

Keep handy for reference. Station Log on back.

PHILCO
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Electric RADIO
"neutrodyne-plus"

**Operating
Instructions**

**Model
87**

PHILADELPHIA STORAGE BATTERY CO.
Ontario and C Streets
Philadelphia, Pa., U. S. A.

PHILCO RADIO INSTRUCTIONS

Follow these instructions when putting the Philco Radio in service.

Do not insert the attachment plug in the house socket until connections are made, and the speaker plug and all tubes are in the sockets.

Never operate receiver without having a good ground connection to a water pipe or a radiator.

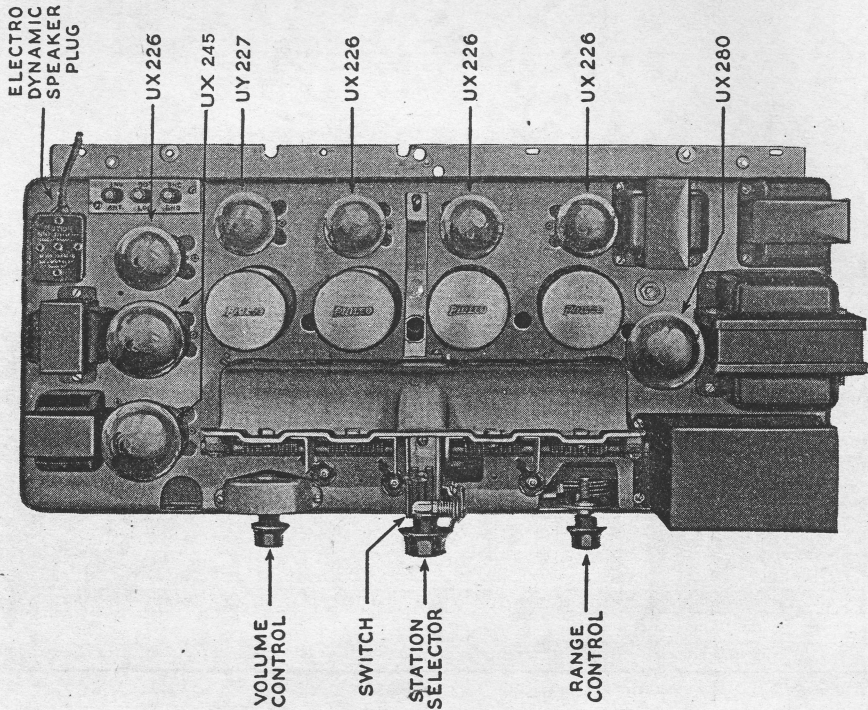


Fig. 1

The Philco Model 87 A.C. Electric Radio Receiver is to be used only on an alternating current supply of 50 to 60

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cycles, 95 to 135 volts. If connected to a direct current supply such as is used in some hotels, apartments, stores and houses in large cities, the Receiver may suffer serious injury.

Tubes

Eight tubes are required.

4 UX 226 Tubes

1 UY 227 Detector Tube

2 UX 245 Power Amplifier Tubes

1 UX 280 Rectifier Tube

Place the tubes in the correct sockets as shown in Fig. 1.

Speaker

The Philco Electro Dynamic Speaker is built into the cabinet and is ready to operate as received.

Better tone quality, especially at great volume, will usually be obtained from the Speaker if the cabinet is placed four inches or more away from the wall.

Aerial

The Receiver is shipped with the "ANT" and "LOC" terminal posts connected by a wire link. This in effect provides a built-in aerial which will be found very satisfactory for the reception of nearby broadcasting. If it is desired to use an external aerial, remove this wire link and connect the aerial wire to the "ANT" terminal, leaving the "LOC" terminal post disconnected.

An outdoor aerial, consisting of a single copper wire 50 to 80 feet long, usually gives the best results. In the country, however, where there is no powerful broadcasting station within 50 miles, a longer aerial may be used and will bring in far-away stations with somewhat greater volume. The lead-in wire is an active part of the aerial and the aerial

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length should always be measured from the Receiver to the insulator at the far end. 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.

Good results can also be obtained with an indoor aerial 25 feet or more in length. A shorter aerial usually will not be satisfactory. If the walls are constructed with metal lath the "LOC" post connection, described above, will usually give better results than a short indoor aerial.

Ground

A suitable ground clamp must be securely attached to a radiator valve or water pipe and the bare wire end inserted in the "GND" terminal post of the Receiver.

Never operate the Receiver without the ground connection.

Use separate insulated wires rather than a two-wire cord for the aerial and ground connections.

How to Operate the Receiver

After the aerial and ground connections are made and all the tubes are in place, insert the attachment plug that is on the cord at the back of the Receiver into a convenient floor receptacle or lamp socket.

Snap the power switch of the Receiver ON, that is, toward the right. The pilot lamp should light, indicating that the power is turned on. If the pilot lamp does not light, it may be that it is not screwed tightly into the socket. When the switch is snapped OFF, no power is used and the attachment plug need not be withdrawn.

After waiting about half a minute for the tubes to become heated, turn the volume control (left knob) counter-clockwise

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as far as it will go. Turn the station selector (center knob) to a point at or near 55 on the scale where no broadcasting can be heard. Now, while listening carefully to the A.C. hum in the Speaker reverse the attachment plug in the house socket. Leave it in the position that gives the least hum.

Turn both the Volume Control (left knob) and the Range Control (right knob) clockwise about half the total range of movement. Now turn the Station Selector (center knob) and different stations will be tuned in at different points on the scale. Tune a station to the loudest point and reduce or increase the volume as desired with the Volume Control. The Range Control should be rotated back and forth for fine tuning after a distant station is brought in with the Station Selector.

The Range Control may also be used to decrease the volume of powerful local stations. When the volume of such stations cannot be reduced satisfactorily by means of the Volume Control alone, set the Range Control in the short range position by turning it counter-clockwise as far as it will go, then bring up the volume with the Volume Control.

Except when set in the short range position, the Range Control acts as a fine tuner in the aerial circuit and often makes possible the selection and bringing in of a distant station that otherwise could not be separated from other stations of nearly the same frequency.

Never reduce the volume of a station by detuning with the Station Selector, as this may spoil the tone quality.

Always tune sharply and use the Volume Control and, if necessary, the Range Control, to regulate the volume to the desired point.

The tone quality is not affected by the operation of these controls.

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If at any time a decided hum should develop, it is probably due to the attachment plug having been reversed in the wall receptacle or lamp socket. To correct this, remove the plug from the socket and re-insert it with the prongs turned the opposite way.

The chart on the back page shows, in the center column, the tuning scale used in the Philco Radio Receiver. The scale is numbered from 55 to 150. The numbers represent channel numbers and by adding a cipher after each represent kilocycles. For example, 85 on the scale represents channel number 85 and a frequency of 850 kilocycles. In the outer columns are given the approximate frequency and wave-length figures that correspond to the main divisions on the tuning scale. A number of key stations are listed to show approximately how the Receiver must be tuned to bring them in. Variations in local conditions may change this reading one or two divisions. The user can fill in the call letters of favorite stations that are not listed, in the blank column.

Special Notice

Do not attempt to make any adjustments to the Philco Receiver or Philco Speaker except as covered by these Instructions. If there is any question about the operation or care of this equipment, consult the dealer from whom it was purchased.

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,

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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.

We make no warranty whatever in respect to tubes, inasmuch as they are usually warranted by their respective manufacturers.

PHILADELPHIA STORAGE BATTERY CO.

Ontario and C Streets

Philadelphia, Pa., U. S. A.

Station Log

KILO-CYCLES	STATIONS	PHILCO SCALE CHANNEL NUMBERS	STATIONS	METERS
550	WGR	55		545
	WFI-WLIT			
	WKAQ			
	KHQ			
600	WIP	60		499
	KGW			
	WOS			
	KFI			
650	WSM	65		461
	WEAF			
	WMAQ			
	WPTF-KPO			
	CANADA			
700	WLW	70		428
	WOR			
	CANADA			
	WSB			
750	WJR-WCX	75		400
	WJZ			
	WBBM-WJBT			
	KGO-WGY			
800	KTBS-WBAP	80		375
	KOA			
	CANADA			
850	WABC	85		353
	WENR-WLS			
	CANADA			
900	KHJ	90		333
	KOMO			
	KOIN-KGU			
950	KLDS-WRC	95		316
	CANADA			
	KDKA			
	WBZ			
1000	KYW-KFKX	100		300
	CANADA			
	WFAA-KRLD			
1050	KNX	105		285
	WBT			
1100	WPG	110		273
	KSL			
1150	WCAU	115		261
	WOAI			
1200	KYA	120		250
	WIOD			
1250	KXL	125		240
	KOIL			
	WCAM			
1300		130		231
1350	KGB	135		222
	KOW			
1400		140		214
1450	WJSV	145		207
	WLAC			
1500		150		200

Additional Station Call Letters can be marked in the blank column.