

Chapter 2

Receiver Description and Installation

Receiver Front Panel



Smart Card Door

Behind this door is a slot for a future smart card. No smart card is included with this receiver.

Indicators

- **TV1 Power** - The green light indicates that the receiver is providing programming to the nearby TV through the **TV1** output connections.
- **TV2 Power** - The blue light indicates that the receiver is providing programming to the remote TVs through the **TV2** output connections.
- **Recording** - Indicates that the receiver is recording. **TV1** and **TV2** each have recording indicators.
- **Mode** - Indicates if the receiver is in **Single** or **Dual** mode (see page 49 for details).

Buttons

The buttons on the receiver give you some control of the receiver. Most of the time you will want to use the remote controls that came with your receiver.

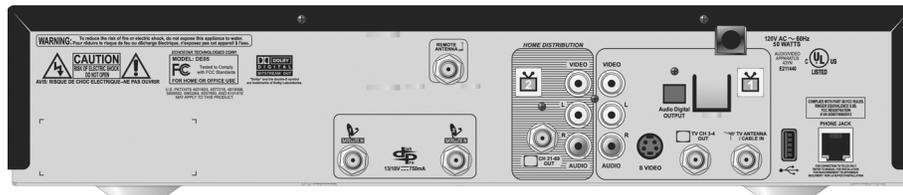
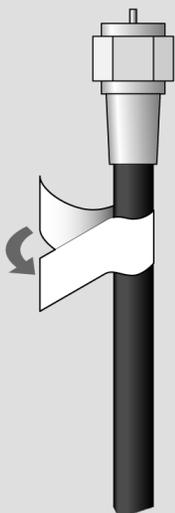
- **Mode** - Press the receiver **MODE** button to switch between **Single** and **Dual** mode (see page 49 for details).
- **System Info** - Displays the **System Info** screen on the nearby TV.
- **Menu** - Displays the **Main Menu**. After you press this button, use the **ARROWS** and **SELECT** buttons to navigate through **TV1**'s menus.
- **Arrows/Select** - Use the **ARROWS** and **SELECT** the same way as the **ARROW** and **SELECT** buttons on Remote Control 1.
- **Power** - Press the **POWER** button to turn the **TV1** programming on or off to the nearby TV.

IR Sensor

The **INFRARED (IR) SENSOR** receives IR signals from Remote Control 1.

Receiver Back Panel

Tip: The six coaxial connections on the back of your receiver are color coded to make the connectors easy to identify. Inside the front cover of this guide are stickers that are color coded the same way as the coaxial connections. See the installation instructions starting on page 29 for information on how to use the stickers that go on the coaxial cables.



The receiver connections on the back panel are placed in three groups:

- **TV1 Connections** - Use these connections with the nearby TV.
- **TV2 Connections** - Use these connections with the remote TV(s).
- **Other Connections** - Use these connections with the dish antenna, UHF antenna, and phone line.

TV1 Connections

The following connections provide **TV1** menus and programming to the nearby TV.

TV CH 3-4 Out

The **TV CH 3-4** connection provides good quality video and mono (non-stereo) audio to your nearby TV. Use a coaxial cable to make the connection. The **TV CH 3-4** connection is color coded white.



RCA Out

The **RCA** audio/video outputs provide high quality picture and stereo sound to your nearby TV (if your TV has these connections). Use an RCA-type cable assembly to make the connection. If the TV has only one input for this type of audio, connect it to the right (R) phono (RCA) audio output on the receiver.



S-Video Out

The **S-VIDEO** connection provides the highest quality video available to your nearby TV (if your TV has this connection). Use an S-Video cable to make the connection. If you use this back panel output for video between your receiver and nearby TV, you must still connect the audio using the **PHONO (RCA) AUDIO LEFT/RIGHT OUTPUTS** and Phono (RCA) cables.



Digital Audio Out

The **DIGITAL AUDIO OUTPUT** is for use with high-quality digital sound decoding systems. Connect the **DIGITAL AUDIO OUTPUT** with a Digital Audio Optical cable (available at consumer electronics stores).



Digital Audio
OUTPUT

TV Antenna/Cable In

The **TV ANTENNA/CABLE IN** is used if you want the satellite receiver to connect the tuner of the nearby TV to an off-air antenna or cable TV system when the satellite receiver is turned off or when using the **TV/VIDEO** button on Remote Control 1. Use a coaxial cable to make this connection to an off-air antenna or cable TV system. The **TV ANTENNA/CABLE IN** connection is color coded black. Your nearby TV must be connected to the **CHANNEL 3-4** output to use this feature.



TV ANTENNA
/ CABLE IN

Tip: If you connect a cable to the **TV/ Antenna In** port, attach the black cable sticker to the cable near where it attaches to the receiver. The stickers are located inside the front cover of this guide.



TV2 Connections

The following connections provide menus and programming to the remote TVs. These connections are active when the satellite receiver is in **Dual Mode** or in **Single Mode** with **Shared View** enabled.

CH 21-69 Out

The **CH 21-69 OUT** connection provides good quality video and stereo audio for the remote TV(s). Use a coaxial cable to make this connection to your home cable system. Remote TVs connected to the home cable system can receive programming from this receiver output. The **CH 21-69 OUT** connection is color coded yellow.

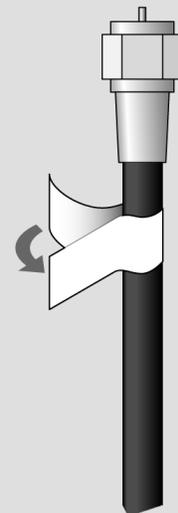


CH 21-69
OUT



Note: When connecting to the home distribution (**CH 21-69 OUT**) coaxial port, you must meet requirements covered under *FCC Compliance* in the *Appendix*. To meet these requirements, an in-line coaxial attenuator has been included with your receiver and may need to be installed using the following guidance:

- If connecting directly to a TV tuner port, you must install the attenuator in the cable between the **CH 21-69 OUT** port and the TV tuner.
- If connecting to your in-home cabling system to distribute the signal to a TV(s) in other rooms, in most cases you will not have to install the attenuator for typical in-home cabling systems.



Receiver Description and Installation

RCA Out

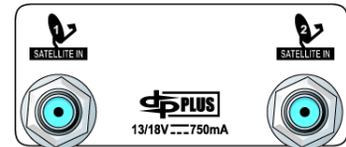
The **RCA** audio/video outputs provide high picture quality and stereo sound to your TV (if your TV has these connections). These outputs can be used to provide **TV2** menus and programming to a wireless audio/video transmitter or to a second input on a nearby TV. Use an RCA-type cable assembly to make the connection. If the TV has only one input for this type of audio, connect it to the right (R) phono (RCA) audio output on the receiver.



Other Connections

Satellite In

The **SATELLITE IN** connections are used to receive satellite TV signals from the dish antenna. The connection is made using RG-6 coaxial cable. The **SATELLITE IN** connections are color coded blue.



Note: Both **SATELLITE IN** connections must be used for proper operation of the receiver.

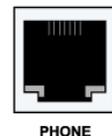
Remote Antenna

The **REMOTE ANTENNA** port receives UHF signals from the Remote Control 2 so that it can control **TV2** menus from another room. Connect the UHF antenna here, and place it so that it does not touch anything. If you do not connect the antenna, you cannot use Remote Control 2 to control the receiver for **TV2** menus and programming. The **REMOTE ANTENNA** port is color coded green.



Telephone Jack

The **TELEPHONE JACK** is used to connect the receiver to an active telephone line. Use a standard RJ-11 telephone cable assembly to make the connection. You *must* keep the receiver connected to an active telephone line. Otherwise, you may not be able to order pay per view programs, use all of the DISH Interactive features, or other services from DISH Network.



Remote Controls

The two remote controls give you easy access to all the features of your satellite receiver. You can set up each remote to control the satellite receiver and up to three other devices. These devices can be a TV, a VCR or DVD player, and a third device.

Types of Remote Controls



Remote Control 1 uses infrared (IR) light signals to:

- Control **TV 1** menus for the nearby TV in **Dual Mode**.
- Control the satellite receiver in **Single Mode**.

IR signals travel only short distances (40 feet or less), and cannot go through walls or other solid objects. You must point the remote control directly at the device, with no objects blocking the line of sight.

Remote Control 1 uses IR signals to control other devices that the remote is programmed to control. You must point the remote control directly at these devices, with no objects blocking the line of sight.

This remote control is identified by the green number 1 at the bottom of the remote control.



Remote Control 2 uses UHF Pro signals to:

- Control **TV 2** menus for the remote TVs in **Dual Mode**.
- Control the satellite receiver in **Single Mode** (with **Shared View** enabled as described on page 51).

UHF Pro signals travel long distances and go through walls and other solid objects.

To use Remote Control 2 to control the receiver, you must attach the UHF antenna to the receiver back panel (see page 28).

Remote Control 2 uses IR signals to control other devices that the remote is programmed to control. You must point the remote control directly at these devices, with no objects blocking the line of sight.

This remote control is identified by the blue number 2 at the bottom of the remote control.

Receiver Description and Installation

Batteries

The remote controls come with AAA batteries, which need to be installed when you first receive your system. When you replace old batteries, you should replace all of the batteries. Use batteries of the same kind, for example alkaline or carbon zinc, and don't mix batteries of different kinds. Alkaline batteries last longer than carbon zinc.

Installing or Changing the Batteries

1. Press down on the battery cover's top latch and slide the cover off.
2. If you are changing the batteries, take out all of the old batteries.
3. Put the new batteries in. Make sure you match the plus (“+”) ends with the plus markings on the battery case.
4. Slide the cover back into place.



Low Battery Warning

When you see a low battery warning message below the **Program Banner**, the batteries in your remote control are weak and need to be replaced.



Attach a UHF Antenna

You need to attach the UHF remote antenna to the receiver's back panel **REMOTE ANTENNA** input so you can use UHF Pro Remote Control 2.

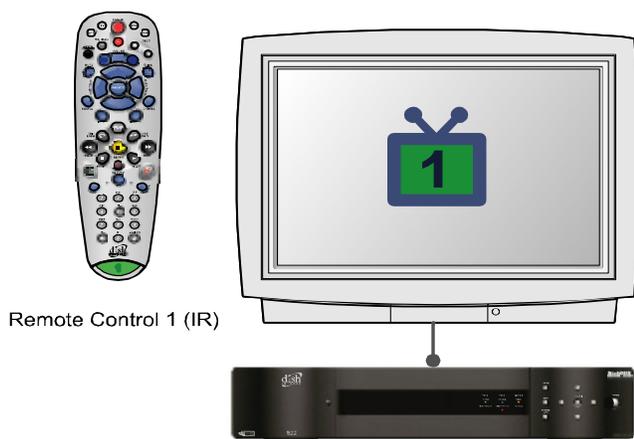


Note: Be sure to set the antenna straight up so you can use the remote control from as far away as possible. Don't let the antenna touch anything.

Connecting the Receiver to a Nearby TV

This section describes how to connect receiver **TV 1** output ports to a nearby TV. The easiest way to connect the receiver to the TV is using coaxial cable connections, but you may also use **RCA** or **S-Video** outputs.

Nearby TV



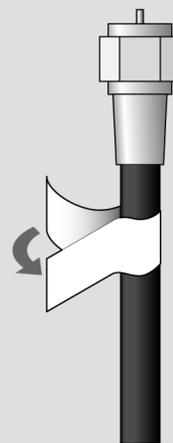
Coaxial Cable Connections

1. Connect a coaxial cable from the **CH 3-4** output on the receiver to the nearby TV's tuner port.
2. Place the white **CH 3-4** sticker on the cable near where the cable connects to the receiver (see the picture in the margin).
3. Plug in the power cord for the receiver.
4. Turn on the receiver with the front panel power button and make sure the green TV1 indicator is lit.
5. Turn on the nearby TV.
6. Tune the TV to channel 3.
7. You should see the **Point Dish** screen.
8. If you do not see the **Point Dish** screen, tune the TV to channel 4.

Note: If you want to change the channel that the **CH 3-4** port provides to your TV, see *Changing the TV1 and TV2 Output Channels* on page 37.

9. If desired to remind you of which TV channel (3 or 4) to tune to watch satellite programming, place one of the channel stickers (3 or 4) near or on your TV. The stickers are located in the inside front cover of this guide.

Tip: Using cable labels makes it easy to tell which cables connect to the receiver ports. Inside the front cover of this guide are stickers that are color coded the same way as the coaxial connections.



Receiver Description and Installation

RCA and S-Video Connections (TV1)

1. Connect one of the following video cables:
 - **RCA** video cable (yellow) from the receiver **TV1** outputs to the nearby TV's **RCA** video input.
 - **S-VIDEO** cable from the receiver **TV1** outputs to the nearby TV's **S-VIDEO** input.
2. Connect the **RCA** audio cables (red and white) from the receiver **TV1** outputs to the nearby TV's audio inputs. If the TV has only one input for this type of audio, connect it to the right (R) phono (RCA) audio output on the receiver.
3. Make sure your nearby TV is on and set to receive TV from the correct audio and video inputs. Refer to the instructions that came with your TV.
4. Plug in the power cord for the receiver.
5. Turn on the receiver with the front panel power button and make sure the green **TV1** indicator is lit.
6. You should see the **Point Dish** screen.

Confirm Remote Control 1 Operation

After the nearby TV has been connected to a **TV1** output using one of the methods above, do the following to confirm that the IR Remote Control 1 controls the receiver:

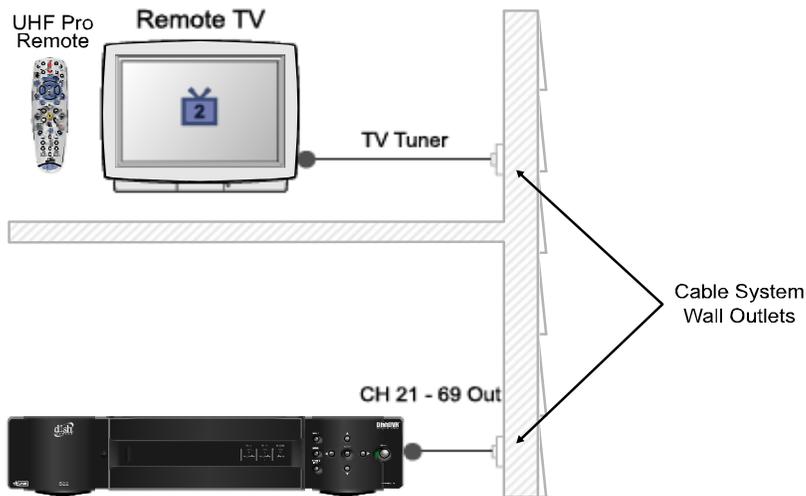
1. Make sure that fresh batteries are installed properly in the IR Remote Control 1.
2. Press the **SAT** button to put the IR Remote Control 1 in **SAT** mode to control the satellite receiver.
3. Use the Remote Control 1 arrow keys to move around the **Point Dish** screen. If you are able to move around in the **Point Dish** screen, you confirmed that Remote Control 1 is controlling the receiver.

Tip: In Dual Mode, Remote Control 1 is used to control TV1 menus on the nearby TV. Remote Control 2 is used to control TV2 menus on the remote TV(s).

Connecting the Receiver to the TV(s) in Another Room(s)

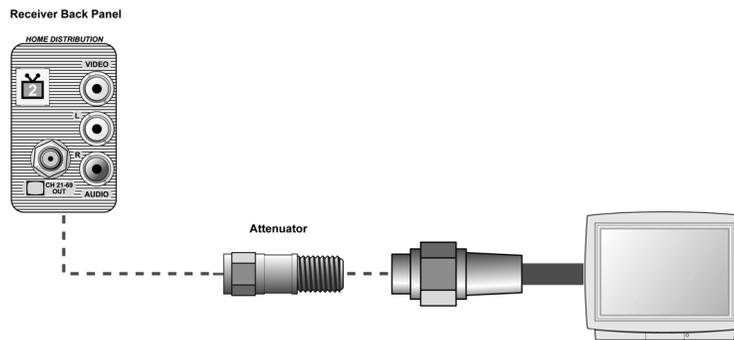
This section describes how to connect the receiver **CH 21–69 OUT** connection to the cable-ready remote TV located in another room away from the receiver. This installation uses your in-home cable system. If your house does not have built-in cabling, it will be necessary to run cables from the receiver to each remote TV. Due to the difficulty of this installation, you should consider having this professionally installed. Call DISH Network at 1-800-333-DISH (3474).

Remote TV



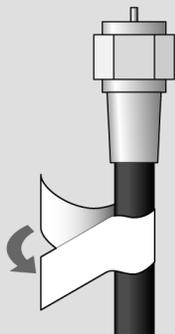
Note: When connecting to the home distribution (**CH 21–69 OUT**) coaxial port, you must meet the FCC requirements in the *Appendix*. To meet these requirements, an in-line coaxial attenuator has been included with your receiver and may need to be installed using the following guidance:

- If connecting to your in-home cabling system to distribute the signal to a TV(s) in other rooms, in most cases you will not have to install the attenuator on the **CH 21–69** port for typical in-home cabling systems.
- If connecting directly to a TV tuner port, you must install the attenuator in the cable between the **CH 21–69 OUT** port and the TV tuner.



Receiver Description and Installation

Tip: Using cable labels makes it easy to tell which cables connect to the receiver ports. Inside the front cover of this guide are stickers that are color coded the same way as the coaxial connections.



Channel: _____

Air/Cable



If you have an off-air antenna or cable connected to your in-home cable system, see *Optional - Connecting to an Off-Air Antenna or Cable* following this section.

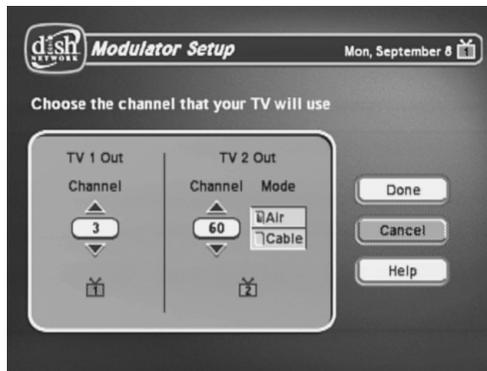


Make sure you are familiar with how to change channels on your TV and if necessary how to switch your TV between off-air and cable channels. During this procedure, it will be necessary to change the channels on your TV(s) to tune to these channels to see the video from the receiver. See your TV user guide for instructions.

1. Connect the tuner input of the remote TV(s) in other rooms to an existing wall cable outlet using a coaxial cable.
 2. Turn on every remote TV connected to the in-home cabling system.
 3. Find three channels next to each other on one of your remote TVs that do not pick up any signals from off-air or cable broadcasts (they should show nothing but snow or static). These channels must fall in one of the two ranges below. For example, if you find that cable channels 75, 76, and 77 do not pick up any broadcasts, pick these channels since they fall into the range below for cable channels. Make sure these three channels on other remote TVs also do not pick up broadcasts.
 - **Air Mode** - Select a channel between 21 and 69 if your TV(s) will be set in Air Mode.
 - **Cable Mode** - Select a channel between 73 and 125 if your TV(s) will be set in Cable Mode.
- Note:** The remote TV(s) will have to be set to the same channel mode, either off-air or cable channel mode for this installation. See your TV user's guide for instructions on how to set your TV to off-air or cable channel modes.
4. Pick the channel in the middle of the three you selected in step 3. Write that channel down in the blank provided in the margin by step 5. For example, if the three channels you picked in the preceding step were air channels 60, 61, and 62, pick channel 61 and write it in space provided in the margin by step 5.
 5. If your TV is in off-air mode for the channels you picked in step 4, circle "Air" in the margin. If your TV is in cable mode for the channels you picked in step 4, circle "Cable" in the margin.
 6. Set all of your remote TV(s) to the channel mode (Air or Cable) you circled in step 5.
 7. Tune all of your remote TV(s) to the channel you wrote in step 5. This is the channel you will use to receive your satellite programming.

Connecting the Receiver to the TV(s) in Another Room(s)

8. Connect **CH 21-69 Out** on the receiver to your existing wall cable outlet using a coaxial cable.
Note: If you do not have an existing in-home cable system, you will need to run coaxial cable to each TV in other rooms. If this is too difficult, you may want to contact a professional to do this installation.
9. Place the yellow sticker on the **CH 21-69 Out** cable near where the cable attaches to the receiver. The stickers are located inside the front cover of this guide.
10. Turn on the nearby TV (the TV that gets programming from the **TV1** outputs).
11. Make sure the receiver's green **TV1** indicator is on.
12. Select the **Modulator Setup** (MENU 6-1-5).

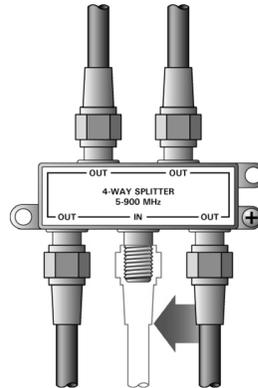


- With the **Modulator Setup** screen displayed on the nearby TV, use Remote Control 1 to do the following:
- a. Under **TV2 Out**, select either **Air** (for off-air channel numbers) or **Cable** (for cable channel numbers) based on what you wrote down in step 5.
 - b. Under **TV2 Out**, use the **UP** and **DOWN ARROWS** to change the modulator channel to the one you wrote in step 5.
 - c. Select **Done**.
14. For some TVs, you must run a channel scan so that the TVs will find and display the selected channel from the receiver. Run channel scan on all remote TV(s), if available. See your TV user's guide for instructions.
 15. Confirm that you see a picture from the receiver TV2 output on your remote TV(s).
 - If your picture looks good, go to step 23.
 - If your TV(s) do not have a picture or if it is not as clear as you would like it to be, go to the next step.

Receiver Description and Installation

16. You may need to change the cable connection on the splitter that sends the TV signal throughout your house. The change that needs to be made is move the cable coming from the receiver **CH 21-69 Out** from the output of the splitter to the input of the splitter using the instructions that follow.

The following figure shows an example of what your splitter may look like. Your splitter may look different. The places where the splitter indicates **Out** refers to all TVs connected to your cable system. The places where the splitter indicates **In** refers to where the TV signal is fed into the splitter.



1 Input, 4 Output (4-Way) Splitter

17. Find where the TV signal is distributed throughout your house. It should be near where the cable TV service enters the house.
18. Disconnect the cable TV service cable or antenna cable from the splitter input, if necessary. Make sure the disconnected cable is capped or otherwise protected from the weather.
19. Disconnect the cable coming from the receiver CH 21–69 Out port from the splitter. If you do not know which cable this is, go to the next step. Otherwise, go to step 21.
20. If you have multiple TVs on the cable system, do the following to determine which cable on the splitter is coming from the receiver:
 - If you have at least some picture on your TV(s), turn on all remote TVs connected to the cable system. Disconnect and reconnect each cable one by one observing what happens to the TV(s). When all remote TVs lose the signal, you have disconnected the receiver's cable. If only some or one TV loses the signal, then you have disconnected a cable from the TV(s).
 - If the above step does not work, disconnect one of the output cables and connect to the splitter input. If you do not see a picture, connect the cable back to its output. Repeat this step on every connection until you get a picture on the remote TV(s).
21. Reconnect the receiver's cable to the input of the splitter.
22. Make sure you have a good picture on your remote TV(s).

Connecting the Receiver to the TV(s) in Another Room(s)

23. If desired to remind you of which TV channel your satellite programming is on, write the channel number you wrote in step 4 on a blank channel sticker and place it on or near your remote TV(s). The stickers are inside the front cover of this guide.
24. Confirm Remote Control 2 controls the receiver. See the next section for instructions.
25. Program Remote Control 2's RECOVER to the channel you selected in step 5. See page 36 for instructions.

Confirming Remote Control 2 Operation

After the remote TV(s) have been connected to the **CH 21–69 OUT** using in-home cabling using the preceding steps, do the following to make sure Remote Control 2 controls the receiver:

1. Press the **SAT** button to put Remote Control 2 in **SAT** mode to control the satellite receiver.
2. From a remote TV, use the Remote Control 2 arrow keys to move around the **Point Dish** screen. If you are able to move around in the **Point Dish** screen, you confirmed that Remote Control 2 is controlling the receiver.

Programming the Recover Button for a Remote TV

Now that the channel for the **CH 21–69 OUT** to the remote TV(s) has been set, the **RECOVER** button can be programmed to tune your TV back to this channel.

1. Program Remote Control 2 to control your TV using the instructions in *Control Other Devices with the Remote Controls* on page 106.
2. Press and hold the **TV mode** button until all the other mode buttons light up, and then let go of the button. The **TV mode** button flashes.
3. Press the **STAR (*)** button.
4. Enter the three digits of your channel number. For example, if your remote TV is set to channel 60, enter 0-6-0.
5. Press the **POUND (#)** button. The **TV mode** button flashes three times.



Tip: In Dual Mode, Remote Control 1 is used to control TV1 menus on the nearby TV. Remote Control 2 is used to control TV2 menus on the remote TV(s).

Programming the Recover Button

Your remote controls come equipped with a RECOVER button that helps you if you accidentally change the channel or video input on your remote TV and cannot get the picture back from your satellite receiver. When you press the RECOVER button as described on page 56, the remote control sends commands to your remote TV to change channels or video inputs to try to get you back to watching satellite programming.

When your Remote Control 2 is shipped from the factory, the RECOVER button is set up to restore satellite TV viewing by tuning your TV to channel 3, 4, and other inputs (see page 56 for details). However, to use the RECOVER button with your remote TV, you need to program the RECOVER button with the specific channel (for example, channel 60) that you use to watch **TV2** programming. The following instructions describe how to program the RECOVER button to tune your remote TV back to a selected channel.

Programming the Recover Button Channel

1. Program Remote Control 2 to control your remote TV using the instructions in *Control Other Devices with the Remote Controls* on page 106.
2. Press and hold the TV mode button until all the other mode buttons light up, and then let go of the button. The TV mode button flashes. 
3. Press the STAR (*) button. 
4. Enter the three digits of your channel number. For example, if your remote TV is set to channel 60, enter 0-6-0.
5. Press the POUND (#) button. The TV mode button flashes three times. 

Removing the Recover Button Channel Programming

The following instructions describe how to reset the RECOVER button to the way it was delivered to you from the factory.

1. Press and hold the TV mode button until all the other mode buttons light up, and then let go of the button. The TV mode button flashes. 
2. Press the STAR (*) button. 
3. Press 0-0-0. 
4. Press the POUND (#) button. The TV mode button flashes three times. 

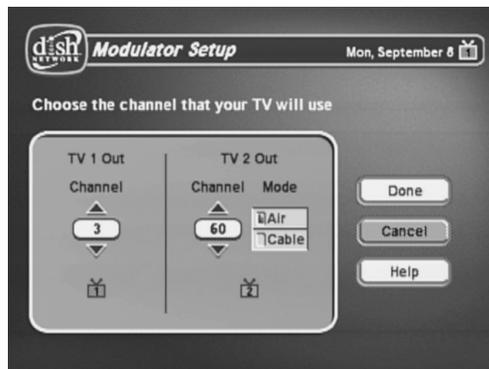
Changing the TV1 and TV2 Output Channels

The receiver comes preset to use channel 3 for **TV1** and off-air channel 60 for **TV2**. If you are experiencing interference on the channels you are using, follow these instructions to change the channel that **TV1** or **TV2** uses.



Make sure you are familiar with how to change channels on your TV and if necessary how to switch your TV between off-air and cable channels. When you change these receiver output channels, you must also change the channels on your TV(s) to tune to these channels to see the video from the receiver. See your TV user guide for instructions.

1. Press MENU-6-1-5 to open the **Modulator Setup** screen.



2. For **TV 1 Out**, highlight the number under **TV 1 Out**. For **TV 2 Out**, skip to step 4.
3. Use the UP and DOWN ARROW buttons to change the modulator channel either **3** or **4**. Continue to the next step to set **TV 2 Out** or skip to step 7 if you are finished making changes.
4. For **TV 2 Out**, select either **Air** (for off-air channel numbers) or **Cable** (for cable channel numbers).
5. Highlight the number under **TV 2 Out**.
6. Use the UP and DOWN ARROW buttons to change the modulator channel to one of the following:
 - **Air Mode** - Select a channel between **21** and **69**.
 - **Cable Mode** - Select a channel between **73** and **125**.
7. Select **Done** to save the changes.
8. Change the channel on your TV(s) to match the channel(s) you selected.
9. If desired to remind you of which TV channel to tune to get satellite programming, place a channel sticker near or on your TV to indicate the correct channel.
10. If you changed your **TV 2 Out** channel, repeat *Programming the Recover Button for a Remote TV* on page 35.

Tip: It's easier to set the output channel from the opposite TV. For example, if you are changing the output on TV1 (nearby TV), use TV2 (remote TV) to make the change. When you save the changes, simply remember to change the channel on the nearby TV.

Tip: The channel stickers are located inside the front cover of this guide.

Connecting the Receiver to the Phone Line

Keep the receiver connected to an active telephone line so you can order Pay-Per-View programs and use all of the **dish home Interactive TV** features, and other services from DISH Network.

Note: You *may* be able to use a wireless modem jack. However, this may *not* support all the features of this receiver, such as Caller ID. See www.dishnetwork.com for compatible modem products.

Note: If you have a Digital Subscriber Line (DSL), you may have to install a DSL filter between the receiver's back panel **PHONE JACK** and the telephone wall jack to successfully connect with DISH Network. You can obtain a filter from your DSL provider.

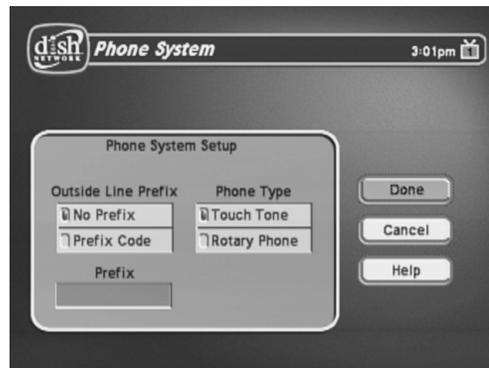
Phone Line Connection

Run a telephone cable with a standard RJ-11 connector from the receiver's back panel **Phone Jack** to an active telephone connection.

Phone System Setup

You must also set up the receiver for your telephone system (touch tone or rotary), and set a telephone number prefix, if you need a prefix to make an outside call.

1. Display the **Phone System** screen by pressing MENU-6-1-4.



2. Select the **Touch Tone** or the **Rotary/Pulse** option in the **Phone Type** list.
3. Select either the **No Prefix** or the **Prefix Code** option in the **Outside Line Prefix** list.

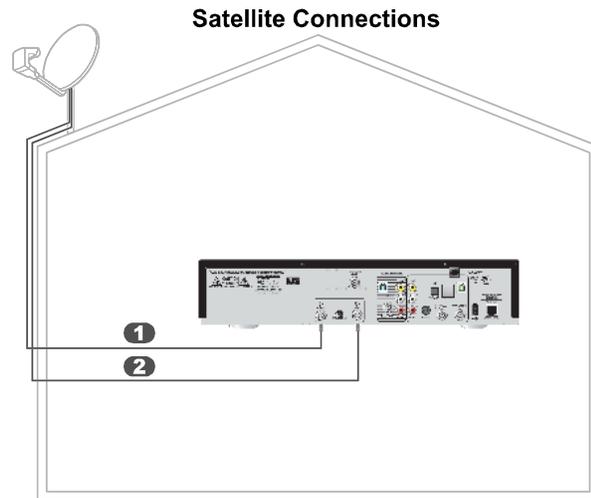
Note: The **Outside Line Prefix** is usually used only for business installations. For most residential installations, all you need set is the **Phone Type**.

4. If you selected the **No Prefix** option, select **Save** to finish.
5. If you selected the **Outside Line Prefix** option, the receiver highlights the box where you must enter the exact sequence you dial the phone to obtain an outside line.
6. Select **Save** to save the settings.

Connecting the Receiver to a Dish Antenna System

Note: Before you can begin connecting your receiver to your dish antenna, you must first complete the preceding sections on connecting your TVs to the receiver. Then if you are installing a dish antenna system for the first time, see *Chapter 4 - Dish Antenna Installation*. Otherwise, if you already have a dish antenna system installed and peaked for maximum signal strength, complete the following instructions to connect the dish antenna system to the receiver.

Note: You will need two available receiver connection ports on your installed switch or LNB to complete this installation. If these ports are not available, you may need to upgrade your system with different or additional equipment. See *DISH Pro Wiring Diagrams* in *Chapter 4*.



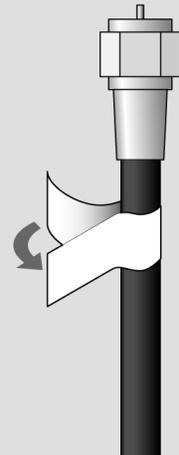
1. Connect two RG-6 coaxial cables between the **SATELLITE IN 1** and **SATELLITE IN 2** ports on the receiver's back panel to two available ports on either your switch or your LNB in your existing system. See the wiring diagrams in *Chapter 4* for appropriate receiver connections in your system.

Note: If you are installing your receiver into a system with DISH Pro LNBFs (and/or switches), you can have as much as 200 feet of cable between the LNBF and the receiver. However, you must use only "RG-6 coaxial cables rated for 950 to 2150 MHz. Some cables may say "Swept tested for 2150 MHz." If you have any doubt about this, ask your DISH retailer, or look on the container the cable came in. Do not use cable company TV cables or cables from other satellite TV systems not rated for 950-2150 MHz. These other cables may cause signal loss. Do not use existing cables such as RG-59. Use waterproof F-connectors outdoors.

Note: Some receivers include a DISH Pro Plus Separator that can be used when installing the receiver with a single cable along with a DISH Pro Plus Switch or LNBF.

2. Peel off the blue stickers and affix them to the cables close to where they connect to the **SATELLITE IN 1** and **SATELLITE IN 2** connections on the back of the receiver.

Tip: Using cable labels makes it easy to tell which cables connect to the receiver ports. Inside the front cover of this guide are stickers that are color coded the same way as the coaxial connections.



Receiver Description and Installation

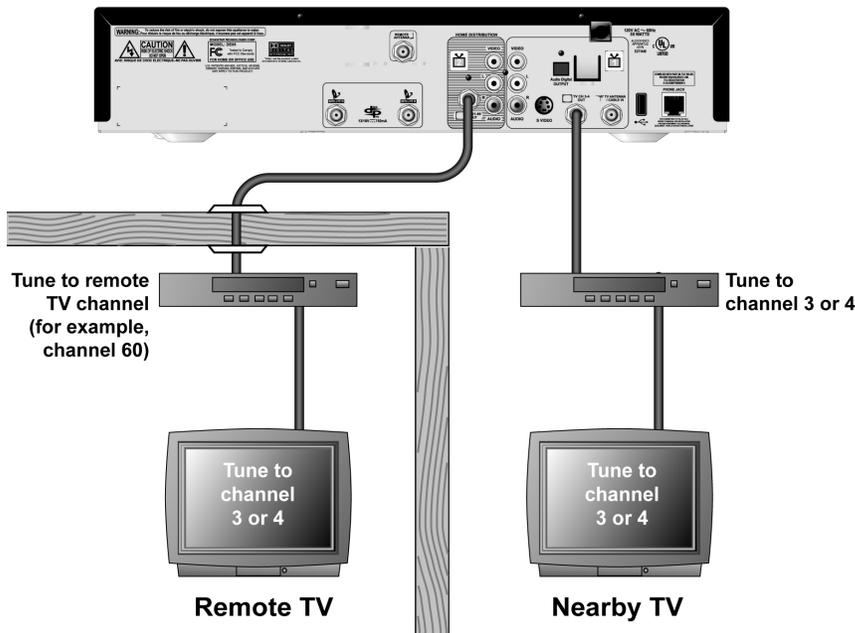
3. On Remote Control 1, press MENU-6-1-1 to display the **Point Dish/Signal** screen on the nearby TV.
4. Select **Check Switch**. When an attention screen displays, select **Retest**.
5. The receiver begins performing the **Check Switch** tests. When it is finished, the **Installation Summary** screen displays.



6. Make sure that the information on the **Installation Summary** screen identifies your system correctly and shows all transponders for all satellites in your system. Your screen may look different from the example above depending on the dish antenna system you are using.
7. Select **OK** to go to the **Point Dish/Signal** screen.
8. Select **Cancel** to exit the **Point Dish** menu. An **Attention** screen will open asking the mounting and positioning of your dish is complete with a **Locked** indication in the **Point Dish** screen. If the answer is yes, select **Yes**.
9. After you select **Yes**, the receiver will begin taking a software upgrade. You will see a **Warning** that **Vital program information will now be downloaded into your receiver**. You will also see a status bar showing the progress of this upgrade.
10. Once the software upgrade is complete, you will see a message that your receiver's memory is being upgraded.
11. Do not disturb the receiver while the receiver's memory is being upgraded.
Note: If you are installing other DISH Pro or DISH Pro Plus receivers, be sure to run **Check Switch** on all of them, and allow them to take the necessary software upgrade.
12. When the memory upgrade is complete, you should be watching TV. Your dish antenna installation is now complete.

Optional - Connecting VCRs to the System

The diagram below provide example of how to connect VCRs to your satellite TV system. Your installation may be different.



Connecting a VCR to the Nearby TV

1. Connect a coaxial cable from the **CH 3-4 OUT** output on the receiver to the nearby VCR's tuner port.
2. Connect a coaxial cable from the output on the VCR to the nearby TV's tuner port.
3. Plug in and turn on the nearby VCR and TV.
4. Set the VCR output to Channel 3 or 4 as set on page 37.
5. Tune the nearby VCR and TV to Channel 3 or 4 as set on page 37.
6. Place a **TV1** channel sticker (Channel 3 or 4 as set in step 5) on or near your nearby TV. This sticker will remind you which channel to use to watch satellite programming. The stickers are located in the inside front cover of this guide.



Receiver Description and Installation

Connecting a VCR to the Remote TV



For this installation, always leave your VCR powered on so that the TV can receive satellite programming. If you turn off your VCR, your TV will not be tuned to the correct channel to receive satellite programming.

1. Connect the tuner input of the remote VCR to an existing wall cable outlet using a coaxial cable.
2. Connect a coaxial cable from the output on the VCR to the remote TV's tuner port.
3. Plug in and turn on the remote VCR and TV.
4. Tune the remote VCR to the remote TV channel that you use to watch satellite TV programming (for example, channel 60) as set on page 33.
5. Write the channel number you tuned your VCR to in the previous step on one of the **TV2** channel stickers. Place the sticker on or near the VCR. This sticker will remind you which channel to use to watch satellite programming. The stickers are located in the inside front cover of this guide.
6. Set the VCR output to channel 3 or 4.
7. Tune the remote TV to the same channel that you set your VCR to in step 6.
8. Write the channel number you tuned your TV to in the previous step on one of the **TV2** channel stickers. Place the sticker on or near the TV. This sticker will remind you which channel to use to watch satellite programming. The stickers are located in the inside front cover of this guide.



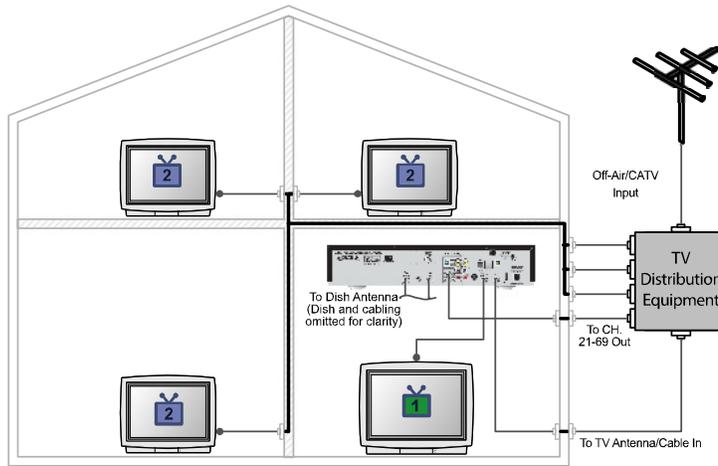
Optional - Connecting to an Off-Air Antenna or Cable

If you want to receive channels from an off-air antenna or cable in addition to your satellite receiver programming, connect the off-air antenna/cable into your TV distribution equipment.

For the nearby TV receiving programming from **CH 3–4 OUT**, the off-air antenna cable needs to be connected to the **TV ANTENNA/CABLE IN** port.

For remote TVs receiving programming from **CH 21-69 OUT**, the off-air antenna needs to be connected to your TV distribution equipment. When adding this connection, the FCC requires that you install appropriate equipment between the off-air antenna/cable and the satellite TV receiver to prevent you from accidentally retransmitting DISH Network programming (see *FCC Compliance* in the *Appendix*).

TV distribution equipment devices include coax panels, amplifiers or super home nodes, and are available through many companies. See www.dishnetwork.com for a list of approved equipment.



Optimize Your Remote Controls

Change the Address

When you receive your system, both remote controls and the receiver have been set to communicate on address 1. However, because UHF signals travel long distances and go through walls, a neighbor's UHF Pro remote could control your receiver by mistake if they are on the same address.

Note: You can also use this procedure to change the **Primary Remote Address** for IR Remote Control 1 on a nearby TV, if necessary. However, if you are using a UHF Pro remote to control **TV1**, use the instructions on page 46 to change the address.

To handle this situation, you can change address on Remote Control 2 and the receiver as follows:

1. Make sure you turn on the TV.
2. Press the front panel **SYSTEM INFO** button to display the **System Info** screen.

The **System Info** screen shows the **Secondary Remote Address**.

Write down this address: _____

3. Press and hold the **SAT** button on Remote Control 2 for about three seconds, until all of the mode buttons light up, and then let go of the **SAT** button.
4. Use the **NUMBER PAD** buttons to enter any number between 1 and 16, but not the one you wrote in step 2.

Write down the number you entered: _____

5. Press the **POUND (#)** button. If you entered the address correctly, the **SAT** mode button will flash three times.



Receiver Description and Installation

6. Press the RECORD button.
7. Make sure the **Secondary Remote Address** you see on the **System Info** screen is the same as the one you entered in step 4. If it isn't, the remote cannot control the receiver.
8. Press the SELECT button to close the **Important System Information** screen.



Checking the Remote Control Address

1. Press and hold the SAT mode button for three seconds, until all of the mode buttons light up, and then let go of the SAT button.
2. Press the POUND (#) button twice. The SAT mode button will flash the same number of times as the address number (three flashes means address 3).



Adjusting the Remote Control Antenna



Attention: If your UHF Pro Remote Control 2 isn't working very well from far away, you may be experiencing interference from objects near your receiver. To improve your remote control's range, try any or all of the following:

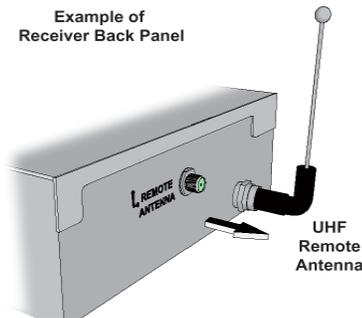
- Place the receiver higher than all of the other equipment in your entertainment center.
- Provide room above the receiver so that the antenna can be installed straight up. If this is not possible, tilt the UHF antenna at about a 30° angle.
- Place the UHF antenna outside the entertainment center by using a coaxial cable to connect the antenna to the receiver.
- Try moving the receiver to other locations.
- Move all nearby off-air antennas away from the UHF remote antenna. Do not place an off-air antenna on your receiver.
- Attach a UHF attenuator.

Attach a UHF Attenuator

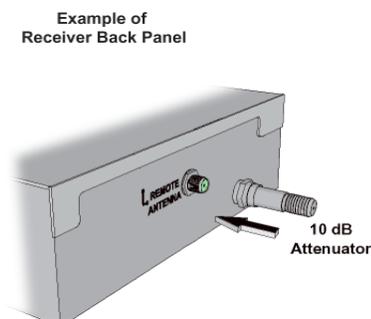
Stray UHF signals can block signals from the remote control to the receiver. To prevent this problem, you can install the attenuator provided with the satellite receiver if it is not being used for TV connections as described on page 31. Otherwise, obtain a 10 dB attenuator (you can buy one from a consumer electronics parts store).

Note: This will help keep out stray UHF signals, but also cut down how far away you can use the remote control.

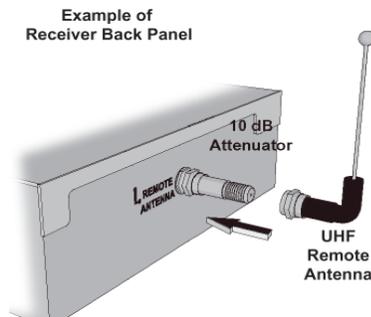
1. Take the UHF antenna off of the receiver's back panel UHF Remote Antenna input



2. Put the attenuator onto the UHF Remote Antenna input.



3. Put the UHF antenna onto the attenuator.



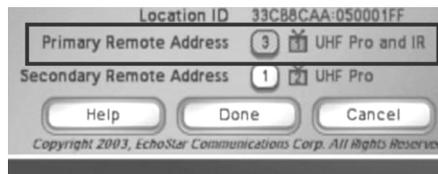
Setting Up TV1 to Operate in UHF Pro

You can set your receiver to operate your TV1 using another UHF Pro remote control (sold separately) by completing the following instructions:



If you set up your receiver to operate the **1** side using UHF Pro, the two UHF Pro remotes for this receiver will interfere with each other when operated at the same time. This may prevent the remotes from operating the receiver momentarily.

1. Perform the following using an existing remote control:
 - a. Open the **TV1 UHF Pro Setup** screen by pressing MENU-6-1-8 on the remote control.
 - b. Select **Enable** from the **TV1 UHF Pro Setup** screen.
 - c. Select **System Info** to open the **System Information** screen.
 - d. Move the highlight to the address for the **Primary Remote Address** as shown below. This is important - if you do not do this, your remote will change the receiver's **Secondary Remote Address** and cause your Remote Control 1 to control the **2** side of your receiver.



Note: Highlight the **Primary Remote Address**.

2. Perform the following using the UHF Pro remote that you are going to use to control TV1:
 - a. Press and hold the **SAT** mode button about three seconds, until all the mode buttons light up, and then let go of the **SAT** button. The **SAT** mode button will blink.
 - b. Use the **NUMBER PAD** buttons to enter any number from 1 to 16, except for the number shown by the **Secondary Remote Address**. The **SAT** mode button goes out after you enter each digit, and then lights up again.

Write down the number you entered: _____
 - c. Press the **POUND (#)** button. If you entered the address correctly, the **SAT** mode button will flash three times.
 - d. Press the **RECORD** button.
 - e. Make sure the **System Information** screen shows that the **Primary Remote Address** shows **1** **UHF Pro and IR** and that this address matches the number you entered in step b.

Setting Up TV1 to Operate in IR

The following instructions describe how to set up TV1 to operate in IR only.

1. Perform the following with an existing remote control:
 - a. Open the **TV1 UHF Pro Setup** screen by pressing MENU-6-1-8 on the remote control.
 - b. Select **Disable** from the **TV1 UHF Pro Setup** screen.
 - c. Select **System Info** to open the **System Information** screen.
2. Perform the following with an IR remote control, such as a Remote Control 5.0 (as shown on the back of the remote), that you intend to use to control TV1:
 - a. Press the RECORD button. The **Done** button should be highlighted.
 - b. Make sure the **System Information** screen shows that the **Primary Remote Address** shows  **IR**.

