

Station Log

KILO-CYCLES	STATIONS	PHILCO SCALE	STATIONS	METERS
540		100		550
560		95		535
530		90		515
610		85		490
640		80		470
680		75		440
730		70		410
780		65		385
830		60		360
880		55		340
930		50		320
990		45		300
1050		40		285
1120		35		265
1200		30		250
1260		25		240
1330		20		225
1390		15		215
1460		10		205
1490		5		200
1520		0		195

Station Call Letters should be filled in opposite the scale readings where they are tuned in.

Keep handy for reference. Station Log on back.

Instructions

for

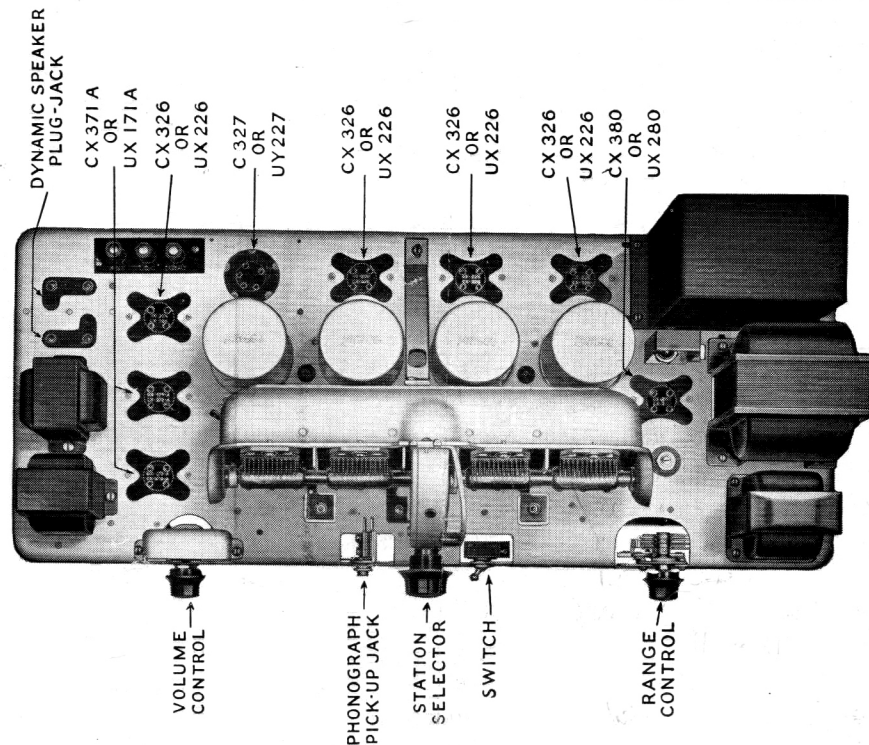
Operating the



Models 86 and 82

PHILADELPHIA STORAGE BATTERY CO.

Ontario and C Streets
Philadelphia, Pa., U. S. A.



The Philco A.C. Electric Radio Receiver is to be used only on an alternating current supply which corresponds in cycles and voltage to the markings on the name-plate. If plugged in on direct current, such as is used in some hotels, apartments, stores and houses in large cities, the Receiver may suffer serious injury.

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

Tubes

Eight tubes are required, as follows:

- 4 CX 326 or UX 226 Tubes
- 1 C 327 or UY 227 Detector Tube
- 2 CX 371-A or UX 171-A Power Amplifier Tubes
- 1 CX 380 or UX 280 Rectifier Tube

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.

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.

The chart on the back page shows, in the center column, the tuning scale used in the Philco Radio Receiver. In the outer columns are given the approximate frequency and wavelength figures that correspond to the main divisions on the tuning scale. Space has been provided for the user to fill in the call letters of favorite stations opposite the tuning scale settings where they come in.

Phonograph Record Reproduction

With a good phonograph pick-up of the magnetic type and any kind of a turntable, phonograph records may be reproduced with remarkable fidelity and tone quality through the Philco Radio Receiver and Speaker. To do this simply insert the plug of the phonograph pick-up in the jack on the front of the Receiver having the Receiver turned on and all tubes in their sockets. The Volume Control on the Receiver should be turned off and the volume regulated by means of the special control connected with the pick-up.

If the pick-up comes equipped with a plug similar to a tube base, cut the wires from this plug and connect them to a standard telephone plug such as was formerly used for loud speakers and head phones. The pick-up jack on the Philco Receiver is made to take such a plug.

To change back from phonograph to radio, simply remove the plug from the jack and use the Receiver as usual. Never leave the plug part way in the jack when receiving radio programs.

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.

Each tube socket is plainly marked to indicate the correct type of tube to be used in it.

Insert the 71 power tubes first, in the red sockets. These sockets are made red to warn against the danger of burning out a 26 tube if placed therein.

The tubes cannot be injured by turning up the volume.

Speaker

The Philco Dynamic Speaker is built into the cabinet and is ready to operate as received. Simply place the special four-prong connecting plug, which is on the end of the cable coming from the speaker, in the special receptacle in the rear left-hand corner of the receiver base, and fasten it in place with the set screw provided for the purpose. The plug cannot be connected incorrectly.

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

Caution—Never turn on Receiver with the speaker plug disconnected or with tubes out of sockets.

Antenna and Ground

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

An outdoor antenna, 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 antenna may be used and will bring in far-away stations with somewhat greater volume. The lead-in wire is an active part of the antenna and the antenna length should always be measured from the Receiver to the insulator at the far end of the antenna. The outer end of the

antenna should be as high as possible and the entire antenna 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 antenna 25 feet or more in length. A shorter antenna may cause the Receiver to oscillate and usually will not be satisfactory. No. 18-gage stranded copper wire having an insulating covering of a neutral color will be found most suitable for indoor use. This wire can be supported and insulated from the wall by glass push pins so as to present a neat appearance. If the walls are constructed with metal lath, however, the "LOC" post connection, described above, will usually give better results than a short indoor antenna.

A suitable ground clamp, such as the one made by Philco, 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.

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

How to Operate the Receiver

After the Antenna, Ground and Speaker 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. If a lamp socket having a switch is used, make sure the switch is turned on before removing the lamp.

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.

The Receiver uses less current than a 75-watt lamp when turned on. 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 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 the 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 antenna 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 or wave-length.

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.

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.