

# Operating Instructions

## Orbit 360 Antenna Rotator

Your antenna controller system consists of an antenna rotating mechanism which is roof mounted and a controller which is located on or near the TV set. The controller is silent in operation, using only reliable solid state electronic components. Antenna rotation is indicated by a pilot light in the controller. When the antenna has rotated to the desired position the pilot light will go out.

The control system ensures positive alignment between the mechanism and controller and a high degree of repeat accuracy which is important for proper signal reception. The connecting cable between the control unit and the mechanism carries only safe, low voltage power.

### STOP!

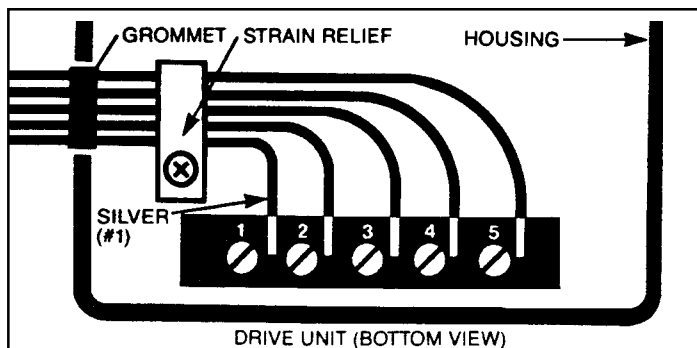
This precision product will give you many years of reliable service if installed properly. Please take a few moments now and read the installation and operating instructions before proceeding. If you have any questions regarding installation or operation, call this Help Line number Monday thru Friday, 8:30 A.M. to 5:00 P.M., Eastern Standard Time: 973-471-8212 or e-mail [rmi@gemini-usa.com](mailto:rmi@gemini-usa.com).

### Drive Unit Connection

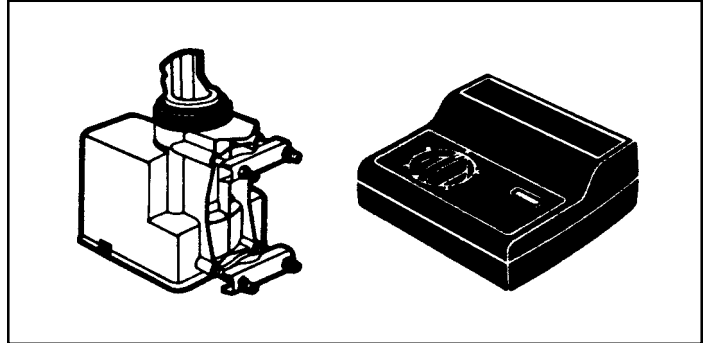
Number 20 gauge 5 conductor cable is recommended for wire lengths up to 75 feet. For longer runs use heavier gauge.

Open bottom cover (side without black rubber sleeve) of drive unit. Strip the 5 conductor cable as shown for the nearest installation.

Remove the Strain Relief. Starting with the silver wire on terminal 1, connect all five wires in sequence to the terminal strip. When this is complete, place the cable in the Strain Relief. Fold the Strain Relief in half and screw the Strain Relief to the plate as shown. Place the grommet on the cable and slide into position on the housing.



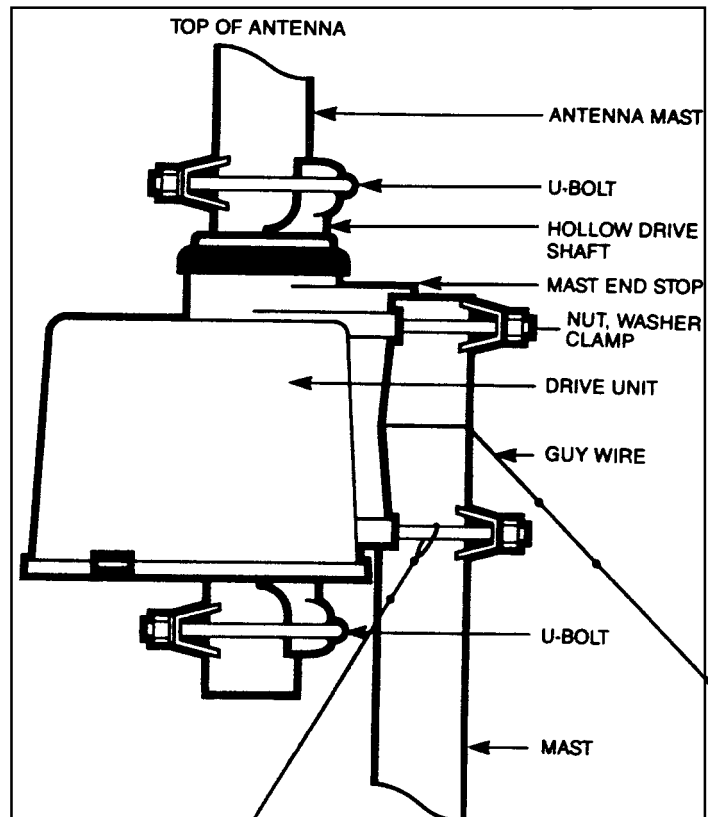
NOTE: It may be hard to cut and strip the wire while the unit is on the roof. We suggest you prewire the unit prior to installation. After you have wired the unit, plug it in. If wired properly it will function, if not recheck the order of the wires.



### Drive Unit Mounting

Mount the drive unit as indicated. Lower the unit until the mast end stop is in contact with mast. Do not overtighten the mast clamps.

Masts should be guyed at 10 foot intervals. If guy wires are used, loop one around the mast and two around the mounting bolts as shown.

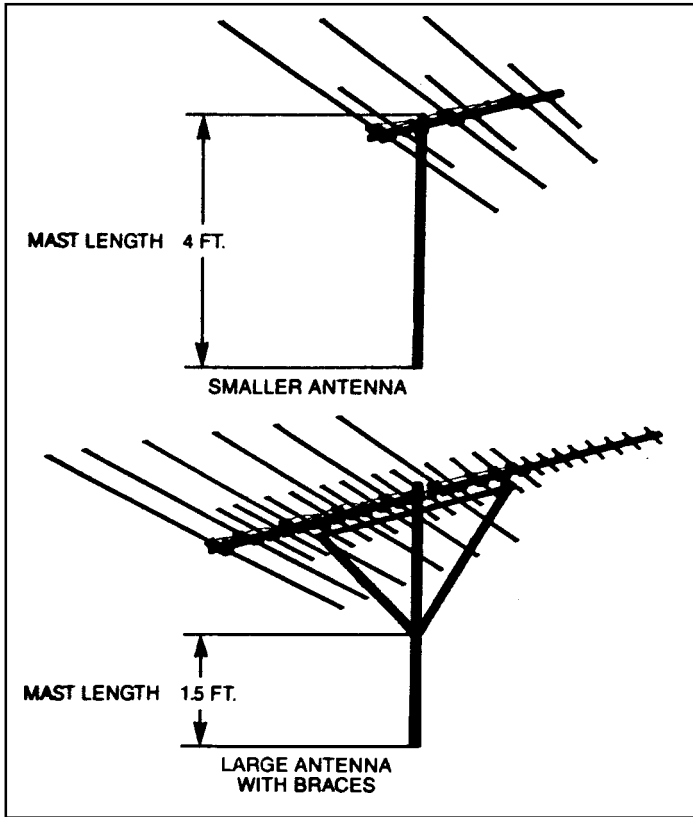


### WARNING

Antennas and masts are conductors of electricity. Make sure these items do not come in contact with power lines. If the Antenna or its mast comes in contact with power lines you can be electrocuted.

## Antenna Support Mast

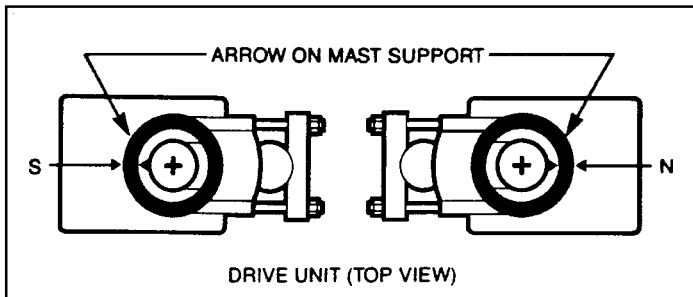
Masts for larger TV antennas should be no longer than 1.5 feet in length from the base of the braces to the top of the drive unit. If no brace, then measure from top of antenna mast to the top of the drive unit. For smaller antennas the maximum mast length is 4 feet from the top of antenna mast to top of drive unit.



## Antenna Orientation

As shipped from the manufacturer, the arrow on the housing and the arrow on the mast support are aligned and coincide with north on the controller.

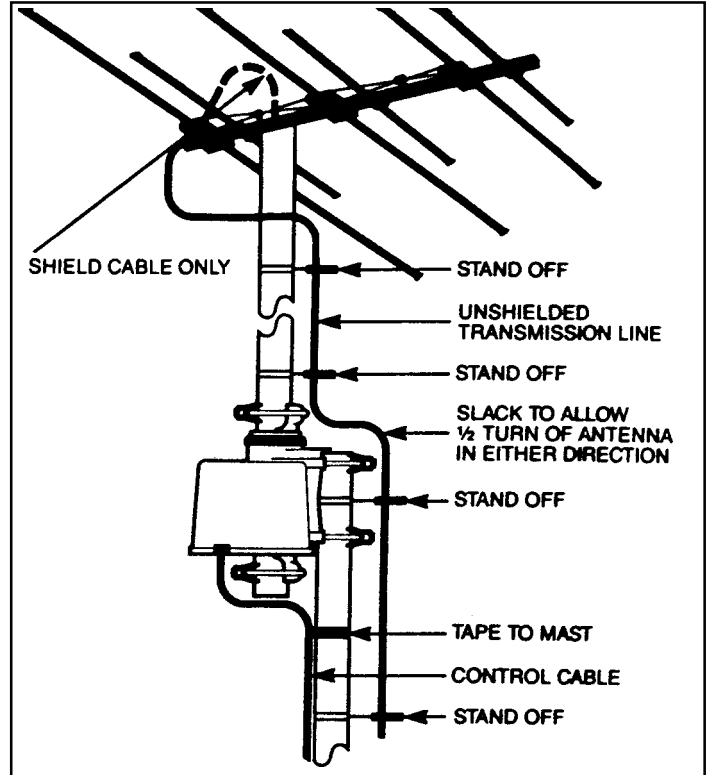
If you wish to have a south orientation, place the south overlay marker on the dial covering the north. Do the same to the south on the dial by using the north markers. The motor unit on the mast will need to be moved so that the arrow on the housing faces south.



## Lead-in Wire Installation

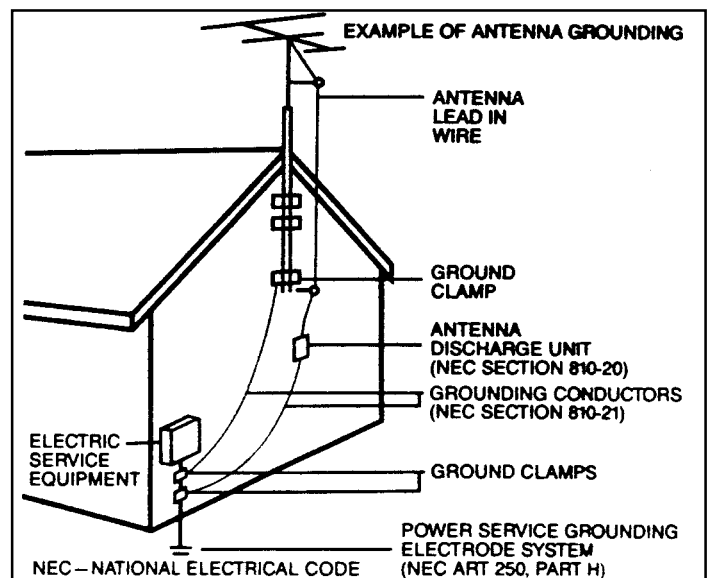
Fasten the antenna lead-in wire to the antenna mast using stand-off insulators as shown. Do not run unshielded lead-in wire inside the mast. Keep unshielded transmission line and control cable as far apart as possible. If you want to

run the cable inside the mast from the antenna, use a shielded cable. The control cable should be taped to the lower mast.



## Antenna Grounding

- Use No. 10 AWG (5.3mm<sup>2</sup>) copper, No. 8 AWG (8.4mm<sup>2</sup>) aluminum, No. 17 AWG (1.0mm<sup>2</sup>) copper-clad steel or bronze wire, or larger as ground wire.
- Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 m) to 6 feet (1.83 m) apart.
- Mount antenna discharge unit as close as possible to where lead-in enters house.
- A driven rod as illustrated may be used as the grounding electrode where other types of electrode systems do not exist. Refer to the National Electrical Code,



# IMPORTANT SAFEGUARDS

ANSI/NFPA 70-1981 for information.

## 1. Read Instructions

All instructions should be read before the product is operated. Retain instructions for future reference.

## 2. Heed Warning

All warnings on the product and in the operating instructions should be adhered to.

## 3. Follow instructions

All operating and use instructions should be followed.

## 4. Cleaning

Unplug the control unit from the wall outlet before cleaning. Do not use aerosol cleaners directly on the unit. Use a cloth dampened only with water.

## 5. Water and Moisture

Do not place the control unit near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, or in a wet basement.

## 6. Mounting

Mounting of the drive unit should follow the instructions, and should use hardware and interconnecting cable recommended in the instructions.

## 7. Ventilation

The control unit should never be placed near or over a radiator or heat register. It should not be placed in a built-in installation, such as a bookcase or rack unless proper ventilation is provided or the instructions have been adhered to.

## 8. Power Sources

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

## 9. Power-Cord Protection

The power-supply cord should be routed so that it is not likely to be walked on or pinched by items placed upon or against it. Pay particular attention to the cord at the plug and the point where it exits from the control unit.

## 10. Outdoor Antenna Grounding

If the drive unit is installed on an outdoor antenna, be sure the antenna system is grounded so as to provide some protection against voltage surges and build-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70-1981, provides information with respect to proper grounding of the mast and supporting structure, grounding of the antenna lead-in wire and drive-unit to control-unit interconnecting cables to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection for grounding electrodes and requirements for the grounding electrode. See Figure 1.

## 11. Rooftop Installation

Always use extreme caution when installing rooftop antenna and rotator system to reduce the risk of falls. Wear rubber-soled shoes and use a sturdy ladder. Do not install on a windy day or when the roof is wet or is covered with ice or snow.

## 12. Lightning

For added protection for the product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug the control unit from the wall outlet and disconnect the interconnecting cable. This will help reduce the possibility of damage to the product due to lightning and power-line surges.

## 13. Power Lines

An outdoor antenna and rotator system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outdoor antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them may be fatal.

## 14. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

## 15. Object and Liquid Entry

Never push objects or spill liquids of any kind through openings in the control-unit enclosure as they may touch dangerous voltage points or short-out parts that could result in a risk of fire or electric shock.

## 16. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other risks. Refer all servicing to qualified service personnel.

## 17. Damage Requiring Service

Unplug the control unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power cord or plug is damaged.
- If liquid has been spilled into the control-unit enclosure.
- If the control unit has been exposed to rain or water.
- If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the control unit has been dropped or the enclosure has been damaged.
- When the product exhibits a distinct change in performance-this indicates a need for service.

## 18. Replacement Parts

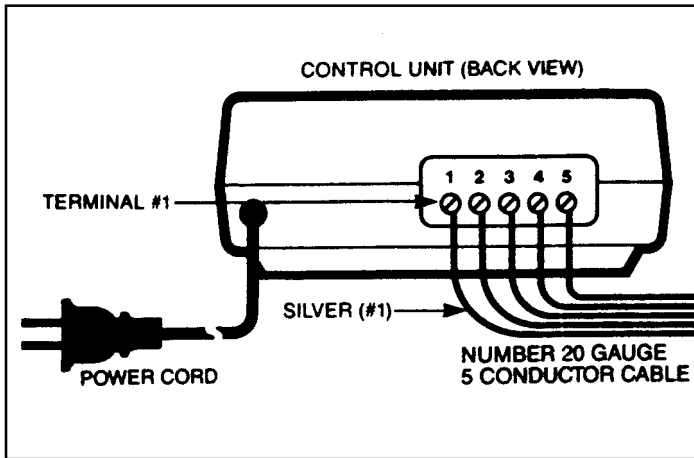
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in a risk of fire or electric shock, or other risks.

## 19. Service Check

Upon completion of any service or repair to this product, ask the service technician to perform checks to determine that the product is operating as intended.

## Control Unit Connection

Starting with the silver wire on terminal 1, connect all five wires in sequence on the terminal strip. Tighten all screws, recheck wiring order and check for shorted strands between terminals.



## Operation

Plug the power cord into any standard 115 volt outlet. You need only rotate the control knob to the desired heading. The rotation of the drive unit is electronically synchronized to the controller. The drive unit responds instantly to any change in setting on the controller and the pilot light will remain on while the antenna is turning from one heading to another.

If the pilot light stays on for more than one minute, check the wiring sequence at both the control unit and the rotator mechanism. Continuous pilot light operation is an indication of incorrect hook-up.

## Limited Warranty

This equipment is warranted against defects for 90 days from the date of purchase. Within this period, we will repair or replace the unit without charge for parts or labor.

Do not return this unit to the place of purchase. Service work is available only at the address indicated below. Warranty does not cover transportation costs or equipment subjected to misuse or accidental damage.

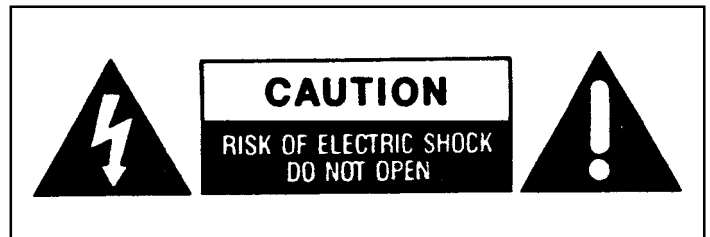
# MAJOR SAFETY REMINDER



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



## CAUTION

To reduce the risk of electric shock, do not remove cover (or back), or any serviceable parts inside. Refer servicing to qualified service personnel. To prevent fire or shock hazard, do not expose this appliance to rain or moisture. This unit is for indoor use only.