

# PHILCO SERVICEMAN



RADIO • MANUFACTURERS • SERVICE • NEWS



APRIL, 1941

## EDITORIAL

### NEGATIVE SELLING

"You don't want to buy any new tubes for your radio, do you lady?"

Perhaps such negative selling is a bit exaggerated, but in effect it is exactly the way many servicemen do not supplement their income through tube and accessory sales. Most servicemen are just naturally not salesmen, and they don't like to sell. And yet they often feel sorry for their lot financially when it is easily possible to add 50% to their income with only a little more time and effort.

#### Time Factor

During the changeover of push-button sets on March 29, most servicemen are going to be so busy actually changing push-buttons, they will not have much time for sales work. The more change-over jobs they can handle, the better. It will not take any time or effort, however, to just drop the hint to the customer that he certainly should have a new aerial, if he needs one; or that judging from the generally weak performance of his set the tubes should be tested and replaced. Many places will be observed in which a Philco 906 extension speaker could be used to advantage.

#### Forget Selling

After the change-over work has been cleaned up, then is the time to stop back on the pretext of wanting to know how the set is performing since the push-buttons were re-set. Then is the time for the serviceman to forget he is trying to sell, but rather to feel he is trying to give his customer greater pleasure out of radio. The improved performance resulting from a new set of tubes or a new aerial means better radio for the customer. The right kind of noise filter to eliminate electrical interference again adds to the customer's pleasure in owning a radio. And all the serviceman's effort in this connection means more profit from a pleasant and interesting occupation.

## Philco Parts Line is Complete

Elsewhere in this issue you will find described new items of Philco parts and accessories. The addition of these new items to the Philco line again draws attention to the fact that the Philco line of parts and accessories is COMPLETE. In general, the Philco line can be classified into the following divisions:

- Test Equipment,
- Tools,
- Aerials (home and car radio),
- Tubes,
- Accessory items,
- R.M.S. materials,
- Replacement Parts,
- Kits of Parts

The line of **Test Equipment** includes Signal Generators, Circuit Tester, Vacuum Tube Voltmeter, Condenser Tester, Pocket Multitester, as well as numerous other items.

**Philco Tools** include a complete assortment of the specialty radio servicing items that are so essential to the radio serviceman, such as wrenches, aligning tools, furniture and refrigerator touch-up kits, etc.

**Philco Aerials and Aerial Accessories** are available for every type of home, portable and auto radio installation.

**Philco Tubes** are for practically every make and model of radio set sold in Canada.

**Philco Accessory Items** include many intended especially for counter sales, as well as those that require labour for installation. Polishes, cements and lubricants, etc. can be sold over the counter, while headphone kits, line filters, and extension speakers require to be service sales. There are many items of each type, all intended to increase the serviceman's net profits.

**R.M.S. Materials** include a complete line of advertising and display materials at rock bottom prices, to enable the serviceman

member to increase his service business. Also included are various service manuals, etc., intended to assist him in the actual performance of his daily service work.

The Philco line of **Replacement Parts** includes parts not only for all models of Philco radios, but a complete line of general radio replacement parts that are interchangeable for all makes of radios. Such items as universal field coils, volume controls, pilot lamps, universal I.F. coils, resistors, condensers (all types), transformers (all types), etc., account for the great majority of all parts sales, and the Philco assortments of these items will repair practically every make and model of radio.

A complete assortment of **Kits** of many different items, from hook-up wire and resistors, to pilot lamps and volume controls, makes for more ready accessibility, and displays the most commonly used items. Kits should be used in the shop and for counter display to increase sales.

A complete, loose-leaf **Parts Catalogue**, which is continuously being revised and brought up to date, gives full details of all of Philco's parts line, with various newer items also being described in the pages of this publication.

**You only need to carry the PHILCO Line!!!**

## Philco Parts Catalogue Pages

Two new Philco loose-leaf **Parts Catalogue Sheets** are now in the hands of all Philco Distributors. These sheets describe the complete line of Philco Home Radio Aerials, Portable Radio Aerials, Auto Radio Aerials, Aerial Accessories, Adapters, Aerial Lead-in, Aerial Wire, etc.

Be sure to get your copy from your Philco Distributor.

## NEW PHILCO AUTO RADIO AERIALS

A complete new line of Super Quality Auto Radio Aerials is now available from Philco Distributors.

The specifications for these new aerials include a quality story that has no parallel in Auto Radio Engineering—such items as:

- Hard drawn brass tubing, plated first with bright nickel, and then with chromium of measured thickness. This plating must be held to extremely close limits, as too much plating on curved surfaces is just as detrimental as too little.
- Phosphor bronze tip sections of specified hardness.
- Complete freedom from rattle when aerial is telescoped, fully extended, or partially extended.
- Fully shielded, weatherproof leads with high "Q" factor, extremely low capacity and humidity coefficient.

As with other Philco products, engineering has not stopped with the issuing of complete electrical and mechanical specifications, but follows through to include complete inspection and the maintenance of high standards. Highest quality is not the only exclusive feature of the new Philco Aerials, for there are many that appear on the surface.

There are four new aerials in the new Philco Auto Radio Aerial line.

1. **THE DUO FLEX AERIAL** is the only Auto Radio Aerial that is adjustable in ALL directions. It can be viewed in several alternate positions before the adjustments are finally tightened, or can be re-adjusted to meet the customer's wishes after it has been completely installed.

Three-section rod extends to 65 inches; 48-inch lead-in covered with heavy rubber tubing for complete weatherproofing when installed on fenders.

Part No. 91-0217. List Price \$5.25

2. **THE THREE WAY MOUNTING AERIAL**—enables one aerial to take the place of three! Three types of mounting brackets are supplied with each aerial. For underhood mounting—For alligator hood mounting—For hinge pin mounting.

Completely adaptable for all three kinds of mounting, without any sacrifice in appearance or efficiency.

Three-section rod extends to 65 inches. Part No. 91-0216.

List Price .....\$4.50

## PHILCO SERVICE INFORMATION

Philco Service Information and Wiring Diagrams are available for all Philco home and automobile radios. The following list shows the contents and R.M.S. net price of each volume. Years quoted are model years.

Volume	Contents	R.M.S. Net Price
H.R. Vol. I (PR-329D)	Domestic Radios up to and including 1936	\$1.50 with binder \$1.00 less binder
H.R. Vol. II (PR-329E)	Domestic Radios, 1937 and 1938	\$1.50 with binder \$1.00 less binder
H.R. Vol. III (PR-329F)	Domestic Radios, 1939.....	\$1.00 with binder .50 less binder
C.R. Vol. I (39-5600)	Standard car radios up to and including 1938, and custom car radios up to and including 1937.....	.70 no binder
C.R. Vol. II	Standard car radios, 1939, and custom car radios, 1938 and 1939.	\$1.50 with binder \$1.00 less binder
1940 Year Book	All domestic radios, all standard car radios, and all custom car radios issued during the calendar year of 1939.	\$1.50 with binder \$1.00 less binder
1941 Year Book	All domestic radios, all standard car radios, and all custom car radios issued during the calendar year of 1940.	\$1.50 with binder \$1.00 less binder
"Aligning Philco Receivers" by John F. Rider	Gives alignment data on all Philco receivers up to and including 1937 models. A necessary supplement to H.R. Vol. I (PR-329D), because alignment data is not given in H.R. Vol. I.	\$1.00
R.M.S. Course of Lessons	A 26-lesson course of Radio Theory and Practice especially written for R.M.S. members interested in brushing up their fundamental knowledge, by G. J. Irwin, Chief Engineer Philco Products Ltd.	\$1.00
U.S. 1939 Year Book	(PR-762) All U.S. Philco Home Radios, standard car radios, etc. for model year 1939.	\$1.50 (no binder)
U.S. 1940 Year Book	(PR-795) All U.S. Philco Home Radios, standard and custom car radios for model year 1940 and custom car radios for model year 1939.	\$2.00 (no binder)

All Philco Service Information and Materials are Available from Your Philco Distributor

3. **THE THREE SECTION SIDE COWL AERIAL** is equipped with streamlined stanchions to harmonize with modern body designs, and comes complete with extra elongated stanchion kits for slanting cowls at no extra cost.

Three-section rod extends to 65 inches. Part No. 91-0219.

List Price .....\$4.50

4. **THE FOUR SECTION SIDE COWL AERIAL** is also equipped with streamlined stanchions and with the extra elongated stanchion kit for slanting cowls. The four-section rod extends to 88 inches and is particularly suitable for use in remote locations where highest sensitivity is essential.

Part No. 91-0220. List Price \$6.50

Don't gamble with customer goodwill by substituting inferior aerials. Sell a Philco Aerial with every Philco Auto Radio.

## R. M. S. Correspondence

We've just a small corner left this month for our R.M.S. mail, but the amount of thanks we wish to extend to all the members who were kind enough to write us is certainly out of all proportion to the amount of space we have at our disposal this month.

Mr. Donald R. Rozon, of 35 Blainville Street, Ste. Therese de Blainville, P.Q. says—"Many thanks for the information concerning the change of Canadian and American frequency. This will no doubt bring in some extra business to me."

Mr. J. M. Fletcher, of Glencoe, Ontario—"I appreciate the R.M.S. service information very much."

And from one of our French-Canadian members, Mr. Rolland Martel, of Martel Radio Service, 269 Marie-Anne Est., Montreal — "Veuilley recevoir mes plus profonds remerciements a l'egard que vous avez parter a mes intentions. Je vous remercie principalement de m'avoir accepter membre de la Radio Manufacturers Service."

# RADIO MOVING DAY MARCH 29, 1941

## Reallocation Affects

### 50 Million Set Owners

Beginning March 29, 90% of all Canadian and United States broadcasting stations will have a new spot on the dial. It will be Radio Moving Day for most broadcasters and for the owners of several million radio sets.

This general reallocation is another major forward step in the constant improvement in radio broadcasting. It results from careful long-time planning and consultation between governments. It required over three years for reallocation to become effective. Reallocation will bring better overall program reception in Canada as well as in all other countries involved (U.S.A., Cuba, Mexico and Haiti). The agreement between governments divides the available frequencies in such a way as to produce a minimum amount of interference to each station.

### B.C. Band to 1600 K.C.

In order to provide enough wave lengths, it was necessary to extend the broadcast band to 1600 K.C. All Philco push-button home sets are capable of tuning to 1600 K.C. when properly adjusted. In addition, most Philco push-button sets have the frequency range on each push-button padder plainly marked on the back of the chassis. This means that the new frequency assignments will present no particular problem to Philco owners.

### Serviceman's Help

The adjustment of the push-button tuning, however, although comparatively simple, will require the aid of the serviceman in most cases if the set is to function correctly. For example, there are in use thousands of Philco Models 38-C7 and 38-C4 which employ the cone-centric dial automatic tuning principle. These dials have the favorite local stations printed on the dial face. When the serviceman makes the change-over on these sets, the old station positions will be changed and if the old dial is used confusion will result as far as the customer is concerned. Philco will be unable to supply new printed dials for each city in the country to take care of these particular models. It will be possible, however, to obtain a plain dial without the station call letters printed so that the new call positions can be lettered by hand on the dial surface. This new dial has a comparatively rough finish which will take pencil or rubber stamp lettering easily. This dial is known as Philco Part No. 27-5356 for the Model 38C7 and Philco Part No. 27-5357 for the Model 38C4. The list price is \$1.95. These dials can be obtained from your Philco distributor.

Philco will also be in a position to supply complete new tab kits for the various Philco sets which have employ-

ed station tabs in the past. In many instances it might be desirable to change tabs when the push-button resetting is being done because of the present scratched or damaged condition of the tabs and because of possible damage to the tabs while being changed from one station window to another. Complete tab kits will be available from Philco distributors at a nominal cost.

### 920 K.C. Heterodyne

In some cities servicemen may experience some heterodyne difficulties if a station with a strong signal intensity is operating on double the frequency of the I.F. of the receiver. Most sets have an I.F. of 460 K.C. This might produce a whistle on 920 K.C., but no Canadian stations will be on this frequency. Also, no high power U.S. stations near the border will use this frequency.

### Big Business for Service

Radio Moving Day is going to be the biggest thing that ever came along for the radio serviceman as far as new business is concerned. We suggest that you sit down at the telephone now and make a number of calls and appointments so that you can line up your calls for March 31 with a view of getting in the maximum number possible. The same thing would apply for the days following because obviously you will be unable to take care of all of your customers on the first day.

## Gas Gauge Interference 1941 Cars

On some of the 1941 cars, the fuel gauge and light wires are dressed through a hole in the left cowl brace. This has been found to induce gas gauge interference into the antenna system.

To eliminate this interference, these wires must be disconnected at the gauge, and dressed over the brace and placed as close as possible to the instrument panel. Then reconnect to the proper terminals on the gauge.

It may also be necessary to connect interference condensers to the gas gauge. In some cases, a 250 Mmfd. mica condenser connected across No. 1 and No. 2 terminals of the gas gauge will be effective. In other cases, it may be necessary to connect a .5 Mfd. condenser to one of the terminals of the gas gauge, fastening the condenser bracket on the bottom flange of the instrument board.

## R.M.S. TWO YEAR CALENDARS

The R.M.S. Two-Year Calendar (PR-710C in hang-up style) has proven so popular that it is now being offered in easel form optionally, as part No. PR-710D.

The two calendars are identical, excepting that PR-710C hangs up on the wall, and PR-710D sits upright on a desk.

In each case, a two-year calendar is attached, running from the month current at the time you place your order, for 24 months.

Prices (to R.M.S. members), imprinted with your name and address are:

R.M.S. Imprinted Cost	Hang-up Style PR-710C	Easel Style PR-710D
per 1000	\$25.00	\$27.00
per 500	13.50	14.50
per 250	7.00	7.50

Each calendar, besides listing your phone number, has spaces on the sides for eight commonly used phone numbers. This is one of the best forms of local advertising that you can use to build increasing business for yourself. See it at your Philco Distributor's.

**When You need RADIO SERVICE**  
Call **YOUR NAME**  
Address and Telephone Number  
Prints in this space

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MADE IN CANADA

PR-710C

## Getting the Ultimate in Signal Strength

When it is desired to set up push buttons with extreme accuracy beyond that acceptable as commercial or production, it is possible to get such precision through the use of Philco test equipment.

In some locations selectivity and sensitivity are extremely important problems which necessitate having the very finest possible adjustment of all the compensating condensers in the receiver. This can be accomplished through the use of the Philco Model 177 Signal Generator and the Model 028 vacuum tube voltmeter. The 177 Generator is used to locate the station, but the final padding is determined by the 028 vacuum tube voltmeter. It is connected in the A.V.C. circuit so that the carrier of the station causes the meter of the vacuum tube voltmeter to show maximum swing. The 028 connected in the A.V.C. can also be employed for precision I.F. alignment. In all cases, it is desirable that a fifteen minute warm-up period precede any of the padding.

Servicemen who align sets in this manner will find the sensitivity and selectivity of almost any set will be very noticeably improved.



# New Philco Parts and Accessories

# PHILCO AUTORADIO

## PHILCO REFRIGERATOR TOUCH UP MATERIALS

**Refrigeration Touch-up Materials**—The touch up materials listed below are all that are required to perform first class touch up work on all makes of refrigerators using lacquered finishes. The three shades of white lacquer can be mixed, if necessary, to match a white lacquered finish of any age. The filler can be used both for repairing deep scratches, and for repairing damaged porcelain finish. The methacrylate clear, and the aluminum paste, are for evaporators.

Part No.	Description	Amount	List Price
8901-1	White Duco (5 years)	3¼ oz. Can	\$1.05
8901-2	White Duco (new)	3¼ oz. Can	1.05
8901-3	Black Duco	3¼ oz. Can	1.00
8901-4	Filler	3¼ oz. Can	1.05
8901-7	White Duco (1940)	3¼ oz. Can	1.05
8901-8	Grey Duco	3¼ oz. Can	1.05
8901-9	Methacrylate Clear	3¼ oz. Can	1.05
8901-10	Methacrylate Thinner	3¼ oz. Can	.55
8901-11	Duco Thinner	13 oz. Can	1.80
8901-12	Paste, Aluminum	1 oz. Can	.70
8901-13	Rubbing Compound	2 oz. Box	.45

## SPECIAL SIZE REPLACEMENT FIELD COILS

These ten sizes of general replacement Field Coils will greatly simplify your stock problem. Carry these in stock for servicing speakers of any make and model. The windings have been moisture-proofed by vacuum-impregnation with high grade sealing compound. Heavily insulated externally to prevent electrical or mechanical damage.

Part No.	Res. (ohms)	Current M.A.	Diam. Ext.	Diam. Int.	Length	List Price
2562	1125	65	2¼	1	1¾	\$2.80
32-9008	1140	65	2¼	¾	1¼	2.00
32-9019	1140	50	2	¾	¾	1.90
32-9046	1140	65	2¼	1	1¼	2.80
32-9024	1450	80	3¾	1½	2¼	4.80
32-9007	2600	40	2	¾	¾	1.90
2768	3100	40	1⅞	1⅞	2¼	2.25
2850	3200	40	3	1¼	2⅞	5.50
2588	3275	40	2⅞	1	1¾	2.50
32-9026	6500	40	3¾	1½	2¼	9.50

## STANDARD SIZE REPLACEMENT FIELD COILS

Five sizes of standard field coils for speakers having a one-inch core. Ideal for small compact receiver speaker.

Part No.	Res. (ohms)	Current M.A.	Diam. Ext.	Diam. Int.	Length	List Price
32-9078	1000	90	2½	1	1½	\$2.95
32-9079	2000	70	2½	1	1½	3.25
32-9080	2500	65	2½	1	1½	3.30
32-9081	5000	40	2½	1	1½	4.05
32-9082	7500	32	2½	1	1½	4.50

## PHILCO UNIVERSAL I.F. TRANSFORMERS

Your Philco distributor now has complete information on the new Philco line of Universal I.F. Transformers for all makes of radios. They are in six different general types from the simple untuned stage type, to the more modern type having primary, secondary and tertiary windings, tapped secondary for grid or diode, and tapped tertiary.

Twenty-one different part numbers are available covering I.F. ranges from 165-185, 250-270 and 450-480. List prices start at \$ .75 and are most attractive.

You can now find a Philco Universal I.F. transformer for practically every make of radio.

## MISCELLANEOUS ACCESSORIES AND TOOLS

A special large size (52 oz.) bottle of the famous Philco High Quality Furniture Polish is now available for shop use.

Part No. 45-1304 .....List Price \$3.95

The universal speaker furnished with Philco Auto Radio Models 804, 805 and 809 (shortwave) has been designed so that it can be installed behind the grille in the instrument panel of practically all 1941 cars, with the least possible installation work. A universal bracket and the necessary hardware are furnished with each universal speaker, although it may not be necessary to use all this material on some installations.

The installation procedure varies somewhat for each car, and details of the correct procedure for each car are now available at your Philco distributor.

Philco Custom built panel plates are now available from Philco distributors to enable custom auto radio installations of Models 804, 805 and 809 to be made in all makes of cars for 1939, 1940 and 1941. These kits all list at \$2.50 and have a dealer net of \$1.75.

## R. M. S. DIVIDENDS

The R.M.S. membership is certainly paying dividends for R.M.S. members this month. The R.M.S. mailing for April has Two Bargain offers that are particularly attractive. One is for Carbon Resistors, and the other for Bakelite Condensers. Be sure to take advantage of these dividend offers.

## Improving Loop Set Performance at Service Bench

Here is a suggestion that will be of interest to servicemen who have a shielded condition surrounding their test bench.

Wind a two-foot square loop of 6 turns, and staple it to the under side of your work bench. Bring out the ends of the loop to a plug that can instantly be connected and disconnected with outside aerial and ground. This arrangement will give exceptionally good signal pick-up without affecting selectivity.

## Miscellaneous Accessories, Tools

A rectangular head bit for 4-32 screws has been added to the line of Philco Tools.

Part No. 45-2844. List Price \$ .60

A handy tool for removing the newer smaller types of tubes is now ready. It is especially useful where the tubes are hard to reach as in compacts and auto radios.

Part No. 45-2849. List Price \$ .75

# PHILCO PRODUCTS LIMITED

PARTS AND SERVICE DIVISION  
TORONTO

The Philco Serviceman is distributed to you free of charge  
with the compliments of your Philco Distributor