radio dealer

"GLAMOUR" SELLER

More "New Merchandise"

Service Market in Industrial Electronics.

DIRECTORY OF RADIO AND

APPLIANCE DISTRIBUTORS

November 1945

Selective Distribution



What's That?

Plenty! It means that Mallory is not content merely to manufacture the finest replacement parts made. It wants you to have them where and when you need them — with assistance when you need it on the best way to use them. That's why it has selected for your area the most outstanding distributor it could find: one

completely familiar with the electronics field, alert and intelligent, willing and able to give you any help you need—from problems of procurement to problems of merchandising. Selective Distribution means a Mallory wholesaler fitted by experience to save you time and worry. Get to know him better!

Here's What Your MALLORY Distributor Will Do For You:

- Offer you a complete line of Mallory replacement parts... many of them first developed by Mallory research... ALL of them guaranteed against premature failure by years of service in the field.
- Meet the maximum number of your application needs with the minimum number of parts. His program of Mallory Standardization will reduce your investment, simplify replacement, speed up delivery.
- Give you detailed information on prices, parts, catalog numbers...work his head off to get you the items you need when you need them ... give you prompt, efficient service always.
- Provide you with bulletins, booklets, catalogs, letters, giving complete data on what to use and where to use it ... offer you special publications and new developments and technical service fundamentals.
- Offer his own personal experience in helping you solve unusual or difficult problems . . . help you train sales and service personnel . . . give you the extra help you need to meet emergencies.
- Provide you, if asked, with sound methods of keeping your business on the beam ... give you special promotion materials to help you sell your story to the public.

The Part Your Mallory Distributor Plays Is Important TODAY-to YOU!

P. R. MALLORY & CO., Inc., INDIANAPOLIS 6, INDIANA



More than ever— ALWAYS INSIST ON APPROVED PRECISION PRODUCTS

VIBRATORS • VIBRAPACKS*• CONDENSERS
VOLUME CONTROLS • SWITCHES • RESISTORS
FILTERS • RECTIFIERS • POWER SUPPLIES

ALSO MALLORY "TROPICAL" DRY BATTERIES, ORIGINALLY DEVELOPED BY MALLORY FOR THE U. S. ARMY SIGNAL CORPS, NOT PRESENTLY AVAILABLE FOR CIVILIAN USE.

*Reg. U. S. Pat. Of



AD-VENTURES Charley Jacobs

rpnompot

*laoallo2mpxoPS''...*powerBo D h * Charley Jacobs is Advertising Manager of

Klein's Sporting Goods, Chicago. You've heard of Klein's. If sighting trout sings you a spring song, and you're pals with a golf ball, you've been there. Klein's is the

largest men's sportswear mail-order house in America.

Charley Jacobs knew about TRUE . . . had heard what it would do . . . would it do that for Klein's? He'd find out . . .

So he did. Klein's ran a 92-line test ad in May.

Charley wrote us an unsolicited letter about the

results

1945

aFeorpnompoxo

Klein's tried it again in the June TRUE.

And Charley wrote us

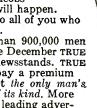
another letter . . .

*powerBoxlaoap*oP5'

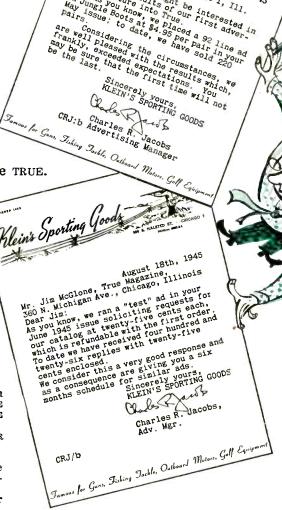
Do 2 m • That's the story of Charley Jacobs' TRUE Ad-Ventures so far. Other good things will happen.

happen to all of you who use TRUE.

More than 900,000 men will buy the December TRUE at their newsstands. TRUE readers pay a premium price to get the only man's magazine of its kind. More than 130 leading advertisers of things men want are using TRUE this year-increasing TRUE'S 1945 adver-



tising revenue 361% over 1944!



Mr. Jim McGlone, True Mag July 23, 19
Jean Jim: Mouth an Aven the Magazine 23, 19
Knowing the You will hicago 1, 111.
As venture suits of be interested in Jung 4 you for the Magazine 23, 19
As you know into or be interested in Jung 4 you know for the first adversaries; to date, we per a pair line ad

Cone; Jan; Me May Pair line ad

Cone; Me May Pair li



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World's Largest Publishers of Monthly Magazines





"RCA All The Way" means even more today-for the new RCA battery line is a volume builder that can't be beat! The battery line ties in perfectly with other RCA products you sell...whether it be tubes, parts, radio sets, or your own service.

Small Inventory - In RCA radio batteries you get a high-volume line of merchandise that can be handled on a small inventory. The RCA battery line has been streamlined-only 35 types enable you to replace batteries in 99% of all battery-operated sets, both portable and farm types.

Customer Acceptance - Radio-set owners respect the name RCA. They know it represents a quarter of a century of radio experience

MAIL THIS COUPON TODAY!



Danu	84-	DCA	Tuba	Distributor:
Dear	Mr.	KCA	lube	DISTRIBUTOR:

I'm interested in increasing my battery profits by handling the new line of RCA Radio-Engineered batteries. Please mail me all details of the RCA battery plan as soon as possible.

Name									٠	•	•		•	٠	•	•		•	•	•	•		 	•	•	•	•
Company	 	•	 			•	•				٠	٠					•	•		•	•	• •		•	•		•
Address	 			_				_				 _		_			 						 				

..... State......

National Advertising Keeps RCA Products Moving - Your RCA products - including batteries benefit from all of RCA's continuing national advertising. Top-flight sales-promotion ideas are developed to keep your RCA products moving in a steady stream from factory to your customers. Counter displays, booklets, catalogs, and many other items, will be made available to you to help sell RCA batteries.

Get in touch with your RCA tube distributor today. Let him help you get on the RCA battery bandwagon of profit.

Listen to "THE RCA SHOW," Sunday, 4:30 P. M., EST, NBC Network





RADIO CORPORATION OF AMERICA

LEADS THE WAY... In Radio... Television... Tubes... Phonographs . . . Records . . . Electronics

radio service dealer

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Covers all phases of radio, phonograph, sound and electrical appliance merchandising and servicing

VOLUME 6 NUMBER 11

NOVEMBER, 1945

CONTENTS

10

With the Dublishor

With the Langshet	
In & Around the Trade	16
Sell - and Re-Sell	27
"Walk-in" Demand for Radios &	
Appliances	28
Uniform Pricing	28
Ready for Customers	29
Plan Your Selling — Part 2	30
"Glamour" Seller	32
Merchandise Pre-Views — 5	33
New Merchandise	34
Why Radio Sets Are Delayed	38
Accurate Sales & Job Tags	39
Service Market in Industrial Elec-	
tronics — 2	40
Bonded Radio Service	43
Circuit Court	44
DIRECTORY OF RADIO AND APPLI-	
ANCE DISTRIBUTORS	46
Revised Increase Factors	64
New Radio Set Prices	74
New Products	76

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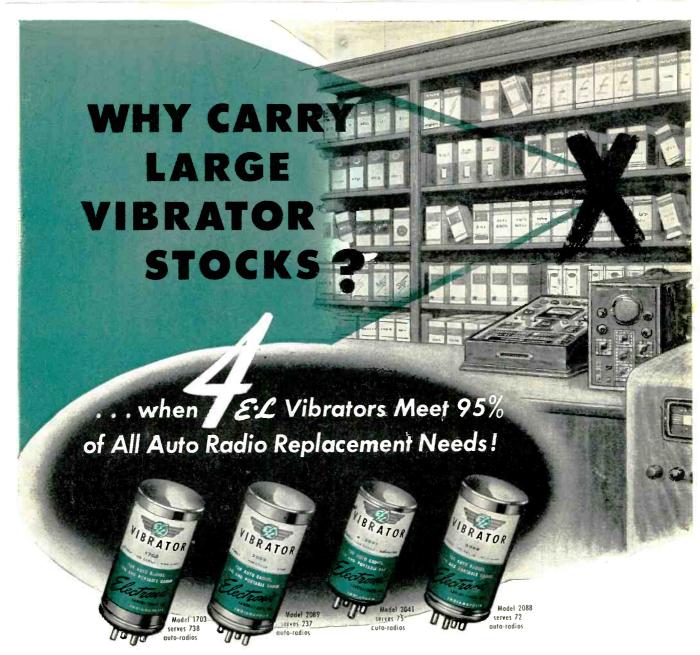
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Originators and Peacetime Marketers of the Celebrated

Lafayette Radio

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Standardization with Higher Quality - This unique E-L Vibrator standardization plan is the product of exhaustive research into auto-radio requirements . . . and of adapting to those requirements E-L models whose design and exclusive features have been perfected and proved in the toughest military applications.

Tests show they provide 33% longer ribrator life, with output and starting voltages held virtually constant at all times.

See Your E-L Distributor - Your E-L distributor will fill your orders as soon as possible, considering the fact that his stocks are limited due to military demands.

With your order, you'll receive your copy of the new E-L Auto-Radio Vibrator Replacement Guide. Designed to hang on your wall, it will tell you instantly which E-L Vibrator to use for most auto-radios as far back as 1936. See your E-L distributor!







the Book of the Year

FOR SERVICEMEN

Get your free copy from your IRC Distributor or write direct

UP TO THE MINUTE DATA ON IRC RESISTORS

Every well-posted Serviceman will want his own personal copy of this new IRC Service Catalog. Profusely illustrated with useful charts, diagrams, tables and product pictures, it contains the kind of material a busy man likes to have right at his fingertips.

Among the interesting features of this catalog you'll find the complete story of the new smaller size BTS (½ watt) and BTA (1 watt) resistors, as well as useful data on the entire BT and BW resistor lines. Now in RMA Preferred Number Ranges as standard Dis-

tributors' stock, these quality resistors are quoted at new low prices.

Also included are pertinent facts on IRC's "Century Line" of volume controls . . . 100 controls that will solve over 90% of your problems in this category. But these are only the highlights of this helpful new catalog. You'll want to see and read it all.

Make sure that you get your copy by stopping in at your nearest IRC Distributor or, if more convenient, drop a card to Dept. 22-J.

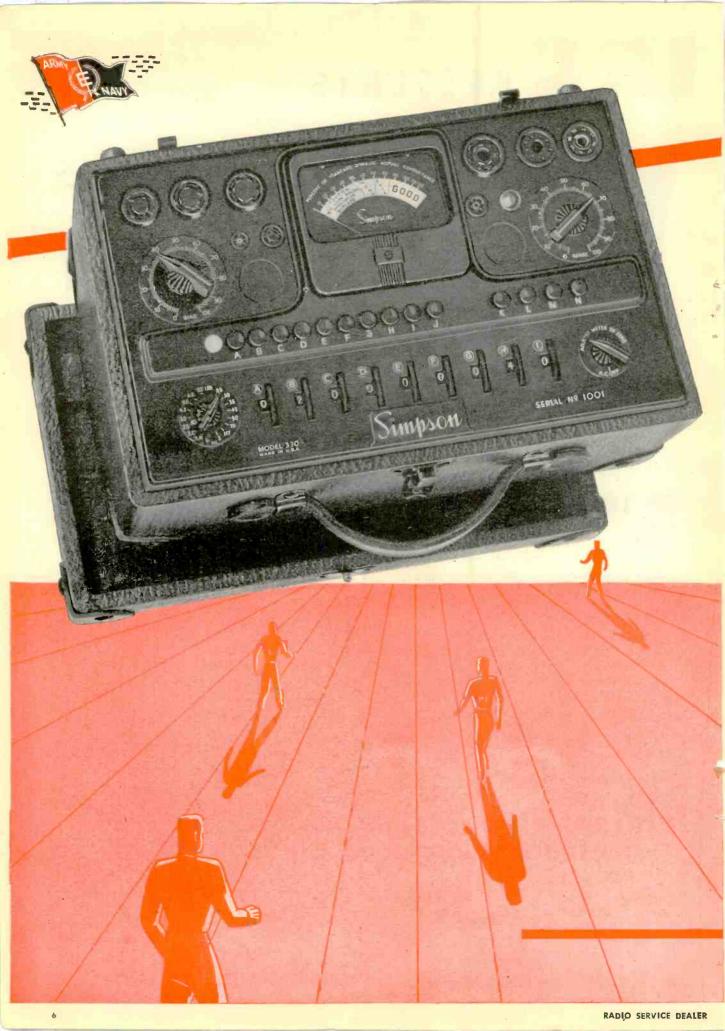
International Resistance Co.

401 NORTH BROAD STREET, PHILADELPHIA 8, PA.



IRC MAKES MORE TYPES OF RESISTANCE UNITS, IN MORE SHAPES FOR MORE APPLICATIONS THAN ANY OTHER MANUFACTURER IN THE WORLD





ith this instrument a new era in tube testing begins

Remember.

As you read below the many other features of this pioneering instrument, remember this: It is a Simpson instrument, with all that implies in creative engineering research, in controlled testing and manufacture. Simpson products are not "assembled", they are engineered and built in the Simpson plant. Practically every component part, from the dial and move-ment to the beautifully designed panels and the bakelite cases and panels, ie made by Simpson. It is this that makes Simpson's the "instruments that stay accurate" with ideas that stay ahead.

SIMPSON MODEL 330 MUTUAL CONDUCTANCE TUBE TESTER

 Size—151/2" x 91/2" x 61/2".
 Case—Sturdy plywood construction, with heavy fabricoid covering, corners trimmed in leather, rustproof hardware -removable cover with slip type hinges.

3. Panel-Heavy molded bakelite, beautiful satin grained finish. All characters. numerals, and dial divisions are engraved and filled in white, insuring long

wearing qualities.

4. Meter — 41/2" rectangular of modern design with artistic four-colored dial indicating good, fair, doubtful, and bad -also "Percentage of Mutual Conductance" scale.

5. Sockets provided for all types of tubes with two spare socket positions.

6. Neon glow tube incorporated to indicate shorted tubes.

7. New simplified revolutionary switching arrangement (see description above).

8. The tube chart provided is arranged for

quickly identifying the tube and setting the controls.

9. Tests tubes with voltage applied automatically over the entire operating range and under conditions approximating actual operation in a radio set.

Ask Your Jobber

The New Simpson Mutual Conductance Tube Tester Brings To Radio Servicemen and Dealers An Entirely New Method of Testing Tubes And A Revolutionary New Switching Arrangement!

Tube manufacturers consider that a radio tube has reached the end of its usable life when it falls to 70% of its rated value. Until now there has never been an instrument to test tubes in percentage terms.

But now here is such an instrument. The new Simpson Model 330 tests tubes in terms of percentage of rated dynamic mutual conductance—a comparison of the tube under test against the standard rated micromho value of that tube. The colored zones on the dial coincide with the micromho rating or the percent of mutual conductance, indicating that the tube is good, fair, doubtful or definitely bad. Thus, at a glance, you can check the tube against manufacturers' ratings. If, for any reason, it becomes desirable to know the actual value in micromhos, the percentage reading may be easily converted.

This is the way tubes should be tested—the way testers always should have worked—but Simpson is first again in bringing this needed development. It tests tubes with voltage applied automatically over the entire operating range, reproducing more completely than ever before the actual conditions under which a tube functions in a radio set. No instrument, not even delicately adjusted laboratory devices, can do this 100%. But this new Simpson Mutual Conductance Tester approaches perfection as never before,

Besides this revolutionary new method, Simpson offers you an equally revolutionary switching arrangement. The circuit is so arranged that, even though there are numerous combinations possible, very few switches require moving to test any one tube. Many of the popular tubes are tested in the "normal" position without moving any of the nine tube circuit switches.

Ten push button switches and nine rotating switches of six positions each provide infinite combinations in tube element and circuit selection. Only a few settings are necessary for the most complicated tube. chart provided is arranged for quickly identifying the tube and setting the

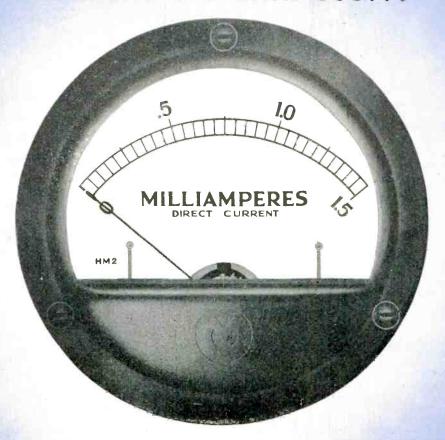
When you have finished a tube test, the Automatic Reset takes over to speed and simplify the next test. Just press the reset button and instantly all switches, both push button and rotary, return to normal automatically!

Here is the test instrument you have had a right to expect from Simpson. With greater flexibility in its circuit and switching arrangement than any other tester can provide, it gives maximum provision against obsolescence. It's the tester of a new era.



NOW AVAILABLE

FOR ALL CIVILIAN USE ...



..... AT NO MORE COST THAN STANDARD UNSEALED INSTRUMENTS

Marion Glass-to-Metal Truly Hermetically Sealed 21/2" and 31/2" Electrical Indicating Instruments

IMPROVED PRODUCT . APPEARANCE . PERFORMANCE . SALABILITY

"Write for details of a Marion Franchise to our Jobber Sales Division"



HYTRON TRANSMITTING AND SPECIAL PURPOSE TUBES

Are you ready to meet the booming amateur and industrial demand for Hytron v-h-f, instant-heating, miniature, and medium power tubes? Check the types briefly described below. Order now those types you need to round out your stock.

HYTRON TRANSMITTING AND SPECIAL PURPOSE TUBES

	Туре	Fila	ment Ro	tings	Plate	Plote	Plate
Description	No.	Volts	Amps.	Туре	Volts	Ma.	Dis.
	3A5	1.4 2.8	0.22	Oxide	150	30	2*
FOM	6J5GTX	6.3	0.3	Cath.	330	20	3.5
AND	10Y	7.5	1.25	Thor.	450	65	15
AND	HY24 HY40	2 7.5	0.13	Oxide	180	20	2
MEDIUM	HY51A	7.5	3.55	Thor.	1000	125 175	40 65
	HY51B	10	2.25	Thor.	1000	175	65
MU	801A/801	7.5	1.25	Thor.	600	70	20
	841	7.5	1.25	Thor.	450	60	15
TRIODES	864	1.1	0.25	Oxide	135	5	_
	1626	12.6	0.25	Cath.	250	25	5
	HY30Z	6.3	2.25	Thor.	850	90	30
HIGH-MU	HY3 IZ	6	2.55	Thor.	500	150*	30*
mon-mo	HY40Z	7.5	2.6	Thor.	1000	125	40
TRIODES	HY51Z	7.5	3.55	Thor.	1000	175	65
	HY 123 1Z	6	3.2	Thor.	500	150*	30*
		12	1.6				
	2C26A	6.3	1.15	Cath.	3500	NOTE	10
V 11 F	HY75	6.3	2.6	Thor.	450	80	15
V-H-F	HY114B	1.4	0.155	Oxide	180	12	1.8
TRIODES	HY615	6.3	0.175		300	20	3.5
IKIODES	955	6.3	0.15	Cath.	200	. 8	1.8
	E1148 9002	6.3	0.175	Cath.	300 200	20	3.5 1.8
	9002	0.3	0.15	Corn.	200	0	1.0
	2E25	6	0.8	Thor.	450	75.	15
	6AR6	6.3	1.2	Cath.	630	60	10
	6L6GX	6.3	0.9	Cath.	500	115	21
BEAM	6V6GTX	6.3	0.45	Cath.	350 425	60 60	13 15
TETRODES	HY60 HY61/807	6.3	0.5	Cath,	600	120	25
TETRODES	HY65#	6	0.8	Thor.	450	75	15
AND	HY67	6	4.5	Thor,	1250	175	65
		12	2.25				
PENTODES	HY69	6	1.6	Thor.	.600	100	30
	HY 1269	6	3.2	Thor.	750	120	30
	1625	12.6	0.45	Cath.	600	120	25
	837	12.6	0.7	Cath.	500	80	12
ACORNS	1.45	_	0.175		C1	. «	
MINIA-	6AK5 954	6.3	0.175		Sharp cu		
	9001	6.3	0.15	Cath.	Sharp cu		
TURES	7001	0.0	0.10	Com,	_		
					Peak	Max.	lnv.
				s Type	Plate	D.C.	Peak
	No.	Volts	Amps	_	Ma.	Ma.†	Pot.
RECTIFIERS	HY866 Jr.	2.5	2.5	Mer.	500	250	5000
	866A/866 1616	2.5	5.0	Mer. Vac.	1000	500 260	6000
	6AL5	6.3	0.3	Vac.	60	20	460

ONLO	0.5	¥ 00.		20	400
Туре	Average Operating	Oper	rating Na.	Av. Volts	Min. Starting
No.	Voltage	Min,	Max.	Reg.	Voltage
OA2	150	5	30	2	185
OB2	108	5	30	1	133
OC3/VR105	108	5	40	2	133
OD3/VR150	150	5	40	3.5	185

*Both sections of twin triade. #Discontinued; 2E25 supersedes and replaces. †Current for full wave.

NOTE: Not recommended for C.W. Consult Hytron Commercial Engineering Dept. for data.



HYTRON RADIO & ELECTRONICS CORP., SALEM, MASS.

GASEOUS VOLTAGE REGULA-TORS

with the publisher....

FLASH — OPA MAXIMUM PRICE REGULATION 599 became effective Oct. 30, 1945. Every dealer and distributor should obtain a copy, read it carefully and abide by the new laws. One stipulation in MPR 599 is this —

MPK 599 is this — "On and after Nov. 29, 1945 no person, except a mail order house may display, offer for sale, sell or deliver at retail any new radio (phonograph, p-a system, record player) unless there is attached to it a retail ceiling price tag containing all information required under MPR 599 Art. IV-Sect. 13 (a)." The price tags alluded to must be provided by the manufacturer of the equipment. A full analysis of the new regulation will appear in RSD's next issue.

Caveat Emptor!

LITERALLY translated from the Latin caveat emptor means "Let the Buyer Beware". It's a timely phrase to bear in mind these days, what with all the new brand names and new products being offered. Sure, being ordinary people, we all want to buy lots of things......but, the desire to buy should be tempered with good judgement, else we're liable to get a bad licking from the

Merchandise By Christmas?

YES, there will be radios and appliances for sale by Christmas—Christmas 1946, not 1945, from the looks of things. Don't get us wrong! We're not happy about it, but facts are facts, and you may as well know the true picture.

Millions of dollars worth of radios and appliances that the public would like to buy right now, and in the months to come, is not going to be produced until there is a closer meeting of the minds between OPA and manufacturers. At this writing the two groups are miles apart in their respective ways of thinking. President Truman's radio speech of October 30th offers no cause for elation to anyone in the radio-appli-

Is A National Organization Wanted?

THERE have been several national associations of radio servicemen. None were genuinely successful but local associations or chapters of associations have been and still are. The question now arises: "Should there be a National Association, and if so, what should it encompass?" To prevent you from believing that we have propounded a leading question that deserves an affirmative answer, let us restate it in another fashion:" "Would the public AND the radio industry itself benefit from the existence of a National Association comprised of radio and appliance dealers AND firms engaged in repairing radios and appliances?" Note, please, that in the latter question we propose to include dealers who might not even indulge in repair work. We also include employees and employers, as stated before, scattered around these United States there are many small, progressive Associations or groups of radio and appliance dealers and service organizations. Being purely localized, they find it beneficial to meet on stated occasions, thrash out their problems, compromise and return to their labours. The individuals and the firms they represent seem to profit from closer cooperative methods. The communities they serve seem to benefit too.

"slickies" who always seem to crop up in times like these when old, established, legitimate manufacturers are having reconversion heartaches.

A radio dealer of unquestioned reputation the other day said a most trite thing on this very subject. He said, "Did you hear, So-and-So Mfg. Co. is running a lot of help wanted advertising. They're trying to hire engineers who can invent the things they've been promising to sell soon."

ance business. In effect the President reiterated what we said in these columns last month, to wit,—OPA wants prices held down to prevent inflation, at the same time granting manufacturers price increases so low in ratio to increased production costs that they simply cannot afford to make their items except at a substantial loss per unit. Naturally manufacturers are not in business to lose money, so they are doing nothing. The President's proposal that Industry should proceed with production for a six month's test period before requesting further price increases, in case same are justified, is certainly not fair because he does not have the authority to also assure subsidies to offset financial losses if there are any. A game of all-take and no-give is no fun.

But the question as to whether or not a National tie-up between all of these independent associations should be attempted again can only be answered by all of you who are representative of the industry. And, the independent dealer or serviceman must be included in the voting because they are a basic part of the whole.

The "movement" as to whether or not radio repairmen should be licensed has not died by any means. The potential evils of licensing ties up with the present ado about forming another National Association. Your opinions are wanted! Write briefly and express your views, pro or con, on the subject. Let's find out once and for all whether or not you want to have a National Association. And bear this in mind: if there ever is such a National Association, it is quite likely that the annual dues per member, regardless of whether he is a small independent serviceman or the owner of a huge retail establishment, will run close to \$50 per year or more for the first few years at least.

S.R. lowar

THE NEW

Stromberg-Carlsons

START ROLLING SOON!

WHOLE new line of Stromberg- ${f A}$ Carlsons—and just wait till you see and hear them! New in their engineering. New in their cabinet designs. New in their price range. New in their broader scope of models. They'll give new meaning to the old saying, "There is nothing finer than a Stromberg-Carlson!"

All new Stromberg-Carlsons take advantage of every latest engineering advance in the science of electronics. FM sets have both present and newly approved tuning ranges for clear and satisfactory reception of international short wave, precision tuning is made easy with spread-band dials. Floor models employ speaker systems with either full-floating suspension or Carpinchoe speaker and the famous acoustical labyrinth. Phonograph models use newly designed record-changers that perform to entirely new standards of speed

and simplicity of operation. All new Stromberg-Carlsons have builtin antenna systems for all tuning ranges on their dials. Special plugin provision is made in many models for the incorporation of Stromberg-Carlson wire-recording and reproduction.

Almost everyone has wanted even if he couldn't afford - Stromberg-Carlson quality, Stromberg-Carlson perfection of reproduction. The new line lets authorized dealers meet practically any customer's demand with a model expressly suited to his own individual taste and needs. Yes, today, Stromberg-Carlson is the ideal radio for the main radio in any home!

Make Stromberg-Carlson the main radio in your showroom; cash in on the heavily advertised Stromberg-Carlson main radio theme. You'll find it the radio of real profitopportunity.

STROMBERG-CARLSON

ROCHESTER 3, NEW YORK

RADIOS, RADIO PHONOGRAPHS, TELEVISION, SOUND EQUIPMENT AND INDUSTRIAL SYSTEMS TELEPHONES, SWITCH BOARDS AND INTERCOMMUNICATION SYSTEMS

NOVEMBER, 1945



THE NEW WORLD — 1121-M2 . . . New Automatic Radio Phonograph designed for tomorrow's living.



THE AUTOGRAPH - 1135 PL. fect Automatic Radio Phonograph in a cabl-net of classic 18th Century design.



THE DYNATOMIC — 1101HB...New sleek table radio with unique portability feature.



THE BEAUX ARTS — 1110 PTW ... New, amazingly compact, automatic table radio-phonograph in smart modern design.



THE HEPPLEWHITE - 1121 PG...N automatic radio-phonograph in a beautifully finished cabinet of Hepplewhite inspiration.

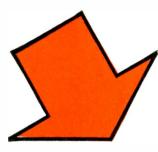
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NEW SET DELIVERY

WRITE, WIRE OR PHONE YOUR

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HERE IS THE COMPLETE LIST BY STATES - ALPHABETICALLY



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Nelson Radio & Sup.Co. 263 St. Louis St. Mobile, Alabama

ARIZONA

Radio Specialties Co. 401 West Jackson St. Phoenix, Arizona

ARKANSAS

Home Appliance Distributors of Ark. 600 West 7th Street Little Rock, Ark.

CALIFORNIA

Davis Radio Co. 498 North Fresno St. Fresno 3, California

Western Auto Sup. Co. 1100 South Grand Ave. Los Angeles 54, Calif.

Kierulff & Company 1839 South Flower St. Los Angeles 15, Calif.

C. G. Hadicke Co. 1812 Van Ness Ave San Francisco 9, Calif.

COLORADO

Boyd Distributing Co. 20 West 13th Ave. Denver 4, Colorado

CONNECTICUT

Post & Lester Co. 10 Chestnut St. Hartford 5, Conn.

D. C.

Simon Distributing Corp. 615 Pennsylvania Ave. Washington 4, D. C.

Thurow Radio Distr. 115-117 S. Franklin St. Tampa 1, Florida

GEORGIA

Edwards-Harris Co. 258 Peachtree St., N. E. Atlanta 3, Geor a

ILLINOIS

Motorola-Chicago Co. 1330 W. Washington Bl. Chicago 7, Illinois

Lofgren Distr. Co. 1202 Fourth Ave. Moline, III.

Seltzer Company 604 Fulton St. Peoria 2. III.

INDIANA

Wall Distributing Co. 241 Pearl St. Fort Wayne 2, Ind.

Radio Distributing Co. 1013 N. Capitol Ave. Indianapolis 4, Ind.

Radio Distr. Co. Monroe & Carroll Sts. South Bend, Ind.

IOWA

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Gifford-Brown, Inc. 1216-18 Grand Ave. Des Moines, Iowa

Duke's Radio Co. 114 W. Fourth St. Sioux City 6, Iowa

KANSAS

McGrew Distr. Co. 1312 E. Douglas Ave. Wichita 7, Kan.

KENTUCKY

Falls City Supply Co. 315 Roland Ave. Louisville 3, Ky.

Strickland Distr. Co. 615 Jefferson St. Paducah, Ky.

LOUISIANA

Higgins Industries, Inc. Appliance Division 521 City Park Ave. New Orleans 19, La.

Dunckelman-Pace 1417 Louisiana Ave. Shreveport, La.

MAINE

Radio Service Lab. 45 Haymarket Sq. Bangor, Maine

Radio Servite Lab. 45A Free St. Portland 3, Maine

MARYLAND

Simon Distributing Corp. 615 Pennsylvania Ave. Washington 4, D. C.

MASSACHUSETTS

Metro Distribs., Inc. 884 Commonwealth Av. Boston 15, Mass.

MICHIGAN

4490 Cass Ave. Detroit 1, Mich. Republic Distr. Co. 72-74 N. Division Ave. Grand Rapids, Mich.

Ingram Distr.Co.

Offenhauer Co. 227 W. Washtenaw St. Lansing, Mich.

Radio Sales Co. 816 East Genesee A Saginaw, Mich.

MISSISSIPPI

Higgins Industries, Inc. Appliance Division 521 City Park Ave. New Orleans 19, La. Mills-Morris Co. 171 S. Dudley St.

MINNESOTA

Forster Distr. Co. 1122 Harmon Pl. Minneapolis 3, Minn.

Memphis 1, Tenn.

MISSOURI

Motor Radio Co., Inc. 2440 Charlotte St. Kansas City 8, Mo. Disco Distr. Co. 2843 Washington Blvd. St. Louis 3, Mo.

MONTANA

Pasley & Spitzer Co. 20 N. 33rd St. Billings, Mont.

NEBRASKA

Mueller & Selby Co. 2549 Farnam St. Omaha 2, Nebr.

NEVADA

Nevada Distr., Inc. P. O. Box 1047 Reno, Nevada

NEW HAMPSHIRE

Radio Service Lab. 1191 Elm St. Manchester, N. H.

NEW JERSEY

Kearns Auto Radio Serv. 25 North Albany Ave. Atlantic City, N. J. Motorola-New Jersey, Inc. 177 Central Ave. Newark 4, N. J.

NEW YORK

Hudson Valley

Asbestos Corp.

170 Central Ave. Albany, N. Y. Battery & Starter Co., Inc. 2505 Main St. Buffalo 14, N. Y. Motorola-New York, Inc.

33 West 60th St. New York City 23, N. Y. Kemp Equipment Co.

39-57 Mt. Hope Ave. Rochester 7, N. Y.

NEW MEXICO

Oakes Batt. & Elec. Co. 423 Texas St. El Paso, Tex.

Mitchell Products 495 W. Water St. Santa Fe, N. M.

NORTH CAROLINA

Freck Radio & Sup. Co. 38 Biltmore Ave. Asheville, N. Car.

Carolina Appliance Co. 208 E. Fifth St. Charlotte 1, N. Car.

Tire Sales & Serv. Co. 401 Hillsboro St. Raleigh, N. Car.

NORTH DAKOTA

Fargo Paper Co. 26-28 Eighth St., No. Fargo, North Dakota

Lockie & Glenn 2110 Gilbert Ave. Cincinnati 6. O.

The M & M Co. 5200 Prospect Ave. Cleveland 3, O. The M & M Co.

214 E. Gay St. Columbus, O. Moore Equipment Co. 226 W. Third St.

Dayton 2. O. Christian-Sheidler Co. Adams & 20th Sts. Toledo, O.

OKLAHOMA

Wm. Mee Co. 120 E. Grand Ave. Oklahoma City, Okla.

OREGON

C & H Supply Co. 1316 S. W. Washington St. Portland 5. Ore.

PENNSYLVANIA

Dibert Radio Distr. Co. 1802-11th Ave. Altoona, Pa. Specialty Sales Co.

116 W. Chestnut St. Lancaster, Pa. Goldner Distr. Co.

46-50 N. 5th St. Philadelphia 6, Pa. Moto Radio Distr. Co. 5732 Baum Blvd.

Pittsburgh 6, Pa. Big Boys Auto Parts Co. 123-129 S. Second St. Sunbury, Pa.

RHODE ISLAND

I. Feldman Co. 186 Broadway Providence 3, R. I.

SOUTH CAROLINA A. H. Wherry, Jr.

Chester, S. Car.

SOUTH DAKOTA

Graff Motor Sup. Co. 122-24 W. Seventh St. Sioux Falls. S. Dak,

TENNESSEE

Bryant & Trimble 406 Broad St. Chattanooga, Tenn.

Bryant & Trimble 324 W. Magnolia St. Knoxville, Tenn.

Mills-Morris Co. 171 S. Dudley St. Memphis 1, Tenn.

Currey's 17th & West End Ave. Nashville 3, Tenn.

McDonald Auto Sup. Co. 2nd & Polk Sts. Amarillo, Tex.

Porter Burgess Co. 815 N. Pearl St. Dallas 1, Tex.

Oakes Batt. & Elec. Co. 423 Texas St. El Paso, Tex.

Fort Worth Battery Co. 615 Lamar St. Fort Worth, Tex.

Moore Bros. Co. 1515 Milam St. Houston, Tex.

Krisch-Delavan Co. 801 Main Ave. San Antonio 2, Tex.

UTAH

S. R. Ross 1212 S. State St. Salt Lake City 4, Utah

VERMONT

Radio Service Lab. 1191 Flm St Manchester, N. H.

VIRGINIA

Ashman Distr. Co. 807 Granby St. Norfolk 10, Va.

Lee Distr. Co. 1126 North Blvd. Richmond 20, Va.

Western Va. Sales Co. P. O. Box 1506 Roanoke, Virginia

WASHINGTON

Motorola Distr. Co. 620 Eastlake Ave. Seattle 9, Wash.

WEST VIRGINIA

Wilson Radio Distr. Co. 1116 Central Ave. Charleston 4, W. Va.

Jones-Cornett Elec. Co. Welch, W. Va. .

WISCONSIN

Electro-Pliance Distr.. Inc. 2458 W. Lisbon Ave. Milwaukee 5, Wis.



In & Around the Trade

Being a condensed digest of production, distribution and merchandising activities in the radio and appliance trade.



First postwar radio set made in RCA plant at Bloomington, Indiana, is presented to Frank M. Folsom, RCA Victor head (left), by J. A. Milling, director of manufacturing (right) and Joseph B. Elliott, general manager, RCA home instrument division (center). Table models slated for delivery in October, console sets in November.

RADIO'S SILVER ANNIVERSARY

The entire radio industry this month joined forces in one of the greatest single events in the history of the American system of broadcasting, announces R. C. Cosgrove, president RMA. More than 250 radio manufacturers and 25,000 radio dealers, who jointly produced, sold and serviced the 60,000,000 receivers now in the hands of 95 per cent of the people, linked efforts with the National Association of Broadcasters, the five networks and 957 individual stations in nationwide and local observances of National Radio Week, Nov. 4 to 10, which brought a new high to public interest in radio and its progress in the last quarter century.

Following a resolution adopted by RMA, the manufacturers and dealers arranged numerous local Silver Anniversary celebrations which ranged all the way from special displays in dealer showrooms to cooperation with stations in special broadcasts telling of radio's 25 years of progress and featuring appearances of radio stars, past

and present. The resolution, on which these events were based, reads:

"Whereas, the Radio Manufacturers Association, a group representing the companies producing radio receiving sets for the home, desire to honor, to congratulate, and to express esteem for the Broadcasting Industry in such fashion that it may be shared by each one of the industry's more than 900 stations . . ." In all cities and towns where it was possible, local observances were tied in with the introduction of new radios and were heightened by interest in FM and Television, along with 1946 standard broadcasting receivers.

Other tie-ins planned by stations and dealers, frequently in cooperation with each other, included:

Displays of original models of receiving sets, first introduced by the manufacturers, in combination with displays of the new sets.

Use of records and recordings to feature contrasts in 25 years of radio broadcasting programs, and to recall

popular stars of the last 25 years, many of whom are still nationally famous.

Dramatizations of the radio industry's vital role in the war, one feature of which was the production by radio manufacturers of some \$7½ billion worth of radio and communications equipment.

Presentations highlighting the histories of individual stations.

Silver Anniversary tie-ups with many different types of programs, including interviews, women's cooking and style programs, man-in-the-street interviews and many others.

Silver anniversary parties in dealers' showrooms and broadcasting studios.

Electric Toys for Christmas

Elec-Toy, the electronic toy division of Electronic Laboratories, Indianapolis, Indiana, has developed four completely new models of electric toys, announces William W. Garstang, president. Aspiring toward different age groups, the electric toys will be available by the Christmas season at moderate prices.

The electric cannon and black light kit are for children beyond kindergarten age. The Utiliphone, a two-way inter-communications system, can be utilized for practical uses about the house by children as well as their parents

The Buzz-Ball is designed for older children and adults.



The men, l. to r.: Lt, Col. H. L. Lister, Lt. Com. W. J. Warburton; Harry Friedlander and Leonard A. Meyerson of Eastern Amplifier Corp.; Major M. J. Roberts. The occasion: Presentation of Army-Navy "E" award flag. Over 400 persons attended dinner & dance, at Concord Plaza Hotel.

Radio Parts and Equipment Trade Show

The board of directors of the newly formed Radio Parts and Electronic Equipment Shows Inc. announce the 1946 trade show, May 13th through 16th (Monday through Thursday) at Chicago, the site of many previous radio trade shows was selected because of its geographically central location

[Continued on page 16]



featuring . . .

HUM - FREE OPERATION



PROVIDES

"A"

"B"

1.5v at 200 m.a. 1.35v at 250 m.a. 1.55v at 300 m.a. 1.35v at 350 m.a. 90v at 13 m.a. 101v at 8.5 m.a.

of 4, 5, or 6 tube, 1½ volt battery farm or portable radios from 105-125 volt, 50-60 cycle lines.

Two section filter, composed of three very high capacity condensers, and two oversized iron core chokes in the "A" supply: — and two high capacity condensers and an oversized choke in the "B" supply positively block out hum.

Universal sockets for battery plugs.

Fits in 99% of all portables.

Circuit designed for optimum voltage regulation and changes in line voltages.

Weighs 4½ Pounds — and every ounce essential to topnotch performance.

O.P.A. APPROVED

PRICE # \$15.00

Jobbers — write for details . . . Dealers — See your jobbers

GENERAL TRANSFORMER CORP...

1250 W. Van Buren St., Chicago 7, III.

NOVEMBER, 1945

Wait for these new



Radio Service Instruments

If It Isn't A Hickok Indicating
Micromhos It's Not
Dynamic Mutual Conductance

Your patience in waiting for these new 1946 HICKOK models will be richly rewarded for these new HICKOK tube and set testers make still closer tests, with finer accuracy, rejecting tubes that might get by with an ordinary tester.

Now you have 7 selector switches instead of 2. That aims to prevent obsolescence. Isn't that worth waiting for?

What's more, Dynamic Mutual Conductance, indicated in Micronthos, is a duplicate of the manufacturers' method of checking when he makes the tubes. Remember, if it isn't a HICKOK Indicating Micromhos, it isn't Dynamic Mutual Conductance.

The new Electronic Volt-Ohm-Capacity Milliammeter Model 203 reads as low as 1.0 mmf and up. It will measure at frequencies to over 10 mc with no frequency error and the ohm meter vill measure up to 10,000 megohms.

Keep patiently in touch with your jobber and you will soon get the instruments that are held in highest esteem.

THE HICKOK ELECTRICAL

Model 534 All Purpose Tube and Set Tester

Model 532 Fube Tester

> 10533 Dupont Avenue Cleveland 8, Ohio

INSTRUMENT CO.



In Trade

[from page 14]

and availability of the Hotel Stevens facilities.

The trade show corporation is represented by eight directors appointed by the four sponsoring organizations, two from each group. These men, all well known among the trade are:

From Parts Division of Radio Manufacturers Association: Leslie F. Muter—The Muter Company, Chicago. Jerome J. Kahn—Standard Transformer Corporation, Chicago.

From National Electronic Distributors Association: W. O. Schoning— Lukko Sales Corporation, Chicago. Sam Poncher—Newark Electric Company, Chicago.

From Association of Electronic Parts and Equipment Manufacturers: H. W. Clough—Belden Manufacturing Company, Chicago. J. A. Berman—Shure Brothers, Chicago.

From Sales Managers Club, Eastern Division: R. P. Almy—Sylvania Electric Products Inc., Emporium, Penn. Charles Golenpaul — Aerovox Corporation, New Bedford, Mass.

Herb Clough, who ably served as Chairman of the 1944 Radio Industry Conference, is president. The other officers are: Charlie Golenpaul, vice president; Sam Poncher, treasurer; Jerry Kahn, secretary.

The respective chairmen and membership of the various committees selected from the board and sponsoring groups to handle the many activities will be announced soon. As soon as the services of a show manager can be obtained, a headquarters office will be established in Chicago.

Exhibitors at the show will be limited to members of the four sponsoring groups. No radio sets will be displayed. Application forms are being prepared and will be mailed to all sponsor members soon. The October, 1944 Industry Conference which operated under wartime conditions pulled an attendance of approximately 1,700 members of the trade including 160 booth exhibitors. Indications are that this 1946 show with interest in peacetime merchandising at its peak will attract a much larger number.

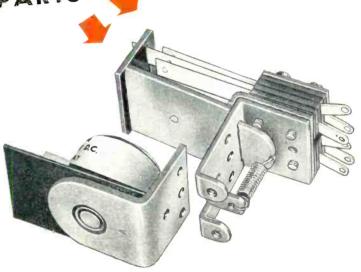
Stewart-Warner Sets

Stewart-Warner Corporation began a "pilot run" of radio sets in September on what is believed to be the longest continuous-flow production line in the industry. From four parallel radio assembly line the company expects to

[Continued on page 18]



★Two basic parts — a coil assembly and a contact assembly — comprise this simple, yet versatile relay. The coil assembly consists of the coil and field piece. The contact assembly consists of switch blades, armature, return spring, and mounting bracket. The coil and contact assembly are easily aligned by two locator pins on the back end of the contact assembly which fit into two holes on the coil assembly. They are then rigidly held together with the two screws and lock washers. Assembly takes only a few seconds and requires no adjustment on factory built units.



On Sale at Your nearest jobber NOW!

See it today! . . . this amazing new relay with interchangeable coils. See how you can operate it on any of nine different a-c or d-c voltages — simply by changing the coil. Ideal for experimenters, inventors, engineers.

TWO CONTACT ASSEMBLIES

The Series 200 is available with a single pole double throw, or a double pole double throw contact assembly. In addition, a set of Series 200 Contact Switch Parts, which you can buy separately, enables you to build dozens of other combinations. Instructions in each box.

NINE COIL ASSEMBLIES

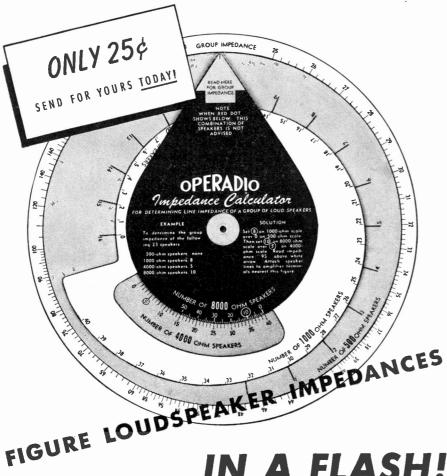
Four a-c coils and five d-c coils are available. Interchangeability of coils enables you to operate the Series 200 relay on one voltage or current and change it over to operate on another type simply by changing coils.

Your jobber has this sensational new relay on sale now. Ask him about it Or write for descriptive bulletin.





A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY



IN A FLASH!

You'll save time and money on loudspeaker installations with the handy Operadio IMPEDANCE CALCULATOR ... a simple twist of a disc gives you instant answers to puzzling group impedance problems! You quickly match loudspeaker lines to the amplifier for any sound system covering 500, 1000, 4000, 8000, or 16,000 ohm loudspeakers. No rule-of-thumb guesswork... no involved mathematical formulas. Handy 5" diameter, fits your pocket or sales kit. Heavily varnished cardboard. Send coupon with 25¢ (not stamps) today!

OPERADIO Sound Equipment

	MANOTACIONITO	CO., DEPT. RS-11,	SI. CHARLES,	ILL.
	Enclosed is 25c in coin your "IMPEDANCE CA	(stamps not accepted). LCULATOR" by return n		
Name				
Address				
City		Sfafe		

In Trade

[from page 16]

turn out 5,000 sets daily when maximum production is attained.

The run of one of the four production lines initiates production of 14 post-war radio models. This number includes table models, consoles and radio-phonograph combinations. They are not an assembly of left-over parts of pre-war models but is actual production-line output of post-war radios, under regular assembly and materials-flow conditions. Some of each of the 14 post-war models were included in the pilot run.



Photos by Bachraci

Lester L. Kelsey

appointed a vice president of the Hallicrafters Co.; also general manof the Echophone Division.



Paul H. Eckstein

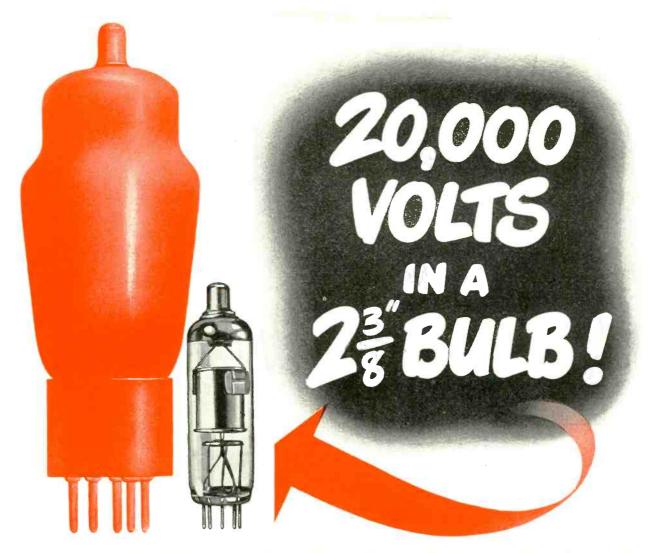
appointed sales manager of the Echophone Division of the Hallicrafters Co., Chicago.

Sentinel Production

With an estimated production of more than 3,000 radio sets per day, the new Sentinel Radio Corporation plant is now in course of construction, according to E. Alshuler, president. Occupying a 9-acre tract in western Evanston, the new plant will be housed in a single modern building of 125,000 square feet of floor space.

[Continued on page 20]

RADIO SERVICE DEALER



ANOTHER "FIRST" BY NATIONAL UNION RESEARCH LABORATORIES

AN example of how war-time research by National Union engineers is helping to lay the foundation for vastly improved post-war Television, FM and radio reception, is this new half wave high vacuum rectifier—the NU 1Z2.

Here is a miniature with the voltage handling capabilities heretofore possible only in full size tubes. For a high voltage rectified supply in the operation of radar and television equipment, the NU 1Z2 saves space—operates with increased efficiency—is exceptionally rugged. Its low filament power consumption suggests many new fields in circuit design and application, especially to the "ham" and experimenter.

For the distributor and service dealer, such original N. U. electron tube developments are creating new opportunities for profitable N. U. Tube replacement sales—today and in the future.

National Union 1Z2 High Voltage Rectifier

Inverse peak anode voltage- max
Peak anode Current 10 ma.
DC Output Current 2 ma.
Filament Voltage 1.5 volts
Filament Current 300 ma.
The NU 1Z2 is designed to withstand shocks in excess of 500 G's.
Maximum overall length 2.70"
Maximum seated height 2.37"
Maximum diameter
Bulb
Base Miniature Button 7 pin
Mounting position Any

NATIONAL UNION RADIO AND ELECTRON TUBES

NATIONAL UNION RADIO CORPORATION . NEWARK 2, N. J.

NOVEMBER, 1945

SPEED UP REPAIRS WITH THESE G-C AIDS!



G-C Dial Belt Kits



G-C Dial Drive Cables

G-C has a complete line of Dial Drive replacement cables. Available by the spool for prompt servicing of all sets. Every Serviceman should have a complete assortment. Best quality—extra strength. Preferred by Radio Men everywhere.



The best cement for Speaker and Radio Work Especially suitable for cementing replacement cones and repairing rattling and torn cones. Also used on glass to seal adjustments, hold wires in place etc. Dependable, wipration of water-proof and fast drying.

Write for New G-C Catalog No. 116 and G-C Dial Belt and Service Book

Immediate Delivery on all G-C Products



Order From Your Radio Parts Jobber
ALWAYS ASK FOR G-C PRODUCTS

GENERAL CEMENT MFG. CO.

ROCKFORD, ILLINOIS

SUBSCRIBE TO "RSD"

On A Money-Back Guarantee Basis
12 ISSUES \$2
24 ISSUES \$3



In the U. S. A. & Possessions — In Canada & Foreign Countries \$3 per yr.

The nation's finest radio service dealer establishments subscribe to "RSD" because it keeps them posted on new products — new merchandising methods — new servicing techniques.

"RSD" charges slightly more for a subscription than other radio trade papers, but it gives better value — exclusive and timely articles by experts — more pages of text material.

Subscribe today on a money-back-if-you-don't-like-it basis. If after reading 3 issues of "RSD" you find it not worth the subscription price — merely ask for a cash refund in full and you'll get it.

USE COUPON PRINTED BELOW

COWAN PUBLISHING CORP. 342 Madison Ave., New York 17, N. Y.

The state of the s	
Gentlemen: Please send the next issues of RADIO SERVICE DEALER. Our remittance in the sum of \$ is enclosed.	
Name	
Address	
City Zone State	
Firm Employed By:	
Position or Title	

In Trade

[from page 18]



Charles M. Sherwood (left) Stromberg-Carlson's eastern district manager, watches Benjamin Gross, president of Gross Distributors, sign an order for 1916 quota of S-C home radio receivers. Distributor has sold \$65,000,000 worth of these sets (retail value) since 1924.

Stromberg-Carlson Staff

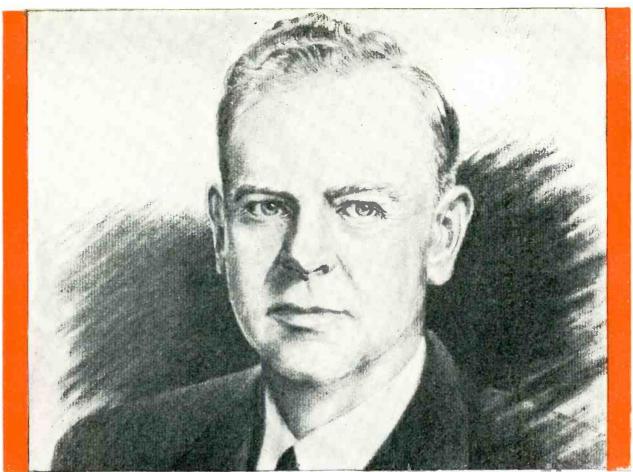
Stanley H. Manson, manager of public relations of the Stromberg-Carlson Company, announced recently two new appointments to his staff. Appointed to the new positions, made in line with the department's expanded scope of activities, were Frederic W. Haupt, as assistant advertising manager, and William D. O'Toole. as managing editor of the company's employee publication, "The Speaker."

More Firms to Make Wire Recorders

The licensing of four additional manufacturers, including Bendix Aviation Corporation, to produce Armour magnetic wire sound recorders is announced by Lucius A. Crowell, president of Wire Recorder Development Corporation, 135 South LaSalle Street. Chicago, which handles the licensing program for the Armour Research Foundation of Illinois Institute of Technology. Other new licensees are Bang and Olufsen. Copenhagen, Denmark; Pyrox Proprietary, Ltd., Melbourne, Australia; and the St. George Recording Equipment Company, New York, N. Y. (For full description, see "H'ire Recorder Development," RSD. May, 1945).

Bendix Aviation Corporation, which is reported to have plans to manufacture 1,000,000 home radios yearly as a part of its peacetime reconversion program, expects to produce magnetic wire sound recorders in seven different fields of application. In addition to incorporating wire recorders in home radio receiving sets, Bendix will manufacture.

[Continued on page 70]



Portrait of Randolph C. Walker by John Cirlian

Engineers of Victory NOW SERVE MEN AT PEACE

The creative engineering which armed our fighting men for Victory has no less a responsibility in the years of peace ahead. Now that the war is won, we have the job of making this a better world.

AIREON produced huge quantities of communications and radar equipment and other machinery for waging war. Its achievements were equal to its heavy responsibilities, and its workers established an outstanding record of performance.

AIREON enters peacetime production with a notable engineering organization, highly skilled personnel and great confidence in the future. We have developed many products which will contribute to better living, for the manufacture of which all 15 AIREON plants will continue in production.

In order to extend our usefulness we recently established an experimental laboratory in Greenwich. AIREON's creative engineering in radio communications, electronics, musonics and hydraulics will team with production proficiency in contributing devices for future service.

In peace, as in war, AIREON will stand for quality and performance.

Randolph C. Walker PRESIDENT

Cinaudagraph Speakers AKES

A DIVISION OF Aireon

3911 SOUTH MICHIGAN AVENUE, CHICAGO

Want a share of Leadership?



Now RCA Offers a Complete Line of Dry Batteries, Too

In Metal, Miniature, or Glasse THE FOUNTAINHEAD OF MODERN TUBE DEVELOPMENT IS RCA

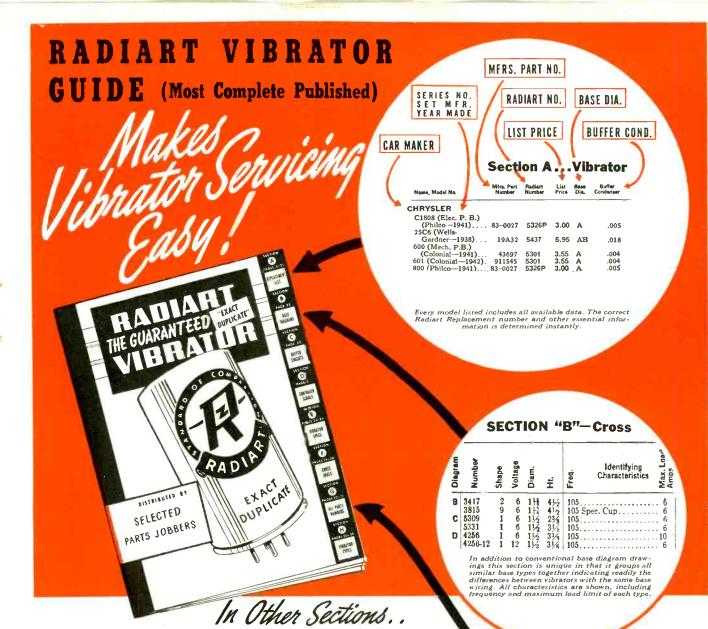
Buy Victory Bonds

and Keep Them

Listen to "The RCA Victor Show." Sundays, 4:30 P. M., EST, NBC Network

RADIO CORPORATION OF AMERICA

LEADS THE WAY: In Radio .. Television .. Tubes ... Phonographs ... Records .. Electronics



Section "C"—Buffer Condenser Values and Circuits.

Section "D"— Container Shapes permitting an easy method of "visual" identification.

Section "E"— Complete Vibrator Specifications arranged numerically by number. Contains necessary data not published in any other replacement guide. Section "F"—Long a favorite with users of this guide. The only cross-index of all other manufacturers or merchandisers of vibrators, converting their type numbers to the Correct Radiart Replacement.

Section "H"— Numerical Listing of Radiart Vibrators. Furnishes complete information as to all models serviced by each unit. Also advises year each type was originated.

Auto Radio Service Dealers:

Obtain this Guide free of charge from your Radiart Distributor. Ask him to furnish you with a stock of the popular 12 types of Radiart Vibrators each of which is guaranteed to CORRECTLY service the applications listed for it in this guide. With these 12 types you can satisfy nearly all of the "Demand" types. But — RADIART is a complete line and your Radiart Distributor renders a complete service and can quickly furnish all of the necessary slower moving correct Radiart Replacement Vibrators as well.

Manufactured by the makers of RADIART Rust Proof Aerials.

SECTION "G" — C Radiart and Original Equ.

Original Equipment		Original Equipment		Original Equipment
Part	Radiert	Part	Radiart	Part
Nos.	Nas.	Nos.	Nos.	Nos.
75	3283	1974	5301	8539
80-161	5421	2080	3417	8540
82B	5341M	2110	3417	8541
83-0017	5326P	2269	5413	8542
83-0025	5326P	2404	5340M	8601
83-0026	5326P	2501	5411	8602

Another Radiart Vibrator Guide EX-CLUSIVE feature. When called upon to duplicate a vibrator and no information is available except the number on the old one, use this cross-index which shows the original manufacturer's number (as stamped on vibrator) and the CORRECT Radiart Replacement.

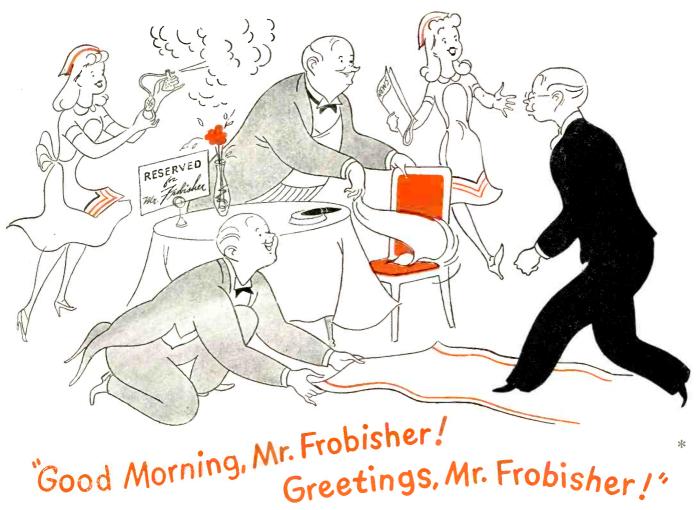


Radiart Corporation

3571 W. 62nd STREET

Export Division 25 Warren St., New York 7, N.Y. CLEVELAND 2, OHIO

Canadian Office 455 Craig St., W., Montreal, Canada



Greetings, Mr. Frobisher 1"

What a difference a few months make! Not so long ago all of us were forced to "take a beating" from almost every seller. Generally their excuse was "don'cha know there's a war on?" customers will be appreciated They'll get the kind of treatment they always should have gotten, war or no war.

With pardonable pride we boast that the staff of Radio Service Dealer editorial, advertising and circulation-never "got rough" with subscribers or advertisers. We've always tried to give both groups the finest service and

best values possible. Despite WPB retrictions, subscribers got more and more text pages—advertisers got more and more coverage every month. Distribution is now guaranteed to exceed 15,000 monthly.

In the days, months and years ahead we, the staff of "RSD", pledge ourselves to continue to do an even better job. No monthly magazine has a better field staff than "RSD". No other radio publication works as closely with manufacturers, retailers and servicers of radios and appliances. No other radio trade paper has refused advertising from unknown. untried Johnny-comelately brand lines thus protecting service-dealers as has "RSD". We have always provided our advertisers with an audience made up of the nation's finest radio-appliance dealers and service organizations—all of whose subscriptions are screened before acceptance.

"RSD" is the one radio trade paper that caters to "the cream of the crop". The magazine itself, the products advertised in it, and the articles published are always reliable, timely and geared to the industry's needs. It's a gr-a-a-a-n-d feeling, Mr. Frobisher!

COWAN PUBLISHING CORP. 342 Madison Ave., New York 17, N. Y.







REMEMBER back in pre-war days when anything less than an exact duplicate condenser replacement simply wouldn't do? Condensers were big as half a pound of butter and weighed almost as much. Today, you can replace any of those old "giants" with a Sprague Atom midget dry electrolytic less than half its size—and twice as dependable by any electrical standard of comparison you care to name. What's more, compare Atoms with any similar midgets and you will find they are smaller than most—and far and away the most dependable of the lot!

Sprague Products Company, North Adams, Mass.

(Jobbing Sales Organization for Products of the Sprague Electric Co.)

TRADING POST ON PAGE 51

Sprague's free wartime Advertising service, THE TRADING POST, also appears in this issue—and will continue to appear as long as it can be of help to our thousands of friends throughout the trade.



SPRAGUE ATOMS



THE IDEAL REPLACEMENTS FOR ALL DRY ELECTROLYTIC CAPACITOR TYPES

NOVEMBER, 1945

MALLORY REPLACEMENT VIBRATOR GUIDE

NEV

...the MOST
COMPLETE
REPLACEMENT
VIBRATOR
GUIDE
ever published



Ready for you NOW ...

Long hailed as one of the most helpful publications in the radio service field, the Mallory Replacement Vibrator Guide has run through 17 editions since 1934. Now comes the largest, most comprehensive edition of all — easier to read, easier to use, more valuable than ever before!

If you're an old timer in radio service, you'll recognize that a great deal of new material has been added. There's a whole new section on buffer capacitor circuits. Another section shows you how to service old radio sets that need obsolete or discontinued types of vibrators. Still another contains a complete cross-index of all vibrators.

Mallory is the first manufacturer in this post-war period to offer this up-to-date Guide. It's yours, as usual, without cost. Get a free copy of the Mallory Replacement Vibrator Guide at your nearest Mallory distributor.

P. R. MALLORY & CO., Inc., INDIANAPOLIS 6, INDIANA





More than ever— ALWAYS INSIST ON APPROVED PRECISION PRODUCTS

VIBRATORS • VIBRAPACKS* • CONDENSERS
VOLUME CONTROLS • SWITCHES • RESISTORS
FILTERS • RECTIFIERS • POWER SUPPLIES

ALSO MALLORY "TROPICAL" DRY BATTERIES, ORIGINALLY DEVELOPED BY MALLORY FOR THE U. S. ARMY SIGNAL CORPS, NOT PRESENTLY AVAILABLE FOR CIVILIAN USE.

*Reg. U. S. Pat. Off.

SELL — and RE-SELL

Radio receiver and household appliance industry can pace nation's business to new highs...

by J. J. NANCE,
Vice President, Zenith Radio Corporation

E have seen and are becoming increasingly aware of the surprising durability of our automobiles, radios, washing machines, typewriters, and other devices when we are forced to keep them in service without replacement. Until this war I had never in my life owned the same automobile more than two years. My pet car is now five years old.

This gives a far different picture than one of customers crowding each other out of line in their frantic rush to buy what each of us has to sell. Many an automobile has given its last gasp, and many a radio has been turned over to Junior for demolition. But there are millions upon millions of theoretically obsolete appliances, vehicles, and other mechanical devices that are still going strong. Now that the madly stimulating psychology of war has run its course, the Joe Smiths and Pete Harrises are going to think a second time before committing themselves to the heavy expenditures they so blithely discussed with makers of market surveys. With their lessons in thrift fresh in mind, they are going to think a second time before committing themselves to the heavy expenditures they so blithely discussed with makers of market surveys. With their lessons in thrift fresh in mind, they are going to take another look at that still serviceable car or washing machine before digging into their savings to buy something that is labeled "post-war."

I realize that this may sound unduly pessimistic, but it is not meant that way. There is, of course, a terrific market ahead for each of us. First, is the real pent-up demand, as distinguished from the estimates that have been deduced by crystal-gazing theorists. There are homes without radios, people in urgent need of new automobiles, and pressing demands for all of the things that we have done without for so long. But this urgent,

Note: Based on a speech before Sales Executive Club of New York, October, 1945. pressing demand is, in my opinion, a mere fraction of what the theorists have predicted.

The real market, the volume market, is the one represented by the millions of Pete Harrises and Joe Smiths who are waiting to see what happens. But Pete and Joe are not standing in line to buy your goods, nor will they stand in line. Pete and Joe will have to be sold, and that is going to require real salesmanship.

Salesmanship is the phase of business that has been most severely neglected, not only during the war years just ending, but ever since our orgy of financial insanity brought calamity in 1929. In fact, I believe it is fair to say that there has been little real building of salesmen in the country since that tragic Black Friday. During the thirties we did not develop young salesmen; we were hard pressed to keep the older ones. During the forties, thus far, we have been in a seller's market and, of course, the young men have been in the armed forces. Seriously, how many young men have been trained during the past fifteen years?

More Customers

It is natural that during the war the emphasis of industrial management has been on production. In war industries there was but one customer; in others, that could still produce for the civilian market, the only problem

The Author



was getting the merchandise manufactured within the price limits set by OPA. One result is that many a manufacturer, newly born or vastly expanded by war, is innocently stepping into a competitive situation with no experience in large scale sales organization. Another is that even many established prewar sales organizations have forgotten much of their competitive experience.

The so-called law of supply and demand will go to work on manufactured goods as it already has on food. Here are two homely examples of the latter given to me by the boss of our household: In August, canning peaches were \$4.50 per bushel in Chicago, as compared to \$3.50 a year earlier; three weeks later they sold for \$2.95. In August it was difficult to buy beef in Chicago at any price; last month porterhouse steak retailed for less than forty cents a pound, while hamburger had dropped to a pre-war quarter. The same thing will be true in industry; all that we at Zenith need to keep our prices in line is the hot breath of Philco on our necks. I daresay that the same thing is true for virtually all other manufacturers.

It is my considered opinion that the period when people will buy anything is to be exceedingly brief, and that within a relatively short time we are going to be in a fiercely competitive market.

Management — from manufacturers to wholesalers to dealers — must become sales-minded, or be lost in the shuffle. It is a case of sell goods or die, and if enough companies die, it will mean death to something else: our free enterprise system.

On a national basis, success or failure will be determined by results in the field of durable consumer goods. If we sell enough automobiles and radios and washers and refrigerators, we will pace the entire business activity of the nation to new highs. Then it follows, to paraphrase Portia, as the night the day: Machine tools, factory buildings, homes, sewers, farm machinery, utility construction, and all of the complex operations of an expanding economy will be in heavy demand if the output of heavy consumer specialties is heavy enough.

WHAT THE CUSTOMER WILL BUY (National Estimates)

	<i>Number -</i> April	of Families April	Increase As Percent
Appliance ·	1944*	1945**	of 1944
Mechanical Refrigerator	3,827,000	5,852,000	53%
Sewing Machine	2,323,000	3,451,000	49
Vacuum Cleaner	2,390,000	4,501,000	88
Home Radio	2,682,000	5,085,000	90
Electric Iron	4,019,000	5,195,000	29
Washing Machine		5,834,000	37

^{*} Third Survey of Consumer Requirements.

Table 1.

Survey of Buyers for Radios and Appliances

This report on buying intentions deals with the "walkin" demand as expressed by consumers last April, while the two-front war was still in progress.

S A PART of the Fourth Survey of Consumer Requirements, performed early in April of 1945, a responsible member of each of the 4,285 households visited was asked about attempts to purchase a list of household appliances during the past twelve months. He was further asked if he would "buy one right away if there were plenty of everything in the stores."

How closely demand so stated measures the immediate postwar market for the articles surveyed must remain a guess. It is likely, on the one hand, that increased advertising and sales promotion, the return of service personnel to civilian life, the establishment of new households, and the

mechanical failure of old appliances during the months since interviewing will add to the April market.

The survey was conducted for the Office of Civilian Requirements by the Special Surveys Division of the Bureau of the Census. The sample of households used is well tested and offers a reliable cross-section of American homes. It permits of expanding the sample figures to national estimates, and these estimates are used throughout the report. The sample of households, the questions asked, and most of the items inquired about are comparable to those in the Third Survey of Consumer Requirements, conducted in April of 1944. Figures from

that survey are therefore also shown in cases where trends and comparisons are to the point.

EMMEDIATE BUYERS

The survey shows a marked increase between April 1944 and April 1945 in the number of families that say they would buy major household applicances if these were readily available.

Of the six appliances investigated, the percentage increase is greatest for radios.

Table 1. shows these national estimates, developed from the survey sample, and based on the number of families answering "yes" to the question: "Would you buy a (radio, refrigerator, etc.) right away if there were plenty of everything in the stores?"

THE MARKET

Table 2. indicates how the market for each appliance is distributed over urban communities of various population-sizes and rural communities.

Exceptionally high percentages of buying intentions are found for vacuum cleaners in cities of over 100,000, and for refrigerators, sewing machines, and radios in rural non-farm areas (some of which, of course, are relatively high-income suburban areas.) Low percentages occur for sewing machines in the largest cities, for radios in cities of 25,000 to 100,000 and for vacuum cleaners in rural areas, farm and non-farm alike.

Table 2.

	:	Type of	Commun	nity	
	mu- Ov		es 00- 2.500 000 25,00		
Mechanical Refrigerator 100	% 32	% 11%	19%	23%	15%
Sewing Machine100	30	11	21	23	14
Vacuum Cleaner100	42	10	21	16	10
Home Radio100	33	9	19	24	15
Electric Iron100	37	12	19	21	12
Washing Machine100	35	12	21	18	14

Fourth Survey of Consumer Requirements.

PENED for business last month Bigelow's Appliance store of Jamestown, New York, is featuring a full line of Westinghouse appliances. It will also offer Bendix home laundry units; radios by Westinghouse, Zenith, Magnavox, Stromberg-Carlson and RCA Victor-to mention only a few of the appliance items to be offered for sale when production begins a-rollin'.

The store contains 3,000 square feet and is divided into two sections. The front portion will be devoted to the larger appliances such as refrigerators, sinks, dressers, washers, radios, ironers while the mezzanine in the rear will house the smaller appliances and also the record and sheet music departments. The interior of the store has been decorated with light tints and shadow boxes while the display window



Major appliance display area. Below, radio-record area.

READY FOR CUSTOMERS

has been constructed to great depth to facilitate group displays.

One of the show spots of the store is the modern kitchen already under construction by the Excel Metal Cabinet Co. of Falconer, New York, which manufactures equipment used in the White House in Washington. The kitchen will include complete metal cabinets, electric range, refrigerator, kitchen radios and other electrical. kitchen accessories.

Along one side of the store are to be found a group of six radio demonstration chambers. Each chamber is sound proof and resembles a minature living room. Two easy chairs, and space for several console radios and two table or midget type receivers is provided in each demonstration chamber.

Each chamber is designed so that individuals and family groups may try out not one but three or more radios in quiet surroundings. A maximum of thirty radios may be demonstrated in the half dozen demonstration booths. The entire floor is arranged in self service style a la super market. Refrigerators, radios, are arranged and posters show at a glance the salient features. Push buttons provided at strategic intervals along the floor allow potential patrons to summon salesclerks when specific information is de-

Bigelow's has several unique mer-

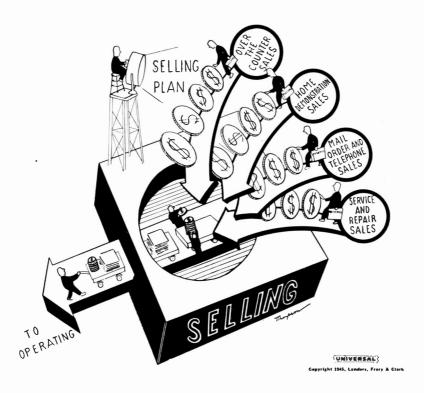
Modernizes 3,000 square feet of store space for selling radio receivers, major and traffic appliancs, records

chandising maneuvers on the fire at present. First of all it will invite neighbors from a certain residential district to make an appointment in groups of three to six to visit the model kitchen and try out for themselves the various appliances therein. Members of such group expeditions will be urged to offer their frank opinions of the merchandise on display and of the layout of the "model kitchen."

Secondly it will maintain a large field staff of returned veterans who will be trained in the art of repairing major and minor electrical appliances. Every individual purchasing any appliance from Ligelow's will receive a

[Continued on page 62]





PLAN YOUR SELLING

The Selling Function is the heart of your retail store. Every step you take in planning and operating your business should be geared to making it easy for your customers to buy.

2. THE SMALLER STORE OPERATION

■HE dealer's direct selling tools are advertising, display, and personal salesmanship. As a small merchant, due to the closer contact you will have with your customers, you should make each of these tools as personal as possible. For example, instead of using only general newspaper advertising, you might choose also to contact your customers in person through direct-by-mail advertising or through the distribution of handouts. As a small merchant you must pay particularly close attention to your window and interior displays. Not having the advantage of a big advertising budget or, perhaps, a wellestablished name, you must make your displays so attractive that they will

draw customers into your store and put them in a buying frame of mind.

Be sure, too, to take full advantage of your opportunities for selling over the telephone. You are in an excellent position to keep an active prospect file and, by arrangement with your customers, to call them and tell them about the special values you have in your store.

Your over-the-counter, service department, and home demonstration selling should be friendly and personal. See that your salespeople are well-informed about the goods you sell, that they call their customers by name, and maintain a helpful, interested attitude.

Remember, as a small merchant,

your biggest advantage lies in your opportunity for personal, individual attention.

YOUR SALES RECORDS

For a good selling job, you need the right records. The system described here is your minimum essential. It will give you the facts you need every day. Don't try to get along with less!

Prospect File or Record

A good prospect file is a *must* for many types of small retail stores. The file should include the names of your regular customers, plus a list of any individuals who might be converted into customers. This file becomes your official mailing list and, if it is kept active and up-to-date, you will use it constantly in building bigger sales and greater customer satisfaction.

Recording Sales

As each sale is made, you will, of course, need to make a proper record. Your sales records are the foundation of your business. If properly maintained, they will show you where you are making and where you are losing money—which of your employees are

productive and which are unproductive. They serve as a guide to buying and, most important, they give you the basis for a control of your income and a protection of your company funds.

An adequate sales recording system requires an original record made at the time the transaction takes place a daily summary, and a method of recording the transaction in the permanent store books. The system suggested for the proper recording of sales, as shown here, consists of a simple sales check system, a cash register, or cash drawer with a locked-in control, a daily transaction report and a simple ledger account.

Sales Check

The original record of every sales transaction is an important document for audit purposes. The simplified design of the sales check provides the small store with a record of cash, charge or C.O.D. sales, payment on account and any merchandise returned by customer.

Original copy—Is your office record and is filed by date after posting to bookkeeping records.

Duplicate copy—Is the audit copy left in the book for reference and checking by numerical sequence.

Triplicate copy—Is the customer's copy.

Cash Register

The best place to record, control and protect cash is at its source—at the time it is received—and one of the best ways to handle it is through the use of a cash register. A cash register will speed up the sale, provide you with a complete record of cash sales, give you a record of cash sales by employees, and help you protect your store's money from the losses which come from carelessness, errors, and dishonesty.

If you feel that a cash register is not needed for the type of merchandising job you are doing, you may find the combination sales check register and cash drawer adequate for your purposes. This type of system will give you good cash control.

HANDLING SALES

If you are doing a credit business, you will need a simple system for recording charge sales, keeping up a daily summary, making the proper ledger entry, and collecting the account.

The system described here employs the same sales check as used for cash and C.O.D. sales and provides a practical means of handling the charge transaction.

Cash Sales

When goods move off your shelves into the hands of customers, a change is again made in your business picture. And since you have probably set a sales quota, or a mark to shoot at, you want to know how close you are coming to hitting that mark each day.

Therefore, whether the sale is cash or charge, you will want to keep a record of it. The sale can, of course, be recorded on a cash register only. But it is good business to have a permanent record. A sales ticket gives you that record and is the medium from which to record all sales on your daily transaction report and later post the management control ledgers to keep your business picture constantly in balance and up-to-date.

Charge Sales

Like any other transactions, charge sales should be recorded on the daily transaction report and certain accounts changed in your ledgers to keep your records in permanent balance. But charge sales merely let goods go out of your business for which you have not, as yet, received payment. Thus, part of your assets have merely moved from your store to the customer's home. It is important therefore to

know how much of your stock is moved out, where it is and whether you get paid for it when you expect to. While the job is important, it is just as simple to handle in principle as most of the other transactions in the day's business.

COLLECTIONS

Collecting for the goods you have sold is an extremely important function of your business. But regardless of its importantance, the accounting principles are just as simple and fundamental as handling any other transactions. When the payment is received it is recorded on the daily transaction report, and then entered on the various accounts the payment affects in your ledger. This enables you to exercise control over the amount of money you have outstanding and to decide what action you need to take from day to day to keep your business heading in the right direction.

Customer's Statement

The regular monthly mailing of statements to customers who owe you money is a basic requirement for collection. The statement is a single copy, padded form on which the customer's name, address, dates and outstanding balance are transferred from the ledger.

(Part 1 appeared in October.)

PROFITABLE SELLING

. . . Landers, Frary & Clark's "Systemeering"

1. Selling is a vital function of retail operation. With buying and operating it constitutes the "big three" of the retail operation.

2. A sale begins with the advertising of the product to be sold and is not considered completed until the product is paid for . . . therefore it is of vital importance to the dealer that his selling plan, system of recording sales, receiving cash, handling charges, recording time payments and lay away sales be efficient if his selling function is to produce results.

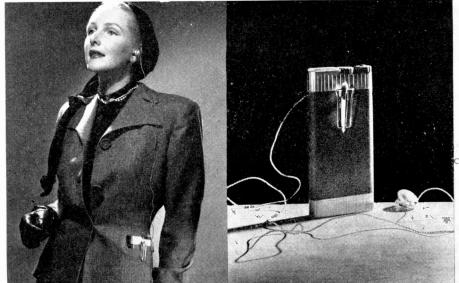
3. Well planned advertising display, direct mail, telephone, and other stimulating sales promotion activities plus aggressive personal selling are the essential tools of an effective selling plan.

4. To adequately follow thru on the selling operation the dealer must know who his customers are and want to buy. This knowledge can be secured by maintaining useful customer and prospect records.

5. Attractive store maintenance and orderly shelves with merchandise attractively arranged is just as important to the selling procedure as is the actual discussion of the product with the prospect. In addition the dealer must provide a proper wrapping service, provision for making adjustments and handling the many special customer service problems that build permanent business.

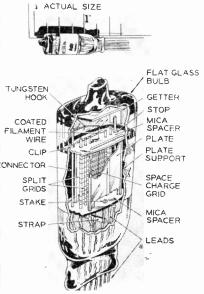
6. All these things go into the process of selling and if effectively controlled thru proper records result in more profits for the dealer.

7. Thru Systemeering, Universal's program aimed at assisting dealers in their retail operations, retailers are shown how to set up record controls for every phase of the selling operation. With Dr. O. P. Robinson, professor of retailing at New York University, School of Retailing, setting the pace, representatives of Burroughs Adding Machine Company, Moore Business Forms, Inc., and Shaw-Walker Company have prepared this program with Landers, Frary & Clark, giving radio and electrical appliance dealers the minimum essentials and complete procedure for retail operations which will assist them in systemeering their store operations for greater profits.





The Set, with pocket clip . . .



Tubes, like an oval cigarette.

"GLAMOUR" SELLER

Promised in time for Christmas trade. High fashion gift item in precious metals and leather combinations

Through utilizing the types of sub-miniature tubes developed by Raytheon Manufacturing Co. for the variable time radar proxomity fuse, Belmont Radio Corp. of Chicago announces that it is manufacturing a 5-tube superheterodyne pocket radio receiver weighing 10 ounces, including batteries; 3" wide, ¾" thick and 6¼" high. It is designed to fit the pocket or purse, yet its reception is comparable to that of the usual 5-tube receiver.

The set is finished in solid gold, sterling silver, plain and two-tone metal, and morocco, pin seal, alligator, pigskin, suede and other leathers. Retail prices start at approximately \$30 and it is expected to have the line in the retail shops for the Christmas season.

The five plug-in tubes together weigh about a half ounce and occupy less than a cubic inch total volume, yet they perform all the functions of normal size tubes found in conventional superheterodyne radios. The individual tubes are about one-fourth the size of those used in the famous handie-talkie. The cross section of each tube is about the same as that of an oval cigarette, yet one of the tubes known as the converter has nine active surfaces between the two glass walls which are only one-quarter inch apart.

The elements known as the filaments, grids, and plates are all located and held together at top and bottom by

very thin pieces of mica which have previously been punched with extremely accurate locating holes. All metal parts are held together by welding. The filament or electron-emitter is made from a bare wire, less than a thousandth of an inch in diameter, made by being drawn through fine diamond dies. These tubes contain many more parts than the tubes used in proximity fuses or hearing aids. About 30 separate parts go to make up one tube.

Two of the tubes are as radio frequency amplifier pentodes, one is a triode-heptode frequency converter, one a diode-pentode detector amplifier, and the fifth is an output pentode similar to the type used in hearing aids. Two of the tubes are actually two tubes in one envelope. The five tubes combined require less than 1/3 of a watt to operate and require a B battery of only 22½ volts.

UNIFORM PRICES

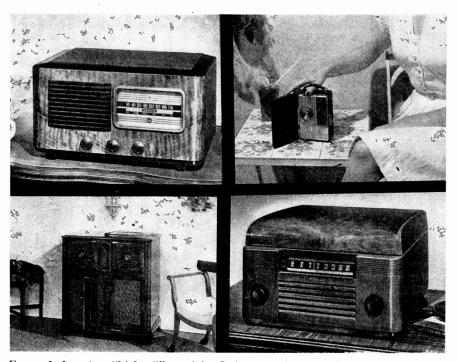
The General Electric Company is the first manufacturer of a complete line of household electrical appliances to adopt a national pricing policy on all its appliance products. In announcing this policy, C. R. Pritchard, general sales manager of the company's Appliance & Merchandise Department, Bridgeport, Conn., said that "from now on, each G-E major and small appliance will be sold at the same price to consumers in every part of the United States—whether they live in Seattle, San Antonio or Augusta, Me." Prior to the war, the company maintained a national-delivered-one-price policy on small appliances such as irons, fans, toasters and roasters.

"This policy had tremendous public acceptance," Mr. Pritchard said. "Consumers everywhere knew the prices of G-E small appliances because they were nationally advertised in newspapers, magazines and over the air. Now we are extending this advertised price policy in order to give the public the same advantage on all G-E home appliances—on refrigerators, home freezers, ranges, water heaters, washers, dryers, ironers, dishwashers and Disposalls, as well as on small appliances."

The new General Electric prices will include the cost of delivery and federal excise tax, but because state and local taxes vary so widely these are of necessity excluded from the national prices. And because installation costs of ranges and water heaters also vary in different localities, the national prices on these appliances are exclusive of installation. Mr. Pritchard said that General Electric expects to announce its postwar national prices on all appliances in the next few weeks, following approval by the OPA.

A similar pricing policy on major appliances only is announced for Edison General Electric (Hotpoint) Appliance Co., Chicago. by Ward R. Schafer, vice president.

MERCHANDISE PRE-VIEWS - 5.



Four of the nine "kick-off" models, Left, top: Table model for rural areas, with Battery-saver Switch. Convertible to line power by plugging in RCA Victor "Electrifier" which automatically converts set to 105-125 volt AC. Bottom: One of two console models. Roll-out-record changer, 9 tubes including rectifier. 3 bands: standard and police, air-craft and amateur, and foreign. Both consoles equipped with "permanent point" pickup. Right, top: Personal Radio; fits into topcoat pocket; miniature receiver weighs only 3½ pounds complete with batteries but has sufficient volume for room-level performance. Plastic case of simulated alligator hide; opening of lid turns it on automatically. Bottom: Table radio-phonograph, smaller by almost one-third than smallest RCA Victor prewar combination.

\$25 TO \$200 SELLERS

HE RCA Victor Division last month announced to its distributors its first postwar line of radios and radio-phonograph combinations. Preceded by a national pre-selling advertising campaign, the line was revealed by Joseph B. Elliott, general manager of the company's Home Instrument Division, as including nine models of wide consumer appeal. The first commercial-type table radio sets have already come off the company's assembly lines in Bloomington, Ind. One of the first models coming off the line now are being produced under Army-Navy contracts to be distributed for entertainment purposes to Army and Navy bases and hospitals overseas.

Subject to anticipated improvement in the flow of materials and parts, it is expected that by December the production rate may compare favorably with normal peacetime volume. Output depends upon procurement of necessary materials and parts.

Incorporating numerous wartime advances in technique and design, the initial line is designed to permit volume production in the shortest possible time. Estimated retail prices, exclusive of Federal excise taxes and subject to pricing regulations to be fixed by OPA, range from about \$25 for a table model radio to about \$200 for a top-line radio-phonograph console Victrola.

Outstanding selling feature of the new line is the inclusion in all models of an exclusive three-way acoustical system, developed by RCA Victor engineers through years of research and extensive listener tests and presented as the "Golden Throat". This is described as an acoustical system which matches and harmonizes the tone producing characteristics of the three essential elements of electronic sound

reproduction—the electronic amplifier, the loudspeaker, and the cabinet—to provide the tonal quality which tests have shown most listeners want and will buy.

Included in the kick-off line is the new RCA Victor Personal Radio that is one-third smaller and more compact than the highly successful miniature pioneered and introduced before the war, and a streamlined table model radio-phonograph combination with automatic record changer that is also almost one-third smaller than the company's smallest prewar combination.

In addition, there are five table model radios. Two of these are in plastic cabinets in walnut and antique ivory colors. Three table models have wood cabinets with walnut finish or veneer. Pointing to the farm market, there is a battery radio table model, convertible to line power, especially engineered for maximum performance and economy in rural areas. Another table model features a short-wave band and has been designated the "12,000 Miler" because of tests which have proven its ability to bring in distant foreign stations.

Completing the line are two handsomely designed consoles. These are top-of-the-line instruments with newly styled period cabinets. They include both standard band and foreign radio reception, automatic record changers, and record library compartments. The de luxe console model has three bands—standard and police, foreign, aircraft and amateur. Tuning is facilitated by the use of spread-band dials.

An RCA Victor "Permanent Point" pick-up, which avoids the use of needles, is a sales feature of the two console "Victrolas", which accommodate twelve 10-inch or ten 12-inch records, providing almost an hour of uninterrupted music. Other technical features common to most of the models in the new line are built-in "Magic Loop" antennas, supersensitive electrodynamic speakers, and selective superheterodyne circuits.

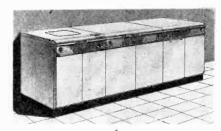
In regard to the Personal Radio, economies in space and weight without sacrifice of performance quality or sturdiness, were made possible, RCA Victor states, by the company's wartime experience in developing miniature tubes for military equipment, and in compact designing and construction to withstand heavy usage. The RCA Victor Personal Radio measures only 3½ by 4½ by 6½ inches — small enough to fit in a top-coat pocket—and weighs only 3½ pounds complete



Readers desiring additional information about the home radio receivers, traffic and major appliances pictured and described in this special feature section, should write to NEW PRODUCTS EDITOR, RADIO SERVICE DEALER, 342 Madison Avenue, New York 17, New York.



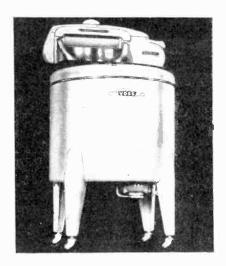
FRIGIDAIRE, Model M1-7. 12 square feet shelf space. MeterMiser unit, white baked enamel finish, meat tender, Quickube ice frigidaire Div., General Motors, Dayton,



BLACKSTONE, combination laundry-automatic washing, rinsing, drying and ironing in a unit of standard counter height and depth, and 80 inches in length. Blackstone Corp., Jamestown, N. Y. (A division of Jamestown Metal Equipment Co., Inc.).



SAMSON, automatic flat iron; Duo-Dial-A-Heat control to suit the fabric; plastic aircooled handle, tapered point, bevel edge, built-in cord, rock-to-rest stand; 1000-watts. Samson United Corp., Rochester 10, N. Y.



VDSS, washer. Model 41-C, electric; 41-CP, with pump; 41-CG, gas engine. Centralized controls; double woll insulated tub. Rotary water pump, optional on 41-CP models at extra cost. "Flex-O-Klean" agitator; Emerson electric motor. Uniform roll pressure with Voss Electro-safe wringer rolls. Voss Bros. Mfg. Co., Davenport, lowa.



SAMSON, heating pad; 3 fixed heats; Safe-T Selective heat circuit; heats from low, to medium to high; cover treated with Zelan. Self-selling counter display. Samson United Corp., Rochester 10, N. Y.



PROCTOR, model 1472 toaster, two-slice, automatic; thermostatically controlled; silent pop-up, a-c only. Available in time for Christmas shopping. Proctor Electric Co. (Division of Proctor & Schwartz, Inc.), New Ycrk, N. Y.

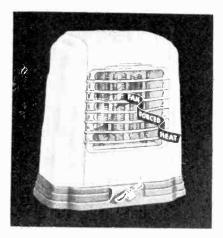


KITCHENAID, Top: Model K4-B food mixer; 10 definite (and intermediate) speeds, governor-controlled. Universal type 1/6 h.p. motor, operates direct through steel cut gears. Variable speed attachment hub on front of mixer for accessories. Standard equipment: one 4-qt. tinned steel mixing bowly wire loop whip; combination beater-postry knife. Ht. 14"; base 8"x 14"; weight 24 lbs. Below: Model 3-B, ½ B. motor; other specifications same as above. Standard equipment: one 3-qt. heat-resisting glass mixing bowl; juice extractor; all-purpose stainless steel beater for mixing, beating, whipping and making pastry. Other attachment priced separately. Ht. 1334"; base 7½"x123/8". Weight 18 lbs. Hobart Mfg. Co., Kitchen-Aid Div., Troy, Ohio.

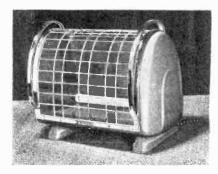




SUN-KRAFT, cold quartz ultraviolet ray therapy lamp, model A-1. Radiation of 95 per cent ultraviolet rays always cold and always constant in intensity. Quartz tube guaranteed for 5 years (except breakage); rest of lamp for one year. Comes with pair of protective goggles and carrying case. Finish in surgical brushed chrome; portable and adjustable. Wt. 20 lbs; AC-DC, 40 watts. Sun-Kraft, Inc., 215 W. Superior St., Chicago 10, 111.



ARVIN, Electric heaters, deluxe model 202A, fan-forced. Helical coil heat element; induction type motor (no radio interference). 2-blade propeller type fan; heavy-gauge steel housing, rubber feet. AC only, 110-120 volts, 1320 wotts. Boked-on finish; ornamental grille. Carrying handgrip in back, with air intake control louvers. Toe switch control; red glow-light indicates whether heater is on; 6 feet #16 cord and plug. 1134" high; base 103gx65g"; wt. 9 lbs. Noblitt-Sparks Industries, Inc., Columbus, Ind.



ARVIN, Electric heaters, model 52, radiant portable unit. AC-DC, 110-120 volts; 1320 watts. Heavy duty heating element, wound on porcelain. Body and feet heavy gauge metal, hammer finish. Guard rails at both ends of front grill also carrying handles; 18" wide, 14" high. Noblitt-Sparks Industries, Inc., Columbus, Ind.



GENERAL ELECTRIC, Model F-112 electric type, weight 5 pounds; Dial-the Fabric temperature selector, cast-in Calrod heating unit. General Electric Co., Appliance & Merchandise Dept., Bridgeport, Conn.



DORMEYER, Model 3000, vertical food mixer and juice extractor. Plaited white glass bowls; fully ball bearing turntable, adjustable for height; variable speed motor with "Off-1-2-3" painter control switch. AC-DC. Includes two beaters, juice extractor bawl with reamer and juice directing spout. Shipping wt. 18 lbs. Dormeyer Corp., 4300 N. Kilpatrick Ave., Chicago 41, III.



safety heater, model A. Spot-welded all steel cabinet. Two heat generator coils for rapid heating; non-radiant coils create air circulation—cold air in at bottcm comes out heated at top. AC-DC, 1200 watts. Approximately 19" wide; 18" high; 9" deep; wt. 19 lbs. Output 4080 b.t.u. at 120 volts. Colors: ivory or brown baked enamel. Trimont Products Co., Walnut St. at 24th, Philadelphia 3, Pa.



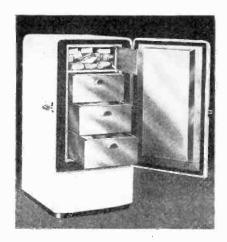
TELECHRON, "Buffet" self-starting electric clock for kitchen or bathroom, molded plastic case—ivory, green, white, red. 5" metal dial; black figures on white background. Dark blue hands, lacquered metal bezel. Ht. 65%"; width 6 7/16"; depth 21/4". Warren Telechron Co., Ashland, Mass.



TELECHRON, "Embassy", self-starting electric finish; 3½" dial, metal, dark cream center with brown characters on light ivory numeral band. Bezei and hands metal, gold color, lacquered. 6-ft. cord. Ht. 5½"; width 5½", depth 3". Warren Telechron Co., Ashland, Mass.



GENERAL ELECTRIC, automatic iron, model F-113. Wt. 3 pounds; Calrod heating element; large Dial-the-Fabric indicator; safety light tells when to start ironing. General Electric Co., Appliance & Merchandise Dept., Bridgeport, Conn.



FREEZ-ALL, home freezer, model 80. Five models. Illustrated, 8 cu. ft.; others from 6 cu. ft. chest type, to two vertical drawer types 8 and 16 cu. tt. Dimensions, model 80: 63" high; 29" wide; 34" deep; 1/4 h.p. refrigeration unit. Portable Elevator Mfg. Co., Bloomington, Illinois.



GENERAL ELECTRIC, "Leader" range. 37" one large Calrod surface units, each with five heats; 6-qt. thriff cooker; tilt-out storage bin; two-unit oven; no-stain oven vent. General Electric Company, Appliance & Merchandise Dept., Bridgeport, Conn.



GENERAL ELECTRIC, automatic blanket; incorporates many new features from flying suit made for armed forces. 110-volts; new model operates without transformer. General Electric Co., Appliance & Merchandise Dept., Bridgeport, Conn.



BLACKSTONE, wringer washer, deluxe model 130. All-white baked porcelain finish. Mono-steel chassis; wringer column fully enclosed. 1-piece aluminum Hydractor in washing action. Controls located on wringer head for operating convenience. Standard make 1/4 h.p. motor, rubber-mounted. Blackstone Corp., (Div. of Jamestown Metal Equipment Ca., Inc.) Jamestown, N. Y.



EUREKA, Cordless automatic ircn; operates without a cord-draws instant heat from a brief contact from thermostat-controlled electric safety base. Micro-heat regulator governs exact operating temperatures for various fabrics. Current switched on and off automatically, eliminating danger of fire. Eureka Vacuum Cleaner Co., Detroit 2, Mich.



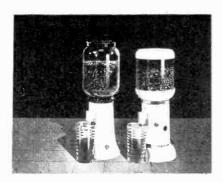
FRIGIDAIRE, electric range, first post-war, Model BI-17. In addition to pre-war features, this range is equipped with Radiantube cooking units, "Even-heat" oven, deep well Thermizer and other new features. Frigidaire Divisian, General Motors, Dayton 1, Ohio.



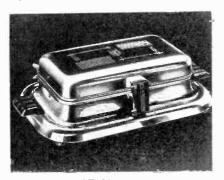
ESTATE, electric range, "Montrose", Model 616. Balanced heat oven, with light; single dial ThermEstate oven heat control; 6-heot Bar-B-Kewer with deep pan; Grid-All, Toast-All. 1-piece work surface and metal back. Three 6-heat surface units and 6-heat Electricooker. Signal light for all above food preparation units; convenience outlet; utensil drawer. Floor space required, 38x25 inches. Accessories, extra: Deluxe TimeEstate automatic oven time control, with lamp; automatic oven time control; cooking top lamp. Estate Stove Co., Hamilton, Ohio.



HOTPOINT, washing machine, model LWP-1. gallons t waterline. This first postwar model is made with and without a water pump. Wringer with increased squeezing action. Tub mounted on rubber basket, motor cushioned to eliminate vibration. Occupies a total of 261/2" x 261/2" floor space. Edison General Electric Appliance Co., 5600 West Taylor St., Chicago 44, Ill.



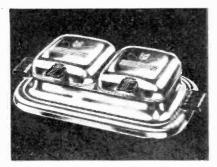
kitchen AlD, Coffee grinder, model A-9 and in. A-9 in white lacquer finish; A-10 in white Delux. Includes graduated receiving glass. Coffee beans stored in transparent container; holds full pound. 16 grinds available in A-9; 17 in A-10; both with markings for 'regular', 'percolator', 'drip' and 'vacuum pot'. AC-DC motor, 1.6 amps. Ht. 13"; base 5" diam; wt. 6 and 8 lbs. Hobart Mfg. Co., Kitchen Aid Div., Tray, Ohio.



GENERAL ELECTRIC, Sandwich Grill, model G-37. Will toast sandwiches, and grill and fry. Pressed aluminum grid with drain and cup to catch grease; quick-heating nickel-chromium heating unit. Bright finish with black Textolite handles and non-scratch feet. Interchangeable cast aluminum waffle grid available. General Electric Co., Appliance & Merchandise Dept., Bridgeport, Comn.



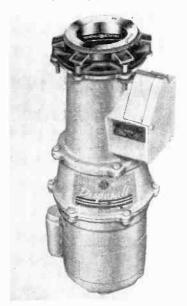
GENERAL ELECTRIC, Sandwich Grill, model G-38. Textolite thermostatic control dial sets temperature automatically for taasting, grilling and frying. Signal light shows when desired heat is reached. Other details same as model G-37 (above).



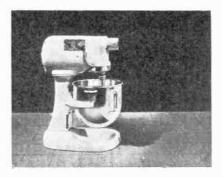
GENERAL ELECTRIC, Waffle Iron, model Ylarger family; bakes two 5 x 51/2" waffles. Heat
indicator, wide tray base, expanding hinges.
Bright finish with ebony Textolite handles. General Electric Co., Appliance & Merchandise Dept.,
Bridgeport, Conn.



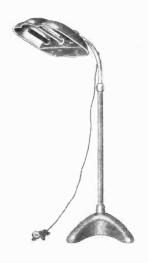
GENERAL ELECTRIC, Coffee maker, model entirely automatic. Pilot light glows ruby red when warming unit is on. Coffee made by pressing red starting button; when coffee returns to lower bowl, stove switches to low heat and keeps coffee hot until served. General Electric Co., Appliance & Merchandise Dept., Bridgeport, Conn.



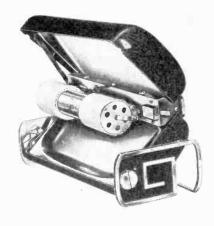
GENERAL ELECTRIC, Disposall. Similar to pre-war model, but with improved shredding elements and better shredding action. Installed in the sink outlet, will grind up any food wastes and wash them into the drain in such fine particles that no stoppages in the piping occur. General Electric Co., Appliance & Merchandising Dept., Bridgeport, Conn.



Food mixer, model G-5. Three speeds: 1, slow for stirring, 2, medium for beating, chopping, grinding; 3, fast for whipping, slicing, etc. Standard equipment: one 5-qt. tinned steel mixing bowl; one wire loop whip; one flat beater; other attachments price separately. Ht. 17"; base 10½" x 12½"; wt. 39 lbs. Hobart Mfg. Co., Kitchen Air Div., Troy, Ohio.



SPERTI, Sun Lamp, "Selector" model S-200, deluxe model of the line; selective in projection of ultraviolet or infra-red rays, or a combination of both. Triple reflector type, with 2 infra-red burners on either side of mercury ultraviolet generator; AC-DC; stand extends to over 80 inches; universal adjustment radiates light in any direction, at any angle. Sperti, Inc., Appliance Div., Cincinnati 12, Ohic.



SPERTI, Sun Lamp "Aristocrat" model P-100.
Almost pocket size. Projects full ray
of ultra-violet and infra-red light which produces
tan in 4 minutes. Crackle finish case. Integral
adjusting support bracket fcr hanging lamp or
standing on flat surface. AC-DC, 102-105 V. Sperti,
Inc., Appliance Div., Cincinnati 12, Ohio.



GENERAL ELECTRIC, postable heater, model PH-1A1. Radiant convection type, in semi-circular design with polished metal reflector and gray "hammered" exterior finish. Heating unit of nickel-chromium; "cool" handle. General Electric Co., Appliance & Merchandise Dept., Bridgeport, Conn.

[Continued on page 76]

Why Radio Sets Are Delayed

Holdover backlog of 300,000 radio sets and components for armed forces must be made prior to civilian set production; material shortages delay parts; pricing of "new" models awaits individual decisions by OPA. Further price relief on components being pressed. Estimate of sets for Christmas selling cut to 500,000.

ECONVERSION of the radio manufacturing industry, which was expected to be one of the speediest immediately after V-J Day, has been retarded from six weeks to two months with the result that informed industry and government estimates of radio set production by Christmas have been cut to about 500,000. Last August WPB officials forecast an output of 3,500,000 sets by the end of 1945. Delays in the issuance of OPA recon-

version pricing orders for both components and sets, below production costs in many cases, are held responsible for most of the delay by manufacturers.

But now new bottlenecks threaten to retard volume production for several more weeks or months.

Shortages of certain materials, especially steel, electric wire and aluminum containers, are holding up production of some radio parts, and grow-

ing labor and wage disputes threaten further obstacles to large scale production.

With the issuance this month of a new regulation (MPR 599) establishing prices for radio sets modelled after those produced in late 1941, OPA has cleared away its major reconversion pricing orders for the radio industry. However, a large volume of applications for individual prices, especially covering "new models", is expected to further slow up reconversion although OPA is prepared to handle them expeditiously. Some "hardship" appeals also are being filed with OPA.

Radio parts, particularly variable condensers and speakers, were reported still in short supply as manufacturers of these components sought additional price relief from OPA. A new increase factor for variable condensers, possibly higher than the 13.5 per cent announced in mid-October, was under consideration by OPA officials. Higher prices for "new model" speakers also were being approved, indicating that this bottleneck may shortly be broken

A backlog of military orders for "morale" radio sets and radio components also was blocking civilian production in some plants. WPB officials told RMA that more than 300,000 of these sets for the Signal Corps, the Navy and the Army Air Forces are still on order and carry a priority which gives them the right-of-way over civilian radio receivers.

RADIO-So-o-o Big!

ITH a total war output of approximately 7½ billion dollars, the radio industry produced nearly twice as much radio-radar communications equipment during the war (3 years, 11 months) than it produced radio equipment alone for civilian use in all the years since commercial radio began about 1922 (23 years ago). This was announced by the Radio Manufacturers Association following receipt of new production records of the WPB Radio and Radar Division.

From January, 1942, until the war ended this summer, the industry's war production mounted to the huge total of \$7,220,000,000, the records show. In addition, the industry produced about \$250,000,000 in military equipment from September, 1941, until the

end of that year, bringing the aggregate contribution to the war effort to close to the \$7½ billion mark.

Best industry and trade statistics show that in the entire period of civilian radio beginning in 1922, the total volume of radio equipment manufac-

THE SCORE

Totals for the war years in radio - radar communications equipment as follows: 1941 (four months), \$225,000,000; 1942, \$984,000,000; 1943, \$2,-160,000,000; 1944, \$2,676,-000,000, and 1945 (seven months), \$1,400,000,000.

tured was about \$4,225,000,000, not including transmitting and communications equipment, the association announced. This is some 3½ billion dollars less than the production total for war.

During the war, the radio industry hit its peak volume in the year 1944 when production averaged \$223,000,000 a month for a year's total of \$2,676,000,000. In the seven months of 1945, ending in August, production was at the rate of \$200,000,000 a month, the same as in the last six months of 1943. These figures compare with \$55,000,000 monthly in the first six months of 1942; \$109,000,000 monthly in the last six months of 1942, and \$160,000,000 per month in the first six months of 1943.

Accurate Job and Sales Slips

Example No. 1 77 No.2 49 No.3 10 No.4 S

by MAURICE C. MOORE

ARN it all; I wasted half a morning trying to locate the man who was having trouble with his radio," complained a radio servicer.

"How come?" we asked.

"That new employee made a complete hash of the name and address," explained the radio servicer. "I'd be willing to overlook the newcomer's other faults if only he would try to be accurate."

That's just it; lack of accuracy means that the new employee does about half as much constructive work as he should. The precious time and energy of an experienced employee is drawn upon to straighten out a newcomer's errors. Worst yet, customer goodwill is endangered in the process.

Unfortunately, the best and most experienced of us pull "paper" boners at times, but if we blink at first slips and make light work of them, the weakness is apt to become chronic. Errors occur mostly at rush times or near the end of the day, when we are tiring, and our thoughts are beginning to "lightly turn," as the poet says, in the direction of the good time in prospect with Peggy later that evening! Apart from the above special causes, there are three principal reasons for mistakes:

1. Many customers speak indistinctly or with an accent or intona-

a word in its place which we know from common usage.

2. Many of us fail to listen well enough to all that is said by the prospect or customer. As a result, we often miss some of the words and the instructions.

3. The last and perhaps the most common of mistakes is that we do not fully realize the effects of mistakes.

As to No. 1, the customer's style of speech is naturally beyond our control. It is a sound policy to show the customer the instructions written down in his presence. The prospect or customer is more familiar with the *sight* of words than the *sound* of them. Erros will come to light before any damage is done—and this goes, too, for contributing cause No. 2.

As to No. 3, we have to remember that when the radio repair job is completed, and the bill presented, the transaction is not closed until the work is found satisfactory, the bill paid, and all records tallied.

Legible Handwriting

In every organization with a working force of two persons or more, every word arv figure written concerning to will have the else.

clea

that there is no possibility of mistakes. Here's a batch of vague or indistinct figures to ponder over (See illustration).

The first may be eleven, seventy-seven or seventeen. The second may be either seventy-seven or perhaps seventy-nine. The third may be ten or sixteen. The last is possibly five—or is it eight?

The Right Billing

An undercharge may swallow all the profit on the job, while an over-charge may mean the loss of a good client. What are the chief mistakes in billing? 1. In the arithmetic. 2. In names and addresses. 3. In the date, employee's name, and the estimate or job number.

Under No. 1, we find wrong additions, wrong subtractions, wrong alignment of items, carbon paper creased or badly inserted, and a wrong number of items credited to customer.

Bad figures and wrong multiplication can be removed: Bad figures by adopting a standard form of figures; wrong multiplication by practice and care. Mistakes are usually "slips." The best safeguard against them is to always count the items twice.

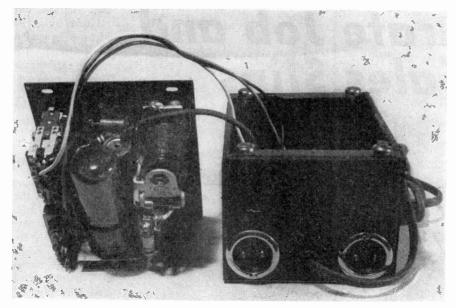
One way to get names and addresses right more of the time is to use CAPITAL or BLOCK letters. The initial F is often mistaken for S, and A for K. The correct initial is very important with such common names as Smith and Brown. The wrong initial can easily lead to complications when there are several clients of the same name.

While we can form an approximate estimate of the loss of time and money arising from errors, we cannot calculate the loss of prospects and customers. For every customer who complains and gives us a chance to set things right, there may be several who remain quiet, and who simply stop doing business with us.

One firm to realize the latter fact has taken constructive steps to remedy it. It is a bonus scheme dedicated to accuracy, and is working out very well. Each morning the office girl has a short session with the boss, who tells her the previous day's errors and who made them. The names and figures go down on a monthly list. The employee to have the fewest number of recorded errors at the end of the month receives a day off with pay.

Some of us may be inclined to think that because our own errors seem or comparatively few, there is

that causes so



Phototimer, for timing photographic processes.

SERVICE MARKET in Industrial Electronics

Radio servicemen located industrial have within their "service creasing field of repair and maintenance expanding field of industrial electronics.

> by OSCAR E. CARLSON E.S.M.W.T. Instructor, Temple University

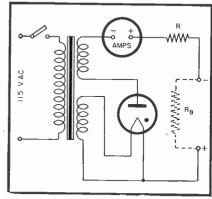


Fig. 1 — Schematic for a battery charger, using a Tungar rectifier.

Haling the laction gas most generally see tubes

with low voltage drop. 2. deliver high current with small power dissipation. 3. cause high rectifier efficiency. Their major use therefore will be as vacuum tube rectifiers, i.e., supplying DC power for operation of electron tubes in associated circuits.

THYRATRONS

We have previously stated that a Thyratron is a gas filled triode or tetrode. Let us now further expand a grid or grids. Fig. 2 shows some typical thyratrons. One of these, the 884, is familiar to users of oscilloscopes as this tube is used extensively in oscilloscope sweep circuits. The type 2050 is used extensively in industrial control circuits and the 2D21, the miniature tube in Fig. 2, shows promise of considerable use in new compact and light weight industrial control equipment.

Fig. 3 illustrates the internal components making up the construction of the type 2050 shield grid thyratron. It is to be noticed that the geometric configuration of the elements differ considerably for the plate and the grid from their configuration in vacuum tubes. The grid is large compared with the plate due to the function of the grid in such a tube. The grid of a vacuum tube was introduced in 1907 by Dr. De Forest as a control element and received the name of "grid" due to the mechanical construction used for that control element. In such tubes the grid is designed to vary the flow of electrons between cathode and plate around some nominal value.

In the thyratron the grid serves not to vary the plate current around some fixed value, but to control the time at which electrons may start to flow toward the plate. The thyratron is a phanotron with an added control element. Let us consider the action of such a tube. Fig. 4 illustrates the occurrences to be described.

With the plate of the tube negative with respect to cathode as in Fig. 4A no electrons reach the plate. With the plate positive with respect to cathode, as in Fig. 4B, and the grid negative with respect to the cathode a negative field between grid and cathode prevents electron flow to the plate. With the plate still positive and the grid less negative some electrons are allowed to proceed toward the plate as in Fig. 4C. Ionization then occurs as in the phanotron. The positive ions are attracted toward the cathode near which they combine with free electrons and become again normal atoms. Thus in combining with the electrons near the cathode the ions reduce the space charge present in that area. With the space charge neutralized more electrons leave the cathode since there is no repulsion effect from a negative space charge. More electrons reach the plate for a given difference of potential between plate and cathode than in a tube where space charge would tend to lower that current.

The grid was used in the above description to start conduction. If the plate now stays positive with respect to the cathode the grid cannot be used

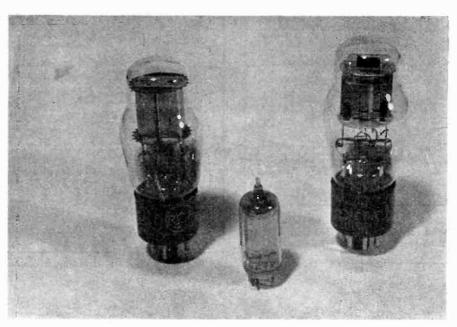


Fig. 2-The 884, 2050, and 2D21 Thyratrons (left to right).

Fig. 3—Components of the 2050 Thyratron. Top, shield grid. Below, left to right: Getter, Grid, Filaments, Plate, Cathode.

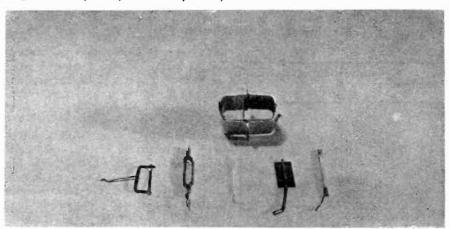
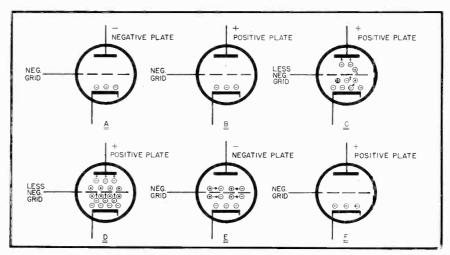


Fig. 4—Thyratron operation: A, plate is negative, no plate current flows. B, plate is positive, but not sufficient to overcome negative grid voltage. C, grid has been made less negative, tube conducts and ionization occurs. D, positive ion sheath surrounding the grid after ionization starts. E, plate suddenly negative, needs time for de-ionization. F, highly negative grid will not allow ionization with the applied plate potential.



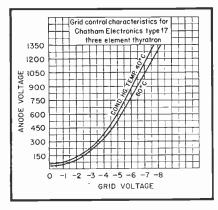


Fig. 5-Grid volts to fire tube at any anode voltage and HG. temperature. DC values.

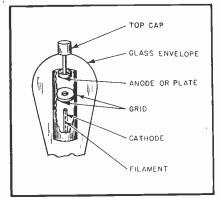


Fig 7 — Construction of 3-element Thyratron.

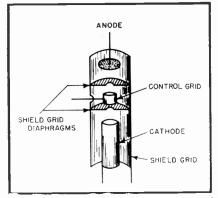


Fig. 8-Internal detail of shield grid

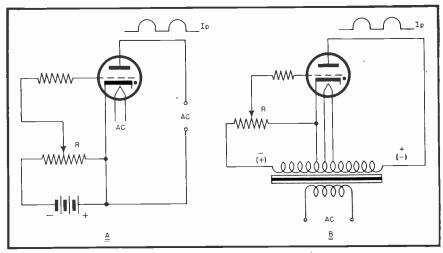


Fig. 10-Industrial control circuit, using Thyraton.

to again turn off the plate current. Why? The positive ions which are attracted toward the cathode and thereby neutralize the space charge are only a part of the total number of ions. Some ions are attracted toward the grid and form a protecting positive sheath about it as in Fig. 4D. Making the grid negative with respect to cathode has now no effect due to the fact the external voltage applied to do so cannot set up within the tube a negative field between grid and cathode due to this positive sheath of ions. Therefore, if the plate is kept positive the tube will now conduct continuously.

If the plate is now made negative with respect to the cathode, the plate will repel electrons which are emitted from the cathode and ionization will stop as in Fig. 4E. The positive ions composing the sheath at the grid and those neutralizing the space charge will combine with electrons destroying the positive sheath but allowing the buildup of space charge again. The grid is again free to be made to assume control of the electron flow. Let us now make the plate positive with respect to cathode again. The grid is also made negative with respect to cathode. If this negative grid voltage is large enough the tube will not conduct until some high value of positive plate potential. See Fig. 4F. Thus with a.c. voltage on the plate the grid resumes control each cycle and the conduction time may be controlled so that the tube conducts for only a small period of time during the positive half cycle of plate voltage. By proper proportioning of applied anode voltages the tube may be made to conduct during very nearly the full 180 degrees of positive plate voltage.

Due to the time involved for ionization to start or to stop the applied frequency range over which the thyratron will function is necessarily limited to the range of a few thousand cycles per second. At power line frequencies we may consider this time as negligible.

The thyratron is a grid controlled rectifier and may not, due only to the starting and stopping of conduction, be used as an amplifier as is the triode vacuum tube. Fig. 5 shows the grid control characteristics of the "Chatham Electronics" type 17 mercury vapor thyratron. Notice the variation with change in temperature of the mercury vapor, Fig. 6 illustrates the control characteristics of the type 2050 which is illustrated in the photograph of Fig. 2.*

PIGIF Negative and Positive **Grid Control**

We have treated the thyratron as being such that the grid was controlled over a range of voltages such that it

*Fig. 6 will be published with Article 3

Fig. 9-Grid controlled rectifier circuits of the Thyratron. ₩₩₩ CONTROL RESISTANCE 0000 ΑC

of this series.

[Continued on page 66]

Bonded Radio Service



Bonded 90-day guarantee for radio service jobs is basis of program for firmer profits and improved public confidence.

by ARTHUR E. AKEROYD,
Distributor Sales Manager, Raytheon Manufacturing Co.

REVOLUTIONARY merchandising plan for qualifying radio service dealers known as the "Raytheon Bonded Electronic Technician Program", has been developed after almost two years of study and investigation. This program is a major effort on the part of Raytheon to help win back for the radio service industry the good will and public confidence which have suffered greatly from adverse publicity, caused by a few unethical service men, appearing in magazines and newspapers.

Examples of this publicity, which has recently increased in volume, are the well known Reader's Digest article which appeared in August 1941 entitled "The Radio Repair Man Will Gyp You If You Don't Watch Out" and an article published in many New York newspapers a few months ago expressing the belief of a New York City magistrate that all repair men should be "licensed and fingerprinted" to protect the public from fraud and other violations of ordinary business ethics.

Such articles have tended to turn public opinion against the radio service industry, seriously handicapping the honest, ethical service-dealers for the postwar period. This is the first program of its kind designed to "improve the lot" of the radio service-dealer by making him a respected and trusted member of his community. It will assist the radio service-dealer to meet the post-war competition from incompetent radiomen who obtained some elementary training during the war, and who will constitute a serious threat to the legitimate business house.

It also offers deserving newcomers, such as returning veterans, the opportunity to establish themselves in business, without being handicapped by the questionable practices of some widely publicized radio repairmen.

Our organization has made an extremely careful study of every phase of the radio service business. The many varied arguments, both pro and confor licensing... establishing rates, etc., were examined and ultimately discarded. This extensive period of study permitted the development of the overall program from the viewpoint of both the radio service-dealer and the general public.

For Service Profits

It was felt that the plan must be based on guarantees to the much maligned radio service-dealer as well as the customer. Every radio shop is entitled to a legitimate profit. widely divergent cost under different conditions and in different locations, any bonding program must not interfere with the established business policies of the ethical shop. By the same token, the program must also recognize the fact that the majority of radio service-dealers are honest. When presented to the public, the bond must in effect say: "This dealer is honest, The bond is merely your guarantee that his integrity and work is above reproach."

To qualify as a Raytheon Bonded Electronic Technician, a radio service-dealer must meet certain qualifications of experience, reputation and ability . . . and he must have and use adequate equipment to do skilled service

work and repairs efficiently.

The dealer's application must be approved by his Raytheon distributor and by Raytheon and the bonding agency. When accepted by all parties, he becomes bonded for the period of one year by the Western National Indemnity Company of the Firemen's Fund Group, one of the nation's largest surety firms. His bond states that he agrees to guarantee complete satisfaction of every radio repair job for 90 days, and outlines a "code of ethics" that he agrees to observe in the conduct of his business.

The requirements for certification have been drawn up so that they parallel the now generally accepted practices and standards of the modern, competent qualified service-dealer. The requirements do not represent the ideas of any single group, but rather the suggestions and opinions of hundreds of radio service-dealers who, when questioned, felt that the Raytheon Bonded Electronic Technician Program would be of inestimable benefit to their own business. There is nothing in the requirements for certification which can disqualify the ethical dealer. Adequate provision is provided to prevent the exclusion of any dealers from this program, without appeal, in the event that they feel rejection was not justified.

This bond is not only the first real bond in the radio service industry, but it is the first bond which really means something to the consumer because its assurance of satisfaction is backed up by a strong bonding company interested in protecting public welfare.

CIRCUIT COURT

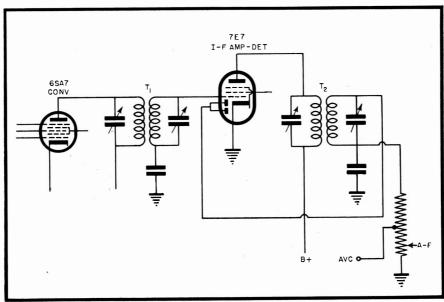


Figure 1

I-F AMPLIFIER-DETECTOR CIRCUT

We find so often that the detector and first audio stage are combined in a single tube that the fact that other possible combinations exist in this part of the circuit is often overlooked. As a result, some time may be lost in trouble-shooting when an unusual circuit is encountered.

An example of such an out-of-theordinary circuit is shown in Fig. 1. The i-f transformer T1 feeds the pentode input section of the 7E7. The amplified i-f signal is fed back into the diode rectifier section of the same tube, where it is demodulated and used for a-v-c and audio amplification.

This circuit is employed in many receivers, such as the Majestic Model 7C40, 7CU40, etc.

DOUBLE PUSH-PULL STAGE

When power triodes such as the 2A3 are employed in output stages, they are usually fed by a coupling transformer with a push-pull secondary. This is because the 2A3 requires a fairly low-resistance input, particularly when used with fixed bias.

A circuit using resistance coupling in a push-pull driver stage is shown in Fig. 2. A phase inverter is used to secure push-pull operation, the phase inversion being secured by picking off the signal for the phase inverter tube from the junction of R1-R3 and R2-R3. This is in effect a self-balancing arrangement because R3 is common to both the upper and lower circuits from which phase shift is derived. The 1000-ohm resistor

R4 serves as cathode bias for the two driver tubes. It is not by-passed, so that degeneration occurs and further improves the fidelity of response. Because there is likewise degeneration in the circuit of which R3 is a part, any unbalance in the equality of the signal voltage applied to the upper 6J5 tends to be offset by a compensating balancing effect on the signal applied to the lower 6J5 driver.

Medium-mu triode drivers are employed because of the need for a low resistance input to the 2A3s, and because more power can be secured from them

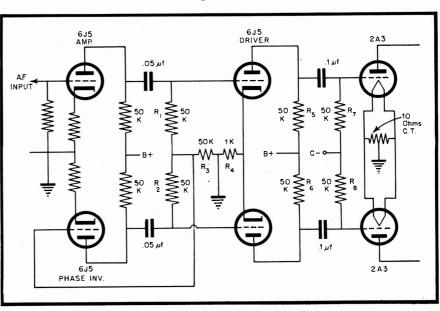
than from high-mu tubes. Thus the plate and grid resistors, R5, R6, R7, and R8 are all 50,000 ohms. Care should be taken not to increase the value of these resistors when making service replacements.

This circuit is used in the Ansley Model 61.

TAPPED OUTPUT TRANSFORMER

In making repair estimates, it usually happens that the replacement cost of a conventional output transformer is as-

Figure 2



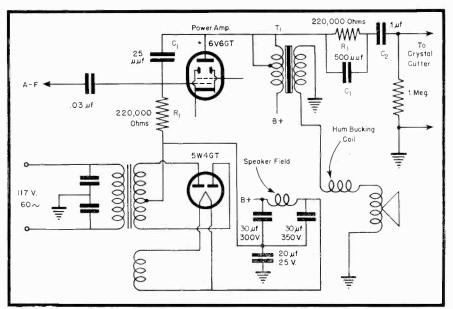
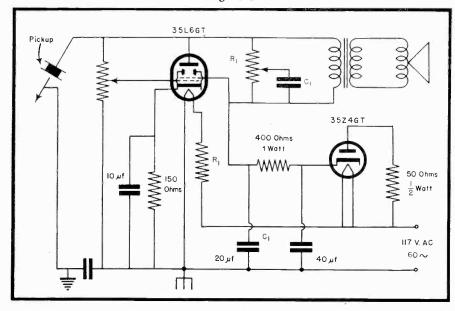


Figure 3

6K6GT 220,000 02 uf 6SQ7GT .005 005. آلر 39.000 Ohms WW .0005 µf 3.3 Med 2.2 Meg W 1 Meg ww Vol. Control 47 300 Ohms Ohms (A) AVC (10 r-f tube) To center tap on pwr. trans. sec

Figure 5



sumed when such replacement is required. This is not always the case, and especially not when the output transformer is used to drive a recording cutter as well as a loudspeaker.

An example is illustrated in Fig. 3, which is a portion of the circuit of the Motorola Model 51R11. Here a crystal cutter is coupled to the power tube by means of the output transformer T1. Because the primary of this transformer is tapped, the impedance across the full primary is higher than that which faces the output section of the 6V6GT. Thus a high impedance is coupled to the cutter, as required for most efficient operation, while the lower impedance tap provides the proper load for the output tube and speaker for minimum distortion.

The filter network of R1-C1 is used to give the proper frequency characteristic for the cutter. In apparatus employing a low-impedance magnetic cutter, a different type of coupling transformer would be required.

Figure 4 BIASING THE 6SQ7GT

In most circuits, the 6SQ7GT is used either with contact-potential biasing, employing a very high resistance grid leak, or bias is applied by means of a cathode resistor. A method of applying a semifixed bias to both the 6SQ7GT and the output power tube is illustrated in Fig. 4.

This circuit, which is employed in the Motorola Model 61T23, derives bias from the voltage divider R1 and R2. Because these resistors return to the center tap of the power transformer, all plate current must pass through them. In general, this will be fairly constant, being modified by the biasing effect of a-v-c action, but cannot be termed fixed bias for this reason.

Maximum bias is derived at point A, which returns directly to the power transformer center tap. This is applied to the grid of the 6K6GT through the grid leak resistor. The lower voltage appearing at the junction of R1 and R2 is applied to the 6SQ7GT.

TWO-TUBE PHONO AMPLIFIER

Most phonograph amplifiers are fairly complicated affairs, yet there has long been a demand for a simple circuit which would perform acceptably. One which does the trick is illustrated in Fig. 5, which represents the circuit of the Sears Roebuck Model 5815, phono chassis 145.815.

Consisting simply of a rectifier and power amplifier tube, with associated components, this amplifier utilizes a crystal pickup and operates from either a.c. or d.c. The variable resistance R1 and capacity C1 in the plate circuit of the amplifier tube serve as a tone control.

A resistance-capacity filter circuit in the power supply section further simplify the hookup.

This unit may be conveniently added to the radio equipment of customers who wish to be able to play records because it requires no modification of existing equipment.

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Palmetto Elec. Sup. SIOUX FALLS, S. D.— A. Y. McDonald Mfg. Co. CHATTANOOGA, TENN.-Harry W. Cameron, Inc. MEMPHIS, TENN.-P. F. Grenshaw Co. AMARILLO, TEXAS-C. M. Williams & Co. DALLAS, TEXAS-Paul Blackwell EL PASO, TEX.-Crouch Appl. Co. HOUSTON, TEXAS-Straus-Bodenheimer SAN ANTONIO, TEXAS-Standard Dist. Co. SALT LAKE CITY, UTAH-Jackson Dist. Co. BURLINGTON, VT.-J. S. George Sup. Co. RICHMOND, VA.-B. T. Crump Co. Inc. WASHINGTON, D. C.— Washington Wholesalers SEATTLE, WASH.-Northwest Appl. Dist.

SPOKANE, WASH.-

Jensen-Byrd Co.

CHARLESTON, W. VA.—
Charleston Elec. Sup. Co.
ASHLAND, WIS.—
E. Garnich & Sons Hdwe.
Co.
MILWAUKEE, WIS.—
Lappin Elec. Co.

GAROD ELECTRONICS CORP.

70 Washington St.,, Brooklyn, N. Y.

Radio and Television Products

BIRMINGHAM, ALA.-

Monarch Sales Corp. MOBILE, ALA.-McGowin-Lyons Hdwe. & Supp. Co. Inc. FRESNO, CAL.-Incandescent Supp. Co. LOS ANGELES, CAL.-Incandescent Supp. Co. SAN FRANCISCO, CAL-C. C. Brown Co. DENVER, COL.-The Jake Hayutin & Sons Co. HARTFORD, CONN .-Stern & Co. HARTFORD, CONN.-Tel Ra Appl. Co. MIAMI, FLA.-National Radio Dists. Inc. MACON, GA .-Maga Dists. Ltd. POCATELLO, IDAHO Tede & Etchingham CHICAGO, ILL.-Leonard Ashbach Co. BALTIMORE, MD .-Associated Dist. Corp. BOSTON, MASS .-K. Stores Co. SPRINGFIELD, MASS.— Paramount Dists. Inc. DETROIT, MICH.-Morley Bros. FLINT, MICH.-Radio Tube Mdse'g Co. GRAND RAPIDS, MICH .-Gil Schaefer Dist. SAGINAW, MICH. Morley, Bros. UTICA, N. Y .--George W. Bauer & Son CHARLOTTE, N. CAR .--Mill Dists. Inc. CANTON, OHIO-The Furbay-Sommer Co. CINCINNATI, OHIO-Chambers Radio Supp. Co. CLEVELAND, OHIO-Golden Appl. Co. TOLEDO, OHIO-Lifetime Sound Equip. Co. PORTLAND, ORE .-Gilbert Bros. Inc. PHILADELPHIA, PA.— Tel Ra Appl. Co. PITTSBURGH, PA.-Allied Elec. Supp. Co. WILKES BARRE, PA .-Airflow Prods. Co. PROVIDENCE, R. I .--Tel Ra Appl. Co. COLUMBIA, S. CAR.—

Wilson Dist. Co.

Dixie Appl. Co.

MIWAUKEE, WIS .-

HUNTINGTON. W. VA .--

Roth Appl. Distrs., Inc.

Van vandt Sup. Co.

CHATTANOOGA, TENN .--Clemons Bros. Co. KNOXVILLE, TENN.-Chapman Drug Co. MEMPHIS, TENN .-Shelby Tucker Co. NASHVILLE, TENN .-Electric Prods. Corp. FORT WORTH, TEX.-W & K Wholesale Dists. LYNCHBURG, VA.-Adkins & Co. Inc. STAUNTON, VA.-Southern Elec. Co. SEATTLE, WASH.-Herb E. Zobrist Co.

HOFFMAN RADIO CORP.

3430 S. Hill St., Los Angeles, Cal. Radio Receivers,

PHOENIX, ARIZ .-Radio Parts of Ariz. FRESNO, CALIF .--Martin Dist'g Co., Inc. SACRAMENTO, CALIF.— E. M. Kemp Co. San Diego, Calif.ie vOHLy SAN DIEGO, CALIF.— Western Radio & Elec. Co. SAN FRANCISCO, CALIF.-Hoffman Radio Corp. Walter J. Epstein, Mgr. DENVER, COLO.— Radio Products Sales Co. PORTLAND, ORE .--Stubbs Elec. Co. SALT LAKE CITY, UTAH-Radio Sup. Co. SEATTLE, WASH .-Love Elec. Co.

HOWARD RADIO COMPANY

1731 Belmont Ave., Chicago, Ill. Radio Receivers Recording Discs

PHOENIX, ARIZ .--Arizona Hdwe. Co. LITTLE ROCK, ARK.— Wholesale Appl. Co. SAN FRANCISCO, CAL.-J. N. Ceazan Co. W. LOS ANGELES, CAL.-Wm. P. Swartz TAMPA, FLA.— The Gulf Appl. Dists., Inc. ATLANTA, GA.— Gate City Furn, Dists. CHICAGO, ILL. General Utilities Dists. CEDAR RAPIDS, IA .--Terry Durin Co. MONROE, LA.-Monroe Furn. Co. N. ORLEANS, LA .-Southern Radio Supply BOSTON, MASS .-The Louis M. Herman Co. DETROIT, MICH.-Appliance Wholesalers, Inc. GRAND RAPIDS, MICH .-Mich.-Kent Wholesale Dists. MENOMINEE, MICH.-Wm. Van Domelen Co. DULUTH, MINN .-S. & S. Auto Parts ST. LOUIS, MO.-Witte Hdwe. Co. NEWARK, N. J.— All-State Dists., Inc. NEW YORK, N. Y .-Lafayette Elec. Corp. BISMARCK, N. DAK .-Quanrud Brink & Reibolo, Inc. CLEVELAND, O .-Grossman Music Co. DAYTON, O .--Major Appliance Co. OKLA. CITY, OKLA.-Waugh & Robertson Refrig. Co. PHILA., PA.-Ed. K. Tryon Co. GREENVILLE, S. CAR .-C. A. Herlong NASHVILLE, TENN.— Harris Patrick Elec. Sup. Co. AMARILLA TEX.-Broome Elec. Co. BEAUMONT, TEX.—
The Reed Company FT. WORTH, TEX.-Wolf & Klar Whsle. Sup. Co. LUBBOCK, TEX.-The DeWitt Co. SAN ANTONIO, TEX.— E. G. Hendrix Co. NORFOLK, VA.-Bowers Whsle, Corp. STAUNTON, VA.-Southern Elec. Co. SPOKANE, WASH.— True's Oil Co. MILWAUKEE, WISC .--Central Elect. Sales Corp.

MAJESTIC RADIO & TELEVISION CORP.

St. Charles, Ill.

Radio Receivers, Records, Electronics

BIRMINGHAM, ALA.— Birmingham Elec. Battery

PHOENIX, ARIZ.-Elect'l Equipment Co. of Ariz.

LITTLE ROCK, ARK .--555, Incorporated LOS ANGELES, CAL.—

Roach-Driver Co. SAN FRANCISCO, CAL.-McCormack & Co.

DENVER, COLO.-The Parker Co.

NEW HAVEN, CONN.-Mory Sales Corp.

WASHINGTON, D. C .-Mehen Dist'g. Co. JACKSONVILLE, PA.-

Major Appliances, Inc. MIAMI, FLA.—

Shelley Dist'g. Co. TAMPA, FLA.-Major Appliances, Inc.

ATLANTA, GA.— Crawford & Thompson

CHICAGO, ILL .-Chicago-Majestic, Inc. ROCK ISLAND, ILL .--Tri-City Radio Sup. Co. EVANSVILLE, IND.—
Allied Appl. Distrs. of Evansville INDIANAPOLIS, IND .-Kiefer-Stewart Co. SOUTH BEND, IND .-PEMCO Dist'g. Co. DES MOINES, IA.-Sidles Co. WICHITA, KANS .-Home Appliance Co. LOUISVILLE, KY .--Bomar Mfg. Co. MONROE, LA .-United Electric Serv. NEW ORLEANS, LA .-United Distrs., Inc. CAMDEN, ME.-Camden Shipbuilding Marine Rlwy Co. BALTIMORE, MD .-

J. B. Mitchell Co. HAGERSTOWN, MD .-

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Major Appliance Corp. DETROIT, MICH. LaSalle Elec. & Mill Sup.

Co. GRAND RAPIDS, MICH .--

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JACKSON, MISS.-Mississippi Appl. Co. KANSAS CITY, MO.-

Maco Appl. Distrs. ST. LOUIS, MO.— Recordit Dist'g Co.

OMAHA, NEBR.-Sidles Co.

NEWARK, N. J.-Igbe Brothers, Inc.

LACONIA, N. H.-George C. Stafford & Sons

ALBANY, N. Y .--Reines-Freeman Distrs. BUFFALO, N. Y .-

Mutual Appliance Distrs. NEW YORK, N. Y .-

Colen-Gruhn Co., Inc. PLATTSBURGH, N. Y.-A. H. Marshall Co., Inc.

ROCHESTER, N. Y .-Harmon Automotive Corp. SYRACUSE, N. Y .-

B. H. Spinney Co. CHARLOTTE, N. C .--

Southern Appliances, Inc. CINCINNATI, O.-

Kelley-Mason, Inc. CLEVELAND, O .-Elliott & Evans, Inc.

COLUMBUS, O.-Thompson & Hamilton, Inc. DAYTON, O .-

Gem City Appliances, Inc. TOLEDO, O .-

Gerlinger Equipment Co. OKLAHOMA CITY, OKLA.-Hales-Mullaly Co.

PORTLAND, ORE.-F. B. Connelly Co. PHILADELPHIA, PA.-

J. J. Pocock, Inc.

PITTSBURGH, PA.-J. E. Miller Co.

MITCHELL, S. DAK .-Automotive Sup. Co.

RAPID CITY, S. DAK .--The Wallahan Co.

CHATTANOOGA, TENN.-Allied Appl. Distrs. of Chattanooga

KNOXVILLE, TENN .--Allied Appl. Distrs. of Knoxville

MEMPHIS, TENN .--Allied Appl. Distrs. of Memphis

NASHVILLE, TENN.-Allied Appl. Distrs. of Nashville

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DALLAS, TEX.-Lone Star Wholesalers, Inc. HOUSTON, TEX .-

Electrical Equipment, Inc. ROANOKE, VA.-

Dowdy Electric Co. SEATTLE, WASH.-

F. B. Connelly Co. SPOKANE, WASH.— Prudential Dists., Inc.

HUNTINGTON, W. VA.-Modern Dists., Inc. MILWAUKEE, WIS.-

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INDUSTRIES, INC.

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BIRMINGHAM, ALA.-

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Allan Brown Co. LOS ANGELES, CALIF.-Radio Specialties Co.

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SACRAMENTO, CALIF. Lester Distributing Co.

SAN DIEGO, CALIF.-Gough Industries, Inc.

DENVER, COLO.-Tom Killian, Inc.

JACKSONVILLE, FLA.-Dunkerley Distributing Co. SARASOTA, FLA.-

Morley Radio Co.

ATLANTA, GA .-Alexander-Seewald Co. MACON, GA .-

A. S. Hatcher Co. CHICAGO, ILL.-

Lynn Stewart Co. MATTOON, ILL.-

Furste Auto Supply PEORIA, ILL.-

Kiefer Electrical Supply ROCK ISLAND, ILL.-

Tri-City Radio Supply INDIANAPOLIS, IND.-The Gibson Co.

SOUTH BEND, IND.-Colfax Co.

(Continued on page 52)

RADIO SERVICE DEALER

SPRAGUE TRADING POST

A FREE Buy-Exchange-Sell Service for Radio Men



THE IDEAL REPLACEMENTS FOR ALL DRY ELECTROLYTIC CAPACITOR TYPES

FOR SALE — About 30 hard-to-get used tubes, \$20 for lot. Everett Trent, Bowen, Ky.

SELL OR TRADE — DeForest course in Radio Instruction, over 90 lessons. Want communications receiver preferably Hallicrafters. George B. Martin, Box 111, Campbell Hall, N. Y.

Campbell Hall, N. Y.

WANTED — Pair of 100TH tubes in good condition; UTC VM-4 or equivalent, modulation transformer of 250 to 300-watt rating. Have for sale or trade Giant 24" ventilating fan; Emerson BAC-10 chassis, complete with tubes and speaker; 4-tube short wave autodyne receiver with tubes and speaker All in A-1 condition. C. Floyd Donbar, 112 Damon St., Filmt 5, Mich.

FOR SALE — Radio City 442-V.O.M.:

Damon St., Film. 5, Mich.

FOR SALE — Radio City 442-V.O.M.;
Superior PB200-V. 0. M.; Cornell Dubilier type BN capacity resistance bridge;
Phileo 030 Dynamic signal tracer, Supreme 589 tube and battery tester,
Supreme 561-R.A.F. freq. mnd, signal generator; Hickok R.F.O.4, 3" oscillograph and Service Manuals. Edward N. Christner, 313 Crawford St., Middletown 12, Ohio.

WANTED — Hickok traceometer and Riders 10, 11, 12 and 13. TEC 3 Herbert B. Reiszuer, E.B.R.C. #1; 5th Bb. F.A.S., Ft. Sill, Okla.

FOR SALE — Bogen E-1620, 30-watt amplifier for 6v d-c or 117v a-c. Has separate mike, phone & tone controls. Built-in phone has 78 & 33-1/r.p.m. \$165 list will sell for \$100. Radio Service, 285 Juanita Way, San Francisco 16, Calif. FOR SALE — 8" x 12" x 9" ICA deluxe amplifier chassis \$3; 10" x 17" x 3" blank chassis base \$1.50; 22X crystal Turner mike, \$9, and WRL multitester, \$15. Shigeo Akada, 3307-A Newell, Calif.

WANTED — Radio News, Jan.-April, July, August, 1940; Jan., Feb., July-Sept., 1941; Sept.-Dec., 1942; Feb., March, 1943. Exchange British radio mags. L. Marks, 14 Avenue Road, Kingston, Surrey, England.

FOR SALE — Four Fox spun aluminum trumpets 3½' long \$9 ea. and six Fox and one Western Electric 30-wait heavyduty 6v dynamic units, \$10 ea. Wilmer Wright, New Philadelphia RR #2, Ohio.

FOR SALE — Wilcox-Gay Recordio — a 4-in-1 unit; phonograph, public address, mike record and broadcast record; complete with mike and record changer. New, less cabinet, \$150. Black Rock Radio Sales & Service, 1868 Niagara St., Buffalo, N. Y.

WILL TRADE — Radio books, ARRL. Audels: by-pass condensers, coils, leads, 301 Weston 01 Mo. VOM, 20 late tubes, etc. Want Sky Champion, S-20R or Echophone EC-1 or what have you? Cpl. John Bronisjwski, 1816 W. 7th St., Spokane, Wash.

FOR SALE — Supreme #444 complete with instructions \$30; Radio City tube tester #304, no chart, \$20; Philco #066 tube checker complete \$20. Long list new and used tubes all tested perfect. 10 to 30% off list price. Harry Hollander, 2136 77th St., Jackson Heights, N., Long Island, N. Y.

FOR SALE — Solar model CC-1-60 capacitor tester in new condition, \$30 F.0.B. Also Superior Model #1280 tube tester and V.0.M. complete with charts and instructions. Hinged portable case in excellent condition \$20. Will trade tubes for Rider Manuals, A. Brindley, Radio Technical Service, 2821 Girard Ave., Philadelphia 30, Pa.

WANTED — 110v phono-motor with turntable. O. W. Moehlman, 3522 Askew Ave., Kansas City, Mo.

FOR SALE — Philco tube tester #421 in good usable condition, \$15. Harlan Reach, Route #1, Owen, Wisc.

HELP WANTED — Good serviceman. Write qualifications. James H. Brown, Radio Service and Supply Co., Childersburg, Ala.

FOR SALE — Triplett a-c ammeter 0-2; Philco shadow meter; output meter; RCA. 156 tube tester, modem; 1940 Supreme Radio diagrams; Supreme book Radio Servicing by Comparison; Early model Gernsback wiring diagrams; Audels Radioman, Audels Auto Manual and 1-Dyke Encyclopedia. All in A-1 condition. Hamilton Radio Clinic, What Cheer, Iowa.

WANTED — Back issues of "Radio" magazine for '38, '39, '40 and '41. Also '39 and '40 radio handbooks. Will pay original price if in good condition or will trade radio parts and tubes. Write giving details. John Isaacs, 2412 W. 156th St., Gardena, Calif.

FOR SALE — Brand new 2000 mfd. — 15 volt elec. condensers in round metal cans 1½" x 3" high. Three units \$5 or singly \$2 ea. J. Goldstein, 151-09 34th Ave., Flushing, Long Island, N. Y.

WANTED — Tube checker any reliable make. Will pay cash or trade Solar C. B. condenser analyzer and R.C.P. 702 signal generator or hard to get tubes. M. J. Oulas, 1216 N. 17th St., Clarksburg, W. Va.

FOR SALE — Riders Manuals 1-7 good condition \$65. Paul Meyer, 1119 Putnam Ave., Plainfield, N. J.

URGENTLY NEEDED — Riders Manuals 5, 8, 10, 11, 12 and 13; 50L6 and 50Y6 tubes. James H. Brown, Childersburg, Ala. FOR SALE — Complete radio and Refrigerator Sales and Service business and building, Good stocks and business, owner retiring. Cheap. Write for details. Leo L. Boeman, 615 W. Main St., Lewistown, Mont.

FOR SALE — Two almost new PM, 30 watt 12'' speakers; 1-12'' 2,000 olum field, 1-11'' speaker 1,000 ohm field. \$25 for lot C.O.D., August Palermo, 223 S. Winebiddle Ave., Pittsburgh, Pa.

WANTED — Recording unit with motor and 35mm camera. Have to sell 20 watt amplifier with carrying case, input for two mikes and phono. Roy W. Spencer, 222 E. 23rd St., Erie, Pa.

FOR SALE—Over 100 pieces radio equipment

FOR SALE—Over 100 pieces radio equipment, many hard-to-get parts; coils, condensers, volume controls, switches, resistors, tubes, transformers, phones, speakers, phone jacks, dial knobs, sockets, binding posts, etc., \$20 plus postage. Wm. Haglen, Heron, Mont.

SELL OR TRADE — 5" oscilloscope regulated power supplies built by RCA, \$15 or what have you? Lectronic Research, Hegerman and Howell Sts., Philadelphia 24, Pa.

Geiphia 24, Fa.

FOR SALE — Instructograph with oscillator phones and tapes, like new. Have for trade Riders Manuals 1 and 3. Want two Sprague condensers, 4 or 8 mfd. 1,000 v and Sprague bleeder 25,000 ohm, 100 or 200 watt. H. E. Leigh, 801 Clintonia Ave., San Jose 10, Calif.

7 good WANTED
9 Put- tester. W
Blanchard
Januals FOR SAL

tester. Write full description. Linus J. Blanchard, 181 W. Park Ave., Houma, La. FOR SALE — Following tested and A-1 nubes; 2 — 676; 5 — 0Z4; 2 — 12SK7; 4 — 6F6; 5 — 42; 2 — 224; and 1 ea. 6R5, 12SQ7, 6H6, 35Z3, 6U7, 35A5, 50L6, 6K7G, 7Y4, 80, 6G5, 5Z3, 1C7, 1N5, 6U5, 57. Want M.O.V. tester or kit to make one and kit of parts to construct 5 or 6 tube radio and auto radio. Herbert James, Box SO7, Big Spring, Tex. WILL TRADE — Phono turntable from

- Signal gen.

WILL TRADE — Phono turntable from RCA comb. comp. 10" RCA speaker model 50; 0-50 Weston Milliammeter #301; B eliminator Sterling speaker RT 41 Tel #24. Also tubes and parts. Frank Helm, 192 Jefferson St., Brooklyn, New York.

FOR SALE — Meissner, signal calibrator model 9-1076, \$50. Laughmans Radio Service, E-1027-J, 2815 Henderson St., El Paso, Texas.

SELL OR TRADE — Hallicrafters HT7 frequency standard. Want camera or equal value. Michael Topoll, RD #2, Box 204, Aliquippa, Pa.

WANTED — Rider chanalyst or Meissner analyst any condition. Also RCA Jr. voltohmyst and any television amateur equipment. Henry Setzke, 2250 W. 35th St., Chicago 9, Ill.

FOR SALE — Supreme tube checker #85 with adaptors. Fred L. Stahl, 25 W. Clinton St., Valhalla, N. Y.



5 TIMES HONORED

by distinguished service citations

YOUR OWN AD RUN FREE

For three wartime years, the Sprague Trading Post helped radio men sell, trade or buy needed materials. Now, with the advent of Peace, this free advertising service will continue as long as the need exists.

We'll gladly run your ad free in the first available issue of one of the 5 magazines in which the Trading Post appears. All we ask is that it be written clearly and concisely, that it be confined to radio materials, and that it fit in with the spirit of this service.

As always we know we can count on you to use Sprague Condensers and Koolohm Resistors — and to ask for them by name!

HARRY KALKER, Sales Manager

DEPT. RSD-115, SPRAGUE PRODUCTS CO., North Adams, Mass.

Jobbing distributing organization for products of the Sprague Electric Co.



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M. REGISTERED U. S. PATENT OFFIC

Obviously, Sprague cannot assume any responsibility, or guarantee goods, services, etc., which might be exchanged through the above advertisements

DES MOINES, IOWA-Radio Trade Supply Corp. WICHITA, KAN.-Basham Appl. Co. LOUISVILLE, KY .-Myer-Bridges Co. NEW ORLEANS, LA.-Higgins Industries, Inc. Modern Apply. & Sup. BALTIMORE, MD.-Arvin-Salmanson Co. of Balt. BOSTON, MASS .-Arvin Salmanson of New DETROIT, MICH .-Automobile Equipment Co. JACKSON, MICH.-C. E. Hamlin Co. MUSKEGAN, MICH. Fitzpatrick Elec. Co. PONTIAC, MICH.— Madison Elec. Co. Standard Elec. Co. SAGINAW, MICH .--Standard Elec. Co. DULUTH, MINN .-Marshall-Wells Co. JACKSON, MISS .-Ryan Sup. Co. KANSAS CITY, MO .-Ryan Interstate Dists. ST. LOUIS, MO .-Brown Sup. Co. BILLINGS, MONT .-Marshall-Wells Co. LINCOLN, NEBR.-The Korsmeyer Co. ALBUQUERQUE, N. MEX .--Stephens Whsle. Co. ALBANY, N. Y.-Arvin Dists. of East'n N. Y. BINGHAMTON, N. Y .-Southern Tier Elec. Sup. NEW YORK, N. Y .-Arvin-Salmanson Co. ROCHESTER, N. Y .-Kemp Equip. Co. SYRACUSE, N. Y .-Group Parts Inc. ASHEVILLE, N. C .-Hayes & Hopson CHARLOTTE, N. C.-Hough-Wylie Co. CINCINNATI, OHIO-Keilson Cigar Co. columbus, ohio-McCleery-Carpenter Elec. DAYTON, OHIO— Keilson Cigar Co. LAKEWOOD, OHIO-Irving Leon Co. TOLEDO, OHIO-World Radio & Appl. Co. PORTLAND, ORE .-Marshall-Wells Co. PHILADELPHIA, PENN. Everybodys Supply Corp. PITTSBURGH, PENN.-Joseph Woodwell Co. CHARLESTON, S. C .-C. D. Franke & Co. GREENVILLE, S. C .-Bates Radio & Sup. Co. COLUMBIA, S. C .-C. D. Franke & Co. KNOXVILLE, TENN.-

NASHVILLE, TENN.—
Auto Bearings & Parts Co.
DALLAS, TEX.—
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HOUSTON, TEX.—
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Jackson Dist. Co.
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Benf. T. Crump Co.
SPOKANE, WASH.—
Marshall-Wells Co.
CHARLESTON, W. VA.—
Valley Equip. Co.

RADIO CÒRPORATION OF AMERICA

RCA Victor Division Camden, N. J. Radio Receivers, Phono-Records

BIRMINGHAM, ALA.-R. P. McDavid & Co., Inc. LOS ANGELES, CAL.-Leo J. Meyberg Co., Inc. SAN FRANCISCO, CAL.-Leo J. Meyberg Co., Inc. DENVER 17, COL.— Hendrie & Bolthoff Mfg. & Supply Co. E. HARTFORD, CONN.-Radio & Appliance Dists. D. C.-Southern Wholesalers, Inc. JACKSONVILLE, FLA.-Southern Hdwe. & Bicycle Co. JACKSONVILLE, FLA.-Major Appliances, Inc. MIAMI, FLA.-Major Appliances, Inc. TAMPA, FLA.— Electric Sup. Co., Inc. ATLANTA, GA.-The Yancey Co., Inc. CHICAGO, ILL.-RCA Victor Dist. Corp. PEORIA, ILL.-Klaus Radio & Electric Co. INDIANAPOLIS, IND.-Associated Distributors DES MOINES, IA .-G. W. Onthank Company LOUISVILLE, KY.-Ewald Distributing Co. NEW ORLEANS, LA.-Electrical Supply Co. PORTLAND, ME.-Cressey & Allen BALTIMORE, MD.-D & H Distributing Co. CAMBRIDGE, MASS .--The Eastern Company DETROIT, MICH.

RCA Victor Dist. Corp.

RCA Victor Dist. Corp.

Interstate Supply Co.

SPRINGFIELD, MO.— Ozark Motor & Sup. Co.

MINNEAPOLIS, MINN.-

F. C. Hayer Co. KANSAS CITY, MO.-

ST. LOUIS, MO .-

BILLINGS, MONT .-Northwestern Auto Sup. Co., NEWARK, N. J. Krich Radisco, Inc. ALBANY, N. Y. Shapiro's Dist. Co. BINGHAMTON, N. Y .-Morris Dist: Co., Inc. BUFFALO, N. Y. Bickford of Buffalo NEW YORK, N. Y.-Bruno-New York, Inc. ROCHESTER, N. Y. Bickford Bros. Co. SYRACUSE, N. Y. Morris Dist. Co. CHARLOTTE, N. C. Southern Radio Corp. CINCINNATI, O. Ohio Appliances, Inc. CLEVELAND, O. Cleveland Radiolectric, Inc. COLUMBUS, O. Ohio Appliances, Inc. OKLA. CITY, OKLA. Dulaney Dist. Co. PORTLAND, ORE .-Harper-Meggee, Inc. HARRISBURG, PA.-D & H Distributing Co. PHILADELPHIA, PA. Raymond Rosen & Co. PITTSBURGH, PA .-Hamburg Brothers PROVIDENCE, R. I .-Eddy and Company, Inc. CHATTANOOGA, TENN.-Radio & Appl. Dists., Inc. KNOXVILLE, TENN.-C. M. McClung & Co. MEMPHIS, TENN.-McGregor's, Inc. NASHVILLE, TENN.-Keith Simmons Co., Inc. DALLAS, TEX.-Adleta Company EL PASO, TEX. Midland Specialty Co. HOUSTON, TEX.-Straus-Frank Co. SAN ANTONIO, TEX.-Straus-Frank Co. SALT LAKE CITY, UTAH-The Salt Lake Hdwe. Co. RICHMOND, VA.-Wyatt-Cornick, Inc. SEATTE, WASH .-Harper-Meggee, Inc. SPOKANE, WASH .-- Harper-Meggee, Inc. HUNTINGTON, W. VA.-Van Zandt Supply Co. WHEELING, W. VA.-Hamburg Brothers MILWAUKEE, WIS .-Taylor Electric Co.

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Home Cleaning Machines,
Blowers, Electric Floor
Polishers

MONTGOMERY, ALA.—
Walther Bros. Co.
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(Continued on page 54)

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(Continued on page 58)

(Northern) Victor H. Meyer,

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SYLVANIA NEWS

RADIO RETAILER EDITION

NOV.

Published by SYLVANIA ELECTRIC PRODUCTS INC., Emporium, Pa.

1945

SYLVANIA "LOCK-IN" ADVERTISEMENTS SELL THIS SUPERIOR TUBE TO NATION'S MILLIONS



This full page "Lock-In" ad appears in eight national magazines—including The Saturday Evening Post, Time, Fortune and Newsweek—telling over ten million people why Lock-In Tubes are the best tubes for their radios.

Many Set Makers to Include Them in Next Models

There are two important reasons why radio retailers will find the Sylvania Lock-In radio tube one of their best-sellers and biggest profit-makers. First, the Lock-In has advantages possessed by no other radio tube made. Second, the story of this remarkable tube is being directed to millions through Sylvania national advertisements.

These ads will boost your profits by further popularizing a tube already famous for the vital part it played in communications during the war. Today, set manufacturers are looking to the Sylvania Lock-In Tube as the perfect electronic unit for every type of set—including FM and Television.

WHY THEY ALL WANT LOCK-IN RADIO TUBES

- 1. ELECTRICALLY, Lock-In Tubes are more efficient. Element leads are brought directly through a low-loss glass header to become sturdy socket pins—effecting a much desired reduction in lead inductance and inter-element capacity.
- 2. MECHANICALLY, Lock-In Tubes are more rugged. Support rods are stronger and thicker. There are fewer welded joints and no soldered joints. The elements can't warp or weave and the "Lock-In" lug is made of metal—not plastic.

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Radio Receivers

BIRMINGHAM, ALA.-Cruse-Crawford Dist. Co. PHOENIX, ARIZ .-Arizona Mercantile Co. FORT SMITH, ARK.-Wise Radio Sup. Co. LITTLE ROCK, ARK.-Connerly . Radio Distrs. LOS ANGELES, CALIF.-Kinney Bros. SAN FRÂNCISCO, CALIF.— Edward F, Hale Co. DENVER, COLO .-Ralph Olsen Sales Co. HARTFORD, CONN.-Wood, Alexander & Co. JACKSONVILLE, FLA |--Lovejoy Co. MIAMI, FLA.-J. M. Keely Sales Co. ATLANTA, GA.— Cowan-Boze Co. BOISE, IDAHO-Afton-Lemp Elec. Co. CHICAGO, ILL.-T. H. Maginniss Dist. Co. LAWRENCEVILLE, ILL.-Suttle Equipment Co. PEORIA, ILL. Graybar Elec. Co. INDIANAPOLIS, IND. Central Rubber & Sup. Co. DAVENPORT, IA.-Graybar Elec. Co. DES MOINES, IA.— Graybar Elec. Co. DUBUQUE, IA. Diener Appliances WICHITA, KAN.-Wichita Building Material Co. LOUISVILLE, KY.-Stratton & Terstegge Co. PADUCAH, KY.-Michael Hardware Co. NEW ORLEANS, LA.-C. T. Patterson Co. BANGOR, MAINE-Coffin & Wimple LEWISTON, MAINE-Lewiston Maytag Co. BALTIMORE, MD.-Butler Bros. DETROIT, MICH.-Specialties Dist. Co. FLINT, MICH.-Silkworth Dist. Co. GRAND RAPIDS, MICH -Graybar Elec. Co. YPSILANTI, MICIL-Silkworth's DULUTH, MINN.-Great Lakes Auto Parts & Machine Works MANKATO, MINN. Southern Minn, Sup. Co. MINNEAPOLIS, MINN.-Minnesota Elec. Sup. Co. WILLMAR, MINN.-Minnesota Elec. Sup. Co. KANSAS CITY, MO.-Fitzgerald & Co. ST. LOUIS, MO .-Butler Bros. SPRINGFIELD, MO .-Harry Cooper Sup. Co. OMAHA, NEBR.-Motor Parts Co. NORTH PLATTE, NEBR.-

Kunkel Auto Sup. Co.

Sterling Appliance Co.

RENO, NEV .-

NEWARK, N. J .--Clinton Radio & Appl. Corp. ALBUQUERQUE, N. MEX.-Charles Ilfeld Co. ALBANY, N. Y.-Ft. Orange Radio Dist. Co. BINGHAMTON, N. Y .-Northrup Sup. Corp. BUFFALO, N. Y.-John Henrich Co. LONG ISLAND CITY, N. Y .--Apex-New York MOUNT VERNON, N. Y .-Appliance Distrs. STATEN ISLAND, N. Y .--Gershoff Elec. Sup. Corp. BIRMINGHAM, ALA.-UTICA, N. Y .-Miller Elec. Co. PHOENIX, ARIZ.-CHARLOTTE, N. C.-Shaw Dist. Co. LITTLE ROCK, ARK .---RALEIGH, N. C .-Blackwood's Inc. MINOT, N. DAK .-Shirley & Onstead CINCINNATI, OHIO-Harry Knodel Dist. Co. CLEVELAND, OHIO-J. C. Boylan Co. DAYTON, OHIO-Standard Radio & Electronic Prod. Co. NEWARK, OIIIO-Williams Whsle. Distrs. PORTSMOUTH, OHIO-The Hibbs Hardware Co. TULSA, OKLA.-Stewart-Warner Prod. Co. PORTLAND, ORE. Graybar Elec. Co. ERIE, PA.-Reliable Radio, Inc. PHILADELPHIA, PA.-Philadelphia Distrs. PITTSBURGH, PA.-I. & M. Sufrin WILKES BARRE, PA.— Kile-Jacobs & Co. YORK, PA. Motter Elec. Co. PROVIDENCE, R. I.-Tracy & Co., Inc. CHARLESTON, S. C.-Home Appliances Co. RAPDI CITY, S. DAK .-Hills Gas & Appl. Co. SIOUX FALLS, S. DAK.-Rudning-Robertson C6 CHATTANOOGA, TENN,-Johnson Tire Co. KNOXVILLE, TENN.-Bright Dist. Co. MEMPHIS, TENN.-Woodson-Bozeman Nashville, Tenn.-W. W. Acuff Co. CORPUS-CHRISTI, TEX.-Edwin Flato Co. DALLAS, TEX .-Butler Bros. BURLINGTON, VT .--Hagar Hardware & Paint Co. RICHMOND, VA .--Consolidated Sales Co. ROANOKE, VA.-Cormell-Friddy, Inc. SEATTLE, WASH.-Graybar Elec. Co. SPOKANE, WASH.-Graybar Elec. Co. HUNTINGTON, W. VA.—

Emmons-Hawkins

WHEELING, W. VA .-Ott Heiskell Co. MILWAUKEE, WIS .--State Dist. Co.

STROMBERG-CARLSON CO.

Rochester 3, N. Y.

Radio Receivers

Clark & Jones

Motor Sup. Co.

Rochester, New York

Boren Bicycle Co. DENVER, COLO.-Robert F. Clark Co. MIAMI, FLA.-Domestic Refrigeration Co. TAMPA, FLA.-Byars-Forgy, Inc. ATLANTA, GA.-Schiffer Dist'g Co. INDIANAPOLIS, IND.-Appliance Distrs., Inc. DAVENPORT, IA.-Midwest-Timmermann Co. DES MOINES, IA .-Midwest-Timmermann Co. WICHITA, KAN.—.

Jenkins Wholesale Div. ASHLAND, KY.-Vogel Birch & Co. LOUISVILLE, KY.-Graybar Elec. Co., Inc. NEW ORLEANS, LA.-Modern Appliance & Sup. PORTLAND, ME .---Farrar-Brown Co. BALTIMORE, MD.-Henry O. Berman Co. BOSTON, MASS.— Adams Erickson, Inc. GRAND RAPIDS, MICH .--Radio Dist'g Co. MINNEAPOLIS, MINN.-Graybar Elec. Co. KANSAS CITY, MO.-Jenkins Wholesale Div. ST. LOUIS, MO.senkins Wholesale Div. GRAND ISLAND, NEBR.--Island Sup. Co. MANCHESTER, N. H .--Auto Elec. Serv. Co. BUFFALO, N. Y.— H. D. Taylor Co. ELMIRA, N. Y .-Barker, Rose & Kimball, Inc. SEW YORK, N. Y.-Gross Distrs., Inc. SYRACUSE, N. Y .-Baldwin Hall Co. TROY, N. Y.-H. A. McRae & Co., Inc. CHARLOTTE, N. C .-Chapman & Wilhelm Co. CINCINNATI, O.-Tepfer Appliance Co.

(Continued on page 60)

CLEVELAND, O.-

COLUMBUS, O.-

J. J. Skinner & Co.

The Callander-Lane Co.

RADIO SERVICE DEALER

Here's your big, profitable tube market!

—the millions of radio owners who

HEAR

G.E programs on the air



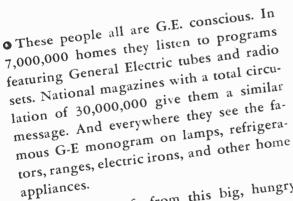
G.E magazine advertising



G.E lamps and appliances







• YOU can profit from this big, hungry market by selling G-E radio tubes. Arrange now for a sharp increase in your tube business in the months ahead. Write for information about G-E tube selling rights to Electronics Department, General Electric Company, Schenectady 5, N. Y.



Hear the G-t radio programs: Ine worth, Today" news, Monday through Friday, CBS. "The G-E All-Girl Orchestra," Sunday, NBC. "The G-E House Party," Monday, through Fuil of CBS. Hear the G-E radio programs: day through Friday, CBS.

GENERAL E ELECTRIC



OKLAHOMA CITY, OKLA.-Jenkins Wholesale Div. ALLENTOWN, PA.-Bell-Clark & Co. PHILADELPHIA, PA.-Elliott-Lewis Elec'l Co., Inc. PITTSBURGH, PA.-Ludwig Hommel & Co. YORK, PA.-The Careva Co. PROVIDENCE, R. I.— John J. Moore Co. CHATTANOOGA, TENN.-Tri-State Sup. Co. KNOXVILLE, TENN. Roden Elec. Sup. Co. MEMPHIS, TENN.-Adair Appliance Co. NASHVILLE, TENN.-Better Home Products, Inc. BROWNWOOD, TEX .--Central Sup. Co. DALLAS, TEX.-Padgett Dist'g Co. HOUSTON, TEX .-Houston Radio Sup. Co. SAN ANTONIO, TEX.-General Appliance Co. SALT LAKE CITY, UTAII.-Standard Sup. Co. RICHMOND, VA.-Graybar Elec. Co., Inc. SEATTLE, WASH .-Huletz Elec. Co. SPOKANE, WASH.—
Spokane Paper & Stationery

TEMPLETONE RADIO
MFG. CORP.
New London, Conn.

Roth Appliance Distrs., Inc.

MILWAUKEE, WISC .--

Co

Radio Receivers

BIRMINGHAM, ALA.-Alamaba-Florida Dist. Co. DENVER, COL.-Goldberg Bros. HARTFORD, CONN .-Hartford Stove Co. WASHINGTON, D. C .-Eastern Wholesalers, Inc. MIAMI, FLA.-Seaboard Dist. Co. ATLANTA, GA.-The A. G. Rhodes Co. CHICAGO, ILL .-H. U. Mann Co. BALTIMORE, MD.-Eastern Wholesalers Inc. BOSTON, MASS.-Littlefield-Greene Inc. DETROIT, MICH.-Associated Industries GREENVILLE, MISS. Goyer Supp. Co. ST. LOUIS, CO -Roehr Dist. Co. OMAHA, NEB,-Appliance Dists. Inc. NEWARK, N. J.-Northern Air Conditioning Corp. ALBANY, N. Y.-Alfred Dist. Co.

NEW YORK, N. Y .-

Templetone-New York Inc.

RALEIGH, N. CAR.-Electrical Wholesalers CLEVELAND, OHIO-K & F Dist. Co. ADA, OKLA.-Martin Clark Radio HARRISBURG, PA.-Penn Appl. Dists. PHILADELPHIA, PA .--Harry Lasky & Co. PITTSBURGH, PA .-Hi Major Div. Minsky Bros. & Co. SCRANTON, PA .--John J. Weis Sales Co. Inc. PROVIDENCE, R. I.-Radio & Appl. Sales Co. COLUMBIA, S. CAR .-Associated Dist. Co. of S. GREENEVILLE, TENN.-Bird's Co. KNOXVILLE, TEX .-Southern Dists. BROWNSVILLE, TEX .--Texas Motor Co. DALLAS, TEX.-Norman-Young Inc. EL PASO, TEX .-Reynolds Elect'l & Engineering Co. Inc. FORT WORTH, TEX .-W. W. Slaughter Co. HOUSTON, TEX .-Allen Sales Co. ST. JOHNSBURY, VT.-

WESTINGHOUSCE ELEC-TRIC CORPORATION Sunbury, Pa. Radio Receivers (Wesco distributors located in all cities listed unless another name is given)

The Peck Co.

BIRMINGHAM, ALA.—
Moore-Handley Hdwe. Co.
PHOENIX, ARIZ.—
LITTLE ROCK, ARK.—
Fones Bros. Hdwe. Co.
LOS ANGELES, CAL.—
OAKLAND, CAL.—
SACRAMENTO, CAL.—
SAN FRANCISCO, CAL.—

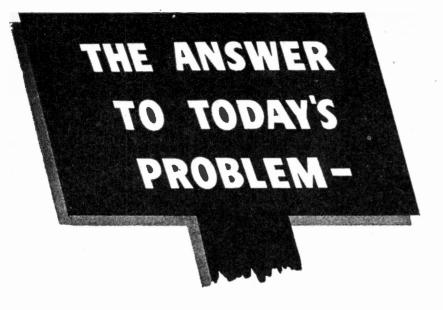
NEW HAVEN, CONN.-WILMINGTON, DEL.-DIST. OF COL. JACKSONVILLE, FLA.— MIAMI, FLA.-TAMPA, FLA.-ATLANTA, GA.-PEORIA. ILL.-CHICAGO, ILL.-EVANSVILLE, IND .--FT. WAYNE, IND.-INDIANAPOLS, IND .-McCaffrey Co. DAVENPORT, IA. DES MOINES, IA .-SIOUX CITY, IA .-WATERLOO, IA .-WICHITA, KANS .--LOUISVILLE, KY.-Tafel Elec. Sup. Co. N. ORLEANS, LA:-AUGUSTA, ME .--BANGOR, ME .-BALTO., MD .-BOSTON, MASS .--SPRINGFIELD, MASS .-WORCESTER, MASS .-DETROIT, MICH .-GRAND RAPDIS, MICH.-DULUTII, MINN.-MINN., MINN.-ST. PAUL, MINN .-KANS, CITY, MO .-Continental Elec. Co. ST. LOUIS, MO .-BUTTE, MONT .-OMAHA, NEBR.-RENO, NEV .-Saviers Elec. Prods. Co. NEWARK, N. J.-TRENTON, N. J-ALBANY, N. Y .-BINGHAMTON, N. Y .-BUFFALO, N. Y .-Buffalo Elec. Co. NEW YORK, N. Y .-Times Appliance Co., Inc. NEW YORK, N. Y.-ROCHESTER, N. Y .--SYRACUSE, N. Y .-UTICA, N. Y .-Kempf Bros. CHARLOTTE, N. CAR .--RALEIGH, N. CAR .-AKRON, O.-The Moock Elec. Sup. Co.

CANTON, O.-The Moock Elec. Sup. Co. CINN., O.— CLEVE., O.-COLUMBUS, O .-DAYTON, O .-TOLEDO, O.-YOUNGSTOWN, O.-The Moock Elec. Sup. Co. OKLA. CITY, OKLA.— TULSA, OKLA. PORTLAND, ORE .-ALLENTOWN, PA.-ERIE, PA.-PHILA., PA.— PITTS., PA.-Danforth Co. PITTS., PA.-READING, PA.-SCRANTON, PA.-Penn Elecl. Eng. Co. YORK, PA.-WILLIAMSPORT, PA.— PROVIDENCE, R. I .-COLUMBIA, S. CAR.-GREENVILLE, S. CAR.-KNOXVILLE, TENN.-Southern Furn. Sales Co. MEMHIS, TENN. NASHVILLE, TENN.-AMARILLO, TEX. CORPUS CHRISTI, TEX.-DALLAS, TEX.— EL PASO, TEX.— Zork Hdwe. Co. FT. WORTH, TEX.-HOUSTON, TEX.-SAN ANTONIO, TEX.— SALT LAKE CITY, UTAH.— BURLINGTON, VT .-BRISTOL, VA. Service Appliance Co. NORFOLK, VA.-RICHMOND, VA.-ROANOKE, VA.-SEATTLE, WASH .-SPOKANE, WASH.— TACOMA, WASH.— BLUEFIELD, W. VA.-Superior-Sterling Co. CHARLESTON, W. VA. Thomas, Field & Co. WHEELING, W. VA.-GREEN BAY, WISC .-MADISON, WISC.-MILWAUKEE, WISC.— HONOLULU, T. H.—

Hawaiian Elec. Co.

Additional lists of radio and appliance distributors will appear in the next issue of RADIO SERVICE DEALER, alphabetized separately for easy reference, as a service to our readers.

Barris

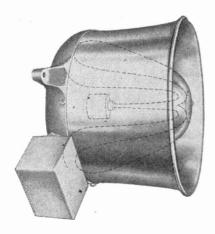


RACON's...the leading speaker line...for all types of sound installation!

Most of the best industrial p. a. installations in use are RACON speaker equipped. They are the finest speakers made and there is a type for every conceivable application.

For Marine p. a. installations, too, RACON leads. Approved by the U. S. Coast Guard, RACON speakers are used aboard Army and Navy vessels. Only RACON can supply, when needed, patented Weatherproof, Stormproof Acoustic Material which is impervious to any weather condition and prevents resonant effects.

Most manufacturing plants will soon order sound installations. Specify RACON Speakers! All types now available in unlimited quantities.



Left: MARINE HORN Speaker, approved by the U. S. Coast Guard. Several sizes available. Reentrant type, suitable for indoor or outdoor use — may be used as both speaker and microphone. 2½', 3½', 4½' and 6' sizes available. Right: RE-BNTRANT TRUMPET; available in 3½', 4½' and 6' sizes. Compact. Delivers highly concentrated sound with great efficiency over long distances.



RACON ELECTRIC CO. 52 EAST 19th ST. NEW YORK, N. Y.

Ready for Customers

[from page 29]

courtesy call once monthly from a fieldman who will inspect all home appliances, make minor repairs necessary and discuss appliance problems with the housewife. Before the courtesy call is made the housewife will be phoned so that a mutually convenient time may be arranged for the interview. In addition fieldmen will call on housewives who are not as yet customers, offering free inspection of appliances.

This store is now handling the merchandise situation from a priority standpoint in a little different fashion

than many dealers. 60% of all incoming appliances are reserved for purchase by returning war veterans. Any veteran calling at the store and showing his or her discharge papers may sign a request blank for not more than two electrical appliances most desired. The veteran will be notified when the appliances arrive. The remaining 40% of arriving appliances and radios will be distributed among the citizenry who are also eligible to fill out request forms for not more than two appli-

Bigelow's is at present also offering

the "household electrical appliance package" consisting of everything electrical for the home. The applicant makes out a list of all appliances desired, including lamps, toaster, percolator, mixer for the kitchen, one console radio and three secondary radios for the kitchen, dining room and children's or guest room, refrigerator, air conditioning unit and electric range. Total cost of the electrical combination is estimated and the purchaser pays monthly on his or her package. One, two or more items in the package are delivered monthly as they arrive until the entire package purchase has been consummated.

At present all Bigelow appliance sales people are women. They are all housewives whose husbands are war casualties-women who desire to commence a new career for themselves. "It takes a woman to sell a woman," is the Bigelow merchandising philosophy and they reason that war widows will be particularly interested in carving out a promising future for themselves hence their peculiar fitness for the post.



Appointment of Chester F. Gilbert as manager of a newly created Retail Finance Division of the firm's treasury department has been announced by L. H. Lund, vice president and treasurer of the Westinghouse Electric Corporation.

The company anticipates that a large percentage of products which lend themselves to installment selling will be purchased on time. The new division will cooperate with leading finance companies and banks of the country in developing technique of installment selling.

This will include the coordination of policies and practices of all departments of the company with respect to financing dealers, and products sold through dealers, distributors or agent jobbers; development of retail finance plans that will stimulate the sale of products by these groups; and the providing of means to assure satisfactory and efficient service by financing institutions on all retail sales.

Mr. Gilbert, a native of San Francisco, Calif., has, for the past four years, been associated with the Bank of America in San Francisco, and, at the time of joining Westinghouse, was an assistant vice president of that institution.

Before that he was for 15 years with the Commercial Investment Trust, Inc., where in 1930 he became an assistant vice president.



AVAILABLE NOW: MASCO'S MODEL RC-1

PORTABLE AUTOMATIC RECORD CHANGER

The model RC-1 is a modernized, well built automatic record-changer housed in an all wood case covered with durable duPont fabric. Cover is removable for convenience when playing . . . changer plays either 12 10" records or 10 12" records. Low pressure pick-up has an Astatic high fidelity cartridge with permanent sapphire stylus. Changer is mounted on spring shock absorbers, and all controls are incorporated on one switch.

Includes 6 ft. of shielded cable and 6 ft. line cord. Operation: 105-120 volts, 50-60 cycles. Dimensions: 16x15x934.

List Price\$110.00 Plus F.E.T.

Write for Catalog 45-E

ARK SIMPSON MANUFACTURING CO.





Masco Sound Systems and Accessories 186-194 WEST FOURTH STREET :: NEW YORK 14, N. Y.

Telephone CHelsea 2-7112-3-4



21 STAR FEATURES



Ready Now...the New 1946 EASTERN AMPLIFIERS



UALITY performance is the keynote of the new 1946 21-Star-Feature series of Eastern Amplifiers. Each model contains the many built-in features exclusively listed as Eastern developments and innovations.

The 21 Star Features include the new Eastern's *AMPLITUBE, a unique circuit component, insuring constant operation under all conditions-Eastern's *UNICABLE construction, eliminating the troubles associated with old-fishioned "floating" components-Eastern's *ROTO-VUE scale dials -Eastern's "Coded Cable Wiring Harness" -and many other Eastern contributions to "Soundest Sound" values. And back of this 1946 picture stands Eastern's well-known policy of "Ethical Engineering."

For complete information and price list -for the first edition of our 1946 Catalog-write today! Eastern Amplifier Corporation, 794 E. 140th St., New York 54, N. Y.-Dept. 11C.





STERN∠ДM PLIFIERS

*U.S. Reg'n Applied For

Revised Increase Factors

Sets

N a new OPA regulation manufacturers returning to production of radios comparable to those produced between July 15 and October 15, 1941, may increase their base ceiling prices as follows:

1. On sets sold to wholesalers for \$11.00 or less, an increase of 15 per cent;

2. Over \$11.00 and to and including \$30.00, 12 per cent;

3. More than \$30.00, $10\frac{1}{2}$ per cent. This distribution of increases is intended to encourage production of relatively inexpensive sets, and the overall increase should average about 12 per cent for the manufacturers.

New manufacturers, and those continuing with models that they introduced since October 1941, or who are coming out with models not comparable to those they produced in the summer of 1941, will be required to apply

for price approval at the national office of OPA, where reconversion ceiling prices will be established in line with other reconversion prices already set.

Parts

Final increase factors that radio parts manufacturers may use in calculating their ceiling prices for sales of base period parts to set manufacturers became effective October 11, 1945, and permit increases in pre-war parts prices ranging from 9.5 to 26.3 per cent.

The final factors replace "interim" increase factors announced August 31, 1945, which permitted increases of five to 11 per cent over pre-war prices pending further study of radio parts production cost data to determine the extent of advances in labor rates and materials costs experienced by producers since before the war. The new final increase factors are as follows: (For "interim" factors see RSD for October, 1945)

Coils, including radio frequency and intermediate frequency coils for radio 26.3% equipment Capacitors, fixed, all types (except mica) 16..4% Radio power and audio transformers chokes 16.1% and vibrators Variable condensers (ex-13.5% cept mica) Speaker and speaker 13.5% parts Parts for electric phonographs, phonograph recorders and radio - phonograph 11.5% combinations Fixed and variable re-9.5% sistors All other radio parts, including hardware, moulded parts, terminals, shields 9.5% switches

Ceiling Price

To compute his ceiling price for a part sold either as original equipment for installation in a new radio set or as industrial equipment or replacement, the parts manufacturer takes his October 1, 1941, price for the part and multiplies it by the percentage increase factor provided for the part. This gives the amount of the allowed increase over his 1941 price.

If a parts manufacturer since October 1, 1941, has received an individual adjustment in the ceiling price for any part which gives him a more favorable price than that computed by the foregoing method, however, he may continue to use the adjusted ceiling.



AMERICAN PHENOLIC CORPORATION

ware and Accessories.

tors and Material, Plugs, Sockets, Hard-

Chicago 50, Illinois In Canada • Amphenol Limited • Toronto

W.H.F. Cables and Connectors • Connectors (A-N, British) • Conduit • Cable Assemblies • Radio Parts • Plastics for Industry



Service Market in Industrial Electronics

[from page 42]

was negative with respect to the cathode. The use of the shield grid tube allows the control voltage to be either negative or positive dependent upon the voltage applied to the shield grid as shown by Fig. 6 where either negative or positive control may be achieved.

In the three element thyratron as of

Fig. 7 the construction is such that only a very small portion of the grid is in such a geometric arrangement as to set up the control field between plate and cathode. The remainder serves simply to shield the cathode. Such a tube is of necessity a negative control voltage type. These functions are isolated in the shield grid thyra-

tron whose components are seen in Fig. 3. The assembled interior view of such a tube is shown in Fig. 8.

The control grid is here only a small ring at the exit hole of the shield grid. A portion of the shield grid is usually used between plate and grid to shield the grid from the plate. A negative voltage applied to this shield grid sets up a field which may then be of such strength as to be counteracted only by a positive voltage applied to the control grid. The voltage applied to the shield grid is usually a d.c. voltage. The plate and control grid may both be a.c. Operation of the shield grid at cathode potential will allow only negative grid voltage control as seen for the type 2050 in Fig. 6.



We have called the thyratron a grid controlled rectifier. This is in general true of every application made of such a tube. Fig. 9A illustrates the simple grid controlled rectifier with d.c. grid voltage. By adjustment of R we may vary the time of conduction during the half cycle when the plate is positive with respect to the cathode and derive output waveforms as shown. Fig. 9B shows a circuit more applicable to industrial work since the operation of the circuit is entirely from a.c. During the period when the plate voltage is going through a negative excursion the grid will be positive but plate current cannot flow due to the negative plate. When the plate is going through a positive voltage excursion the grid is negative with respect to both cathode and plate. Positioning of the potentiometer R will vary the time of conduction during the positive plate voltage period.

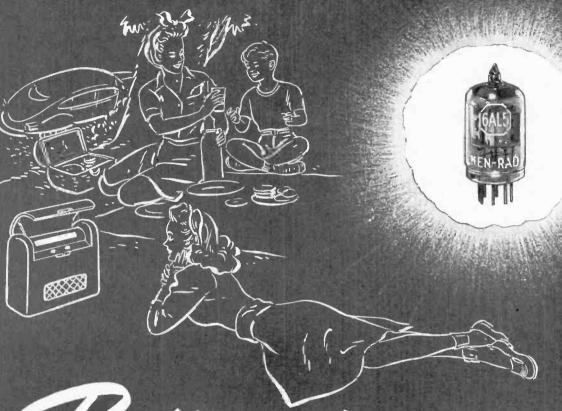
This basic circuit may be altered to that of Fig. 10 which has a relay in the plate circuit which is shunted by a large capacitor to smooth out the voltage drop across the relay coil. Potentiometer R may be set so that the tube will not conduct until resistor RR becomes low enough to permit the grid voltage to lower to the tube firing point. RR may be a control which changes resistance per some industrial operation and may thus be used to control the relay closing in correlation with some step in an industrial process.

More thyratron applications will be covered in part 3 of this series, together with photo-elements and the combined appliactions of these two in simple industrial circuits.



KEN-RAD

Little Giant MINIATURE TUBES



Better than ever

• Power-packed Ken-Rad Miniature Tubes have helped to popularize the friendly companionship of portable radios... Now still finer tube performance is assured by Ken-Rad's association with new, large research and engineering facilities... The ever-growing consumer demand for Ken-Rad quality means increased profits for Ken-Rad Tube Dealers!

Write for your copy of "Essential Characteristic." the most complete digest of tube information available.

KEN-RAD

DIVISION OF GENERAL ELECTRIC COMPANY
OWENSBORO, KENTUCKY

173-D13-8650

Micro-Wave Radio Relay

HE new micro-wave radio relay system revealed early this month by the Radio Corporation of America and the Western Union Telegraph Company is already in use in a test circuit between New York and Philadelphia. Ordinary poles and wires are replaced by a chain of elevated radio relay stations spaced 25 to 50 miles apart. Each station receives the transmissions from the preceding station and automatically passes them on to the next following station. Installation of two receivers and two transmitters at each station provides for simultaneous two-way operation:

1. Because the equipment is relatively simple and easy to install, "chains" of such stations may be installed more quickly and cheaply than wire lines.

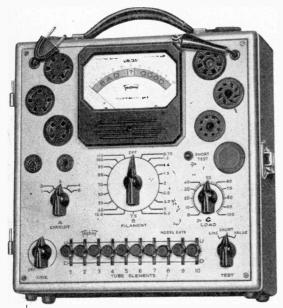
2. Because the stations operate automatically and hence require no attendants, they are *inexpensive to maintain*. Moreover, each radio circuit is capable of carrying many voice or telegraph channels simultaneously so that one such line may well serve the needs of most cities.

3. Finally, such service has the advantage of being *less vulnerable to storms* or electrical disturbances than are land lines.

The new type RCA equipment, which is used in a circuit installed early this year between New York and Camden, N. J., operates on frequencies in the band of 3900-4450 megacycles. At these frequencies a wavelength' is only about three inches and hence antennas of high directivity can be used. The consequent antenna "gain" is such that only very low powers are required and therefore the equipment is relatively simple. As a complement to the use of these extremely high frequencies, RCA engineers developed an entirely new system of "modulating" the carrier signal. In this system the carrier is only partially demodulated at each station, thereby avoiding the increase in noise level which would otherwise occur. As a result, the distortion and noise levels are very low even for a chain of many stations.

Two intermediate relay stations are required in the New York-Philadelphia link. One of these is located near Bordentown, N. J., and the other at 10-Mile Run near New Brunswick, N. J. At each point a 100 ft, steel tower has been erected on top of which is an 8 ft. square enclosed cabin. On the outside of the cabin are four bowl-shaped reflectors at the center of which are the tiny high frequency antennas. One bowl-antenna on the East side of the tower feeds the East-to-West receiver. while the other feeds the West-to-East transmitter. The two-bowl antennas on the West side of the tower feed, respectively, the West-to-East receiver and the East-to-West transmitter. The transmitters and receivers, together with the demodulating and modulating circuits are housed in the cabin. The transmitters in the present system put out about one-tenth of a watt. However, when it is considered that the antennas have a power gain of 900 (so that the receiver-antenna to transmitter-antenna gain is 810,000) it will be noted that the equivalent nondirective power is 81 kilowatts.

The band or channel width transmitted by the present system is 150 kilocycles. It has been estimated that this is sufficient for 270 multiplex or 1080 single, telegraph circuits. It could probably handle at least 25 ordinary telephone circuits, or if used for high-quality FM broadcast service, possibly



The New Speed-Chek Tube Tester

MORE FLEXIBLE • FAR FASTER • MORE ACCURATE

Three-position lever switching makes this sensational new model one of the most flexible and speediest of all tube testers. Its multi-purpose test circuit provides for standardized VALUE test; SHORT AND OPEN element test and TRANSCONDUCTANCE comparison test. Large 4" square RED • DOT life-time guaranteed meter.

Simplicity of operation provides for the fastest settings ever developed for practical tube testing. Gives individual control of each tube element.

New SQUARE LINE series metal case 10" x 10" x 5½", striking twotone hammered baked-on enamel finish. Detachable cover. Tube chart 8" x 9" with the simple settings marked in large easy to read type. Attractively priced. Write for details.

Model 2413



is another member of the NEW TRIPLETT Square Line





Precision first
...to last
Trinle

ELECTRICAL INSTRUMENT CO.

Additional Features

- Authoritative tests for tube value; shorts, open elements, and transconductance (mutual conductance) comparison for matching tubes.
- Flexible lever-switching gives individual control for each tube element; provides for roaming elements, dual cathode structures, multi-purpose tubes, etc.
- Linevoltageadjustment control.
- Filament Voltages, 0.75 to 110 volts, through 19 steps.
- Sockets: One only each kind required socket plus one spare.
- Distinctive appearance makes impressive counter tester,

eight channels. The present bandwidth is insufficient for television, but it is expected that new equipment, of higher power, which is soon to be available may provide the necessary 6-megacycle television bandwidth.

In its six months operation to date, this new radio circuit has performed admirably in the face of the rigid requirements of regular commercial operating practice. As a result of this experience the Western Union Company has filed an application with the Federal Communications Commission requesting permission to install equipment of a similar type in lines from New York to Pittsburgh, Pittsburgh to Washington, Washington to New York, and New York to Philadelphia. These are the first links of what Western Union has indicated will eventually be a nation-wide network.

Midget Vibrator

The Radiart Corporation announces that the Midget Vibrator, VR-2, is now available for civilian applications. It is the smallest vibrator made, measuring 2½" high by 1½" in diameter. It is one of the new radio developments of the war, being designed for operation from a small 6-volt storage battery in furnishing power to replace dry battery power. The entire power supply including the storage battery had to be made for a space 6½" x 3½" x 1¾". Naturally the vibrator had to be as small as possible. Specifications of the VR-2 are as follows:

Vibrator Frequency, 185 CPS \pm 10%; Input Voltage Nominal, 6.0 V.; Input Volatge Range, 4.5 V. to 7.5 V.;

Input Current, 1.5 amps max. at 6.0 V.; Output Voltage, 200 V. d.c. max.: Potential Difference Between Primary Reed and Secondary Reed, 25 V. max.

Manufacturers who would like more information may write to the corporation at 3751 W. 62 St., Cleveland 2. O., for blueprints and engineering cooperation.

Clarostat's Silver Jubilee

On October 30th at the Hotel St. George, Brooklyn, N. Y., the employees of Clarostat Mig. Co., Brooklyn, were feted and presented with five, ten, twenty and twenty-five year medallions in commemoration of the firm's twenty-fifth anniversary as producers of resistor products.

5,000 "Teleview" President

An audience of about 5,000 persons, believed to be the largest ever gathered under one roof to witness a television program, saw and heard President Harry S. Truman's Navy Day address in the Gimbels-Philadelphia store over 20 RCA Victor television receivers installed in the building. The President's speech and attendant ceremonies were telecast from New York by WBNT, NBC's television station, and picked up by WPTZ, which relaved it throughout the Philadelphia area. The television receivers in the Gimbels-Philadelphia store were taken off the intra-store coaxial cable and adjusted to pick up the telecast by RCA Victor engineers.

Currently presenting one of the most extensive demonstrations of intra-store television ever staged, Gimbels-Philadelphia has set up 20 receivers in strategic locations throughout the store's seven floors to present selected merchandise items to shoppers in all parts of the store. Placed in enclosed areas, these "Telesites" enabled the store's visitors to both see and hear the President.







In Trade

[from page 20]

facture wire record business dictating machines, adaptor units for use with existing home radios; portable, selfcontained recorders (including pocket models); recorders for installation on railroad trains, ships and planes for entertainment purposes; recording devices for use in connection with the operation and control of mobile vehicles, and specially designed recorders for application in five different fields, including self-contained units, machines especially designed for advertising purposes; commercial entertainment devices including single reproducers and multiple record players; and recorders designed for medical applications in diagnosis and study of human ailments.

These new licensees bring to 24 the total number of manufacturers who have been licensed to produce Armour magnetic wire sound recorders in various fields of application. They are: Aireon Manufacturing Company, Kansas City, Kansas; Ansley Radio Corporation, Long Island City, N. Y.; Automatic Electric Company, Chicago, Ill.; Boosey and Hawkes Ltd., London, England; C. G. Conn Ltd., Elkhart, Ind.; General Electric Company, Syracuse, N. Y.; The Hallicrafters Company, Chicago, Ill.; Hammond Instrument Company, Chicago, Ill.

Meissner Manufacturing Company, Mt. Carmel, Ill.; Packard-Bell Company, Los Angeles, Calif.; Radiotechnic Laboratories, Evanston, Ill.; E. H. Scott Radio Laboratories, Inc., Chicago, Ill.; J. P. Seeburg Corporation, Chicago, Ill.; Sonora Radio and Television Corporation, Chicago, Ill.

Stromberg-Carlson Company, Rochester, N. Y.; United States Government, War Department, Army Service Forces, Washington, D. C.; Utah Electronics (Canada) Ltd., Longueil, Quebec, Canada; Utah Radio Products Company, Chicago, Ill.; Webster-Chicago Corporation, Chicago, Ill.; and Wi-Recorder Corporation, Detroit, Michigan.

Norge Staff

Three important appointments to the company's headquarters sales staff have been announced by M. G. O'Harra, vice-president and general sales manager of the Norge division of Borg-Warner Corp. They involve three men who have long been identified with the distribution of household appliances and well known in the industry: Howard L. Clary, named sales promotion [Continued on page 72]





ere's what you can do to help put over the Victory Loanour last "all out" effort! To help bring our battle-weary men home and give the finest medical care to our wounded heroes! To show every one in your community that your store is back-

A Your community measures your support of the Victory Loan by your Bond advertisements! In all your advertising, include the Victory Loan "drop-ins" supplied by your newspapers. Use the Victory Loan Insignia and your own Trade Group Emblem in every advertisement!

B For top Victory Bond sales on Armistice Day, the Thanksgiving season, and Pearl Harbor Day, use mats of special Bond advertisements, which you can get from your newspapers!

C Advertise, display, and put your best selling effort behind the new Franklin Delano Roosevelt Memorial \$200 Bond!

Make every working day a Victory Bond Day! And be sure employees buy their quota, too, through the Payroll Savings Plan! If you do not have the Campaign Book, get in touch with your local Retail War Finance Chairman or the head of your own Trade Group. The Victory Loan is our final big drive-make it YOUR BEST!

The Treasury Department acknowledges with appreciation the publication of this message by

RADIO SERVICE DEALER

It'S NEW! It'S POST-WAR SUPPEME Model 565 VACUUM TUBE VOLTMETER





NEW PROBE Streamlined Hand Fitting, Incorporating new High Frequency Diode

Negligible frequency error from

50 cycles to 100 megacycles.

FREQUENCY RANGE:

DC 0-1, 2.5, 10, 50, 250, 500 AC 0-1, 2.5, 10, 50, 250 EXTENDED TO 5000 VOLTS BY EXTERNAL MULTIPLIERS

INPUT RESISTANCE:

DC—80 megohms on 1 volt range; 40 megohms on 500 volt range AC—40 megohms on 1 volt range; 20 megohms on 250 volt range

INPUT CAPACITY OF PROBE: 5 micro-micro farads

SUPREME INSTRUMENTS CORPORATION GREENWOOD

AUTO ANTENNAS Designed for LEADERSHIP

Leaders in the auto antenna field for over a decade, JFD offers for prompt shipment auto antennas with these advantages:

- 1. Seamless Admiralty Brass Tubing
- 2. High-Polished Chromium Plating
- 3. Stainless Steel" Snap Back" Top Rod
- 4. Heavily Insulated Shielded Loom Lead
- 100% Low Loss ConstructionEight Fast Selling Sizes and Types

Write for FREE literature # 344

J. F. D. Manufacturing Co. 4111 Ft. Hamilton Parkway, Brooklyn 19, N. Y.

In Trade

[from page 70]

manager; Harry J. Holbrook, manager of electric range sales, and John F. Morgan, southwest central regional sales manager. With their new appointments, Clary and Holbrook return to private business after three years with the War Production Board in Washington. Morgan relinquished his wartime duties last November.

Home Records Lower

While manufacturers in general are clamoring for higher ceilings for their products, Sidney S. Gould, president, RecorDisc Corp., 395 Broadway, New York City, announces lower prices on improved quality RecorDisc home recording blanks, as follows:

 6½"
 8"
 10"

 Bond Base
 10¢
 20¢
 30¢

 Steel Base
 20¢
 30¢
 40¢

 Aluminum Base
 25¢
 35¢
 45¢

It is Mr. Gould's contention that the home recording industry should follow the policy carried out by the photographic industry. Only at such time when cameras and films became cheap enough to be accessible to even the modest income groups did photography "catch on". Similar popularity could be achieved by the home recording industry if it were to follow a downward trend price policy. It can easily become a vital and integral part of the radio business to a volume of millions of dollars a year.

Over four million home recordings for overseas were made each year during 1942, 1943, and 1944, and an even larger number proportionally thus far this year. These millions of recordings were received by the families of the senders, and from 2 to 10 people have listened to each of them.

In addition, hundreds of discs are sold across the counter to home recording enthusiasts who are fortunate enough to own home recording equipment now. Then, too, there is the great number of retail stores and other organizations which specialize in making voice recordings for the general public. It is obvious from the above that tremendous publicity and advertising have been given to home recording.

G-E Credit Corp.

Appointment of J. A. Foley as manager of the East Central District of the General Electric Credit Corporation, has been announced by G. F. Mosher, president. Foley will make his head-quarters in the General Electric Building, 4966 Woodland Avenue, Cleveland 4, Ohio, and will reassume the

position he held prior to special assigned work during the war period with the General Electric Company in Schenectady.

Kelvinator Sales Training

Kelvinator and Leonard appliances for 1946 took their initial bows before the company's zone managers and distributors meeting in five cities last month. The meetings, coincident with the first shipments of new refrigerators to the field, touch off a series to be held throughout the entire organization during the next few weeks.

Occupying a major spotlight at the meetings was an outline of Kelvinator's new "Vocation-in-Sales" training program, which Charles T. Lawson, vicepresident in charge of sales described as the most vigorous and important activity of its type ever undertaken by the company. Designed with the twofold purpose of aiding the retailer to rebuild his sales manpower and to open up new professional opportunities to returning servicemen, the program was developed by Kelvinator with the assistance of leading authorities in sales training and manpower selection. Much of the research and preparation of material was the work of the Psvchological Corporation of New York, which was responsible for important Army and Navv selection programs Mr. Lawson told the zone managers and distributors that "no other factor in the period ahead approaches the problem of sales manpower in importance."

Charles J. Coward, director of advertising and sales promotion, outlined the company's comprehensive advertising and promotional program for the months immediately ahead, pointing up a rapid fire consumer magazine advertising schedule, the company's new full-network radio show on Columbia, and an array of promotional aids.

Hotpoint Sales Heads

Don W. Rennewanz is appointed sales manager of the range division, Edison General Electric (Hotpoint) Appliance Co., according to Gregory L. Rees, manager, range and water heater sales division. Rennewanz has been a range and water heater specialist in the Seattle, Wash., sales district. Other appointments: H. L. Cushing, district sales manager, Dallas, Tex-Harold B. Cromleigh, district sales manager, Philadelphia, Pa.; D. C. Risher, district sales manager, Charlotte, N. C.; and Samuel J. Houston. general representative, eastern region, with headquarters at the company's New York office.

[Continued on page 78] | ADDRESS.....



Years of experience and research have enabled HALLDORSON designers and engineers to produce transformers of the highest quality.

Look for the well-known HALLDORSON trademark when ordering transformers. It is your guarantee of high quality backed by long experience. . . . We are developing additional and improved transformers to make our line more complete.

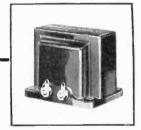
Join the list of alert jobbers who are planning to carry this better line of transformers. WRITE TODAY.

THE HALLDORSON COMPANY

since 1913 4500 Ravenswood Avenue • Chicago 40, Illinois

HALLDORSON Vacuum Sealed

TRANSFORMERS





Please ship me one All-Steel Parts Cabinet by express. I enclose \$6.50 ☐ check ☐ money order. I will pay express charge upon arrival.

New Radio Set Prices

Maximum Price Regulation No. 599—Radio Receivers and Phonographs, Amendment 70 to Maximum Price Regulation 188; Revocation of Maximum Price Regulation 430—all effective October 30, 1945. Covers all new model radios and supersedes existing regulations and prices affecting these models. Manufacturers to tag sets with retail ceiling prices.

ECONVERSION pricing methods for consumer type radios and phonographs are given in detail by the Office of Price Administration in a new regulation covering these items at all levels of sale. As announced October 11, consumer prices will be about what they were in March 1942. Two kinds of adjustment have been made, however, to iron out inequities that had crept into the retail price picture at that time.

First, where retail prices in March 1942 included excise taxes newly imposed in October 1941 at the manufacturing level, and pyramided through to the consumer by means of percentage mark-ups at successive levels of distribution, OPA has reduced these retail prices to the point where they include

only the original dollar amount of the manufacturer's October 1941 excise tax. This policy has been consistently followed on all consumer items on which new wartime taxes were imposed in October 1941.

Second, in cases where dealers, by March 1942, had established individual ceilings higher than those in the manufacturer's October 1941 suggested list of retail prices, OPA has reduced these prices by the amount of the increase over list. Such price increases did not represent any actual increase in acquisition or distribution costs, OPA said, but served merely to increase margins abnormally.

Through customary retail practices of giving substantial discounts for cash payments, generous allowances for

trade-ins, and mark-downs at periodic bargain sales, consumers normally paid considerably less in pre-war years than the retail prices listed in the manufacturers' catalogs, OPA pointed out. But during the early months of the war, when production was curtailed and consumer buying power already had begun to increase, retail selling prices of many consumer goods gradually rose to the higher levels represented by the manufacturers' lists. Many of these increases took place before the price agency was authorized to impose controls.

List prices, not actual pre-war selling prices, are the basis of the retail ceilings that have prevailed during the war, OPA said. On the other hand, increases now being granted to manufacturers are based on their costs and sales prices in the months before materials scarcities and higher production costs have driven prices above normal peacetime levels. Furthermore, the manufacturer increases granted do not compensate for all cost increases since the beginning of the war, OPA explained, but normally require a certain amount of cost absorption on the part of the manufacturer.

For these reasons, and because sellers can now look forward for many months to an increasing volume of goods and a steady demand for all items offered for sale, distributors and dealers should be able to absorb without substantial hardship the increases over 1941 prices that are granted to manufacturers. OPA said. In many cases, 100 per cent absorption will leave dealers with realized margins actually higher than those they enjoyed in 1941, the agency stated.

Pricing Methods

On models the same as those produced from July to October 1941, the



manufacturer computes his reconversion price on the basis of his established price to distributors or to dealers if he did not sell to distributors. Old price ranges and increases that may be added by manufacturers who sold through distributors are as follows:

Manufacturer's Established Price to Distributors \$11 or less between \$11 and \$30

over \$30

Allowed Increase on Sales to Distributors 15% 12% or \$1.65, whichever is more 10½% or \$3.60, which-

ever is more

If the manufacturer dealt only with dealers in the base period, he computes his new ceilings to dealers as follows:

Manufacturer's Established Price to Dealers \$13 and under between \$13 and \$35.41 over \$35.40

Allowed Increase on Sales to Dealers 15% 12%

ANY

RADIO

101/2%

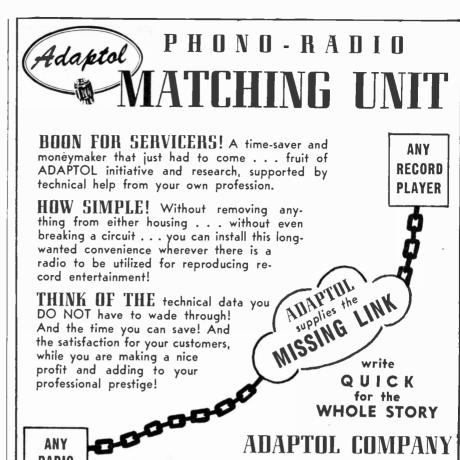
On new or changed models that are nevertheless comparable to any they produced from July to October 1941. manufacturers first compute the new ceiling price of the comparable item. and find the percentage mark-up it yields over the current unit direct cost of producing the item. Next, they compute the current unit direct cost of producing the new or changed model, and apply to this cost the same percentage mark-up as that found for the comparable item.

Thus if the current unit direct cost of producing a model on which a reconversion ceiling price already has been established is \$6, and the ceiling price is \$9, the mark-up on unit direct cost is 50 per cent. If the current unit direct cost of producing a new or changed model is \$6.50, this figure is marked up by 50 per cent resulting in a ceiling price for the new model of \$9.75.

Private Brands

In all cases except one, the manufacturer calculates retail ceiling prices, and tags each unit with this price. Manufacturers also compute wholesale prices and notify distributors of their ceiling prices. The exception is the case of manufacturers who produce units under contract with the owner of a special brand name, who is another radio manufacturer, an automobile manufacturer, or a mail order establishment. Here the manufacturer calculates his new ceiling price to the brand owner, but the brand owner applies to OPA for resale ceiling prices. The brand owner must wait for spe-

[Continued on page 77]





WHOLE STORY

ADAPTOL COMPANY

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BOOKS THAT TELL YOU HOW

3 new books that give you the basic knowledge for successful work in post-war radio.

PRINCIPLES OF RADIO FOR OPERATORS



By Atherton. Clear instruction on the operating principles of all parts of radio, including antennas, with full details about equipment and procedures for construction and operation. Many visual aids to help the beginner. \$3.75.



By Hudson. A simply written but scientifically reliable explanation of the theory, construction, and uses of the various electron tubes and other electronic devices, showing their enormous potentialities for future developments. \$3.

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By Tucker. An outstandingly clear, thorough training in the basic principles of radio circuits and their components, with full explanations of the necessary mathematics at the points where it is used. \$3.

FREE EXAMINATION

By using the coupon below you can procure copies of these books to look over for 7 days without cost or obligation on your part. Send for your copies today.

Special note to Dealers

YOU CAN MAKE A DOUBLE PROFIT

1. Books bring you better buyers. They stimulate the interest and knowledge that makes steady customers. The more your customers learn about radio the more they will buy from you.

2. Books are a profitable stock item. Our trade discounts allow you a good profit on each sale. Our wide promotion insures their sale without effort on your part.

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Let these books be salesmen for you. Let
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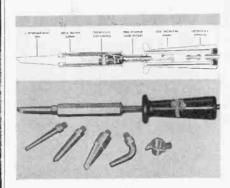
- ☐ Please fill my order for the books checked by number below, with the understanding that if I return them within 7 days my bill will be cancelled.
- Please fill my order, at dealer's discount, for copies of the books checked.

SIGNED.

1. 2. 3.

NEW PRODUCTS

[Continued from page 37]



KWIKHEAT Soldering Iron — Type #300; 225 Watts; 100-125 volts AC. Thermostat built into shaft of iron, maintains constant temperature. Element heats up in 90 seconds after connecting to current. Six tips, copper alloy. Tinning cup is aluminum. Wt. with #1 tip—14 oz.; lenfith, with tip, 13 in. Approved by Underwriters Labs. Made by Sound Equipment Heating Corp. of California, 3901 San Fernando Rd. Glendale 4, Cal.



MINIATURE lamps for radio, instrument and indicator service. 2.5 to 18 volt service, supplied with miniature screw and bayonet bases. Operate without causing radio interference and resist vibration from loudspeakers. Current ratings from .06 ampere to .5 ampere for wide range use, including ac-dc and battery sets. Lamps come with color-coded beads for quick identification. Made by Sylvania Electric Products, Inc., Emporium, Pa.

Color Television

Thomas H. Hutchinson, production director of the RKO Television Corporation, announces a practical color chart to aid in the production of television programs.



CLAROSTAT WIRE-WOUND Controls

★ This latest refinement of the well-known Clarostat wire-wound rheostat or potentiometer, is a still tougher control. And provably so. It copes with extreme vibration and mechanical abuse, fully matching its electrical ruggedness. You'll like this job. ★ Ask your jobber about Clarostat controls and resistors. Ask for catalog. Or write us direct.



CLAROSTAT MFG. CO., Inc. · 285-7 N. 6th St., Brooklyn, N. Y.

Set Builders' Specials

Radio and Phono Kits

New Items for the Ham

Send for our NEW

Fall Catalog

Complete line of ALL TYPES of Radio Parts. Write today.

McGee Radio & Electric Co.

R-1045, 1225 McGee Street Kansas City, Missouri

COOLING TO SEE MAYY

• These handy Aerovox Type PBS cardboard-case electrolytics squeeze into the tightest places. Can be mounted three ways — perfectly flat on the side, or on end. Also can be stacked. Note the Aerovox Adjustimount feature — adjustable metal mounting brackets adjusted for any position or mounting holes. Choice of popular voltages and capacitances and combinations.

• Ask your Aerovox jobber for PBS electrolytics.





Radio Set Prices

[from page 75]

cific approval, and then tag or list each unit with its new ceiling price, OPA said.

Manufacturers with established prices will compute their reconversion ceilings on comparable models on a form to be supplied by OPA, and may begin selling 15 days after mailing the form without waiting for specific approval, unless they are notified to the contrary, OPA said.

New manufacturers, and old manufacturers with models not comparable to any they produced in the summer of 1941, will apply for price approval at the national office of OPA, where reconversion ceiling prices will be established in line with other reconversion prices already set, the agency said

OPA may withdraw reconversion price increases from manufacturers who fail to maintain approximately their pre-war "product mix"—that is, the proportion of low and medium priced models to those in the higher price brackets, the agency said. Also, if any obviously out-of-line prices result from the application of today's pricing methods, OPA reserves the right to readjust them.

Burgess Guide

The new guide combines a listing of the correct replacement batteries for portable and farm radios. It also includes a listing of the private brand portables. Many new manufacturers are listed, and the number of sets covered exceeds 1,000. Also available is a numerical and alphabetical listing of all Burgess Battery products, which enables a quick identification of any stock number. Write Dept. RG for free copy of this new guide and product listing to Burgess Battery Co., Freeport, Ill.

Auto Antenna

Mr. Julius Finkel, president, JFD, aunounces the full production of a line of automobile antennas consisting of 8 popular three section antenna types. These telescoping antennas, according to Mr. Finkel, incorporate every advanced production design, including the stainless steel "snap back" top rod, chromed Admiralty brass tubing, shielded loom leads and 100% low loss construction.

The firm, which helped build radio parts for the armed forces during the war, has reconverted completely to the manufacture of civilian radio replacement parts.



RADIO PARTS ELECTRONIC



FREE! CONCORD **Victory Clearance Flyer**

Ready now! 32 Bargain-packed pages listing thousands of standard-make, top-quality radio parts and electronic supplies — now available without priority at low VICTORY CLEARANCE prices. The values listed below are typical of the important savings offered in Meters, Condensers, Transformers, Resistors, Controls, Switches, Relays, Test Equipment, Generators, Microphones, Tools, and hundreds of Repair, Replacement, and Accessory Parts.

Typical Concord Values



D. C. Milliammeters 2½" flange mtg. type. Metal case dull black finish. G. E. 0-200 M. A. C10650 Specially Priced \$4.95

Transformer Hermetically Hermetically sealed. Six studs, 1.2. and 3 are pri. 4.5. and 6 the sec. Pri. ind. at 5 V. 1000 cy.: 20 H. Ratio sec. to pri. 3.02:1. size: 31/4 x 2.-41/64" 5B5045 Your cost \$1.95

Output

Order Today for Shipment Tomorrow from CHICAGO or ATLANTA

Huge stocks in two convenient warehouses — one in CHICAGO and one in ATLANTA — are ready to supply you quickly with needed parts of dependable, nationally-known quality — and at VICTORY CLEARANCE prices that mean real savings. Mail the coupon below NOW for your FREE copy of CONCORD'S VICTORY CLEARANCE Flyer.

RADIO CORPORATION

Lalayette Radio Corporation ATLANTA 3, GA.

901	W.	Jackso	n Blvd.
Lo	ONC	OPD R	ADIO

265 Peachtree Street ACOP CORPORATION 901 W. Jackson Blvd.

Ι	Dept.	K-11	l5, Chie	cago 7,	III.	74	DI
						CONCORD'S	new

Name																					
Address																			, it		

City State

In Trade

[from page 73]



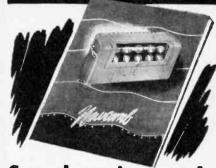
"Eddie" Riedel

A veteran merchandiser in the radio industry of radio receiving sets, speakers and tubes, Edgar S. Riedel, for 13 years general sales manager of the Receiving Tube Division of Raytheon Manufacturing Co., Newton, Mass., announces his resignation from the company. "Eddie" Riedel is a popular nationally-known pioneer in the field of radio distribution, advertising and sales. He was one of the nine original organizers of the Radio Manufacturers' Association in the Sherman Hotel at Chicago in 1923. He has been engaged in radio merchandising since the first day of broadcasting, when he manufactured Thorola sets, parts and speakers. During the first four years of broadcasting in radio he manufactured and marketed over two million Thorola and Thorophone horn type loudspeakers, leading the speaker industry.

During the "B" eliminator days, as general sales manager for Raytheon, he was active in licensing the 45 manufacturers who built their "B" eliminators around the Raytheon BH gaseous rectifier, which at that time was the firm's only product. This was the first step toward AC radio sets. After several million of these BH tubes were on the market in "B" eliminators, "Eddie" established Raytheon's first replacement sales policy through jobbers whose outgrowth is today's national group of replacement tube distributors.

During the period that National Carbon had an option to buy Raytheon and handled its tube sales, marketing 4 Pillar radio tubes under Everready-Raytheon's name, "Eddie" Riedel resigned and accepted the position of vice-president and general sales manager of Utah Radio Products Co., Chicago, and again made an outstanding merchandising success with Utah dy-

AN ENTIRELY NEW LINE



Sound equipment by NEWCOMB

Our newest amplifiers offer greater excellence in sound reproduction than ever before available to the public address field. Designed by an organization devoted exclusively for seven years to the perfection of sound equipment, they embody all the benefits of today's most advanced electronic achievements.

Send for the catalog ... you'll find no other amplifier has so many advantages.



7ed McElroy World's Largest Manufacturer of Wireless Telegraphic Apparatus McElroy Manufacturing Corp. 82 Brookline Avenue • Boston, Massachusetts

WANTED: Radio Technician capable of taking complete charge of service department. Real opportunity for the right man. Southern Radio Service, Thomasville, Ga.

ADDRESS CHANGES—

Subscribers to RSD should notify our Circulation Dept. at least 3 weeks in advance regarding any change in address. The Post Office Dept. does not forward magazines sent to a wrong address unless you pay additional postage. We cannot duplicate copies of RSD sent to your old address.

Cowan Publishing Co. 342 Madison Ave., New York 17, N. Y.

RADIO SERVICE DEALER

Help Wanted! TECHNICAL **EDITORS!!**

We are increasing our staff need a technical editor and assistant technical editors having practical knowledge of radio servicina.

> Must be able to write simply on servicing methods, test equipment applications, special circuit problems, trouble shooting, installation and servicing of FM and television receivers and antennas, bench short cuts and miscellaneous subjects incidental to the radio service field.

SU.

4)

Excellent remuneration. Give details, experience, etc., so an interview can be arranged. Write to:

LEWIS C. STONE, Editor RADIO SERVICE DEALER

> 342 Madison Avenue. New York 17, N. Y.



namic speakers. In 1933 National Carbon canceled its contract with Raytheon giving up the option, and receiving tube sales were thereupon turned back to Raytheon. "Eddie" was induced to rejoin Ravtheon as general sales manager, which position he has held until his present resignation.

The new Raytheon replacement tube sales plan to be announced shortly to the parts and tube industry is one of the most revolutionary ever to be offered the tube distributors and service dealers in radio tube history. It is the crystallization of Eddie Riedel's dream for the past three years, of something to offer the parts distributors and service-dealers on tubes that was entirely new, helpful and constructive in post-war tube merchandising, which would elevate their business and protect them from outside interests cutting into the reliable radio-service profession in the new era of Electronics.

Before his radio days "Eddie" was for several years in charge of national accounts and manufacturers' sales for B. F. Goodrich Rubber Company, Akron, Ohio. During his high school days he was one of Oak Park High School's greatest athletes. His straight form of hurdling, new at the time, enabled him to break the world's interscholastic record. During each of his four years at Oak Park High School he was captain of all four major sport teams, winning 16 Oak Park monograms. In his freshman year, when Oak Park won the Central States championship of the West in basketball, he was honored as the greatest prep player in the Middle West. He pitched Oak Park to many baseball victories, and in his last year of high school he won the Cook County tennis championship. In his freshman year at the University of Chicago, he set a new world's record in the Olympic tryouts to represent the United States in the high hurdles at the Stockholm Olympics. For eleven years following college, as a member of the Chicago Athletic Association track team, he consistently won in the National track championships in the high hurdles. During the first World War he served as a United States Naval officer. At the time of his discharge, he held the rank of Lieutenant Senior Grade. He specialized in navigation and studied at Annapolis.

E. S. Riedel will announce his new business plans in the near future.

Demand for Television Sets

Paul Porter, chairman of the F.C.C., forecast television stations in 187 key cities, with a demand for \$1,000,000,-000 in video receivers at the end of five years.

OF PARKS STANDARD AND A SECOND



We have, ready for immediate delivery, a complete stock of tools, replacement parts, intercommunication systems, public address systems. test equipment . . . everything in radio equipment for the progressive service dealer. For big profit items . . . for quick delivery . . . place your order now with Leo.

6 TUBE AC-DC KIT



Complete. ready for assembly.

A two-band, superheterodyne kit with all tubes, speaker, chassis, and all parts for easy assembly. Broadcast band from 540 to 1620 KC. Short wave from 5.7 to 18.3 MC. Cabinet, \$5.25.

WRL MULTITESTER

All purpose tester. Money back quarantee.

\$18.75

less leads Cat. No. 16-439



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hig	ndles AC DC Voltmeter, DC Milliammeter, h and low range Ohnmeter. 3" meter with ody D'Aronsval movement. Size 5½x8x3½.
	Exclusive at WRL! Our latest flyer 12 page V-J edition of merchandise and radio values. FREE
	Handy Tube-Base Calculator 25c Giant Radio Reference Map, 3½x4½ ft 15c
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NAME			_		_
ADDRI	ESS		_		_

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ad Index

Adaptol Company	75	Marion Electrical Instrument Co Agency: Shappe-Wilkes, Inc.	8
Aerovox Corporation	77	McElroy Mfg. Co	78
American Condensor Co	70	McGee Rodio & Electric Co Agency: Clyde H. Smith Adv. Co.	76
American Phenolic Corp	61	Murray Hill Books, Inc	53
Burstein-Applebee Co	87	National Union Radio Corp	19
Centralab	65		78
Cinaudagraph Speakers, Inc Agency: Michael F. Mayger	21	Olson Radio Warehouse	73
Clarostat Mfg. Company	76	Operadio Manufacturing Co Agency: Howard H. Monk & Assocs.	18
Concord Radio Corp	78	Racon Electric Co	61
Eastern Amplifier Corp	63	Radiart Corp	23 :
Electrical Reactance Corp	77	Radio Corporation of America2, Agency: Kenyon & Eckhardt, Inc.	22
Electronic Laboratories, Inc	4	Radio Press	77
Agency: Burton Browne Adv.	1	Radio Wire Television	3
Tawcett Publications	12	Radolek Co	79
Galvin Mfg. Corp	15	Raytheon Mfg. Co 4th Cov	er
General Cement Mfg. Co	20	Raytheon Mfg. Co 4th Cov. Agency: Burton Browne Adv.	
Agency: Turner Adv. Agency General Electric Co	70	Agency: Sander Rodkin Adv. Agency	80
Sanaral Industries Co., The	75	Simpson Electric Co	-7
Agency: Fuller & Smith & Ross, Inc. General Transformer Co	15	Agency: Edwd. Hamburger Adv. Co.	62
Quardian Flactric Mfa Co		Snyder Mfg. Co	59 =-
Agency: Kennedy & Company	72	Southern Radio Service	
Halldorson Co., The	73	Sparks-Withington Co., The! Agency: Brooke, Smith, French & Dorrance, Inc.	55
Hallicrafters Co., The3rd Co Agency: Burton Browne Adv.	ver	Sprague Flectric Co	51
lickok Electrical Instrument Co	16	Sprague Electric Co	74
Agency: White Adv. Co. Hytron Radio & Electronics Corp	9	Agency: Burnet-Kuhn Adv. Co.	/T
Agency: Henry A. Loudon, Adv. deal Commutator Dresser Co Agency: Van Auken & Ragland Adv.	66	Agency: McCann Erickson, Inc.	
nternational Resistance Co	5	Agency: O'Callaghan Adv. Agency	72
Agency: Lavenson Bureau IFD Manufacturing Co	72	Agency: Newell-Emmett Co.	57
Agency: Mitchell Advertising Agency		Agency: Western Adv. Agency	68
(en-Rad		U. S. Treasury Dept	
Macmillan Company, The	76	Ward Products Corp	
Mallory & Co., Inc., P. R 2nd Cover, Agency: The Aitkin-Kynett Co.	26	Wholesale Radio Labora ories Agency: Pfeiffer Adv. Agency	79

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