MODEL TR-4 ROTOR

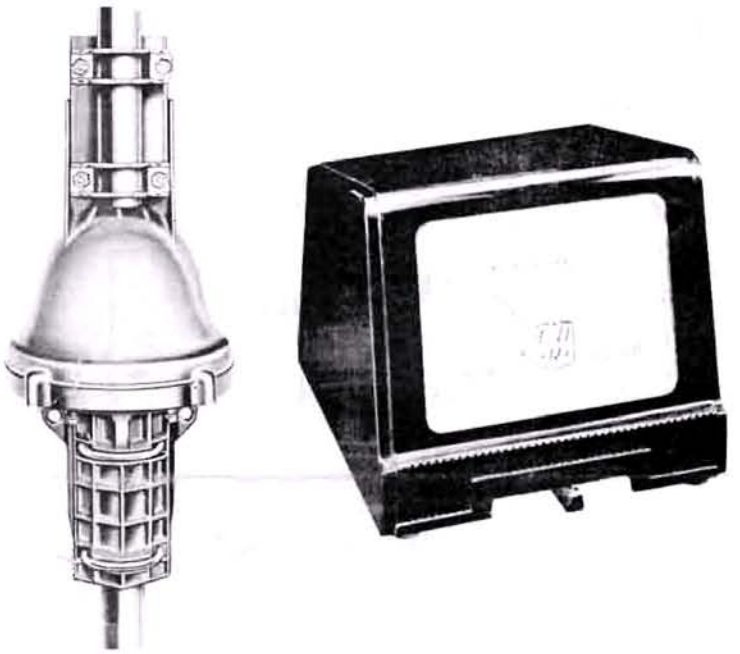
OPERATING INSTRUCTIONS

FUNCTION

The function of the ROTOR is to turn the antenna so it will point in the direction of best reception from the stations in your area.

INSTALLATION

The ROTOR is conservatively rated and will readily handle antenna installations weighing 150 lbs. The ROTOR unit is shipped from the factory set at the end of rotation in a counter-clockwise position. The ROTOR mast clamps will accommodate mast diameters from $\frac{7}{8}$" to $1\frac{5}{16}$" with the small radius side and $1\frac{3}{8}$" to 2" with the large radius side, adequate for all tower and mast installations. The remote control unit, which may be conveniently located at the television receiver, utilizes 115 volts, 60 cycle A.C. current and furnishes the power to operate and control the ROTOR.



* CABLE CONNECTIONS AND MOUNTING

A good grade of polyethelene (dark) cable should be used to connect the ROTOR to the Control Unit. This cable is available from your distributor.

The lower mast support casting is shipped unmounted; feed the cable through the rubber grommet in the terminal cover plate and strip each conductor end. Connect as shown in the illustration, Fig. 1. Then mount the lower mast support casting to the ROTOR base with four hex head bolts and lockwashers, tighten them securely. The mast, ROTOR and antenna are mounted in place with the antenna facing due NORTH.

To relieve strain on the ROTOR, cable standoff insulators should be mounted on the mast as follows: With the ROTOR in "end" position, mount a standoff insulator directly above upper mast support and another immediately below lower mast support as shown in Fig. 2. The standoffs should be 180° apart. Dress antenna down lead through the standoffs, allowing sufficient slack for complete rotation. A swinging standoff insulator TRA-54-1 (4" length) TRA-54-2 (8" length) is available for use with the ROTOR. (See Fig. 5).

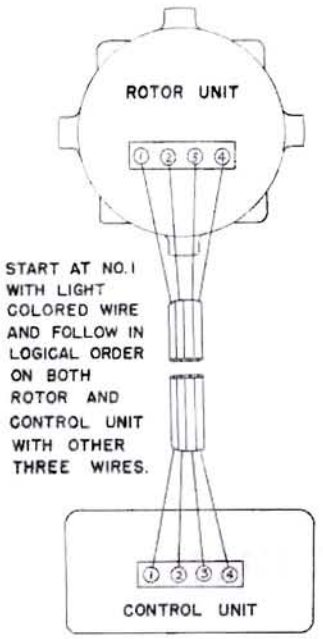


Fig. 1

CALIBRATION

To calibrate the directional indicator, shift the direction lever to the right. Just as the end of rotation is reached, the needle must be on the right North indication. At the end position, the needle will move off scale slightly, due to the increased current drain at the stopped position. ADJUST METER FULL-SCALE INDICATION JUST BEFORE THIS CONDITION IS REACHED TO obtain proper indication. To adjust, rotate clockwise or counter-clockwise the slotted shaft at the rear of the control box.

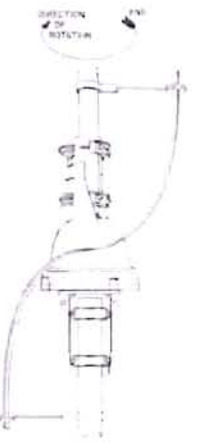


FIG. 2

GUYING

Three guy wire lugs are provided on the lower mast support casting for guying purposes. The use of standard $\frac{3}{16}$" or $\frac{1}{4}$" guy thimbles with adequate size wires, using turnbuckle adjustments, is recommended. Care should be taken not to tighten guy wires excessively. The installation should have a slight freedom of movement to prevent storm damage.

OPERATION

Movement of the ROTOR is controlled by the finger-tip lever on the front of the control unit. During operation of the ROTOR the compass dial shows the position and movement of the antenna. The ROTOR turns in a clockwise direction, looking down from the top when the lever is shifted to the right and turns in a counter-clockwise direction when the lever is moved to the left.

With no pressure exerted, the switch lever returns to normal center "OFF" position. Current is not consumed with the switch in the normal position.

The ROTOR will turn 360° in approximately 42 seconds. Rotation limits are controlled by a mechanical stop. With no power applied to the ROTOR the dial pointer will fall back to its normal rest position at the left side of the dial.

NOTE: Use a damp cloth to clean dial face of control unit to prevent scratching of dial face.

GENERAL

Alternate methods are possible for platform mounting as shown in Fig. 3 and Fig. 4. A metal base mounting plate, Part No. TA-4, is available as shown in Fig. 3.

Where extreme weather conditions require, it is desirable to apply radio cement or other sealing compound around the edges of the terminal cover plate, over the heads of the two screws, around the grommet, and around the cable where it enters the grommet.

The control unit incorporates a step-down transformer which furnishes the low voltage power to operate the ROTOR motor and the compass dial.

All moving parts and motor bearings are lubricated at the factory for all weather use.

BI-229

*Canadian Approvals Laboratories require the use of cable having good flexing characteristics at low temperature.

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Fig. 3

Fig. 4

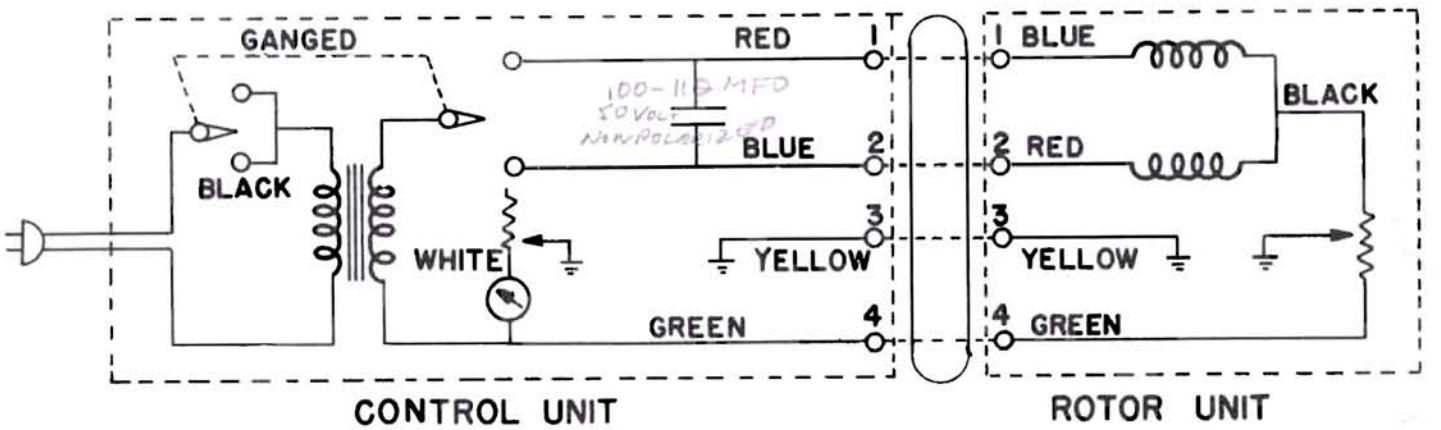
LIGHTNING PROTECTION

It is recommended that lightning arresters be installed both on the ROTOR cable and antenna downlead to conform to the National Electrical Code and local Fire Underwriters' regulations. At least two (2) conductors of the 4-wire ROTOR cable should be grounded through a lightning arrester. Model TA-5U arrester is recommended for this application.

Service data for the TR-4 ROTOR with a complete parts list may be obtained by writing to The Radiart Corporation, 3455 Vega Avenue, Cleveland 13, Ohio, or Cornell-Dubilier Electric Corporation, South Plainfield, New Jersey, requesting Service Bulletin BI-215.

WARNING: Only authorized personnel should attempt to repair this unit and the Service Bulletin information should be read before proceeding to repair it.

CIRCUIT DIAGRAM



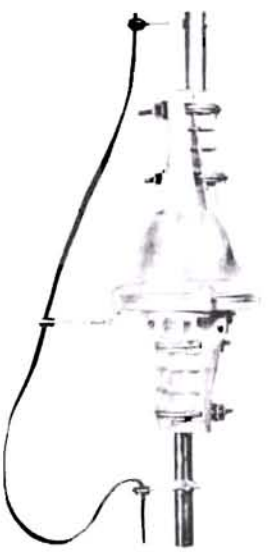


FIG. 5

Warranty

We warrant each new ROTOR in accordance with R. T. M. A. Standards for a period of one (1) year from the date ROTOR is sold to the original purchaser.