

PHILCO SERVICEMAN

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RADIO · MANUFACTURERS · SERVICE · NEWS

OCTOBER, 1937



EDITORIAL

Just Between Ourselves

WHEN a serviceman's business is not what it should be and when his competitors are enjoying a nice business, it is high time to start something. The first thing necessary is to do a bit of impartial analyzing of the business methods, the product (service), the advertising program and the selling program.

The most effective way to get somewhere in this analyzing procedure is to try to look upon your problem as a disinterested outsider might do. Ask yourself a few pertinent questions, but don't try to make excuses for your unsatisfactory answers. Instead, resolve to do something about it. Ask yourself a few questions such as these:

1. Are you satisfied to go coasting along, doing just a mediocre job, or are you sufficiently ambitious to get out and work hard to take care of the jobs on hand and to get additional business?
2. Do you operate your business with a punch and a follow-through, or are you a hit-and-run operator?
3. Do you give your customers the best you have in the way of quality, both from the standpoint of workmanship and material, or do you operate under the more short-sighted plan of getting as much as you can and then hoping there isn't a call-back because of failure?
4. Are you waiting for business to come to you, or are you trying through your advertising and promotional efforts to build up additional business?
5. Are you a better serviceman than a salesman, or a better salesman than a serviceman, and do you make an honest effort to improve yourself wherein you are lacking?
6. Are you an understanding human being when you go out on a job, or are you a hot-shot technical man who tries to impress his customer by a display of technical language that leaves him in a fog of doubt?

AERIALS AND REPUTATION

A Non-Technical Discussion on the Purchase of Aerial Kits

By JOHN F. RIDER

(Reprinted from August-September issue, SUCCESSFUL SERVICING, courtesy John F. Rider)

THERE is no doubt that the aerial is one of the very important parts of a radio installation. We say this despite the fact that such excellent reception is often experienced with exceedingly poor antenna systems. However, the criterion is not what takes place in a few instances, but rather the experiences of the majority, and this means that no matter how well designed the receiver may be, it nevertheless requires a good antenna system.

This is particularly true with respect to noise elimination. What with the tremendously increased sensitivity of receivers and the greatly increased number of electrical devices used inside and outside the home, which devices are sources of electrical disturbance, it becomes necessary to institute all possible measures to provide the greatest freedom from such noises. . . . The antenna system plays a very important role in this connection.

Now, all of this is not new to the men who read these pages. . . . Much has been written about antenna systems, but in practically every case a great deal of space was devoted to the technical considerations associated with antenna systems. We intend departing from that routine, and it is our aim to present the

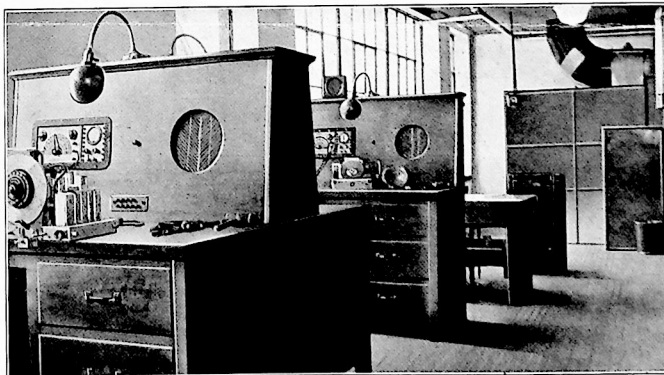
subject of antennae from the practical angle.

What antenna kit to buy? . . . that is a commonplace question. . . . As a rule the antenna is intended for use with a certain receiver. Then it becomes necessary to locate, if such is possible, an antenna kit most suitable for use with the receiver. . . . In this connection we can appreciate that every antenna will operate with every receiver, but—and the *but* is strong—very few people can deny that some systems perform better with certain receivers than others.

Under the circumstances, let's be logical. . . . Some receiver manufacturers have recommended certain antenna systems for their receivers. . . . Is it conceivable, bearing in mind that the receiver manufacturer wishes his receiver to perform to best advantage, that such a manufacturer will suggest an antenna system which is not best for his receiver? Very unlikely. . . . Accordingly, it is a safe bet, without making a study of the technical considerations, to employ the antenna kit suggested by the receiver manufacturer.

You may say that the receiver manufacturer who also makes antenna kits and who suggests these kits for his receiver has a personal ax to grind. . . . That may be so since he makes the kit, but somehow or other we cannot overlook one important consideration: the

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The service bench illustrated above is located in the Repair Department of the C. R. Rogers Company, PHILCO distributors in Pittsburgh, Pennsylvania.

The test bench design and layout will be of particular interest to servicemen who are planning to build a bench in their shop. Note the convenient arrangement of PHILCO test equipment built into the front panel and also the handy drawer locations at the lower right of the bench.

Tube Listing for 1938 Philco Models

IN the listing below we show the 1938 PHILCO Radio models and the type of tubes and the functions of each in these various models:

Model	Tubes Used
38-1	6U7G, R.F.; 6A8G, Osc. Det.; 6N7G, Twin control; 6K7G, I.F.; 6H6G, Discriminator; 6R7G, Det. Audio; 6J5G, Phase inverter; 6J5G, 6J5G, Driver (degenerated); 6F6G, 6F6G, Output (degenerated); 5X4G, Rectifier.
2	6U7G, R.F.; 6A8G, Osc. Det.; 6N7G, Twin control; 6K7G, I.F.; 6H6G, Discriminator; 6J5G, Diode; 6K5G, Audio; 6J5G, Phase inversion; 6F6G, 6F6G, Output (degenerated); 5X4G, Rectifier.
3	6U7G, R.F.; 6A8G, Osc. Det.; 6N7G, Control; 6K7G, I.F.; 6Q7G, Det. Audio; 6H6G, Discriminator; 6F6G, 6F6G, Output; 5Y4G, Rectifier.
4	6U7G, R.F.; 6A8G, Osc. Det.; 6K7G, I.F.; 6J5G, Diode; 6K5G, Audio; 6F6G, 6F6G, Output; 5Y4G, Rectifier.
5	6U7G, R.F.; 6A8G, Det. Osc.; 6K7G, I.F.; 6J5G, Diode; 6K5G, Audio; 6F6G, 6F6G, Output; 5Y4G, Rectifier.
7	6A8G, Osc. Det.; 6K7G, I.F.; 6J5G, Diode; 6K5G, Audio; 6F6G, Output; 5Y4G, Rectifier.
8	6A8G, Osc. Det.; 6K7G, I.F.; 6J5G, Diode; 6K5G, Audio; 6F6G, Output; 5Y4G, Rectifier.
9	6A8G, Osc. Det.; 6K7G, I.F.; 6J5G, Diode; 6K5G, Audio; 6F6G, Output; 5Y4G, Rectifier.
10	6A8G, Osc. Det.; 6K7G, I.F.; 6Q7G, Diode Audio; 6F6G, Output; 5Y4G, Rectifier.
12	6A7, Osc. Det.; 78, I.F.; 75, Diode Audio; 41, Output; 84, Rectifier.
22	6A8G, Osc. Det.; 6K7G, I.F.; 6R7, Diode Audio; 25L6G, 25L6G, Output; 25Z6G, Rectifier.
23	6A8G, Osc. Det.; 6K7G, I.F.; 6R7, Diode Audio; 25L6G, 25L6G, Output; 25Z6G, Rectifier.
33	1D7G, Osc. Det.; 1D5GT, I.F.; 1H6G, Det. Audio; 1H4G, Phase inversion; 1E7G, Quiescent pentode output.
34	1D7G, Osc. Det.; 1D5GT, I.F.; 1H6G, Diode Audio; 1H4G, Phase inverter; 1E7G, Quiescent pentode output.
14	
15	
35	

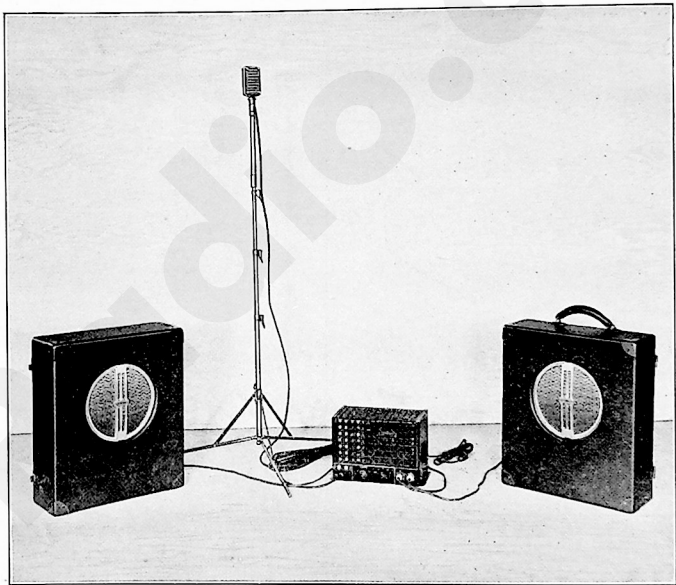
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NEW AMPLIFIER HAS TREMENDOUS WALLOP PLUS PHILCO TONE

AT last there is a portable amplifier which has PHILCO tone quality, large output volume and which does not require an engineer to operate. This is the new PHILCO Portable Sound Amplifier, Model 905.

This amplifier can be readily sold by dealers, and it is unnecessary to have a sound expert in the dealers' employ in order

to make such sales. Here is an instrument which can be sold just the same as a radio set. It can be demonstrated even more easily than a radio set. PHILCO has made available for the first time a quality amplifier having real PHILCO tone and priced so that it can be sold readily and at a profit.



PHILCO Portable Amplifier Model 905

Here are a few of the possible prospective uses for the PHILCO Portable Sound Amplifier:

Theatres	Garages
Lectures	Training Camps
Recitals	Airports
Stores	Fire Houses
Restaurants	Parks
Clubs	Publicity Stunts
Swimming Pools	Sound Trucks
Churches	Country Fairs
Bus Terminals	Horse Shows
Railway Stations	Colleges
Institutions	Locker Rooms
Hotels	Service Stations
Offices	Barracks
Factories	Prisons
Warehouses	Court Rooms
Schools	Police Departments
Gymnasiums	

Improvement on Cementing Speaker Cones

IN REPLACING PHILCO cones which are cemented in place, it is very important not to scrape the rim of the old cone from the frame. The thermoplastic cement, used at the factory to fasten the original cone, makes an excellent binder for the cementing of the replacement cone.

The correct procedure in removing the original speaker cone is to tear the cone away from the rim and then to remove as much of the rim as will come off by pulling it away from the plastic cement. The cement for the new cone is then applied over the remaining part of the paper rim of the old cone.

A special grade of Duco cement is available from your PHILCO distributor for this purpose.

Questions and Answers

1. Q. What is a cause of microphonic howl in the Models 4 and 7?

A. This condition is often caused by failure to remove the upper shipping braces for the cone-centric dials. When these braces are left in place, the chassis is not free-floating and microphonics result.

2. Q. In the event the R. M. S. membership certificate or the registration number is lost, is it possible for an R. M. S. member to purchase the R. M. S. sales helps and advertising materials from the PHILCO distributor?

A. Yes. By showing adequate proof of membership to the distributor's parts man who takes the order. The distributor can then pass along the information to R. M. S. headquarters in Philadelphia and the order will be filled.

3. Q. Is there an improved construction of the output transformer, Part No. 32-7639, used in the Models 37-623, 37-38, etc.?

A. Yes. The transformers manufactured during the early part of last season do not have the complete impregnation which is found in the later type. The improved transformers will withstand extremes of humidity and temperature without failure.

Complete 1937 Philco Volume-Control Assortment Announced

A NEW Volume-Control Kit is now available to servicemen and dealers for the 1937 PHILCO models. This kit contains twelve volume controls, which cover all of the 1937 PHILCO models except the battery sets. Each control is boxed individually in the attractive new yellow containers marked with the PHILCO part number and the volume-control resistance. The identification and price list in the kit gives complete information on the proper control for the various PHILCO models of the 1937 series.

This handy new volume-control assortment is known as Part No. 45-2489 and sells at a list price of \$15.15.



1937 PHILCO Volume-Control Assortment, Part No. 45-2489

THE AERIAL SPECIALIST

"What, Why, Where, and How!"

THE sales and installation of aerials has always been a profitable job for the dealer and serviceman. Because there is such a large potential market for aerials, and because there is such big profit in this type of work, many servicemen specialize in aerial installations. Customers who cannot afford to buy a new radio, but who definitely need better radio performance, can obtain such improved reception with a new PHILCO aerial.

What to Sell

Here are the various PHILCO aerials for home-set use: (1) 1938 PHILCO High-Efficiency, All-Wave Aerial, list price \$5.00; (2) 1938 PHILCO De Luxe Heavy-Duty, All-Wave Aerial, list price \$13.50; (3) PHILCO Utility Aerial, list price \$5.00; (4) PHILCO Long-Distance Aerial, list price \$2.50; (5) PHILCO Standard Aerial, list price \$1.60.

Why Sell It

The 1938 PHILCO High-Efficiency, All-Wave Aerial offers extremely high sensitivity over the broadcast band and the short-wave band. The low-impedance lead-in system increases the efficiency of signal transmission between the flat portion of the aerial and the radio set itself. This aerial is also noise reducing both on the broadcast and short-wave bands. This is one point to bear in mind, because many aerials employing transmission-line lead-in are not noise reducing in any sense of the word.

The De Luxe Heavy-Duty Aerial is electrically the same as the regular High-Efficiency, All-Wave Aerial, but is constructed of heavier materials to withstand extreme wind and weather conditions. This aerial is used extensively by dealers on their store installations and is also used in de luxe installations in homes and apartment houses. The PHILCO Utility Aerial is designed primarily for small sets and for locations where a large outside aerial would be out of the question. The extra set, which is probably located in the children's room or in a bedroom, is readily adaptable to the utility aerial. In many installations of this kind a large aerial is already installed. Also, in apartment houses and hotels, it is usually difficult, if not impossible, to have a large outside aerial installation. In such cases the utility aerial affords highly satisfactory performance. All of the 1938 PHILCO compact models are adjusted in the factory to the utility aerial. When these sets are used with this aerial, exceptionally good results are obtained.

The PHILCO Long-Distance Aerial gives marvelous signal pickup because of its great length. Although it is not of the transmission-line type and is not noise reducing, nevertheless, it does give wonderful performance when used in locations where noise is not a factor. All soldered connections are made at the factory so that it is unnecessary to do any

soldering work when making the installation.

The PHILCO Standard Aerial is a low-priced aerial for use in those cases where price is a factor. It will give very good results both on broadcast and short wave and will answer the requirements in all cases for a low-priced aerial.

Where to Sell

Unless you live in a battery-set territory, your best bet, from the profit standpoint, is to push the 1938 PHILCO High-Efficiency, All-Wave Aerial. Almost every owner of a radio set without a noise-reducing aerial is a prospect. The De Luxe Heavy-Duty Aerial can be sold to a certain portion of the prospects which are obtained for the regular High-Efficiency, All-Wave Aerial in those locations where permanency of the installation is an important factor. The PHILCO Utility Aerial can be sold to small-set owners who are at present struggling along with a piece of wire thrown out over the floor or a wire of some kind attached to a radiator. It can also be sold to traveling men who carry small, compact A.C./D.C. sets with them on their trips. The compactness of this aerial, together with its high efficiency, makes it most desirable for small-set use where it is impossible to install a larger outside aerial.

The Long-Distance Aerial can be sold to people in the suburbs or on farms where it is not necessary to have the noise-reducing feature. It is particularly desirable for use with the PHILCO battery sets, inasmuch as these sets are adjusted to this type of aerial. The PHILCO Standard Aerial can be sold for the same type of installations as the Long-Distance Aerial and where price is an important factor.

How to Sell

Many dealers who specialize in aerial work in connection with getting prospects for new radio-set sales have found that the aerial installation business is most profitable with their customers to whom they sold sets two or three years ago. Many independent servicemen cooperate with dealers on customer lists of this kind. The serviceman works out the list with a view of getting new aerial installations, and any hot prospects for new sets are turned over to the dealer. If you, as an independent serviceman, do not have a large mailing list which comprises your older customers, it might be advisable to select a group of names from the telephone directory in a given section of town.

Your PHILCO distributor has an aerial leaflet, illustrated in the September issue of the PHILCO SERVICEMAN (Form PR-569). You can also send a letter if you prefer, outlining the many advantages to be gained by installing a new aerial.

When going after prospects for a new aerial, remember that you are selling him better radio performance, and not just a new aerial. Your added profits from this activity will be a pleasant surprise.

New Type Screw Driver Fits Socket Wrench Kit

AT THE request of many servicemen, we have made available a new bit which fits in the PHILCO Socket Wrench Kit and is used for the new Phillips head screws with the cross-type slot. One end of the bit has the pointed end to fit into the slot of the screw, and the other end of the bit is a hex rod which fits into the 1/4-inch socket of the PHILCO Socket Wrench Kit. A ball at one end of the bit holds the latter in place when in use.

This new tool is PHILCO Part No. 45-2522 and sells at a list price of 50 cents.

R. M. S. Members

HAVE you received your new Radio Manufacturers Service sign in the October mailing from PHILCO?

PHILCO is making it easier for you to identify yourself as a member of Radio Manufacturers Service. Only through such identification can you expect to realize in a profitable way the full advantages of R. M. S. membership. Hundreds of orders are being received at R. M. S. headquarters for the Radio Manufacturers Service printed matter and sales helps. Members are learning by experience that these R. M. S. sales helps invariably get them new business and are a profitable investment.

Make sure that you are getting all of the service business in your territory to which you are entitled and that this business is not going to some other R. M. S. member who has advertised and identified himself to the public as the local representative of Radio Manufacturers Service.

RADIO MANUFACTURERS SERVICE



AUTHORIZED BY

PHILCO

New R. M. S. Sign Free
to All Members

Aerials and Reputation

Continued From Page 1

manufacturer who makes an antenna kit is in a position to develop that most ideally suited to his receiver. Whether or not such actually is the case is beyond the point at present. . . . The fact remains that he is in a position to do so, and it is only natural, if the belief is expressed, that he does so.

As to the technical considerations, do not for one moment believe that we belittle this factor. . . . It is an excellent means of making comparisons, so as to arrive at a decision, providing that the technical specifications are available and can be interpreted. . . . Bearing in mind that the modern antenna may be required to perform upon possibly five wavebands, a great deal must be considered from the technical angle. . . . If we analyze the antenna-kit field today, we find a large number of kits—all of which are classified as being good—all of which will work—although all are not of like design, construction or price. . . . Can they be equally good? . . . How can the servicing industry judge the merits of these systems? . . . To attempt to judge by technically analyzing a modern noise-reducing antenna—even if all of the information is available—without the resources of a good laboratory and a large number of receivers upon which they can be tried so as to establish the practical value—is a mighty difficult task. . . . Accordingly, it becomes necessary to choose along commonsense lines. . . . Maybe you will make a mistake, but acting with commonsense has proven itself to be a mighty good method of procedure.

How can we tell a good antenna from a poor one without having tried both? Certainly not by appearances only, although well-constructed devices are invariably superior to those of inferior construction. . . . Not solely by advertising, because paper is very patient, and each manufacturer will naturally laud his product to the fullest extent, although it is true that even types of advertising differ. The cost is not necessarily a barometer, even though the best is the cheapest in the long run—that is when the customer is willing to pay the price. How, then, are we to judge? . . . After due consideration of all factors, there is but one way: the reputation of the maker. . . . Fortunate are those men who can interpret by analyzing technical details; but all servicemen are not in this category, hence reputation is as good a basis as any for these less technically trained men.

It is logical to say that a manufacturer with a reputation will not attempt to sell an inferior product—at least not continue selling the product—so that if

we select the manufacturers with well-established names and who are known to be capable of producing a good antenna kit, it is safe to buy it. . . . The magnitude of the concern, its financial standing, the knowledge that they have good engineers and a good laboratory, are significant factors. . . . Of course, there are small organizations of good reputation, but less magnitude, who may specialize in antenna kits and who offer the size of the others by specialization so that they, too, deserve full consideration. The decision, then, hinges upon personal experiences with the antenna units in question.

There are, of course, times when judgment is tempered by cost, so that the product with the reputation cannot be bought because it is too expensive. Yet that should not be so, because so much depends upon a good antenna, and the difference in price is as a rule comparatively little. Knowing that the function of the serviceman who makes an antenna installation is to do the best job possible—to give the best possible service—so that the job will stay sold, the safest move is to buy the product according to the reputation of the maker and not according to the price.

We realize fully that this is a peculiar presentation of a subject which normally is treated in a technical manner, but we feel that with the large number of different types of antenna kits offered to the service industry it is time to view the subject from an unorthodox, but perhaps more sensible, angle.

Tube Listing for 1938 Philco Models

Continued From Page 2

- 38 1C7G, Osc. Det.; 1D5GT, I.F. Pentode; 1H4G, Diode; 1E5GP, Audio; 1H4G, Driver; 1J6G, Output.
- 39 1C7G, Osc. Det.; 1D5GT, I.F. (Pentode); 1H4G, Diode; 1J6G, Output; 1H4G, Driver; 1E5GP.
- 40
- 60 6A8G, Osc. Det.; 6K7G, I.F.; 6Q7G, Diode A.F.; 6F6G, Output; 5Y4G, Rectifier.
- 62 6A8G, Osc. Det.; 6K7G, I.F.; 6Q7G, Diode A.F.; 6F6G, Output; 5Y4G, Rectifier.
- 89 6U7G, R.F.; 6A8G, Osc. Det.; 6K7G, I.F.; 6Q7G, Det. Audio; 6F6G, Output; 5Y4G, Rectifier.
- 93 6A8G, Osc. Det.; 6K7G, I.F.; 6Q7G, Diode Audio; 6K6G, Output, 5Y4G, Rectifier.

(To be continued next month)

DEVLIN-DREW COMPANY

718 "F" Street

Fresno, California

Service Department