Satellite TV Antennas

WINEGARD

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Although all TRAV’LER multi-satellite antennas include a TRAV’LER mount base and a satellite provider specific reflector, the dimensions vary in size between the DIRECTV SWM TRAV’LER antenna, the DISH®/Bell TV™ TRAV’LER antenna, and the Shaw Direct TRAV’LER antenna (see table 2.1).

### TABLE 2.1: Dimensions of TRAV’LER antennas

<table>
<thead>
<tr>
<th></th>
<th>DIRECTV SWM TRAV’LER antenna</th>
<th>DISH/Bell TV TRAV’LER antenna</th>
<th>Shaw Direct TRAV’LER antenna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of assembled antenna</td>
<td>44&quot;</td>
<td>42&quot;</td>
<td>46&quot;</td>
</tr>
<tr>
<td>Width of antenna with reflector</td>
<td>34&quot;</td>
<td>25&quot;</td>
<td>37&quot;</td>
</tr>
<tr>
<td>Width of antenna without reflector</td>
<td>23.5&quot;</td>
<td>23.5&quot;</td>
<td>23.5&quot;</td>
</tr>
<tr>
<td>Maximum width of mount base</td>
<td>24&quot;</td>
<td>24&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>Minimum width of mount base</td>
<td>21&quot;</td>
<td>21&quot;</td>
<td>21&quot;</td>
</tr>
</tbody>
</table>

Aside from the parts included with all models of TRAV’LER antennas, the DIRECTV SWM Slimline TRAV’LER (SK-SWM3) antenna also includes the following parts:
1. 21V SWM power inserter
2. DIRECTV® 4-way SWM splitter
WARNINGS
Do not attempt to install this system in the rain or under any wet conditions. Moisture may affect electronics and void your warranty.

Do not paint the antenna. Painting the antenna will void your warranty.

Pay attention to the pinch points as the antenna raises. The pinch points should be labeled on the antenna.

Roof Location Requirements
Before installing the antenna, make sure that the chosen location meets the minimum roof space requirements for the antenna (see table 2.2). Note that the length of the antenna must be parallel to the centerline of the vehicle.

<table>
<thead>
<tr>
<th>TABLE 2.2. Roof space requirements for TRAV’LER antennas with reflector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum area required (length x width)</strong></td>
</tr>
<tr>
<td>DIRECTV SWM TRAV’LER antenna</td>
</tr>
<tr>
<td>DISH/Bell TV TRAV’LER antenna</td>
</tr>
<tr>
<td>Shaw Direct TRAV’LER antenna</td>
</tr>
</tbody>
</table>

For the TRAV’LER antenna to safely operate, the chosen location must meet the clearance requirements for the antenna (see table 2.3). Within the operational radius (~3’), there should not be any obstructions taller than the lowest operational height of the antenna, and there should not be any obstructions above the antenna that will prevent the antenna from raising.

<table>
<thead>
<tr>
<th>TABLE 2.3. Clearance requirements for TRAV’LER antennas in inches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational radius</strong></td>
</tr>
<tr>
<td>DIRECTV SWM TRAV’LER antenna</td>
</tr>
<tr>
<td>DISH/Bell TV TRAV’LER antenna</td>
</tr>
<tr>
<td>Shaw Direct TRAV’LER antenna</td>
</tr>
</tbody>
</table>

For best performance and to reduce signal acquisition time, park the vehicle on a level surface that is free of obstructions such as trees or buildings.

Before removing the TRAV’LER antenna from its box, contact your RV dealer or manufacturer. Your RV may be pre-wired or have a reinforced area for this system.

Units pre-wired for a TRAV’LER antenna have the communication cable pre-ran for easier installation.
Roof Location Requirements, cont.
The chosen location on the roof must be within five degrees of level and offer enough support for a secure installation. Do not install the TRAV'LER antenna in a location where a gap of 3/16" or more exists between the bottom of the antenna and the roof, as the antenna may damage the roof.

Finally, choose a location for cables to enter the vehicle. Cables must not be run through the area where the reflector stows. Cables in this area may interfere with the operation of the TRAV'LER antenna and may cause damage to the object or the antenna.

Installing the TRAV'LER Mount Base
After choosing a location on the roof for installation, place the mount base in the chosen location. Rotate the base until the marked “FRONT” of the base faces the front of the RV. The centerline of the TRAV'LER antenna must be on or parallel to the centerline of the vehicle. Level the base front-to-back and side-to-side.

Once the mount base is in the chosen location, mark through the screw holes on the base, and trace around the perimeter of the unit.

Move the mount out of the installation area, and use a solid bead of sealant inside the traced outline to connect the screw marks (see fig. 2.6).

Carefully place the TRAV'LER mount base directly onto the sealant. Check with your vehicle manufacturer for any special screw requirements for your vehicle, and screw the mount base to the roof with nine screws.
Wiring the TRAV’LER Antenna

When connecting the DIRECTV SWM TRAV’LER antenna to receiver(s), only port C should be used for making connections to the mount base; multiple receivers will connect to the mount base via the provided splitter.

To connect the DIRECTV SWM TRAV’LER antenna to receiver(s), complete the following steps (see fig 2.7):

1. Connect the power/control cable running from the mount base to the “DC OUT/ANT. COMM.” port of the interface box.
2. Connect the power supply to the “DC IN” port of the interface box.
3. Connect one end of the AC power cord to the power supply and the other end to a 110 V outlet.
4. Connect a coax cable running from port “C” of the mount base to the “POWER TO SWM” port of the power inserter.
5. Connect a coax cable from the “SIGNAL TO IRD” port of the power inserter to the “In from SWM” port of the splitter. Terminate unused splitter outputs with a 75 ohm termination cap.
6. Connect a coax cable from the splitter to each receiver. The receiver(s) should already be connected to the TV(s).
7. Plug in the power inserter to a 110 V outlet.

If using a SK-SWM and a dome, Mike recommends wiring as two separate systems or use the DSWM30S module.

Mike’s Notes: The supplied power inserter needs a minimum 100 VAC and outputs 21 ± 1.2 VDC.

The power inserter must not be mounted on the roof of the vehicle. The power inserter must always be installed inside the vehicle.

If hooking up to only one receiver, the splitter is not needed, but the power inserter must still be installed.

The DIRECTV SWM TRAV’LER antenna can alternatively be wired so that a cable runs from the TRAV’LER antenna to the splitter and from the splitter to the power inserter and receiver(s). In this setup option, the splitter can be mounted on the roof of the vehicle. For more information, refer to the installation manual.

Works with receiver models 12 and higher except for R-15.

Troubleshooting Summary:
1. Receiver
2. Voltage
3. Coax
4. Substitute
For the long version of Troubleshooting go to page 28.
Wiring the TRAV’LER Antenna, cont.

Once the base has been properly installed, cables should be connected. Cables should be run with some slack. In order to leave room for service, do not pull cables too tightly. Depending on the length of the cable on the roof, you may need to use cable clamps between the unit and the cable entry plate. Clamping every 12–16" should eliminate any unnecessary cable movement.

The DISH/Bell TV TRAV’LER antenna and Shaw Direct TRAV’LER antenna all require the following steps for connecting to the interface box:

1. Connect the power/control cable running from the mount base to the “DC OUT/ANT. COMM.” port of the interface box.
2. Connect the power supply to the “DC IN” port of the interface box.
3. Connect one end of the AC power cord to the power supply and the other end to a 110V outlet.

If setting up a DISH/Bell TV or Shaw Direct TRAV’LER antenna, then connect a coax cable from the mount base to each receiver (see fig. 2.8).

A separator is used with a DISH DVR. One “supply coax” satisfies both tuners in the DVR, no need to add a second coax to a slideout. All components must have the DP Plus logo. You can get a separator from a DISH authorized retailer or on the internet. One possible source is Pace PH#1-800-444-7223.

If using three receivers, connect the third receiver to port C. Coax port C is disabled during the search process; as a result, signal acquisition may be delayed for the third receiver.
Wiring the TRAV’LER Antenna, cont.

Wiring Diagram for Winegard® SK-1000 with Solo Node, 1 Hopper™, 2 Joeys™ and a Splitter (see fig. 2.9) and for Hopper 3, 4K ultra high HD with 16 tuners. Hybrid Solo hub is used, see next page.

Hopper Rules:
1. The Hopper and Joey equipment can at times generate excessive heat. Be sure to allow proper ventilation to prevent equipment from over-heating.
2. To maintain proper ventilation and prevent excessive heat build-up, it is recommended that you do not stack the equipment directly on top of one another.
3. The Hopper contains a hard drive, in-motion viewing could damage the hard drive and cause premature failure of equipment.

FIGURE 2.9. Wiring Diagram for Winegard® SK-1000 with Solo Node, 1 Hopper™, 2 Joeys™ and a Splitter (SK-1000 pictured here)
Winegard Updates TRAV’LER Compatibility Tech Info/Bulletin:

Winegard TRAV’LER Compatibility with Hopper 3:
Any Winegard TRAV’LER SK-1000 unit is compatible with a Hopper 3 from DISH. The components needed for installation and setup will vary based on when the TRAV’LER was manufactured. The manufacture date is available by referencing the serial number, which can be located on the turret and or on the owner’s manual.

For TRAV’LER units manufactured prior to 2018:
A DPH42 switch kit is required for any antenna manufactured prior to 2018. The switch kit is available through most DISH retailers and distributors, or can be purchased directly from Winegard as part number SKDPH42.

For TRAV’LER units manufactured after January 1, 2018:
A DPH LNB may be used. The wiring diagram is detailed on page 2. There is a Diagnostics page screen-shot of the DPH42 checkswitch after successful installation on page 3.

Wiring Diagram for SK-1000 Trav'ler with DPH42 switch and Hopper 3 with 2 clients
- The Power Inserter must be installed in the cable connected to the switch’s “To Receiver Satellite In 1” port.
- The Power Inserter must be installed indoors.
- Use weather caps – not terminators – for sealing off all unused ports on the switch. Weather caps have a flat top.
- Use a Solo Hub or Duo Hub for all Hopper receivers; a Solo Node or Duo Node is not compatible.
- Use RG-6 cable rated between 950-3000 MHz.
- The Switch displayed in the diagnostics screen will be DPH42 as shown on the following page.

Hubs and taps can be found on the internet or from Pace. Pace also can provide DISH troubleshooting.
A Wally network of receivers can be added using a splitter off of the other output.
A Hybrid LNB can be substituted for the standard 1k.2 LNB shipped with the TRAV’LER. The Hybrid LNB (DPH LNB) is available through most DISH retailers and distributors, or can be purchased directly from Winegard as part number RPSK01H.

Connecting a SK-1000 TRAV’LER with Hybrid LNB to a Hopper 3:
- Connect Port 1 on LNB to C-Port on TRAV’LER turret top.
- Connect 1 cable to C-Port on TRAV’LER base to run into RV. DO NOT USE PORTS A or B.
- Connect cable in RV from TRAV’LER to Solo Hub, then run cables to Hopper 3 and Joey’s as needed for each setup.
Sealing

After completing wiring, return to the roof. Seal around the hole where cables enter the vehicle, and seal around the cable entry plate (see fig. 2.11).

Run a solid bead of sealant around the edge where the transition plate meets the roof, making sure to cover each screw head. Be careful not to get any sealant above the transition plate. This way, the unit can be removed (if necessary) from the transition plate without breaking the sealant.

If the TRAV’LER antenna is not sealed properly, water may get into the unit, and the unit will fail due to corrosion.

Mike’s Notes: Stuff a paper towel in hole made for the coax, preventing any self-leveling lap sealant from showing up inside the RV.
Installing the Reflector

In most cases, the reflector can be installed with the unit in the stowed position.

Basic Operation

Once the sealant has begun to cure, the TRAV’LER antenna can be raised by pressing and holding “POWER” for two seconds; the antenna will then automatically begin searching for satellites. The top line of the interface screen will display the antenna type, and after peaking on a signal, the bottom line of the interface screen will display an asterisk for each satellite found (see table 2.4). Before traveling, the antenna must be stowed. Press “POWER” to stow the antenna. Once the antenna is stowed, the power will shut off.

<table>
<thead>
<tr>
<th>TABLE 2.4. Interface box displays for various TRAV’LER antennas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antenna type</strong></td>
</tr>
<tr>
<td><strong>(top line display)</strong></td>
</tr>
<tr>
<td>DIRECTV SWM TRAV’LER antenna</td>
</tr>
<tr>
<td>DISH/Bell TV TRAV’LER antenna (used with DISH programming)</td>
</tr>
<tr>
<td>DISH/Bell TV TRAV’LER antenna (used with Bell TV programming)</td>
</tr>
<tr>
<td>Shaw Direct TRAV’LER antenna</td>
</tr>
</tbody>
</table>

Receiver Setup

After the TRAV’LER antenna has found and locked onto satellites, the receiver needs to be set with the following selections (see fig. 2.13).

If it is not possible to install the reflector with the unit in the stowed position, press “POWER” to turn on the unit, and as the antenna raises, press “POWER” and “SELECT” at the same time; when the antenna stops moving, the reflector can then be installed.

If the TRAV’LER antenna cannot find the primary satellite (119° for DISH, 101° for DIRECTV, 91.5° for Bell TV, or 107° for Shaw Direct) due to an obstruction, the search routine will fail. In this case, the TRAV’LER antenna will stow, and the interface box will indicate a failed search.

Online receiver setup guides are available for the TRAV’LER antenna at www.winegard.com/receivers/setupguide.php.

Mike likes to install the reflector after the Trav’ler is mounted. “I find it easier to get to the screws and then I don’t get sealant on the reflector”. See “Basic Operation” and hard power off to do it.

If the unit is hard to install with the reflector, cut power and use the SELECT button to install it. Place it correctly and adjust so it isn’t an obstruction. If it’s an obstruction, adjust the reflector to allow it to pass. If it’s a concrete wall, it will be hard to get the best signal, so a better option would be to use a larger antenna with a sturdier reflector.
Search Modes

The TRAV’LER antenna offers a simple one-button automatic operation. In addition to Automatic mode, the interface includes a Manual mode with a user menu for advanced features. Always use Automatic mode for normal operation.

Raising, Lowering, and Stowing the Antenna

The user menu includes options to manually move the dish, including raising, lowering, and stowing the antenna.

To enter the user menu, press the Power button for two seconds or until the interface displays “POWER ON.” Once the power is on, release the Power button, and press and hold the Enter button for two seconds. The interface will ask if you wish to enter the user menu. Press the Select button to move the asterisk to “Yes,” and press the Enter button to confirm the selection.

To raise, lower, or stow the antenna, enter the Installation menu by pressing the Select button until the asterisk is next to Installation and then pressing the Enter button to confirm the selection.

From the Installation menu, the antenna can be manually raised or stowed. The antenna will raise in increments.

The antenna can also be lowered from the Installation menu. Keep in mind, however, that lowering the antenna is not the same as stowing the antenna, even though the antenna may appear to be stowed. The lower function was designed to help a user who may hit an obstruction while deploying and who needs a way to lower the unit in order to prevent damage. When lowering the dish, it is a good idea to have someone watch the operation of the TRAV’LER antenna; if the TRAV’LER antenna is skewed, the reflector may contact and/or damage the roof.

Warning: when lowering the antenna, the antenna lowers in its current position and may potentially lower onto anything that is underneath the dish.

Hard Power Off

To activate the hard power off features, press and hold the Power button and Select button at the same time. The TRAV’LER antenna will stop and turn off.

If the hard power off feature is used, the TRAV’LER antenna may not be in a safe position for travel. Do not move the vehicle until the unit is in the stowed position.
RP-SK21, RP-SK11 & OE-DISH
Conversion kits are available for the TRAV’LER antenna. The conversion kits are compatible with converting the DIRECTV Slimline antenna (SK-3005), DIRECTV triple LNB (SK-3003), or DIRECTV SWM Slimline antenna (SK-SWM3) to the DISH TRAV’LER antenna (SK-1000).

To convert from a DIRECTV TRAV’LER antenna to a DISH TRAV’LER antenna, complete the following steps:
1. If converting a DIRECTV SWM Slimline antenna to a DISH TRAV’LER antenna, remove the power inserter and SWM splitter; these will not be used.
2. Remove the reflector.
3. Disconnect the coaxial cables from the turret, remove the bolt holding the cable harness to the unit, and detach the cable harness from the lift arm.
4. Remove the reflector bracket. If applicable, remove the stiffener plate.
5. If applicable, remove the adaptor plate.
6. If applicable, install a new adaptor plate. Then, align the four holes on the inside of the reflector bracket with the four holes in the adaptor plate (see fig. 2.11). Replace \( \frac{3}{16} " \) Allen screws through the four holes, and tighten.
7. Connect and tighten the coax cables. Leave port D open, and install an F-cap on port D. The F-cap will not be used if converting from a SWM TRAV’LER antenna.
8. Replace the clamp that holds the coax cables to the arm with a \( \frac{5}{16} " \) screw. If the cable tie is missing or was not used to mark the position of the clamp on the cable harness, install the clamp 14" from the end of the connectors.
9. Set the IDU for DISH 1000.
10. Repackage the LNB, and return the repackaged parts to Winegard.

Calibrate EL
If the TRAV’LER antenna is stuck in the deployed position, the elevation may need to be re-calibrated. Select “Calibrate EL” from the Installation menu. After a few moments, the interface box will display, “On EL hard stop?/Yes No*.” If the antenna is pointing as far upwards as it can go, then press the Select button to move the asterisk to “Yes,” and press Enter to confirm the selection. The antenna should now be able to be stowed. You may need to repeat this step. “Restore to factory defaults” is also used when issues occur, or follow the emergency manual stow procedure. Please check for physical damage to the antenna before calling Winegard Technical Services. For additional help call 1-800-788-4417 or email help@winegard.com.

Emergency Manual Stow  **DO NOT USE A DRILL!**
Emergency manual stow can be used as a last resort if unable to stow the antenna otherwise. First, unplug the interface box. Remove the black plastic bolt from the back of the mount. Insert a \( \frac{5}{16} " \) socket extension into the auxiliary drive, and turn clockwise to lower the unit.
Accessories

Various accessories are available for the TRAV’LER antenna, including Model CL-SK26 control cable extension, Model SKA-004 roller plate, and Model SKA-008 thin roof plate. Model CL-SK26 is a 25’ power/communication cable that connects directly to the existing TRAV’LER power cable to allow runs up to 55’. Model SKA-004 is a roller plate for protecting a rubber RV roof. Model SKA-008 is a thin roof support plate for reinforcement at the TRAV’LER antenna mounting location.

Replacement Kits

The following replacement kits are available for the TRAV’LER antenna:

a. Turret Replacement Kits
   • SK-LG20, Large Motor Turret for DIRECTV Slimline/SWM3
   • SK-SM00, Small Motor Turret for DISH 1000/DIRECTV triple LNB
   • RP-SK20, Transition Plate Replacement

b. LNB Replacement Kits
   • RP-SK01, DISH1000 - 2780490
   • RP-SK05, DIRECTV Slimline 5 - 2780594
   • RP-SK09, DIRECTV SWM3 - 2780156
   • RP-SK73, Shaw Direct

c. Reflector Replacements
   • RP-SK11, DISH 1000
   • RP-SK33, DIRECTV Triple
   • RP-SK35, DIRECTV Slimline 5/ SWM3

d. Sheathed Cables from LNB to Turret with P-Clamp and screw
   • RP-SK41, DISH 1000 – 3753873
   • RP-SK45, DIRECTV SL5 – 3753881
   • RP-SK47, Shaw – 3753895
   • RP-SK49, DIRECTV SWM3 – 3753110

e. Back-up and Feed Arm Assembly with No LNB or Sheathed Coax
   • RP-SK81, DISH 1000
   • RP-SK89, DIRECTV Slimline 5 & SWM3

f. Back-up and Feed Arm Assembly with LNB and Coax
   • RP-SK95, DIRECTV SWM3
   • RP-SK65, DIRECTV Slimline 5
   • RP-SK63, DIRECTV Triple
   • RP-SK21, DISH 1000

g. Interior Components
   • RP-SK87, Power Supply and 24’ Power Cord
   • RP-SK83, IDU
   • SKM-854, IDU, Power Supply, and 24’ Power Cord

Accessories available include Model SKA-004 roller plate and Model SKA-008 thin roof support plate (see fig. 2.17).