

TRACVISION[®]

BY KVH INDUSTRIES



TracVision R6 & Multi-service Interface Box User's Guide

TracVision R6 Interface Box User's Guide Addendum

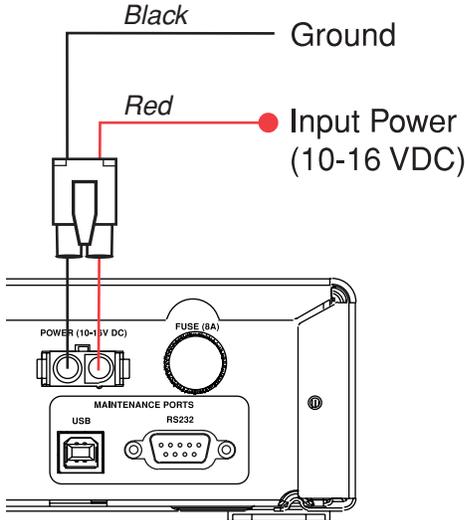
(ECO #7638)

The following change applies to Revision A of the TracVision R6 Interface Box User's Guide (KVH Part Number 54-0324).

Connecting Power

The wiring diagrams on pages 53-60 of the User's Guide show the power connection incorrectly. The wires are reversed.

The diagram below shows the correct power wiring to the TracVision R6 interface box. Be sure to connect the red (positive) wire to +12 VDC vehicle power and the black (negative) wire to ground.



The interface box circuitry has built-in reverse polarity protection. Therefore, if power is wired incorrectly, the electronics will not become damaged.

TracVision® R6

Satellite TV Antenna & Interface Box

User's Guide

This manual provides detailed instructions on the proper operation, setup, and troubleshooting of the KVH TracVision R6 mobile satellite TV antenna system. For basic operation information, also refer to the *Quick Start Guide*. For installation instructions, refer to the *Installation Guide*.



Please direct questions, comments, or suggestions to:

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If you have any comments regarding this manual, please e-mail them to manuals@kvh.com. Your input is greatly appreciated!



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1 – Introduction

This section provides a basic overview of the TracVision R6 system and explains how to use this manual.

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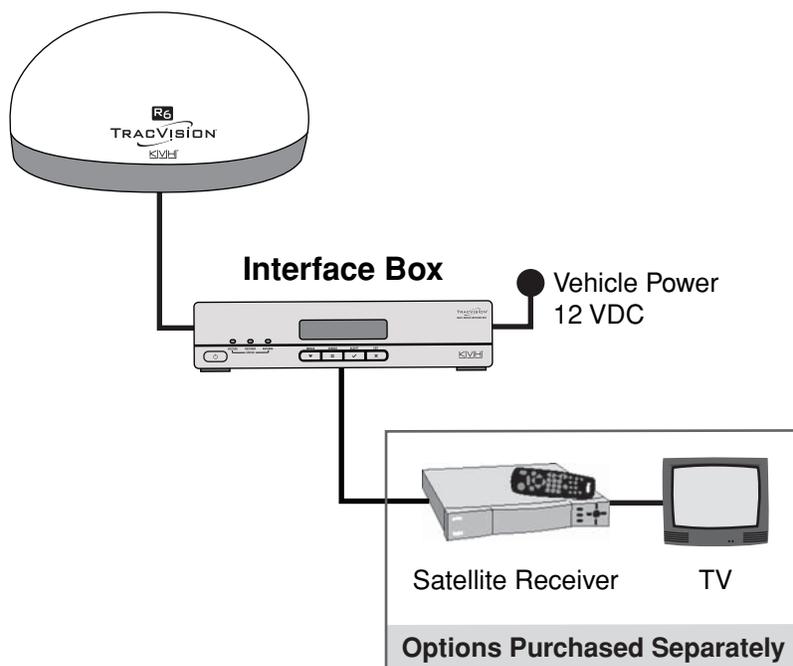
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1.1 System Overview

When connected to your satellite TV receiver and television, the TracVision R6 antenna system delivers live satellite TV to your RV or motorcoach – even while you're on the move! A basic system is illustrated in Figure 1-1. Detailed system wiring diagrams are provided in *Appendix A on page 53*.

Figure 1-1 Basic TracVision R6 System Diagram

TracVision Antenna



System Components

The TracVision R6 includes the following components:

Antenna

Using integrated DVB® and GPS technology, the low-profile (12.5" high) antenna quickly acquires the correct satellite, switches between satellites, and sends TV signals to the interface box. Internal gyros allow the antenna to track the satellite at all times, whether you're parked or cruising down the highway, and its DewShield™ dew elimination system ensures optimum reception.

Interface Box

The interface box allows you to set up and control the system using its four pushbuttons and LCD display. It also supplies power to the antenna and delivers satellite TV signals to your vehicle's satellite TV receiver.



1.2 How to Use this Manual

This manual provides all of the information you need to operate, set up, and troubleshoot the TracVision R6 system.

Who Should Use This Manual

The **user** should refer to the *“Operation”* and *“System Preferences”* sections to learn how to operate the system using the interface box.

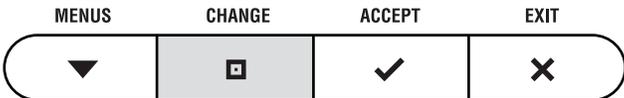
The **user** or **installer** should refer to the *“Initial Setup”* section for information on configuring the system for the desired satellite TV service. The **user** or **installer** should refer to the *“System Wiring Diagrams”* appendix for information on connecting additional receivers or an HDTV converter.

The **user** and/or **servicing technician** should refer to the *“Troubleshooting”* section to help identify the cause of a system problem.

Icons Used in this Manual

This manual uses the following icons to call attention to important information:

Icon	Description
	A helpful tip that either directs you to a related area within the manual or offers suggestions on getting the most from your system
	An alert to important information regarding procedures, product specifications, or product use

Icon

Description
An illustration of the buttons on the interface box; gray shading indicates which button the user should press

Typographical Conventions

This manual uses the following typographical conventions:

Text Example	Description
Press ▼ EXIT to exit the menu.	Both the icon and the name of the button are provided
SELECT SATELLITES	Text as it appears on the interface box display
The display shows "DIRECTV."	Text in quotes is shown on the interface box display
<Satellite name>	Text inside brackets is variable
See <i>Section 3.1, "Turning DewShield On/Off."</i>	Cross-reference to another section in the manual or to a web site

Related Documentation

In addition to this User's Guide, the following documents are provided with the TracVision R6 system:

Document	Description
Installation Guide	Complete product installation instructions
Quick Start Guide	Handy quick reference to basic operation and setup
Product Registration Form	Details on registering the product
Warranty Statement	Warranty terms and conditions
Contents List	List of every part supplied in the kit

2 — Operation

This section explains how to operate your TracVision R6 system. It explains how to turn the system on/off and how to switch between satellites.

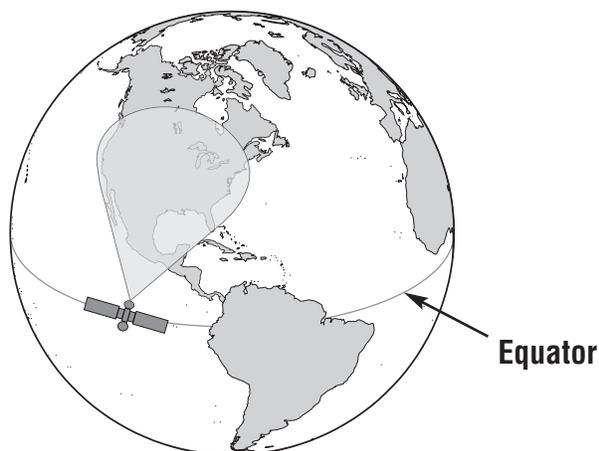
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2.1 Receiving Satellite TV Signals

TV satellites are located in fixed positions above the Earth's equator and beam TV signals down to certain regions of the planet (not worldwide). **To receive TV signals from a satellite, you must be located within that satellite's unique coverage area.**

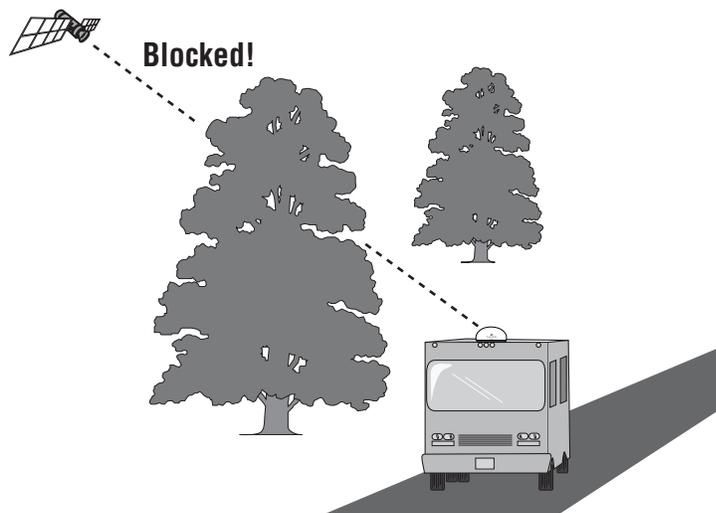
Figure 2-1 Location of the DIRECTV 101 Satellite



For your convenience, KVH provides links to several web sites that offer satellite coverage information. Simply visit our web site at www.kvh.com/footprint.

In addition, since TV satellites are located above the equator, **the TracVision antenna must have a clear view of the southern sky to receive satellite TV signals.** Anything that stands between the antenna and the satellite can block the signal, resulting in lost reception. Common causes of blockage include trees, buildings, and bridges. Heavy rain, ice, or snow may also temporarily interrupt satellite signals.

Figure 2-2 Satellite Blockage



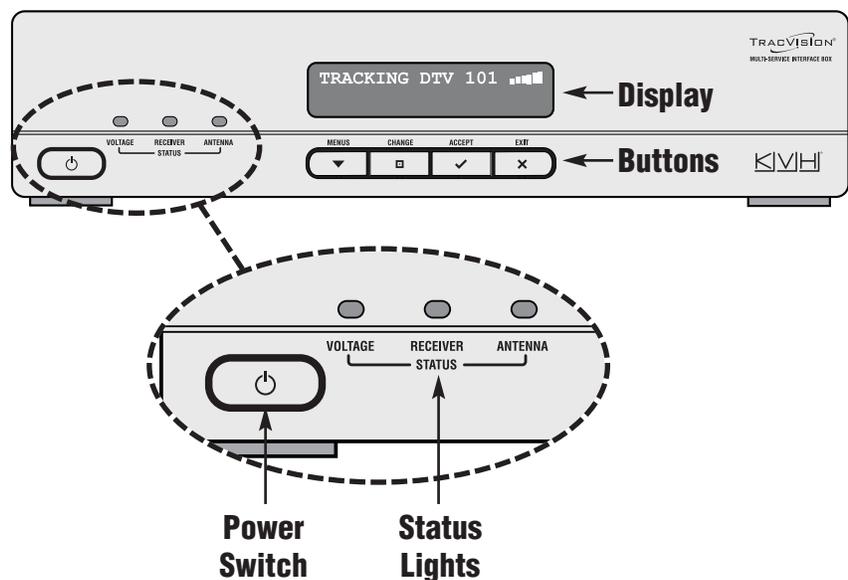
2.2 Turning On the System

Follow the steps below to turn on your TracVision R6 system.

1. Park your vehicle in an area with a clear view of the southern sky, away from trees or tall buildings.
2. Turn on your satellite TV receiver and TV.
3. Press the  Power switch on the front of the TracVision interface box.
4. Wait 1 minute for system startup.

Once the antenna finds the correct satellite, all three status lights on the interface box should be lit solid green. If any lights are not lit green, refer to *Section 5.2, "System Status Lights"* on page 42.

Figure 2-3 Interface Box Components



2.3 Turning Off the System

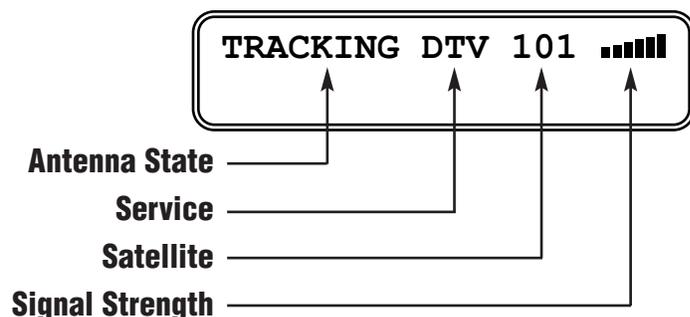
Follow the steps below to turn off your TracVision R6 system.

1. Press the  Power switch on the front of the TracVision interface box.
2. Turn off your satellite TV receiver and TV.

2.4 Understanding the Status Screen

Following startup, the interface box display shows the current system status.

Figure 2-4 Interface Box Status Screen



If your system is set up for an HDTV converter, the status screen differs somewhat. See the table on the following page.

Antenna State

This field indicates the current state of the antenna: IDLE, INITIALIZING, SEARCHING, TRACKING, or ERROR.

Service

This code indicates the satellite TV service that is currently set up in the TracVision R6 system. During initial setup, you can choose from among four services: DTV (DIRECTV), DISH (DISH Network), EXVU (ExpressVu), and MAN (Manual).

Satellite

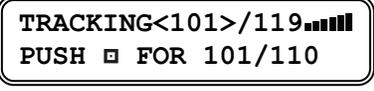
This number is the name of the satellite that the antenna is currently tracking. (*The satellite name refers to the satellite's "orbital slot," which is its longitudinal location above the equator.*)

Signal Strength

These bars indicate the strength of the satellite TV signal, as measured by RF level. The more bars, the stronger the signal, just like a cell phone. In general, you need at least 3 bars for good reception.

2.5 Switching Satellites

If your system is set up for multiple satellites, you can easily switch between them. Use the switching method that applies to your particular setup (see *Section 3, "Initial Setup" on page 21* for details). You can identify the current satellite switching method by the format of the status screen.

Status Screen Example	Satellite Switching Method
	Automatic
	Manual
	Automatic with HDTV Converter

Automatic Satellite Switching

If your system is set up for automatic switching, the antenna automatically switches satellites as you change channels using the receiver's remote control.

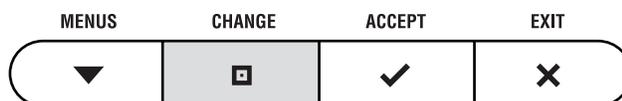
The following antenna setups use automatic satellite switching:

Service	Antenna Setting	Satellites
DIRECTV	OVAL2	101 and 119
DISH Network	DISH500	119 and 110
ExpressVu	DUAL LNB	91 and 82

Manual Satellite Switching

If your system is not set up for automatic satellite switching, you need to use the interface box to switch between satellites.

Press **[square]** CHANGE until the display shows the desired satellite.



Automatic Satellite Switching with HDTV Converter

If you have the optional KVH HDTV converter installed, and your system is set up for DIRECTV automatic switching with an HDTV converter, you can select between two satellite pairs for automatic switching:

101 and 119

101 and 110

The selected pair appears at the top of the display and brackets (<>) surround the satellite that is currently selected for tracking. The antenna automatically switches between the two satellites in the selected pair as you change channels using the receiver's remote control. *In the example below, the 101/119 pair is selected and the antenna is tracking the 101 satellite.*

Selecting the Alternate Satellite Pair

Press **CHANGE** to select the alternate satellite pair.

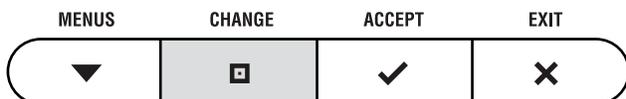
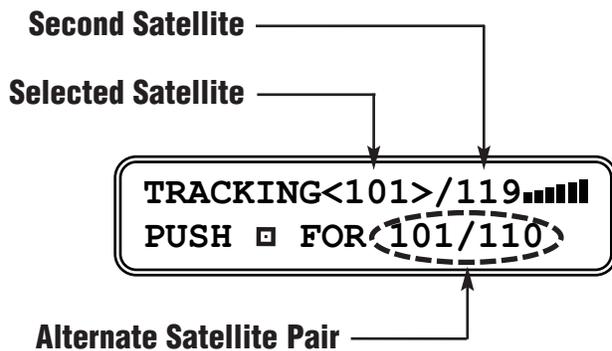


Figure 2-5 Status Screen in Automatic - HDTV Converter Mode



The following antenna setups use automatic satellite switching with the HDTV converter:

Service	Antenna Setting	Satellites
DIRECTV	OVAL3	101, 110, and 119



To order a KVH HDTV Converter (KVH part number 01-0260-06), contact your KVH dealer or call KVH directly at 401-847-3327.



For your convenience, KVH lists HDTV channels, and the DIRECTV satellites that carry them, on the web at www.kvh.com/HDlineup. Since DIRECTV changes its channel lineups frequently, KVH can e-mail updates to you whenever the HDTV lineup changes. Register for this free service when you visit the web site for the first time.

3 — System Preferences

This section explains how to change the settings for DewShield and display brightness to suit your personal preferences. It also explains how to revert these settings to their factory defaults.

Contents

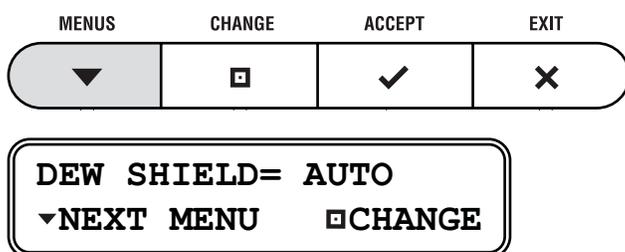
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3.1 Turning DewShield™ On/Off

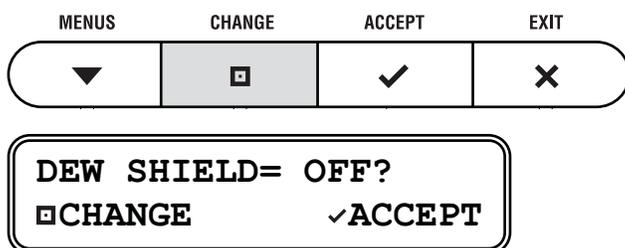
Your TracVision R6 antenna includes the DewShield electronic dew elimination system (*patent pending*). This revolutionary feature keeps the antenna dome clear of dew, ensuring optimum reception of satellite TV signals (moisture weakens signals).

Unless power conservation is a critical concern, you should keep DewShield set to AUTO to prevent dew from forming. Follow the steps below if you need to change the current setting.

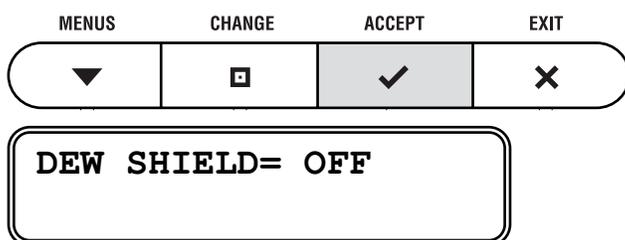
1. Press ▼ MENUS until the display shows “DEW SHIELD”.



2. Press ▣ CHANGE until the display shows the desired setting: AUTO or OFF.



3. Press ✓ ACCEPT.



4. Press ▼ EXIT to exit the menu.

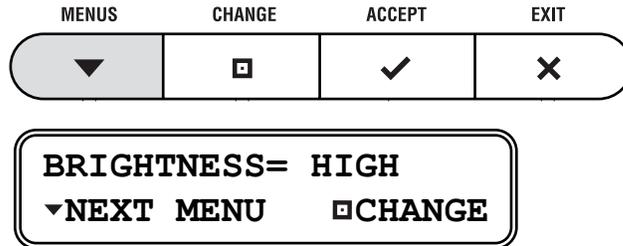


*The DewShield dew elimination system is designed to **prevent** dew from forming on the antenna. If DewShield is set to off, and dew has formed on the dome, setting DewShield back to AUTO will not shed water. For this reason, KVH recommends that you always keep DewShield set to AUTO.*

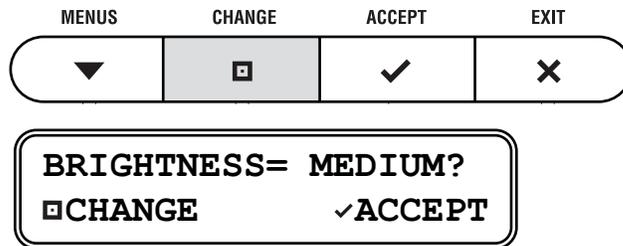
3.2 Adjusting the Display Brightness

Follow the steps below to adjust the brightness of the interface box display.

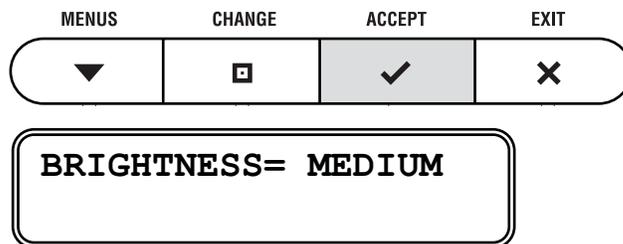
1. Press **▼** MENUS until the display shows "BRIGHTNESS".



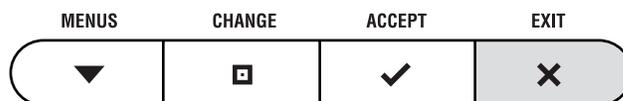
2. Press **□** CHANGE until the display shows the desired setting: **HIGH**, **MEDIUM**, or **LOW**.



3. Press **✓** ACCEPT.



4. Press **▼** EXIT to exit the menu.



3.3 Setting to Defaults

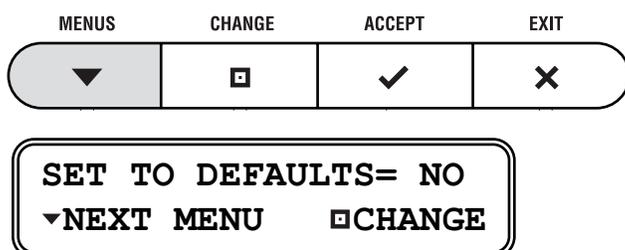
The basic menu functions described in this section are set to the following defaults at the factory:

DewShield: AUTO

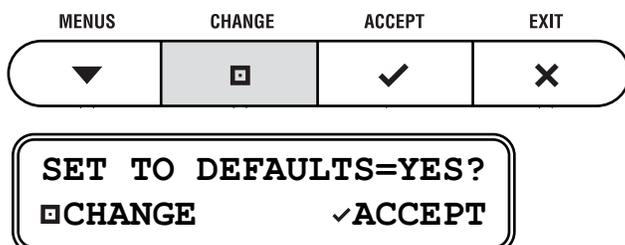
Brightness: HIGH

Follow the steps below if you wish to restore these defaults.

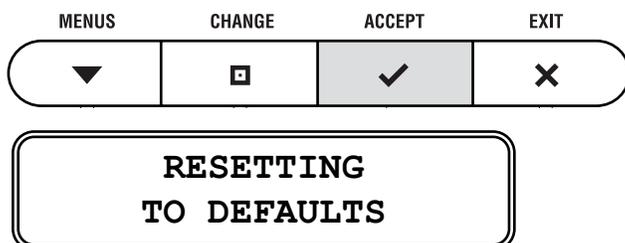
1. Press **▼** MENUS until the display shows “SET TO DEFAULTS”.



2. Press **▣** CHANGE until the display shows “SET TO DEFAULTS=YES”.



3. Press **✓** ACCEPT.



4. Press **▼** EXIT to exit the menu.



4 – Initial Setup

When you turn on the TracVision R6 system for the first time, the interface box display shows “SYSTEM NEEDS SETUP.” This section explains how to set up the TracVision R6 system for your particular satellite TV service and receiver configuration.

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4.1 Initial Setup – DIRECTV

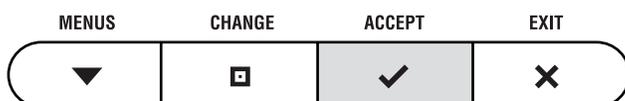
Follow the steps below to set up the TracVision R6 for DIRECTV service.



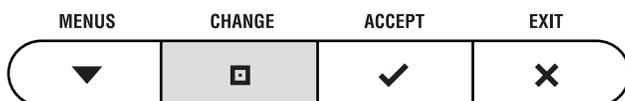
1. Press any button to begin the setup process.



2. The display shows "DIRECTV." Press ✓ ACCEPT.



3. Press CHANGE until the display shows the desired antenna type (see the table below).



Antenna	Satellites Used	Satellite Switching
ROUND	101 only	None (Unnecessary)
OVAL2	101, 119	Automatic
OVAL3*	101, 110, 119	Automatic with HDTV Converter
MANUAL	Select up to 4	Manual

* Select OVAL3 only if you have a KVH HDTV converter installed.

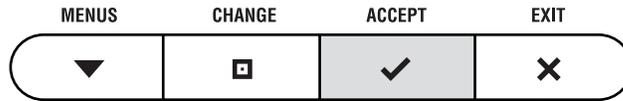


If the status screen does not show "System Needs Setup", follow the steps in Section 4.5, "Resetting the System to Change the Initial Setup" on page 36.



The Antenna type you select should match the "dish type" setting on your satellite TV receiver. Refer to your receiver's owner's manual for details.

4. Press ✓ ACCEPT.



The remaining steps vary depending on the antenna type you selected. Follow the steps for your selected antenna type.

Antenna Type = ROUND?

The setup process is complete. The display shows the installed satellite (101) momentarily then the antenna restarts.

INSTALLING SAT
101

RESTARTING ANTENNA

Antenna Type = OVAL2?

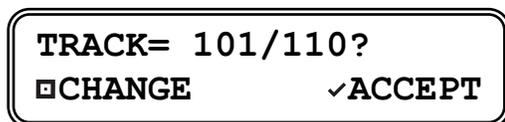
The setup process is complete. The display shows the installed satellites (101 and 119) momentarily then the antenna restarts.

INSTALLING SATS
101 119

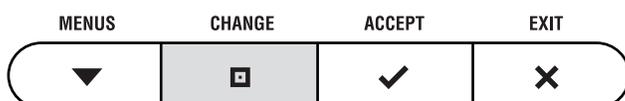
RESTARTING ANTENNA

Antenna Type = OVAL3?

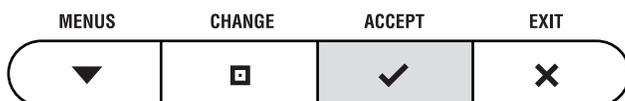
Now you need to select which satellite pair you want the antenna to track first, 101/110 or 101/119.



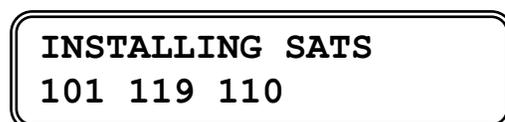
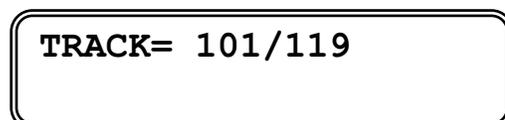
1. Press CHANGE until the display shows the desired satellite pair.



2. Press ACCEPT.



The display shows the installed satellites (101, 119, and 110) momentarily then the antenna restarts.



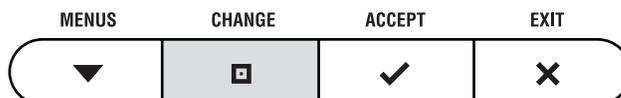
Antenna Type = MANUAL?

Now you need to select which satellites to install in the antenna. The 101 satellite is required for DIRECTV service, so it is installed automatically as the first satellite.

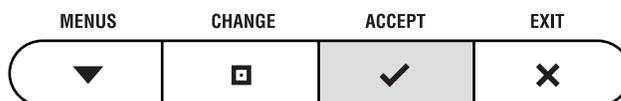
**SAT 1 OF 4= 101
(REQUIRED)**

SAT 2 OF 4= NONE?
▣CHANGE ✓ACCEPT

1. Press **▣ CHANGE** until the display shows the next satellite you want to install. You can choose 72, 110, 119, or NONE.



2. Press **✓ ACCEPT** to install the satellite.



3. Repeat steps 1 and 2 for the remaining satellites you want to install. If you don't want to install four satellites, select NONE.

Once you have installed all four satellites, or you have selected NONE, the display shows the installed satellites momentarily then the antenna restarts.

INSTALLING SATS
101 119 72

RESTARTING ANTENNA

4.2 Initial Setup – DISH Network

Follow the steps below to set up the TracVision R6 for DISH Network service.



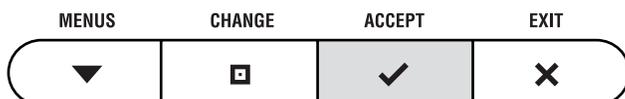
1. Press any button to begin the setup process.



2. Press CHANGE until the display shows "DISH".

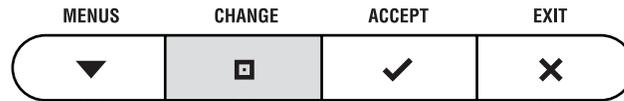


3. Press ACCEPT.



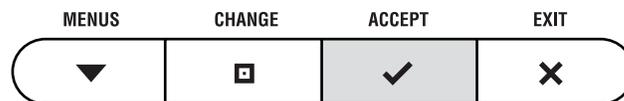
If the status screen does not show "System Needs Setup", follow the steps in Section 4.5, "Resetting the System to Change the Initial Setup" on page 36.

4. Press **▣** CHANGE until the display shows the desired antenna type (*see the table below*).



Antenna	Satellites Used	Satellite Switching
DISH500	119, 110	Automatic
MANUAL	Select up to 4	Manual

5. Press **✓** ACCEPT.



The remaining steps vary depending on the antenna type you selected. Follow the steps for your selected antenna type.

Antenna Type = DISH500?

The display momentarily shows the installed satellites (119 and 110) then the antenna restarts.

INSTALLING SATS
119 110

RESTARTING ANTENNA

Now you need to run the Check Switch function on your DISH Network receiver to configure the receiver for TracVision compatibility. Follow the steps in “*Running the Receiver Check Switch Function*” on page 30.

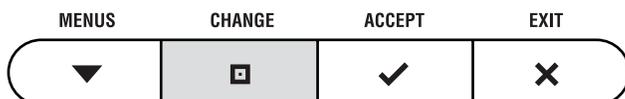
Antenna Type = MANUAL?

Now you need to select which satellites to install in the antenna. The 119 satellite is required for DISH Network service, so it is installed automatically as the first satellite.

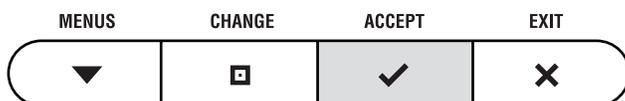
**SAT 1 OF 4= 119
(REQUIRED)**

SAT 2 OF 4= NONE?
 CHANGE ACCEPT

1. Press CHANGE until the display shows the next satellite you want to install. You can choose 61, 110, 129, 148, or NONE.



2. Press ACCEPT to install the satellite.



3. Repeat steps 1 and 2 for the remaining satellites you want to install. If you don't want to install four satellites, select NONE.

Once you have installed all four satellites, or you have selected NONE, the display shows the installed satellites momentarily then the antenna restarts.

INSTALLING SATS
119 110 148

RESTARTING ANTENNA

Now you need to run the Check Switch function on your DISH Network receiver to configure the receiver for TracVision compatibility. Follow the steps in "Running the Receiver Check Switch Function" on page 30.

Running the Receiver Check Switch Function

To configure your DISH Network receiver to work with the TracVision antenna, follow the steps below to run the receiver's Check Switch function.

1. Turn on the receiver and the TV.
2. Using the receiver's remote control, go to the "Point Dish/Signal Strength" screen (*press Menu, 6, 1, 1 (on most models)*).
3. At the "Point Dish/Signal Strength" screen, select the 119 satellite.
4. Select the "Test" button. The receiver begins configuring itself for TracVision operation.
5. Wait until the Check Switch function is complete. It will take a couple minutes.
6. **If you set up the antenna for DISH500 antenna type**, verify that the TV shows the following:

	Installed Switch: SW42			
Input:	1	1	2	2
Satellite:	119	119	110	110
Polarity:	Odd	Even	Odd	Even
Status:	Satellite reception verified			

If you set up the antenna for Manual antenna type, verify that the TV shows "No Switch Detected," "Switch Type Unknown," or a similar error message.

7. If the information is not displayed as noted in Step 6, try running the Check Switch function again.
8. When you are done, exit the menu and allow the receiver to download the program guide.

4.3 Initial Setup – ExpressVu

Follow the steps below to set up the TracVision R6 for ExpressVu service.



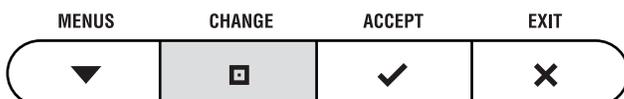
If the status screen does not show “System Needs Setup”, follow the steps in Section 4.5, “Resetting the System to Change the Initial Setup” on page 36.



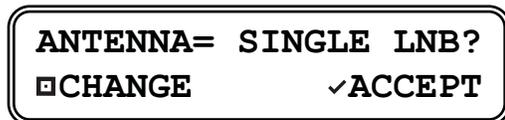
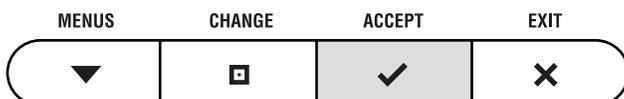
1. Press any button to begin the setup process.



2. Press CHANGE until the display shows “EXPRESSVU”.



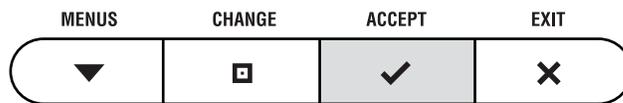
3. Press ACCEPT.



4. Press **▣** CHANGE until the display shows the desired antenna type (*see the table below*).

Antenna	Satellites Used	Satellite Switching
SINGLE LNB	91	None (Unnecessary)
DUAL LNB	91, 82	Automatic
MANUAL	Select up to 2	Manual

5. Press **✓** ACCEPT.



The remaining steps vary depending on the antenna type you selected. Follow the steps for your selected antenna type.

Antenna Type = SINGLE LNB?

The setup process is complete. The display shows the installed satellite (91) momentarily then the antenna restarts.

INSTALLING SAT
91

RESTARTING ANTENNA

Antenna Type = DUAL LNB?

The setup process is complete. The display shows the installed satellites (91 and 82) momentarily then the antenna restarts.

INSTALLING SATS
91 82

RESTARTING ANTENNA

Antenna Type = MANUAL?

Now you need to select which satellites to install in the antenna. The 91 satellite is required for ExpressVu service, so it is installed automatically as the first satellite.

**SAT 1 OF 2= 91
(REQUIRED)**

SAT 2 OF 2= NONE?
 CHANGE ✓ ACCEPT

1. Press CHANGE until the display shows the next satellite you want to install. You can choose either satellite 82 or NONE.

MENUS	CHANGE	ACCEPT	EXIT
▼	<input checked="" type="checkbox"/>	✓	✕

2. Press ✓ ACCEPT to install the satellite.

MENUS	CHANGE	ACCEPT	EXIT
▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✕

The display shows the installed satellites momentarily then the antenna restarts.

INSTALLING SATS
91 82

RESTARTING ANTENNA



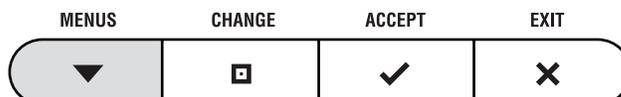
If the status screen does not show “System Needs Setup”, follow the steps in Section 4.5, “Resetting the System to Change the Initial Setup” on page 36.

4.4 Initial Setup – Manual Mode

Follow the steps below to manually set up the TracVision R6 to track your own unique set of satellites.

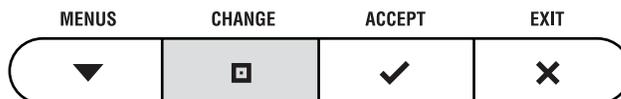
TRACKING DTV 101 
SYSTEM NEEDS SETUP

1. Press any button to begin the setup process.



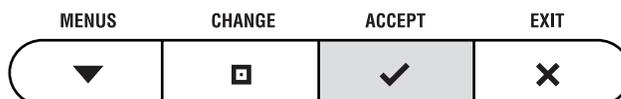
SERVICE= DIRECTV?
□CHANGE ✓ACCEPT

2. Press CHANGE until the display shows “MANUAL”.



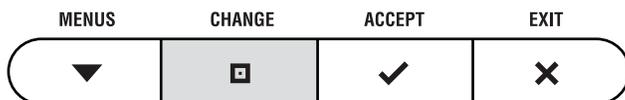
SERVICE= MANUAL?
□CHANGE ✓ACCEPT

3. Press ACCEPT.



SAT 1 OF 5= 101?
□CHANGE ✓ACCEPT

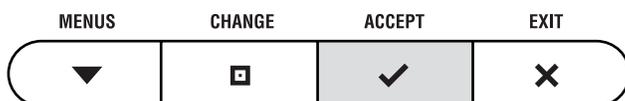
4. Press **CHANGE** until the display shows the first satellite that you want to install.



You can choose any five of the following satellites:

- 61
- 72
- 82
- 91
- 101
- 110
- 119
- 129
- 148

5. Press **ACCEPT** to install the satellite.



6. Repeat steps 4 and 5 for the remaining satellites you want to install. If you don't need to install five satellites, select NONE.

Once you have installed all five satellites, or you have selected NONE, the display shows the installed satellites momentarily then the antenna restarts.

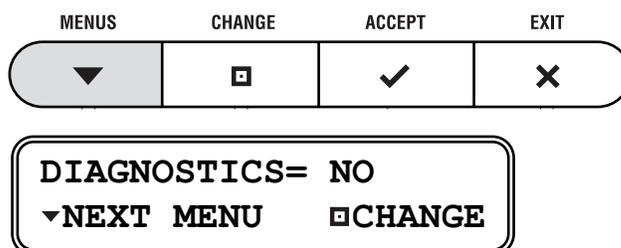
INSTALLING SATS
101 110 119

RESTARTING ANTENNA

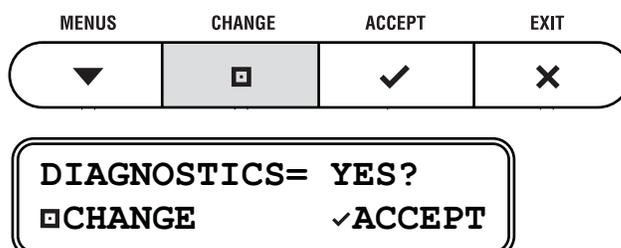
4.5 Resetting the System to Change the Initial Setup

If you need to change the antenna's setup to receive a different satellite TV service and/or track a different satellite, follow the steps below to reset the system. Once the system has reset to its factory condition, you will be able to complete an initial setup as described in the previous sections.

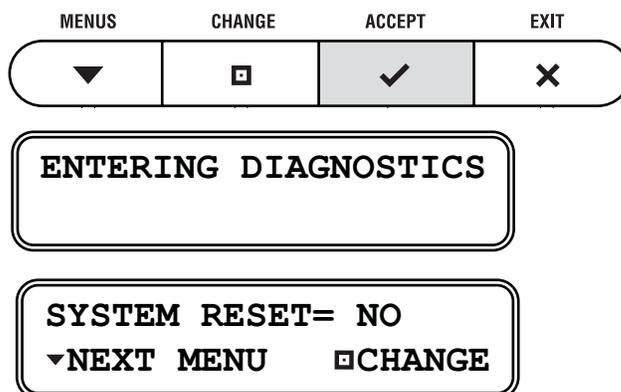
1. Press **▼** MENUS until the display shows "DIAGNOSTICS".



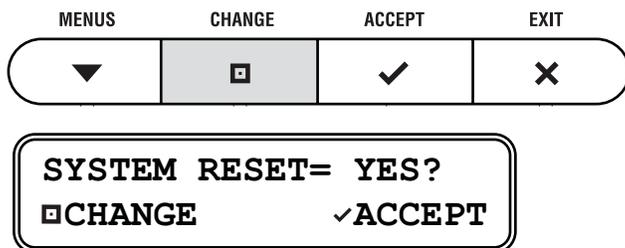
2. Press **▣** CHANGE until the display shows "DIAGNOSTICS= YES".



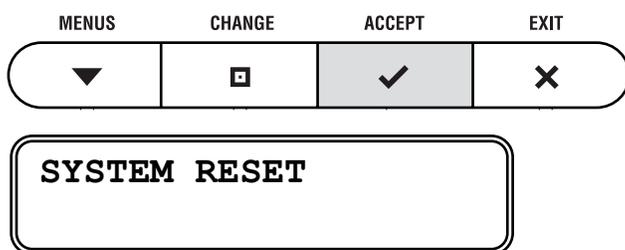
3. Press **✓** ACCEPT to enter the Diagnostics menu.



4. Press **▣** CHANGE until the display shows "SYSTEM RESET= YES".



5. Press **✓** ACCEPT to reset the system.



6. When the display shows the status screen, set up the system for the desired service. *Follow the steps in Section 4.1, 4.2, 4.3, or 4.4.*



5 — Troubleshooting

This section identifies basic problems along with their possible causes and solutions. It also explains what the status lights indicate, how to perform a diagnostics test, and how to get technical support.

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5.2	System Status Lights	42
5.3	Running the Diagnostics Test	44
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5.1 Five Simple Checks

If you are experiencing a problem receiving satellite TV with your TracVision system, first check the five simple things below. If none of these are the problem, check the status lights on the TracVision interface box and/or perform a diagnostics test, as explained in the remainder of this section.

1 Can the Antenna See the Satellite?

The antenna requires an unobstructed view of the southern sky to receive satellite TV signals. Common causes of blockage include trees, buildings, overpasses, and mountains. The TracVision antenna will not work inside a garage.

2 Is There Excessive Dirt or Moisture on the Antenna Dome?

Dirt buildup or moisture on the dome can reduce satellite reception. Clean the exterior of the dome periodically and keep DewShield set to AUTO to ensure optimum reception (*refer to Section 3.1, "Turning DewShield On/Off" on page 17*).

3 Is It Raining Cats and Dogs?

Heavy rain or snow can weaken satellite TV signals. Reception should improve once the inclement weather subsides.

4 If You Have DIRECTV, Does the TV Display a "Please Call Ext. 722" Message?

If you can only access the DIRECTV preview channels, such as channel 100, while all other channels show a message to call Ext. 722, the receiver may have lost its activation data. To fix this problem, call DIRECTV customer service at 1-800-DIRECTV (347-3288). *Be sure the antenna is tracking the satellite when you call.*

5 Are the Interface Box, Satellite TV Receiver, and TV Turned On and Connected Properly?

Make sure the power switch on the front of the TracVision interface box is turned on (the VOLTAGE light is lit green). Also make sure your TV and receiver are both turned on and set up for the satellite input. Finally, check the cables connecting all these components to ensure none have come loose.



You can also try resetting the satellite TV receiver before you begin troubleshooting:

1. Park in a blockage-free area.
2. Turn off and unplug the receiver.
3. Wait 1 minute, then plug the receiver back in.
4. Turn on the receiver and the TracVision antenna.

Satellite Mismatch?

If the interface box and the antenna get out of sync, the display shows "System Sat Mismatch."

SYSTEM SAT MISMATCH
PRESS ✓ TO FIX

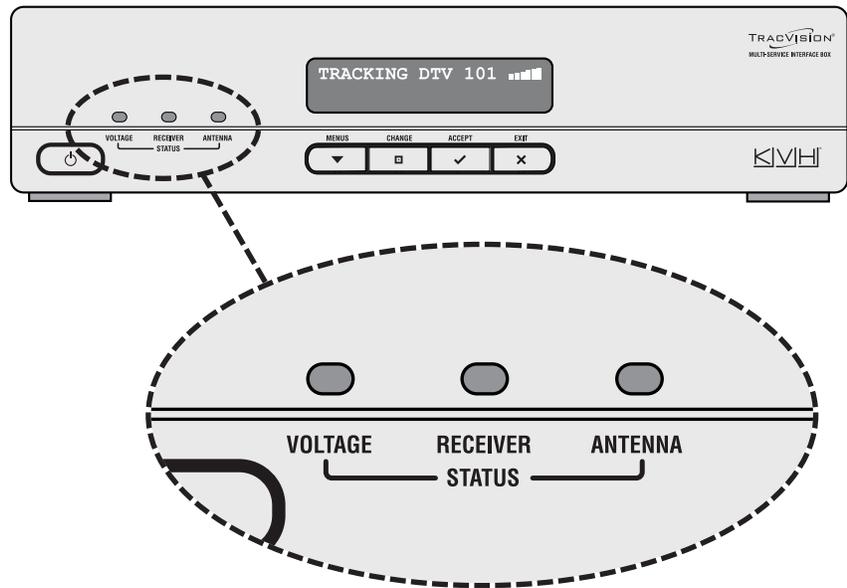
Just press ✓ ACCEPT to fix the problem.

The interface box will synchronize with the antenna and ensure that the satellite setup in the antenna matches the setup in the interface box.

5.2 System Status Lights

Three status lights on the front of the receiver indicate the current status of the system and can help you identify problems.

Figure 5-1 System Status Lights



During normal operation, all three status lights should be lit green. The tables on the following page explain what the different light conditions indicate.

VOLTAGE Light Indications

Light is...	Indicates	Description
Off	Off	Interface box is OFF (power switch is off) or no power input
Green	OK	Good power (between 10-16 VDC at interface box)
Green, flashing	Cable Open	Open detected in antenna cable (check antenna coax connection)
Orange	Low Power	Low power (between 8-10 VDC at interface box)
Red, flashing	Bad Power	Insufficient power (less than 8 VDC or more than 16 VDC input)

RECEIVER Light Indications

Light is...	Indicates	Description
Green	OK	Good communications with receiver
Orange	No Comm	No communications with receiver
Orange, flashing*	Overload	Overload or short circuit detected on the antenna cable
Red	Fault	Internal power fault

ANTENNA Light Indications

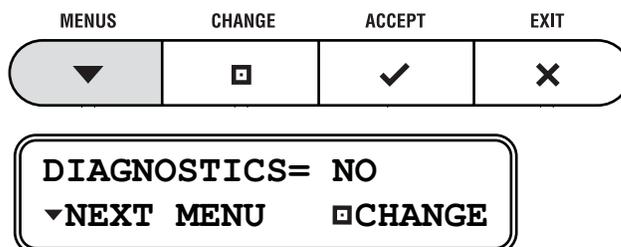
Light is...	Indicates	Description
Off	Off	Antenna is OFF, disconnected, or has insufficient power
Green	Tracking	Antenna is tracking the selected satellite
Green, flashing	Searching	Antenna is searching for a satellite
Orange, flashing*	Overload	Overload or short circuit detected on the antenna cable
Red	No Comm	No communications with antenna
Red, flashing	Fault	Error detected in antenna

* The RECEIVER and ANTENNA lights both flash orange if an overload or short circuit is detected.

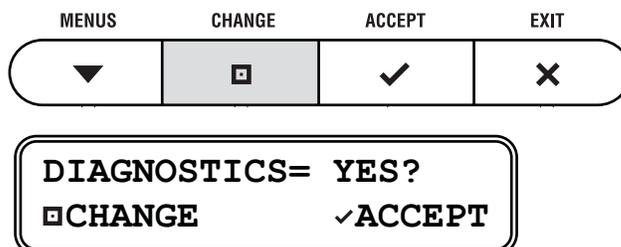
5.3 Running the Diagnostics Test

In addition to the front panel status lights, the interface box includes a self-test function within its Diagnostics menu. Follow the steps below to run this test.

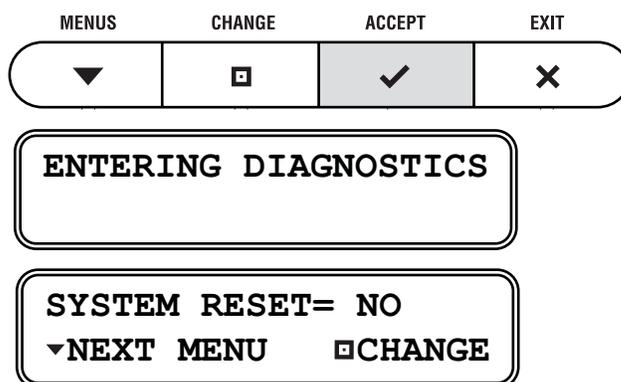
1. Press **▼** MENUS until the display shows "DIAGNOSTICS".



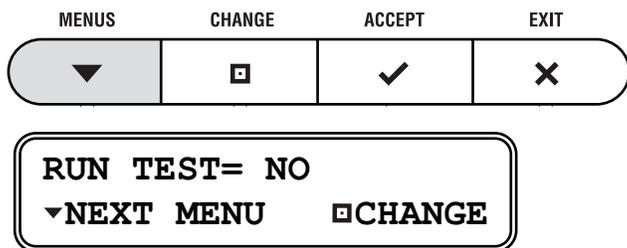
2. Press **□** CHANGE until the display shows "DIAGNOSTICS= YES?".



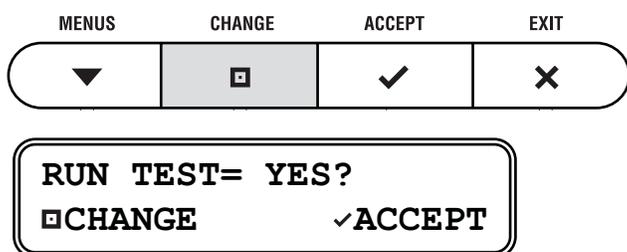
3. Press **✓** ACCEPT to enter the Diagnostics menu.



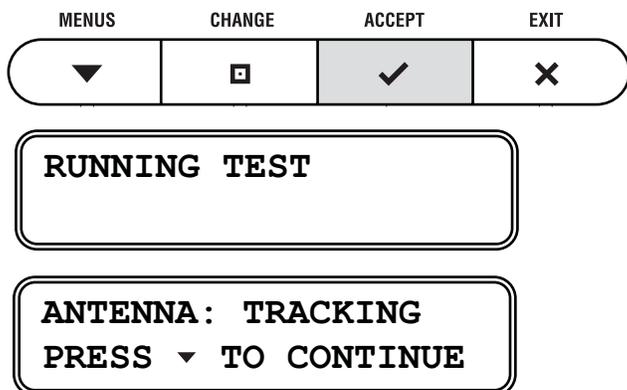
- Press **▼** MENUS until the display shows "RUN TEST".



- Press **□** CHANGE until the display shows "RUN TEST= YES".



- Press **✓** ACCEPT to begin the test.



- Once the test is complete, the display shows the antenna status. Press **▼** MENUS to scroll through the remaining status messages.



The table below lists all of the status messages and their possible states.

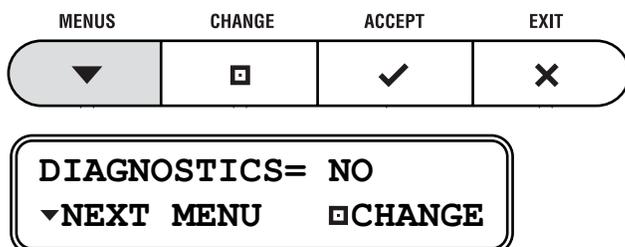
Diagnostics Test Indications

Component Tested	Possible States
ANTENNA	IDLE INITIALIZING SEARCHING TRACKING ERROR
CURRENT SAT	<Name of satellite the antenna is tracking> ERROR
RF LEVEL	OK, <actual RF level> LOW, <actual RF level> ERROR, COMM
AVAILABLE SATS	<Satellite name> <i>Press ▼ MENUS to scroll through the list of available satellites</i> ERROR
GPS	<current position in latitude/longitude> ACQUIRING ERROR
CABLE STATE	OK SHORTED OPEN
SYSTEM DC	OK; <VDC power at the interface box> LOW; <VDC power at the interface box> BAD; <VDC power at the interface box>
ANTENNA DC	OK; <VDC power at the antenna> LOW; <VDC power at the antenna> BAD; <VDC power at the antenna>

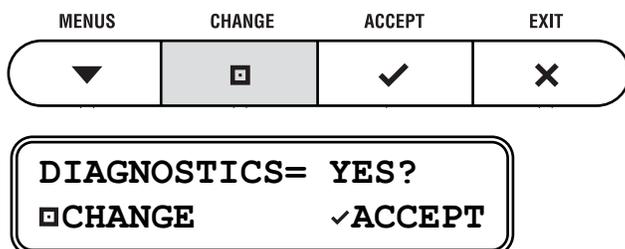
5.4 Viewing System Information

You can view the TracVision system's software versions and serial numbers on the interface box display. Follow the steps below to display the system information.

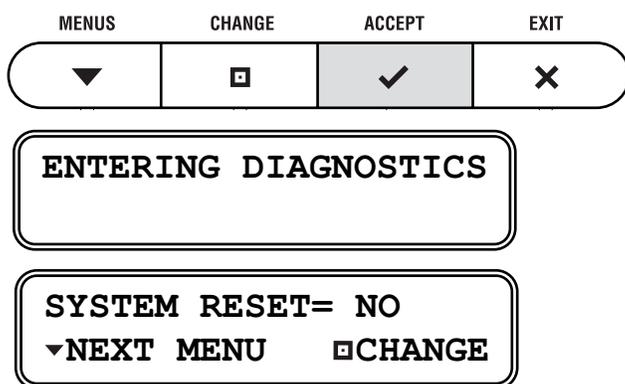
1. Press **▼** MENUS until the display shows "DIAGNOSTICS".



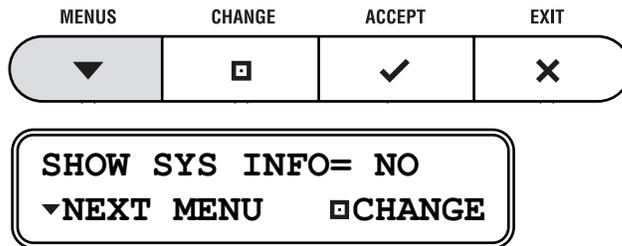
2. Press **□** CHANGE until the display shows "DIAGNOSTICS= YES".



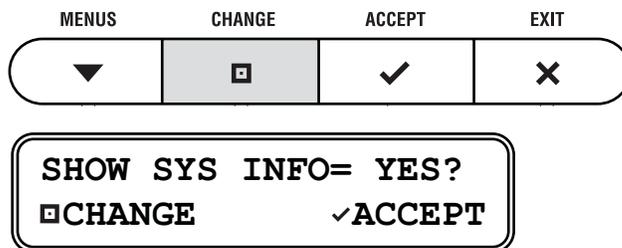
3. Press **✓** ACCEPT to enter the Diagnostics menu.



- Press **▼** MENUS until the display shows "SHOW SYS INFO= NO".



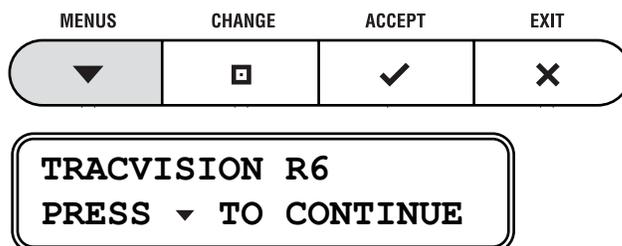
- Press **□** CHANGE until the display shows "SHOW SYS INFO= YES?".



- Press **✓** ACCEPT to begin viewing the system information.



- Press **▼** MENUS to scroll through the list.



The table below lists all of the information reported by the interface box.

System Information

Item	Description
TRACVISION <model>	Model of TracVision antenna (e.g., "R6")
SYS SW: <#>	Version of antenna main software
RF SW: <#>	Version of antenna RF software
MOTOR SW: <#>	Version of antenna motor software
JBOX SW: <#>	Version of interface box software
ANT. SER. # <#>	Serial number of antenna
JBOX SER. # <#>	Serial number of interface box

5.5 Technical Support

If you experience an operating problem or require technical assistance, please contact your local authorized TracVision dealer/installer first. You can find an authorized technician near you by visiting our website at www.kvh.com/wheretogetservice.

If an authorized technician is not located nearby, please contact KVH Technical Support directly:

Phone: 401-847-3327

E-mail: techs@kvh.com

Internet: www.kvh.com/help

Please have your antenna and interface box serial numbers handy before you call.

5.6 Product Care

Please consider the following antenna care guidelines to maintain peak performance.

- Periodically wash the exterior of the antenna dome with fresh water and mild detergent. Avoid harsh cleansers and volatile solvents (e.g., acetone) and do not spray the dome directly with high-pressure water.
- If you wish to paint the dome, use only non-metallic automotive paint without a primer coat. Metallic paint or paint having a metallic color will block satellite signals.
- Consider the antenna's height before driving under low-clearance structures.

Appendices

This section provides wiring diagrams and notes for various TracVision system configurations.

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Appendix A

System Wiring Diagrams

The diagrams on the following pages show how to wire the system for various configurations:

Configuration	Requires KVH P/N(s)*:	See page:
One (1) receiver	N/A	54
Two (2) receivers	19-0347	55
Three (3) or more receivers	19-0410 & 19-0123	56
One (1) receiver with HDTV converter (DIRECTV only) – Automatic Satellite Switching	01-0260-06	57
Two (2) receivers with HDTV converter (DIRECTV only) – Manual Satellite Switching	01-0260-06	58
Three (3) or more receivers with HDTV converter (DIRECTV) – Manual Satellite Switching	01-0260-06, 19-0410, & 19-0123	59
Three (3) or more receivers with HDTV converter (DIRECTV) – Automatic Satellite Switching	01-0260-06 x 2, 19-0410, 19-0123, & 19-0366	60

* RF coax cables sold separately

Destacker, Single-output (19-0347) or Dual-output (19-0410)

The destacker converts a stacked signal into an unstacked signal, which standard satellite TV receivers are configured to decode.

Active Multiswitch (19-0123)

The active (powered) multiswitch allows you to connect multiple receivers. KVH recommends Channel Master model 6214IFD or equivalent. This multiswitch amplifies the signal to compensate for signal loss. A passive multiswitch will not provide the necessary amplification.

HDTV Converter Kit (01-0260-06)

The HDTV converter adjusts the signal frequency of the DIRECTV 110 satellite, allowing you to receive its HD channels. *The kit includes a single-output destacker.*

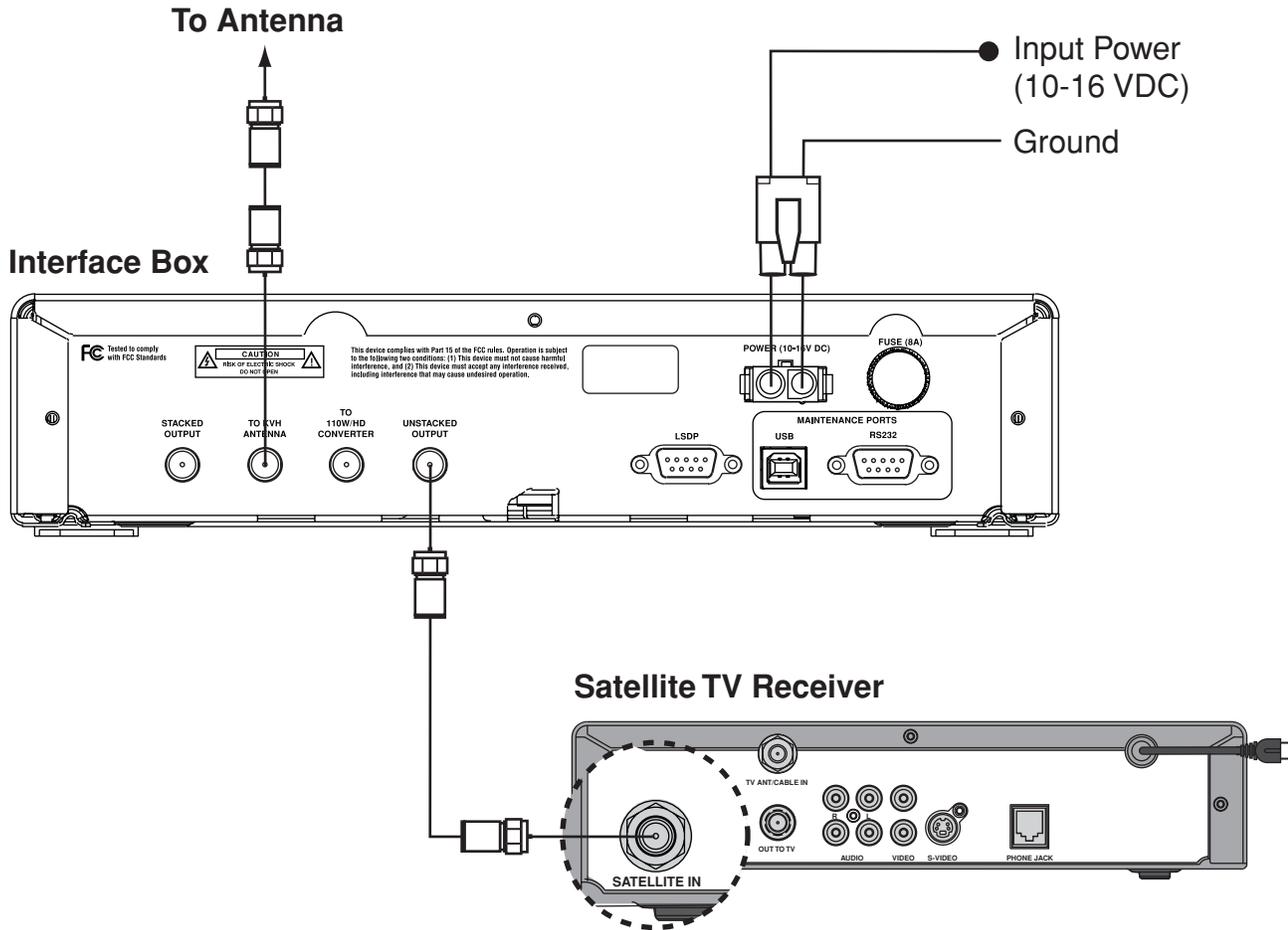
Splitter (19-0366)

The splitter divides the control signal from the interface box, which allows it to activate two HDTV converters.

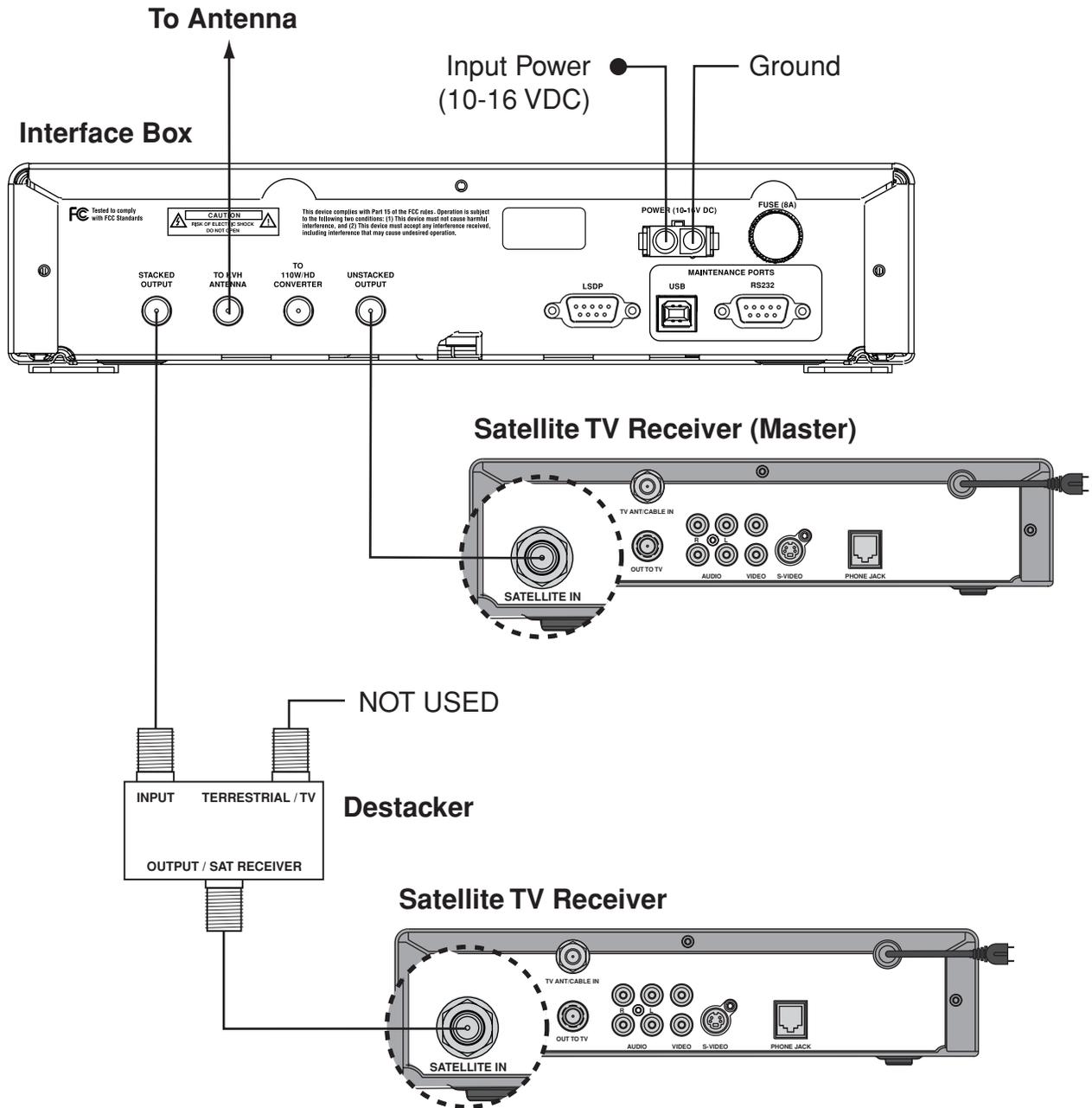


Digital Video Recorders (DVRs): DVRs, such as TiVo®, require two satellite inputs, whereas a standard receiver requires only one input. Therefore, to connect a DVR to the TracVision system, you need to wire the DVR just like you would wire two receivers.

Wiring Diagram for a Single Receiver

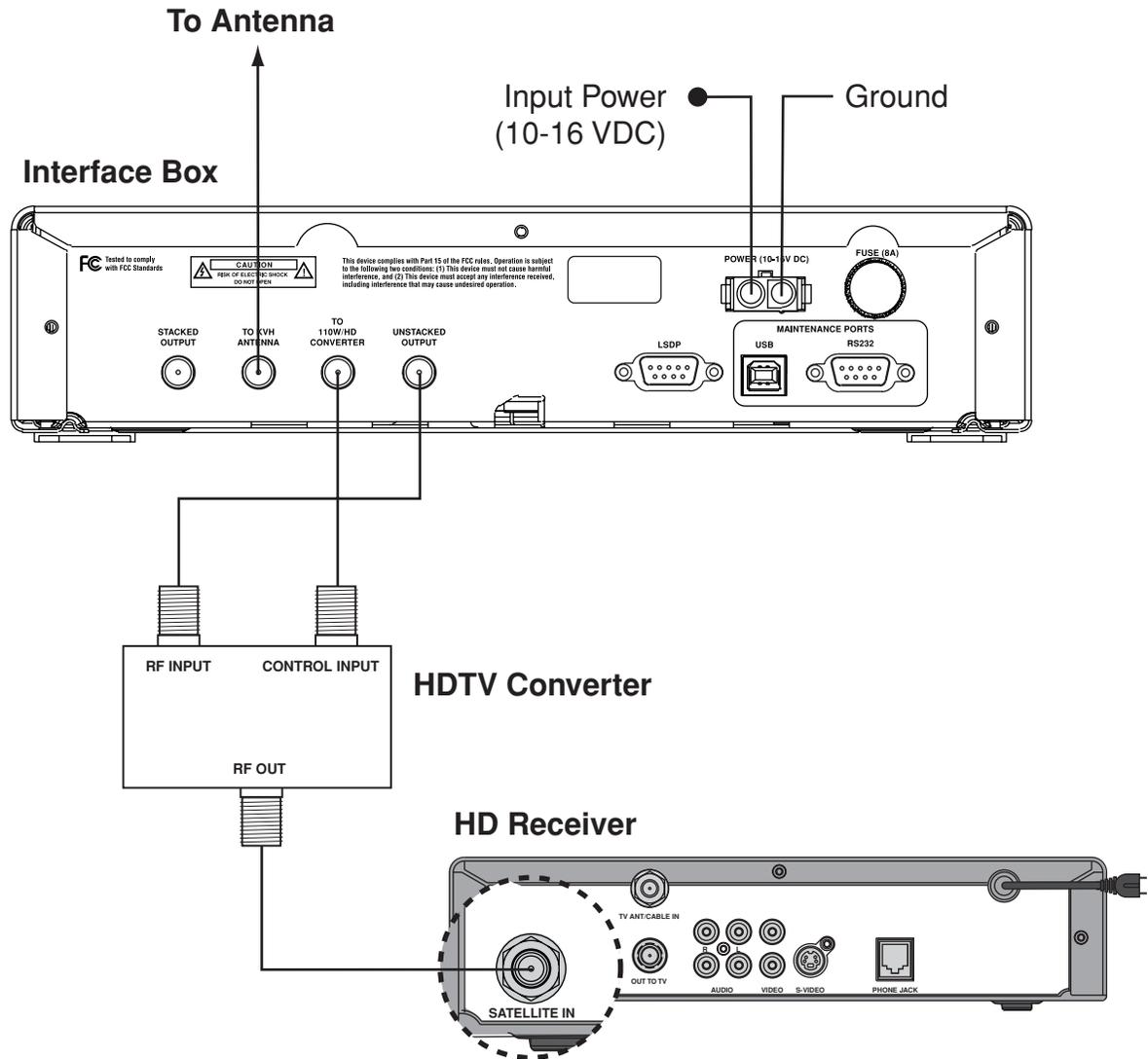


Wiring Diagram for Two Receivers



Components Required	KVH P/N:
Destacker, single-output	19-0347

Wiring Diagram for a Single Receiver and an HDTV Converter (DIRECTV only)

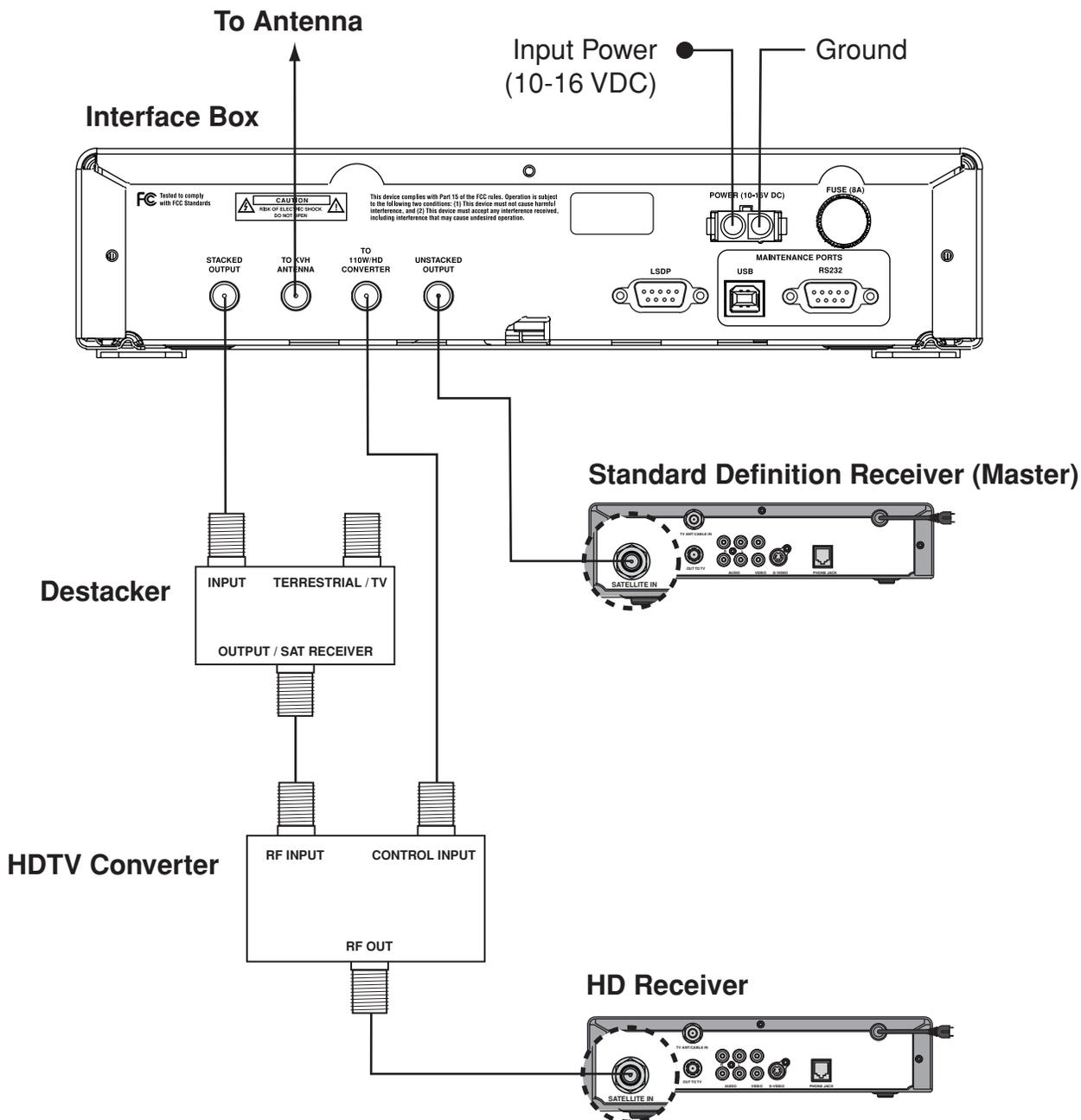


Components Required	KVH P/N:
HDTV Converter Kit	01-0260-06

Wiring Diagram for Two Receivers and an HDTV Converter (DIRECTV only)

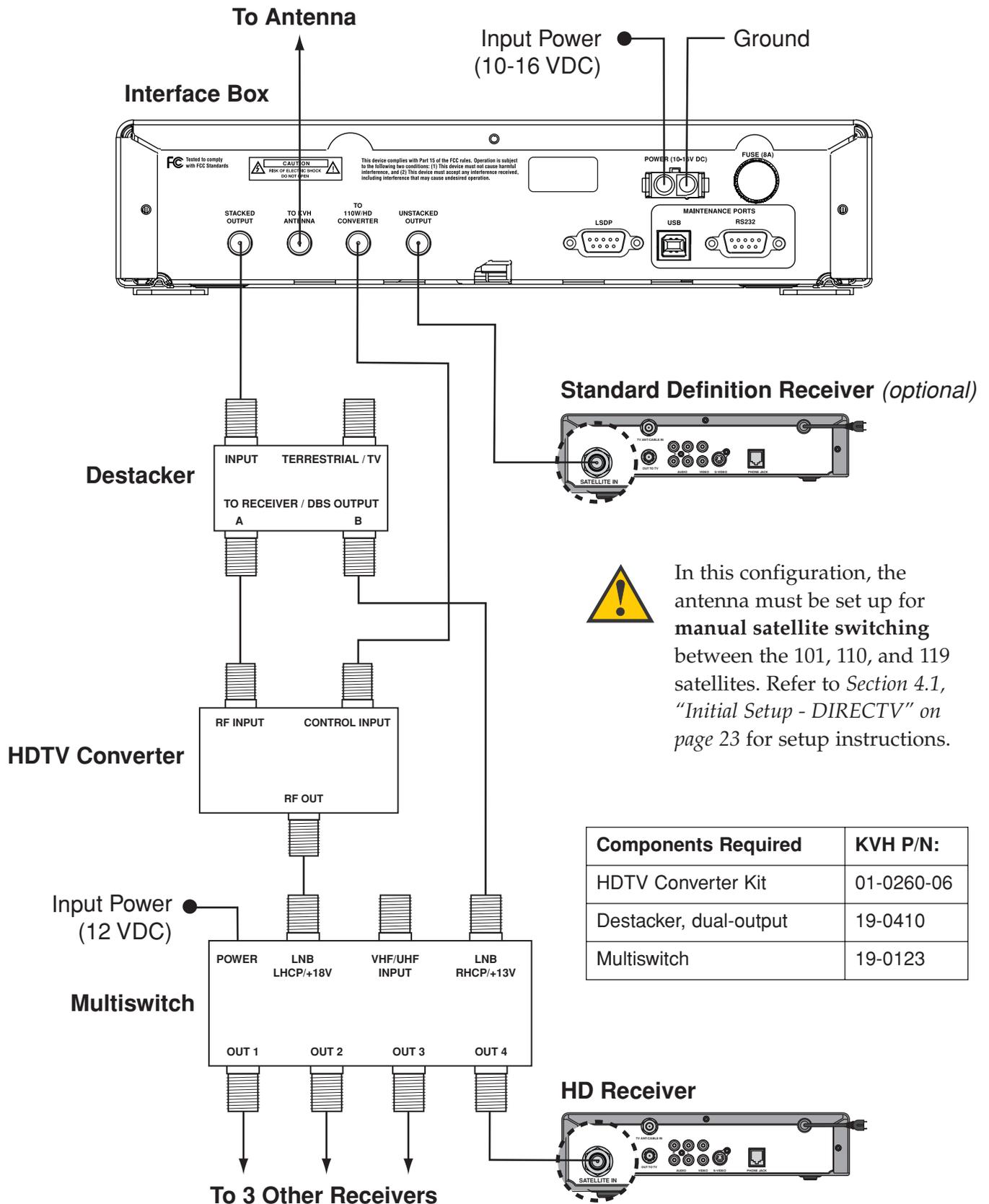


In this configuration, the antenna must be set up for **manual satellite switching** between the 101, 110, and 119 satellites. Refer to *Section 4.1, "Initial Setup - DIRECTV"* on page 23 for setup instructions.



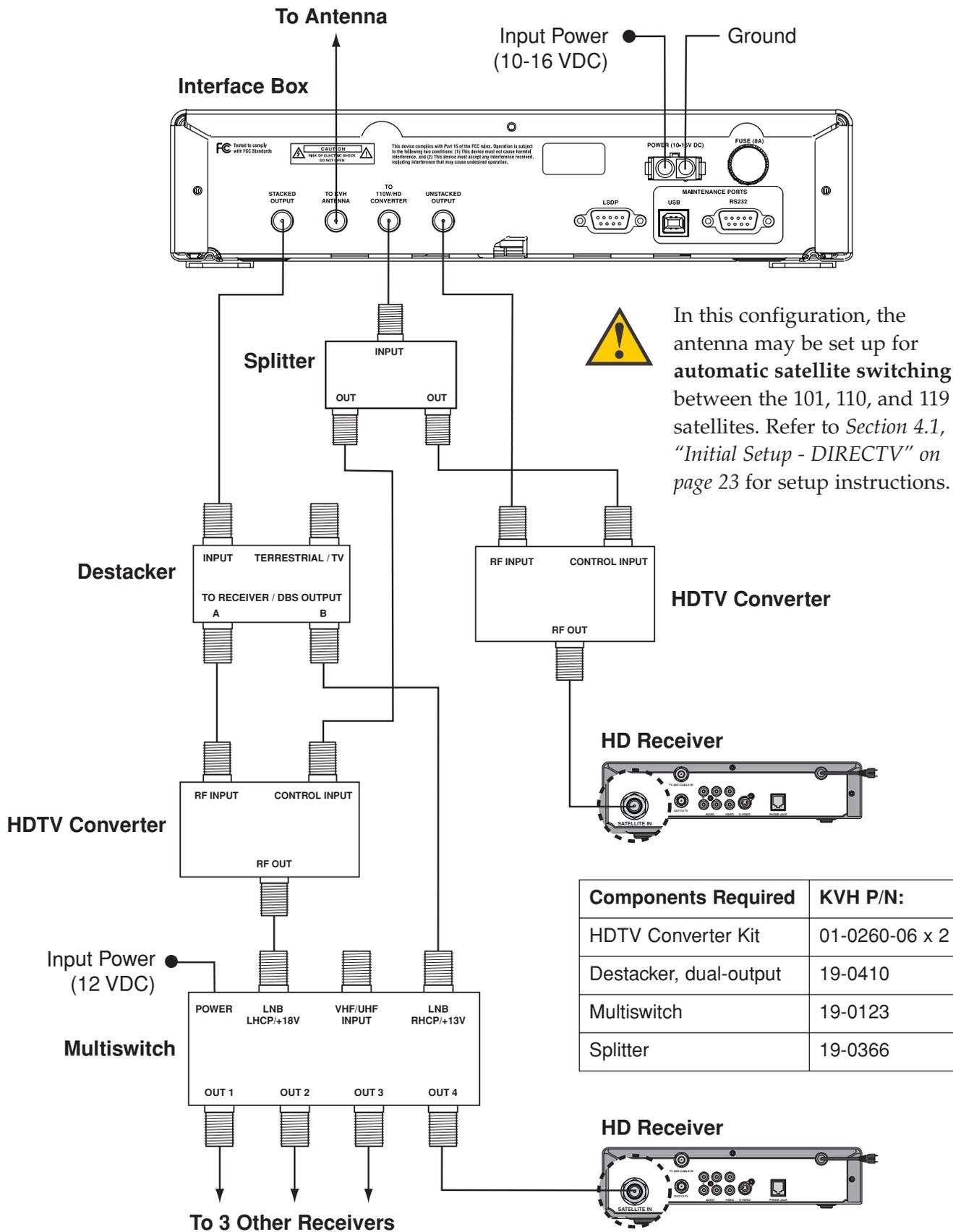
Components Required	KVH P/N:
HDTV Converter Kit (includes single-output destacker)	01-0260-06

Wiring Diagram for Multiple Receivers and an HDTV Converter (DIRECTV only)



Components Required	KVH P/N:
HDTV Converter Kit	01-0260-06
Destacker, dual-output	19-0410
Multiswitch	19-0123

Wiring Diagram for Multiple Receivers and an HDTV Converter (DIRECTV only)



Components Required	KVH P/N:
HDTV Converter Kit	01-0260-06 x 2
Destacker, dual-output	19-0410
Multiswitch	19-0123
Splitter	19-0366

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TVR6_Jbox_UG_Cover_1.06

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