TRACVISION®
BY KVH INDUSTRIES

TracVision R6 - DX Version

TracVision R6 User's Guide

TracVision R6DX
User's Guide

This user's guide provides all of the basic information you need to operate, set up, and troubleshoot the TracVision R6DX satellite TV antenna system. For detailed installation information, please refer to the *TracVision R6DX Installation Guide*.

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1. Introduction

This chapter provides a basic overview of this manual and your TracVision system.

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Using this Manual

This manual provides complete operation, setup, and troubleshooting information for your TracVision system, as well as wiring diagrams for various TracVision R6DX configurations.

Who Should Use This Manual

The **user** should refer to the "Operation" and "System Preferences" chapters to learn how to operate the system.

The **user**, **installer**, or **servicing technician** should refer to the "Setup" chapter for information on configuring the system for DIRECTV HDTV service and the "Wiring Deluxe Configurations" appendix for information on connecting additional components or special receivers for DIRECTV HDTV service.

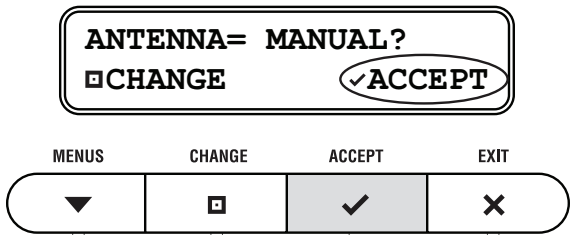
The **user, installer,** or **servicing technician** should refer to the "Baseline Configurations" appendix for information on configuring the system for DISH Network or ExpressVu service and the "Wiring Baseline Configurations" appendix for wiring components for DISH Network or ExpressVu service.

The **user** and/or s**ervicing technician** should refer to the "Troubleshooting" chapter to help identify the cause of a system problem.

Interface Box Flowchart Conventions

When instructions indicate to select a specific interface box menu option, press the corresponding interface box button below the display (see *Figure 1*).

Figure 1 Example of Interface Box Menu Option and Corresponding Interface Box Button



Typographical Conventions

This manual uses the following typographical conventions:

Text Example	Description
SELECT SATELLITES	Text as it appears on the interface box display
See *"System Overview" on page 6*.	Cross-reference to another chapter in the manual or to a website

Notifications Used in this Manual

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

IMPORTANT!

This is an important notice. Be sure to read these carefully to ensure proper operation and configuration of your TracVision system.

NOTE: *This is a Note. Notes contain useful information about system settings.*

TIP: *This is a Tip. These contain helpful information, allowing you to get the most out of your TracVision system.*

System Configuration Conventions

The TracVision R6DX system **deluxe configuration** includes the DIRECTV HDTV Tri-Sat AutoSwitch Kit for use with DIRECTV HDTV service and a DIRECTV H20-600 receiver*.

The TracVision R6DX system may also be set up in a **baseline configuration** to support the DISH Network or ExpressVu service. Information specific to baseline configurations is noted throughout this manual. In addition, *"Appendix B" on page 49* contains setup and operation information specific to baseline configurations; *"Appendix C" on page 63* contains wiring diagrams for baseline configurations.

***NOTE:** The DIRECTV H20-600 receiver is shipped separately and requires activation of service.*

Related Documentation

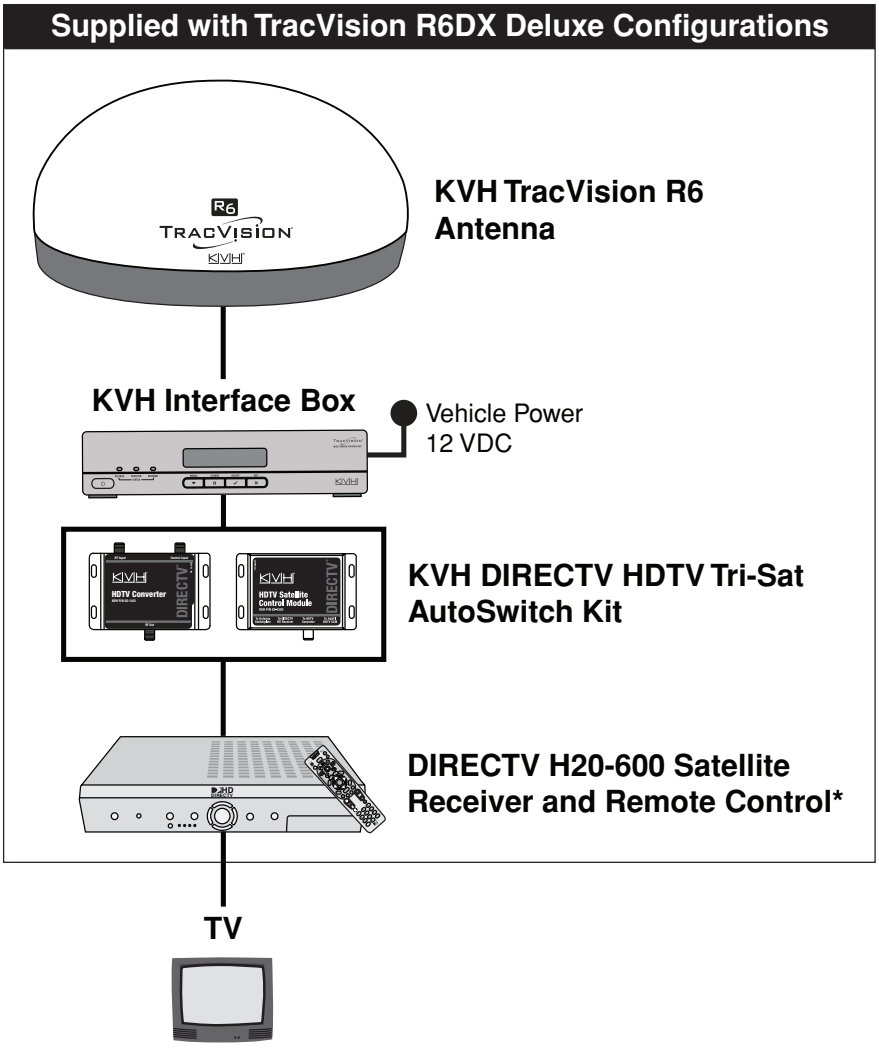
In addition to this User's Guide, the following documents are provided with your TracVision system:

Document	Description
Installation Guide	Complete product installation instructions
Product Registration Form	Details on registering the product
Warranty Statement	Warranty terms and conditions
Contents List	List of every part supplied in the kit

System Overview

Your TracVision R6DX is a state-of-the-art, actively stabilized antenna system that delivers live satellite TV to your mobile audio/video entertainment system. The deluxe configuration is illustrated in *Figure 2*. Wiring diagrams for deluxe configurations are provided in *"Appendix A" on page 41*; wiring diagrams for baseline configurations are provided in *"Appendix C" on page 63*.

Figure 2 TracVision System Diagram (Deluxe Configuration)



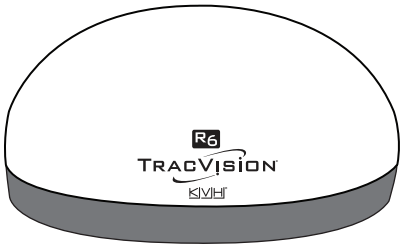
**NOTE:* *The DIRECTV H20-600 receiver is shipped separately and requires activation of service.*

NOTE: *Configurations vary according to your specific system requirements.*

TracVision R6DX Antenna

The antenna uses integrated DVB technology to quickly acquire and track the correct satellite, switch between satellites, and send TV signals to the interface box. Internal gyros allow the antenna to track the satellite at all times, even while you're on the move!

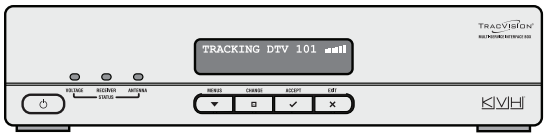
Figure 3 TracVision R6DX Antenna



Interface Box

The interface box supplies power to the antenna and delivers satellite TV signals to your satellite TV receiver. The interface box also allows you to set up the system using the pushbuttons and LCD display.

Figure 4 Interface Box



DIRECTV HDTV Tri-Sat AutoSwitch Kit Components

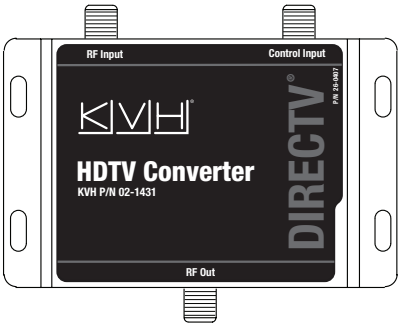
The deluxe configuration of the TracVision R6DX system includes the DIRECTV HDTV Tri-Sat AutoSwitch Kit for DIRECTV HDTV service. The kit consists of two main components:

- HDTV Converter
- HDTV Satellite Control Module (SCM)

HDTV Converter

The HDTV converter enables DIRECTV HDTV service. Only one HDTV converter is required per system configuration - regardless of the number of HDTV receivers.

Figure 5 HDTV Converter

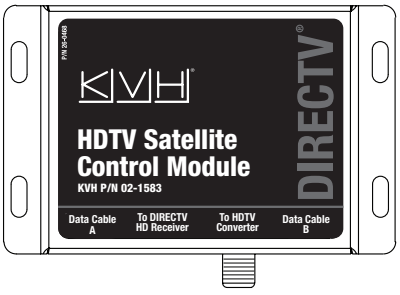


HDTV Satellite Control Module (SCM)

The SCM attaches to the provided DIRECTV H20-600 receiver to automatically control satellite selection. You can also equip additional DIRECTV H20-600 receivers with SCMs to enable each of those receivers to automatically control satellite selection.

NOTE: *SCM-equipped DIRECTV H20-600 receivers control satellite selection. Other receiver models and additional DIRECTV H20-600 receivers without a mated SCM cannot control satellite selection, but they can change channels on the currently selected satellite.*

Figure 6 SCM

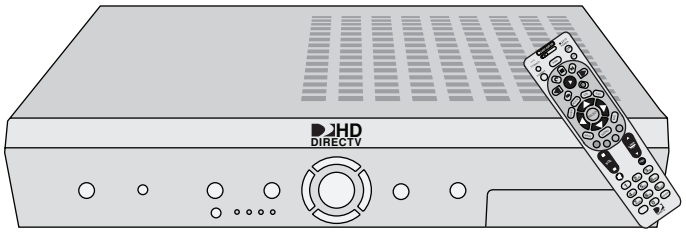


DIRECTV H20-600 Receiver

A DIRECTV H20-600 receiver and remote control are included with the TracVision R6DX deluxe configuration.* When the DIRECTV H20-600 receiver is coupled with an SCM, it automatically changes satellites as necessary - as the user changes channels using the receiver's remote. If desired, you can equip additional DIRECTV H20-600 receivers with SCMs to enable each of those receivers to automatically control satellite selection.

NOTE: *SCM-equipped DIRECTV H20-600 receivers control satellite selection. Other receiver models and additional DIRECTV H20-600 receivers without a mated SCM cannot control satellite selection, but they can change channels on the currently selected satellite.*

Figure 7 DIRECTV H20-600 Receiver and Remote Control



***NOTE:** The DIRECTV H20-600 receiver is shipped separately and requires activation of service.*

2. Operation

This chapter explains everything you need to know to operate the TracVision R6DX system.

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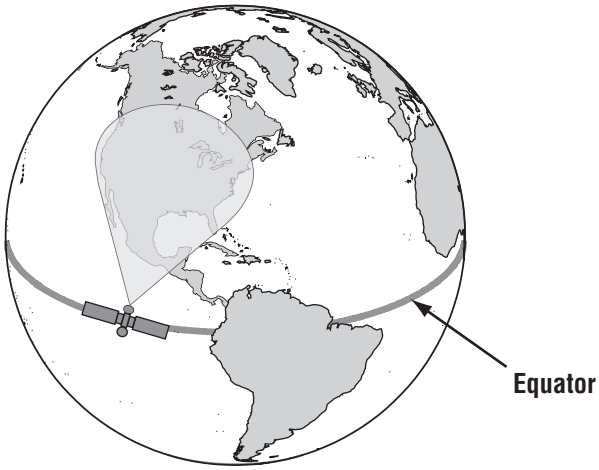
Receiving Satellite TV Signals

Television 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.

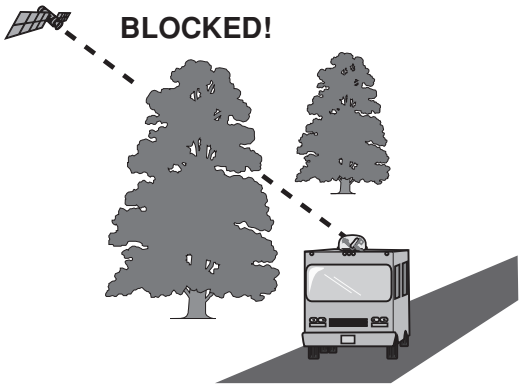
TIP: *For your convenience, KVH provides links to several websites that offer satellite coverage information. Simply visit our website at* ***www.kvh.com/footprint****.*

Figure 8 Location and Coverage Area of DIRECTV 101 Satellite



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 might also temporarily interrupt satellite signals.

Figure 9 Example of Satellite Blockage



Turning the System On/Off

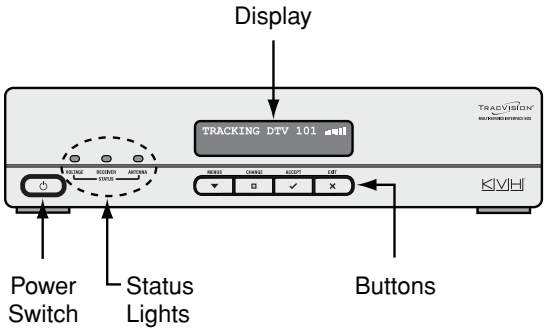
Since the interface box supplies power to the antenna, you can turn the antenna on or off using the interface box ⏻POWER switch.

Turning On the System

Follow the steps below to turn on your TracVision system.

1. Make sure the antenna has a clear view of the sky.
2. Turn on your satellite TV receiver and TV.
3. Press the ⏻POWER switch on the front of the TracVision interface box.

Figure 10 Interface Box Components



4. Wait one minute for system startup.

   Once the antenna finds the correct satellite, all three status lights on the interface box should be lit green. If any lights are not lit green, see *"System Status Lights" on page 32*.

DIRECTV HDTV Subscribers

- When the TracVision R6DX system is turned on, the antenna automatically begins tracking the DIRECTV 101 satellite to download the program guide for the DIRECTV 101, 110, and 119 satellites.
- The program guide might take up to 45 minutes after power on to download the program guide for all three satellites. During download, be sure to select only channels carried on the DIRECTV 101 satellite.

Turning Off the System

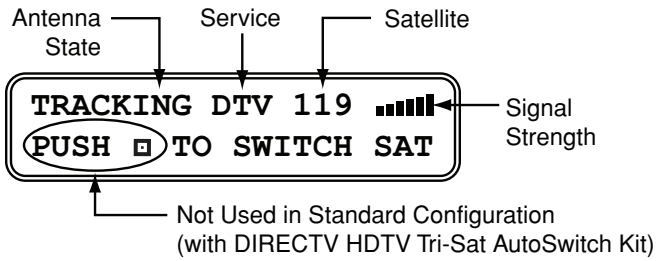
Follow the steps below to turn off your TracVision system.

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

Understanding the Status Screen

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

Figure 11 Interface Box Status Screen



Screen Field	Description
Antenna State	Current state of the antenna: • IDLE • INITIALIZING • SEARCHING • TRACKING • ERROR
Service	Satellite TV service currently set up in the TracVision system: • DTV (DIRECTV) • DISH (DISH Network) • EXVU (ExpressVu) • MAN (Manual)
Satellite	Satellite that the antenna is currently tracking *This number refers to the satellite's "orbital slot," which is its longitudinal location above the equator.*
Signal Strength	Strength of the satellite TV signal, as measured by RF level *The more bars, the stronger the signal, just like a cell phone. Three bars = good reception.*

Switching Satellites

This section explains how to switch satellites using a TracVision R6DX deluxe configuration (for DIRECTV HDTV service).

IMPORTANT!

For information on switching satellites using DISH Network or ExpressVu service, see *"Appendix B" on page 49*.

TracVision R6DX deluxe configurations include the DIRECTV HDTV Tri-Sat AutoSwitch Kit. When the SCM (included in the kit) is connected to a DIRECTV H20-600 receiver, **you do not need to press buttons on the interface box to change channels - the antenna automatically switches between the DIRECTV 101, 110, and 119 satellites as the user changes channels using the receiver's remote.**

TIP: *If you attempt to change channels using the interface box buttons, the programming will not appear on the TV. Simply change channels on the receiver's remote to resume normal operation.*

NOTE: *The receiver might take up to 30 seconds to display video when changing channels, switching between satellites, and/or switching between standard-definition and high-definition channels.*

TIP: *For your convenience, KVH lists the DIRECTV 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 website for the first time.*

Using the DIRECTV HDTV Tri-Sat AutoSwitch Kit with Multiple Receivers

Since the antenna can only track one satellite at a time, all receivers can only view one satellite at a time. Therefore, switching satellites might cause televisions connected to other receivers to display the wrong programming, no programming, or an error message. TV viewers can simply change the channel until they select a channel carried by the new satellite, or they can use any SCM-equipped receiver to switch back to the original satellite.

NOTE: *SCM-equipped DIRECTV H20-600 receivers control satellite selection. Other receiver models and additional DIRECTV H20-600 receivers without a mated SCM cannot control satellite selection, but they can change channels on the currently selected satellite.*

Using the DIRECTV HDTV Tri-Sat AutoSwitch Kit with Additional SCM-equipped DIRECTV H20-600 Receivers

The SCM included in the DIRECTV HDTV Tri-Sat AutoSwitch Kit enables automatic satellite switching for one DIRECTV H20-600 receiver. However, when two or more SCMs are installed, any SCM-equipped receiver can control satellite selection. The last SCM-equipped receiver to change channels controls satellite selection until another SCM-equipped receiver changes channels.

Product Care

Please consider the following antenna care guidelines for maintaining peak performance:

- Periodically wash the exterior of the antenna dome with fresh water and mild detergent. Avoid harsh cleansers and volatile solvents (such as 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. Any paint that contains metal will block satellite signals and impair reception.

3. System Preferences

This chapter explains how to change the DewShield and brightness settings.

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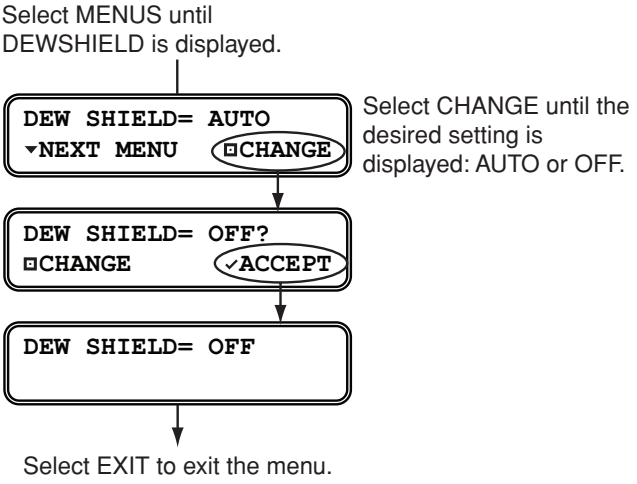
Turning the DewShield On/Off

This revolutionary feature keeps the antenna dome clear of dew, ensuring optimum reception of satellite TV signals (moisture weakens signals). Use the flowchart in ***Figure 12*** if you need to change the current DewShield setting.

TIP: *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 unless power conservation is a critical concern.*

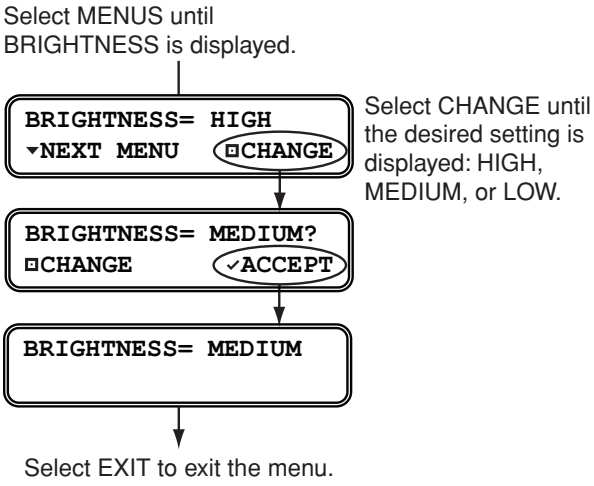
Figure 12 DewShield Setting



Adjusting the Display Brightness

Use the flowchart in *Figure 13* if you need to adjust the brightness of the interface box display.

Figure 13 Brightness Setting



4. Setup

When you turn on the TracVision R6DX system for the first time, the interface box displays "SYSTEM NEEDS SETUP." This chapter explains how to set up a TracVision R6DX for DIRECTV HDTV service.

NOTE: If you need to set up the system for DISH Network or ExpressVu service, see *"Appendix B" on page 49*.

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Setup

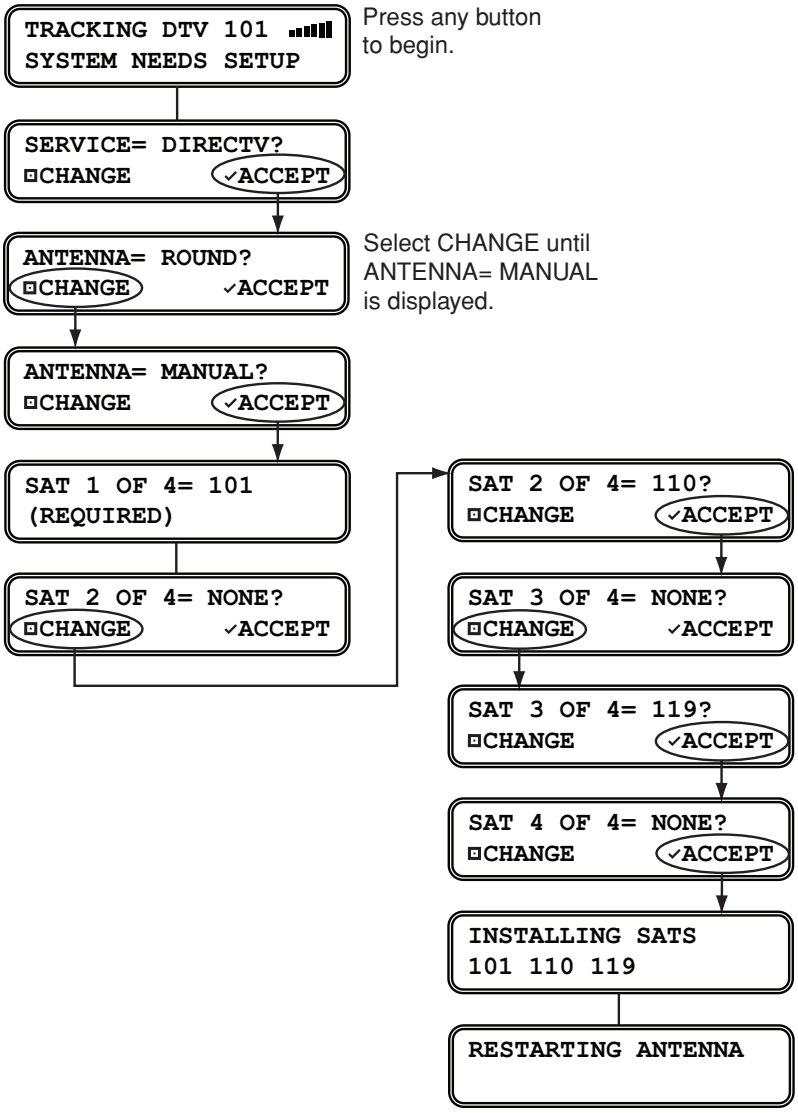
Use the flowchart in *Figure 14* to set up a TracVision R6DX system for DIRECTV HDTV service.

IMPORTANT!

If you need to set up the system for DISH Network or ExpressVu service, see *"Appendix B" on page 49*.

NOTE: *If the status screen does not show "SYSTEM NEEDS SETUP," follow the steps in "Resetting the System to Change Setup" on page 28.*

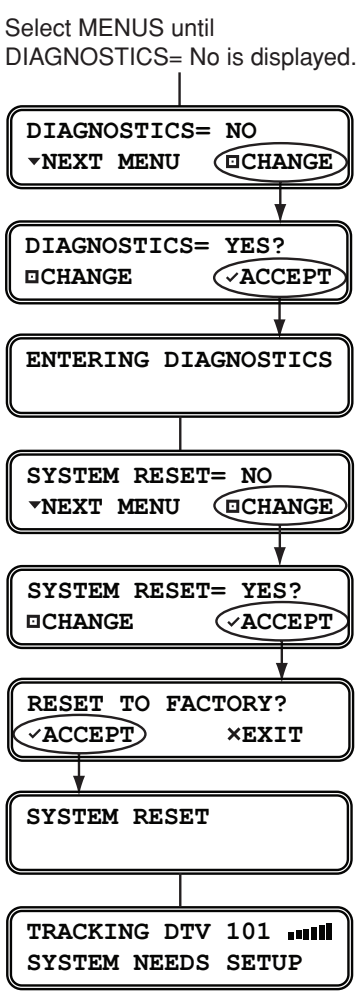
Figure 14 DIRECTV HDTV Setup



Resetting the System to Change Setup

If you need to change the antenna's setup to receive a different satellite TV service and/or track a different satellite, use the flowchart 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 *"Setup" on page 27*.

Figure 15 Factory Reset



5. Troubleshooting

This chapter identifies potential problems along with their possible causes and solutions. It also explains how to get technical support.

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Five Simple Checks

If you are experiencing a problem receiving satellite TV with your TracVision R6DX, perform the five simple checks below. If none of these are the problem, check the status lights on the interface box and/or perform a diagnostics test, as explained in *"Running the Diagnostics Test" on page 35*.

TIP: *You can also try resetting the satellite TV receiver. Turn off and unplug the receiver, wait one minute, then plug it back in and turn it back on.*

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, bridges, and mountains.

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. Keep the DewShield set to AUTO to ensure optimum reception (see *"Turning the DewShield On/Off" on page 23*).

Is it raining heavily?

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

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 might 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.

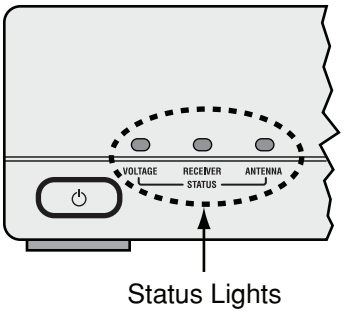
Is everything turned on and connected properly?

Make sure the power switch on the front of the interface box is turned on (the VOLTAGE light on the front of the interface box should be 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 of these components to ensure none have come loose.

System Status Lights

Three status lights on the front of the interface box indicate the current status of the system and can help you identify problems (see *Figure 16*).

Figure 16 System Status Lights



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

VOLTAGE Light

The table below explains what the VOLTAGE light indicates.

Light is...	Indicates	Description
Off	Off	Interface box is off (power switch is off) or no power input
Green	OK	Good power (10-16 VDC at interface box)
Green, flashing	Cable Open	Open detected in antenna cable (check the antenna coax connection)
Orange	Low Power	Low power (9-10 VDC) at interface box)
Red, flashing	Bad Power	Insufficient power (less than 9 VDC or more than 16 VDC input)

RECEIVER Light

The table below explains what the RECEIVER light indicates.

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

ANTENNA Light

The table below explains what the ANTENNA light indicates.

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

Error Messages

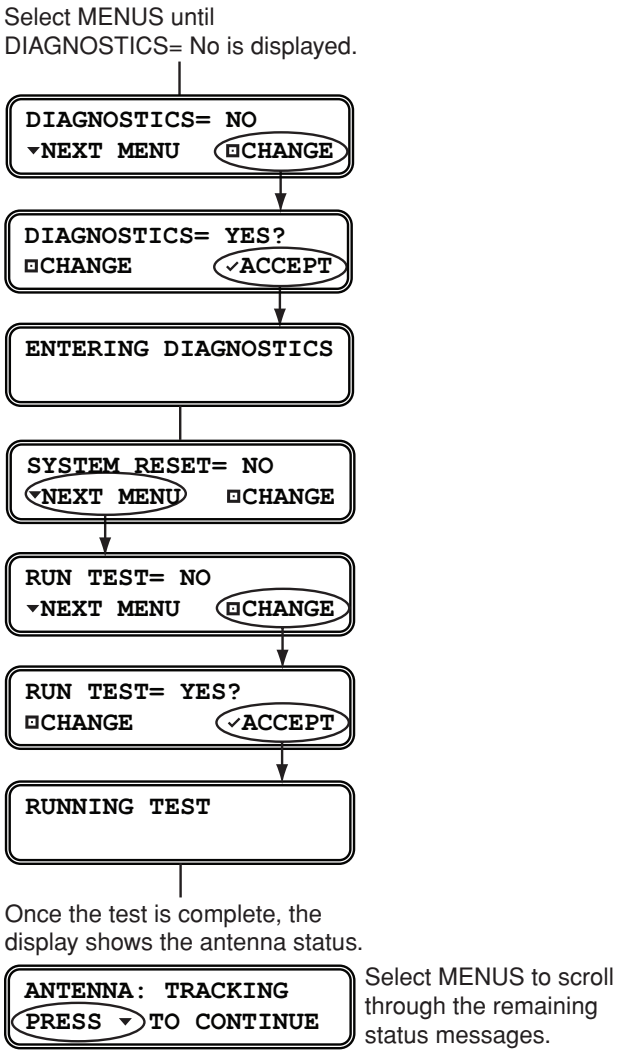
The table below lists possible error messages and the appropriate corrective action.

Warning	Description
SYSTEM SAT MISMATCH PRESS ✓ TO FIX	The interface box and antenna are out of sync. Just press ACCEPT to synchronize.
SAT NOT INSTALLED	The receiver is tuned to a channel carried by a satellite that is not installed in the antenna. You might need to change your setup.
TRACKING DTV 101 SYSTEM NEEDS SETUP	This is not a true error message. This screen indicates that the system needs to be configured for the desired satellite service/ configuration. Refer to *"Setup" on page 27* for detailed setup information.

Running the Diagnostics Test

In addition to the front panel status lights, the interface box includes a self-test function within its Diagnostics menu. Use the flowchart in *Figure 17* to perform a diagnostic test. For information on diagnostic test results, see *"Diagnostic Test Results" on page 36*.

Figure 17 Diagnostics Test



Diagnostic Test Results

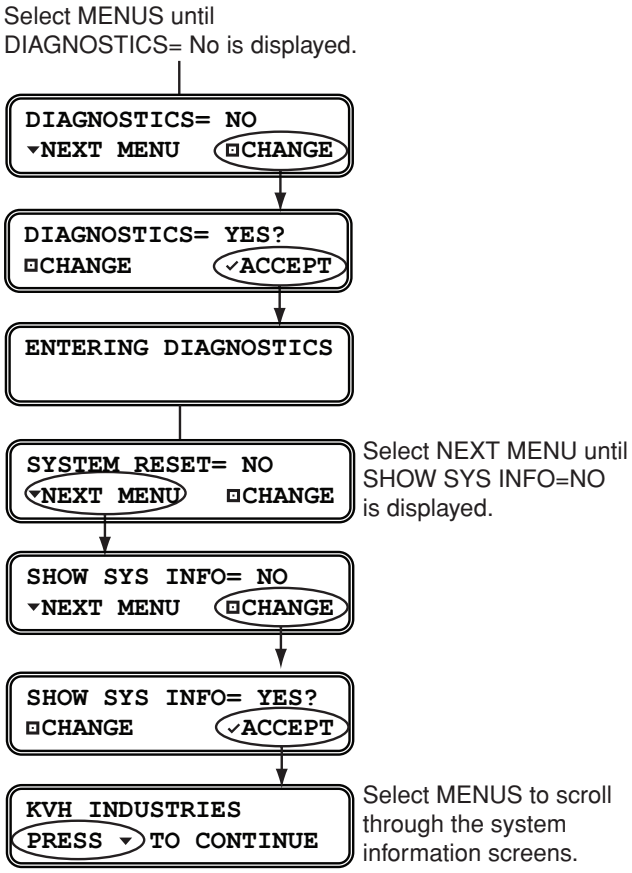
The table below lists all of the status messages.

Status Message	Description
ANTENNA: TRACKING PRESS ▼ TO CONTINUE	Antenna status: Idle, Initializing, Searching, Tracking, or Error
SATELLITE: 119 PRESS ▼ TO CONTINUE	Name of the currently selected satellite
BIT ERROR: OK,928 PRESS ▼ TO CONTINUE	Bit error rate: OK: Less than 2001 High: Between 2001-8000 Bad: Greater than 8000
AGC LEVEL: OK,22500 PRESS ▼ TO CONTINUE	Automatic gain control level: OK: Between 20000-25000 Bad: Less than 20000; greater than 25000
SAT 1: 101 PRESS ▼ TO CONTINUE	List of installed satellites. Press MENUS to scroll through the list
LAT/LONG: 41N, 071W PRESS ▼ TO CONTINUE	Actual GPS position data, or acquiring
CABLE STATE: OK PRESS ▼ TO CONTINUE	Antenna cable status: OK, Open, or Shorted
SYSTEM DC: OK,12.3 PRESS ▼ TO CONTINUE	Input voltage (DC power): OK: 10-16 VDC Low: 9-10 VDC Bad: Less than 9 VDC or more than 16 VDC
ANTENNA DC: OK,41.0 PRESS ▼ TO CONTINUE	Antenna voltage (DC power): OK: 39-42 VDC Low: 37-39 VDC Bad: Less than 37 VDC

Viewing System Information

You can view the TracVision R6DX system's software versions and serial numbers on the interface box display. Use the flowchart in *Figure 18* to display the system information. For more information on system information results, see *"System Information Results" on page 38*.

Figure 18 System Information



System Information Results

The table below lists all of the status information messages.

Information Message	Description
TRACVISION R6 PRESS ▼ TO CONTINUE	Model of TracVision Antenna
SYS SW: 1.2 PRESS ▼ TO CONTINUE	Version of antenna main software
RF SW: 1.3 PRESS ▼ TO CONTINUE	Version of antenna RF software
MOTOR SW: 1.4 PRESS ▼ TO CONTINUE	Version of antenna motor controller software
JBOX SW: 1.5 PRESS ▼ TO CONTINUE	Version of interface box software
ANT.SER.# 061201234 PRESS ▼ TO CONTINUE	Serial number of antenna
JBOX SER.# 061205678 PRESS ▼ TO CONTINUE	Serial number of interface box

NOTE: *The first 4 digits of the serial number indicate the year and month (YYMM) the product was manufactured. For example, if the antenna has a serial number of 061201234, it was built in December 2006.*

Technical Support

The TracVision R6DX system is a sophisticated electronic device; only KVH-authorized technicians have the tools and expertise necessary to diagnose and repair a system fault. Therefore, if you experience an operating problem or require technical assistance, please call or visit your local authorized TracVision dealer or distributor. You can find an authorized technician near you by visiting our website at *www.kvh.com/wheretogetservice*.

If you need help finding an authorized technician, please contact KVH Technical Support:

Phone: +1 401 847-3327
E-mail: *techs@kvh.com*

Product Registration

Be sure to register your TracVision R6DX 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.

When you register, you'll enjoy a wide range of benefits, including:

- Free e-mail notification of enhancements and software updates to improve the performance of your system
- Fast, convenient customer and technical support
- Alerts about changes and improvements to services and programming
- Product news and special offers
- Complete privacy - KVH will never sell or share your data with other companies or organizations

Appendix A Wiring Deluxe Configurations

This appendix provides wiring diagrams for TracVision R6DX deluxe configurations (including the DIRECTV HDTV Tri-Sat AutoSwitch Kit and DIRECTV H20-600 receiver).

NOTE: *For installation instructions, refer to the TracVision R6DX Installation Guide. For information on which receiver controls satellite selection, see* ***"Switching Satellites" on page 17***.

TIP: *For more information on DIRECTV HDTV Tri-Sat AutoSwitch Kit components, see* ***"DIRECTV HDTV Tri-Sat AutoSwitch Kit Components" on page 8***.

NOTE: *Wiring diagrams for TracVision R6DX baseline configurations, for use with DISH Network or ExpressVu service, are provided in* ***"Appendix C" on page 63***.

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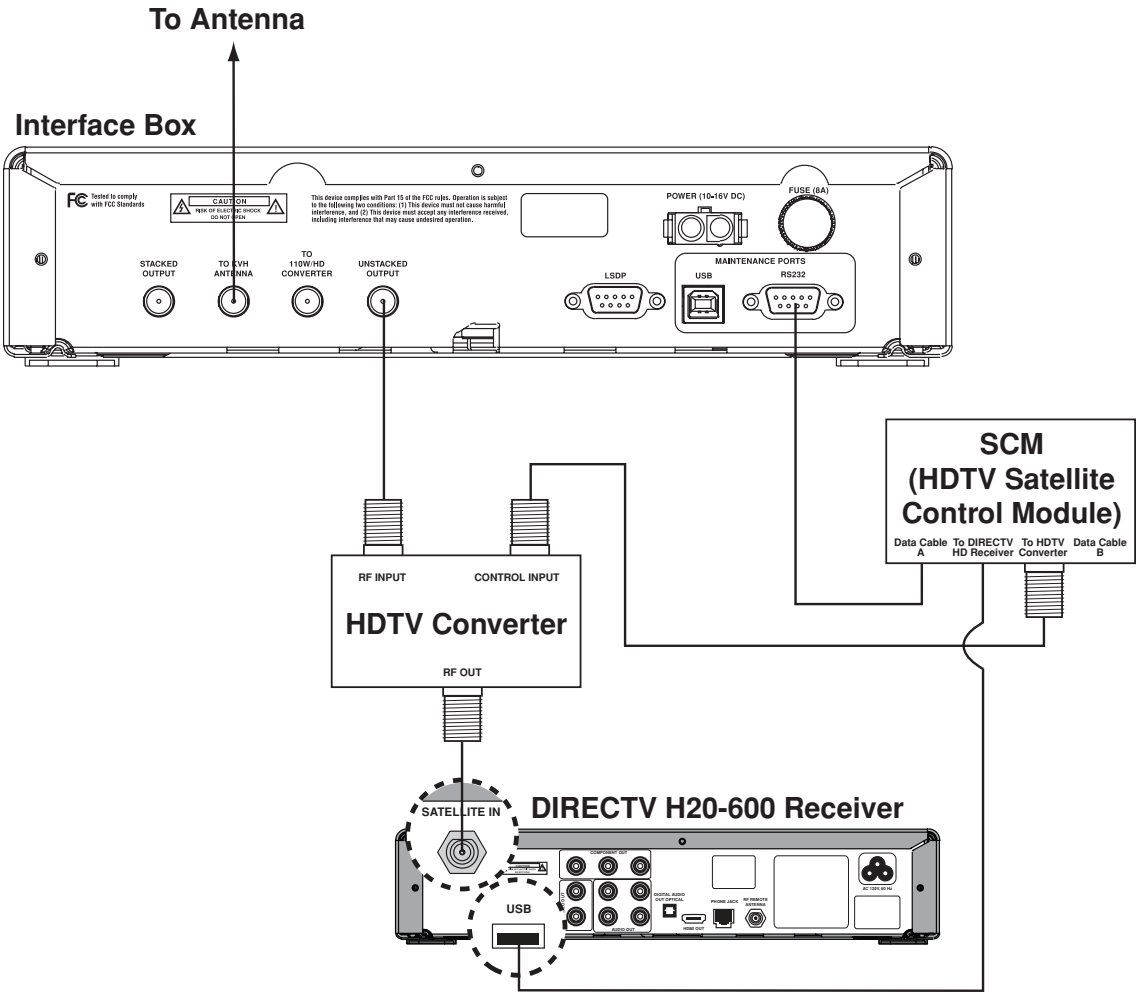
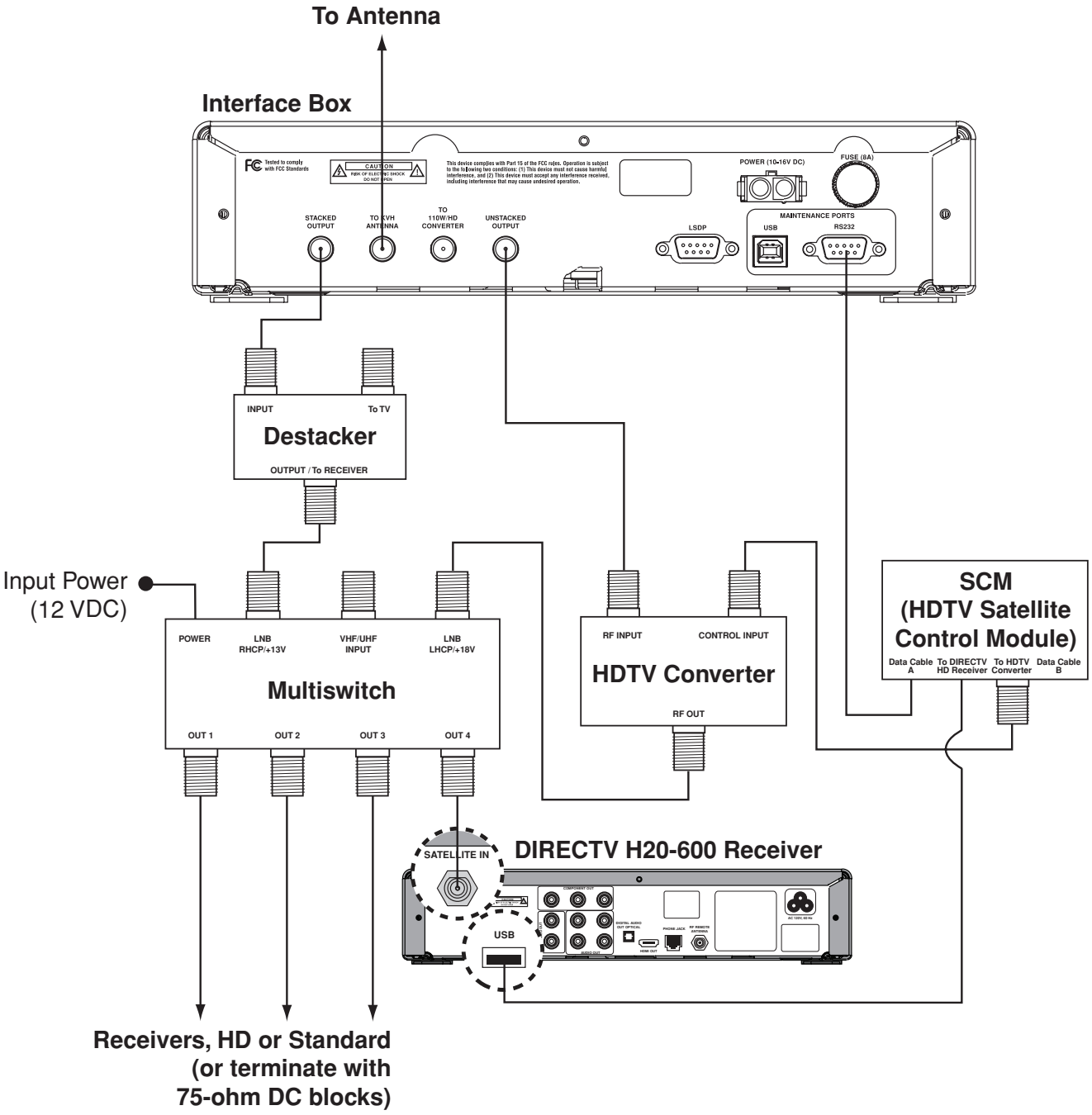
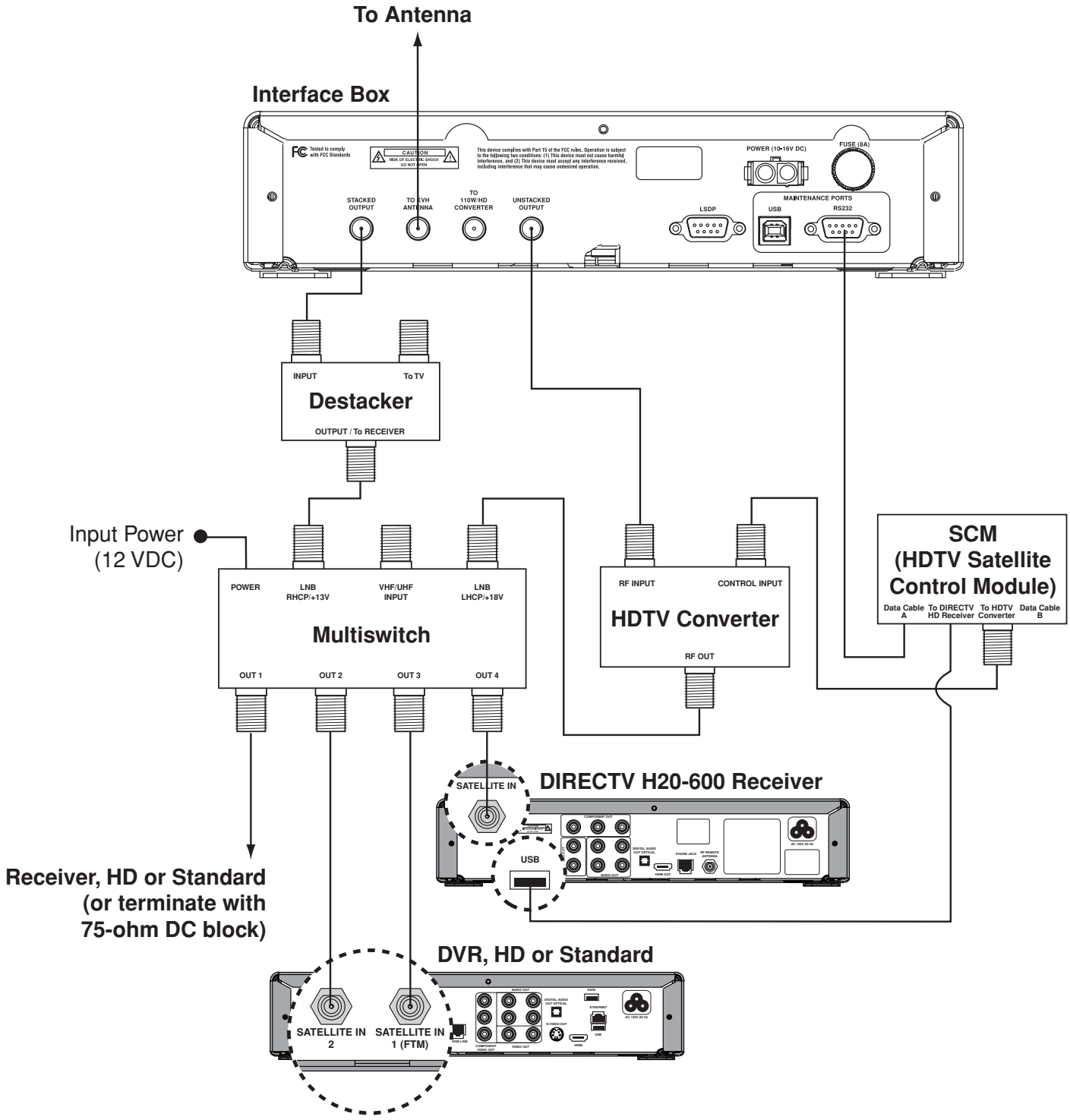
Wiring Diagram - DIRECTV HDTV Tri-Sat AutoSwitch Kit and 1 DIRECTV H20-600 Receiver



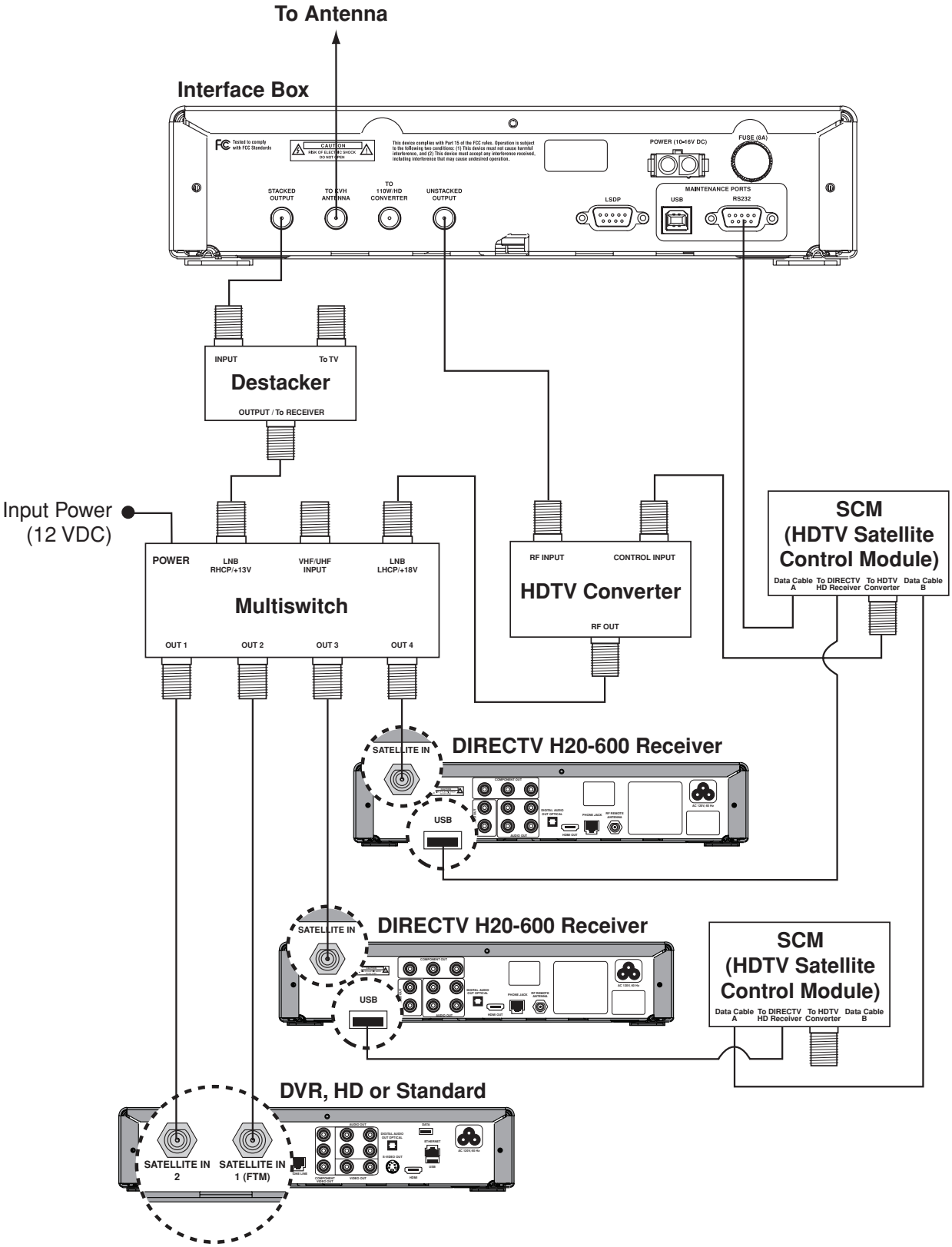
Wiring Diagram - DIRECTV HDTV Tri-Sat AutoSwitch Kit, 1 DIRECTV H20-600 Receiver, and 1-3 Additional Receivers



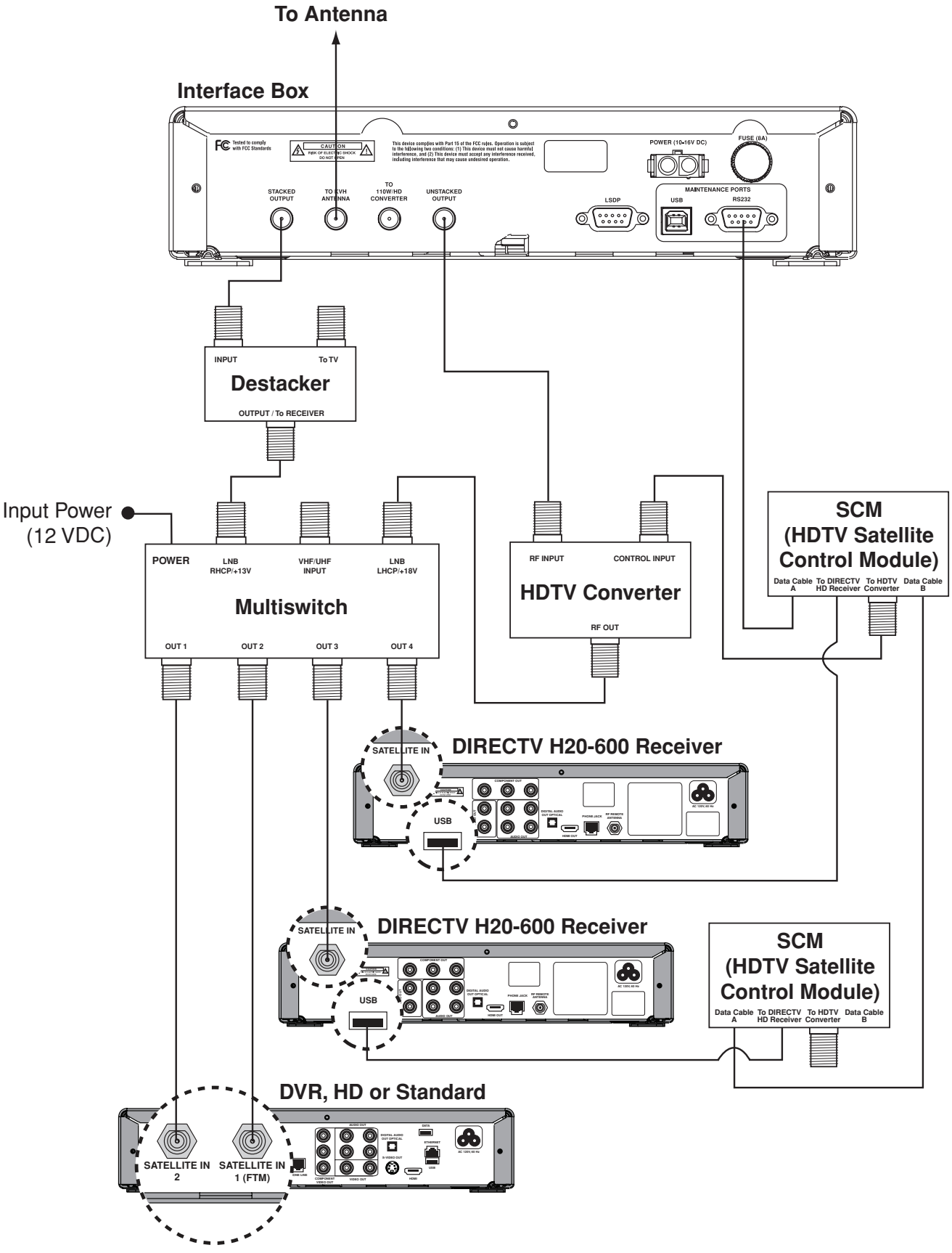
Wiring Diagram - DIRECTV HDTV Tri-Sat AutoSwitch Kit, 1 DIRECTV H20-600 Receiver, 1 DVR, and 0 or 1 Additional Receivers



Wiring Diagram - DIRECTV HDTV Tri-Sat AutoSwitch Kit, 1 Additional SCM-equipped DIRECTV H20-600 Receiver, and 0-2 Additional Receivers



Wiring Diagram - DIRECTV HDTV Tri-Sat AutoSwitch Kit, 1 Additional SCM-equipped DIRECTV H20-600 Receiver, and 1 DVR



Appendix B
Baseline Configurations

This appendix provides setup and operation information for alternate configurations for use with DISH Network or ExpressVu service.

NOTE: If you need to set up the system for DIRECTV HDTV service, see *"Setup" on page 25*.

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Manual Mode Setup 59
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Setup Overview

When you turn on the TracVision R6DX system for the first time, the interface box displays "SYSTEM NEEDS SETUP." The following sections explain how to set up the TracVision R6DX system for DISH Network or ExpressVu service.

To Set Up:	Refer to:
DISH Network	*Page 52*
ExpressVu	*Page 55*
Manual Mode	*Page 59*

NOTE: *If you need to set up the system for DIRECTV HDTV service, see* ***"Setup" on page 25****.*

TIP: *If you need to change the antenna's setup to receive to receive a different satellite TV service and/or track a different satellite, see* ***"Resetting the System to Change Setup" on page 60****.*

DISH Network Setup

DISH Network setup consists of the following steps:

1. Select the Antenna Type and Configure the System
2. Run the Receiver Check Switch Function

Select the Antenna Type and Configure the System

Refer to the table below to select the desired antenna type for DISH Network service (see table below). Then refer to the appropriate flowchart for your desired antenna type.

Antenna	Satellites Used	Satellite Switching	Refer to:
DISH500	119, 110	Automatic *Compatible only with model 311 receiver*	*Figure 19*
MANUAL	Select up to 4	Manual	*Figure 20 on page 53*

NOTE: *If the status screen does not show "System Needs Setup," follow the steps in "Resetting the System to Change Setup" on page 60.*

Figure 19 DISH Network Setup - DISH500 Antenna Type

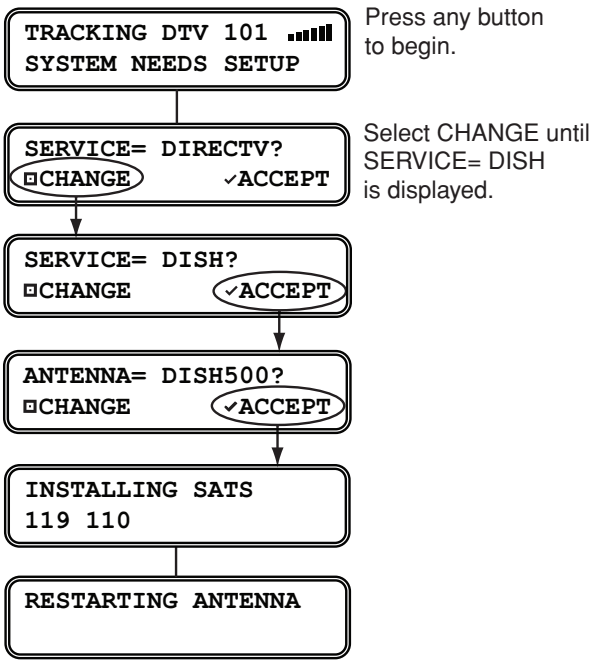
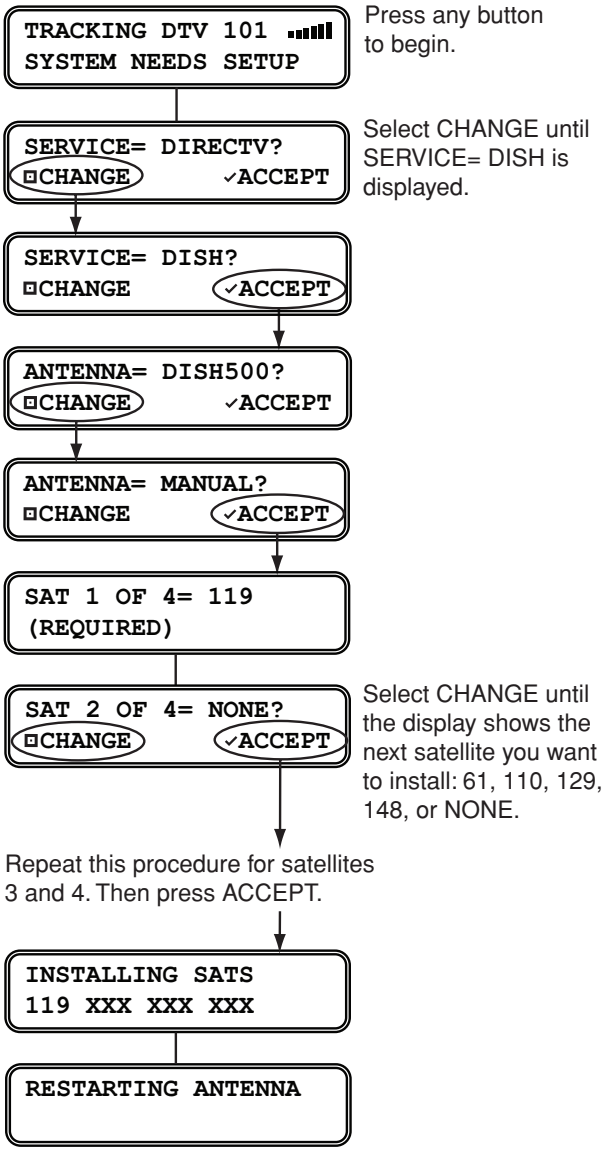


Figure 20 DISH Network Setup - Manual Antenna Type



Run the Receiver Check Switch Function

To configure your DISH Network receiver to work with the TracVision R6DX system, follow the steps below to run the receiver's Check Switch function.

1. Turn on the receiver and the TV. Keep the TracVision antenna turned on.
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, the TV shows "No Switch Detected," "Switch Type Unknown," or a similar error message. This is normal.
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.

ExpressVu Setup

ExpressVu setup consists of the following steps:

1. Select the Antenna Type and Configure the System
2. Run the Receiver Check Switch Function

Select the Antenna Type and Configure the System

Refer to the table below to select the desired antenna type for ExpressVu service (see table below). Then refer to the appropriate flowchart for your desired antenna type.

Antenna	Satellite(s) Used	Satellite Switching	Refer to:
SINGLE LNB	91	None (Unnecessary)	*Figure 21*
DUAL LNB	91, 82	Automatic	*Figure 22 on page 56*
MANUAL	Select up to 2	Manual	*Figure 23 on page 57*

NOTE: *If the status screen does not show "System Needs Setup," follow the steps in "Resetting the System to Change Setup" on page 60.*

Figure 21 ExpressVu Setup - SINGLE LNB Antenna Type

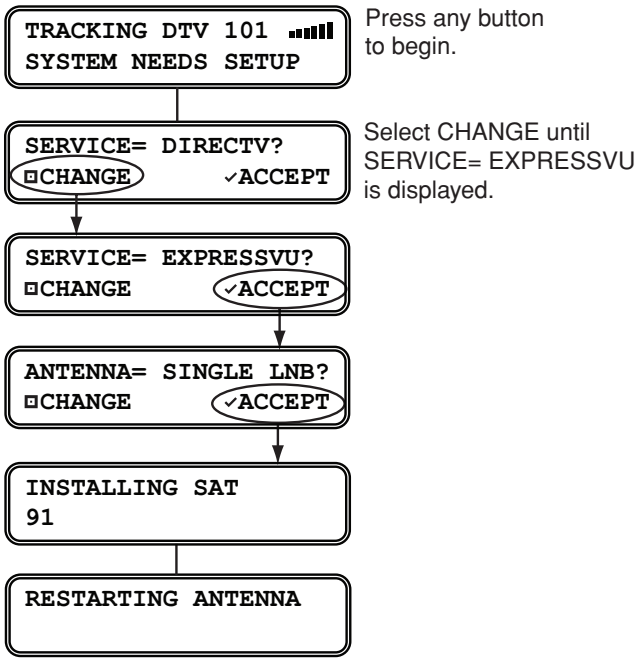


Figure 22 ExpressVu Setup - DUAL LNB Antenna Type

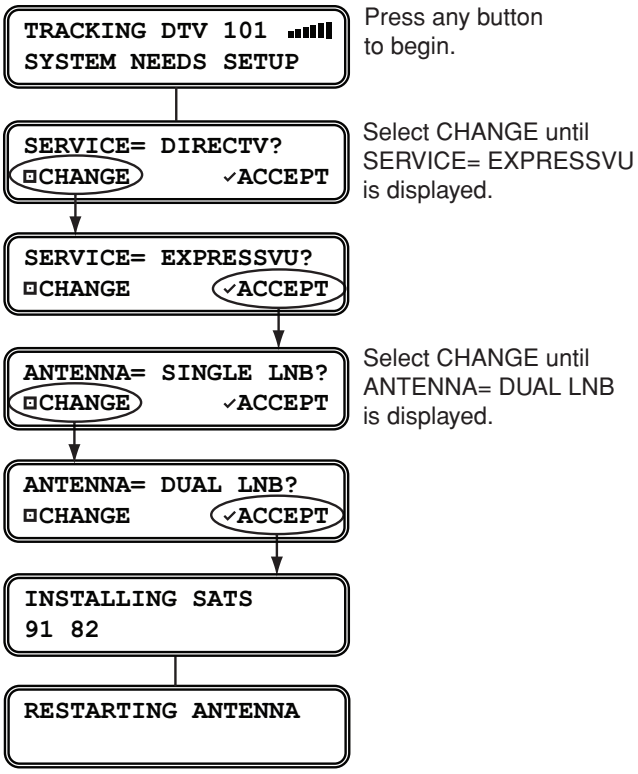
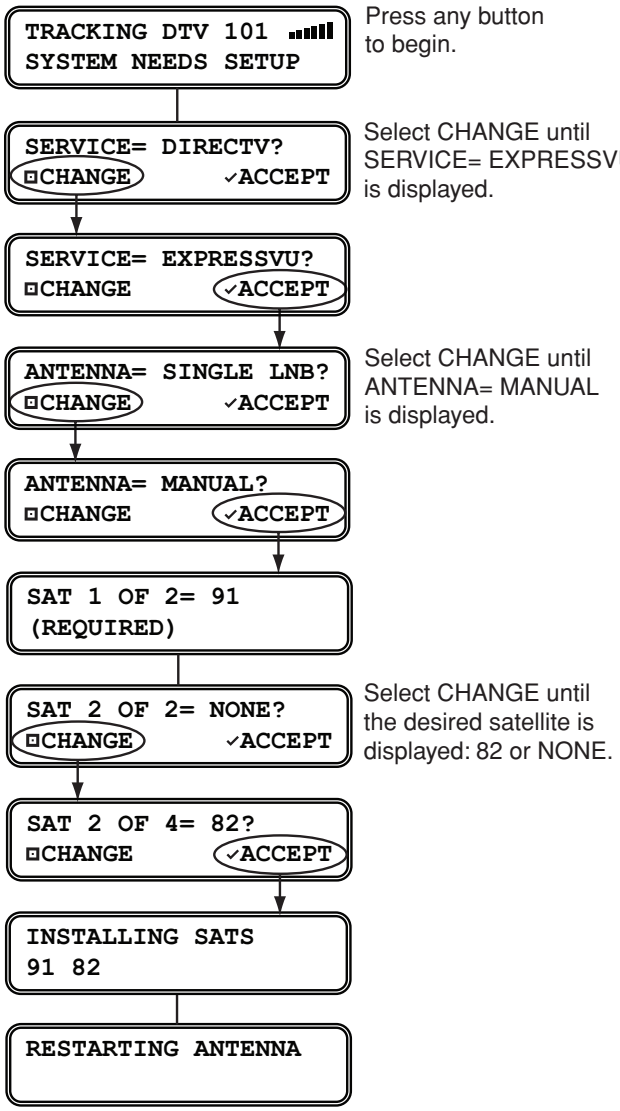


Figure 23 ExpressVu Setup - MANUAL Antenna Type



Run the Receiver Check Switch Function

To configure your ExpressVu 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. Keep the TracVision antenna turned on.
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 91 satellite.
4. Select the "Check Switch" button.
5. At the "Attention" screen, select the "Check" button. The receiver begins configuring itself for TracVision operation.
6. Wait until the Check Switch function is complete. It will take a couple minutes.
7. **If you set up the antenna for DUAL LNB antenna type**, verify that the TV shows the following:

Installed Switch: **SW42**				
Input:	**1**	**1**	**2**	**2**
Satellite:	**91**	**91**	**82**	**82**
Polarity:	**Odd**	**Even**	**Odd**	**Even**
Status:	**Satellite reception verified**			

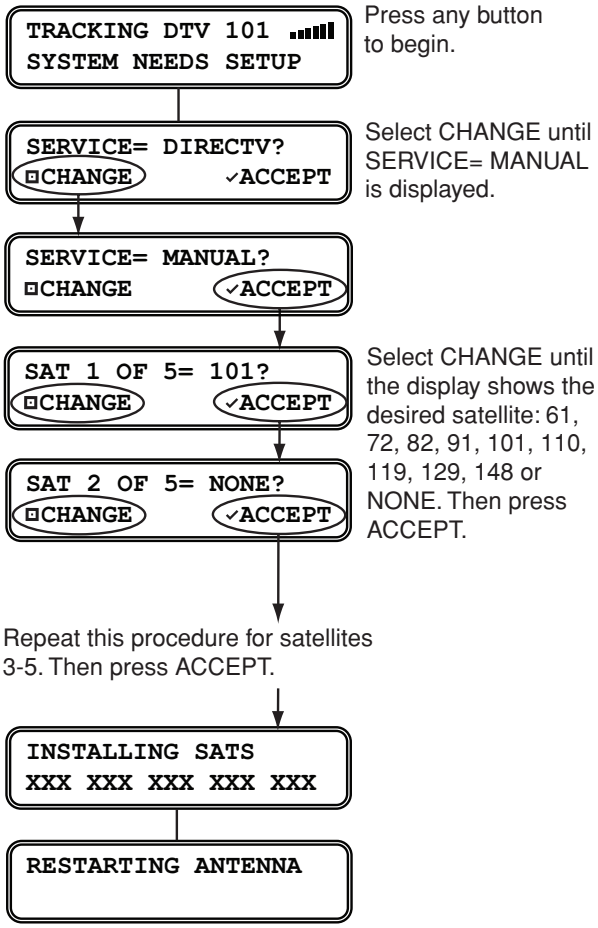
   If you set up the antenna for SINGLE LNB or MANUAL antenna type, the TV shows "No Switch Detected," "Switch Type Unknown," or a similar error message. This is normal.
8. If the information is not displayed as noted in Step 6, try running the Check Switch function again.
9. When you are done, exit the menu.

Manual Mode Setup

Use the flowchart below to set up the TracVision R6DX system to track the satellites of your choice.

NOTE: *If the status screen does not show "System Needs Setup," follow the steps in* ***"Resetting the System to Change Setup" on page 60****.*

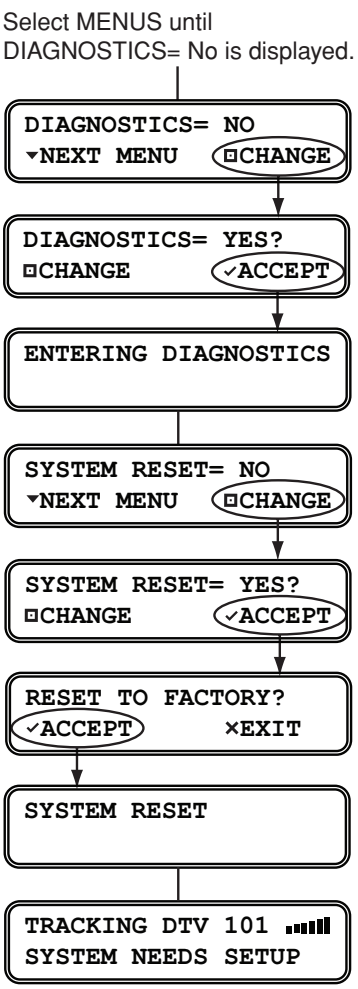
Figure 24 Manual Mode Setup



Resetting the System to Change Setup

If you need to change the antenna's setup to receive a different satellite TV service and/or track a different satellite, use the flowchart 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 earlier in this chapter.

Figure 25 Factory Reset



Switching Satellites

The following instructions explain how to switch satellites using a baseline configuration - for use with DISH Network or ExpressVu service.

If your system is set up to track multiple satellites, you can easily switch between them. Use the switching method that applies to your particular setup (see table below). You can identify the current satellite switching method by the format of the status screen:

Status Screen Example	Satellite Switching Method
	Automatic
	Manual

Automatic Satellite Switching

If your system is set up for automatic satellite 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
DISH Network	DISH500	119 and 110
ExpressVu	DUAL LNB	91 and 82

Manual Satellite Switching

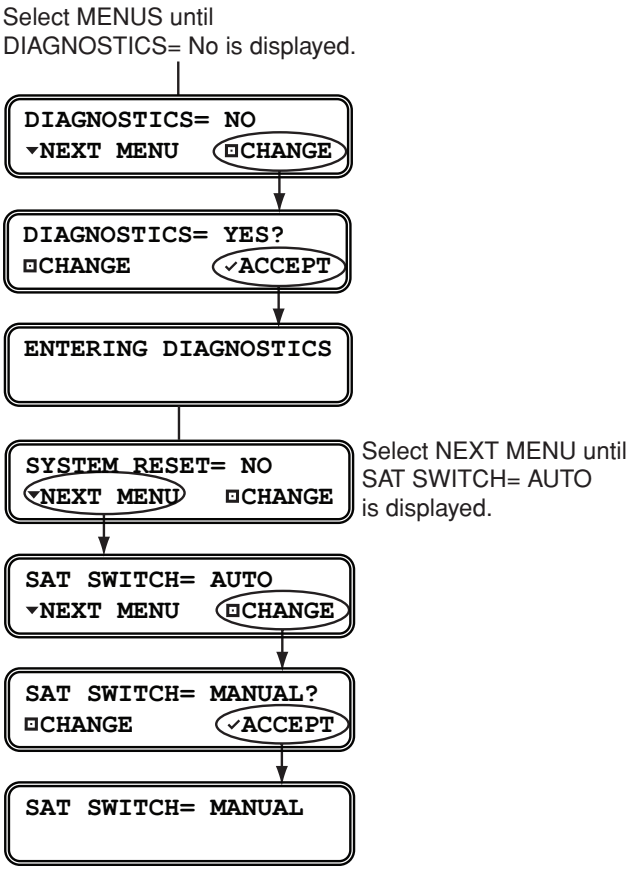
If your system is not set up for automatic satellite switching, simply press the ⊡CHANGE button on the front of the interface box to switch between satellites.

Changing the Satellite Switching Mode

If your TracVision R6DX system is set up for automatic switching, the antenna automatically switches satellites as you change channels using the receiver's remote control. However, if you want to manually select a satellite instead, the interface box allows you to switch from automatic to manual switching (you can also switch back to automatic switching using this same menu function).

Use the flowchart in *Figure 26* if you need to modify the current satellite switching mode.

Figure 26 Satellite Switching Mode



Appendix C Wiring Baseline Configurations

This appendix provides wiring diagrams for TracVision R6DX baseline configurations for use with DISH Network or ExpressVu service.

NOTE: *For installation instructions, refer to the TracVision R6DX Installation Guide.*

NOTE: *Wiring diagrams for deluxe TracVision R6DX configurations, for use with DIRECTV HDTV service, are provided in* ***"Appendix A" on page 41***.

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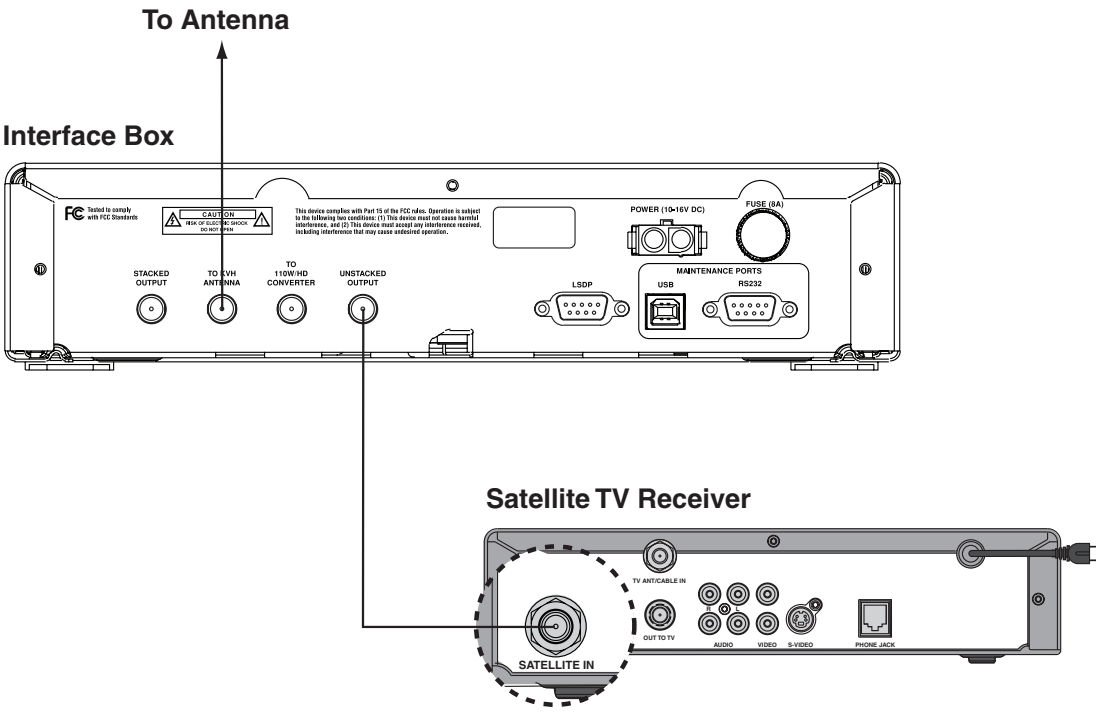
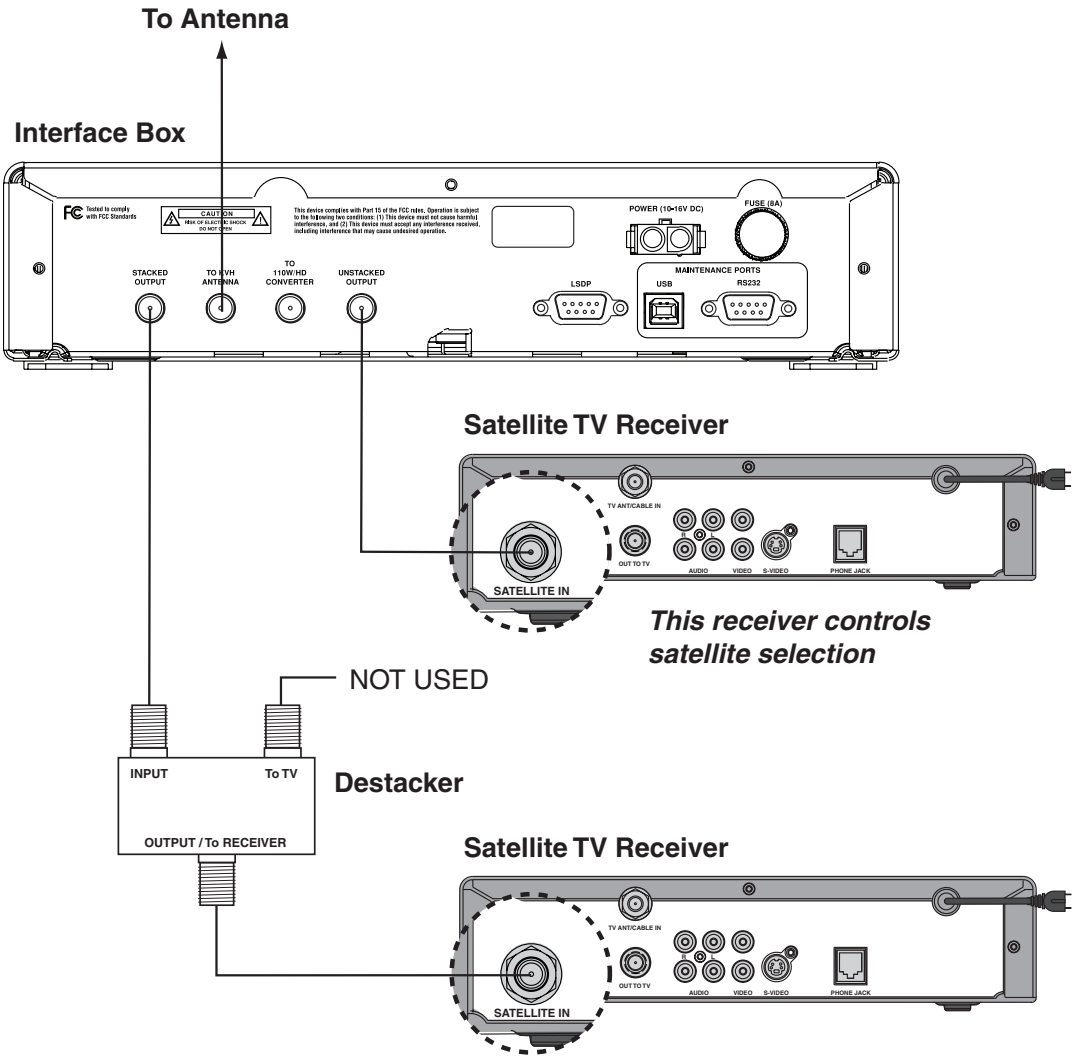
Wiring Diagram - 1 Standard Receiver



Wiring Diagram - 2 Standard Receivers



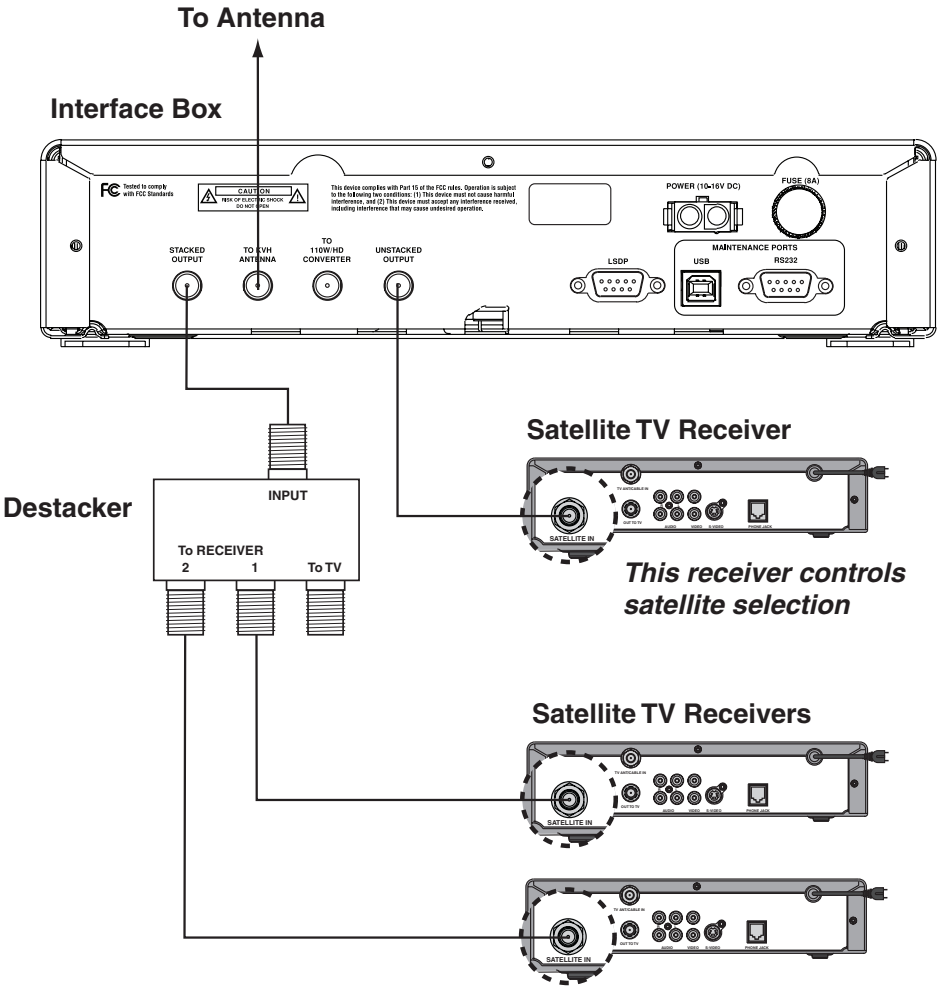
Destacker (Single-Output) Required

The single-output destacker (KVH P/N 19-0347) converts a stacked signal into an unstacked signal, which standard satellite TV receivers are configured to decode. The interface box has two satellite TV outputs: "Unstacked" and "Stacked." You will need to install the destacker between the "Stacked" output and your second receiver.

Primary Receiver Controls Satellite Selection

The receiver that you connect to the "Unstacked" output is the primary receiver. If the system is set up for automatic switching, the primary receiver controls satellite selection.

Wiring Diagram - 3 Standard Receivers



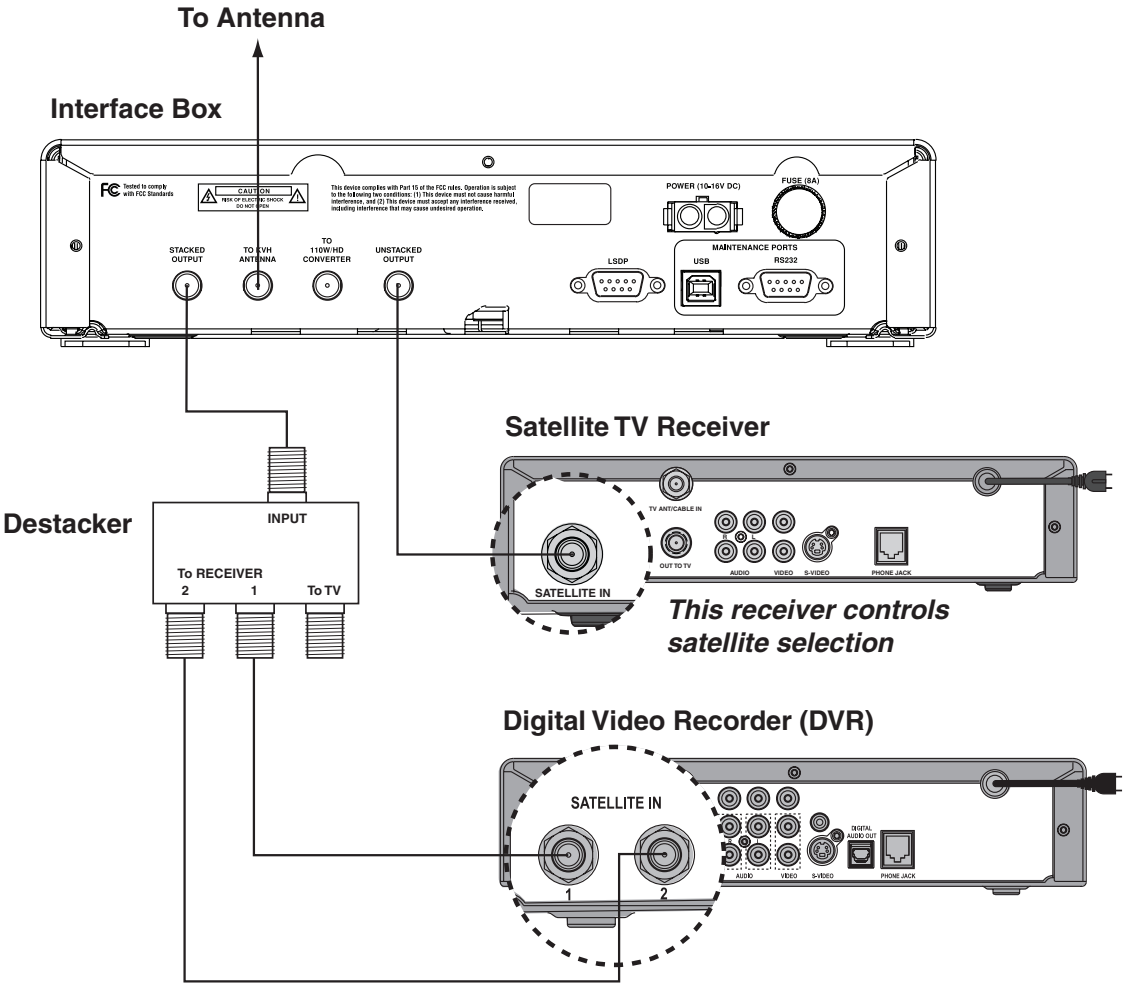
Destacker (Dual-Output) Required

The dual-output destacker (KVH P/N 19-0410) converts a stacked signal into two unstacked signals, which standard satellite TV receivers are configured to decode. The interface box has two satellite TV outputs: "Unstacked" and "Stacked." You will need to install the destacker between the "Stacked" output and your second and third receivers.

Primary Receiver Controls Satellite Selection

The receiver that you connect to the "Unstacked" output is the primary receiver. If the system is set up for automatic switching, the primary receiver controls satellite selection.

Wiring Diagram - 1 Standard Receiver and 1 DVR



Destacker (Dual-Output) Required

The dual-output destacker (KVH P/N 19-0410) converts a stacked signal into two unstacked signals. Two outputs are required because DVRs have two unstacked inputs, whereas standard receivers have only one input.

Recording Limitation

The DVR can record any channel carried on the satellite that is currently selected by the primary receiver. (The primary receiver is connected to the "Unstacked Output.") To record a channel on a different satellite, you need to select that satellite on the primary receiver as well. You don't have to select the same channel; just make sure that channel is carried on the same satellite.

TVR6DX_US_UsersG_Cvr_7.07

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