Trouble Shooting for AS-2003 Satellite Antenna
This trouble-shooting guide will help you solve problems with Model AS-2003 satellite antenna. If, after following these steps, you need further assistance, call Winegard Technical Services at 1-800-788-4417.

I. Will not turn on

Are you using a power supply from Winegard that came with the unit?  
**YES**  
**NO**

Are you using a 13.8 VDC filtered power source with at least 3 amps of constant current and no current limiting?  
**YES**  
**NO**

Replace power supply.

Are the power source plugged into an active 120 VAC outlet?  
**YES**  
**NO**

Replace power supply.

Is the power source turned on?  
**YES**  
**NO**

Measure the DC voltage between the black (ground) and brown wire at the pin on the back of your wall plate. See Figure 1. Does it measure 13+ VDC?  
**YES**  
**NO**

Replace connector.

Replace electronics box.

Figure 1: Pin connected to red wire, Pin connected to brown wire, Pin connected to black (ground) wire

Screw head connected to red wire, Screw head connected to brown wire, Screw head connected to black (ground) wire

Control panel inside RV

Figure 2: Pin connected to red wire, Pin connected to black (ground) wire

Screw head connected to red wire, Screw head connected to black (ground) wire

Electronics box on RV roof

Replace 3-terminal connector.

Replace cable containing the power wires.

Now measure the screw heads connected to the red and black wires on the 3-terminal connector. Does the voltage measure 13+ VDC between these screw heads?  
**YES**  
**NO**

Replace 3-terminal connector.

Does the power source measure 13+ VDC?  
**YES**  
**NO**

Replace power supply with 13.8 VDC filtered power source with at least 3 amps of constant current and no current limiting.

Now measure the screw heads connected to brown and black wires on back of control panel. Does this measure 13+ VDC?  
**YES**  
**NO**

Replace electronics box.

Does the power source measure 13+ VDC?  
**YES**  
**NO**

Replace power supply.

Measure the DC voltage between these screw heads? Figure 2.
Measure the DC voltage between the black (ground) and red wires at the pin. Does it measure 12.5 VDC?

**YES**

Replace control panel.

**NO**

Now measure the screw heads connected to red and black wires on back of control panel. Does this measure 12.5 VDC also? Figure 1.

**YES**

Replace connector

**NO**

Remove the electronics box lid. Find the 9-terminal connector and the pins connected to the red and black (ground) wires. Measure the DC voltage between these pins. Does it measure 12.5 VDC? Figure 3.

**NO**

Replace electronics box

**YES**

Now measure the screw heads connected to the red and black wires on the 9-terminal connector. Does the voltage measure 12.5+ VDC between these screw heads? Figure 3.

**YES**

Replace cable with 9 colored wires.

**NO**

Replace 9-terminal connector.

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Figure 3

[Image of electronics box on roof]
II. On, Park, Search & Off LEDs are on (No LNB power)

Do the lights flush once? then remain ON?

Is the receiver plugged into an active 120 VAC outlet? Power on receiver to verify.

Is the bright white primary coax cable connected from Satellite In jack on the back of the receiver to the coax connection on the left side of the electronics box? Figures 4 and 5.

YES

NO

Replace electronics box.

Plug into receiver, turn on and set menu to signal strength screen.

Connect the white primary coax cable correctly.

Wall Plate Control Panel inside vehicle

WINEGARD

ON OFF

SEARCH/ MOVING PARK

AS-2003 SATELLITE SYSTEM

Figure 4

Figure 5

Coax cable connects from electronics box to receiver.
Is LNBF coax cable connected from the LNBF to the coax positioned on the right connector on the electronics box? Figures 6, 7.

NO

Connect the LNBF coax cable correctly.

YES

Are all coax connections properly crimped and free of shorts?

NO

Replace connectors.

YES

Does the coax cable connected to the LNB measure 11-18 VDC between the copper center conductor (+) and connector (-)? Figure 8.

NO

Does voltage on Satellite In receiver jack measure between 12 & 18 volts? See Note.

YES

Substitute LNBF with an LNBF known to be good. Power down, then try to run again. On the control panel, do all lights remain on?

NO

Replace coax cable connecting receiver and LNBF.

YES

Replace electronics box.

Figure 6

Figure 7

Figure 8

The "Voltmeter", commonly called a Multimeter, can be purchased from your local retailer.

NOTE
Do not try to insert the test meter probes into the coax cable connectors. This will cause permanent damage to the connectors. Use a short piece of coax with a connector on one end, or Winegard's TE-1400 voltage tester (available from your Winegard Distributor).
III. Does not initiate Search routine

Has the search been selected for 10 minutes or more? See Note. For the initial search, time could equal 10 minutes.

- **YES**
  - Is the GPS antenna mounted at least 3 feet from system and free of obstructions?
    - **YES**
      - Remove lid on the electronics Box. Is GPS lead connected correctly to jumper cable in the Electronic box? Fig. 9, 10
    - **NO**
      - Reposition GPS antenna.

- **NO**
  - Repositio GPS antenna.

Wait 10 minutes.

**NOTE:** If the vehicle has gone 600 or more miles since the last use of the AS-2003, GPS acquisition may take longer. Also, obstructions (buildings, trees, hills, etc.) will delay acquisition time.

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**Figure 9**

Electronics box on RV roof

**Figure 10**

Electronics box on RV roof

GPS antenna lead
IV. On and Off LEDs are on (Motor stall error)

Does the unit run into an obstacle while attempting to elevate or rotate?

- **NO**
  - Remove obstacle.

- **YES**
  - Adjust cables.

Does the cable restrict movement while elevating or rotating?

- **NO**

- **YES**
  - Measure DC voltage between the black and brown (ground) wires at the pin. Does it measure 13 VDC? Fig. 11.

  - **YES**
    - Replace the dish assembly and turret. Are there broken or stripped gears?
    - **YES**
      - Replace gears.
    - **NO**
      - Replace connecter.

Remove the dish assembly and turret. Are there broken or stripped gears?

- **YES**
  - Replace gears.

- **NO**
  - Measure the screw heads connected to the brown and black wires on the back of the control panel. Does it also measure at least 13 VDC? Figure 11.

Does the power source measure at least 13 VDC?

- **YES**
  - Replace power supply with a 13.8 VDC power source with at least 3 amps of constant current and no current limiting.

- **NO**
  - Measure the screw heads connected to the red and black wires on the 3-terminal connector. Does the voltage measure at least 13 VDC between these screw heads? Figure 12.

  - **YES**
    - Replace 3-terminal connector
  - **NO**
    - Replace cable containing the power wires.
V. On, Search and Off LEDs are on (Will not find signal)

Clear view of SW sky

Satellites 101, 110 and 119 are within 20° of each other

Any satellite within 20° longitude of the desired satellite will be included as a required satellite in the Search routine. To find 119, for example, 101, 110 and 119 are all required for a successful Search routine.

VI. Will not pass “Check Switch” function (DISH Network only)

Did you run Check Switch within 6 minutes after unit has acquired satellite signal on satellite 119?

YES

Wait for unit to acquire satellite signal on 119. Run Check Switch again within 6 minutes.

NO

Did you retest the Check Switch function?

YES

NO

Retest Check Switch function.

Does the unit run into obstruction or catch the wire harness white raising or rotating?

NO

YES

Remove obstruction.

Is the satellite dish level, within 3° with horizon?

NO

Try to level dish to within 1° of horizon. The unit will find the signal with a 1° to 3° tilt, but search time increases.

YES

Does the unit run into obstruction or catch the wire harness white raising or rotating?

NO

YES

Remove obstruction.

Is the satellite dish level, within 3° with horizon?

NO

Try to level dish to within 1° of horizon. The unit will find the signal with a 1° to 3° tilt, but search time increases.

YES

Does the unit run into obstruction or catch the wire harness white raising or rotating?

NO

YES

Remove obstruction.

Is the satellite dish level, within 3° with horizon?

NO

Try to level dish to within 1° of horizon. The unit will find the signal with a 1° to 3° tilt, but search time increases.

YES

Does the dish rotate almost a full revolution while trying to locate the second satellite during the Check Switch function? Fig. 20.

NO

YES

Move vehicle to a different angle so the stop is not located between the two satellites.

Connect white primary coax correctly.

Connects from electronics box to receiver.

Connects from electronics box to receiver.

Connects from electronics box to LNBF.

Connects from electronics box to LNBF.

Connects from electronics box to LNBF.

Does the dish rotate almost a full revolution while trying to locate the second satellite during the Check Switch function? Fig. 20.

NO

YES

Move vehicle to a different angle so the stop is not located between the two satellites.

Connect white primary coax correctly.
On the connector on the back of the control panel, find the **purple and black** (ground) wires. Measure the DC voltage between these pins. Does it measure 4.8-5.0 VDC? Figure 19.

**YES**

Are the rotary switches set to the proper satellite? Figure 18.

**YES**

Set to 119 for DISH Network, 101 for DIRECTV and 092 for ExpressVu. Switches will appear upside down and numbers counterclockwise.

**NO**

Have you tried changing transponders? 11 for DISH, 1 or 3 for DIRECTV, 11 for ExpressVu.

**YES**

For DISH, have you cleared the Check Switch, started a new search and running the Check Switch again? For DIRECTV, is the receiver set to “Two Sat. Oval Dish”?

**NO**

For DISH, retest Check Switch function; for DIRECTV, set receiver correctly.

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Is the primary (bright white) coax connected to receiver that’s operating the Check Switch routine? Fig. 21, 22.

**YES**

Are any devices inserted on the coax between the satellite antenna and primary receiver?

**NO**

Operate Check Switch routine from primary receiver.

**YES**

Remove device.

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**Fig. 20**

Stop interrupts Check Switch operation

**Fig. 21**

Connects from electronics box to PRIMARY receiver.

**Fig. 22**

Stop does not interrupt Check Switch operation.
VII. Unit will not park

Press Off button. Press On button. Wait 5 seconds for all LEDs to flash. Press Park 1 time. Does unit park?

**NO**

On the connector on the back of the control panel, find the pins connected to the white and black (ground) wires. Measure the DC voltage between these pins. Does this measure 4.8-5.0 VDC? Fig. 23.

**NO**

Now measure the screw heads connected to the white and black wires on the back of the control panel. Does this measure 4.8-5.0 VDC? Figure 23.

**NO**

Are you using a 13.8 VDC filtered power source with at least 3 amps of constant current and no current limiting?

**YES**

Replace connector.

**NO**

Replace power supply.

**NO**

Replace electronics.

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**Fig. 23**

Control panel inside RV

- Pin connected to white wire
- Pin connected to black (ground) wire
- Screw head connected to white wire
- Screw head connected to black (ground) wire
How to test voltages when checking electronics

CAUTION! Improper alignment of connector plug can cause system failure. USE EXTREME CARE when making connection. Unit MUST BE DISCONNECTED FROM POWER SOURCE before connecting.

Measuring voltages present at wall plate control will aid in determining damaged circuitry in electronics housing.
Set voltage meter to DC and touch black meter lead (-) on meter to #9 screw terminal on wall plate connector. (Black wire - ground)
Touch red meter lead (+) to each of the colored wires listed below.

Symptom: Unit may not park.
1. **White** wire voltage range 4.8 VDC - 5 VDC.
   (4.7 would indicate damaged circuitry in the electronics housing — replacement of electronics housing needed.)

Symptom: Unit may fail to rotate or elevate.
2. **Purple** wire voltage range 4.8 VDC - 5 VDC.
   (4.7 would indicate damaged circuitry in the electronics housing — replacement of electronics housing needed.)

3 - 6. **Blue, green, yellow, orange**. These wires should measure .5 VDC or 1.8 VDC, depending on LED states.
7. **Red** wire will read supply voltage to the unit when wall plate is switched on.
8. **Brown** wire will read primary voltage supplied to unit (11 to 13.8 VDC)
9. **Black** wire is ground.

For more information, or help with your product, call Winegard Technical Services toll-free at 800-788-4417, Monday through Friday, 7:30 am to 5:00 pm, Central Time.