

PHILCO SERVICEMAN

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RADIO · MANUFACTURERS · SERVICE · NEWS



MARCH, 1937

EDITORIAL

Keep Your Name Before Them

THE old saying, "Out of sight, out of mind," applies equally well to the radio serviceman as to anyone else—either in business or social contacts.

The serviceman who makes a call, completes the job, collects his charge and promptly forgets the customer (unless there's a comeback) is making a great mistake.

The serviceman who is desirous of building up a permanent business with a desirable following in his neighborhood should endeavor first to do his work so well and leave such a good impression that the customer will always think of him when either he or any of his friends need radio service work done.

Secondly, he should not fail to leave some permanent reminder for the customer. PHILCO has prepared for R. M. S. members several inexpensive items designed to accomplish just this. The chassis sticker, Form PR224A, attached to the back of the receiver chassis, is an excellent permanent reminder of the serviceman's name and phone number. The attractive R. M. S. tube sticker, Form PR353, is another method.

Best of all, perhaps, is a combination reminder and good will builder—the extremely attractive, eye-catching and useful R. M. S. book matches. Printed in four colors and with the member's imprint and R. M. S. emblem, they cost less than half a cent per pack—excellent value from the standpoint of their usefulness alone. The illustration below shows the design, but cannot convey the unusually good advertising value due to the attractive color combination.

A fourth and recently very popular reminder item is the return postcard entitled "Just Checking Up on Our Work," Form PR409. This asks the customer if the work done in his set was satisfactory and, if so, to suggest the names of two persons who might need radio repair work. Blank spaces on the return card are provided for the customer to fill in.

Use any or all of these four items as "Constant Reminders" to keep your name and business in your customer's mind. You'll find it will pay you many times over.

R. M. S. Promotional Material for R. M. S. Members Only

WHEN ordering any of the Radio Manufacturers Service sales-promotion material, it is now necessary that the member give his name and address and R. M. S. number as recorded in R. M. S. headquarters in Philadelphia. This new ruling will go a long way toward protecting the interests of Radio Manufacturers Service members. It will prevent the possibility of the use of the R. M. S. name and prestige by anyone except a member in good standing.

Radio Manufacturers Service sales-promotion material is being used by almost every R. M. S. member. The tremendous success

which has been attained through the intelligent use of this material has spurred these members to advertise and promote their service business extensively. It is the desire of R. M. S. headquarters to keep R. M. S. just as clean as possible. The careful checking of orders for handbills, postcards, signs and the many other helpful items will assure this material being used only by members.

In the future, when ordering R. M. S. material from your distributor, *be sure* to include your correct address and your R. M. S. membership certificate number.

Special Coil Improves Reception in Many Locations

THE PHILCO loading coil, Part No. 32-2417, is being used successfully in many installations to eliminate the effects of a number of powerful broadcasting stations being received simultaneously. In some neighborhoods, where there are two or more strong stations, it is sometimes impossible to get clear reception without squeals and "birdies"

under normal conditions. The loading coil has been used in cases of this kind, and in many instances it has cleared up reception conditions to the point where customers were entirely satisfied.

Indiscriminate use of this coil should be avoided. It must be understood that the coil should be employed only in those cases where several strong stations produce reception interference. The coil, when connected across the transmission-line terminals on the back of the radio chassis, will reduce sensitivity on the broadcast band. In order to obtain clearer reception in cases of this kind, it is necessary to sacrifice a certain amount of sensitivity. The coil should be connected only after the usual service adjustments have been made, and it is found that performance has not been materially improved. This coil, Part No. 32-2417, sells at a list price of 30 cents.



R. M. S. Book Matches
Red, Yellow, Blue and Silver
PR-352—\$4.50 Per 1000

PHILCO CAR-TOP AERIAL EASILY INSTALLED WITH SPECIAL CEMENT

THE recommended method of installing the PHILCO Car-Top Aerial is to employ drive screws for holding the aerial supports to the top. In those cases where there is a serious objection on the part of the owner to drilling the top, the aerial can be cemented satisfactorily by the method outlined below:

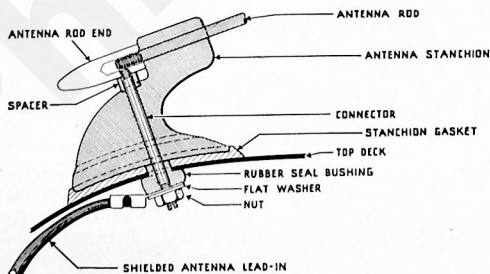
Special cement, PHILCO Part No. 45-2345, is available from your distributor in handy 10-cent tubes or in standard packages of twelve tubes at \$1.20 list. A complete instruction sheet for the installation is packed with the kit of twelve tubes.

The cement method of attaching the aerial consists first of cementing the rubber block to the aerial support stanchion. The aerial rod is formed by bending along the car top. In this way the contour of the top can be obtained in the shape of the aerial without there being any spring tension from the aerial when the rods are placed in the supporting stanchions. This bending process is done first at the front for the front half of the aerial and next at the back of the car for the back half of the aerial. After the rods have been formed properly, the special cement is applied to the car top, and the stanchions in which the rods have been mounted are then cemented to the top.

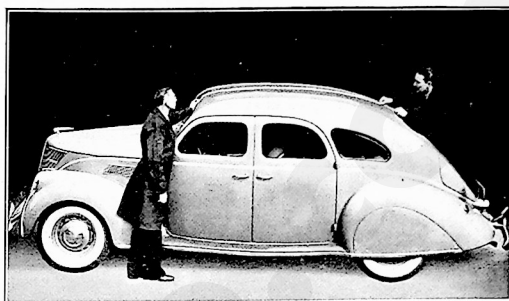
When employing this method of attaching the aerial it is only necessary to drill one 3/8-inch hole for the lead-in at the front of the car. The various illustrations on this page clearly show the stages of installation. It will be found in many cases that this method of attaching the aerial, although not as strong as the standard method, will overcome some of the most serious sales objections.



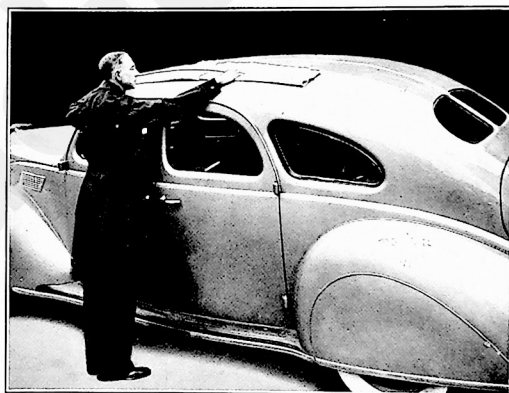
Aerial Rods Assembled in Center Stanchion.



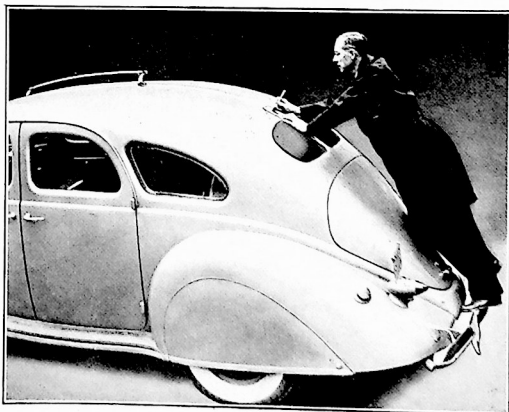
Lead-in Connections.



Marking Center Line.

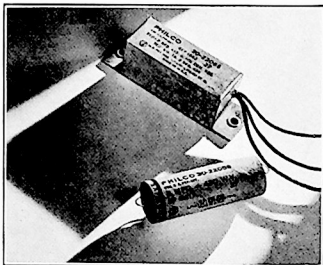


Bending Front Aerial Rod.



Applying Cement.

New Midget Electrolytics Announced



A COMPLETE line of the new midget-type electrolytic condensers is now available from PHILCO.

These condensers are a comparatively recent development in which a given capacity of high working voltage can be placed in an extremely small container. The condensers are ideal for replacement use in all makes of receivers, and particularly in small midget sets where space is a prime factor. The following is the complete listing of these new items in the PHILCO line:

Part Number	Capacity	Working Voltage	Dimensions	Type
30-2222	8 Mfd.	250	3/8" diam. x 2 1/4" long	Tubular
30-2221	8 Mfd.	250	15/16" x 15/16" x 2 3/4"	Rectangular
30-2205	8 Mfd.	450	12/16" diam. x 2 3/4" long	Tubular
30-2206	Twin 8 Mfd.	450	3 7/8" x 1 1/16" x 1 1/8"	Rectangular
30-2220	8 Mfd.	450	1 1/16" x 1 1/16" x 2 3/4"	Rectangular

FOR THE PHILCOPHONE INSTALLATION

BLACK TRANSMISSION WIRE (weatherproof)

- Part No. L-1551, 100-foot spool \$3.00 list
- Part No. L-2603, 500-foot roll 12.50 list

WHITE TRANSMISSION WIRE

- Part No. L-1591, 100-foot spool 3.00 list
- Part No. L-2627, 500-foot spool 15.00 list

EXTENSION CABLE (8 feet, with terminal strip)

- Part No. 45-2443 1.55 list

All prices subject to regular parts discount.

Vibrator Warranty Failures Lower Than Ever

IT IS interesting to note that a summary of warranty replacements on PHILCO Vibrators for the year 1936 shows failures of only 1.68 per cent.

Ordinarily the percentage of PHILCO parts which fail within the warranty period is extremely small. It is naturally expected that the failures on more complicated parts, particularly those which are subject to mechanical movement, will be higher. In the case of the vibrator there are 200 complete mechanical vibrations per second of a small contact point mounted on the reed. In spite of this tremendous amount of mechanical movement, the PHILCO vibrators continue to take punishment day in and day out, month in and month out, for long periods of time.

The vibrator, like all other PHILCO parts, has been engineered to withstand the greatest possible amount of abuse so far as performance is concerned. The safety factor which has been allowed in the case of the vibrator is extremely high, just the same as the safety factor is high in the case of all other PHILCO parts. Less than two vibrators out of every hundred have failed within the warranty period. The serviceman's experience with other makes of vibrators

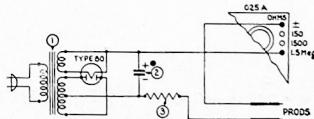
will show him that this percentage in the case of PHILCO is far lower than any competition.

The tremendous response in a sales way to PHILCO vibrator quality has permitted the recent price reduction to \$3.00 list from the former \$5.00 list. This lowered price means that PHILCO car radio owners will use their sets more than ever before. Servicemen will get more legitimate service business and at the same time will be in a position to offer PHILCO quality in the replacement vibrator at a price which is lower than ever before.

Adding a 15-Megohm Range to the Model 025A Philco Tester

SERVICEMEN who have the later Model 025A Tester will be glad to learn how easy it is to add a 15-megohm range for additional resistance measurements. The diagram on this page shows the simple connections of employing a power transformer, a rectifier, two electrolytic condensers and a resistor to afford the necessary operating voltages for this high-resistance range. It will be noted that the high-voltage secondary of the power transformer and the rectifier circuit are simply placed in series with the 1.5-megohm terminals so as to give sufficient voltage for a 15-megohm range.

All of the necessary parts, together with a diagram of connections, are available from your PHILCO distributor. These are all standard PHILCO parts which have been combined into a kit, PHILCO Part No. 45-2456, which sells at a list price of \$5.65.



Extending Ohmmeter.

EXTENDING OHMMETER RANGE 025A

Maximum Resistance Reading 15 Megohms

Parts Required

- 1—Part No. 32-7180 Power Transformer
- 1—Part No. 30-2064—Electrolytic Condenser, 4 mfd., 450 working volts.
- 1—Part No. 33-1023 Resistor 354,600 ohms (1 watt)
- 1—Type 80 Rectifier Tube

A Correction

IN the January issue of the PHILCO SERVICEMAN we stated on page 2 that the 1X1 ballast tube was used for Model 37-643. This was an error and should read 1Z1.

Questions and Answers

1. Q. Is it possible to eliminate the 10 K.C. heterodyne which is often experienced between stations on some of the older models?

A. Yes. The 10 K.C. filter, which was used in the PHILCO Model 200X, is most helpful in eliminating 10 K.C. heterodynes between stations. This filter is connected in series with the plate of the second detector or first audio tube. Reference can be made to the 200X wiring diagram in the PHILCO Wiring Diagram Book for details of connection. The filter is known as PHILCO Part No. 32-7261 and lists at 85c. In addition to the filter coil, it is necessary, of course, to complete the filter with the compensating condenser, Part 04000B, list price 25 cents, and the two .00015 Mfd. mica condensers, Part No. 30-1033, list price 25 cents.

2. Q. What is the cause of pilot light burnout in the Model 37-641?

A. This condition is caused by excessive voltage across the lights when the set is operated with slightly high line voltage. In the wiring diagram of Service Bulletin No. 265 it will be noted that a 33-ohm resistor is shunted across the pilot lights. In some sets this resistor was omitted in production, with the result that the voltage was slightly high. The addition of the resistor, Part No. 33-3294, across the pilot lights will reduce the voltage sufficiently to prevent burnout.

3. Q. How can surface cracks in a lacquer finish of a radio cabinet be removed?

A. Rub the surface with fine sandpaper and oil. This procedure removes some of the lacquer and provides a base for additional coats. Clean the rubbed surface with a cloth or waste and apply one coat of PHILCO brushing lacquer, Part No. 80176. After this coat has dried, rub the surface with fine sandpaper and then apply a second coat. After the second coat has dried, polish with fine sandpaper and oil followed by pumice stone and oil.

4. Q. Is there an easy method for fastening the shadowmeter assemblies to the screen at the bezel as used with the 1937 PHILCO models?

A. Some of the earlier shadowmeter assemblies had a straight-flanged edge over which the tension springs were placed. The later type had a 1/32-inch chamfer filed at this junction, which allowed the springs to be slipped over the flanges with a minimum of effort. It is important that even pressure be applied to both the top and bottom ends of the holding springs, and at the same time bend the spring over the body of the meter housing. This procedure permits the holding springs to be snapped into place at the flange openings very easily.

Operating a Six-Volt Set From Farm Lighting Circuit

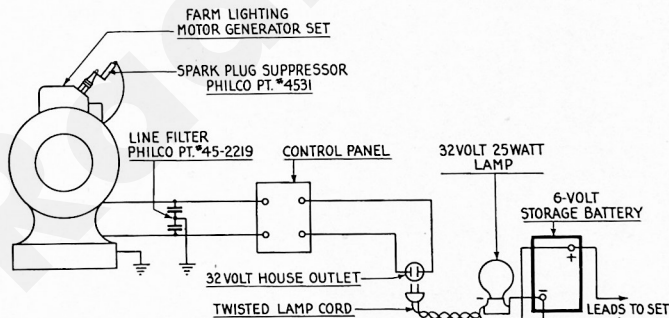
A CONVENIENT method of operating a 6-volt storage battery receiver, such as the PHILCO Model 37-624, has been suggested by Mr. C. D. Carter, of Brawley, California.

Dealers and servicemen who have attempted to operate the 6-volt battery receivers from a farm-lighting source of power, using a suitable resistor to cut down the voltage, have found that excessive hum and vibrator hash result. In fact, it is not practicable, when using a battery, to extend the "A" battery leads beyond the length of the battery cable, since excessive hum of this kind will invariably result.

In the method illustrated below the standard 6-volt storage battery, furnished with the radio set, is connected to the set in the usual manner. A 32-volt, 25-watt lamp is connected in series with one side of the line in the farm-lighting equipment in such a way that a trickle charge can be placed across the battery. This connection can remain on the battery at all times, so that the charge will be going into the battery when the set

is in operation as well as when the set is disconnected. With this arrangement the battery is being charged constantly at a rate of approximately .7 to .8 ampere. A PHILCO Filter, Part No. 45-2219, is connected across the line at the generator of the farm-lighting equipment. It is desirable to mount the filter on the generator frame. It will also be noted that the frame itself is grounded to a good water pipe or driven ground of some kind. In addition to this filter, a spark plug suppressor resistor, PHILCO Part No. 4531, is connected in series with the spark plug lead of the gas engine. The link on the aerial terminal strip is disconnected and allowed to hang free.

This system is comparatively simple to install and will permit operation of the Model 624 without any of the objectionable hum and vibrator noise which would ordinarily result. It is suggested in all cases that the PHILCO All-Wave Aerial be employed for further reduction of noise from the motor generator equipment.



Connections for 32-Volt Operation of 6-Volt Storage Battery Receiver.

Philco Heavy-Duty Transmission Lead-in Wire Used on Many Special Aerial Installations

THE heavy-duty lead-in wire which is employed in the PHILCO Heavy-Duty All-Wave Aerial Kit is now available separately.

This wire is the same electrically as the standard transmission wire employed with the PHILCO All-Wave Aerial. Mechanically the wire has been greatly strengthened, and it has been made absolutely impervious to moisture and weather. The wire is specially impregnated and is then placed through

an additional impregnating operation which affords greater mechanical strength and makes the wire entirely waterproof. This special transmission wire is used in locations where strength is a prime factor and also where it is necessary that the wire stay in position for a number of years.

The heavy-duty transmission line is known as PHILCO Part No. L-2243 and sells at a list price of \$9.00 for a roll of one hundred feet.

THOMPSON & HOLMES, LTD.

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