TracVision® R5SL/R4SL Installation Guide

These instructions explain how to install the satellite TV antenna system on an RV or motor coach. Complete instructions on how to use the system are provided in the *User's Guide*.

Installation Steps

Who Should Install the System?

To ensure a safe and effective installation, KVH recommends that a KVH-authorized technician install the TracVision R5SL/R4SL system. To find a technician near you, please visit **www.kvh.com/wheretogetservice.** If you purchased the product and decide to install it yourself, please see the enclosed warranty statement for warranty implications.

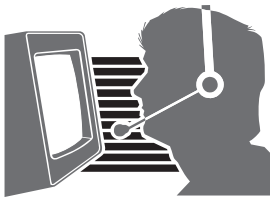
Related Documentation

The following additional documents are provided with the TracVision R5SL/R4SL system:

Document	Description
User's Guide	Operation, setup, and troubleshooting information
Product Registration Form	Details on registering the product with KVH
Warranty Statement	Warranty terms and conditions
Contents List	List of every part supplied in the kit

Technical Support

If you need technical assistance, contact KVH Technical Support:



Phone: +1 401 847-3327

E-mail: techs@kvh.com

PLEASE READ!
Important Addendum to Your Product Manual

This addendum applies to the following TracVision® antenna models: R4SL and R5SL.

IMPORTANT!

This addendum only applies if the vehicle is located in the **southwestern U.S.** (California, Nevada, Arizona, New Mexico, Texas, or Oklahoma) and you need to configure the system for **DISH Network®** service.

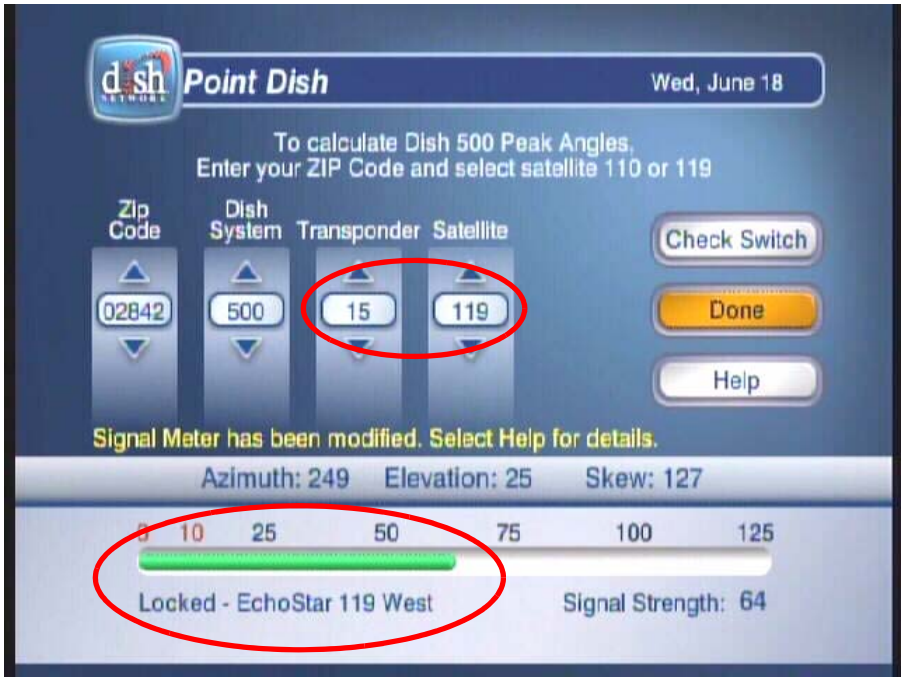
Running Check Switch Tests for DISH Network in the Southwest

Due to the higher elevation angle in the Southwest to the 119 satellite, follow the modified steps below to run the receiver Check Switch tests for a DISH Network configuration.

1. Park the vehicle in a blockage-free area. Ensure the antenna has an unobstructed view of the entire southern sky.
2. Ensure the receiver you wish to configure is connected to the the antenna's RF1 cable.
3. Apply power to the TV and receiver.
4. If the antenna is turned off, turn it back on and wait two minutes for system startup.
5. Using the receiver's remote, go to the "Point Dish/ Signal Strength" screen (press MENU, 6, 1, 1 on most models).
6. Choose **Check Switch**, then press SELECT.
7. Choose **Test**, then press SELECT.

8. Once the TV shows that the Check Switch test is complete, return to the "Point Dish/Signal Strength" screen and choose transponder 15 on satellite 119.

9. Wait until the Signal Strength meter turns green and shows "Locked - EchoStar 119 West," as shown below (it may take up to 30 minutes).



10. When the Signal Strength meter turns green and shows "Locked - EchoStar 119 West," wait 2 minutes, then turn off the TracVision antenna.

11. Wait 10 seconds, then re-apply power to the TracVision antenna. Wait two minutes for system startup.

12. Repeat Steps 5-7 to run a second Check Switch test.

13. Wait at least 15 minutes before proceeding. Disregard any messages that appear on the TV screen.

14. After you have waited 15 minutes, repeat Steps 5-7 to run a third Check Switch test.

15. Refer to the tables on page 3 to verify the values displayed on your TV match those required for your selected service. If your values do not match, repeat Steps 5-7 to run another Check Switch test.

16. When the values match, exit the menu and allow the receiver to download the program guide.

DISH 1000/129 Results

Port	1	2	3
Satellite	119	110	129
Trans	OK	OK	OK
Status	Reception Verified		
Switch	SW64		

DISH 1000/61 Results

Port	1	2	3
Satellite	119	110	61
Trans	OK	OK	OK
Status	Reception Verified		
Switch	SW64		

DISH 500 Results

Input	1	1	2	2
Satellite	119	119	110	110
Polarity	Odd	Even	Odd	Even
Status	Reception Verified			
Switch	SW42			

All other installation and operation steps remain the same as described in the manual.

PLEASE READ!
Important Addendum to Your Product Manual

This addendum applies to the following TracVision antenna models: R4, R5, R4SL, R5SL, and C3.

Power Supply and Grounding Kit

A 15-volt, 4-amp power supply and grounding kit are now included with your TracVision system. Be sure to install these components as explained in this addendum.

The power supply will ensure a stable power input to the TracVision antenna. (Low power, fluctuating power, and RF noise can affect the antenna's performance.) The grounding block will provide a single ground point for the system and provide lightning protection.

Power Supply

Grounding Block

Installing the Power Supply

Follow the steps below to install the supplied power supply.

a. Disconnect vehicle/vessel power. Test the circuit to ensure that no power is present.

b. Connect the power supply's power and ground wires to the switchplate's input power terminals, as shown in the diagram on the following page.

c. Plug the power supply into vehicle/vessel AC power.

Installing the Grounding Block

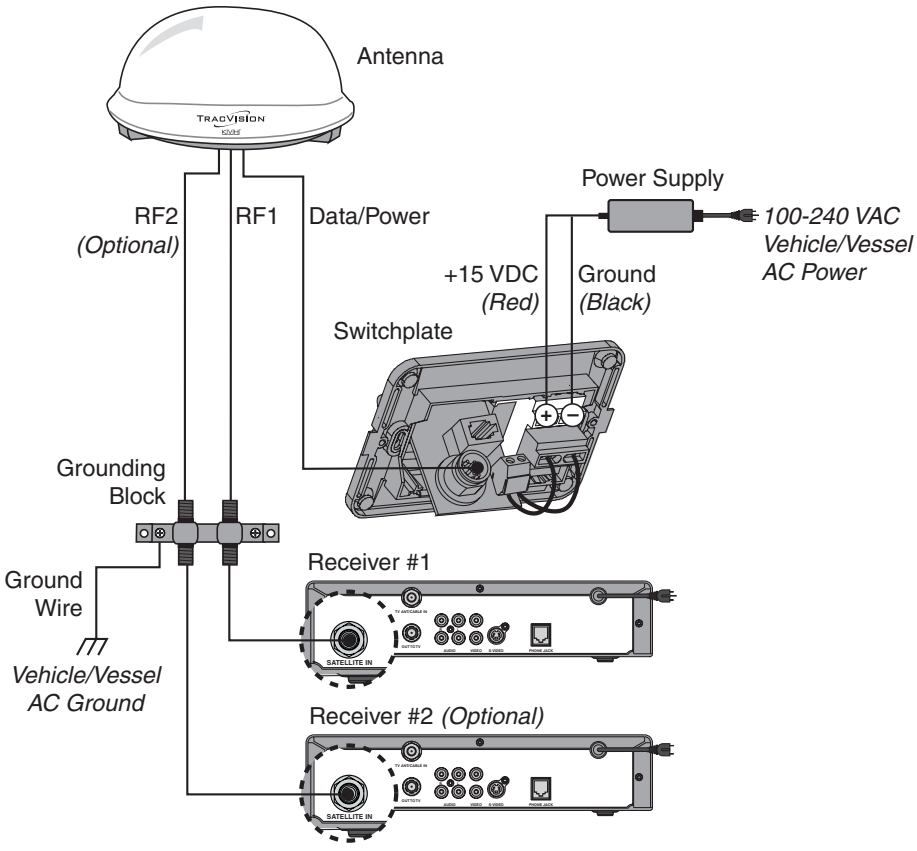
Follow the steps below to install the grounding block.

a. Connect the grounding block in-line with the antenna's RF cable(s), between the antenna and the receiver(s), as shown in the diagram below.

b. Mount the grounding block to a structure inside the vehicle/vessel.

c. Attach the supplied ground wire to either ground screw on the grounding block. Connect the other end of the wire to vehicle/vessel AC ground.

All other installation steps remain the same as described in the manual.



PLEASE READ!
Important Addendum to Your Product Manual

This addendum applies to the following TracVision antenna models: R4, R5, R4SL, R5SL, and C3.

New Switchplate Design

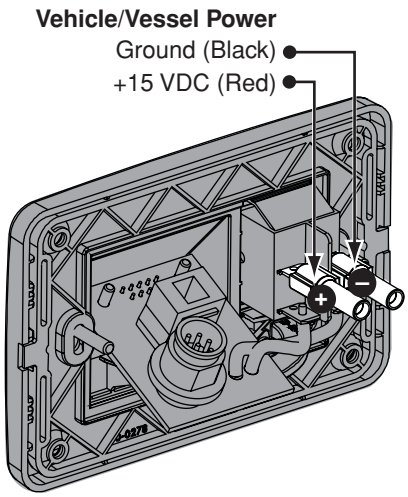
The switchplate provided with your system differs slightly from the version shown in your manual. Its input power connections are simple power terminals rather than a recessed terminal block.

To connect vehicle/vessel power to this new switchplate, follow the steps below.

a. Disconnect vehicle/vessel power. Test the circuit to ensure that no power is present.

b. Crimp the supplied terminal connectors onto the vehicle/vessel power wires (the DC power wires if using an AC/DC power supply).

c. Carefully push the connectors onto the switchplate's input power terminals as shown in the illustration below.



Note: *Strain-relieve the wires to ensure a reliable connection.*

All other installation and operation steps remain the same as described in the manual.

1 Inspect Parts and Get Tools

Before you begin, follow these steps to make sure you have everything you need to complete the installation.

a. Unpack the box and ensure it contains everything shown on the supplied Contents List. Cables are stored beneath the antenna unit during shipping.

IMPORTANT!

Always lift the antenna by the baseplate, never by the radome (see Figure 1).

b. Carefully examine all of the supplied parts to ensure nothing was damaged in shipment.

c. Gather all of the tools and materials listed below. You will need these items to complete the installation.

- Electric drill
- 3/16" (5 mm), 5/32" (4 mm), and 3/32" (2.5 mm) drill bits
- 3/4" (19 mm) hole saw and auger bit
- Phillips and Flat-head screwdrivers
- Cutting pliers
- RG-6 or RG-11 (75 ohms) RF cable, if installing two RF cables
- Silicone sealant, RTV, or equivalent
- 7/16" open-end wrench
- Construction adhesive suitable for the roof
- Fasteners suitable for mounting the antenna to the roof
- Augat IT1000 connector installation tool (KVH Part #19-0242)
- Satellite TV receiver(s) (see Figure 2)

Figure 1 TracVision R5SL/R4SL Antenna

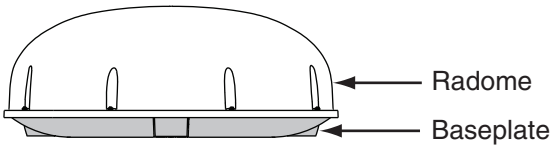


Figure 2 KVH-Validated Receivers*

Standard-definition receivers		
DIRECTV	**DISH**	**ExpressVu**
D12 D11 D10	311	3100
High-definition receivers		
DIRECTV**	**DISH**	**ExpressVu**
H21-200 H20-600	211k 211	6100

****NOTE:** For information on connecting different receiver models, contact KVH Technical Support at 1-401-847-3327. Additional hardware is required for high-definition service/receiver support.*

*****NOTE:** DIRECTV H21 receivers must have manufacturer ID 200; H20 receivers must have manufacturer ID 600.*

2 Plan the Installation

Before you begin, consider the following installation guidelines:

- Minimize blockage. The antenna needs a clear view of the southern sky to receive satellite TV. Use the guidelines in Figure 3 to mount the antenna a suitable distance away from obstructions on the roof, such as air conditioners.

- Ensure the mounting surface is flat and strong enough to support the 28-lb antenna. When placed on the mounting surface, all three mounting plates must lay flat against the roof (within 7/16") to avoid warping the base and damaging the antenna.

- The antenna must be mounted on the centerline of the vehicle with the antenna's cable connector facing the rear of the vehicle (see Figure 4).

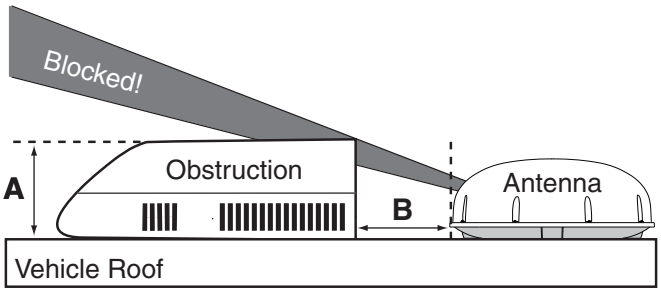
- Identify a location for the 3/4" (19 mm) cable access hole in the roof. The cable access hole should be located at least 6" (15 cm) away from the antenna's baseplate connectors (see Figure 4). Make sure you will not drill into any existing wires or aesthetic structures inside the vehicle

- Choose a dry, flat location for the switchplate that will be easily accessible to the user. Take into account the 28-foot length of the power/data cable that connects from the antenna to the switchplate, the power supply's six-foot power cord, as well as accessibility to the equipment after installation.

  NOTE: *If you need a longer power/data cable, KVH offers 45-foot (KVH Part #32-0730-45) and 60-foot (KVH Part #32-0730-60).*

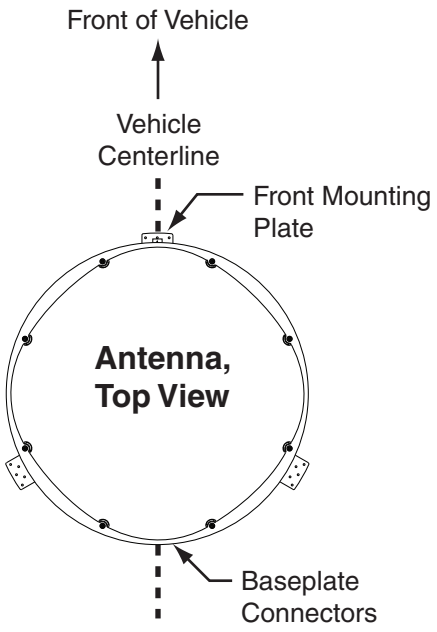
- The grounding block must be mounted within 27 feet of the antenna, within 5 feet of the receiver(s), and within 25 feet of a suitable chassis ground location.

Figure 3 Blockage from Obstruction



Obstruction Height (A)	Min. Distance from Antenna (B)
8"	6"
10"	12"
12"	17"
14"	23"
16"	28"

Figure 4 Antenna Orientation



3 Remove the Restraints

Follow the steps below to remove the shipping restraints.

a. Carefully carry the antenna to the roof of the vehicle.

b. Using cutting pliers, cut and remove the two tie-wrap shipping restraints, located on the bottom of the antenna's baseplate (see Figure 5). **You do not need to remove the radome.**

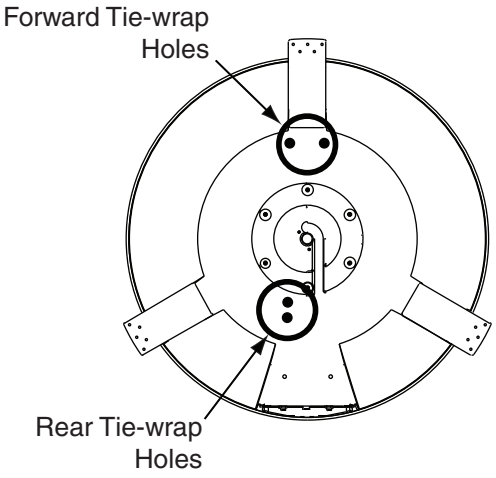
IMPORTANT!

Exercise caution when handling the antenna after removing the shipping restraints. Improper handling might damage the unit.

c. After removing the tie-wraps, seal the four tie-wrap holes with the plugs provided in the kitpack (see Figure 6).

Figure 5 Removing the Shipping Restraints

Figure 6 Tie-wrap Hole Locations



4 Mount the Antenna

Follow the steps below to mount the antenna to the vehicle's roof.

a. Apply appropriate construction adhesive to the bottom of the antenna's three mounting plates across all of the holes.

b. At the mounting location you chose in "Plan the Installation" on page 4, place the antenna on the centerline of the roof, ensuring the arrow on the antenna's front mounting plate points towards the front of the vehicle (see Figure 7).

c. Attach the three antenna mounting plates to the roof using 15 fasteners appropriate for the roof's construction (see Figure 8).

IMPORTANT!

Due to the variation in RV roof construction, consult with the RV manufacturer to determine the safest fastening method.

d. Seal all fasteners with silicone sealant or equivalent (see Figure 9).

Figure 7 Antenna Orientation

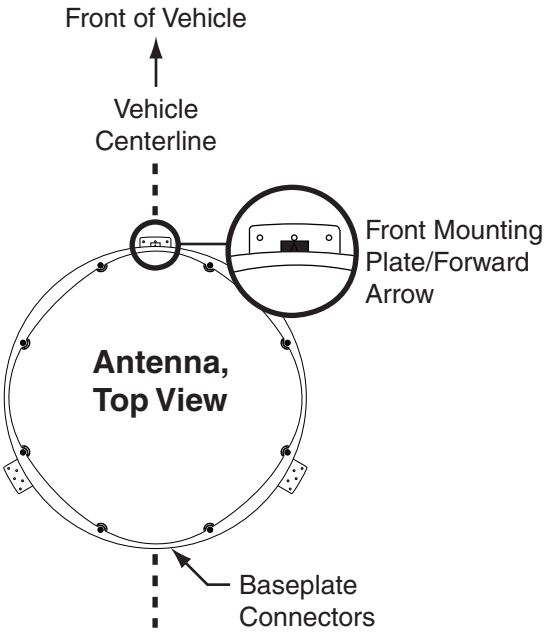


Figure 8 Attaching the Mounting Plates

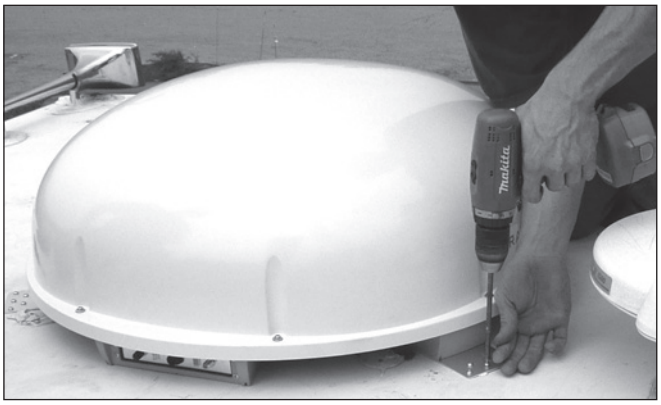
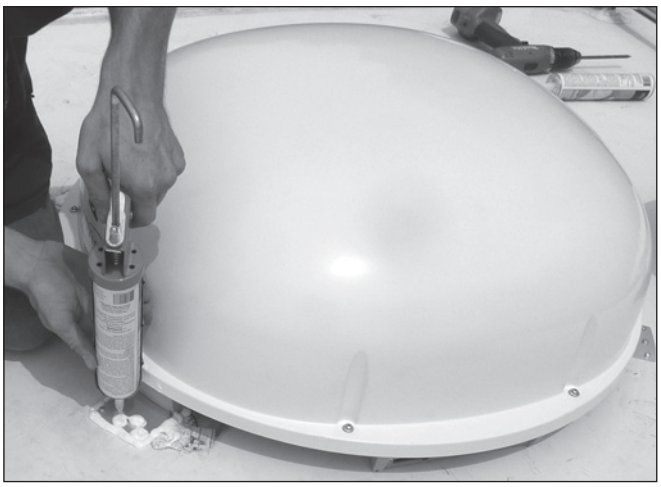


Figure 9 Sealing the Fasteners



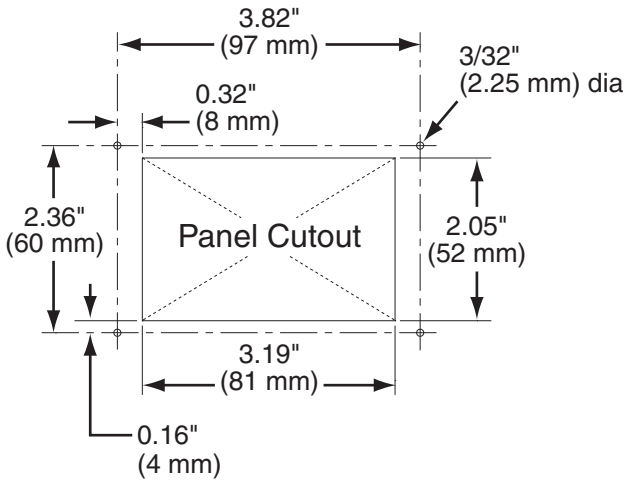
5 Cut Out the Switchplate Mounting Hole

Follow the steps below to cut out the switchplate mounting hole.

a. Using the template supplied in Appendix C on page 23, drill four 3/32" (2.25 mm) holes in the mounting surface at the location you chose in "Plan the Installation" on page 4.

b. Cut out the switchplate mounting hole (see Figure 10).

Figure 10 Switchplate Cutout Dimensions



6 Wire the Antenna

Follow the steps below to wire the antenna.

a. At the location you chose in "Plan the Installation" on page 4, use a 3/4" (19 mm) hole saw to cut out a cable access hole in the vehicle's roof (see Figure 11).

b. Smooth the edges of the hole to protect the cables.

c. If you plan to connect more than one receiver, label both RF cables for later reference.

d. Route the power/data cable and the RF cable(s) down through the cable access hole in the roof. Be sure to maintain a service loop on the roof (approximately 8" (20 cm)).

NOTE: *Ensure the rubber sealing boot on the RF cable is located on the end of the cable closest to the antenna's baseplate connectors.*

e. Connect an RF cable to the antenna's "RF1" connector. Hand-tighten first, then tighten with a 7/16" wrench for 1/4 turn.

NOTE: *Leave the protective cap installed on the RF2 connector unless you are connecting a second RF cable.*

f. If you plan to connect more than one receiver, connect a second RF cable to the "RF2" connector.

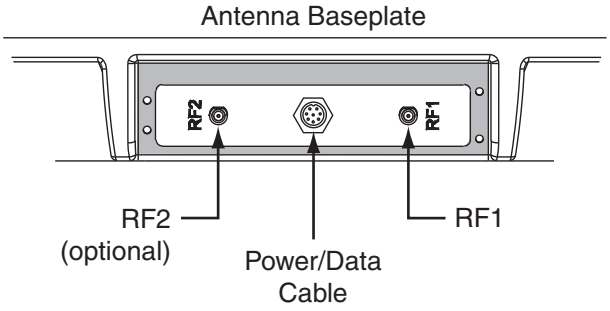
TIP: *If you need to connect three or more receivers, install an Eagle Aspen multiswitch (KVH Part #72-0310); refer to Appendix A on page 21 for more information.*

g. Connect the power/data cable to the antenna's center connector and lock in place (see Figure 12).

h. Slide the rubber sealing boot up the RF cable until it covers the connector. This boot will help protect the connector from the elements.

Figure 11 Drilling the Cable Access Hole

Figure 12 Wiring the Antenna



7 Seal the Cable Access Hole

Follow the steps below to seal the cable access hole.

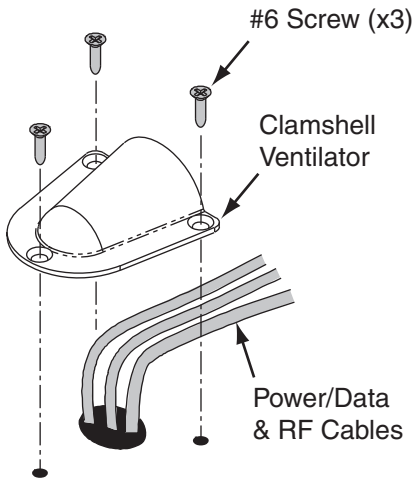
a. Seal the cable access hole on the roof with a liberal amount of silicone sealant, RTV, or equivalent to protect against leakage.

b. Install the clamshell ventilator, supplied in the kitpack, over the cable access hole using three of the supplied #6 screws (see Figure 13).

c. Route the RF cable(s) to the grounding block location you chose in "Plan the Installation" on page 4.

d. Route the power/data cable through the switchplate cutout you made in "Cut Out the Switchplate Mounting Hole" on page 7.

Figure 13 Installing the Clamshell Ventilator



8 Wire the Receiver(s)

Follow the steps below to wire your receiver(s).

IMPORTANT!

If you cut the RF cable(s) or used additional RF cabling, be sure to terminate all RF cables with Snap-N-Seal® F-connectors using an Augat IT1000 connector installation tool (KVH Part #19-0242). Screw-on, push-on, twist-on, and other low-quality connectors will degrade system performance.

a. Connect the RF1 cable to the grounding block, as shown in Figure 15.

b. If you connected an RF2 cable in "Wire the Antenna" on page 8, connect the RF2 cable to the grounding block, as shown in Figure 15.

c. Label the RF1 and RF2 connections at the grounding block (see Figure 15).

d. Locate the 5-foot RF cable supplied in the kitpack. Connect this cable from the grounding block to the receiver's "Satellite In" connector (see Figure 15).

e. If you need to connect a second receiver, connect an RF cable from the grounding block's RF2 connector to the second receiver's "Satellite In" connector.

NOTE: *Since the receiver connected to RF1 controls satellite selection, be sure to wire your receivers accordingly. A receiver connected to RF2 cannot switch satellites, but it can change channels carried on the currently selected satellite.*

NOTE: *If you need to connect three or more receivers for your DIRECTV, DISH 500, or ExpressVu setup, refer to Appendix A on page 21.*

TIP: *For DIRECTV HDTV service, you need to install the KVH HDTV Tri-Sat AutoSwitch Kit (KVH Part #72-0301-03).*

Figure 14 Augat IT1000 Connector Installation Tool

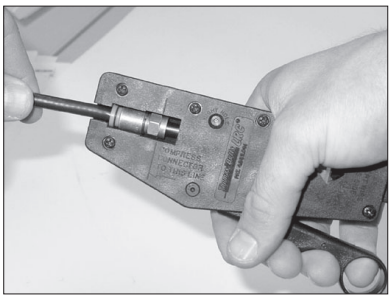
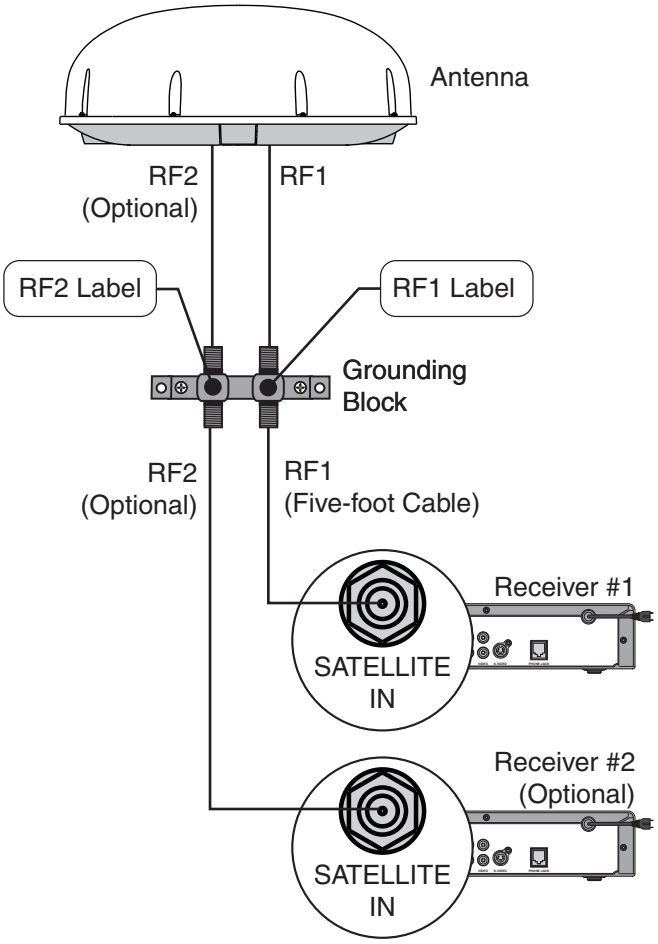


Figure 15 Grounding Block and Receiver Wiring



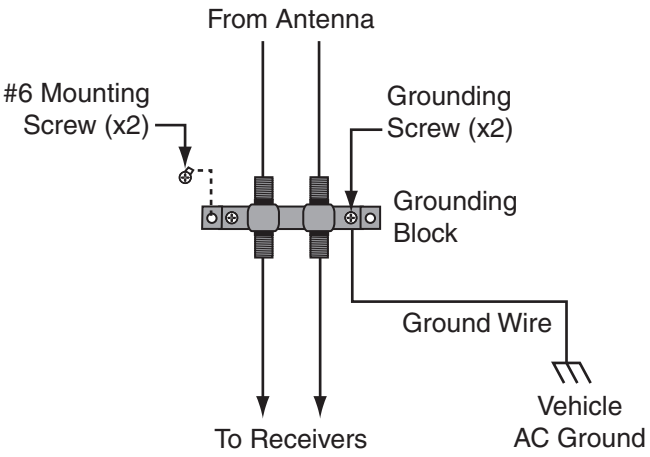
9 Ground the System

Now you need to ground the system to ensure proper operation. Follow the steps below to ground your TracVision system.

a. Attach the supplied ground wire to either grounding screw on the grounding block (see Figure 16). Connect the other end of the wire to a suitable vehicle AC ground.

b. Use the two #6 screws supplied with the grounding block to mount the grounding block at the location you chose in "Plan the Installation" on page 4.

Figure 16 Grounding Block Mounting and Grounding



10 Wire the Switchplate

Follow the steps below to wire the switchplate.

> **CAUTION**
>
> For your own safety, shut down vehicle power before you connect wires. Test the circuit to ensure no power is present.

a. Connect the antenna's power/data cable to the switchplate's power/data connector and lock in place (see Figure 17).

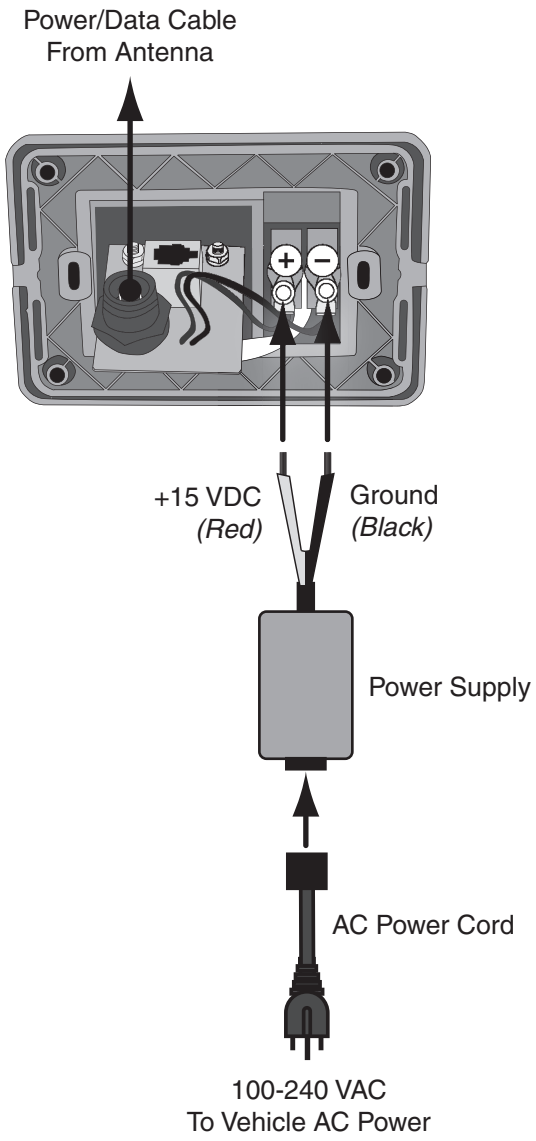
b. Crimp the supplied terminal connectors onto the 15 VDC power supply's DC power wires.

c. Carefully push the connectors onto the switchplate's input power terminals (see Figure 17).

NOTE: *Strain-relieve the wires to ensure a reliable connection.*

d. Connect the AC power cord to the power supply. Then plug the power cord into the vehicle's AC power.

Figure 17 Switchplate Wiring



11 Configure for the Selected Service

Some service configurations require you to connect one or two service keys to the switchplate. Find your service below to determine which service key(s), if any, you need to connect.

NOTE: *Be sure to store any unconnected service keys in the TracVision system's Welcome Kit.*

DIRECTV

The system is already set up from the factory for DIRECTV service. No service keys are required to track the DIRECTV 101, 110, or 119 satellites.

DISH 1000

To ensure you receive proper reception and the local channels for your geographic area, use the map in Figure 18 to determine your appropriate DISH 1000 configuration.

DISH 1000/129

The DISH 1000/129 configuration sets the system to track the DISH 110, 119, and 129 satellites. No service keys are required.

DISH 1000/61

The DISH 1000/61 configuration sets the system to track the DISH 110, 119, and 61 satellites. Connect service key "A" to the front of the switchplate (see Figure 21).

DISH 500

Select DISH 500 if you wish to track only the DISH 110 and 119 satellites. Connect both service keys to the switchplate (see Figure 21 and Figure 22).

ExpressVu

Connect service key "B" to the back of the switchplate to set the system to track the ExpressVu 82 and 91 satellites.

NOTE: *If you wish to set the system to track satellites not listed above, you do not need to connect any service keys. Refer to Appendix B on page 22 for more information.*

Figure 18 Approximate 61 Satellite Areas (DISH 1000 Only)

Figure 19 Service Key Usage

Satellite Service	Key A	Key B
DISH 1000/129	-	-
DISH 1000/61	Connect	-
DISH 500	Connect	Connect
ExpressVu	-	Connect

Figure 20 Service keys

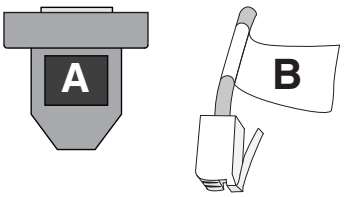


Figure 21 Connecting Service Key A

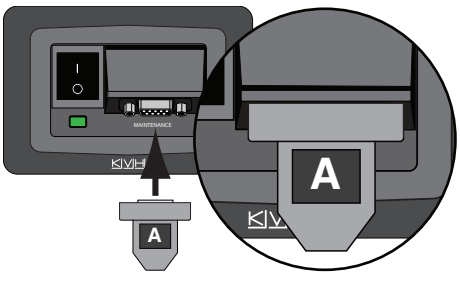
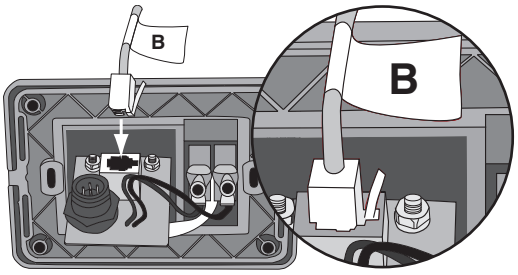


Figure 22 Connecting Service Key B



12 Mount the Switchplate

Follow the steps below to mount the switchplate.

a. Fit the switchplate flush into the panel cutout you made in "Cut Out the Switchplate Mounting Hole" on page 7.

b. Drill out four 5/32" (4 mm) mounting holes in the switchplate's screw cavities (see Figure 23).

c. Mount the switchplate to the mounting surface using four #6 screws.

d. Gently snap the switchplate cover onto the front of the switchplate.

Figure 23 Switchplate Mounting

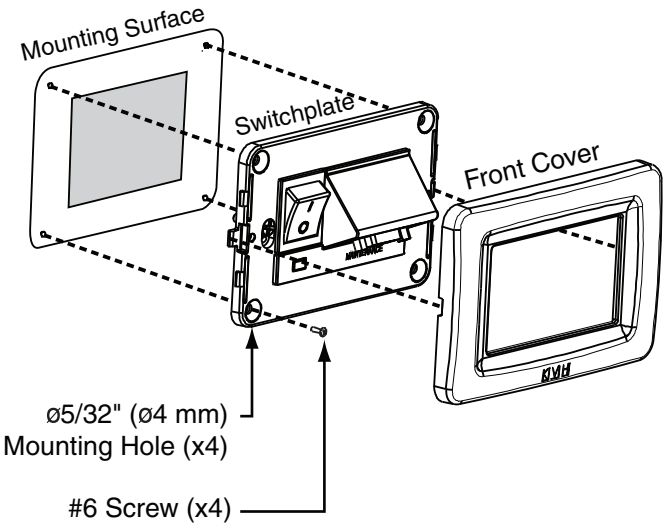
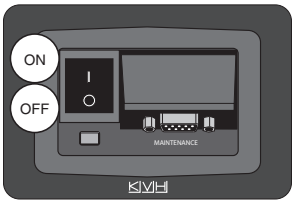


Figure 24 Assembled Switchplate and Power Switch Positions



13 Run Two Check Switch Tests (non-DIRECTV only)

If you installed a **DISH Network** or **ExpressVu** receiver, you need to run two Check Switch tests to configure the antenna and each receiver.

***NOTE:** This is not required for **DIRECTV** setups.*

***NOTE:** You do not need to perform this procedure again unless you add additional receivers or reconfigure your receiver(s) for home use.*

If you are connecting multiple receivers, you need to connect each receiver to the RF1 cable and repeat the procedure below. Once all receivers have been configured, you can reconnect the receivers as desired.

a. Park the vehicle in a blockage-free area.

b. Turn on the TV and receiver. Ensure the receiver you wish to configure is connected to the RF1 cable.

c. Set the switchplate's power switch to the ON (|) position (see Figure 24 on page 14). Wait one minute for system startup.

d. Using the receiver's remote, go to the "Point Dish/Signal Strength" screen (press MENU, 6, 1, 1 on most models).

e. Choose **Check Switch**, then press SELECT.

f. Choose **Test**, then press SELECT. Wait at least 15 minutes for the antenna to record the Check Switch settings.

***NOTE:** Ensure you wait at least 15 minutes before proceeding. The TV screen does not indicate when the antenna is finished recording the Check Switch settings.*

g. After you have waited 15 minutes, repeat Steps d-f to run a second test.

h. Refer to the tables in Figure 25 to verify the values on your TV match those required for your satellite service. If your values do not match, turn the antenna off, then turn it back on and repeat Steps d-g.

i. Exit the menu and allow the receiver to download the program guide.

Figure 25 Second Check Switch Results

DISH 1000/129 Results

Port	1	2	3
Satellite	119	110	129
Trans	OK	OK	OK
Status	Reception Verified		
Switch	SW64		

DISH 1000/61 Results

Port	1	2	3
Satellite	119	110	61
Trans	OK	OK	OK
Status	Reception Verified		
Switch	SW64		

DISH 500 Results

Input	1	1	2	2
Satellite	119	119	110	110
Polarity	Odd	Even	Odd	Even
Status	Reception Verified			
Switch	SW42			

ExpressVu Results

Input	1	1	2	2
Satellite	82	82	91	91
Polarity	Odd	Even	Odd	Even
Status	Reception Verified			
Switch	SW21			

14 Test the System

Now all you need to do is verify that everything works properly. Follow the steps below to test the TracVision R5SL/R4SL system for proper operation.

a. Park the vehicle in a blockage-free area. The antenna requires an unobstructed view of the southern sky to receive satellite signals.

b. Turn on the receiver(s) and TV(s). For details on operating the receiver, refer to your selected receiver's user manual.

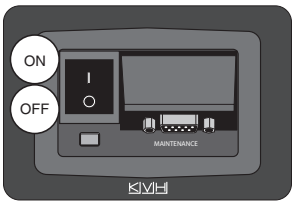
c. Set the switchplate's POWER switch to the ON (|) position (see Figure 26).

d. Within a few minutes, a picture should appear on the TV.

e. **TracVision R5SL only -** Take a road test to verify the antenna tracks the satellite while the vehicle is moving.

f. When you have finished testing, set the switchplate's POWER switch to the OFF (O) position. Be sure to leave the Welcome Kit inside the vehicle for the customer, and ensure any unused service keys are placed inside the kit.

Figure 26 Switchplate ON/OFF Switch



15 Educate the Customer

Be sure to give the Welcome Kit to the customer and explain how to use the product. Also be sure the customer understands the following:

- The receiver(s) must be activated before it can receive satellite TV programming.

  To activate a DIRECTV receiver, call KVH at 1-888-584-4163 (Mon. - Fri., 8:30am - 5pm ET).

  To activate a DISH Network receiver, call 1-888-333-DISH.

  To activate an ExpressVu receiver, call 1-888-SKY-DISH.

- The antenna must have a clear view of the southern sky to receive satellite TV. Common causes of blockage include trees, buildings, overpasses, and mountains. The system will not work inside a garage.

- Keep the radome installed on the antenna at all times. The radome protects the antenna's moving parts from wind, rain, and debris.

- Heavy rain or snow might temporarily interrupt satellite reception.

- Clean the antenna periodically. Dirt buildup on the radome can affect satellite TV reception.

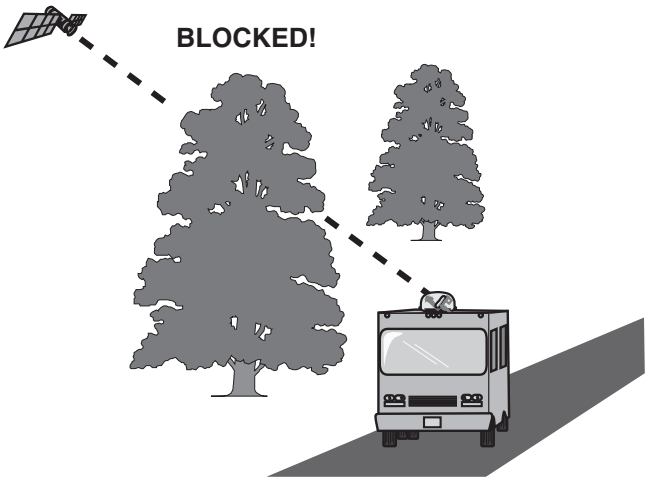
- Please register the system with KVH. The registration process is quick, easy, online, and ensures the best possible service from KVH. Visit **www.kvh.com/register** or refer to the Product Registration Form for details.

- The vehicle must be located within the selected satellite's footprint in order to receive its signals. To view satellite coverage maps, visit **www.kvh.com/footprint**.

- If you need to paint the radome, use only non-metallic automotive paint without a primer coat. Metallic paint impairs satellite signals.

- Refer to the *User's Guide* for complete operation and troubleshooting information.

Figure 27 Blockage Example



Appendices

This section includes the switchplate template and provides supplemental instructions for special or advanced configurations.

Contents

A Connecting 3 or More Receivers

If you need to connect three or more receivers, install an Eagle Aspen multiswitch (KVH Part #72-0310) between the grounding block and the receivers, as shown in Figure A-1.

IMPORTANT!

DISH 1000 configurations must not exceed two receivers.

NOTE: *If you need to connect more than four receivers, contact KVH Technical Support for additional wiring instructions.*

The use of a multiswitch interrupts communications between the receiver and antenna. As a result, you will need to install one of the following for satellite switching:

DIRECTV

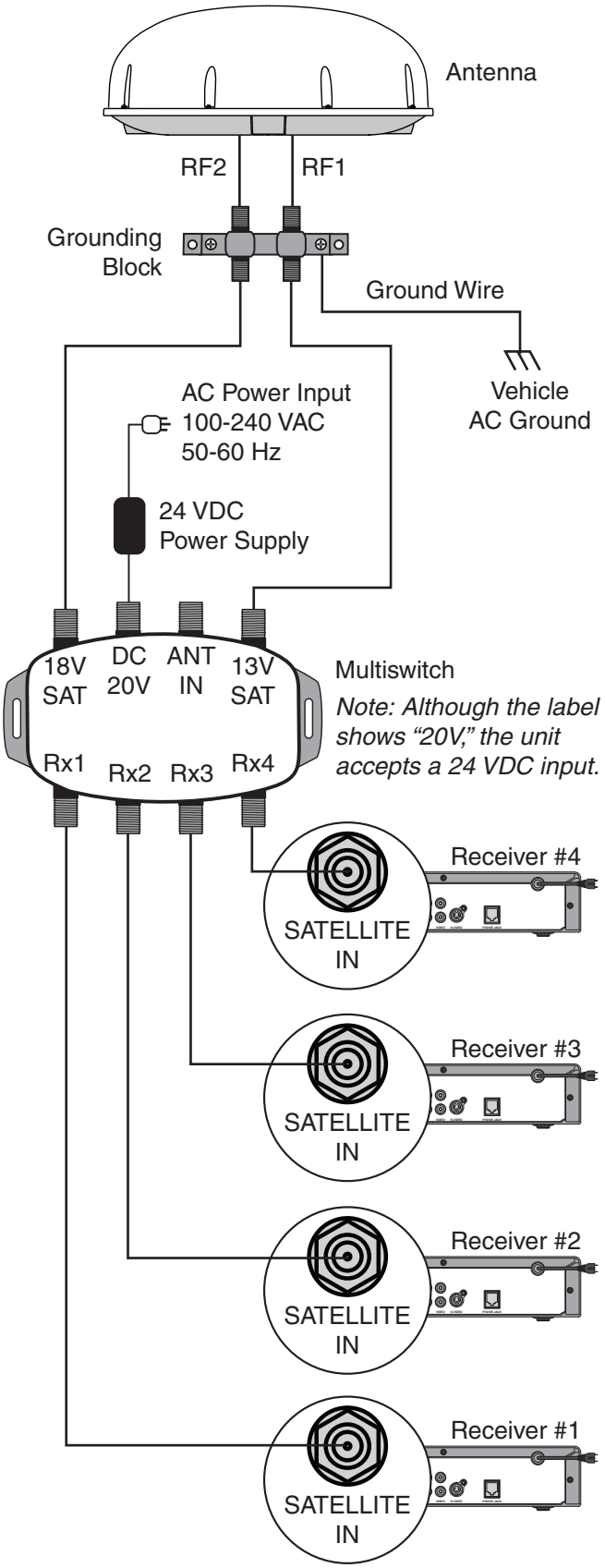
Automatic Switching (Ku-band HD Only): To switch automatically between your selected satellites using a DIRECTV H21-200 or H20-600 receiver, you will need to install the KVH HDTV Tri-Sat AutoSwitch Kit (KVH Part #72-0301-03). You can also equip multiple H21-200 and H20-600 receivers with the Tri-Sat AutoSwitch, allowing you to control satellite selection using multiple receivers.

Manual Switching (Non-HD Only): To manually switch between your selected satellites, you will need the TV/SAT Switch (KVH Part #01-0245). When the TV/SAT Switch is installed, you can switch between your selected satellites at the press of a single button.

DISH 500 or ExpressVu

To manually switch between your selected satellites, you will need the TV/SAT Switch (KVH Part #01-0245). When the TV/SAT Switch is installed, you can use a single button to switch between your selected satellites.

Figure A-1 Wiring 3 or 4 Receivers



B Choosing Alternate Satellites

Although most installations do not require choosing different satellites than those listed in "Configure for the Selected Service" on page 13, you can set up your TracVision R5SL/R4SL to track a pair of alternate satellites.

If you need to set up the system to track different satellites, you will need to connect a PC to the antenna and use the KVH Flash Update Wizard to install your alternate satellites. The TracVision R5SL/R4SL system includes a satellite library that contains the most commonly used satellites. Follow the steps below to configure the system to track satellites from the satellite library.

NOTE: *The Flash Update Wizard is available to KVH-authorized dealers through the KVH Partner Portal.*

a. Connect a PC to your TracVision system, as described in the Flash Update Wizard's Help file. You will enter PC commands into the Flash Update Wizard's "Antenna Comms" window.

NOTE: *For more information on entering antenna commands, refer to the Flash Update Wizard's Help file.*

b. Type **HALT** then press Enter.

c. Choose your desired satellites from the satellite library (see Figure B-1).

d. Type the following command then press Enter. Be sure to use your selected satellite's Install Names.

SATINSTALL,<SAT_A_NAME>, <SAT_B_NAME>

NOTE: *Select the satellite you want to track first as "SAT_A". Once the procedure is complete, the TracVision R5SL/R4SL system will begin tracking that satellite.*

e. Type **ZAP** then press Enter to restart the antenna. Wait two minutes for system startup.

Figure B-1 TracVision Satellite Library

Satellite	Install Name
DIRECTV 72° W	DSS_72
DIRECTV 101° W	DSS_101
DIRECTV 110° W	DSS_110
DIRECTV 119° W	DSS_119
DISH NETWORK 61° W	ECHO_61
DISH NETWORK 110° W	ECHO_110
DISH NETWORK 119° W	ECHO_119
ECHOSTAR 129° W	ECHO_129
ECHOSTAR 148° W	ECHO_148
EXPRESSSVU 82° W	EXPRESSVU
EXPRESSTV 91° W	EXPRESSTV
None	NONE

Figure B-2 Example of Choosing Alternate Satellites

Installing ECHOSTAR 148 Only
HALT SATINSTALL,ECHO_148,NONE ZAP

C Switchplate Template