

# PHILCO SERVICEMAN

Copyright 1936 By Philco Radio & Television Corporation

RADIO · MANUFACTURERS · SERVICE · NEWS

DECEMBER, 1936



## EDITORIAL

### 1937 and Your Business

THE motto "Everything comes to him who waits" does not apply to modern business. It may be possible to *stay* in business, but it is certainly not possible to *build up* a business and make real profit by sitting around waiting for business to come in.

Radio Manufacturers Service has given you the tools to get more business (R. M. S. Sales Helps) and the necessary equipment and backing to make that business a profitable one—Standard Service Charge Sheet, List Price Catalogs and recommendation in PHILCO radio instruction sheets, nation-wide broadcasting and many other ways. It's up to you to "follow through" and by your own individual efforts cash in all through the coming year.

Many sources are all working together toward the goal of establishing the radio service business on a satisfactorily profitable, highly dignified basis where it belongs. Radio Manufacturers Service has worked steadily for three and a half years to help your business reach and maintain that desirable status.

There will be no let-up in the efforts of R. M. S. to help you next year. Decide *now* how you will conduct your business during 1937 so as to take full advantage of that help.

And don't let anyone or anything cause you to deviate from your plans, once you have formulated them. Almost anyone can *make* plans, but few can *carry them out* over a period of time. Be one of those who "carry on"—and you will never regret it.

## Complete Performance Check-Up Proves Best Sales Insurance

### Tests and Adjustments Important Factors in Keeping Sets Sold

ONE of the best ways to make a sale and to have a radio set stay sold is to have the set performing properly from the beginning and have the customer satisfied with the performance. If the set does not operate correctly from the very first, the customer will naturally be suspicious of it at all times in the future, even though the performance is perfect at a later date. The set is never sold until it has been properly installed and until the customer is thoroughly satisfied. It pays to recognize this fact and to take the necessary steps before delivery to assure correct performance.

#### Sales Insurance

A sales insurance check-up is important on all radio sets, but it is particularly important on the larger models such as the 37-116 and the 37-690X. Customers pay greater prices for these sets because they want better performance. Unless they get performance in proportion to the size and price of the radio set, they will feel that their money has been wasted.

Many dealers feel that it is good policy to open a radio set from the original factory packing box in front of the customer to show him that he is getting a new set. This may be good psychology, but it does not always work. A radio set which is shipped by freight, as all factory shipments are made, is neces-

sarily subject to excessive vibration, which may affect the adjustments. Every possible precaution is taken in the construction to prevent such changes during transit, but it must be remembered that a radio set is a delicate electrical instrument and that it can get out of adjustment if mishandled.

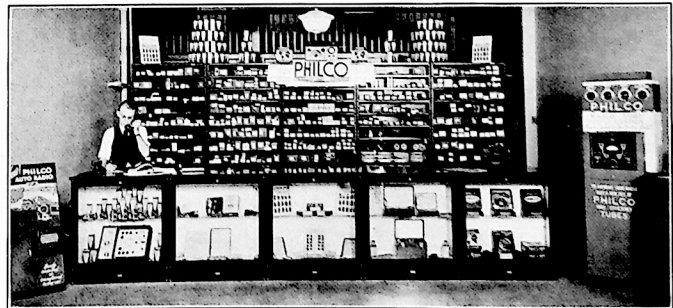
#### Thorough Check-Up

It is our suggestion that a set be checked thoroughly in the store before delivery to the customer. This means that the complete radio should be taken out of the shipping case, connected to a PHILCO All-Wave Aerial installation and played on each wave band. If the dial calibration is off slightly, as happens occasionally, the set should be readjusted by the serviceman. These adjusting instructions are contained in the service bulletin for every PHILCO model, and these bulletins, of course, are mailed to all members of Radio Manufacturers Service. We understand that John Rider is coming out soon with a new manual covering the adjustments of all PHILCO receivers. This manual will likewise be most helpful to servicemen in making these adjustments.

If the set has shadow tuning, the operation of the shadow indicator should be noted carefully. If the shadow is too sluggish or if it is too free, the condition can be corrected by turning the coil on the back of the shadowmeter. The edges of the form on which the coil is wound are knurled for convenience in making this adjustment.

In the case of the models with automatic tuning, it is suggested that the six or eight most popular nearby stations be

(Continued on Page 3)



Parts Department, William H. Metz Company, PHILCO Distributors in Des Moines, Iowa.

## BOAKE CARTER ADVERTISES R. M. S. NATIONALLY and LOCALLY



WHEN Boake Carter, in his nation-wide broadcasting, talks about Radio Manufacturers Service, he is talking about you, an R. M. S. member. This type of

broadcast advertising is far more valuable to you as an individual serviceman than any broadcasting which you might have done locally on your own local station. Without question, Boake Carter is the most popular news commentator on the air, and he is also PHILCO'S greatest salesman. He inspires people with confidence in his statements, and

when he says that you are a capable serviceman he is giving you the best advertising send-off you ever had.

In order for you to cash in on this finest advertising all you have to do is tell the people in your community that you are the local R. M. S. member. PHILCO has provided you with all the necessary materials to do this. Handbills, direct-mail pieces, R. M. S. signs, etc., are your means of tying in with Boake Carter's broadcasting. Read what Boake Carter had to say recently about R. M. S. (next column) and decide now that you are going to take advantage of the marvelous possibilities for increased service business provided through Boake Carter.

### October 29th Broadcast

The only poll that really counts is the one that comes on Tuesday. So it seems that between now and then is the time when you should get hold of a Radio Manufacturers Serviceman, one of those PHILCO-trained repair and service men dotted all over the country, to come in just to give your set the once-over and see that it is in perfect working order and not likely to suddenly go dead on the very night you will be needing it most, Tuesday night. And it is these PHILCO-trained R. M. S. men who are the best in their line; they have been examined and passed by hard PHILCO tests; they know their business; their charges are standard and reasonable, and you know what you are getting for what you pay; and if anybody wants one of these men, any PHILCO dealer can put you in touch with him. For there's nothing like the old adage that an ounce of prevention is worth a pound of cure.

# ATWATER KENT TUBULAR RESISTORS

*Replacement Numbers in Philco Identified Resistors*

Resistance (Ohms)	Atwater Kent Color Code	A. K. 1/2-watt . . . 1" Long		A. K. 1-watt . . . 1 7/8" Long	
		A. K. No.	Philco Replacement	A. K. No.	Philco Replacement
3,300	Green and Red	26410	33-233339	19436	33-235439
4,000	Green and Blue	.....	.....	18049	33-240439
5,000	Blue and Yellow	28050	33-250339	.....	.....
6,000	Purple	.....	.....	20151	33-260439
7,500	Yellow	.....	.....	15544	33-275439
10,000	Maroon	20950	33-310339	15545	33-310439
12,500	Purple and Yellow Purple and Red Red only	.....	.....	15941 16472 15802	33-313439
15,000	Gray and Yellow Gray and Green	20960	33-315339	22211 21784	33-315439
20,000	Black and Red	23120	33-320339	15891	33-320439
30,000	Gray	20970	33-330339	15285	33-330439
40,000	White Black and Yellow	26160	33-340339	16724 16725	33-340439
50,000	Black, Yellow and Red	.....	33-350339	22407	33-350439
65,000	Black Black and Green	21040	.....	15592 17558	.....
100,000	Blue Red and Blue	20980	33-410339	15287 16282	33-410439
250,000	Red and Yellow	20920	33-425339	19581	33-425439
500,000	Black and Purple	20930	33-450339	19649	33-450439
800,000	Red and Gray	23130	.....	20223	.....
1,000,000	Blue and Gray	21050	33-510339	.....	33-510439
2,000,000	Green	20940	33-520339	15892	33-520439

Carlson resistors in Atwater Kent sets made up till the end of 1934 were colored according to Atwater Kent's own code (appearing in the second column above). After 1934, the standard R. M. A. color code was used.

# Complete Performance Check-Up—

(Continued from Page 1)

tuned in and the station tabs inserted before delivery of the set to the customer. Complete instructions for installing station tabs are contained in the customer's instruction sheet.

The cabinet should be gone over carefully and should be polished with PHILCO furniture polish.

### Location in Room

The first thing to do after the set has been delivered is to select the best position in the room for the cabinet. The customer may want the radio set on a wall opposite a window. Ease and neatness of installation would be improved if the set were placed near the window, unless it is possible to run the lead-in wire under the floor. In general, a radio set should be placed so that it is facing the length of the room rather than the width. Better tone quality always results.

### Aerial Installation

The aerial installation is an important factor in the correct performance of the set. The easiest way to install the aerial is not always the best from the standpoint of performance. The aerial should be run at right angles to electric and power lines and should be placed as far away from such lines as possible. It is more desirable to run the aerial from the back of the house away from the power lines than from any other point near power lines. The height of the aerial is also important, because the amount of noise pick-up is dependent upon the distance of the aerial from the source of noise. If the electric wiring in the house is radiating noise interference, increased height of the aerial will get the flat top farther away from such noise and thus afford better reception. It should be remembered that the theoretical noise pick-up in the flat portion of the aerial varies in-

versely as the square of the distance from the noise. This means that if the distance of the aerial from a given source of noise is doubled, the amount of noise pick-up, instead of being half, is one-fourth.

### Fifteen Minutes' Instruction

The person who makes the installation of a radio set, and particularly one of the larger models, can well afford to spend fifteen or twenty minutes giving the customer personal instructions on the operation. Many dissatisfied customers have resulted simply because they did not understand the various controls. An extra few minutes devoted to instruction and demonstration in the home will save a sale in many cases. Many dealers are insistent that the customers be satisfied and that they thoroughly understand the operation. They have a serviceman stop back two or three days after the set has been installed just to make sure that everything is operating as it should and that the customer thoroughly understands the operation.

Your serviceman may be busy making installations and taking care of service work, but it is highly important to you that you keep your sets sold. In many cases an extra half hour devoted to each new customer has not only kept sets sold, but has resulted in additional sales to friends of the customer simply through real customer satisfaction.



PHILCO All-Wave Aerial transmission line is now available in 500-foot rolls at a reduced price of 2½¢ per foot list. The part number of the 500-foot roll is L-2603; list price, \$12.50.



## Questions and Answers

1. Q. Are the shadowmeters used in the '37 line of PHILCOS adjustable?

A. Yes. The coil form on the back of the shadowmeter is knurled so that the entire coil can be rotated slightly with respect to the body of the meter. Turning this coil will regulate the sensitivity of the shadowmeter in order to correct sluggish action or too free action.

2. Q. Have there been any changes in the new PHILCO parts catalogue since printing?

A. Yes. The changes are indicated below:

### Corrections in part numbers:

Page	Number Shown	Correct Number
9	28-8029	28-8009
11	42-5570	42-5580
11	Pontiac Control Assy.	42-5582
12	42-1159	42-1160
15	5262	28-3326
20	L-1831	(75c C. list) L-1821

### Insert prices where omitted:

Page	Number Shown	List Price
11	28-8595	\$1.00
11	28-8599	1.00
30	30-2113	.80

### Replacement parts chart:

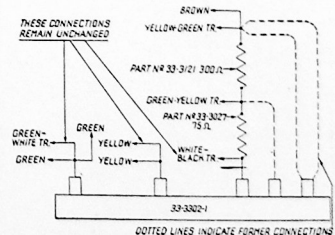
Model 643 output transformer should be Part No. 32-7472.

3. Q. What is the best way to remove so-called "printing" on the top of new cabinets caused by slight abrasion from the packing material?

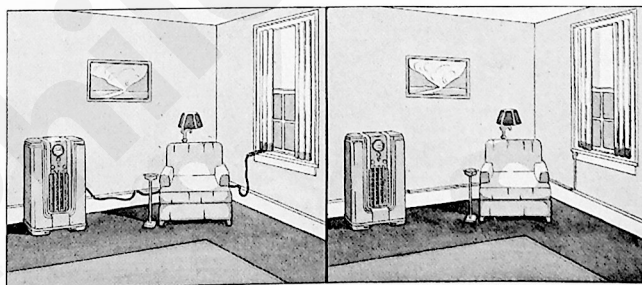
A. Markings of this kind may be removed by using Dupont Duco No. 7 Speed Blend Polish obtainable at any auto supply store. A pad of soft cloth should be saturated with the polish, and the surface of the cabinet rubbed vigorously. The top should be allowed to dry several minutes and then should be wiped clean with a soft, dry cloth.

4. Q. What is the cause of noise in the Model 690 similar to that produced by a noisy audio tube?

A. This condition is caused by loose contact in the 80-ohm and 325-ohm sections of the B/C resistor. Part No. 33-3302-1. The diagram below indicates the changes to be made for correcting this condition.



## HOW DO YOU INSTALL RADIOS?

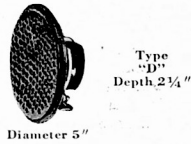


This Way? or This Way?

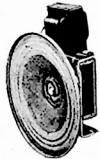
Some installations may require special care and must be handled differently from the standard. For example, a long transmission line lead-in around white woodwork looks better with the PHILCO ivory-colored transmission line (Part No. L-1591) than with the standard black.

# Philco Speaker Data Help Replacement Selection

Speakers Used on Other Make Sets and for P. A. Work



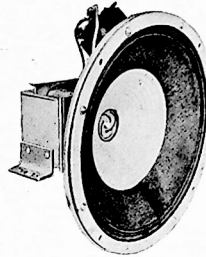
Diameter 5"



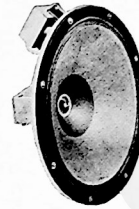
"B" Types  
Diameter 5"—Depth 2 1/2"



"K" and "S" Types  
Diameter 7 1/2"  
Depths: K—4 3/4"  
S—3 3/4"



"U" and "W" (Auditorium Types)  
"W" Type: Diameter 14"  
Depth 7 1/2"  
"U": Diameter 11"  
Depth 6 1/2"



"H" Types  
Diameter 11"  
Depth 5 3/4"



"KR" Types  
(Permanent Magnet)  
Diameter 7 1/2"  
Depth 4 1/4"

HUNDREDS of servicemen are using PHILCO speakers as replacements on other makes of radio sets.

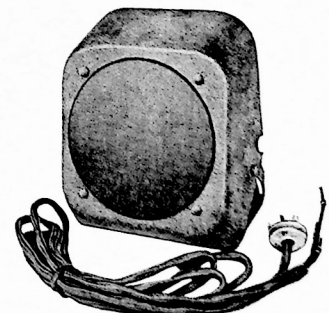
The large "U" and "W" type speakers are used extensively by servicemen for public address and other types of power amplification work.

There is a big market for auto radio extension speakers in the larger cars. In

many cases the owner will want the extension speaker in the rear of the car so as to afford better tone distribution. PHILCO'S auto radio extension speaker with its 6-volt field supply and its seven-foot extension cable with on-off switch makes an ideal arrangement for auto radio receivers.



PHILCO Extension Speaker—Permanent Magnet Field—Part No. 45-1224. List Price, \$15.00



Auto Radio Extension Speaker 6-Volt Field—Part No. 40-8182. List Price, \$10.00

For use with Output of	Field Res. (Ohms)	Approx. Field Watts	Output Trans. Imped. (Ohms)	Voice Coil Imped. (Ohms)	Model No.	Part No.	List Price
Any type; depends on output trans. used.	4	8	transf. not incl.	5	D*	36-1175	\$3.75
25A6	2,600	4	4,400	1	B-4	36-1194	6.00
6K6	1,140	4	7,400	1	B-6	36-1205	6.00
1-42 as pentode	1,140	6	7,400	1	S-7	36-1009	5.75
1-43 as pentode	2,850	6	4,000	1	S-15	36-1173	5.75
PP 47's as pentodes	3,275	8	12,500	1.25	K-6	02821	7.25
PP 42's as triodes	1,125	8	5,900	1.25	K-17	36-1025	7.25
1-42 as pentode	1,125	8	7,100	1.25	K-21	36-1055	7.25
1-42 as pentode	660	8	7,200	1.25	K-23	36-1060	7.25
PP 71A's or 45's	3,275	8	5,900	1.25	K-24	36-1067	7.25
1-47 as pentode	3,275	8	7,100	1.25	K-25	36-1068	7.25
1-43 as pentode	2,850	8	4,300	1.25	K-27	36-1120	7.25
PP 42's as pentodes	3,275	8	12,500	1.25	H-12	36-1006	8.25
PP 42's as triodes	1,125	8	5,900	1.25	H-13	36-1036	8.25
1-42 as pentode	1,125	8	7,100	1.25	H-15	36-1057	8.25
PP 45's	3,275	8	5,900	1.25	H-17	36-1064	8.25
1-47 as pentode	3,275	8	7,100	1.25	H-18	36-1065	8.25
1-42 as pentode	660	8	7,200	1.25	H-22	36-1161	8.25
PP 42's as triodes	1,450	12	5,700	3.90	U-7	36-1108	15.00
PP 6A3's (class A)	1,450	12	3,200	3.90	U-9	36-1162	16.00
PP 42's as triodes	1,450	12	5,700	2.28	U-2	36-1019	15.00
PP 6A3's	350	12	8,000	3.90	W	36-1219	22.50
1-19 (class B)	Perm. Mag.	Perm. Mag.	17,000	5	KR-17	36-1248	10.00
PP 43's as pentodes	"	"	7,000	5	KR-18	36-1249	10.00
1-19 (class B)	"	"	17,000	5	HR-12	36-1250	11.00
PP 43's as pentodes	"	"	7,000	5	HR-13	36-1251	11.00

\*Type D especially recommended for auto-radio sets. Types KR and HR for battery sets.

DEVLIN-DREW COMPANY

718 "F" Street

Fresno, California