ANTENNAS

The HA-650 is supplied with a 52-inch collapsible whip for portable use and an antenna switch and Motorola type antenna jack for use with external antennas.

WARNING: Do not transmit with the HA-650 unless the antenna switch is in the proper position. Severe damage to the output transistor will occur if the transceiver is operated without a proper load.

WHIP ANTENNA

Place the red antenna switch on the left side of the unit in the INT position. Extend the whip to its maximum length (52 inches). Antenna polarization is very important at these frequencies and should be considered when choosing an operating position. Generally speaking, the antenna polarization should be compatible with that of the stations with which you expect to communicate (i.e., vertical to vertical, horizontal to horizontal). Normally, for portable operation, or any operation with the whip antenna, vertical polarization will probably be most convenient and provide the best results. When used in the vertical position, slide the plastic hold-down clamp to the base of the whip and push it over the swivel ball. This will provide greater rigidity and maintain the whip in the vertical position.

EXTERNAL ANTENNA

Any six-meter antenna presenting 52 ohms impedance to the HA-650 may be used. The antenna switch must be in the EXT position and the antenna should be connected to the antenna receptacle on the side of the unit using RG-8/U or RG-58/U coaxial cable and a Motorola antenna plug. Should your antenna transmission line already have a PL-259 coaxial connector attached, an adapter (Lafayette #42-3206) is available to adapt the PL-259 to a Motorola type plug. Instructions for attaching the cable to the plug appear below and are illustrated in Figure 9.

Additional information on antennas may be found in the ARRL Antenna Book, ARRL Radio Amateur's Handbook, Radio Handbook or other authoritive references on the subject.

ATTACHING COAXIAL CABLE TO A MOTOROLA PLUG

1. To prepare the coaxial cable, remove 1-1/8" of outer insulation as shown in "A" of the diagram. Be careful not to cut into the shield. Push the shield back exposing the dielectric and the center conductor. Bend the cable as shown in "B" and, using a pointed tool, spread the shielding at the bend. Pull the center conductor through this opening as shown in "C". Using pliers, squeeze the shield flat and cut to a length of 1". Remove 7/16" of the center conductor insulating dielectric and twist the stranded wire as shown in "D".

2. Bend the shield back along the black outside insulation and insert the prepared cable into a Motorola plug (Lafayette #11-6603) allowing the center conductor to pass through the small opening at the front of the plug (see "E"). Bend the shield over the connector as shown in "F" and solder.

3. Cut off the center conductor flush with the small opening and solder (see "G").