

INSTRUCTIONS FOR
INSTALLING AND OPERATING

PHILCO 40-100

A MUSICAL INSTRUMENT OF QUALITY



BATTERY OPERATED RADIO
FOR STANDARD BROADCAST RECEPTION
WITH ELECTRIC PUSH-BUTTON TUNING

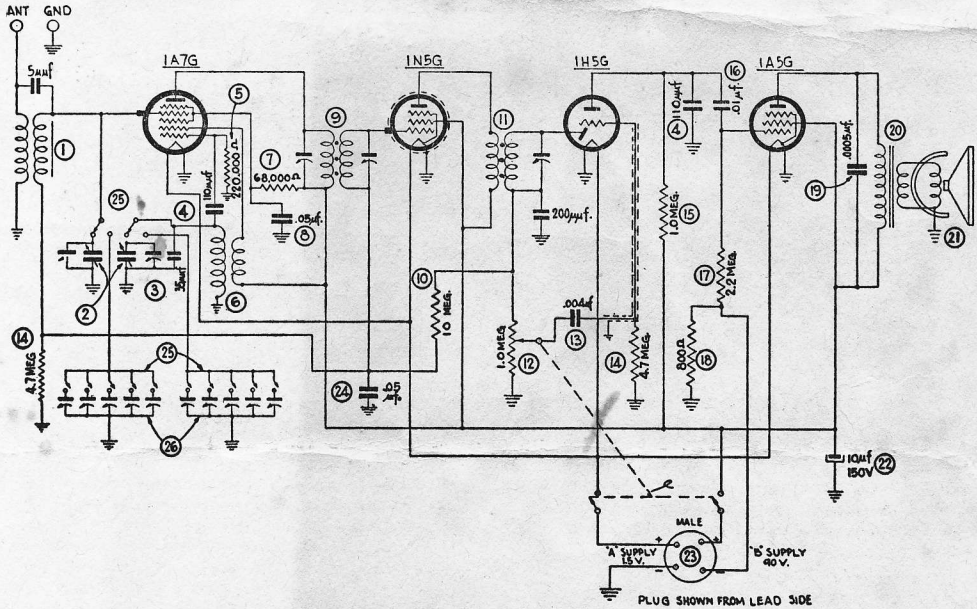
DO-NOT-HAVE-THIS-SET
CIRCUIT-MIGHT BE USEFUL

INSTRUCTIONS FOR PHILCO 40-100

Philco Model 40-100 is a four-tube battery operated superheterodyne radio. It operates from a plug-in type "A" and "B" Pack.

The dial on this model is calibrated in both kilocycles and meters, with meters appearing on the lower half of the dial. Stations are listed in kilocycles in most station lists.

The Philco High Efficiency Tubes used in this model are: 1—1A7G, 1st Detector and Oscillator; 1—1N5G, I. F. Amplifier; 1—1H5G, 2nd Detector, A. F. Amplifier and Automatic Volume Control; and 1—1A5G, Power Output.



INSTALLATION

After unpacking the radio make sure all the tubes are in their correct sockets, pressed firmly down, with the grid clips in place. A label inside the cabinet will show the relative location of the tubes.

TO INSURE THE BEST POSSIBLE RECEPTION, ON THE COMPLETE TUNING RANGE OF THIS RECEIVER, THE "PHILCO FARM RADIO AERIAL" MUST BE USED. This Aerial (Part No. 40-6383) complete with instructions for installing, may be obtained from your Philco Dealer. Make the aerial connections to the receiver by twisting the bare end of the lead-in wire tightly around the bare end of the white wire at the rear of the chassis.

A GOOD GROUND CONNECTION IS ABSOLUTELY NECESSARY WITH THIS RADIO. Make the connection from the black wire at the rear of the chassis to the nearest water or radiator pipe. If there is no ground convenient, construct one by driving a four-foot length of metal into moist earth.

The Philco Model 40-100 requires one Philco plug-in type "A" and "B" Pack P60D116. This battery may be obtained from your Philco Dealer.

Remove the wood strip from the rear of the cabinet and insert the battery in the space provided for it at the rear of the chassis. In the floor-type cabinet, it may be placed in the bottom of the cabinet.

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Insert battery cable plug into the battery, observing the arrangement of the pins on the plug and the corresponding holes in the socket of the battery so as to be sure of inserting it correctly. Replace the wood strip to hold the battery firmly in place.

OPERATION

On-Off Switch and Volume Control

Turn the left hand knob clockwise until a click is heard and the on-off indicator on the dial shows red. Further rotation will increase the volume.

Station Selector

To tune a station manually, the extreme right hand push button labelled "DIAL" must be pressed in. Next, advance the volume control to about half its total range. Then, select the desired station by rotating the right hand, "Station Selector," knob.

For best tone, tune the desired station with the volume control low. This enables you to get the exact point where the station comes in best. Then adjust the volume to desired level with the volume control. DO NOT reduce the volume by tuning away from the station.

Some Police Stations may be tuned in above 1600 KC.

PROCEDURE FOR SETTING AND OPERATING THE ELECTRIC PUSH-BUTTON TUNING

Select five of your most dependable broadcast stations and remove their call letters from the station call letter tab sheets supplied. Place the call letters in the windows above the buttons, making sure that each respective button covers the frequency of the station for which it is to be used. The frequencies of these stations may be found by consulting any station list. The frequency range of the buttons and corresponding padders is as follows:

| <i>Padders</i> (right to left from rear) | <i>Circuit</i> | <i>Buttons</i> (left to right from front) | <i>Frequency Range</i> |
|---|----------------|--|-------------------------|
| 1 | Ant | 1 | 540 to 1030 kilocycles |
| 2 | Osc | | |
| 3 | Ant | 2 | 650 to 1100 kilocycles |
| 4 | Osc | | |
| 5 | Ant | 3 | 650 to 1100 kilocycles |
| 6 | Osc | | |
| 7 | Ant | 4 | 740 to 1240 kilocycles |
| 8 | Osc | | |
| 9 | Ant | 5 | 1160 to 1600 kilocycles |
| 10 | Osc | | |
| | | 6 | Dial |

The left-hand button, looking at the front of the cabinet, corresponds to the two right-hand padder screws, looking at the rear, and covers the lowest frequency range.

With the "DIAL" button depressed, tune in the station whose call letters appear above the left-hand button. Then depressing the left-hand button, tune in this station by rotating the No. (2) "OSC" screw (next to the right end of the unit, looking at the rear of the chassis). (NOTE: Inherent characteristics of these padders may cause some of them to cover a lower range than required to cover the broadcast band. This may cause the receiver to howl or flutter when a station button is depressed. To correct this, loosen the "ANT" padder corresponding to the depressed station button.) Turn the "OSC" screw slowly and listen carefully or the station may be passed without noticing it. After the "OSC" screw has been adjusted for maximum volume, the corresponding "ANT" screw should be adjusted for maximum. For some stations, it may be necessary to readjust the "OSC" screw after the "ANT" screw has been set. Switching

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from the "DIAL" to the automatic push button will enable you to make sure you have the correct station tuned in. When the first station has been set, the same procedure should be followed for the remaining buttons, first tuning in the desired station by means of the "Station Selector."

To tune the receiver with the "Push-Buttons," simply press in the button which is under the call letters of the desired station. Your station will be received instantly. The volume of the program may be controlled with the manual volume control.

BATTERY LIFE

The life of the battery will depend upon how often and how long the receiver is used. With average use of several hours per day a reasonable life should be obtained. If reception becomes weak after several months, have the voltages of the battery checked.

SERVICE

SERVICE . . . For the convenience of all radio owners, Philco has developed a plan for prompt, efficient radio service in every locality. This plan is known as "Radio Manufacturers' Service." There is a member in your neighborhood—his shop or store can be identified by the emblem shown here. To make sure of guaranteed work, genuine Philco tubes and parts, and standard prices—call a member of Radio Manufacturers' Service.



REPLACEMENT PARTS PHILCO 40-100

| Schem. No. | Description | Philco Part No. | Schem. No. | Description | Philco Part No. |
|---------------|---|--------------------|---------------|--|--------------------|
| 1 | Antenna Transformer | 32-3248 | 16 | Tubular Condenser (.01 mf., 400 v.)..... | 30-4572 |
| 2 | Variable Condenser | 31-2384 | 17 | Resistor (2.2 meg., ½ watt)..... | 33-522244 |
| 3 | Silver Mica Condenser | 30-1113 | 18 | Resistor (800 ohms., ½ watt)..... | 33-180326 |
| 4 | Molded Mica Condenser (110 mmf.)..... | 30-1031 | 19 | Molded Mica Condenser (500 mmf.)..... | 30-1114 |
| 5 | Resistor (220,000 ohms., ½ watt)..... | 33-422244 | 20 | Output Transformer | 32-8051 |
| 6 | Oscillator Transformer | 32-3214 | 21 | Speaker | 36-1477 |
| 7 | Resistor (68,000 ohms., ½ watt)..... | 33-368244 | 22 | Electrolytic Condenser (10 mf., 150 v.)..... | 30-2396 |
| 8 | Tubular Condenser (.05 mf., 200 v.)..... | 30-4444 | 23 | Battery Cable | 41-3478 |
| 9 | 1st I. F. Transformer | 32-3198 | 24 | Tubular Condenser (.05 mf., 200 v.)..... | 30-4519S |
| 10 | Resistor (10 meg., ½ watt)..... | 33-610244 | 25 | Push Button Switch | 42-1835 |
| 11 | 2nd I. F. Transformer | 32-3199 | 26 | Push Button Condenser Strip | 31-6309 |
| 12 | Volume Control (1 meg. and D. P. S. T. Switch) | 33-5321 | .. | Flag Arm Spring | 28-8949 |
| 13 | Tubular Condenser (.004 mf., 400 v.)..... | 30-4578 | .. | Flag Arm Transfer Lever Assembly..... | 38-9843 |
| 14 | Resistor (4.7 meg., ½ watt)..... | 33-547244 | .. | Flag Cam Assembly | 38-9723 |
| 15 | Resistor (1 meg., ½ watt)..... | 33-510244 | .. | Flag Assembly | 38-9844 |

WARRANTY

We warrant each new Philco Radio Receiver and Speaker to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our depot any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original retail purchaser, be returned to our depot with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of Receivers or Speakers.

This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered other than by us in any way so as, in our judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any Receiver or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.