

Instructions for Putting Up the PHILCO HIGH-EFFICIENCY AERIAL

Part No. 40-5922

DESCRIPTION: This aerial was designed as an integral part of the Philco "Foreign Tuning System," which is a feature of all the "37" series of Philcos designed for foreign reception. This exclusive system greatly increases the sensitivity of the receiver for short-wave reception and "Doubles the number of foreign stations you can get and enjoy."

Another valuable feature of this aerial is that it is practically noise-proof—background noise or man-made static is reduced to a minimum on all tuning ranges (wave-bands) of the receiver.

When installed properly in accordance with the instructions herewith, the aerial is weatherproof. Installation trouble is reduced to a minimum since all connections are soldered, and the transmission line (lead-in) is attached to the aerial when it is assembled at the factory.

If there are no convenient supports available for the ends of the aerial, we suggest the use of the Philco Aerial Mast (part No. 45-2127), which consists of an 8-foot mast in two sections, including guy wire and insulators.

CONTENTS:

- 1 Part No. 32-2124 Aerial wire, aerial transformer and transmission line (lead-in) assembly.
- 2 " No. 45-2011 Insulators (for ends of aerial wire).
- 2 " No. 27-7903 Porcelain wall knobs.
- 1 " No. 27-7741 Lightning arrestor.
- 2 " No. W-88 Screws for lightning arrestor.
- 1 " No. 27-7021 Porcelain tube.
- 1 " No. 28-1039 Ground clamp.
- 1 " No. L-2176 9-foot length of ground lead.

LOCATION: The aerial should be located so that the horizontal portion (bare copper wire) is as high as possible above the ground (or above the roof) and preferably level or horizontal (although this is not essential). A location should be selected which is as far as possible from any source of electrical disturbance which causes noise in reception, such as flashing signs, power wires, passing street cars, automobiles, etc.

PUTTING UP THE AERIAL: Attach the insulators to the outer ends of the aerial wire, and suspend the aerial between the two supports by means of suitable lengths of wire or rope. This will leave the weather-proof aerial transformer suspended in the center of the aerial, with the insulated transmission line coming down vertically from it. Use the full 60 foot length of the aerial, if possible. If limited installation space makes it absolutely necessary to reduce the length of the aerial, **be sure** to cut off an **equal length** from **each end** before attaching the insulators.

LEAD-IN: The insulated transmission line (lead-in) should be brought down directly from the aerial to the point where it is to enter the building; or if it is run along the side of the house use the two porcelain knobs, supplied in the kit, to hold the transmission line out from the wall. The portion indoors may be fastened to interior woodwork by means of insulated staples (Philco Part No. W-917. List price, 40c per hundred).

The transmission line supplied with the kit is 65 feet in length. If the full length is not needed, it may be cut down to any lesser length required to reach the receiver or an addition may be made, to the length of several hundred feet if necessary. Additional transmission line is available in rolls of 50 feet (Part No. L-1556) and 100 feet (Part No. L-1551). It is also available in ivory color, part L-1591. List price \$3.00 per 100 feet.

LIGHTNING ARRESTOR: The location of the lightning arrester will depend upon local fire underwriters rulings. It should preferably be located outside the building (use the two screws furnished for mounting) at the point where the transmission line is brought into the building. At this point the covering of the transmission line must be removed to allow separation of the two leads, which should then be connected (after removing the insulation from a short section of each) one to each of the outer terminals of the lightning arrester. The center terminal of the lightning arrester is to be connected by a suitable length of wire to a good ground nearby, such as a water pipe.

PORCELAIN TUBE: Bring the transmission line into the house thru the porcelain tube supplied. This will require drilling a hole of suitable diameter thru the wall or window frame, and fitting the porcelain tube into this hole.

RECEIVER CONNECTIONS: The transmission line, after passing thru the porcelain tube into the house, should be brought to the back of the receiver, and connected to the proper two terminals on the terminal panel at the rear of the set (see instruction label near this panel on radio set). Connect the red lead to the screw terminal marked "RED" and the black lead to the one marked "BLK."

GROUND: A good ground connection is important in securing best results in foreign reception. With the Philco High-Efficiency Aerial a ground clamp and a 9-foot length of ground wire are supplied. Make the ground connection by attaching the clamp to the nearest radiator or water pipe. The other end of the ground wire is to be connected to the "GND" terminal on the panel at the back of the receiver. The use of a ground connection is not recommended on AC-DC sets, since it may cause a hum in reception.

FOR EXCEPTIONALLY NOISY LOCATIONS: In an occasional installation, the presence of much electrical machinery and wiring in the neighborhood may create excessive radio disturbance noise. In such rare cases, you can practically eliminate such noises as are not entirely removed by the aerial, by making an extra ground connection directly to the aerial transformer. A terminal is provided on the base of the transformer for such a connection. Before suspending the aerial, solder one end of an insulated wire (No. 14 rubber covered copper or similar wire) to this terminal, and (after the aerial is in place) attach the other end of this ground wire to the nearest available source of connection to the ground, on the roof. If there is a "standpipe" handy use this (being sure it is scraped clean and shiny at the point of connection). If there is no such pipe handy, it may be necessary to run the extra ground wire through a window on the top floor of the house to a handy radiator or water pipe.