



## Installing Philco Dipole Outdoor Aerial

The Philco Dipole Outdoor Aerial is designed to provide maximum signal reception for all types of Frequency Modulation receivers, and is suitable for all frequencies used in F. M. broadcasting. ALL PHILCO radios equipped for F. M. reception are designed for use with this aerial. The aerial is easily assembled and mounted to suit any type of installation problem that may be encountered. It can be installed on a window sill, wall, or roof and is equally sensitive to signals from the two directions perpendicular to the Dipole.

The items required for various types of installations are as follows:

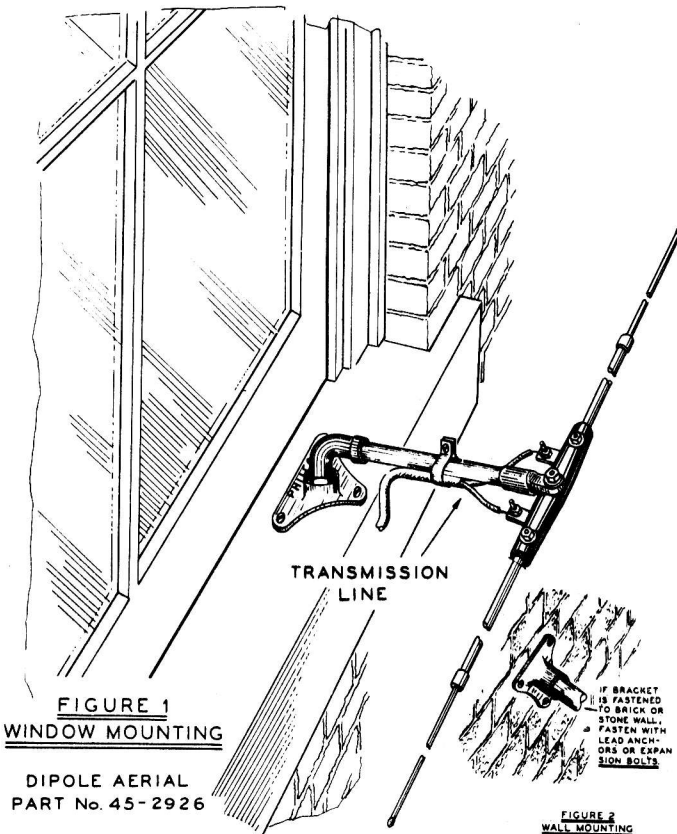
**PHILCO DIPOLE OUTDOOR AERIAL**—Part No. 45-2926 for window sill or wall mounting, consists of parts shown in figure #1, including 50 feet of standard transmission line.

**PHILCO AERIAL MAST KIT**—Part No. 45-2927 for roof top installations. For this type of installation, which is illustrated in figure #3, the Philco Dipole Outdoor Aerial, Part No. 45-2926, is required in addition to the Philco Aerial Mast Kit.

**PHILCO REFLECTOR KIT**—Part No. 45-2928 for roof top installations requiring increased signal strength from one direction only. For this special type of installation, which is illustrated in figure #4, the Philco Dipole Outdoor Aerial, Part No. 45-2926, and the Philco Aerial Mast Kit, Part No. 45-2927, are required in addition to the Philco Reflector Kit.

**AERIAL COUPLER**—Part No. 76-1361, required in connecting Philco Dipole Outdoor Aerial to Philco 1942 frequency modulation models when it is desired to have the Dipole Aerial function as an external aerial on the standard broadcast and shortwave tuning ranges in addition to the frequency modulation band.

**PHILCO HIGH EFFICIENCY TRANSMISSION LINE**—Part No. 41-3576 (100 ft. roll) for all installations requiring more than 50 feet of transmission line. In such cases, the special transmission line should be used in place of the standard transmission line supplied with the Philco Dipole Aerial.



**FIGURE 1**  
**WINDOW MOUNTING**

**DIPOLE AERIAL**  
**PART No. 45-2926**

**FIGURE 2**  
**WALL MOUNTING**

### 1. WINDOW SILL OR WALL MOUNTING

(Requires Philco Dipole Outdoor Aerial, Part No. 45-2926, only)

- A To obtain the best results from the aerial it should be mounted on the side of the building, facing the station to be received, and as high as possible.
- B Attach mounting bracket to the window sill or wall as shown in figures #1 or #2. When mounted on the window sill insert the elbow coupling into the mounting bracket. Wall installations do not require the elbow.
- C Assemble Dipole Aerial, coupling, and short mounting pipe as shown in figures #1 or #2.  
**NOTE:** When assembling Dipole, twist end sections in bayonet sockets to lock them together. The aerial should be mounted horizontally and in a perpendicular direction to the station to be received. If this direction is not known, it can be found by trial by rotating the dipole until the best reception is obtained.
- D Connect the transmission line to the dipole terminals as shown in figure #1.  
**NOTE:** If more than 50 feet of lead-in is required to connect the Philco Dipole Outdoor Aerial to the radio, use Philco Special Transmission Line, Part No. 41-3576 (100 ft. roll) in place of the transmission line supplied with the aerial. In this case the special transmission line should be used for the entire lead-in between the dipole and the aerial. If less than 50 or 100 ft. is sufficient the line may, of course, be cut to the desired length.
- E Fasten transmission line to mounting pipe with special clamp provided.

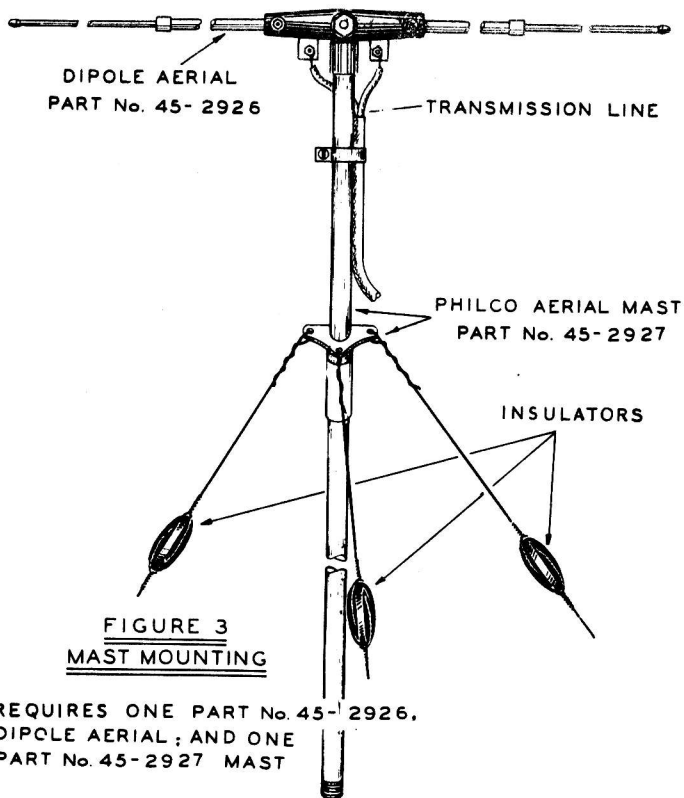
### 2. MAST MOUNTING

(Requires Philco Dipole Outdoor Aerial, Part No. 45-2926, and Philco Aerial Mast Kit, Part No. 45-2927)

The Aerial Mast Kit consists of two 4-foot mast sections with coupling, guy wire bracket, 20 feet of guy wire and three strain insulators. A separate roof mounting bracket of one of the two types shown in figures #5 and #6 should also be obtained if the installation is to be made on a sloping roof.

- A Screw the two mast sections together with the coupling and tighten securely.
- B Place guy wire bracket over top of pole, and allow to slide down to position above coupling as shown in figure #3.
- C Assemble and connect dipole as directed in I-C, D, and E.
- D Screw base fitting of mast to a board of sufficient size to prevent bottom of mast from moving out of place. If the base of the mast can not be fastened to the roof it should be secured in place by means of additional guy wires.  
**NOTE:** For installation on peaked or sloping roofs use special base fitting shown in figures #5 or #6.
- E Secure the aerial with guy wires, inserting strain insulators as shown in figure #3.

Complete characteristics of this aerial, directional effects, etc., are covered in the August 1941 issue of the Philco Serviceman.



**FIGURE 3**  
**MAST MOUNTING**

REQUIRES ONE PART No. 45-2926,  
DIPOLE AERIAL; AND ONE  
PART No. 45-2927 MAST

### 3. MAST MOUNTING WITH REFLECTOR

(Requires Philco Dipole Outdoor Aerial, Part No. 45-2926, Philco Aerial Mast Kit, Part No. 45-2927, and Philco Dipole Reflector Kit, Part No. 45-2928)

The reflector kit consists of a Reflector Dipole, two cross arms and a "T" Mounting Fitting.

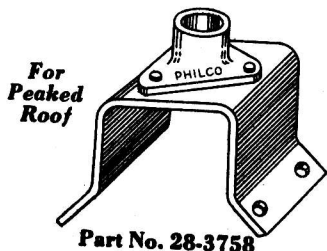
This type of installation is required when the receiver is located at a considerable distance from the transmitter. In addition to increasing the sensitivity of the aerial, the reflector also has the effect of making the dipole uni-directional, i. e., sensitive to signals perpendicular to the dipole from the direction opposite the side at which the reflector is located. Advantage can be taken of this additional characteristic of the reflector to eliminate noise pick-up from the direction behind the reflector.

- A Attach the two cross arms to the "T" Mounting Fitting. The Dipole Aerial is placed at the end of one cross arm and the reflector dipole at the end of the other. Be sure the link which joins the terminals of the reflector sections is in place, and securely tightened to the terminals.
- B Attach this assembly to the aerial mast. See Figure #4.
- C Assemble Dipole and erect Aerial Mast as directed in I-C, D, E and 2-D and E.
- D Turn the entire aerial assembly so that the dipole aerial faces the direction of station to be received.



**For Sloping Roof**  
**Part No. 28-3757**

FIG. 5



**For Peaked Roof**

**Part No. 28-3758**

FIG. 6

## CONNECTIONS TO PHILCO RADIOS

(1942 Models with Frequency Modulation)

For installations where the aerial is to operate on the frequency modulation band only:

- 1 Remove plug attached to frequency modulation loop from socket in chassis.
- 2 Insert into this socket the plug at end of transmission line supplied with Philco Dipole Outdoor Aerial.

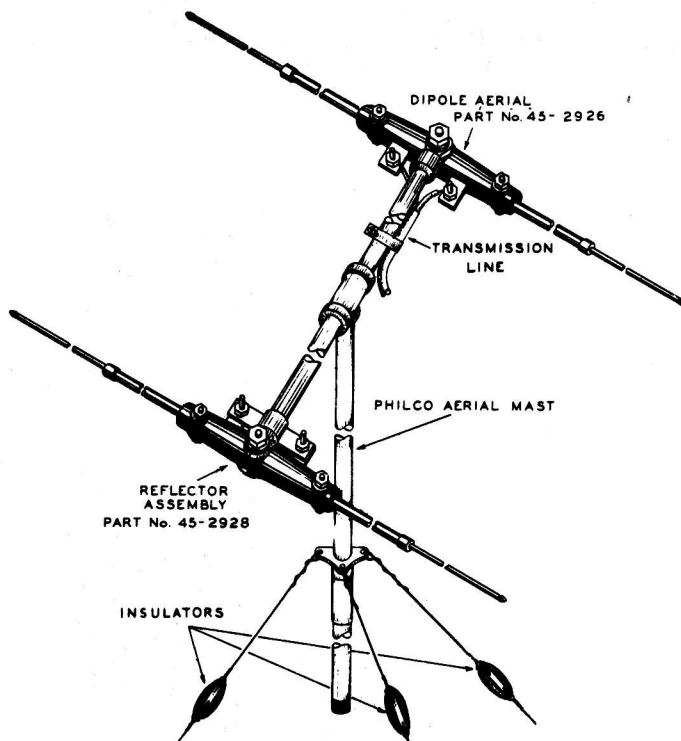
For installations where the aerial is to function on standard broadcast and shortwave tuning ranges in addition to frequency modulation band it is necessary to install Philco Aerial Coupler as follows:

### INSTALLING SPECIAL COUPLER

Part No. 76-1361

- 1 Remove plug attached to frequency modulation loop from socket in chassis.
- 2 Plug Philco Aerial Coupler Part No. 76-1361 into this socket.
- 3 Connect transmission line to terminals on coupler.

The switch on the top of the coupler marked "local-distance" is used to disconnect the outdoor aerial when the additional pick-up is not required on standard broadcast or shortwave tuning ranges. The aerial is connected when the switch is in the "distant" position and disconnected when the switch is in the "local" position. This switch does not affect the operation of the Dipole Outdoor Aerial on the frequency modulation band.



**FIGURE 4**  
**MAST MOUNTING WITH REFLECTOR**

REQUIRES ONE PART No. 45-2926,  
DIPOLE AERIAL; ONE No. 45-2927,  
AERIAL MAST AND ONE REFLECTOR  
ASSEMBLY No. 45-2928