

# ZENRTR1 OPERATING INSTRUCTIONS

**CAUTION** - Read all of the IMPORTANT SAFEGUARDS contained elsewhere in this instruction 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.

**WARNING** - Installation of this product near power lines is dangerous. For your safety, keep ladder and antenna away from power lines. Contact may cause electrocution.

## Product Description

The rotator is designed to turn and accurately position even large antennas, allowing best possible reception. Rotation of the rotator unit is synchronized with commands from the indoor control unit to automatically go to up to 12 different memorized positions or any direction chosen manually. The connecting cable between the control unit and the rotator unit carries only safe, low voltage power. When the operating command sequence is finished, the unit shuts off automatically and draws no current until activated by a remote or manual command to the control unit.

## Operating and Installation Instructions

**TIP** - While you are still on the ground and before mounting the rotator unit to the support mast, temporarily connect the rotator unit to the control unit with the control cable and perform the alignment (and basic system check) by following Steps 2 and 5 and 8 below.

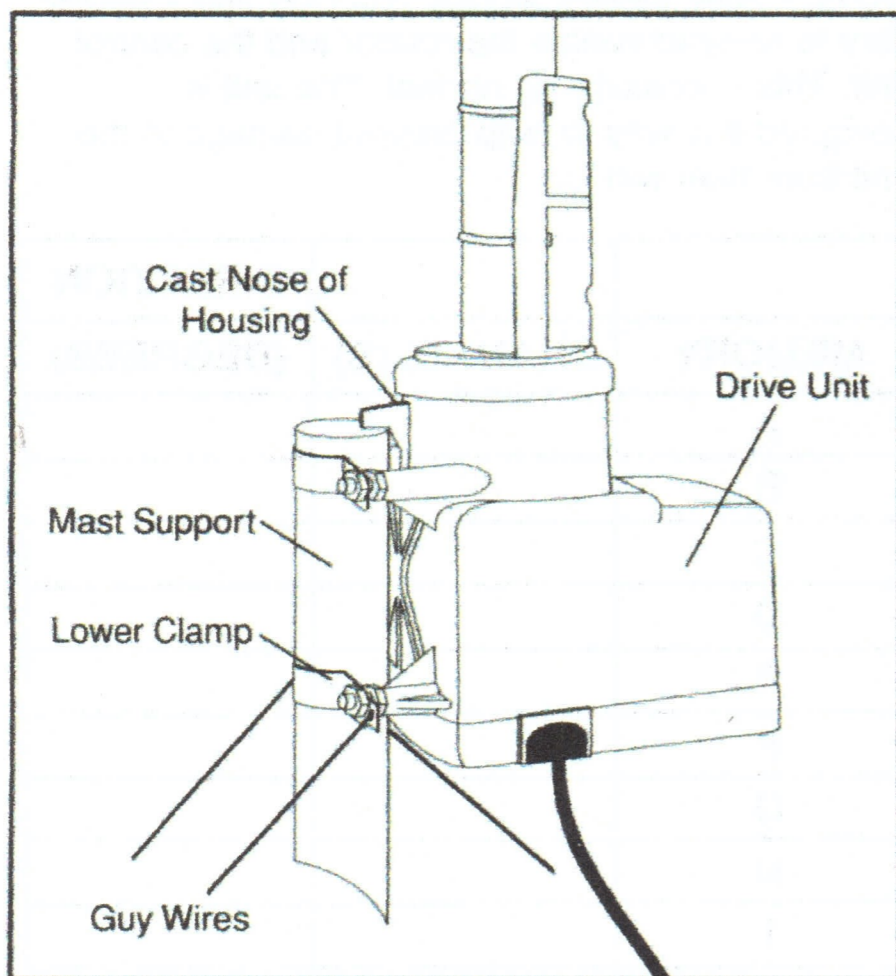


Fig. 1

### STEP 1 - Rotator unit Mounting

If not mounting the rotator unit inside a tower, attach the rotator unit to the support mast by loosening the nuts enough to slide the clamps over the mast. Lower the rotator unit until 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 of the clamp to grip the mast securely. DO NOT over-

tighten to the point that you deform the mast, as this will reduce its strength. Mast Diameters of 1 1/4" to 2" (3-5cm) may be used. The 1 1/2" (3.8 cm) size or larger is recommended for un-guyed mast 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 the installation and / or guy wires should fail.

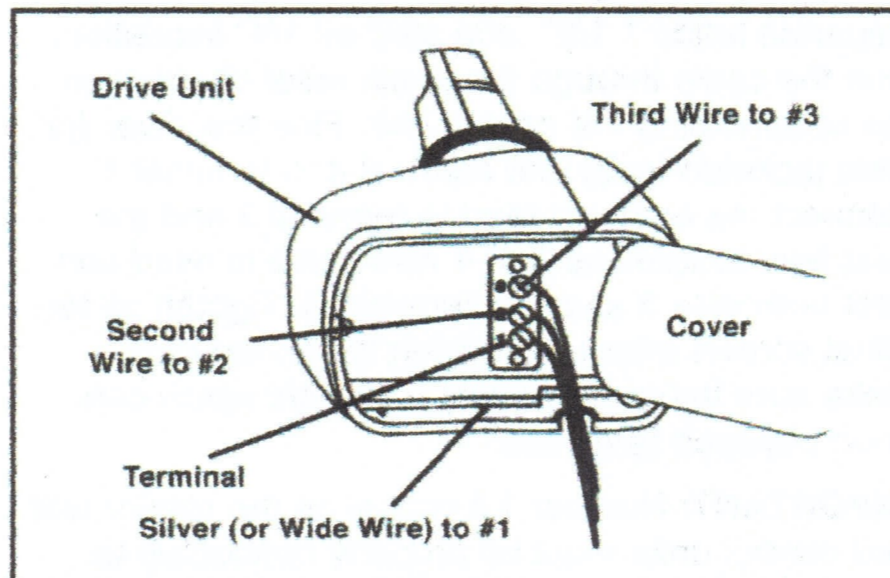
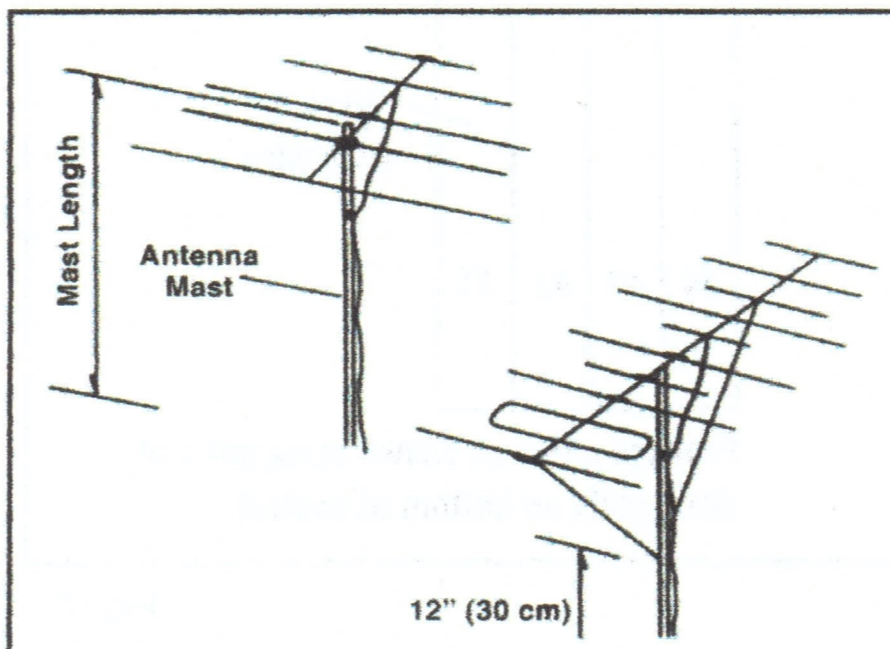


Fig. 2

### STEP 2 - Rotator unit (Rotator) Connection

Up to 280' of 20 AWG 3 conductor cable may be used. For longer runs use heavier gauge wire. To attach cable to rotator unit, open the bottom cover using a screwdriver. Remove the grommet and insert the cable through the slot. Press the grommet back into the slot. Separate leads 1 1/4" and strip off 1/2" insulation. 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 and 4 to terminal 3. Make sure there are no loose strands which can short between terminals. Recheck the wiring order and then securely close the bottom cover. To avoid moisture collecting in the cable, be sure the jacket passes through the grommet.

Fig. 3



### STEP 3 - Antenna Mast

Antennas should be mounted as close as possible to the rotator unit. Cut 1 1/4" - 1 1/2" mast to a length not exceeding that shown in the chart below and mount the antenna at the top of the mast. Be sure to attach transmission line to antenna.

Antenna Size: Maximum Mast Length

- Small - Up to 5' (1.5M) Long 5' (1.5M)
- Medium - Up to 8' (2.4M) Long 3' (0.9M)
- Large - Over to 8' (2.4M) Long 2' (0.6M)
- Large with braces See Note
- Two antennas\* 4' (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

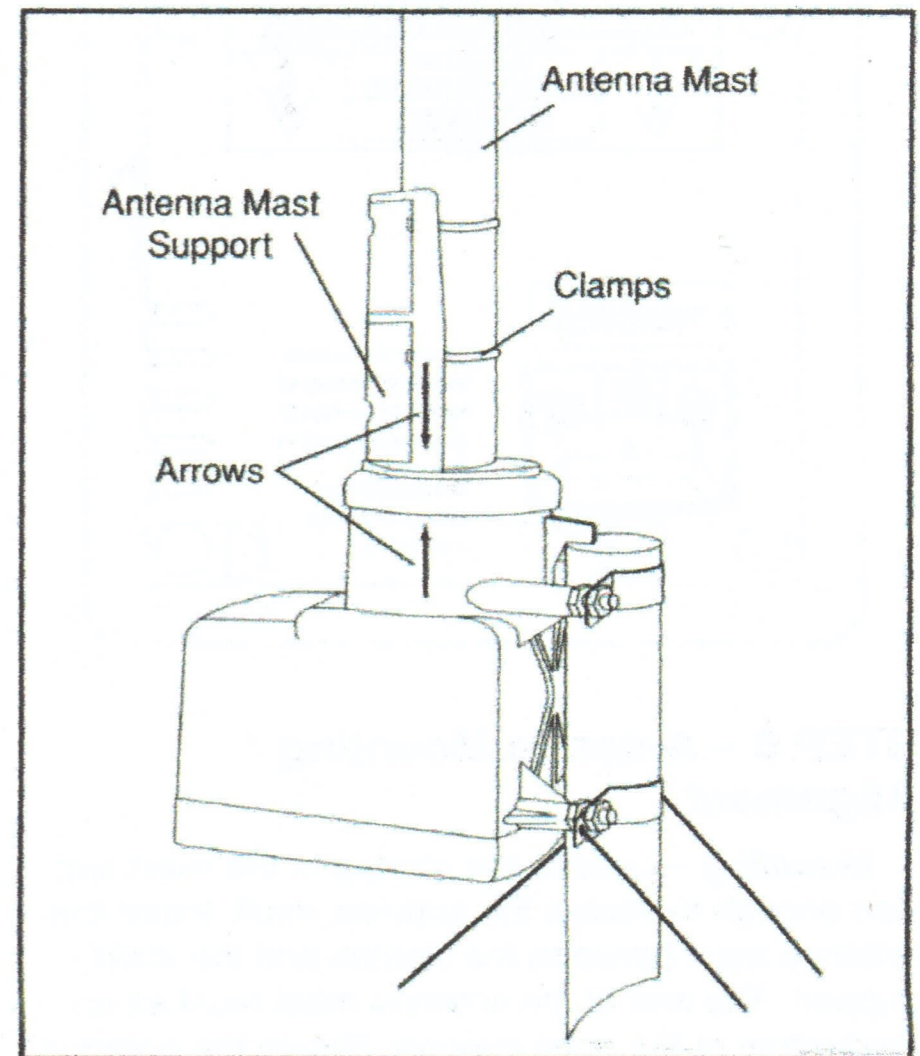


Fig. 4

### STEP 5 - Synchronization

To synchronize the position of the antenna and the rotator unit a synchronization procedure must be performed.

**TIP** - We recommend that you perform this procedure while the rotator unit is still on the ground. This procedure should be performed WITHOUT the mast or antenna attached to the rotator unit.

- A. Temporarily connect the control cable to the rotator unit following procedure in Step 2 above and control unit using Step 8 below. After calibration of position disconnect the appropriate wires and move on to final installation.
- B. Plug the power cord of the control unit into an AC outlet. Turn the power on using the red rocker switch on the unit's right side.
- C. With the power on the control unit the CHANNEL display will show  $\square$  ANT POSITION will display  $\square\square$ .
- D. Press the INITIAL key to begin the synchronization process of the control unit and rotator unit. While this is progressing, the < lamp will blink for about 96 seconds. When the < lamp has stopped flashing, the first step of synchronization has been completed.
- E. Press the INITIAL key once again. The ANT POSITION will then count down from 36 to 0. The control unit and the rotator are now synchronized.
- F. Hold the < button down until the rotator stops, then release button. The arrows molded in the antenna mast support section (FIG.4) and the body of the rotator unit should be aligned. This position represents the fully counterclockwise stop position. There is also a fully clockwise stop position 360 degree opposite to this position.

This is important to note as you do not want to position the antenna to be at the stops in normal operation.

Fig. 5

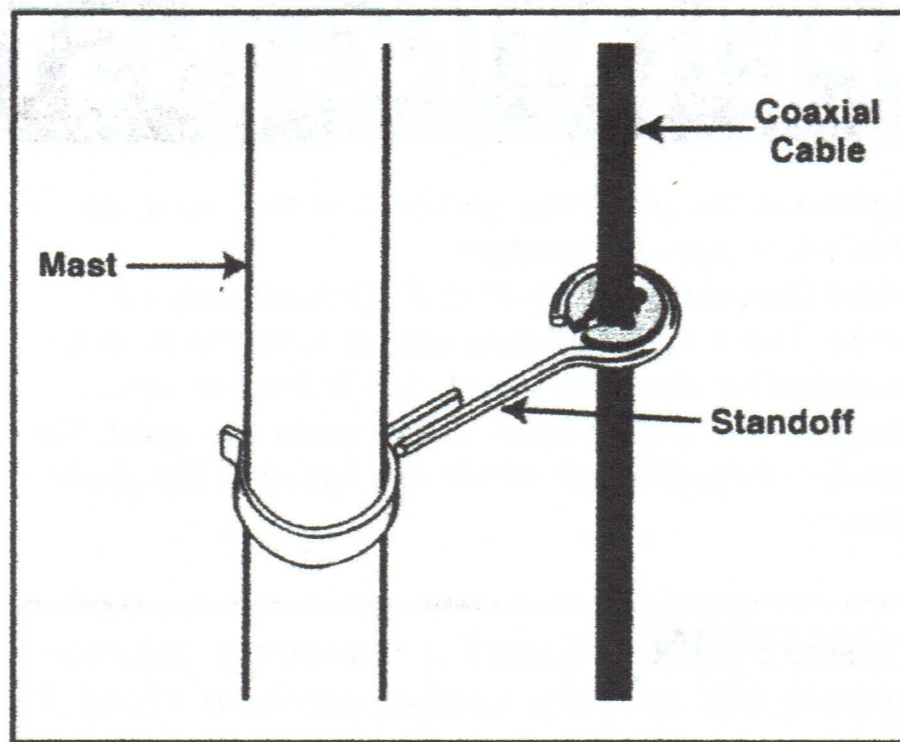
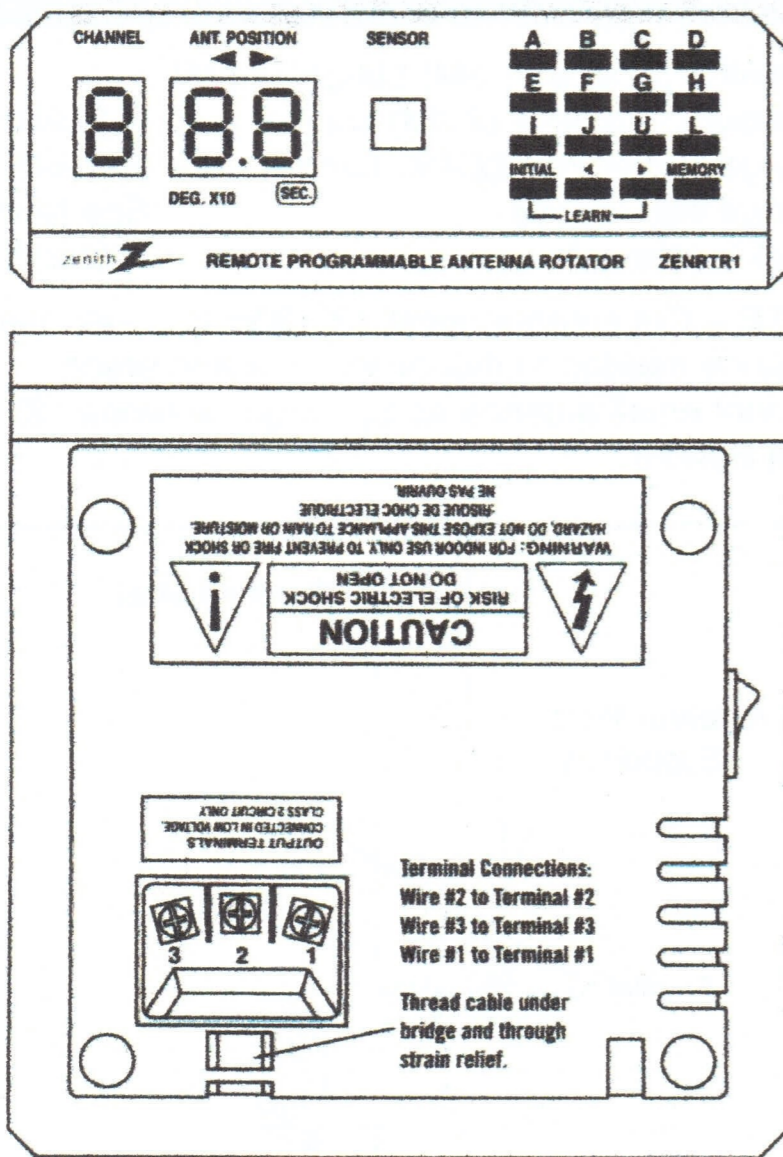


Fig. 6

### STEP 8 - Control unit Connection

Prepare the end of the control cable as shown. Separate leads 1 1/2" and strip off 1/4" insulation. Run the cable through the strain relief channel on the underside of the control unit. 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 and 4 to terminal 3. Tighten all terminal screws after re-checking the wiring order. Make sure there are no loose strands which can short between terminals.

**IMPORTANT:** Number 1 terminal on the rotator unit and control units must be properly connected to each other as must terminal 2 and 3. Improper connection will result in incorrect operation or permanent damage.

### STEP 9 - Operation and Memorization

**NOTE** - See the separate enclosed instructions for information about the use of the Universal Remote

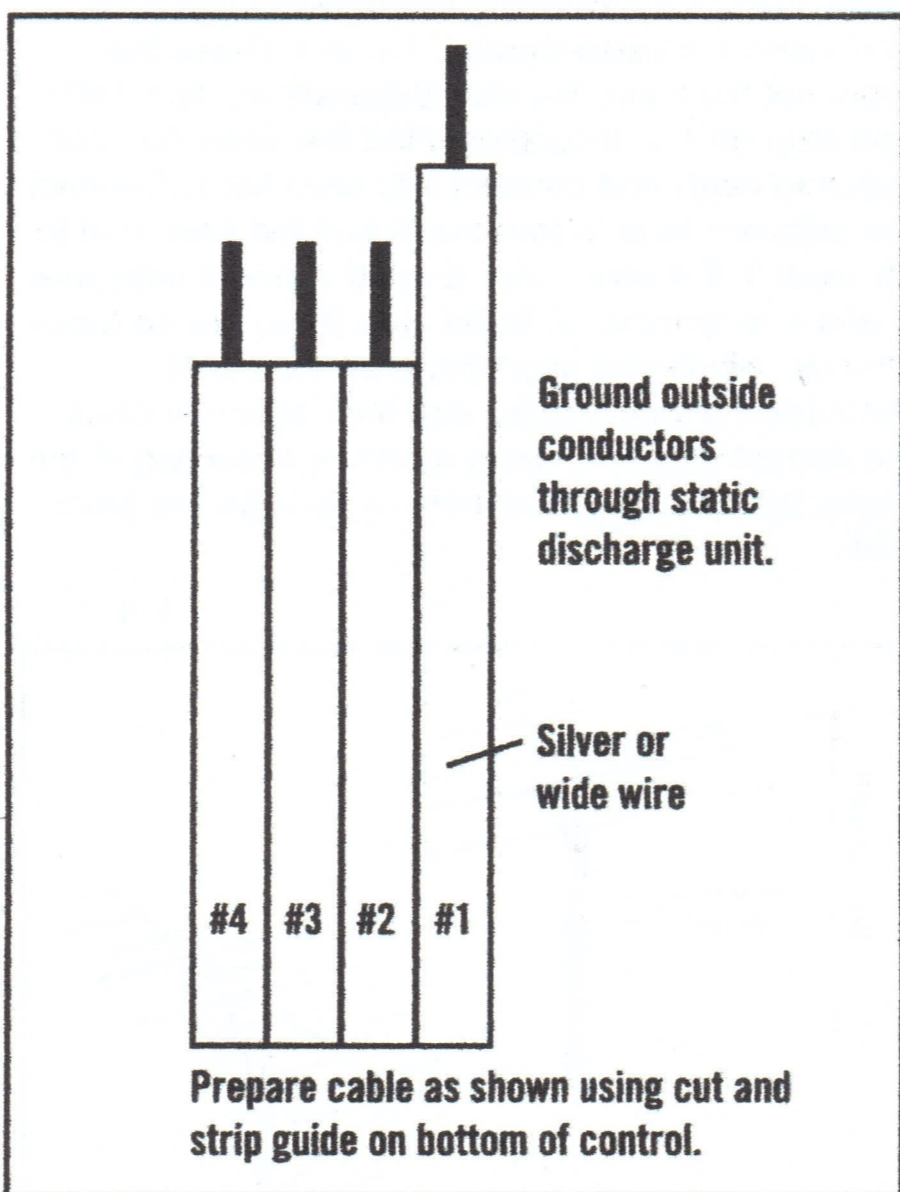


Fig. 7

### STEP 6 - Antenna Mounting / Alignment

**Mounting** - 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 North and tighten the nuts. Excessive over-tightening of the clamp nuts will weaken the antenna mast without adding more clamping action. In some instances, where desired stations are predominantly in a southerly direction, point the antenna South instead of North when arrows are aligned to avoid the rotator from operating at the end stops. If this is done please note that the display of the control unit will be display 18 (180°) when the antenna is pointed North.

### STEP 7 - Antenna Cable Installation

After connecting the antenna lead-in to the antenna, fasten it to the antenna mast using stand off insulators (sold separately) as shown, approximately every four feet. Be sure to provide a generous loop of cable at the rotator unit to allow the antenna to rotate a full turn. Use nylon wire ties or tape the rotator unit control cable directly to the support mast, using good quality electrical tape. (sold separately)

**NOTE** - See Step 1 of the Important Safeguards Sheet enclosed in your package for Grounding of Control Cable and Lead-in Cable for Lightning Protection.

Control.

Tune your TV to the desired station you wish to receive. If you are not sure of the direction of the station's transmitter visit <http://www.antennaweb.org>, which can help you find local transmitter locations. While watching the TV, move the antenna back and forth using the > (clockwise) and the < (counterclockwise) keys until the best picture is obtained. If you are tuning Digital Television Channels (DTV), many receivers feature signal strength meters. Consult your receiver owner's manual for best use of this meter. When you have achieved the best reception you can store the location in the control units memory;

1. Press the "MEMORY" key (front panel or remote), the ANT Position indicator will blink.
2. Select one of the 12 memory location keys from A thru L, press the one which will signify the antenna's position. The position is now stored. The ANT POSITION indicator will display the antenna location. You may wish to note the antenna position and the corresponding letter on the chart below.
3. Repeat the procedure above for each location. Up to 12 station positions may be stored. You may find that a single antenna position will be suitable for more than one station.

**NOTE** - memory location keys can easily be re-programmed by pressing MEMORY, and then pressing the appropriate A-L key. This will "overwrite" the previous.

**TO CLEAR MEMORY** - The following procedure will clear all the memory from the control unit. After performing this step you will need to re-synchronize (STEP 5) and re-memorize the antenna locations.

1. Turn power off at the control unit.
2. With power off press the "B" key, continue to hold while you turn power back on the control unit. When the <> lights flash release the "B" key.
3. Turn the power off again and then turn on again.
4. Follow the direction to re-synchronize in Step 5.

**NOTE** - After severe storms you may find it necessary to re-synchronize the rotator and the control unit. This is considered normal. The unit is designed this way to help prevent damage to the unit from high winds.

		DIRECTION
MEMORY	CHANNEL(S)	(DEGREES)
A		
B		
C		
D		
E		
F		
G		
H		
I		
J		
K		
L		

Zenith warrants that this product shall be free from defects in material, workmanship and assembly, under normal use, in accordance with the specifications and warnings, for the life of the product. This warranty extends only to the original purchaser and is non-transferable. Defective products must be returned with the dated proof of purchase to the place of purchase for replacement. THERE ARE NO OTHER EXPRESS OR IMPLIED WARRANTIES. Incidental or consequential damages are disclaimed where permitted by law.



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## Synchronization

To synchronize the position of the antenna and the rotator unit a synchronization procedure must be performed.

**TIP** – We recommend that you perform this procedure while the rotator unit is still on the ground. This procedure should be performed WITHOUT the mast or antenna attached to the rotator unit.

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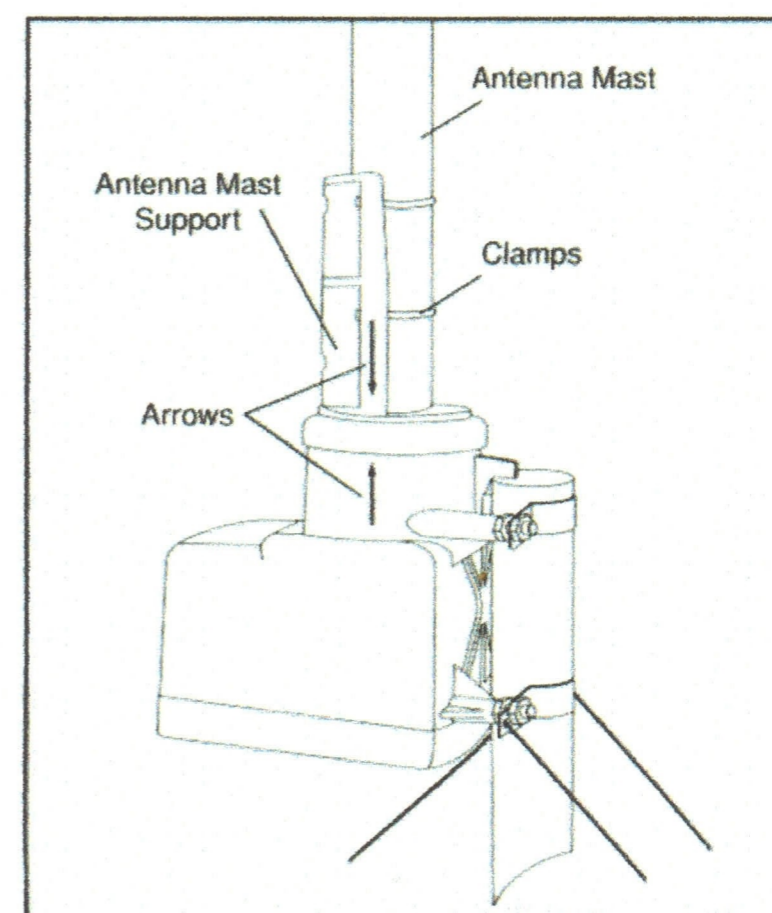
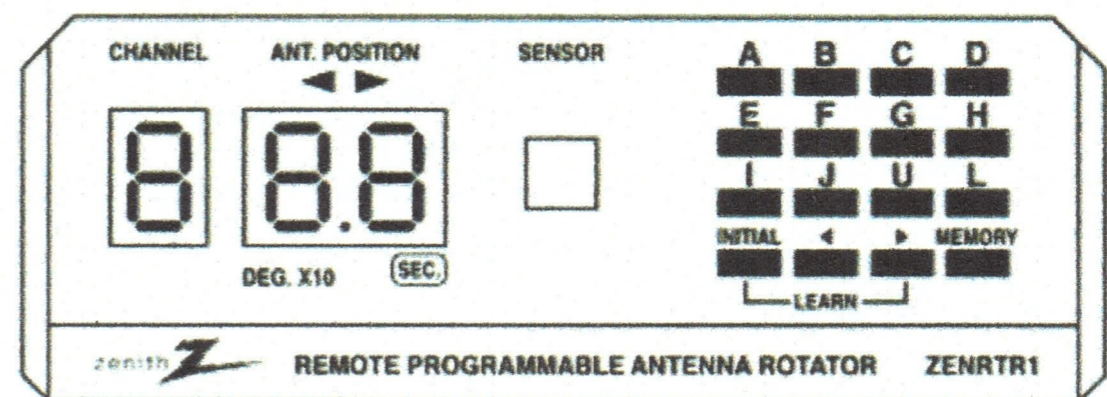
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