

Control Cable Installation

Before installing the rotator, mast, and antenna, prepare the rotator control cable and *test rotator system performance on the ground*. Potential alignment, cabling, or other problems can quickly be resolved on the ground; once a rotator is mounted however, troubleshooting may require that the tower be climbed and/or the rotator be removed and lowered to the ground!

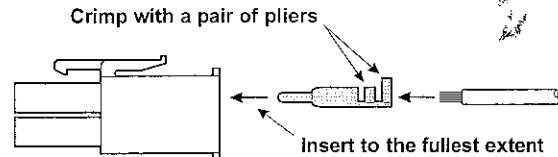
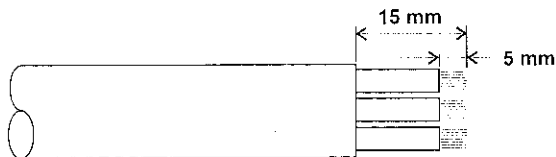
CONTROL CABLE PREPARATION

In this Rotator, the user must supply and prepare the control cable, per the simple instructions below

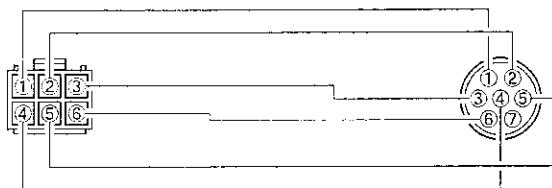
The control cable to be used should have six stranded conductors of at least 0.5 mm (#20 AWG) diameter if the cable is shorter than 40 m in length (125'); if the cable is longer than 40 m, use conductors with a diameter of 0.75 mm (#18 AWG) or larger

- 1 Disassemble the supplied round plug: slide off the rubber boot, remove the setscrew from the shell using a small screwdriver, then unscrew the shell from the plug. Save the setscrew in a safe place until step 10, so you don't lose it
- 2 Slide the rubber boot and the round shell over the "rotator" end of the cable. Leave enough cable protruding to allow easy dressing the end of the cable
- 3 Using special care to avoid nicking the insulation of the individual wires, strip back 15 mm (about 5/8") of the outer jacket of the cable from both ends. Now strip 5 mm (about 3/16") of insulation from each wire, being careful not to nick the conductors
- 4 Solder the wires to the round plug pins, noting the color of the wire and the number associated with each pin for reference later. **Pin 7 of the round connector is not used!** Confirm that all solder joints are firm and cleanly made, as this part of the cable will be difficult to access once the rotator is installed on top of the tower. Do not slide the shell onto the connector at this time

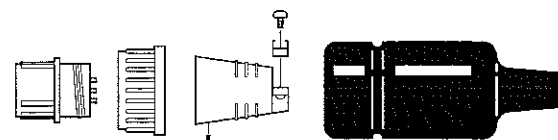
- 5 Crimp the supplied pin contacts onto the wires on the opposite end of the cable, per the illustration below
- 6 Referring to your notes of the wire color at each pin of the round (rotator end) connector, insert the pins into the rectangular plug at the opposite (controller) end of the cable. Be sure that each wire from the round connector is routed to the corresponding pin number in the rectangular connector (i.e. 1 to 1, 2 to 2, etc.)
- 7 Temporarily connect the round plug to the rotator, and the rectangular plug to the controller. Make sure that the **POWER** switch on the controller is set to "OFF," then plug the controller's AC cable into your station's AC outlet
- 8 Set the controller's **POWER** switch to "ON." Verify that the controller's pilot lights have become illuminated
- 9 Press the **LEFT** (rotation) side of the seesaw switch, and confirm that the rotator (when viewed from the top) and the controller's needle turn counter-clockwise together. Stop rotation, then press the **RIGHT** (rotation) side of the seesaw switch, and confirm that the rotator and indicator needle turn clockwise. If rotation does not occur as indicated, turn the **POWER** switch "OFF," and re-check your cable connections
- 10 If the rotator and controller are working as described, replace the plug shells, setscrew, and rubber boot (removed in step 1)



Assembly of 6-pin Plastic Connector



Pin No. 7 for the metal connector is not used



Assembly of 7-pin Metal Connector