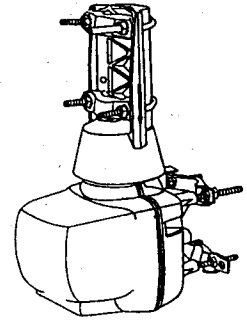
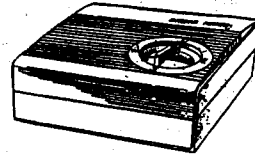


INSTRUCTION MANUAL

ANTENNA ROTATOR

CAUTION: Read all of the **IMPORTANT SAFEGUARDS** contained elsewhere in this booklet, as well as all safety, installation and operating instructions supplied with this unit, and with your antenna, before installing or operating. Retain this booklet and all instructions for your safety and future reference.



DESCRIPTION

Your rotator is designed to turn and accurately position even the largest TV antenna, assuring the best possible TV picture reception. Rotation of the drive unit is synchronized with the position of the moving dot of the control unit. This is accomplished by use of highly accurate synchronous motors.

The connecting cable between the control unit and the drive unit carries only safe, low voltage power. When the operating cycle is complete, the unit shuts off automatically and draws no current until it is again activated by turning the control knob.

OPERATING & INSTALLATION INSTRUCTION

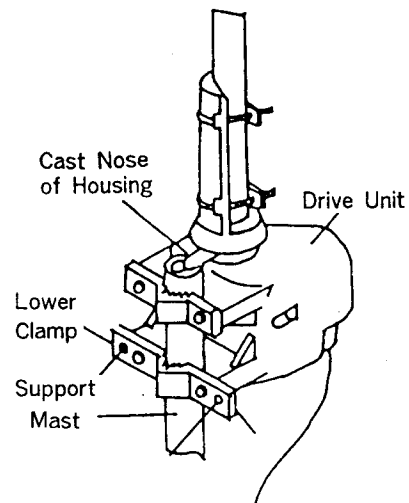
NOTE: Before mounting drive unit on the support mast, connect drive unit to control unit with the control cable and perform the function show in paragraph 7.

STEP.1 DRIVE UNIT MOUNTING

If not mounted inside a tower, attach the drive unit to the support mast by loosening the nuts enough to get the clamps over the mast. Lower the drive unit the cast nose of the drive housing sits on top of the support mast and tighten the nuts. Moderate tightening of the nuts with a 7/16" wrench will cause the teeth to grip the mast securely. Do not overtighten to the point that you deform the mast, since this will reduce its strength.

Mast diameters of 1 1/4" to 2" (3-5cm) may be used. The 1 1/2" (3.8cm) size or larger is recommended for unguyed masts over 6' long, or where large antennas are used.

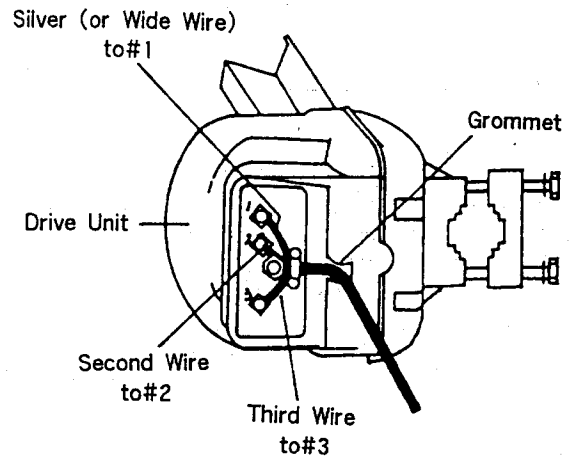
If guy wires are used, fasten two through each of the two holes of the lower clamp.



CAUTION: Select a mounting location where the antenna cannot come in contact with power lines while it is being installed, and where the installation will not fall across power lines if a guy wire should fail.

STEP 2: DRIVE UNIT CONNECTION

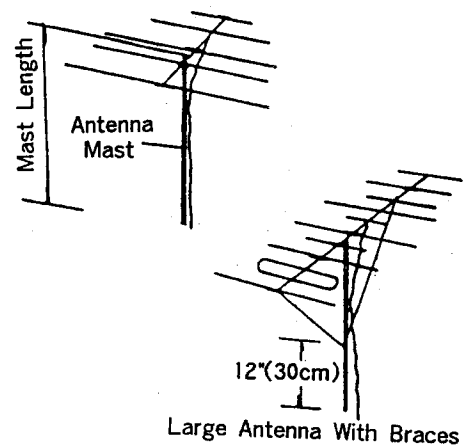
Up to 280' (84m) of 20AWG3 conductor cable may be used. For longer runs, use heavier gage wire. To attach cable to the drive unit, snap open the cover using a coin or screw driver and connect the cable as shown. Remove the grommet and insert the cable thru the slot. Press the grommet back into the housing. Separate leads for 1 1/2" (4cm) and strip off the insulation for 1/2". Find the silver or wide jacketed lead and connect it to Terminal 1. Connect the adjacent lead to Terminal 2, and the next lead to Terminal 3. If 4 wire cable is used, connect both wire 3 or 4 to Terminal 3. Mark sure there are no loose strands, which can short between terminals. Recheck the wiring order and securely close the cover. To avoid moisture collecting in the cable be sure jacket of cable passes thru the grommet.



STEP 3: ANTENNA MAST

Antennas should be mounted close to the drive unit. Cut 1-1/4" (3cm) antenna mast to a length not exceeding that shown below and mount the antenna at the top of the mast. Attach transmission line to the antenna.

Antenna Size	Max. Mast Length
Small (up to 5' (1.5M) long)	5 feet (1.5M)
Medium (up to 8' (2.4M) long)	3 feet (0.9M)
Large (over 8' (2.4M) long)	2 feet (0.6M)
Large with Braces	See Note
Two Antennas*	4 feet (1.2M)

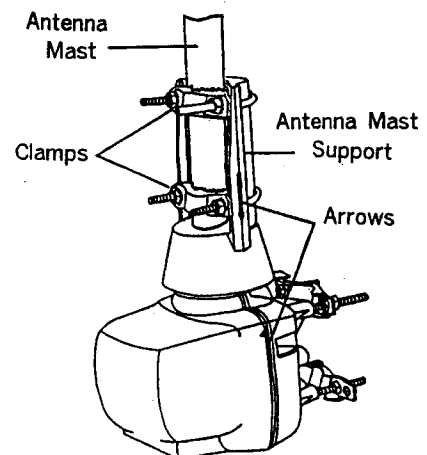


NOTE: Cut antenna mast 12" (30cm) longer than distance needed to mount antenna and brace.

*Mount small antenna at top, larger antenna 12" from bottom.

STEP 4: ANTENNA MOUNTING

The arrow of the antenna mast support and housing must be aligned. If not, turn the knob of the control until the arrow of the antenna mast support is in the position shown in the sketch. Loosen the clamps of the mast support enough to accept the antenna mast. Insert the antenna mast between the clamps and the mast support. The end of the antenna mast must sit on the bottom of the mast support. Rotate the antenna mast until the antenna points south, and tighten the nuts. Excessive overtightening of the clamp nuts will weaken the antenna mast without adding more clamping action.



In some instances, where desired stations are predominantly in a northerly direction, it may be desirable to point the antenna north in order to avoid having the rotator operating near its end stops. If this is the case, point the antenna north instead of south when arrows are aligned. If this is done, please note that the antenna is pointing in the opposite direction from that indicated on the control. For example; When the control is pointing to North the antenna will be pointing South and when the control is pointing to East the antenna will be pointing West. Using channel as described in Step 9 will help to eliminate confusion.

STEP 5: CABLE INSTALLATION

After connecting the antenna lead-in cable to the antenna fasten it to the antenna mast using stand-off insulators as shown. Provide a generous loop at the drive unit and attach lead-in cable to the support mast with stand-off insulators approximately every four feet. Tape the rotator control cable directly to the support mast.

NOTE: See Step 1 of the Important Safeguards Section for Grounding of Control Cable and Lead-in Cable for Lightning Protection.

STEP 6: CONTROL UNIT CONNECTION

Prepare the end of the lead-in cable as shown. Use the cut/strip guide on the underside of the control to determine the proper spacing and lengths. Run the cable through the strain-relief channel on the underside of the control unit and connect to the terminals in proper order. The wide or silver wire is to be connected to Terminal 1 as on the drive unit. The next wire is connected to Terminal 2, and the next lead to Terminal 3. If 4 wire cable is used, connect both wire 3 and 4 to Terminal 3.

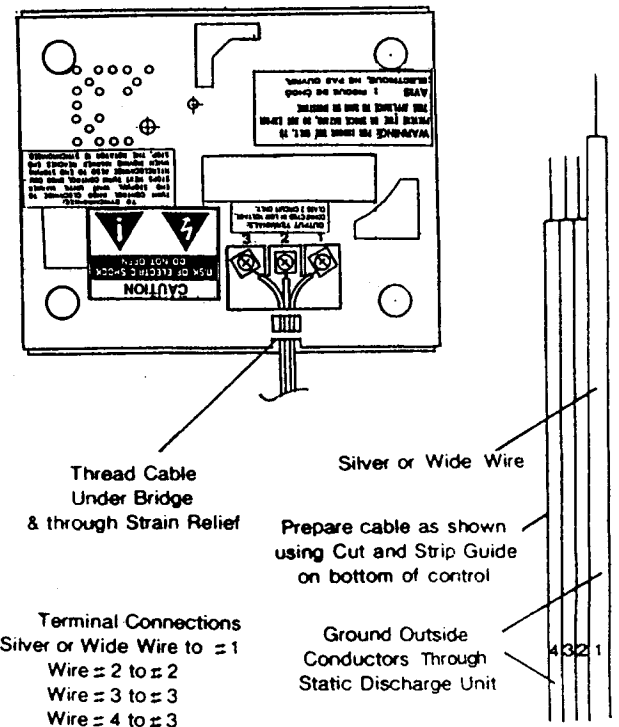
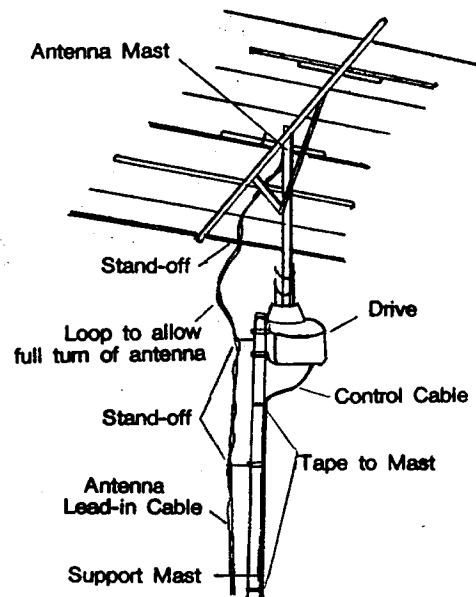
Tighten all the terminal screws after rechecking the wiring order and making sure there are no loose strands that could short between terminals.

Improper connections will result in incorrect operation of the units or permanent damage.

IMPORTANT: Number 1 terminal on the drive and control units must be connected to each other, as must Terminal 2 and Terminal 3.

STEP 7: TESTING

With drive and control units properly wired together, plug control into proper A.C. outlet after checking voltage and cycle data on underside of control. Do not use D.C. Turn the control knob fully clockwise. The dot of the indicator disc will start moving clockwise. The low sound of the running motor will be heard from the control unit. When the antenna reaches the end of rotation, the control unit dot will stop moving and the unit will automatically switch off. Repeat this procedure turning the knob fully counterclockwise. When the dot reaches the north position and switches off, the control unit and drive unit are synchronized. Turn control knob to south "S" to align arrows of drive unit for correct antenna installation.



STEP 8: RESYNCHRONIZATION

Should the antenna position move out of synchronization with the control unit indicator dot, turn the knob clockwise against the north end of the rotation stop. Wait until the dot stops moving and then turn the knob counterclockwise against the north stop. When the dot stops moving, units are synchronized. This procedure can be repeated whenever needed.

STEP 9: USE OF CHANNEL MARKERS

With units synchronized as above, turn the control knob to the position of best reception for each desired TV channel. Remove the appropriately numbered channel marker from the label provided and place it on the control dial face at the knob position selected for the best reception of each TV channel.

STEP 10: OPERATING INSTRUCTIONS

To rotate the antenna, turn the control knob to the desired reception direction. While the antenna is rotating, the indicator dot will move, indicating the direction of antenna rotation. When the antenna reaches the selected direction, it will automatically stop. Do not force the knob beyond the end of rotation stops. The rotation of the antenna may be stopped at any time by reversing the original direction of knob rotation just far enough to cause the dot to stop and the control unit to shut off.

When locating the direction of a station for the first time, rotate the antenna several times through the point of best reception. The correct direction can then be noted for future reference by placing the appropriate channel marker on the dial face at this position. If there is reason to believe that the antenna and control unit are not tracking together, it may be necessary to synchronize the system. (See Step 8-Resynchronization)