

# INSTRUCTIONS

## PHILCO REG. U.S. PAT. OFF. Balanced-Unit RADIO

### Model 80 Series

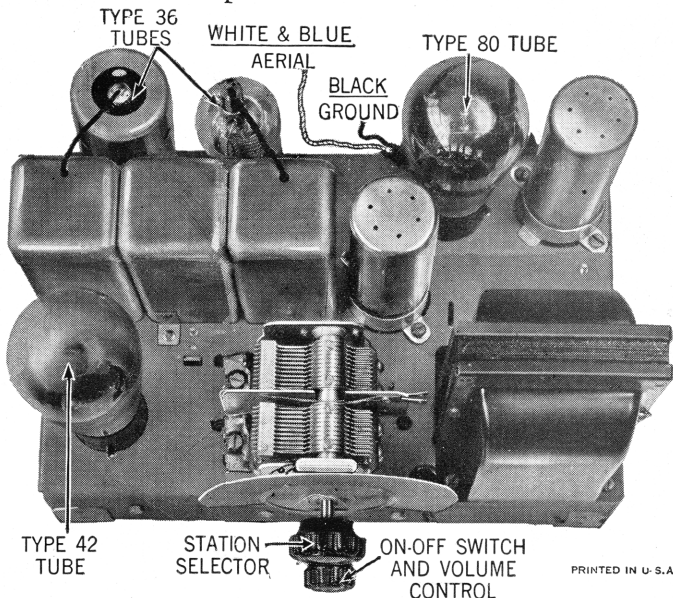
**T**HIS model is a complete A.C. electric screen grid superheterodyne receiver using the new Philco electro-dynamic Speaker.

The receiver is shipped with the tubes installed in their respective sockets. Before placing the receiver in operation, be sure that the packing material around the tubes is removed, and that the radio chassis hold down bolts are loosened. Before inserting the attachment plug of the receiver in the A.C. line outlet, see that all the tubes are seated in their sockets (see Fig. 1). The terminals of the two wires must be connected to the terminals on the top of the screen grid tubes. Connect only to a source of alternating current within the limits of voltage and frequency (cycles) as listed in the name plate on the radio chassis.

Four Philco tubes are supplied. They are:

- 2 *Philco type 36* screen grid tubes
- 1 *Philco type 42* Pentode power amplifier tube
- 1 *Philco type 80* rectifier tube

Use only Philco tubes in this receiver for 100 per cent. balanced-unit performance.



**Fig. 1**

### Aerial

An outdoor aerial, consisting of a single copper wire 50 to 100 feet long, usually gives the best results. The lead-in wire, unless shielded, is considered an active part of the aerial. The outer end of the aerial should be as high as possible and the entire aerial should be spaced well away from trees and buildings and supported by glass or porcelain insulators.

### Ground

A suitable ground clamp and wire must be securely attached to a radiator pipe or water pipe and the bare wire end connected to the "GND" terminal.

### Adjusting the Receiver

The fibre screw at the back of the radio chassis (right end when facing back of set) should be adjusted at the time of installation. Place the radio in operation as described below, tuning to a station near the middle of the dial. Turn the adjusting screw to the right with a screwdriver until a swishing sound is heard and until a squeal is heard when different stations are tuned in. Now turn the

screw to the left until the swishing sound just ceases. Continue to turn in the same direction about one quarter of a revolution beyond this point. Tune to different stations over the dial, noting that the squeal is not present on any stations received. If such a noise is present at any section of the dial, the adjusting screw should be turned farther until the noise stops. For best average operation, the nut should be turned back from one-half to one turn except where extreme selectivity is required. Should the type 36 tube under the metal shield ever be replaced, this adjustment should be repeated.

**NEVER ATTEMPT TO REGULATE ANY OF THE OTHER ADJUSTING NUTS AS THIS MAY CAUSE THE RADIO TO BECOME INOPERATIVE.**

## Operating the Receiver

After all connections have been made, turn the combined "on-off" switch and volume control clockwise about one-half the total range of movement. After the tubes heat up, turn the station selector and different stations will be tuned in at various points on the scale.

The figures on the Philco scale represent channel numbers which, by the addition of a cipher, correspond with the station broadcast frequencies in kilocycles as listed in newspapers and other station logs. For example: 85 on the scale represents channel 85 and a frequency of 850 kilocycles.

Tune the desired station accurately to the point where it is clearest, and reduce or increase the volume with the volume control—never by detuning, as detuning will spoil the tone quality.

When it is desired to turn off the radio, turn the combined "on-off" switch and volume control all the way to the left until the switch clicks off.

## Service

Should your Philco ever require service attention, be sure that such servicing is done by an authorized Philco Dealer or Philco Service Station and that all tubes and parts used for replacement purposes are genuine Philco parts. Only with Philco parts and tubes can the Philco give its original quality performance.

## PATENTED

Licensed only for Radio Amateur, Experimental and Broadcast Reception use under the following patents of the Radio Corporation of America and Associated Companies:

1,158,123—1,195,632—1,201,270—1,201,272—1,231,764—1,239,852—1,251,377—1,273,627  
1,282,439—1,297,188—1,313,094—1,329,283—1,342,885—1,349,252—1,377,405—1,385,873  
1,387,984—1,398,665—1,403,475—1,403,932—1,426,754—1,459,412—1,465,332—1,465,961  
1,484,605—1,491,774—1,507,016—1,507,017—1,508,151—1,520,994—1,537,708—1,544,081  
1,558,437—1,573,374—1,611,848—1,631,646—1,639,713—1,702,833—1,707,617—1,714,149  
1,728,879—1,734,038—1,734,132—1,740,331—1,795,214—1,811,095—1,834,414—1,849,651  
1,852,068—1,868,443.

Also licensed under the following patents of the Hazeltine and Latour Corporations:  
1,405,523—1,648,808—1,710,035—1,755,114—1,755,115—RE: 16,461.

Other Patents Pending

The manufacture and/or sale of this apparatus does not imply any license under any patent relating to the structure or manufacture of vacuum tubes.

## Standard Warranty

We warrant each new Radio Receiver and Speaker manufactured by us 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 factory or factory depots any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original purchaser, be returned to us 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 our Receivers or Speakers.

This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered outside of our factory or factory depots 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.

**PHILCO—PHILADELPHIA—TORONTO—LONDON**