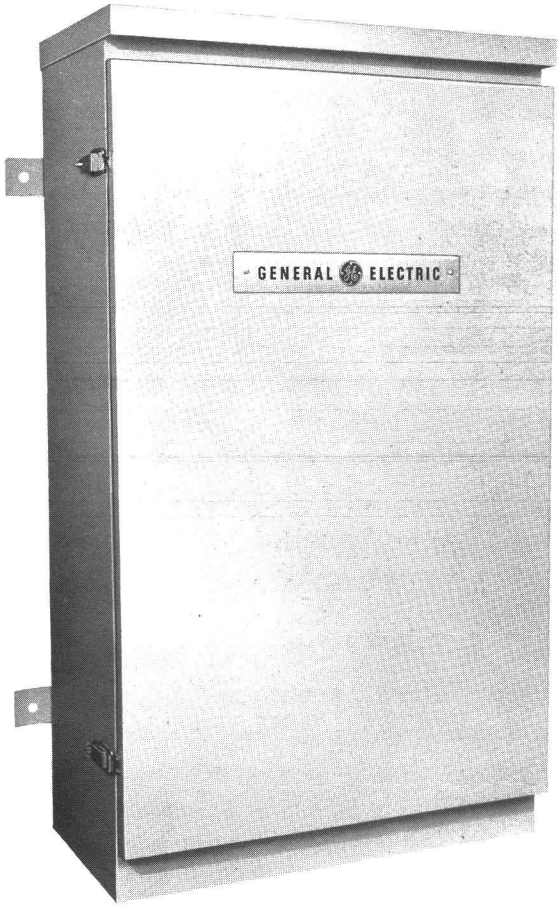
communications

INSTALLATION OF
MASTR Progress Line POLE MOUNT
TWO-WAY FM RADIO STATION COMBINATIONS



Style PM: POLE MOUNT

- **Remote Control**
- **Repeater Control**

You can mount your station outdoors in remote locations regardless of rain, snow, heat or cold. Mounting brackets on the rear of the cabinet make installation possible on either a pole or a wall.

The electronic components are attached to a unique "swing-out" rack for ease in servicing either side of the rack.

Tamper-proof latches can be padlocked to prevent unauthorized entry into the cabinet.

PLANNING SPECIFICATIONS

Dimensions (H x W x D)	42" x 23" x 12¼"
Weight	Approx 170 lbs.
Shipping Weight	Approx 190 lbs.
Temperature Range	−30°C to +60°C (−22°F to +140°F)
Input Power	2.9 Amps (max) 340 W. transmit 0.8 Amps (max) 95 W. receive @ 117 VAC, 50/60 cps.

GENERAL ELECTRIC

POWER AND GROUND REQUIREMENTS

A 15- or 20-ampere, 117-VAC 50/60-cycle electrical circuit must be provided for the station.

A 220/117 Volt AC Stepdown Transformer Kit is available when the AC input source is 220 volts.

The AC and ground connections to the station are shown in "Remote Control and Repeater Control Connections for Pole Mount Station Installations". Power cable is supplied by installer.

After the ground lead from the power cable is connected to the chassis mounting rack, check for continuity between chassis mounting rack and the cabinet. Be sure cabinet and rack are grounded together to protect service personnel and to minimize hum currents.

The cabinet should be connected to a good earth ground. A #12 stranded flexible wire connected to the component mounting rack should be clamped along the pole and mounted securely to a ground rod for a good ground—or if inside, to a water pipe. Soldered terminals should never be used in grounding.

Check your local electrical code to be sure that you comply with any local ordinances.

ANTENNA REQUIREMENTS

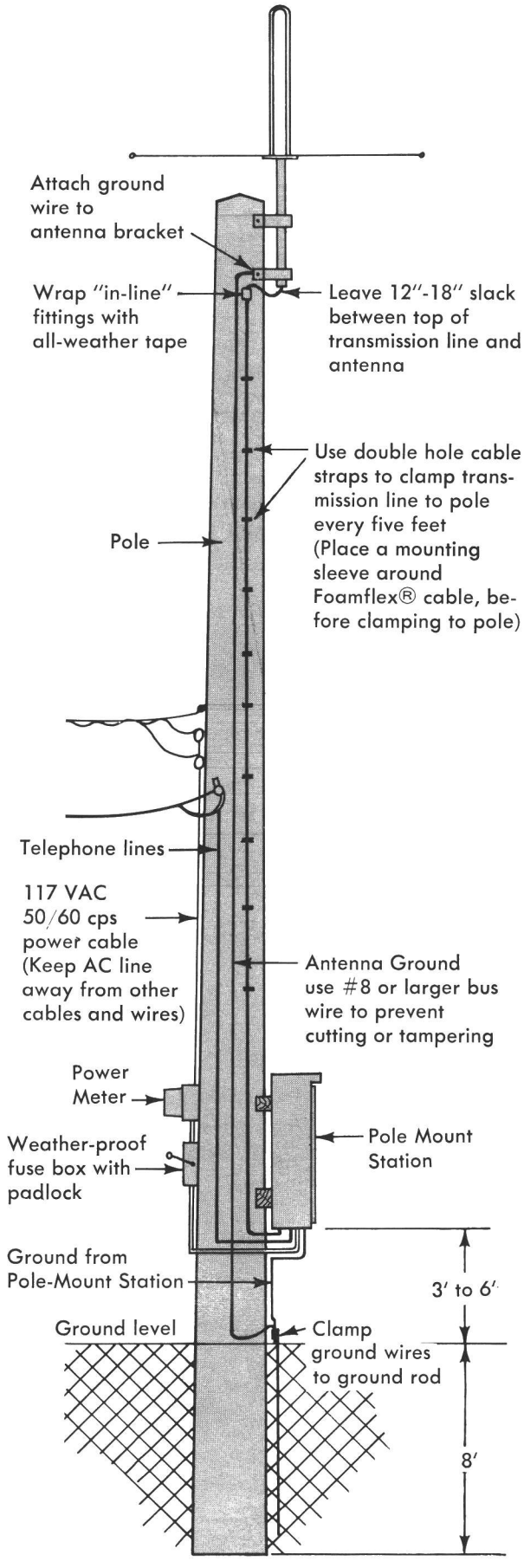
The antenna should be located as close as possible to the Pole Mount Station, so that the antenna transmission line can be kept short. Receiving and transmitting efficiency decreases as the length of the transmission line increases.

The antenna, tower, other antenna supports, and transmission line are ordered separately from the station combination, but proper installation of the antenna is essential for proper operation of the radio system. The system will not perform satisfactorily unless the antenna is installed in accordance with good engineering practice.

Install the station antenna following the instructions furnished with the antenna.

A typical antenna and Pole Mount Station with valuable installation hints is shown *on the following page*.

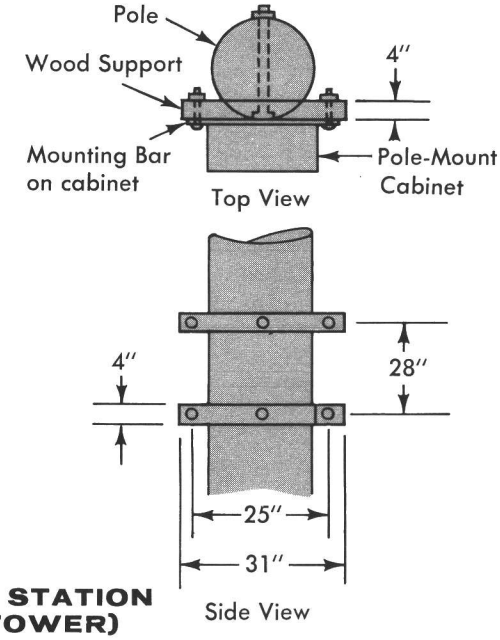
TYPICAL POLE MOUNT AND ANTENNA INSTALLATION



- Antenna should not be located in an area of a strong "electrical noise" field. It should be located at least several hundred feet from: high tension power lines, internal combustion engines, heavy electrical machinery, or other "radio-frequency devices".
- Check transmission line and connectors for opens and shorts before installing.
- Make a "drip-loop" in the transmission line before line enters the building, if station is mounted inside a building.
- Check continuity between transmission line ground and Pole Mount Station ground before transmission line is attached to station.. Both continuity check readings must be identical.
- Keep transmission line away from all sharp edges. Do not make sharp bends.
- Do not mount cabinet below or near water level. Keep it elevated high above high water and flood levels.
- Upon completion of antenna installation, measure and record the antenna system V.S.W.R. at the transmitter antenna connector.

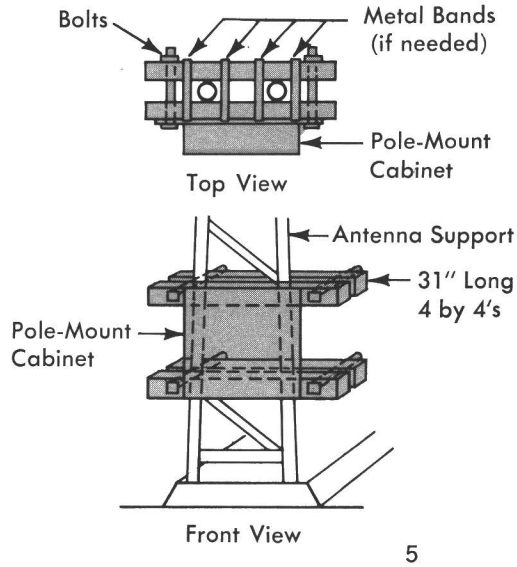
ATTACHING POLE MOUNT STATION TO A SINGLE POLE

1. Cut horizontal mounting surfaces for two 4" by 4" wood supports on pole. Cut should be about 2" deep to allow outside surface of wood support to extend out from curvature of pole.
2. Drill a ½" hole through center of wood supports and pole. Mount wood supports with a ½" Diameter bolt. Tighten bolt securely with washer and nut. Head of bolt must be countersunk on wood support to provide flat surface for cabinet.
3. Bolt pole-mount cabinet to wood support, using four ½" bolts, washers, and nuts.



ATTACHING POLE MOUNT STATION TO ANTENNA SUPPORT (TOWER)

1. Mount 31" 4" by 4" supports on Antenna support as shown. Bolt securely and band tightly together to prevent slippage and vibration.
2. Attach Pole Mount cabinet to outside pole supports.



FINAL CHECKS BEFORE PLACING YOUR "PM" STATION IN OPERATION

After completing the installation of your Pole Mount Station, the following final operations should be performed:

• Final adjustments should be made to the receiver, transmitter and power supply—Transmitter adjustments must be made by a 1st or 2nd Class Radiotelephone or Radiotelegraph licensed electronic technician. Instructions for making these adjustments are included in the Pole Mount Maintenance Manual. The adjustments include:

Transmitter—
- final tuning and loading
- deviation and frequency checks
- plate power input

> Transmitter measurements should be entered in the permanent station records along with the signature and license number of the technician.

Receiver—
- matching to antenna and netting frequency to transmitter

Power Supply—
- VOLUME and SQUELCH controls
- Turn Switch S501 ON

Control Panels—
- 4KC7C1—Remote—adjust transmitter input level control. Turne Switch S702 ON.
- 4KC16A10—Repeater—adjust audio input level control. Turn Switch S701 ON.

- Be sure the station license is displayed as required by FCC rules.
- A transmitter identification card (FCC Form 452-C or G-E Form ECP-82A) must be attached to the transmitter.
- Give the alignment tools to the maintenance technician.
- Give the Operator's Manual to the station operator.

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GENERAL ELECTRIC

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