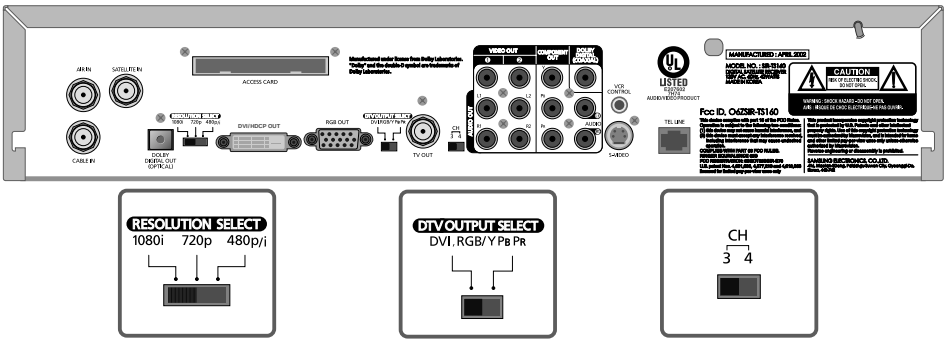
9 Set the RESOLUTION switch to the highest resolution supported by your TV. (See Chapter 1 for information on resolutions. See your TV owner's manual for information on your TV's capabilities.)
If you connect your TV to one of the composite video out jacks (Video Out, S-Video Out, or TV Out), and you view a high-definition program with the DIRECTV® High-Definition Receiver's RESOLUTION switch set to either 720p or 1080i, the picture will be slightly cropped at the top and bottom (the very top and bottom edges of the image will not appear on the TV screen). To avoid this problem, set the RESOLUTION switch to the 480p/i position if your TV is connected to one of the composite video outputs.

10 If you connected your TV using RGB or DVI/HDCP output, set the switch to the left (DVI, RGB). If you connected your TV using the Component output, set the switch to the right (YPbPr).

11 If you connected your TV or VCR to the TV OUT RF jack, set the CH3/4 switch to determine the channel used to view DIRECTV® programming. The position of the CH 3/4 switch on your DIRECTV Receiver should match the setting of the similar CH 3/4 switch on your VCR.

12 (Optional) follow the instructions on the next page if you have a VCR and want to hook up the VCR control.

13 Plug in the power cords for your TV, A/V receiver, and DIRECTV Receiver.



Setting your TV input switch

To view any of the programming from your DIRECTV Receiver (satellite, cable, or off-air), set your TV to display the input from the video input jack you used to connect the DIRECTV Receiver. (This is a setting on your TV usually controlled by a Video, Input, or Mode button. See your TV manual for help.) Also, if necessary, set your A/V receiver to play the audio from the audio input jack you used to make the audio connection. See your A/V receiver manual for help.

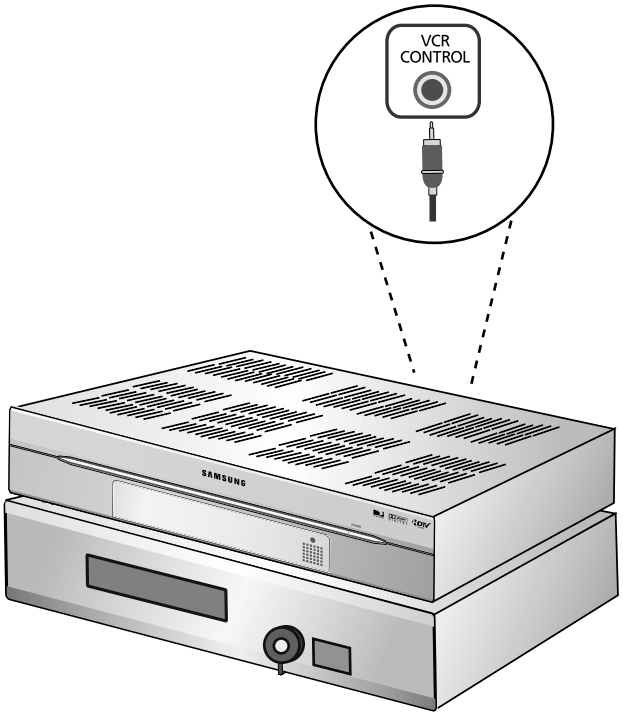
Connecting the VCR control cable

The VCR control cable allows your DIRECTV® High-Definition Receiver to automatically program your VCR to record a TV program. By selecting a *Record* option from the on-screen Program Guide, you can direct the VCR control cable to flash signals to the VCR's remote control sensor programming the VCR to tape a TV program for you.

To connect the VCR control cable to your DIRECTV Receiver, follow these steps:

1 Plug the VCR control cable into the VCR CONTROL jack on the back of the DIRECTV Receiver.

2 Remove the backing tape from the adhesive on the other end of the VCR control cable. Stick the VCR control next to the remote control sensor on your VCR. (See the manual for your VCR if you are not sure where its remote sensor is located.)



Note: Before you can use the VCR control cable to program your VCR, you must set up the VCR control. See *Setting up the VCR control* in Chapter 5 for details.

Turning on the DIRECTV® High-Definition Receiver for the first time

You have completed the connection steps and are ready to start using your DIRECTV Receiver. The first step is to turn on the DIRECTV Receiver.

1 Turn on your TV and set it to display the signal from your DIRECTV Receiver.

If you connected the DIRECTV Receiver to an RF-type input jack, you will need to tune your TV to channel 3 or 4 (depending on how the CH 3/4 switch on the back of the DIRECTV Receiver is set). If you have a VCR, the VCR must be in TV mode or turned off.

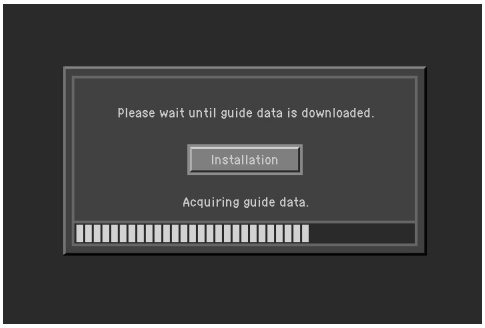
If you connected the DIRECTV Receiver to video input jacks on your TV, you will need to set your TV to display the input from these jacks. Usually this is done by pressing a Video, Input, or Mode button on your TV's remote control. (See the manual for your TV if you need help.)

2 Press the POWER button on the DIRECTV Receiver's remote control or on the front of the DIRECTV Receiver.

The light on the front panel will turn on.

If this is the first time you have turned on your DIRECTV Receiver, it will take a few moments to acquire the program guide from the satellite. During this process, the Progress screen appears.

When the program guide has been fully acquired, the Progress screen clears and the TV screen is displayed. You are ready to continue setting up your DIRECTV System.



Adjusting the satellite dish

If your DIRECTV Receiver is able to acquire the program guide and display TV programs, your satellite dish is setup and working. You can skip ahead to the section on *Setting the dish type.*

If your DIRECTV Receiver cannot acquire the program guide, and you intend to watch DIRECTV® programming, you may need to adjust the way your satellite dish is installed. To do this, first make sure your TV and DIRECTV Receiver are turned on and connected to each other properly. Then follow the instructions below to use your DIRECTV Receiver's Menu system to set up your satellite dish.

The *Installation* option in the *SETUP* menu provides access to a variety of important setup controls. The first of these is the *Set Dish* menu. The *Set Dish* menu allows you to:

- Acquire the exact azimuth, elevation, and tilt angles to help you point your dish accurately based on your ZIP code.
- Check the setup of your satellite dish using an on-screen signal meter.
- Set the dish type (to tell your DIRECTV® High-Definition Receiver what kind of satellite dish you are using).
- Set your dish type automatically.

The sections that follow detail each of these procedures.

Acquiring the correct dish pointing angles

The *Dish Pointing* menu item in the *Set Dish* menu allows you to find out exactly how to point your satellite dish by entering your ZIP code. If you have not yet successfully aligned your satellite dish, or if you need to realign it, follow these instructions to find the exact angles you should use to point your dish:

1 Press the MENU button on your remote control.
The Main menu appears.

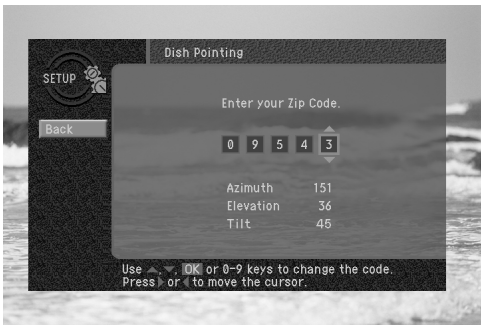
2 Highlight the *SETUP* menu item, then press the OK button.
The *SETUP* menu appears.

3 Highlight the *Installation* menu item, then press the OK button.
The *Installation* menu appears.

4 Highlight the *Set Dish* menu item, then press the OK button.
The *Set Dish* menu appears.

5 Highlight the *Dish Pointing* menu item, then press the OK button.
The *Dish Pointing* screen appears.

6 Use the right-arrow button on your remote control to highlight the space for the first digit in the ZIP code.



7 Use the 0 - 9 buttons on your remote control to enter your five-digit ZIP code.

When you have entered all five digits, the screen updates to display the correct azimuth, elevation, and (for oval dish types only) tilt.

Azimuth refers to the left-to-right angle to which you should point your dish.

Elevation refers to the up-and-down angle to which you should point your dish.

Tilt (for oval dishes only) refers to the amount off-horizontal you should twist the dish on its axis.

Write down these numbers and use them to accurately point your satellite dish.

8 To return to the *Set Dish* menu, press the BACK button on your remote control. To exit the Menu system, press the EXIT button on your remote control.

Checking the satellite signal strength

The *Signal Meter* allows you to check the strength of the signal from the satellite to your satellite dish. This is useful while setting up your satellite dish, and while troubleshooting any reception problems you may encounter. Satellite signal strength can be affected by how accurately you have pointed the satellite dish, and by any obstructions between the satellite and the satellite dish (tree limbs, for example).

(Note: If you connected your DIRECTV® High-Definition Receiver to an off-air antenna, you can check the strength of any digital signals received by that antenna using the Digital Off-Air Signal Strength meter. Follow the instructions in *Programming local channels* later in this chapter.)

To check your satellite signal strength, follow these steps:

1 Press the MENU button on your remote control.

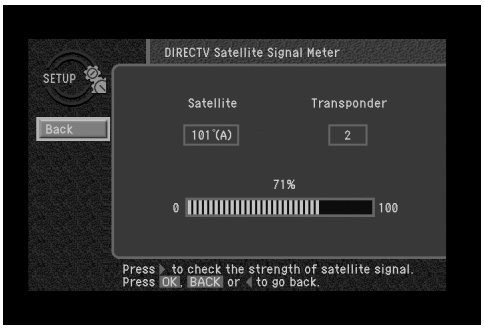
2 Highlight the *SETUP* menu item, then press the OK button.

3 Highlight the *Installation* menu item, then press the OK button.

4 Highlight the *Set Dish* menu item, then press the OK button.

5 Highlight the *Signal Meter* menu item, then press the OK button.

The *Signal Meter* screen appears.



The signal meter starts checking the satellite signal strength immediately. The signal strength (from 0-to-100%) is indicated at the bottom of the screen.

The *Signal Meter* screen allows you to check signal strengths from different *Satellites*, and different *Transponders*. The *Satellites* option applies only to oval-shaped satellite dishes which receive signals from multiple satellites. On round dishes, the *Satellite* setting is fixed.

Transponders are the equipment on satellites that receive the signal from the earth-based program providers and relay it back to earth to your satellite dish. Different transponders handle the signals for different TV channels.
When setting up your satellite dish, you should try to maximize the signal strength across all of the satellites and transponders.

6 To check the signal strength for different satellites (oval dishes only), or different transponders, use the left- and right-arrow buttons on your remote control to highlight the on-screen *Satellite* or *Transponder* option, then use the up- and down-arrow buttons to change the setting.

The signal meter updates to show you the signal strength for the new satellite or transponder.

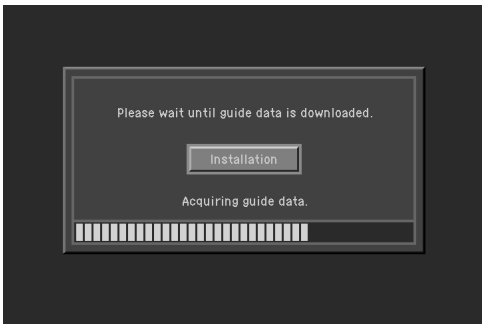
Setting the dish type

To function properly, your DIRECTV® High-Definition Receiver needs to know what type of satellite dish you are using. You can specify the dish type using the instructions here, or you can follow the steps on page 33 to use the *Auto Detection* menu item to automatically set the dish type.

Note: For DIRECTV® High-Definition programming, you will need an oval triple LNB satellite dish antenna.

To manually set the dish type:

1 If the Progress screen (shown here) is on your TV screen, select *Installation* by pressing the OK button.



If this screen is not displayed, access the Main Menu by pressing the MENU button on your remote control. Then use the arrow buttons on your remote control to highlight the Setup menu, and press the OK button. Then highlight the Installation menu, and press the OK button.

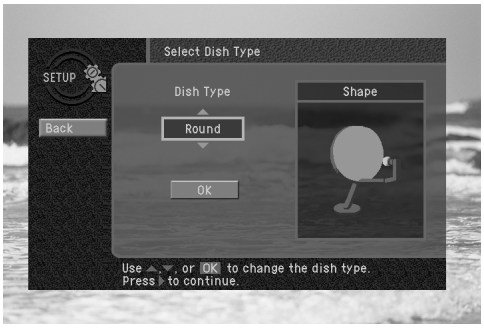
The Installation menu appears.

2 Highlight the *Set Dish* menu item, then press the OK button.

The *Set Dish* menu appears.

3 Highlight the *Select Dish Type* menu item, then press the OK button.

The *Select Dish Type* screen appears.



4 Use the right-arrow button on your remote control to highlight the *Dish Type* option on the *Select Dish Type* screen.

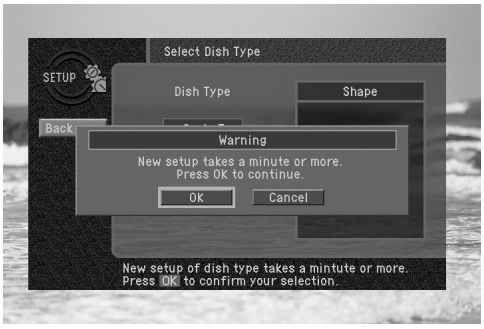
5 Use the up- and down-arrow buttons on your remote control to display the dish type you are using (*Round*, *Oval-2*, *Oval-3, or No Dish*).

As you display each dish type, the on-screen pictures update showing you what each of these dish types look like.

If you plan to use your DIRECTV® High-Definition Receiver for local off-air or cable TV programs, but do not plan to receive DIRECTV® programming, select *No Dish*.

6 When you have displayed the correct dish type, use the right-arrow button on your remote control to highlight the on-screen *OK* button, then press the OK button.

A message appears warning you that your DIRECTV Receiver needs to reboot (turn itself off and on) for the *Dish Type* setting to take effect.



7 To change the *Dish Type* to the new setting, highlight the on-screen *OK* button, then press the OK button. To leave the *Dish Type* setting unchanged, highlight the on-screen *Cancel* button, and press the OK button.

After you select the on-screen OK button, the DIRECTV Receiver will reboot.

If you selected *No Dish*, the DIRECTV Receiver will perform an auto-scan to put your cable and off-air channels into its memory so you can tune them and see them in the on-screen Guide.

Using Auto Detection to set the dish type

To function properly, your DIRECTV® High-Definition Receiver needs to know what type of satellite dish you are using. You can specify the dish type using the instructions on page 31, or you can follow the steps below to use the *Auto Detection* menu item to automatically set the dish type.

Before you can use *Auto Detection* to set the dish-type, the dish must be correctly aligned and the DIRECTV Receiver must be receiving a strong signal from the satellite (that is, signal-lock must be established). To check the satellite signal, use the signal meter — see page 30 for details.

1 Press the MENU button on your remote control.

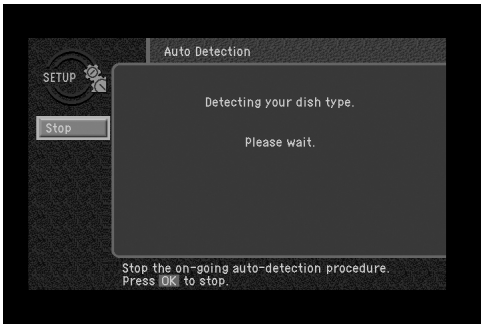
2 Highlight the *SETUP* menu item, then press the OK button.

3 Highlight the *Installation* menu item, then press the OK button.

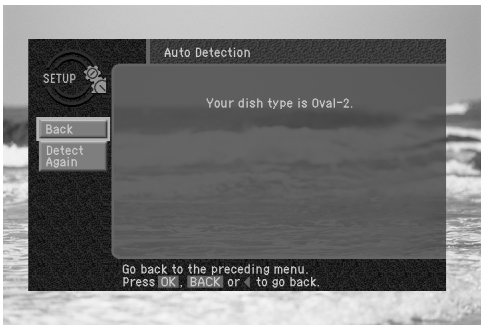
4 Highlight the *Set Dish* menu item, then press the OK button.

5 Highlight the *Auto Detection* menu item, then press the OK button.

The *Auto Detection* screen appears. The DIRECTV Receiver starts attempting to identify the dish type. You can stop the detection process by using the arrow buttons on your remote control to highlight the on-screen *Cancel* button, then press the OK button.



Once the dish type has been identified, a screen appears telling you what type of satellite dish you have.



6 To accept the detected dish type setting, use the arrow buttons on your remote control to highlight the on-screen *Back* button, then press the OK button.

The DIRECTV Receiver will reboot.

Testing the DIRECTV® High-Definition Receiver

The *System Test* feature allows you to quickly check the status of the satellite signal, your Access Card, and your phone line connection. This is helpful in troubleshooting should you experience problems with your DIRECTV Receiver.

To start the System Test, follow these steps:

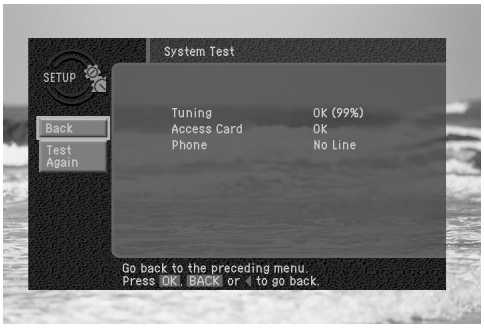
1 Press the MENU button on your remote control.

2 Highlight the *SETUP* menu item, then press the OK button.

3 Highlight the System menu item, then press the OK button.

4 Highlight the *System Test* menu item, then press the OK button.

The *System Test* screen appears.



The test will begin as soon as the screen appears. Results are displayed in a moment.

If the test discovers a problem with the satellite tuning, check that the satellite dish is pointed properly, and that nothing is obstructing the direct view to the satellite (over time trees can grow enough to block a previously open view).

If the test discovers a problem with the Access Card, check that the card is properly inserted. (See *Inserting the Access Card* in Chapter 2 for details.)

For problems with the phone line connection, be sure that the DIRECTV Receiver is connected to a phone line, and that the phone line is working. (Try plugging a telephone into the line you are using for the DIRECTV Receiver; check to see if the phone gets a dial tone. If so, the line is working.)

5 When you have finished the system test, you can run the test again using the on-screen *Test Again* button, exit the Menu system by pressing the EXIT button on your remote control, or use the arrow keys to highlight on-screen *Back* button, then press the OK button to return to the *System* menu.

Setting up local networks

You can use your DIRECTV® High-Definition Receiver to receive Guide information via satellite for local off-air and cable TV channels. To use this feature, you must connect your DIRECTV Receiver to a satellite dish as described earlier in this chapter, and you must set up the *Local Networks* option in the menu system.

(Note: If you do not connect your DIRECTV Receiver to a satellite dish and subscribe to DIRECTV® programming, you can still add local channels to the Guide by following the instructions in the next section.)

To set up the *Local Networks* menu option:

1. Press the MENU button on your remote control.
2. Highlight *Setup*, and press the OK button.
3. Highlight *Installation*, and press the OK button.
4. Highlight *Local Networks*, and press the OK button.
5. Highlight *Primary Air*, and press the OK button.
6. Highlight the first box in the *Zip code* area, then use the number buttons on your remote control to enter your Zip code.

   After a while, a list of cities appears below your ZIP code.
7. Highlight the name of the city from which your local channels are broadcast, and press the OK button.
8. Highlight the on-screen *Back* button, and press the OK button.

   You return to the *Local Networks* screen.
9. (Optional) If you receive off-air broadcasts from a second city, highlight *Secondary Air*, and press the OK button. Repeat steps 6 - 8 for the second city.
10. (Optional) If you receive programming from a cable TV service, highlight *Cable*, and press the OK button. Repeat steps 6 - 8 for the cable service.
11. When you have finished entering your local broadcast and cable TV information, press the EXIT button on your remote control.

    The DIRECTV Receiver will reboot (turn itself off and then back on). After rebooting, the DIRECTV Receiver will acquire and provide Guide information for your local off-air and cable TV channels.

Scanning off-air and cable TV channels

The Guide can receive programming information for local and cable channels via satellite (as described in the previous section). Your DIRECTV Receiver can also add off-air and cable TV channels to the Guide by scanning for signals from any off-air antenna or cable TV service connections you have provided.

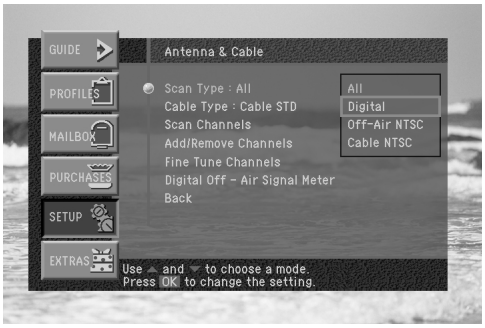
Follow this procedure to scan for channels from an off-air antenna and cable TV service connected to your DIRECTV® High-Definition Receiver.

1 Press the MENU button on your remote control.

2 Highlight the *SETUP* menu item, and press the OK button.

3 Highlight the *Antenna & Cable* menu item, and press the OK button.

4 Highlight the *Scan Type* menu item and press the OK button to display the list of available channel types.



The *Scan Type* list appears allowing you to choose to set your DIRECTV Receiver to automatically scan for channels from *Digital* sources (off-air ATSC broadcasts), *Off-Air NTSC* sources (standard TV broadcasts), Cable NTSC (standard cable TV services), or all of these.

If this is the first time you are setting up this DIRECTV Receiver to receive local channels, the *All* setting is recommended.

5 Highlight the *Scan Type* option that matches the type of broadcasts you would like to program into your DIRECTV Receiver, then press the OK button.

6 Next, set your cable TV type by highlighting the *Cable Type* menu item and pressing OK. Then highlight the type of cable signal your cable TV service provides (*STD*, *HRC*, or *IRC*), and press the OK button.

STD, *HRC* and *IRC* are signal formats used by cable TV services. Contact your Cable TV service provider to determine which signal type they use.

7 Highlight the *Scan Channels* menu item, and press the OK button.

The *Scan Channels* screen appears and the DIRECTV Receiver automatically starts looking for all available channels of the type you specified in the *Scan Type* list. Wait until the scan is complete.

8 If the automatic scan included any channels that you do not intend to watch, you can edit the channel list by using the *Add/Remove Channels* menu item in the *Antenna & Cable* menu.

9 If any of the off-air antenna channels appear out-of-tune, you can fine tune them using the *Fine Tune Channels* item in the *Antenna & Cable* menu.

10 If you have added digital channels from an off-air antenna, you can check the signal strength for that channel by using the *Digital Off-Air Signal Strength* menu item in the *Antenna & Cable* menu.

11 To exit the Menu system press the EXIT button on your remote control.

Activating your DIRECTV account

After you have installed and connected the the satellite dish and DIRECTV® High-Definition Receiver, you must contact your service provider to create an account. To order programming from DIRECTV, please call 1-800-DIRECTV (1-800-347-3288).

With this Digital Satellite Receiver and the proper Satellite Dish Antenna, you may be able to receive local channels from DIRECTV in certain markets. Additional equipment may be required in some areas. Check with your retailer or visit www.DIRECTV.com for information on availability of local channels from DIRECTV in your area.

DIRECTV® programming is provided in accordance with the terms and conditions of the DIRECTV Customer Agreement, which is provided at DIRECTV.com or with your first DIRECTV bill.

Activation of programming may be subject to credit approval and requires valid service address, social security number and/or major credit card. Programming subject to change. You must be physically located in the U.S. to receive DIRECTV® service. DIRECTV services not available outside the U.S. Deposit or prepayment may be required. DIRECTV programming is sold separately and independently of DIRECTV® System hardware. A valid programming subscription is required to operate DIRECTV System hardware.

Upgrades

Your digital satellite receiver is able to receive upgrades or modifications to some of its features and functions. These modifications will occur automatically, usually at times when the receiver would likely be turned off.

If your receiver is on when an upgrade or modification is sent, you may experience a disruption in reception for a minute or two. Your reception should return to normal after the modification is complete. Your receiver must be plugged in to receive any upgrades. **Do not unplug your receiver while an upgrade is in progress.** Please consult the *System Upgrades* menu item (in the *System* section of the *Setup* menu) to find a schedule of upgrades or modifications planned by DIRECTV.

Input/Output Interface

LNB	1 input
Video	2 RCA / Cinch
	1 Component video output (Y, Pb, Pr)
	1 RGB output
	1 DVI output
Audio	6 RCA / Cinch (3 pairs X Left & Right),
	1 Optical digital audio output
	1 Coaxial digital audio output
S-Video	1 output
RF input & output	2 input, 1 output
VCR control	1 VCR control output
Modem	RJ 11 connector
CH 3/4 Switch	Toggle switch Ch 3 or Ch 4
Resolution select Switch	1080i / 720p / 480p/i
DVI, RGB / Y Pb Pr switch	DVI, RGB / Y Pb Pr
Access Card	1 Access Card slot

Accessories

Cables:	1 RF cable
	1 phone cable
	1 A/V (RCA) cable
	1 S-VIDEO cable
	1 Component video cable
	1 DVI cable
	1 VCR control cable
Remote control	1 universal remote control (with 2 batteries)
Card	1 Conditional Access Card
Manual	1 Owner's manual

Specifications are subject to change without notice.