

Instructions for Installing the 1938 PHILCO HIGH-EFFICIENCY AERIAL

Part No. 40-6112

DESCRIPTION: This 1938 Philco High-Efficiency Aerial was designed for use with the "38" series of Philco "American-and-Foreign" radio receivers, that is, receivers incorporating reception of foreign short-wave stations. Having been designed in conjunction with these receivers, it is important that it be used to obtain maximum results.

In addition to providing high-efficiency radio performance, this aerial substantially reduces noises from electrical appliances, etc., which sometimes interfere with radio reception.

LOCATION: The main aerial assembly consists of a 50 foot length of stranded copper wire, one end of which is attached to the aerial transformer. To the latter the 60 foot lead-in (transmission line) of weather-proof twisted pair is also attached.

An insulator is supplied for attaching to the other end of the aerial wire (opposite the aerial transformer end).

It will be found most convenient to install the transformer end of the aerial on the house, suspending it from a mast or other suitable support on the roof. This will allow the lead-in in most cases to be brought down directly to the window of the room where the radio is located.

INSTALLATION: Attach the transformer end of the aerial to its support by means of the short length of stranded copper wire supplied attached to it. No insulator is needed at this end.

Having selected (or installed) a suitable support at the correct distance away, suspend the other (outer) end of the aerial from it by means of the insulator. If it is a little too long for the distance between supports, cut off the excess; however, avoid this if possible. The 50 foot horizontal portion of the aerial should be as near level as possible.

NOTE: Always run the aerial in a direction as far as possible from sources of electrical disturbances—such as flashing signs, power wires, passing automobiles and street cars.

LEAD-IN: The insulated transmission line (lead-in) should be brought down directly from the aerial transformer to the point where it is to enter the building; 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 section of flexible loom (tubing) should be located at the point where the transmission line passes through the uppermost of the porcelain wall-knobs; when attaching the knob, clamp it around the section of loom, with the greater part of the loom extending above the knob.

This prevents damage to the lead-in from swaying in the wind. The portion of the lead-in which is 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 60 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 through the porcelain tube supplied. This will require drilling a hole of suitable diameter through the wall or window frame, and fitting the porcelain tube into this hole.

RECEIVER CONNECTIONS: The transmission line, after passing through 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. 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.

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.