

WINEGARD® RAYZAR® AUTOMATIC

Automatic Amplified Local Broadcast HD TV Antenna

User Guide

For Rayzar Automatic Antenna Models RZ-7500 / RZ-7535 / RZ-8500 / RZ-8535



For French and Spanish versions, FAQs, troubleshooting, videos,
and product information visit www.winegard.com/rayzarauto
For help, email help@winegard.com or call 1-800-788-4417

Parts

Antenna



Other Hardware



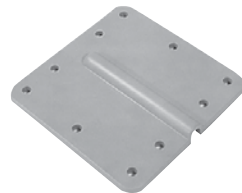
Roof plate



Ceiling plate



Ceiling plate bracket



Single entry cable entry plate



16 Mounting screws
(9 for antenna feet,
7 for cable entry plate)



Control panel



2 Terminal insulators



2 Wall plate screws



72' Coax Cable



20' Coax Cable

Specifications

VHF/UHF Amplified antenna:

Height: 7"; Weight: 4.5 lbs

UV-protected plastic dome

Operating Voltage: 10 – 13.8 VDC

Operating Current:

Park Cable Mode (Off): 10 mA

Active: 500 mA

Sleep Mode: 80 mA

For outdoor use only.

Removing Existing Over the Air



Antenna

(Aftermarket models only)

If removing an existing antenna, supplied with this antenna is a roof cover plate and ceiling cover plate. Make sure to properly seal the roof plate to the roof, including around the supplied grommet. The ceiling plate can mount to ceiling after removing existing crank handle. Mount the ceiling plate bracket to ceiling with 2 screws. Ceiling plate is paintable, if desired.

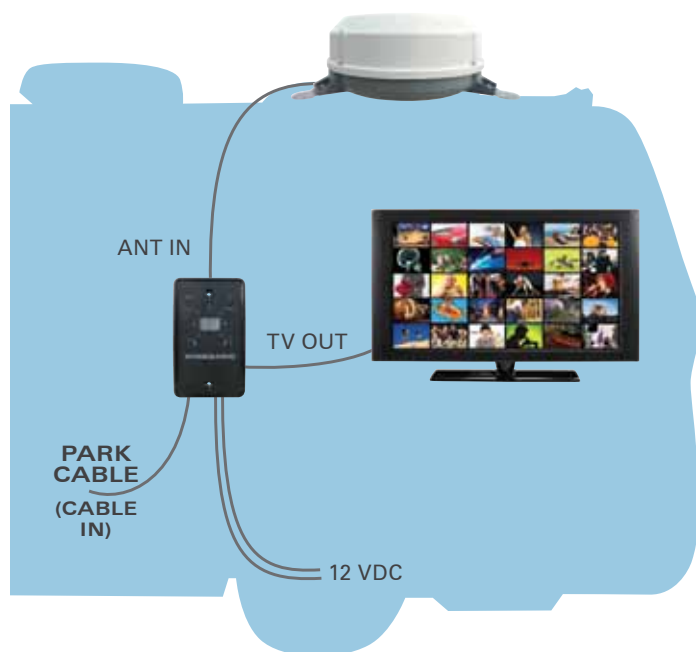
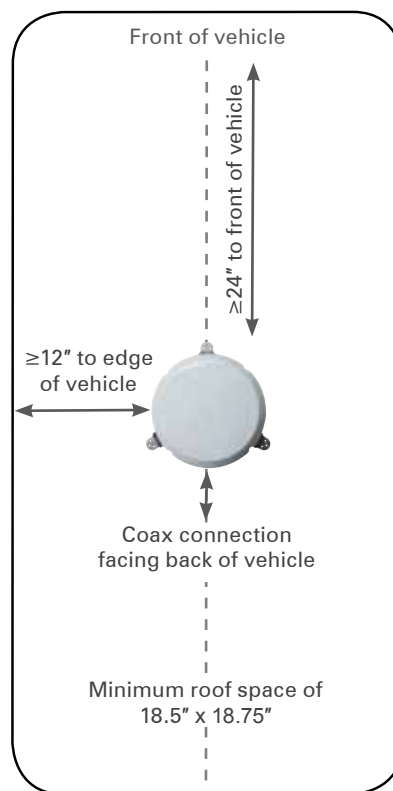
Installation

Installing the Antenna



Warning: Install in dry conditions only!

1. Choose a location on the roof of the RV that meets the following requirements:
 - Has a minimum roof space of 18.5" x 18.75" for the antenna
 - Maintains a minimum clearance of 12" from the edge of the vehicle
 - Maintains a minimum clearance of 24" from the front of the vehicle
 - Maintains distance from any nearby obstructions  See warning below
2. After confirming that the antenna in its chosen location meets all requirements, trace around each base foot. Position the antenna with the coax facing the rear of the vehicle.
3. Clean the roof area where the base feet will attach to the roof; do not erase your marks.
4. Apply approved sealant in the areas marked for the base feet.
5. Align the antenna feet with the areas marked for the base feet, and place the antenna on the sealant.
6. Install three mounting screws per antenna foot, and tighten.



Warning: Installing the antenna on or near metal objects may cause signal interference. For optimal performance install in a location free of obstructions.

Rotate the antenna so that the coax connection is facing the back of the vehicle.

The maximum coaxial length from the roof antenna to the control panel should not exceed 30 feet. The distance from the control panel to TV(s) is not critical.

Routing Cables

1. Connect the included coax cable to the F-jack on the antenna base.

Note: a 20 foot coax cable is included and recommended for use with the antenna. Longer coax runs could potentially cause problems with motor performance. Maximum cable length should never exceed 30 feet.

2. Route the coax cable through the roof and ceiling to the chosen location for the power supply
3. Place the cable entry plate over the hole and cable.
4. Screw the plate in place with up to seven screws.
5. Apply sealant (not included) over the edge of the cable entry plate and screws.

Installing the Control Panel

1. Choose a location for the control panel. Drill a 2" hole, centered, to allow for installation of control panel power and coaxial connections.
2. Connect the coax cable from the antenna to the "ANT IN" port on the control panel, and tighten until fingertight. (The coax cable should have been routed through the ceiling and wall to the chosen control panel location.) If the connector is removed before routing the coax cable, see page 4 for instructions on re-installing the connector.
3. Connect a coax cable from either the port on the front of the control panel or the "TV OUT" to the television. If connecting to TVs in multiple locations both TV outputs can be used or a splitter may be used.

4. If hooking up a cable input, connect the cable from the cable input to the "CABLE IN" port on the back of the control panel.
5. Run two #12 wires between the control panel and +12 VDC source, and route downlead cable to the chosen location for the control panel.
6. Install terminals on wires from +12 VDC source, and crimp the terminals with an appropriate crimping tool. Make 12 volt connection to the control panel.
7. Mount the control panel in the wall with the provided control panel screws.

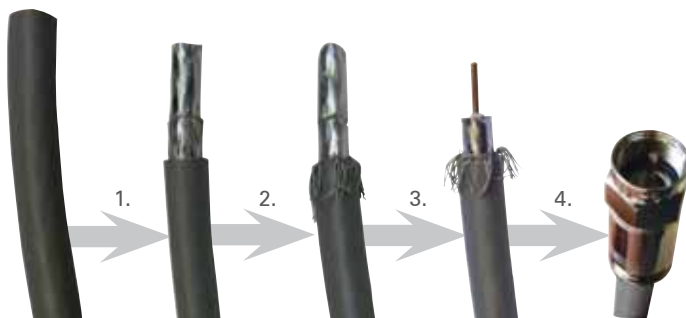
Back of Control Panel



- A) Power +
- B) Ground
- C) Antenna In
- D) Cable In
- E) TV Out

Installing a Connector on Coax Cable

TIP: If installing the connector in hot weather, increase dimensions by $\frac{1}{4}$ ".



1. Strip the outer cover back $\frac{1}{2}$ " from the end of the cable.
2. Fray braid back as far as the outer cover will allow.
3. Trim braid close to the outer cover, and remove $\frac{1}{4}$ " of inner insulation, being careful not to nick the center conductor. Make sure no foil or braid can touch the center conductor.
4. Slide the connector tip between the braid and inner insulation (braid and foil, on foil shield cable). Push the connector onto the cable as far as it will go.
5. Attach the cable with a proper crimping or compression tool. Do not crush cable out-of-round.

FCC Guidelines



Changes or modifications not expressly approved by Winegard could void your 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.

Warning: Do not remove dome or any internal components without direct instruction from Winegard Technical Service. Removing components can cause cable wrap to malfunction, causing permanent damage to antenna. Do not run antenna without the dome in place and secured. Failure to follow these instructions can void the product Warranty.

Operation



Warning: This antenna is designed to be used directly with a television. Operators should consult the original equipment manufacturers' manuals for installation and operation of television and associated accessories, and should never watch or use television equipment when the vehicle is being operated or in motion.

About Digital TV

To fully understand how the Rayzar Automatic antenna functions, it is important to understand how Digital TV signals are broadcast. Whenever in a new location or after re-positioning the antenna a channel scan is required to receive any new/ additional channels. During the channel scan, the TV will automatically detect Digital TV stations and program those to your TV. Each "channel" on a frequency may also likely have sub-channels that will show up on the TV as a "8.2", "8.3", etc. The Rayzar Automatic antenna is identifying all the TV frequencies being broadcast, but only the TV can determine the number of sub-channels. Because of this, the number displayed on the control panel of the Rayzar Automatic is the number of TV frequencies found that are determined to be watchable. The actual number of channels scanned into your TV will vary, depending on the number of sub-channels on each frequency.

Cable Mode

When the control panel is powered off, park cable signals will be passed to the TV. In this mode all LEDs are turned off.

Antenna Mode

When the Control panel is powered on by pressing the On/Off button, the LEDs will flash and begin its

power on process. At this time the antenna amplifier is powered on and TV antenna signals will be passed. Initially, GREEN "Positional LED(s)" will be lit to indicate the direction the antenna is positioned.



Automatic Search

The system does not move until the Search button is pressed. Channels will be received whenever the system is powered on.

To begin a new search, press the Search button. The antenna will go through its initialization process and begin searching for TV frequencies. A typical search will take 2-3 minutes. A RED LED will quickly cycle through the positional LED position to indicate the antenna is moving and direction it is moving.

After the search is complete, the antenna will automatically go to the position which results in the most watchable TV channels. The 2-digit display will show the number of frequencies seen at that position, and both the GREEN and RED LED(s) will be lit to indicate the successful search location.

Additional RED LEDs will also light to show any

other channels found at alternate positions. Pressing the Search button again will move the antenna to the next best location. Continuing to press Search again will cycle through other positions that provided additional channels, until returning to the main search location.

To clear search results and initiate a new search, press and hold the Search button for 2 seconds. The system will also clear all search results each time it is powered off.

Run a Channel Scan

- 1. Using the television remote, select “Menu” and then “Settings.”
- 2. Select “Channel Setup.”
- 3. Select “Antenna” or “Air,” depending on your TV.
- 4. Make sure you are not on “Cable.”
- 5. Select “Channel Search” or “Channel Scan.”

Keep in mind that steps to perform a channel scan may vary. If the wording in your TV differs from the options shown, refer to your TV user manual for help.

Manual Control

The Rayzar Automatic antenna also allows you to move the antenna with a manual control function. This can either be used for fine tuning a channel that may be pixelating, or used as a manual search method in a known location. Pressing the rotate buttons will move the antenna in small increments. The GREEN LED will show the antenna position. If 2 adjacent GREEN LEDs are lit, the antenna is positioned half way between the corresponding LEDs

Pressing the search button after using manual controls will return the antenna to Automatic Search Mode and move to the next best stored location.

Sleep Mode

While in Antenna Mode, if no buttons are pressed for 3 minutes, the system will enter into Sleep Mode. During Sleep Mode the POWER LED will remain lit and the antenna amplifier will remain on, allowing you to watch TV. All other LEDs will be turned off.

To exit sleep mode and resume operation, press any button on the control panel.

Troubleshooting

While in manual mode, if the readout displays “HS”, that means the antenna has reached the operational limit and needs to rotate the other direction.

Pressing the Search and Counter Clockwise Rotate button at the same time will perform a reset on the system. This will clear any search results and restart the system. This can also be used to trouble-shoot the system, as performing a reset can clear error messages. Below is a list of possible Error Codes displayed during operation. The Error Code would be displayed on the 2-digit readout during use. Refer to the table below for possible codes and actions to resolve the errors.

ERROR CODE	CAUSE	ACTION
E1	Short in Coax Between Control panel and antenna.	Check all cables and connections then perform RESET function on control panel or disconnect 12V.
E2	No antenna detected.	Check all cables and connections to antenna.
E3	Motor Movement Error.	Antenna may still function. If problem persists contact Winegard Technical Service.
E4	Tuner Error. Controls and antenna will still function.	Perform RESET function on control panel. If problem persists contact Winegard Technical Service.
E5	Factory Mode.	Perform RESET function to exit Factory Mode and return to normal operation.

If the above steps do not resolve the issue or another persists, please contact Winegard Technical Service at 1-800-788-4417 or help@winegard.com.

WINEGARD MOBILE PRODUCTS LIMITED WARRANTY (2 YEARS PARTS; 1 YEAR LABOR)

Winegard Company warrants this product against defects in materials or workmanship for a period of two (2) years from the date of original purchase. During year one (1) of such warranty, Winegard Company will also pay authorized labor costs to an authorized Winegard dealer to repair or replace defective products.

No warranty claim will be honored unless at the time the claim is made, Customer presents proof of purchase to an authorized Winegard dealer (to locate the nearest authorized Winegard dealer, contact Winegard Company, 3000 Kirkwood Street, Burlington, Iowa 52601, Telephone 800-288-8094 or visit www.winegard.com). Customer must provide proof of purchase with a dated sales receipt for the Winegard product to verify the product is under warranty. If the date of purchase cannot be verified, the warranty period shall be considered to begin thirty (30) days after the date of manufacture.

If a defect in material or workmanship is discovered, Customer may take the product to an authorized Winegard dealer for service. Customer must provide proof of purchase to verify the product is under warranty. If the product is brought to an authorized Winegard dealer for service prior to expiration of year one (1) of the warranty period and a defect in material or workmanship is verified by Winegard Technical Services, Winegard Company will cover the Winegard dealer's labor charges for warranty service. The Winegard dealer must contact Winegard Technical Services in advance for pre-approval of the service. Approval of the service is at the sole discretion of Winegard Company.

Alternatively, Customer may ship the product prepaid to Winegard Technical Services (located at 2736 Mt. Pleasant Street, Burlington, Iowa 52601, Telephone 800-788-4417). Customer must return the product along with a brief description of the problem and provide Winegard Technical Services with Customer's name, address, and phone number. Customer must also provide proof of purchase to verify the product is under warranty. If the product is returned before the expiration of the warranty period, Winegard Company will (at its option) either repair or replace the product.

This Limited Warranty does not apply if the product has been damaged, deteriorates, malfunctions or fails from: improper installation, misuse, abuse, neglect, accident, tampering, modification of the product as originally manufactured by Winegard in any manner whatsoever, removing or defacing any serial number, usage not in accordance with product instructions or acts of nature such as damage caused by wind, lightning, ice or corrosive environments such as salt spray and acid rain. This Limited Warranty also does not apply if the product becomes unable to perform its intended function in any way as a result of the television signal provider making any changes in technology or service.

RETURN AUTHORIZATION POLICY

A Return Material Authorization (RMA) is required prior to returning any product to Winegard Company or Winegard Warranty Services under this warranty policy. Please call our Technical Services Department at 800-788-4417 or send an email to warranty@winegard.com to obtain the RMA number. Please furnish the date of purchase when requesting an RMA number. Enclose the product in a prepaid package and write the RMA number in large, clear letters on the outside of the package. To avoid confusion or misunderstanding, a shipment(s) without an RMA number(s) or an unauthorized return(s) will be refused and returned to Customer freight collect.

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In states that do not allow limitations on implied warranties, or the exclusion of limitation of incidental or consequential damages, the above limitations or exclusions do not apply.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion of limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives Customer specific legal rights. Customer may also have other rights that may vary from state to state.

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