

# HDView<sup>®</sup>360<sup>®</sup>

## MINI-STATE<sup>®</sup> Antenna System

**WARNING: INSTALLATION OF THIS PRODUCT NEAR POWERLINES IS DANGEROUS. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS.**

Model HDMS 9100



**with RF remote and Programmable, Direction Memory**

- **RV**
- **BOAT**
- **HOME**

Model **HDMS 9100/RV** includes two RV/Boat mounting brackets.



Optional **UAM9000** Offset J-Mount

Covered under one or more of the following U.S. Patents:  
227,785; 3,721,990; 3,761,333; 3,909,691

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**IMPORTANT—This model is not compatible with Mini-State 5MS series motor drives.**

Your Antennacraft **HDView360<sup>®</sup>** Mini-State<sup>®</sup> is perfect for receiving off-air reception. You can store channel positions with the Radio Frequency remote control, then later recall one of the channel memories. Your antenna will automatically go to the direction you programmed for your best reception.

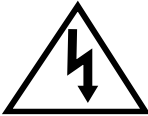

The directional, rotating Antenna provides excellent reception of HDTV/VHF/UHF TV channels in most viewing locations. The UV protective housing is made of impact-resistant filled co-polymer, making the exterior resistant to weathering. It features both AC and DC operation and is excellent for use on recreational vehicles, boats, or in the home.

The VHF section is a circular shaped, slot tuned, broadband, unidirectional traveling wave antenna. The UHF section is a broadband, multi-element array. Both UHF and VHF signals are amplified with a built-in split-band amplifier that provides up to 20 dB gain.

The **HDView360** Mini-State Antenna System is designed for long life and requires no routine maintenance. Should the unit ever quit working, refer to the troubleshooting tips to help determine possible causes. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**Before Installation Note:** to CATV SYSTEM INSTALLER—Article 820-40 of the NEC specified that the cable ground shall be connected to the grounding system of the building "as close to the point of cable entry as practical".


**Note:** Do not plug your Mini-State power supply into an AC outlet or DC power source until all electrical and antenna connections have been made. Doing so may short out the power supply/transformer and void your warranty.

<p><b>WARNING:</b> To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.</p>	<p><b>CAUTION:</b> Use of controls or adjustments or performance of procedures other than those specified may result in hazardous radiation exposure.</p>
<p><b>CAUTION</b></p> <p><b>RISK OF ELECTRIC SHOCK DO NOT OPEN</b></p>	 <p>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 significant magnitude to constitute a risk of electric shock to persons.</p>
<p><b>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICING. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.</b></p>	 <p>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.</p>

# IMPORTANT SAFETY INSTRUCTIONS

1. **READ INSTRUCTIONS**—All the safety and operating instructions should be read before the appliance is operated.
2. **RETAIN INSTRUCTIONS**—The safety and operating instructions should be retained for future reference.
3. **HEED WARNING**—All warnings on the appliance and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS**—All operating and use instructions should be followed.
5. **WATER AND MOISTURE**—The appliance should not be used near water, for example—near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool, or in a wet basement.
6. **VENTILATION**—The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase of cabinet that may impede the flow of air through the ventilation openings.
7. **HEAT**—The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances that produce heat.
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 product dealer or local power company.
9. **GROUNDING OR POLARIZATION**—This product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug full into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
10. **POWER-CORD PROTECTION**—Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point at which they exit from the appliance.
11. **CLEANING**—Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
12. **ATTACHMENTS**—Do not use attachments not recommended by the product manufacturer as they may cause hazards.
13. **ACCESSORIES**—Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. By mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
14. **POWER LINES**—An outside antenna 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 outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
15. **LIGHTNING**—For added protection for this product during lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
16. **OBJECTS AND LIQUID ENTRY**—Never push objects or any kind into this product through openings are they may touch dangerous voltage points or shortout parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
17. **CARTS OR STANDS**—If the appliance is used with a cart or stand, the cart or stand should be a type recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.


18. **MOUNTING**—The appliance should be mounted only as recommended by the manufacturer.
19. **DAMAGE REQUIRING SERVICE**—The appliance should be serviced by qualified service personnel when:
  - A. The power-supply cord or plug has been damaged;
  - B. Objects have fallen onto, or liquid has been spilled into the appliance enclosure;
  - C. The appliance has been exposed to rain.
  - D. The appliance has been dropped; or the enclosure damaged.
  - E. The appliance does not appear to operate normally or exhibits a marked change in performance.
  - F. The product does not operate normally by following the operating inscriptions. Adjust only those controls that are covered by the operating instructions as an 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.
20. **SERVICING**—Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
21. **OVERLOADING**—Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
22. **REPLACEMENT PARTS**—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric chock or other hazards.
23. **SAFETY CHECK**—Upon completion of any service or repairs to this appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operating condition.
24. **OUTDOOR ANTENNA GROUNDING**—If an outside antenna or cable system is connected to the appliance, be sure the antenna or cable system is grounded so as to provide some protection against voltage surged and built-up static charges. Section 810 of the National electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding electrodes, and requirements for the grounding electrode. See the example at the top of page 3.

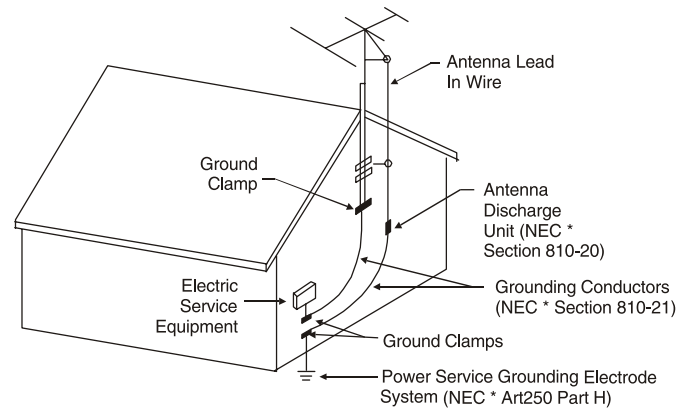
## EXAMPLE OF ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810-”RADIO AND TELEVISION EQUIPMENT”

<sup>a</sup>Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copperclad steel or bronze wire, or larger, as a ground wire.

<sup>b</sup>Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4-6 feet (1.22-1.83 m) apart.

<sup>c</sup>Mount antenna discharge unit as close as possible to where lead-in enters house.

<sup>d</sup>Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21 (j).



### Included in the HDView360 Mini-State Antenna

- HDTV/VHF/UHF antenna with amplifier and internal rotator
- RF remote and receiver
- 12VDC adapter with fused powercord
- 60' combination coaxial/3-wire rotator cable
- Stainless steel mounting hardware kit
- 12VDC power adapter

### Specifications:

Bandpass VHF .....	54-88, 174-216 MHz
Bandpass UHF .....	470-806 MHz
FM trap (fixed) .....	88-108 MHz, 20 dB typical
VHF/UHF Gain .....	up to 20dB
Impedance .....	75 Ohms, Unbalanced
Power Requirement .....	12VDC, 120 VAC, 60 Hz
Weatherproof housing .....	UV-protected, filled copolymer
Mounting .....	1½ inch (maximum) round mast

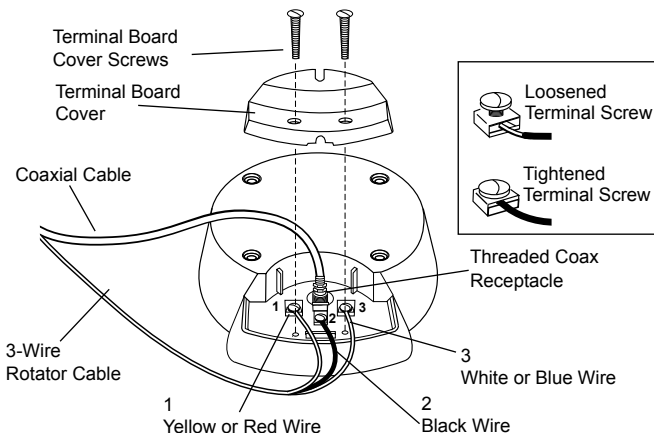
Specifications are typical: Individual units may vary. Specifications are subject to change and improvement without notice.

## Installation of your Antenna

### Connecting Cable to the Antenna

1. Loosen the two screws on the terminal board cover on the bottom of the antenna. This will expose a threaded coaxial receptacle and three special screw-type terminals.
2. Screw the supplied coaxial cable's lead-in connector onto the threaded terminal. **Caution:** Be sure the center conductor of the cable is in the hole of the F-connector before tightening.
3. Your antenna may have either Yellow/Black/White wires or Red/Black/Blue rotator wires.

**Note:** Only loosen clamping terminals up to two turns, as backing them out further can cause the screws to become unattached from their internal mounts.

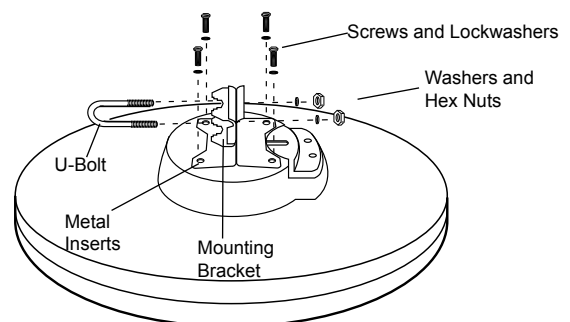


Fasten the Yellow or Red rotator control wire to terminal 1, the Black wire to terminal 2, and the White or Blue wire to terminal 3. Insert the wire between the upper and lower clamps of the terminal body. Tighten the screw as shown.

4. Replace the terminal cover so that the coaxial cable comes out through the notch. Tighten the terminal cover screws. This will clamp the rotator cable in place.

### Attaching the Mounting Bracket

1. Attach the antenna mounting bracket to the four slotted metal inserts on the bottom of the antenna using the four screws and lockwashers provided. (**Do not unscrew recessed metal inserts. They hold the internal motor in place.**)
2. Insert the U-bolt into the mounting bracket using the two washers and hex nuts. Do not tighten.



## Mounting the Antenna

**Note:** Mount the antenna before you make any receiver connections and plug it into its power source.

**Indoors**—You can install the antenna on a vertical mast in the attic, closet or other out-of-the-way location, or suspended from an attic support with a wall-mount bracket. You can also insert the three antenna legs into the matching holes on the underside of the antenna so that they angle outward to form a tripod support. Then place the antenna on a shelf in a closet where it cannot fall or become damaged.

**Outdoors**—Install the antenna outdoors away from trees or obstructions. (Higher frequencies are affected by obstructions.) Mount the antenna on a mast and secure it by tightening the hex nuts evenly onto the U-bolt. You can also use our off-set J-Mount model UAM9000 (optional). Use a wall-thru tube to neatly route the cable thru walls.

Make sure the installation of the antenna conforms to local electrical and building codes, zoning requirements and other

**Boat or RV**—It is recommended that several locations be tried to find the one that provides optimum performance before you permanently install the antenna.

Mount the antenna as high as practical and as far away from metal objects as possible. If the interior areas of the vehicle or boat are substantially enclosed or surrounded by metal surfaces, an exterior mounting location must be selected.

For RVs with metal roofs, the antenna should be mounted at least six inches above the roof surface. For boats, best reception will be obtained if the antenna is mounted above the boat's highest deck or cabin structure. RV/boat mount kits are available to do these installations.

## Adjusting Your Antenna

A double-arrowhead is molded into the outer rim of the antenna's housing to indicate the antenna's rotation. When mounting the antenna in a residential or fixed location, facing the double arrowhead toward the most often used TV station will reduce the amount of rotation needed for best reception.

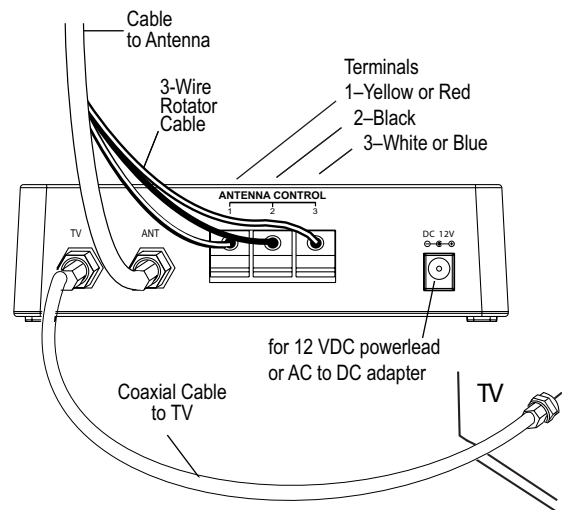
For non-fixed locations, such as RVs or boats, the antenna may be installed with the double arrowheads facing in any direction. Optimum TV reception may be obtained from any location by orienting the antenna with its built-in rotator.

## HDMS9100 Receiver Cable Connections

**Note:** Connect all wires and coax before plugging in the receiver, so that the system can detect the antenna's position and rotate it accurately.

**The coaxial cable provides feedback from your antenna. If it has not been connected, your receiver may be permanently damaged!**

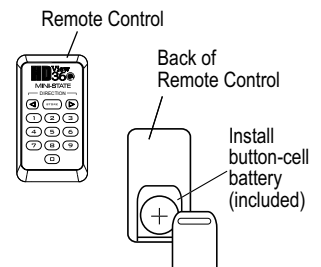
1. Attach the coaxial cable's download connector to the "ANT" threaded coaxial terminal on the RF receiver unit, centering the inner conductor in the hole before tightening the nut.
2. Connect the wires as follows, and tighten the connections.
  - Yellow or Red wire to Terminal 1
  - Black wire to Terminal 2
  - White or Blue wire to Terminal 3
3. Connect the receiver's coaxial cable's output to your TV's coaxial cable input.



## Installing the Battery

Your remote control is powered with a button-cell battery (included). To install the battery:

1. Press and push open the battery compartment cover.
2. Insert the CR2032 battery (included) with positive polarity (+) facing up, into the compartment and then replace the cover.



**Notes:** Keep the button-cell battery away from small children. If swallowed promptly see a doctor.

Do not open the battery or dispose of it in a fire, do not recharge, do not insert it upside down. It may explode or leak, causing injury.

Use only fresh batteries of the same size and kind that are included with the antenna.

If you do not plan to use your remote control for a week or more, remove the battery. It can leak chemicals that can cause damage to the electronic parts.

## Connecting to an AC or DC Power Source

**Note:** Do not plug your antenna's power supply into an AC outlet or DC power source until all receiver and antenna connections have been made. Doing so may short out the receiver's transformer and void your warranty.

**AC POWER**—Plug the 12 VDC adapter into the DC jack on the HDMS9000IR receiver. Plug the HDMS9000 AC adapter into a 120-volt AC outlet near the TV.

**DC POWER**—Plug the 12 VDC adapter into the DC jack on the HDMS9000IR receiver. Attach the red wire to the positive terminal and the black wire to the negative terminal of the DC source used. (The DC power cord's spade terminal ends can be removed if your installation requires another type of connector.)

**Note:** The DC power cord contains an inline protective fuse. For continuous protection against fire hazard, replace fuse only with the same type 0.75 ampere/250 volt rating.

## Finding and Storing Your TV Channels

**Note:** Make sure you have your antenna's final mounting position before you plug in the receiver. If you relocate your antenna's outdoor or indoor position, make sure you unplug the receiver before you disconnect any wires or coax.

1. After plugging in the AC adapter or DC power source, the receiver will turn on. It will display "CA" and start a calibration process.
2. The LCD backlight will also turn on for 1 minute. If the receiver is idle for over 1 minute, the backlight will turn off.
3. When the receiver receives signal from the remote control, the indication LED light beside the LCD panel will flash.

**Note:** This calibration process should be finished in less than 2 seconds. During this process the antenna is internally rotated and its existing position is noted. Afterwards, it will stop at the last position shown on the LCD of the receiver.

If the LCD keeps showing the "CA", it means the calibration process cannot be completed successfully. If this happens, check the wire connections and see if there is anything obstructing the antenna rotation.

4. The antenna's direction can be changed step by step by using the "UP" or "DOWN" arrow buttons on the receiver's front panel or the left or right arrow buttons on the remote control.
5. To continuously change the antenna direction, hold down on the "UP" or "DOWN" arrow buttons on the receiver or remote control.
6. To save the antenna direction for a channel, enter the channel number with the remote control. Then, press and hold the "STORE" button on the remote control until the CH indicator on the receiver LCD flashes.

Use the left or right arrows on the remote to select the optimized antenna direction. Finally, press "STORE" again to save the setting.

8. To recall a stored channel and direction, enter the channel number directly by using the number button on the remote control. The antenna will then turn to the direction that corresponds to the channel number you entered on the remote control.

## Changing the Transmitter/Receiver ID Code

There may be cases that the receiver is triggered by another transmitter in your neighborhood, or if you have the antenna installed on your RV, and you're where there are other RVs with the same antenna.

If you find the receiver is receiving and reacting to some commands which have not been sent from your remote control, try to change the Transmitter/Receiver ID code pair following the below procedures:

1. Unplug the power cord from the receiver.
2. Hold down the 'UP' and 'DOWN' keys together and power up the receiver until the LCD shows "Id". The receiver is now in the ID programming mode.
3. With the remote control near to the receiver, hold down its '9' and '0' keys until the 'Id' on the receiver LCD disappears.
4. Press '1', '2', '3' to select code 1, 2 or 3 respectively within 2½ seconds after the receiver LCD is emptied.
5. The receiver should now show "x", where "x" represents the Code number that you've set.
6. Press the 'STORE' key on the remote control within 2½ seconds after pressing '1', '2' or '3' for code selection.
7. The receiver should now show "Id x".
8. The new ID code pair is stored. Unplug the receiver and then plug it in again and for the new ID to be in effect.

**Note:** You can use one of 3 identifying code numbers. The default ID code used is 1.

1. After the '9' and '0' buttons on the remote control, are released, then choose and press either the '1', '2' or '3' keys within 2½ seconds. If button is pushed, it will exit the ID programming mode. This is to avoid any accidental button pushed on the remote control. If this happens, start at Step 1 again.
2. After code number '1', '2' or '3' is selected, users should push the 'STORE' button on the remote control within 2.5 seconds. If no other button than 'STORE', '1', '2' or '3' is pushed, it will exit the ID programming mode. This is to avoid any accidental button pushed on the remote control. If this happens, start at Step 1 again.
3. If the receiver is unplugged before it has been stored (Step 8 above) the new ID code will not be saved.



## Trouble Shooting

The below provides information for problem diagnosis in case the antenna control system is not working properly. The receiver may sometimes display messages when its operation is interrupted.

Observation	Possible Problem	Actions
No Display on LCD	No power connected. The receiver is in ID programming mode and no appropriate command is received from the remote.	Connect the power. Power reset the receiver and repeat the ID pair up.
LCD freezes with 'CA' upon power up	The motor control wires (red, blue) are not connected. The antenna rotation is obstructed.	Connect the wires*. Clear the obstacles.
LCD displays 'Er'	The position feedback wire (black) is not connected. The coaxial cable is not connected. The 3 control wires (red, black, blue) are reversed.	Connect the wire*. Connect the cable*. Correct the wire connection*.
LCD displays 'Er' and 'CA' during idle	Intermittent connection of the position feedback wire (black).	Fix the wire connection*.
LCD freezes during ID programming	The receiver is in ID programming mode and no appropriate command is received from the remote.	Power reset the receiver and repeat the ID pair up.
Receiver has no response to the remote control	The remote control is out of battery. The ID code is mismatched.	Change the battery. Pair up the ID code.
After changing the antenna position, it returns to the original number	The motor control wires (red, blue) are loosened. The antenna rotation is obstructed.	Fix the wires*. Clear the obstacles.

\* The receiver should be power reset after fixing the wire connection.

## The FCC Wants You to Know

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:**

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

**WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
- Consult the dealer or an experienced radio/TV technician for help.

**Available Parts:**

5MS9000 Hand Control, 5MS9000 Power Supply,  
5MS9000IRK Infrared Conversion Kit,  
5MS9000 RV/Boat Mounts  
30' Coaxial Cable, 60' Coaxial Cable,  
RV/Boat Mounts (1 pair)

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

### **MINI-STATE ANTENNA LIMITED WARRANTY**

We warrant that if anything goes wrong with your ANTENNACRAFT HDView360 Mini-State Antenna within 90 days of purchase, and it is a manufacturing defect, we will repair the unit or replace it at no cost. This warranty excludes all costs arising from installation, removal, reinstallation or setup, transportation to and from the dealer, and damage due to lightning, misuse or neglect. In addition, indirect, incidental, or consequential damages are not covered. Some states do not allow the exclusion or limitation of indirect, incidental, or consequential damages, so the above limitation or exclusion may not apply to you. To obtain warranty service, please do the following:

1. Take the unit to the dealer from which it was purchased or any ANTENNACRAFT Mini-State dealer.
2. Present your bill of sale or other evidence of the date on which the unit was first purchased.

IT IS NECESSARY THAT YOU RETAIN YOUR BILL OF SALE OR PROOF OF PURCHASE IN ORDER TO OBTAIN WARRANTY SERVICE.

#### **OUT-OF-WARRANTY SERVICE**

In the event your ANTENNACRAFT Mini-State 5MS9000 should fail after the 90 day limited warranty period, the ANTENNACRAFT Service Center will either repair the non-functioning unit at a cost to be determined by the Service Center and approved by you before the actual repair process is started, or replace it with a remanufactured unit if available. The unit will be returned to you C.O.D.

When returning for repair:

1. Call 319-758-8050 for a Return Authorization Number
2. Package the unit properly to prevent damage
3. Ship prepaid to: ANTENNACRAFT,  
1719 West Mount Pleasant Street  
West Burlington, IA 52655

Please enclose your name, home phone number, daytime phone number, email address, return ship address, proof of purchase and a description of the problem. You may be contacted by phone for more information about the antenna's malfunction. If the antenna is found not to be defective, there will be a fee of \$20 for servicing plus shipping costs.

[www.antennacraft.net](http://www.antennacraft.net)