

ALLIANCE®

Model

U-110

Automatic TENNA-ROTOR®

GENERAL INFORMATION

The Alliance® Tenna-Rotor® Model U-110 is a fully automatic unit. The control knob is turned to the desired direction and the roof mounted rotor automatically rotates the antenna to that position and stops. The dial of the control box lights when the direction is selected and turns off when the antenna reaches that position. The U-110 will rotate most residential TV antennas.

CARTON CONTENTS

The U-110 Tenna-Rotor includes a control box (FIG. 1), rotor (FIG. 2), mast clamp (FIG. 3) and one hardware bag containing U-bolts, terminal cover and mounting hardware (FIG. 4).

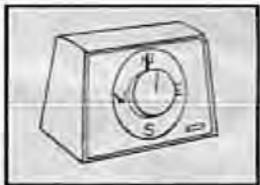


FIG. 1



FIG. 2



FIG. 3



FIG. 4

MATERIAL REQUIRED

To complete the installation of your Tenna-Rotor you will need to purchase 4-conductor rotor wire, a rotor support mast (not to exceed 1-3/8" outside dimension) and cable insulated stand-offs.

For proper performance do not exceed the maximum lengths per wire size as shown in the chart (FIG. 5).

4 CONDUCTOR ROTOR WIRE LENGTHS

AWG	STRANDING	50 FT.	100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.
22	7 x 30								
20	7 x 28								
18	DOUBLED 7 x 28								
20	10 x 30								
18	DOUBLED 10 x 30								
16	16 x 30								
14	DOUBLED 16 x 30								

FIG. 5

ANTENNA SYSTEMS

There are numerous types of residential TV antennas and mounting methods. Please take time to study the following illustration and wording. This will help you in the installation of your Tenna-Rotor.

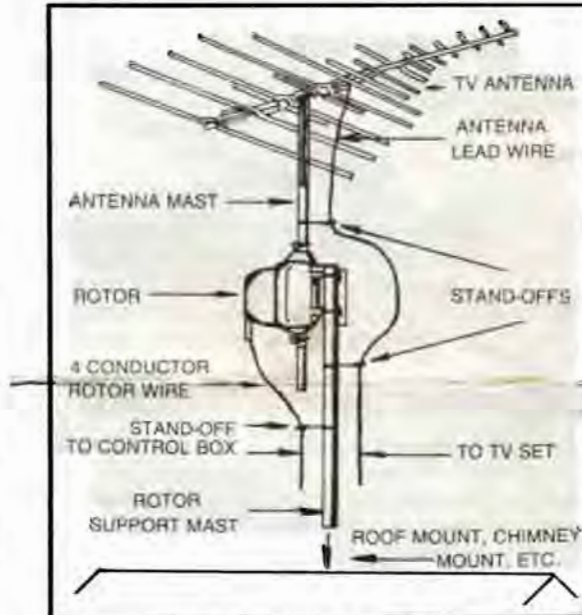


ILLUSTRATION A

WARNING

You must realize that the 120/240 volt power lines run into your home as well as the 7200 volt line run by your utility company to the transformer in your immediate neighborhood are lethal voltages and must not be contacted by your antenna tower, mast, guy wires, cable or rotor under any condition.

CAUTION

The installation of the Tenna-Rotor requires access to and the ability to work under conditions of extreme height. Safety is of paramount concern and you are urged to plan accordingly. The manufacturer assumes no responsibility for personal injury or damage to the product sustained during the installation.

INSTALLATION OF SUPPORT MAST

Determine which type mounting fixture can best be adapted for your antenna system installation and install the rotor support mast.

NOTE: Since the rotor and antenna will be mounted on top of the supported mast (ILL. A, PG. 1) be certain the height of the support mast is within safe and accessible reach. Should your height requirements prevent this, assemble the rotor and antenna on the ground and then mount to the roof or tower. Assistance will be required.

ROTOR INSTALLATION

STEP 1

Remove the terminal cover from the parts bag. Feed the 4-conductor rotor wire through the slots of the terminal cover as shown in FIG. 6.

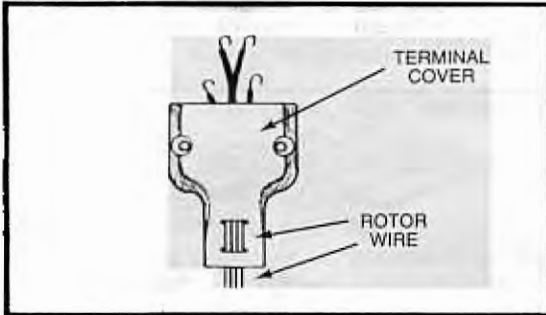


FIG. 6

STEP 2

Remove about 3/4" of insulation from the conductors and separate the leads.

STEP 3

Note the numbering sequence of the 4 terminals on the rotor (FIG. 7). The wiring sequence made at this time must be duplicated when the 4-conductor rotor wire is connected to the control box in a later step.

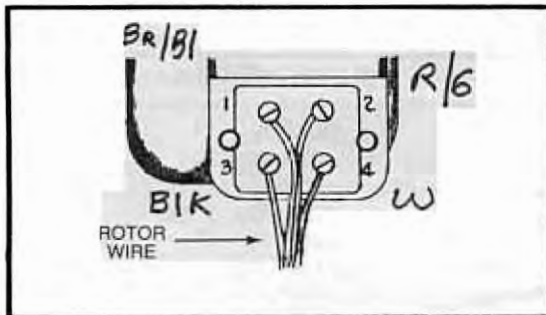


FIG. 7

STEP 4

Twist the 4 wires clockwise around the terminal screws and tighten securely. Make certain loose strands of wire do NOT touch adjacent terminals or metal case.

IMPORTANT: Be certain you note exact location and terminal connection of each wire.

STEP 5

Slide the terminal cover up the rotor wire and fasten over terminals as shown in FIG. 8. Secure the terminal cover with the washers and nuts supplied.

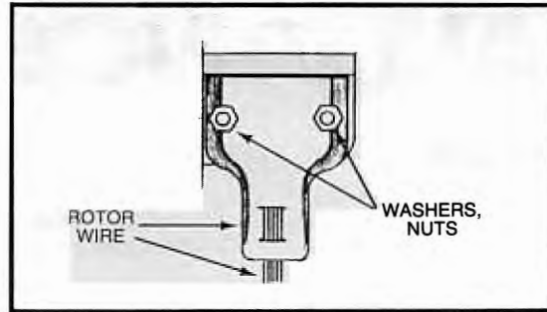


FIG. 8

STEP 6

Attach set screw and nut to mast clamp as shown in FIG. 9. Attach the mast clamp to the rotor as shown in FIG. 10, using the nuts supplied. Do not tighten the nuts at this time.

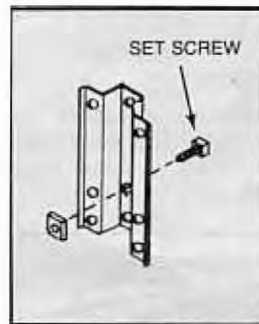


FIG. 9

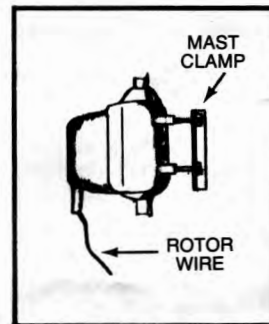


FIG. 10

STEP 7

Mount the rotor on top of the support mast and secure. Tighten the set screw in the mast clamp. The 3 bottom holes in the mast clamp may be used for guying if required. (FIG. 11)

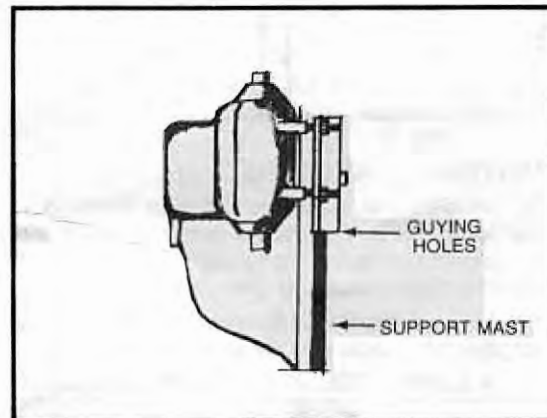


FIG. 11

STEP 8

Attach antenna and antenna lead wire per antenna manufacturer's instructions. Be certain antenna mast does not exceed 1-3/8" outside diameter. Insert antenna mast into the hollow shaft of the rotor (FIG. 12). Allow antenna mast to extend from bottom of hollow shaft at least 2".

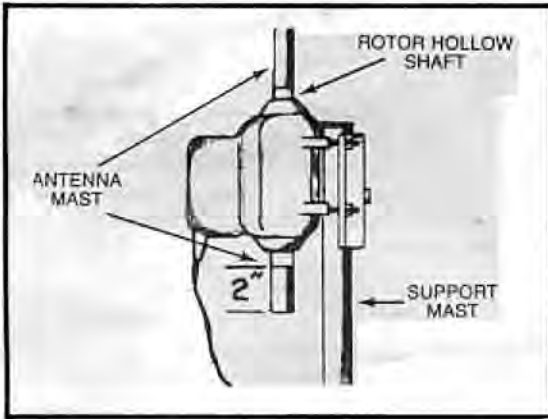


FIG. 12

STEP 9

Point the back (large part) of the antenna in the direction of most desired viewing stations (FIG. 13). The antenna crossbar should be no more than 12" above the rotor. Secure the antenna mast in this position using the U-bolts supplied (FIG. 14).

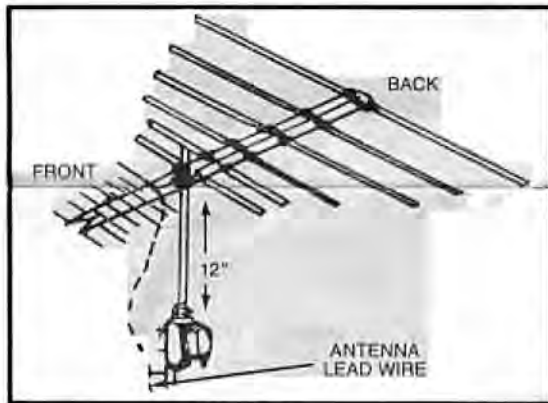


FIG. 13

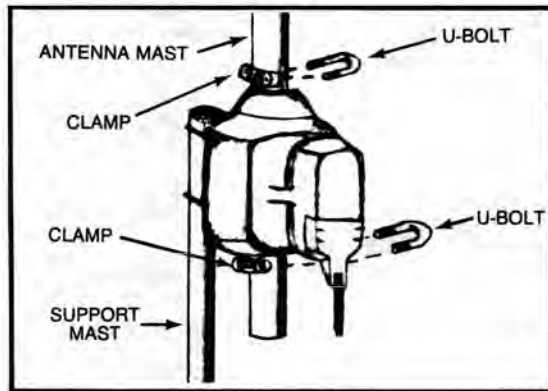


FIG. 14

STEP 10

Attach 1 stand-off just above the rotor and 1 stand-off just below the rotor. Insert the antenna lead wire into the two stand-offs allowing sufficient slack of **approximately 24"** for one complete 360° revolution of the antenna. (FIG. 15) Attach another stand-off and insert the rotor wire as shown.

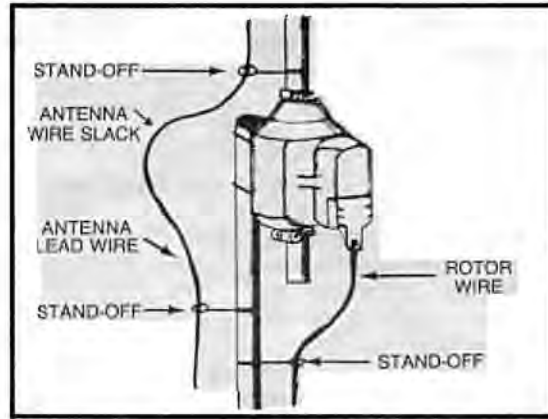


FIG. 15

STEP 11

Complete routing of the antenna lead wire and rotor wire to the TV set per antenna manufacturer's instructions. Continue to use separate stand-offs for antenna wire and rotor wire.

CONTROL BOX INSTALLATION

STEP A

Connect the 4-conductor rotor wire to terminals on the bottom of the control box (FIG. 16).

IMPORTANT! As referred to in steps 3 and 4, terminal connections MUST be identical to the terminal connections made on the rotor.

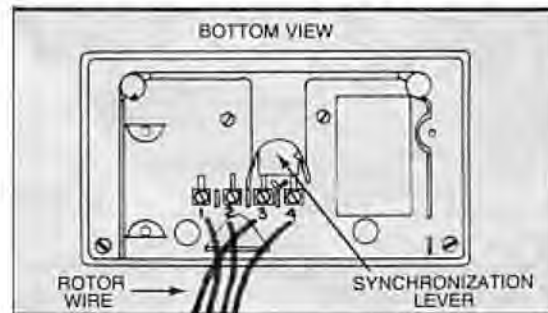


FIG. 16

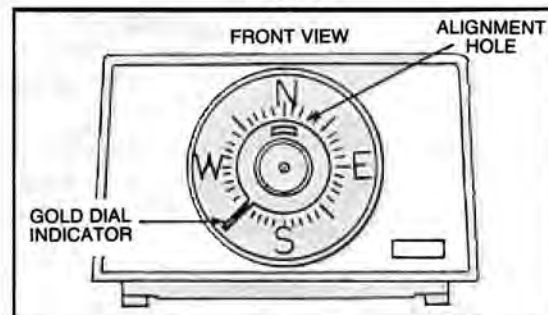


FIG. 17

STEP B

Check the antenna direction (small end). Remove the black knob from the control box. Use a small screwdriver or pen and insert through small hole behind the black knob (FIG. 17). Move the "Gold Dial Indicator" to the same direction as the antenna.

STEP C

Replace the black knob with the gold pointer aligned with the "Gold Dial Indicator".

OPERATING INSTRUCTIONS

- Plug control box into a 120 volt, 60 cycle A.C. outlet.
- Simply turn "knob pointer" to desired direction. The "Gold Dial Indicator" shows position of antenna as it is moving.
- Allow unit to come to rest before reversing direction.
- If desired to turn a complete circle (from stop to stop) move knob halfway and allow "Gold Dial Indicator" to come to rest, then turn knob remainder of way.
- Do not force knob when "stops" are reached.

CAUTION:

Do not operate with cover removed or alter this device in any way.

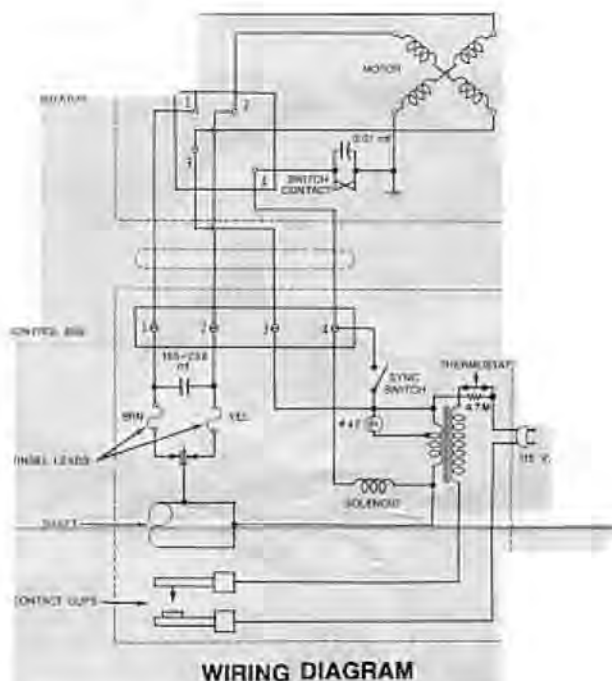
Do not build into other devices.

Do not use this device for any purpose other than its intended use.

SYNCHRONIZATION: If the light in the control box remains on after the "Gold Dial Indicator" stops, this indicates the control box and rotor are out of "synchronization". Instructions for re-synchronizing the unit are located on the bottom of the control box.

LIGHTNING PROTECTION

For an approved installation of this equipment, it is recommended that the two outside wires of the 4-conductor cable, which connects between the control box and the antenna rotor on the mast, be grounded through an Underwriter's Laboratories approved discharge unit. The discharge unit should be located close to the point of entry of the 4 wire cable into the building.



SPECIFICATIONS

Zinc diecast, weather-sealed motor housing
 Maximum antenna wind load area of 5 square feet
 Brake withstands 1440 inch-ounces of torque
 Full feed-through mast mounting
 360° rotation in one minute
 Convenient synchronization switch

Fully automatic control with lighted dial
 Control 115V, 60 Hertz, 0.7 amperes, with 5½ foot cord
 Motor operates on 24 volts AC
 Four conductor lead required
 UL listed and CAS certified

The device described herein is manufactured under one or more of the following U.S. Patents.

2,861,265	2,883,596	3,005,190	3,022,460
3,126,506	3,297,923	3,327,187	3,329,945
3,495,143	3,496,632	3,541,367	3,667,024

Licensed in Canada

4-26-60,	5-3-60,	4-17-62,
8-6-63,	4-21-64,	4-12-66

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