

SILVER-MARSHALL, Incorporated

DECEMBER
1
1928



846 WEST JACKSON BLVD.
Chicago, U. S. A.

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GENERAL CATALOG

S-M Leadership Means Better Radio

IN FOUR short years Silver-Marshall, Inc., has forged up from obscurity to the position of dominant leadership in the radio parts and kit field—interesting, you may say, but just what does that mean *to you?*

S-M leadership means just one thing—*better radio for less money.* Ask any one of the thousands upon thousands who enjoy radio to the full through S-M kits and circuits. Ask the multitude of experimenters who have literally used and recommended S-M into first place; who two years ago swept S-M audio transformers into unquestioned leadership through a veritable avalanche of approving purchases and who have held S-M audios at the top ever since. Ask the thousand odd Authorized S-M Service Stations who have built a profitable business and satisfied customers on S-M stability and worth. Or ask the dealers and jobbers who have seen S-M rapidly crowd competitors from their shelves, to become in four seasons their largest selling, most profitable parts line.

They'll all tell you that S-M leadership means better radio at less cost.

And S-M leads again in 1928 and 1929 by giving you new developments that enable made-to-order or custom-built radio sets to equal in external finish the finest factory productions, parts that place the performance of such sets utterly beyond competition, and, through knock-down kits, radio receivers that will consistently and positively outperform all ready-made sets at anywhere near their amazingly low prices.

Silver-Marshall, Inc., unconditionally guarantees all S-M products against mechanical and electrical defects, and to be exactly as represented. Any S-M products showing any defects not caused by, or the result of, abuse will be gladly replaced free of charge if returned to the factory.

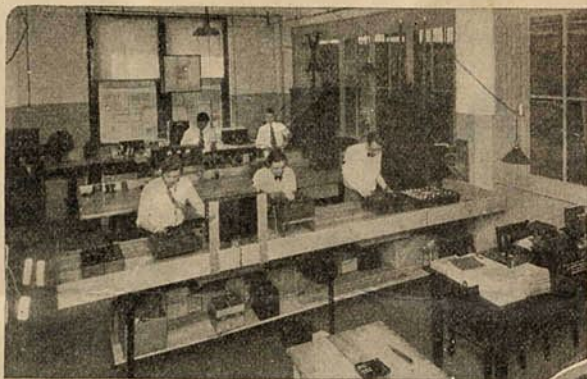
All items listed in this catalog are available through regular S-M jobbers and dealers, with the single exception of Rack-and-Panel "PA" amplifiers, which are sold only by Service Stations actually installing such equipment; or by the factory direct at the prices quoted on page 23, which are *net*.



SILVER-MARSHALL, Incorporated

SM

WHERE S-M PRODUCTS ARE DESIGNED AND MANUFACTURED



In this thoroughly equipped modern laboratory all research and investigation work on new S-M equipment is carried out.



A transformer assembly department. Each transformer is given six tests, three under actual amplifier operating conditions.



McMurdo Silver, founder and President of Silver-Marshall, Inc.

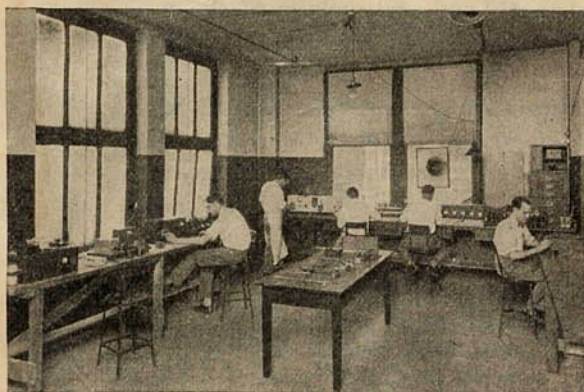
FROM the fact that many fans when visiting Chicago have made it a point to visit the Silver-Marshall laboratories and factory, it has been felt that a few photographs of the plant where S-M products are designed and manufactured would be of interest to those fans who seldom have opportunity to travel to Chicago.

The photographs on this page are of three of the more interesting departments, and of the building which has housed S-M since March, 1926, and in which the S-M factory, laboratories, and offices occupy over 30,000 square feet of floor space on three floors. When S-M first moved to this

building, it was, with considerable trepidation, to occupy a single floor. Since then each year has seen successive expansion until three floors are now needed to house the S-M organization. It is

unfortunate that a photo of the original S-M "factory"—the second floor of a garage in Evanston, Ill., of less than 1,000 feet floor space—is not available for contrast. In it, the total factory, laboratory and office space of four years ago was less than that included in one of the several present testing laboratories.

Behind the rapid growth of Silver-Marshall since the first small factory was opened lies a tale of great romantic appeal; but much more important to readers of this catalog is the motivating ideal of the whole S-M organization—the will to give the utmost of quality in every S-M product to leave the factory's doors.



A typical testing laboratory, where factory production samples and factory test equipment are continually being checked to maintain the high standard of S-M quality.



Offices and stock rooms are on the second floor of this modern building, and assembly, test and press departments on third and fourth floors.

SILVER-MARSHALL, *Incorporated*



KEEP ABREAST OF THE TIMES
WITH THIS S-M MAGAZINE

The S-M "Radiobuilder"



Are You Receiving "THE RADIOBUILDER"?

"The Radiobuilder" is Silver-Marshall's own little magazine, published monthly to give you advance notice of new radio developments and to acquaint you with technical points pertaining to the S-M line.

It was in "The Radiobuilder" that first information was given regarding the S-M Public Address Amplifier, the "Round the World" Screen Grid Short Wave Receiver and Adapter, and the new Clough tuned audio-frequency transformer

system, which has so revolutionized all audio amplifier performance since June, 1928.

A month before the 1929 S-M offerings were announced to the general public through the radio press, and six weeks before this S-M Catalog was ready for distribution, readers of "The Radiobuilder" were fully informed concerning the trends in receiver and accessory design for the fall and winter season.

Every month from now on, through the columns of "The Radiobuilder," you will be given the opportunity to keep abreast of advances in the radio art. New engineering developments will be reported to you, what is going on in Silver-Marshall's Research Laboratories, and in other radio laboratories of the world, will be commented upon.

As new tubes come upon the market, readers of "The Radiobuilder" will be told how they may adapt their present equipment for use with such tubes. As other inventions and improvements are devised, you—if a regular subscriber to "The Radiobuilder"—will be one of the first to profit by them, or to reap the added enjoyment or efficiency which they make possible.

To Silver-Marshall Authorized Service Stations in all parts of the world, "The Radiobuilder" is mailed free each month. To others the very nominal charge of 50 cents for 12 issues, or one dollar for 25 issues is made, to partially cover postage and handling costs. If you are not already a subscriber, we hope you will wish to have your name added to the already large and fast-growing number of fans, experimenters, amateurs and professional setbuilders who enjoy reading "The Radiobuilder"—and who look forward expectantly to receiving each new issue.

All that is necessary is to send 50 cents or a dollar in stamps or money-order with a little note saying, "Please put me down for a subscription to 'The Radiobuilder.'"

There is an Authorized S-M Service Station Near You—Write for Location

If you do not wish to build and install your own receiver or power amplifier, yet desire your radio to be custom-made, with all the advantages that this implies, Silver-Marshall will gladly refer you to an Authorized S-M Service Station near you. Oftentimes an S-M specialist can be of valuable assistance in checking up installations, testing tubes and batteries, or making meter readings to provide proper voltages for your set or power amplifier.

On the other hand, if you build or service sets professionally, on either a full-time or part-time basis, and are interested in learning whether there are valuable S-M Service Station franchises still open in your territory, please write us.

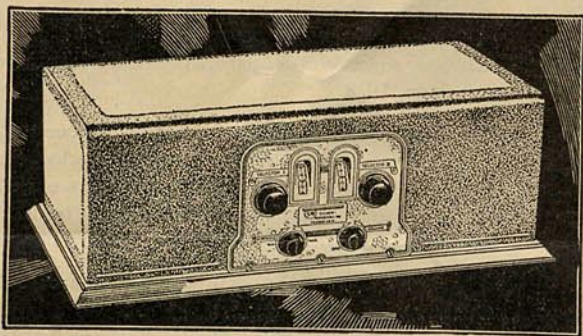
SILVER-MARSHALL, Incorporated



SM

THE GREATEST SCREEN-GRID
VALUE IN RADIO HISTORY!

720 Screen Grid Sixes



NEVER before in the history of radio has there been a receiver design so completely fulfilling the requirements of the custom-set builder as does the new S-M 720 Screen Grid Six. It is a worthy successor to the famous S-M 630 SG Shielded Grid Six.

Essentially the new 720 Screen Grid Six is a refined and greatly improved model of the earlier type 630 SG, which was placed on the market in the early part of 1928 with the amazing guarantee of better performance than any other set or the purchase price would be refunded! Less than 1% of the kits sold were returned as not superior to anything else on the market—an amazing record. Certainly an improved model of such a kit should be an ideal receiver, and that's just what the "720" is!

What's in the 720?

The 720 receiver consists of three stages of radio frequency amplification, using screen-grid tubes, followed by a super-sensitive detector and two stages of Clough high-gain audio frequency amplification, with power output tube—112, 171, 210 or 250 type being optional. Every individual part of the circuit has been designed for greatest efficiency and ease of assembly. The R.F. stages are controlled by two vernier drum dials operating one single condenser and a three-gang die-cast bowl-type condenser of unusual accuracy and rigidity. Ganging troubles are forever eliminated. The new S-M 140 Universal coil is used in the antenna stage, providing greater antenna selectivity than in any other set. A small condenser in this circuit regulates selectivity from minimum to maximum, smoothly and positively. The second and third R.F. stages are tuned by the compensated gang condenser and are individually shielded in separate copper stage shields. The new S-M 255 and 256 A.F. transformers provide twice the average amplification of ordinary audios and in addition give to the set unequalled fidelity of tone.

Performance With a Vengeance

So selective is the 720 Screen Grid Six that, operated in the heart of Chicago, within only one to three miles of powerful local stations, it brings in out-of-town stations only one dial

division (10 K.C.) away from locals! On a short antenna it has brought in, consistently, both east and west coast stations on warm summer evenings. Think of it! KFI was heard in Chicago through WCFL (a very powerful local, one mile away) on a hot summer night; WJZ regularly through WQJ two miles away). The set logs positively, and cannot get out of gang. It will bring in with full volume stations that cannot even be heard on much more expensive factory-built sets.

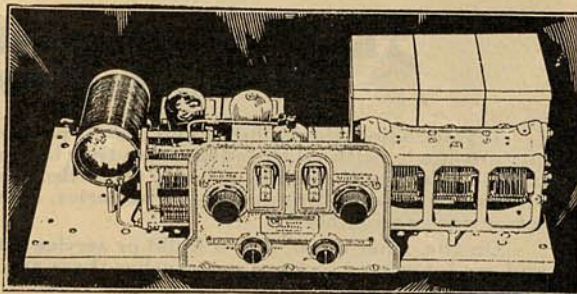
With its beautiful antique brass control escutcheon, walnut knobs and the beautiful new S-M 700 metal cabinet, finished in two-tone moire brown, the 720 is a joy to the eye as well as to the ear. Its appearance when custom-built is far beyond standards of ready-made sets and will harmonize with any surroundings. The metal cabinet provides 100% shielding thus augmenting the natural selectivity of the receiver.

Marvelous Reproduction

The tone quality of this receiver with the famous S-M 255 and 256 transformers is truly remarkable. With their flat characteristic from 100 to 8,000 cycles and their rise in amplification below 100 cycles, every note of the musical scale is brought out with full volume and fidelity of tone, with all hysteretic distortion found in ordinary transformers eliminated.

The attention to detail in the layout and design of the 720 has made it very easy to build. All parts assemble upon the accurately pierced metal chassis in an hour, and the wiring is simple and direct. The ganging, heretofore the hardest part of a single-control receiver, is already done, making only a small adjustment of the compensators necessary to perfectly line up the receiver.

The custom-set builder standardizing on this set will have the benefit of national advertising and publicity, a set that goes together positively, and that will outdemonstrate ready-made receivers of twice and three times its cost. Never before has such a value been offered—a complete six tube screen-grid kit for only \$72.50 list, far better than any factory-built set, and far lower than most in price! The 720 Receivers are available in kit and laboratory wired and tested models, for battery or light socket operation with standard power units (S-M 670 B or 675 ABC specified for B, and any standard A power unit for A supply). Wavelength range approximately 200-550 meters.

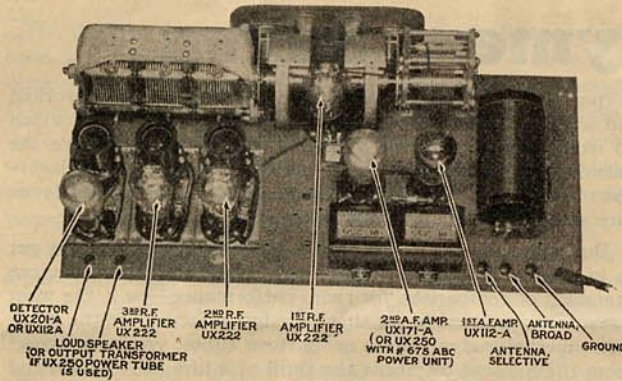


The 720 with Cabinet Removed

SILVER-MARSHALL, Incorporated



A SIX TUBE SCREEN GRID KIT FOR ONLY \$72.50



Inside view of S-M 720 Screen Grid Six showing location of parts and tubes. Note the unusual simplicity and the sturdy well-built parts. (Illustration from S-M Data Sheet No. 5).

1—Polymet .00015 Mfd. Grid Condenser with Clips	.50
1—Polymet .002 Mfd. Bypass Condenser	.40
1—Polymet 2 Megohm Grid Leak	.50
1—Durham .15 Megohm Resistor with Leads	.50
1—Naald 481XS Cushioned Tube Socket	.65
3—Moulded Binding Posts @ 10c	.30
1—Set Hardware	1.00

\$74.65

The 720 Screen Grid Six requires for operation, three UX222 (CX322) screen grid R. F. amplifiers, one UX201A (CX301A) detector, one UX112A (CX312A) first stage amplifier and one UX112A (CX312A) or UX171A (CX371A) last stage power tube. It may be operated from batteries—or the S-M 670B or 675 ABC Reservoir B Power Supply, in combination with any good A power unit, makes the ideal power plant for this receiver.

The 720 is built upon the 701 Universal chassis to fit the beautiful S-M 700 Metal Shielding Cabinet. Or, if desired, S-M 703 Walnut Finish Panel, size 7x24 inches, @ \$4.00 list, may be used to fit it to any console.

S-M Data Sheet No. 5 contains a full description and all construction and operating instructions for the 720 Screen Grid Six and will be mailed upon receipt of 2c stamp.

The parts contained in the 720 Kit (Price \$72.50) are:

1—S-M 701 Pierced Chassis	\$ 3.00
1—S-M 809 Dual Escutcheon	2.75
1—S-M 806L Drum Dial	2.50
1—S-M 806R Drum Dial	2.50
1—S-M 320R .00035 Mfd. Condenser	4.00
1—S-M 323 .00035 Mfd. 3-gang Condenser	13.50
1—S-M 342B .000075 Mfd. Condenser	1.75
3—S-M 638 Copper Stage Shields @ \$1.50	4.50
1—S-M 140 Antenna Coil	3.00
3—S-M 132A Plug-in R.F. Transformers (5-prong)	3.75
3—S-M 512 5-prong Tube Sockets @ 60c	1.80
3—S-M 511 Tube Sockets @ 50c	2.50
1—S-M 255 AF Transformer (first stage)	6.00
1—S-M 256 AF Transformer (second stage)	6.00
1—S-M 708 10-lead Connection Cable	1.75
1—S-M 818 Hook-up Wire (25 ft. to carton)	.50
1—Yaxley 53000-P 3,000 Ohm Potentiometer	1.25
1—Yaxley 500 Switch Attachment	.40
2—Yaxley 420 Insulated Tipjacks @ 12 1/2c	.25
3—Carter RU10, 10 Ohm Resistors @ 25c	.75
1—Carter A6, 6 Ohm Sub-base Rheostat	.50
1—Carter H1 1/2, 1 1/2 Ohm Resistor	.25
1—Potter or Polymet 1 Mfd. Bypass Condenser	1.00
6—Sprague or Polymet 1/4 Mfd. Midget Condensers	6.60

720 SCREEN GRID SIX KIT

(Leader)

Complete kit, as specified above, ready to assemble (less S-M 700 cabinet, \$9.25; and tubes). Factory packed in substantial carton, shipping weight 18 lbs. Price \$72.50

720 CUSTOM-BUILT SCREEN GRID SIX (Leadership)

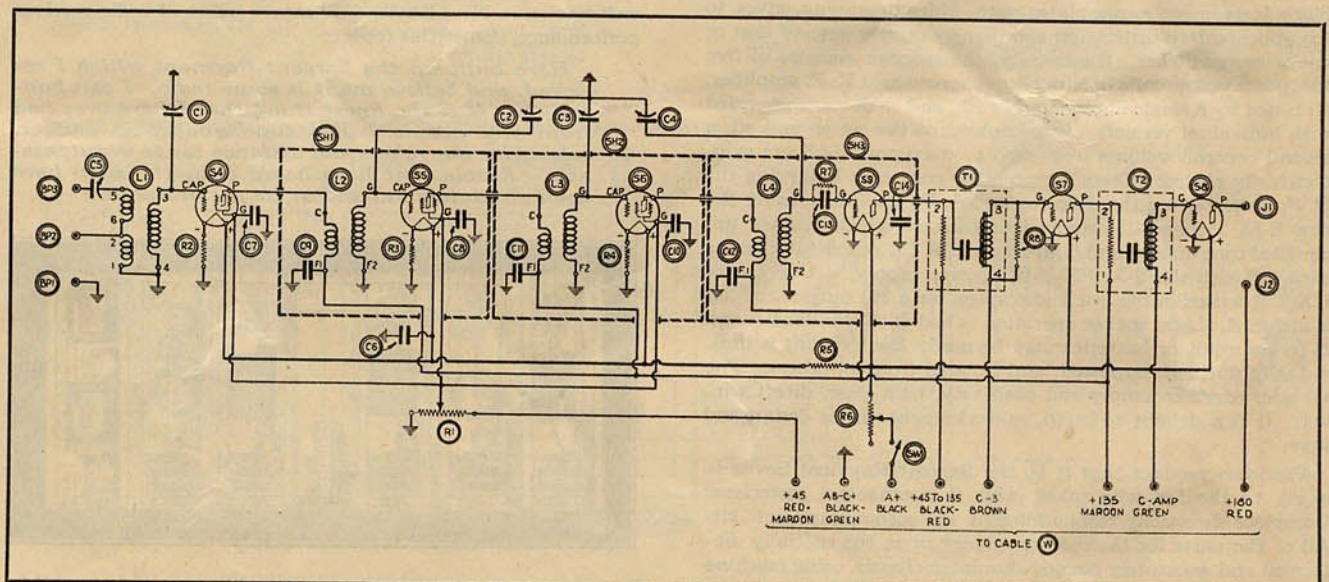
The 720 Screen Grid Six, as described above, custom built and guaranteed, complete with cabinet. Hand assembled and tested in the S-M laboratories. Packed in substantial carton (less tubes) shipping weight 35 lbs. Price \$102.00

700 SHIELDING CABINET

(Cover)

One-piece metal shielding cabinet and walnut base, for the 720 Screen Grid Six Kit. See page 21 for full description. Price \$9.25

NOTE: At such indefinite time as Radiotron and Cunningham screen grid tubes, designed for AC operation, may be marketed and generally distributed, there will be available an AC tube model of the S-M 720 Screen Grid Six. (The models listed above are AC operated when using standard light socket power units.)



Schematic diagram of the efficient circuit of the S-M 720 Screen Grid Six. (Diagram from S-M Data Sheet No. 5)

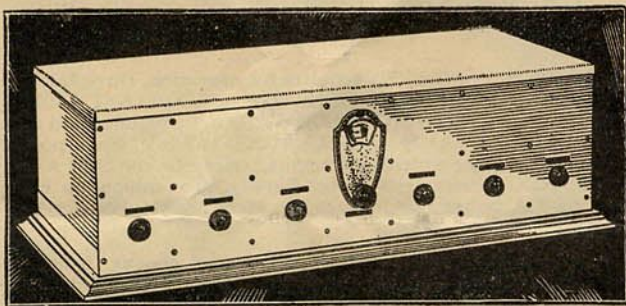
SILVER-MARSHALL, Incorporated



SM

A STATION EVERY TEN
KILOCYCLES

710 Sargent Rayment Seven



A STATION tuned in for every ten kilocycles—an average of one hundred stations heard in one evening! That is the performance record of the Sargent-Rayment Seven, tested in the heart of Chicago interference on a warm summer evening. To the ultra-skeptical veteran listener we heartily recommend this peer of all receivers as a set utterly without equal. In performance, as in unique appearance, it is a precision laboratory type of instrument, intended for the man who desires the very extreme of radio reception in all respects, irrespective of cost or other limitations. The results it gives place the Sargent-Rayment Seven as a leader even among "stunt" sets; but one hearing of its fine tone will remove it entirely from the limitations of any such classification—it is, truly, the set of sets.

Designed by Messrs. E. M. Sargent and L. C. Rayment, inventors of a unique receiver system of past popularity, in conjunction with the Silver-Marshall engineering laboratories, the 710 Sargent-Rayment is like a battleship stripped for action, shorn of every piece of surplus gear. The thick aluminum shielding and chassis, finished in satin silver and trimmed by black instrument name plates with white engraving, gives to the appearance a distinction and dignity utterly beyond that of any other radio set. Electrically, the receiver consists of five sharply tuned circuits in a four-stage screen grid R. F. amplifier, all tuned by a single illuminated drum, and each stage provided with individual verniers. One knob turns the set on and off, a second controls volume from zero to maximum. All are symmetrically placed. There are no other controls. Following the R. F. amplifier are the detector and A. F. amplifiers, using the new S-M 255 and 256 audio transformers which provide unequalled tone quality and high volume. A 171 power tube can be used, or with the S-M 675 ABC power supply, a UX 210 or UX 250 is used in the last audio stage, for a 251 output coupler is included. Light socket operation is had with standard A and B power units, or batteries may be used. Each circuit is individually shielded, bypassed, and isolated from all others. The set goes together simply and positively, with clear, direct wiring. It is a delight to build, so workmanlike is its design and layout.

Precision product that it is, the Sargent-Rayment Seven is a joy to the fan who takes pride in mechanical perfection. Complete directions for building it up accompany each kit. All of the parts for the receiver mount upon the specially deformed and accurately pierced aluminum chassis, using machine screws and nuts. Once the parts have been mounted, the

wiring is unusually easy; the design has been carefully worked out with this end in view, and ample space is available in which to work. Only after the wiring is entirely complete are the shielding partitions and front and back panels attached—thus completing as delightful and satisfying an assembly as any setbuilder has ever undertaken.

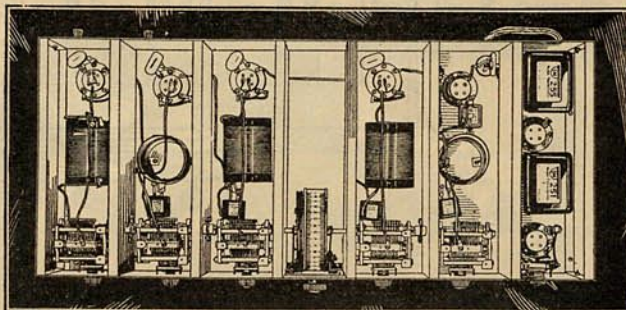
But when the set is put on the air, the biggest surprise yet is in store. No matter what may have been your previous standard of comparison for radio performance—be it the most expensive ready-made set that ever left a factory or the trickiest superheterodyne of ten or fourteen tubes, you may expect from the Sargent-Rayment the thrill of a lifetime. Locals and far-distant stations—usually all at nearly the same volume—come in with full, rounded tone, of a beauty and brilliance that will be the marvel of all to whom you may show it. In the Sargent-Rayment Seven one may indeed realize the full significance of honest "pride of ownership."

Space prevents more than a mere mention of the enthusiastic reports which continually reach us from builders and owners of the S-M 710. Among the more distinguished of these listeners, Kenneth G. Ormiston, Technical Editor of "Radio Doings," writes in that publication (Oct. 13, 1928) as follows:

We were so impressed with the very obvious sensitivity of the receiver, due to its ability to reach the noise level with the sensitivity control but half on, that we decided to try something which we had never considered worth while heretofore. We have journeyed all over the Southern end of the state [California] to find choice spots in which the Japs and Aussies may be received, but never deemed it worth while to attempt this in the city [Los Angeles]. The volume of WGN, when he signed off, inspired us to set the alarm clock for 4 a. m., and when we turned the set on at that hour, five of the Japs were received with good volume and 4QG in Brisbane.

From Radio Inspection Service of Hartford, Connecticut, well known in New England as expert critics of radio receiver performance, comes this report:

Have built up the Sargent-Rayment which I received, and believe me it is some radio. I can honestly say it is the finest thing that I have ever had from you people. The tone quality is perfect, selectivity marvelous and distance range unsurpassable. People that have heard it in the shop have been absolutely amazed at its performance.



Interior of the Sargent-Rayment Seven

SILVER-MARSHALL, Incorporated



THE PEER OF ALL RADIO RECEIVERS

By the fan who appreciates and values really fine performance in a truly precision receiver of great individuality and distinction, the 710 Sargent-Rayment Seven will be welcomed. It is not a set for the furniture buyer—for every dollar of value in it is *radio* value, not expensive wood cabinet work contributing not a single particle to actual *results*. The kit for this receiver is approved by the designers and exclusively manufactured by Silver-Marshall, Inc.

S-M Data Sheet No. 8, describing the construction and operation of the Sargent-Rayment Seven will be mailed on receipt of two-cent stamp, or it may be had from any reputable dealer.

The following parts are contained in the 710 kit, priced at \$130.00.

1—S-M 705 Aluminum Shielding Cabinet.....	\$27.00
1—S-M 706 Walnut Finish Base Moulding.....	3.00
1—S-M 141 Antenna Coil.....	3.00
1—S-M 142 R. F. Transformers @ \$3.00.....	12.00
1—S-M 320-R Variable Condensers, .00035 Mfd., @ \$4.00.....	20.00
5—S-M 340 Midget Condensers, .000025 Mfd., @ \$1.50.....	7.50
9—S-M 275 R. F. Chokes @ 90c.....	8.10
7—S-M 511 Tube Sockets @ 50c.....	3.50
1—S-M 255 First-stage Audio Transformer.....	6.00
1—S-M 256 Second-stage Audio Transformer.....	6.00
1—S-M 251 Output Transformer-Filter.....	6.00
1—S-M 708 Ten-lead Battery Cable.....	1.75
1—National Type "F" Velvet Vernier Dial with Illuminator.....	4.50
8—Sprague or Polymet 1/2-mfd. Condensers @ 1.10.....	8.80
1—Polymet .00015 Mfd. Grid Condenser.....	.25
1—Polymet .002 Mfd. Bypass Condenser.....	.50
1—Polymet Grid Leak Mounting.....	.35
1—Polymet 2 Megohm Grid Leak.....	.50
2—Potter 1 Mfd. Bypass Condensers @ \$1.00.....	2.00
2—Yaxley 420 Insulated Tip-jacks @ 12 1/2c.....	.25
1—Yaxley 53000-P Junior Potentiometer, 3,000 ohms.....	1.25
1—Yaxley 740 Junior Switch, double circuit (D. P. S. T.).....	.95
1—Durham .15-megohm Resistor, with leads (optional).....	.50
3—Hammarlund Flexible Shaft Couplings @ 60c.....	1.80
1—Carter H-1 Resistor (1 ohm).....	.25
1—Carter H-3 Resistor (3 ohms).....	.25
2—Insulated Binding Posts @ 10c.....	.20
1—Kurz-Kasch 1 1/2" black arrow knob.....	.20
2—Cartons S-M 818 Hookup Wire @ 50c.....	1.00
1—Set Hardware, etc.....	4.00
Total	\$131.40

Accessories required for battery operation:

- 4—UX222 (CX322) R. F. Amplifier Tubes
- 1—UX201A (CX301A) or preferably, UX112A (CX312A) Detector Tube
- 1—UX112A (CX312A) First-stage A. F. Amplifier Tube
- 1—UX171A (CX371A) Power Output Tube
- 1—6-volt 100 A. H. Storage A Battery
- 4—45-volt Burgess Heavy-duty Dry B Batteries
- 1—40 1/2-volt Burgess Dry C Battery
- 1—4 1/2-volt Burgess Dry C Battery

Accessories required for light-socket operation:

- Tubes as specified above
- 1—6-volt 1 1/2-ampere (Minimum Capacity) A Power Unit (Abox or Equivalent)
- 1—S-M 670 B Reservoir Power Unit
- 1—40 1/2-volt Burgess Dry C Battery
- 1—4 1/2-volt Burgess Dry C Battery

NOTE: If UX250 (CX350) power output tube is to be used in place of UX171A (CX371A) for finest possible tone quality, the S-M 675 ABC Power Supply should be substituted for S-M 670B, in which case only the 4 1/2-volt dry C battery is needed. A 1 Mfd. 600-volt condenser, as shown in the schematic diagram, must be placed between the speaker and terminal No. 2 of the S-M 251 Output Transformer.

710 SARGENT-RAYMENT SEVEN KIT (Supreme)

Complete kit, as specified above, factory packed, with aluminum cabinet, ready to assemble (less tubes). Shipping weight 33 lbs. Price \$130.00

710 CUSTOM-BUILT SARGENT-RAYMENT SEVEN (Supremacy)

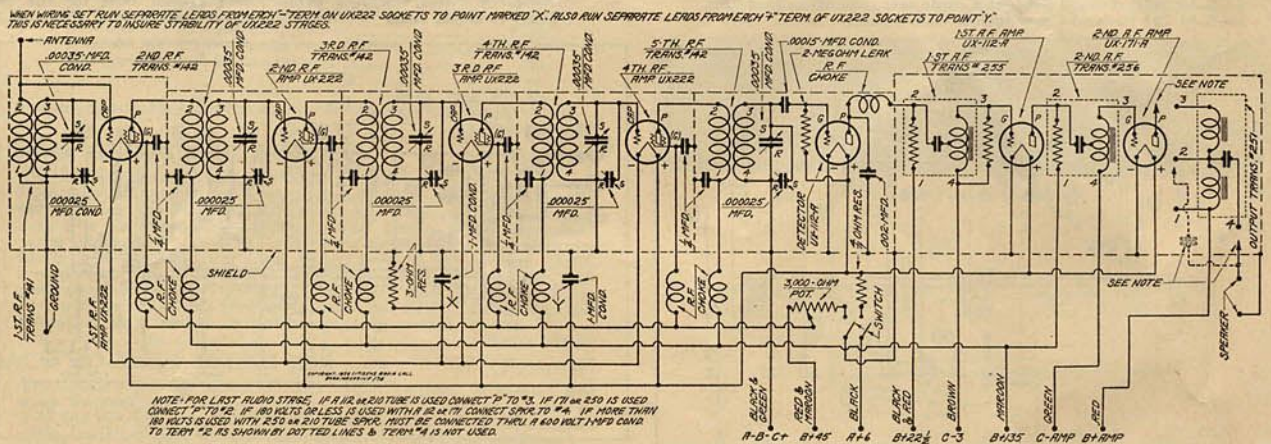
The 710 Sargent Rayment Seven, as described above, custom-built and guaranteed, complete with cabinet. Hand assembled and tested in the S-M laboratories. Packed in substantial carton (less tubes), shipping weight 33 lbs. Price \$175.00

705 ALUMINUM KNOCK-DOWN SHIELDING CABINET (Shieldcab)

Especially designed for the Sargent-Rayment Seven, size 27 1/2" long, 12 1/2" deep, and 8 1/2" high. Included in the 710 Sargent-Rayment Kit, but supplied separately if desired. Factory packed in substantial carton, shipping weight 12 lbs. Price \$27.00

706 WALNUT FINISH BASE MOULDING (Raymould)

A walnut finished base moulding for the S-M 705 Aluminum Shielding Cabinet, greatly improving appearance. Included in the 710 Sargent-Rayment Kit, but supplied separately if desired. Size, 29 3/4" long, 14" wide. Shipping weight, 3 1/2 lbs. Price \$3.00



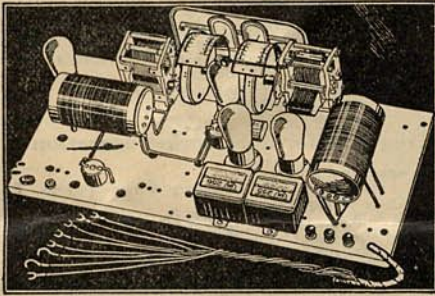
Schematic circuit of S-M 710 Sargent-Rayment Seven. Note thorough bypassing of all circuits, and perfect shielding of all stages.

SILVER-MARSHALL, Incorporated



FOR D. C. OR A. C.
SCREEN GRID TUBES

740 Coast to Coast Screen Grid Sets



TO THE thousands of fans for whom the four-tube R. F. amplifier, regenerative detector and two-stage audio circuit is the time tested standby and the standard of receiver comparison, the new Silver-Marshall Coast to Coast Fours offer the finest performance yet attained with this remarkable circuit. A screen grid R. F. amplifier stage, immeasurably finer coils than ever before, the new Clough high gain audio system, metal chassis, and antique brass control escutcheon, like the finest of ready-made sets, make the "740" the biggest \$51.00 radio value there is.

Its story is told in its name—the Coast to Coast Four. It cuts through interference to distant programs only 10 to 20 K. C. away from "locals" with decisiveness and ease. Its tone quality is such as only the new S-M 255 and 256 transformers can provide. It will take 112, 171, 210 or 250 power tubes. The "eye-value" of the "740" is on a par with the best of ready-made sets when it is housed in the new Silver-Marshall type 700 metal shielding cabinet. Battery or light socket operation is optional. Wavelength range approximately 200-550 meters.

No matter what set you build or buy, the 740 Coast to Coast Four is the best dollar for dollar value you can find. It goes together easily and simply, performs with a vengeance, and for the professional set builder provides a low-priced set that will outdemonstrate popular six-tube, one-dial ready-made sets at up to twice its price.

The parts contained in the 740 Kit priced at \$51.00 are:

1—S-M 701 Universal Chassis.....	\$ 3.00
1—S-M 809 Dual Escutcheon.....	2.75
1—S-M 806L Drum Dial.....	2.50
1—S-M 806R Drum Dial.....	2.50
2—S-M 320R Condensers @ \$4.00.....	8.00
1—S-M 342B .000075 Midget Condenser.....	1.75
1—S-M 708 10-lead Connection Cable.....	1.75

1—S-M 818 Hook-up Wire (25 ft. to carton).....	.50
2—S-M 140 Universal Coils @ \$3.00.....	6.00
1—S-M 275 RF Choke.....	.90
1—S-M 276 RF Choke.....	1.00
3—S-M 511 Tube Sockets @ 50c.....	1.50
1—S-M 255 First-stage AF Transformer.....	6.00
1—S-M 256 Second-stage AF Transformer.....	6.00
1—Yaxley or Frost 6 Ohm Rheostat.....	.75
1—Yaxley No. 500 Switch Attachment.....	.40
2—Yaxley No. 420 Insulated Tipjacks @ 12 1/2c.....	.25
1—Carter RU10, 10-ohm Resistor.....	.25
1—Sprague or Polymet 1/4 Mfd. Bypass Condenser.....	1.10
1—Polymet .00015 Grid Condenser with Clips.....	.50
1—Polymet 2-megohm Grid Leak.....	.50
1—Durham .15-megohm Resistor with leads (optional).....	.50
1—Potter No. 4 1-mfd. Bypass Condenser.....	1.00
1—Naald 481XS Cushioned Tube Socket.....	.65
3—Moulded Binding Posts @ 10c.....	.30
1—Set of Hardware.....	1.00
	\$51.35

Requires 1—UX222 (CX322), 2—UX201A (CX301A), or UX112A (CX312A) detector and first stage amplifier and 1—UX171A (CX371A) power tube. UX210 (CX310) or UX250 (CX350) power tube can be used with S-M 675 ABC. S-M Data Sheet No. 6, describing the Coast to Coast Kits will be mailed for 2c stamp.

740 COAST TO COAST KIT

(Coastkit)

Complete kit, as specified above, ready to assemble, less S-M 700 cabinet, \$9.25; and tubes. Factory packed in substantial carton, shipping weight 18 lbs. Price \$51.00

740 WIRED COAST TO COAST FOUR

(Coastset)

The 740 Kit, above, assembled and wired in S-M laboratories, ready to operate (less tubes). Cabinet included. Shipping weight 35 lbs. Price \$75.00

740AC COAST TO COAST KIT

(Coaster)

Contains the same parts as 740 Kit, described above, less: 2—S-M 511 sockets, \$1.00; 1—Yaxley 6-ohm rheostat, \$0.75; 1—Yaxley No. 500 switch attachment, \$0.40; 1—Carter RU-10, 10-ohm resistor, \$0.25; and 1—Naald 481XS cushioned socket, \$0.65. Parts added: 3—S-M 512 tube sockets, \$1.80; 1—Yaxley 53000-P, 3,000-ohm Potentiometer, \$1.25; 1—Carter AP-15, 15-ohm Potentiometer, \$0.75; 1—Yaxley 840-C balancing resistor, \$0.50; 1—Sprague 1/4-mf. condenser, \$1.10; and 1—Ohmite 1,500-ohm resistor, \$1.00. Total price \$56.70. Requires 1—AC22 Ceco or other AC screen grid tube, 2—UY227 (C327) tubes, and 1—UX112A (CX312A) or UX171A (CX371A) power tube. 210 or 250 tubes may be used if desired. Complete, ready to assemble (less tubes), factory packed in substantial carton. Shpg. wt. 18 lbs. Price \$53.00

740AC WIRED COAST TO COAST FOUR

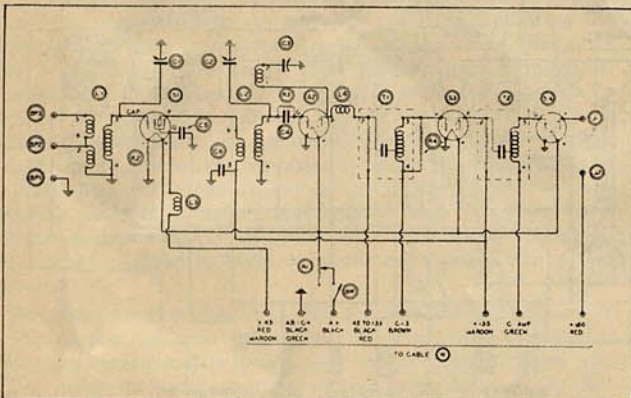
(Coasterset)

The 740AC Kit, above, assembled and wired in S-M laboratories, ready to operate (less tubes). Cabinet included. Shipping weight 35 lbs. Price \$78.00

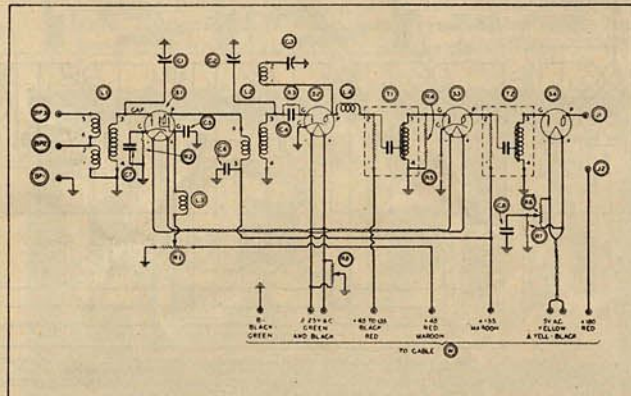
700 SHIELDING CABINET

(Cover)

One-piece metal shielding cabinet and walnut base for the 740 Coast to Coast Kits. See page 21 for full description... Price \$9.25



Schematic of 740 Coast to Coast Four



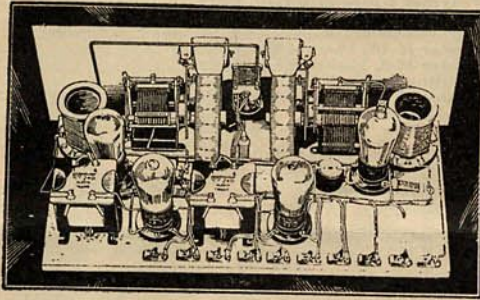
Schematic of 740AC Coast to Coast Four

SILVER-MARSHALL, Incorporated



ULTRA-EFFICIENT TUNERS IDEAL FOR USE WITH POWER PACKS

640 Series Universal All Wave Tuners



THIS series of kits provides any combination desired in the low-priced receiver field—from a simple two-tube tuner for use with headset or power amplifier, to a complete AC operated four-tube receiver with 210 or 250 type last-stage power tube. They are most ingeniously designed for progressive building if desired, the two-tube tuner occupying but 5 inches of the baseboard depth. Three inches additional baseboard depth is available for two audio stages—and in the remaining 4 inches of depth in standard 12" cabinets, either of two types of "power supply," S-M 648 (same as 670 ABC) or 649 (same as 675 ABC) may be included.

Drum dials, beautifully decorated steel panel, plug-in coils (for 30 to 3000 meter range), and new S-M Clough audio transformers, giving wonderful reproduction, make these receivers up-to-the-minute in every respect. Quality is nowhere sacrificed, yet the prices are the lowest on the market. The most efficient two-tube tuner circuit known is employed (made famous by the Silver Knockout, Browning-Drake, Roberts, Lynch Aristocrat, Daily News Four, etc.).

For short wave reception, S-M 114B and 114C coils are used (see page 20) in detector stage only, with S-M 340 midget condenser added, to couple the antenna to the grid circuit of the detector tube. For reception above 600 meters, S-M 111D and 111E coils are used for RF, and S-M 114D and 114E coils for detector. S-M Kits contain "A" range coils only.

640 ESSENTIAL KIT *(Allkit)*

The essential parts for building any model Universal Tuner-Parts contained are:

2—S-M 320 Variable Condensers @ \$3.25.....	\$ 6.50
2—S-M 515 Coil Sockets @ \$1.00.....	2.00
1—S-M 111A Antenna Coil.....	2.50
1—S-M 114A R. F. Transformer.....	2.50
1—S-M 342 Midget Condenser.....	1.75
1—S-M 275 Radio Frequency Choke.....	.90
Blueprints and Instructions.....	.25

Complete factory packed kit in carton, shipping weight 4 lbs.
Price \$16.00

642 TWO TUBE TUNER KIT *(Twokit)*

The 2-tube battery operated tuner for 1½, 3, or 5 volt tubes. Especially designed to precede a high quality two-stage power amplifier such as the S-M 682-210 or 682-250 Unipacs. Kit contains: S-M 640 Essential Kit, \$16.00; 1 Van Doorn 7"x18" decorated metal panel, \$3.00; 1—8"x17"x½" wood baseboard with hardware, \$1.50; 2—S-M 805 drum dials, \$6.00; 2—S-M 511 sockets, \$1.00; 1—Polymet .00015 condenser with clips, \$0.45; 1—Polymet .002 condenser, \$0.40; 1—Polymet 2 meg. grid leak, \$0.25; 1—Frost 6-ohm rheostat, \$0.50; 7—Fahnestock clips, \$0.35. Complete (less tubes), factory packed in carton, shipping weight, 12 lbs.

Price \$29.50

642AC TWO-TUBE TUNER KIT *(Powrkit)*

The 2-tube AC Tuner using 2 UY227 (C327) tubes. With S-M two stage Unipacs it is the finest money can buy. Contains same parts as S-M 642 Kit, less 1—Frost 6-ohm Rheostat and 2—S-M 511 sockets; plus 1—Frost 5000-ohm potentiometer, 2—S-M 512 sockets, 1—F1500 and 1—FT64 resistances. Complete (less tubes), factory packed in carton, shipping weight 12 lbs. Price \$33.25

644 FOUR-TUBE KIT *(Fourkit)*

Complete 4-tube battery operated Tuner for 1½, 3, or 5 volt tubes. Essentially this kit is S-M 642 Kit plus 2—S-M 511 sockets, 1—SM 255 and 1—SM 256 audio transformers. Complete (less tubes), factory packed in carton, shipping weight 16 lbs. 8 oz. Price \$42.75

644AC FOUR-TUBE KIT *(Folkkit)*

A 4-tube AC Tuner using 2—UY227 (C327) and 1—UX226 (CX326) tubes with 171 or 210 type tube in last stage, obtaining all ABC power from S-M 648 power kit (if 171 used) or S-M 649 power kit (if 210 used). Essentially this kit is the S-M 642 AC Kit plus 1—S-M 255 and 1—S-M 256 audio transformers, 1—S-M 251 transformer, 1—F1500, 1—F2000, and 2—FT64 resistors. Complete (less tubes), factory packed in carton, shipping weight 19 lbs. 8 oz. Price \$54.00

644SG FOUR TUBE SCREEN GRID KIT *(Fogkit)*

Complete 4-tube battery operated tuner using 1—UX222 (CX322) Screen Grid Tube, 2—UX201A (CX301A) and 1—UX112A (CX-312A). Essentially this kit is S-M 644 less 1—114A coil, \$2.50; 1—Polymet .002 condenser, \$0.40; 1—Polymet 2 meg. grid leak, \$0.25; 1—Frost 6-ohm rheostat, \$0.45; plus 1—S-M 114 SG coil, \$2.50; 1—S-M 275 R. F. choke, \$0.90; 1—Carter H-1 resistor, \$0.25; 1—Carter H-15 resistor, \$0.25; 1—Carter IR-50 S switch rheostat, \$1.50; 1 Polymet 5 meg. grid leak, \$0.25; 1 Polymet grid leak mounting, \$0.50; 2—Fast 1 mf. condensers @ 90c, \$1.80; 1—Fahnestock clip, \$0.05. Complete (less tubes), factory packed in carton, shipping weight 15 lbs. 8 oz. Price \$47.50

648 ABC POWER UNIT KIT *(Lokit)*

This unit fits behind any 640 series tuner in a 12" deep cabinet. Supplies 45, 90 and 220 volts DC for "B" supply and 1.5, 2.5, and 5 volts for AC tube filaments. Contains the following parts:

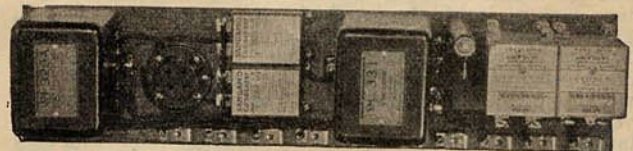
1—S-M 329A Power Transformer.....	\$11.00
1—S-M 331 Unichoke.....	8.00
1—S-M 511 Tube Socket.....	.50
1—S-M 659 Voltage Dividing Resistor.....	2.50
3—Parvolt Series "A," 2 mf. Condensers.....	6.75
2—Parvolt Series "A," 1 mf. Condenser.....	2.50
1—Fahnestock Connection Clips @ 5c.....	.50
1—4"x17"x½" Wood Baseboard, with hardware	.75
Blueprints and Instructions.....	.25

\$32.75

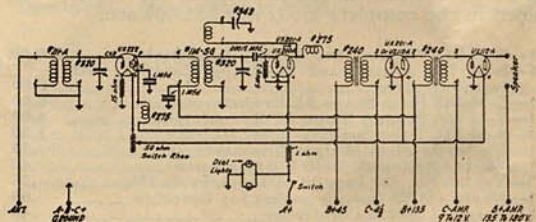
Complete (less tubes) factory packed in carton, shipping weight 14 lbs. 12 oz. Price \$32.50

649 ABC POWER UNIT KIT *(Hikit)*

Same as S-M 648 (described above) except that it supplies 450 volts for a UX210 tube in last stage, as well as A and B power for receiver if equipped with AC tubes. Contains the same parts as the 648 kit, except that it uses S-M 327 power transformer at \$15.00 instead of 329A, and 3 Parvolt type "B," 2 mf. condensers in place of type "A," plus one additional 659 resistor. Complete (less tubes) factory packed in carton, shipping weight 20 lbs. 6 oz. Price \$42.75



648 Power Unit



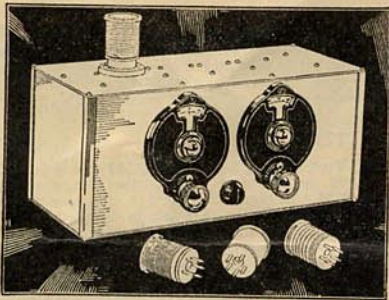
Circuit of the 644SG Tuner

SILVER-MARSHALL, Incorporated

SM

TUNE OVER THE "THRILL BAND" WITH AN S-M SHORT WAVE SET

730 Round the World Four



HAVE you had your taste of the "thrill band"—the wavelength band from 17 to 200 meters? Down on these low waves are the foreign broadcasters—English 5SW with Colonial programs, Dutch, French, Russian, German and other rebroadcast programs. Down there you'll find KDKA, WGY, WLW, with low wave rebroadcasts that you can hear when static blankets out their regular waves. And television—it's on the low waves that you hear the musical sing-song that means the transmission of living pictures! In the "thrill band" you can hear amateurs in every continent, in almost every country, all in an evening—if you have an S-M "Round the World" short wave set.

The definite entry of Silver-Marshall into the short wave receiver field is heralded by the introduction of the "Round the World" short wave kits, with new and unique features. These trim little kits build up into receivers using one screen grid tube in a single stage of radio frequency amplification followed by a non-radiating regenerative detector. The regeneration control is smooth over the entire band—a vital necessity for the satisfactory reception of short wave telephone and broadcast programs. There is but one tuning dial, with variable vernier reduction, so that the tuning is not critical. A similar vernier dial controls the regeneration condenser.

The range for loud speaker reception is practically unlimited, it being regular practice to listen to five continents in an evening on the set. Radio Broadcast Laboratories reported listening to dance music programs from London, on the speaker!

The 730 Round the World Four is a complete short wave receiver and two-stage audio amplifier, using the new S-M 255 and 256 Clough audio transformers for high gain and ultrafine tone quality. It uses the new S-M 5-prong plug-in coils (131-T, 131-U, 131-V, and 131-W) to cover the whole range between 17.4 and 204 meters, efficiently and smoothly. All wavelengths are covered with no dead spots. The amateur bands fall well to the center of the tuning dial. The receiver is built into a very attractive aluminum shielding cabinet. The coils plug into an S-M 512 socket mounted on top of the cabinet for easy and instantaneous wavelength change.

The parts required for the 730 Round the World Four and contained in the complete kit (Price \$51.00) are:

1—S-M 732 "Round the World" Essential Kit.....	\$16.50
1—S-M 734 Aluminum Shielding Cabinet with terminal strip.....	8.00
1—S-M 255 First Stage AF Transformer.....	6.00
1—S-M 256 Second Stage AF Transformer.....	6.00
3—S-M 511 Tube Sockets @ 50c.....	1.50
1—Yaxley 20-ohm Midget Rheostat.....	.75
1—Yaxley Rheostat Switch Attachment.....	.40
2—Yaxley No. 420 Insulated Tipjacks @ 12½c.....	.25
1—Naald 481XS Spring Socket for Detector.....	.65
1—Polymet .00015 Condenser.....	.40
1—Polymet .002 Condenser.....	.40
1—Polymet .005 Condenser.....	.75

1—Polymet Grid Leak Mount.....	\$0.35
1—Polymet 5 megohm Grid Leak.....	.50
1—Durham 60,000-ohm Resistor.....	.75
1—Sprague or Polymet ¼-mf. Midget Condenser..	1.10
2—Carter H-10, 10-ohm Resistors @ 25c.....	.50
1—Carter H-2, 2-ohm Resistor.....	.25
8—Binding Posts @ 10c.....	.80
2—National Type B Vernier Dials @ \$2.50.....	5.00
1—Set Hardware.....	.50
	\$51.35

The tubes required are: 1—UX222 (CX322) screen grid amplifier, 2—UX201A (CX301A) or UX112A (CX312A) detector and amplifier tubes, and 1—UX112A (CX312A) or UX171A (CX371A) power tube

The 731 Round the World 2-Tube Adapter converts any radio receiver into a short wave set by merely plugging it into the detector socket of the set. It is essentially the 730 receiver, less the two audio stages; has the same characteristics in control, tuning and wavelength range, and is contained in the same aluminum cabinet. This adapter may be used with any radio receiver operating with batteries or power units, but only batteries should be used on the adapter itself.

For those wishing to build the "Round the World" kits to their own individual tastes, the 732 Essential Kit is provided, as itemized below.

S-M Data Sheet No. 3 on the "Round the World" series of kits will be mailed for a 2c stamp.

730 ROUND THE WORLD KIT (Thrill)
Complete as specified above, ready to assemble (less tubes), factory packed in substantial carton, shipping weight 13 lbs.....**Price \$51.00**

730 WIRED ROUND THE WORLD FOUR (Thrillset)
The 730 Kit, above, assembled and wired in S-M laboratories, ready to operate (less tubes). Shipping weight, 13 lbs.....**Price \$66.00**

731 ROUND THE WORLD ADAPTER KIT (Thriller)
Contains the same parts as 730 Kit, described above, less: 1—S-M 255 transformer, \$6.00; 1—S-M 256 transformer, \$6.00; 2—S-M 511 sockets, \$1.00; 2—Yaxley tipjacks, \$0.25; 1—Polymet .002 condenser, \$0.40; 1—Durham 60,000-ohm resistor, \$0.75; 1—Carter H-2 Resistor, \$0.25; and 1—binding post, \$0.10. Complete, ready to assemble (less tubes), factory packed in carton, shipping weight, 10½ lbs.....**Price \$36.00**

731 WIRED ROUND THE WORLD ADAPTER (Thrilldapt)
The 731 Kit, above, assembled and wired in S-M laboratories, ready to operate (less tubes, but with 738 Adapter Plug included). Shipping weight, 10½ lbs.....**Price \$46.00**

732 ROUND THE WORLD ESSENTIAL KIT (Thrillkit)
Contains only the essential parts, carefully matched and tested for the RF and detector circuits of the "Round the World" Kits described above. Parts included are: 1—S-M 321 condenser, \$4.00; 1—S-M 320R condenser, \$4.00; 1—each S-M 131-T, 131-U, 131-V, and 131-W coils, \$5.00; 1—S-M 512 socket, \$0.60; 2—S-M 277 chokes, \$3.00; 1—S-M 275 choke, \$0.90; 1—S-M 818 hook-up wire (25 feet), \$0.50. Complete, ready to assemble (less tubes), factory packed in carton, shipping weight 3½ lbs.....**Price \$16.50**

734 ROUND THE WORLD CABINET (Thrillcab)
A complete satin finished aluminum cabinet, pierced for mounting all parts of S-M 730 or 731 Round the World Kits. Sides, bottom, and back detachable. Complete with terminal strip. Contained in S-M 730 and 731 kits, but supplied separately if desired. Size, 14" long, 6¼" high and 6" deep. Shp. wt. 3 lbs. 12 oz.....**Price \$8.00**

738 ADAPTER PLUG (Thrillplug)
A four-prong adapter that fits any standard tube socket, for plugging the 731 Round the World Adapter into the detector socket of any radio set. Complete with 3-foot connecting wire. Not included with 731 Kit. Shipping weight 2 oz.....**Price \$1.50**

SILVER-MARSHALL, Inc.
846 W. Jackson Blvd.,
CHICAGO, ILL., U. S. A.

Enclosed find in stamps for which please send me:

.....(50c) next 12 issues of THE RADIO-BUILDER, or

.....(\$1.00) next 25 issues of THE RADIO-BUILDER

Please send me the following S-M DATA SHEETS, at 2c each:

.....No. 1—670B—670ABC Reservoir Power Units

.....No. 2—685 Public Address Unipac

.....No. 3—730, 731, 732 "Round-the-World" Short Wave Sets

.....No. 4—Hookups for 223, 225, 226, 255, and 256 Audio Transformers

.....No. 5—S-M 720 Screen Grid Six

.....No. 6—S-M 740 and 740AC Coast-to-Coast Screen Grid Receivers

.....No. 7—675ABC Hivolt Power Supply, 676 Dynamic Speaker Amplifier, etc.

.....No. 8—S-M 710 Sargent-Rayment Seven

.....No. 9—678 PD Phonograph Amplifier

.....I am a professional setbuilder. I am interested in your Authorized Service Station Plan.

Name.....

Address.....

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The Radiobuilder

Are you receiving "The Radiobuilder" regularly? Published every month, this little magazine provides you with the earliest information on forthcoming S-M developments and with operating hints and kinks that will help you to get the most out of radio.

You can't afford to be without "The Radiobuilder," for besides general news of interest to every setbuilder it gives advance notice and previews of new products and detailed constructional and operating data on new apparatus before the information appears in the S-M DATA SHEETS.

To S-M Authorized Service Stations, "The Radiobuilder" is mailed each month, free of charge, together with all new Data Sheets and Service Bulletins as they come from press. To all others a nominal charge is made; see coupon.

If you want to keep abreast of the very newest and most practical in radio building developments, be sure to mail the coupon today.

SILVER-MARSHALL, Incorporated



846 WEST JACKSON BLVD.
Chicago, U.S.A.

To _____

This is the New S-M 1928-29 Catalog and Price List

In this S-M Catalog, dated December 1, 1928, which supersedes all previous catalogs, each and every item manufactured by Silver-Marshall, Inc., is described and priced. These items constitute the largest number of high-grade parts made by any one radio manufacturer, and comprise the fastest-selling radio parts line in the market today. Every single item, from the big type 328 heavy-duty power transformer, down to the small compact S-M 275 R.F. Choke, has built into it the very best obtainable materials, workmanship and engineering, and is unconditionally guaranteed against mechanical and electrical defects by Silver-Marshall, Inc.

Turn the pages of this Catalog. Note the neat appearance of the new S-M Kits—the 720 Screen Grid Six, a marvelous six-tube screen grid receiver; the 710 Sargent-Rayment Seven, a precision Radio set for the discriminating fan who wants really fine radio; the 740 Coast-to-Coast Screen Grid Fours; the greatest radio values the world has ever seen; and The Round-the-World Screen Grid short-wave receivers, capable of unlimited distance range. All of these kits are simple and easy to build and will out-perform factory-built receivers far beyond their prices.

Look over the accessories and wired models illustrated and described. Each and every item is a leader in its field for a very simple reason: Silver-Marshall gives more and finer material, equal or better workmanship and engineering value unparalleled in every single piece of apparatus bearing the trade-mark S-M.

That is why the S-M trade-mark means better radio for less money.