

troubleshooting Channel Master 9521 antenna rotators

normal operation

The unit does NOT rotate thru 360°, it goes from 0° to ~358°, then back to 0°.

Part of the install process is to sync the 2 units. On the controller, press the unlabeled SYNC button (to the left of the UP and DOWN buttons). The display should change to SY_ and the motor will rotate for a minute or 2. Verify that the motor rotates showing that it's in the SYNC mode. (the SYNC button can be a little balky sometimes).

When properly sync'ed, the arrow on the rotating section should match the embossed line on the base when the display shows 0 degrees.

At power up, the display will go blank after 5 seconds until a button is pressed. This is NORMAL.

compatibility

Per Channel Master, the current CM controller, 9537, can replace / upgrade these older controllers:
models 9500, 9510(A), 9512, 9513, 9515(A) or Radio Shack 15-122

Per 1 feedback on Amazon, the 9537 controller will work with the AntennaCraft TDP-2 motor.

The replacement power supply is CM 45-1312, 18Vac, 1A. The power supply is rated for 60 Hz only.

The controllers have a handful of configuration items, some for operating with a universal remote, see the manual for more info. A PDF of the manual is on the Channel Master web site.

troubleshooting

Repeat the sync process, see above.

Advanced troubleshooting is probably best done when both units are visible to see what's going on. Use a short piece of cable and wire it up right on the kitchen table (preferably w/o the mast & antenna).

Double check that the wiring connections / colors are the same on both ends.

Check the cable for shorts or opens that might have happened during installation (cuts, pinches, etc).

Check that wiring doesn't exceed the max length as listed in the manual (PDF available on-line). It varies with the wire gauge. JSC5932 is 20 AWG 3 conductor and is rated for a max of 280'.

Unplug the control unit from the wall for 20 seconds to reset it. On power up, it should display "60H".

If the display shows "50H" at power up, the position of the rotator will NOT match the controller. Fix by unplugging for 20 sec, hold UP and DOWN buttons in as the unit is plugged in. Should now show 60H. Then resync as described above.

60H or 50H displayed at power up is NOT an indication of the actual AC line frequency, it's a setting that can be changed. Not casual to the obvious observer.

The rated temperature range is -20°C to +55°C = -4°F to 131°F. The unit isn't guaranteed to work on the coldest days.

Check for a mechanical obstruction that could be restricting the rotation, such as:

- a U bolt snagging on something
- not enough slack in the antenna cable to allow full rotation
- ice buildup in the winter
- a small UFO tangled in the antenna / rotator system

If the CM remote doesn't work, check that the base shows "HH1" at power up, see manual to change.

advanced troubleshooting

Info straight from CM.

AC voltage readings on outputs when all wires are properly connected to rotator. Readings are likely within ~15%.

- Voltage between pins 1 and 2: 26 Vac while pressing UP or DOWN
- Voltage between pins 2 and 3: 17 Vac while pressing UP or DOWN
- Voltage between pins 1 and 3: 17 Vac while pressing UP or DOWN
- For all 3 pairs, the output will be 0 Vac when no buttons are pressed (if the controller isn't counting / rotator not moving).

Symptoms if wires are reversed

- wires #1 and #2 are reversed
 - the rotator will run backwards
- wires #2 and #3 are reversed
 - MAY run slowly backwards when UP is pressed
 - DOWN button will just cause the motor to buzz
- wires #1 and #3 are reversed
 - UP button will just cause the motor to buzz
 - MAY run slowly backwards when DOWN is pressed

Nov-2-2017