

# **12** *Connections and Setup*

## **HOW TO CONNECT YOUR SATELLITE RECEIVER**

Do you have a handful of cables and a head full of questions? This chapter is the perfect place to find out how to connect the receiver to all kinds of equipment. You'll find this chapter particularly helpful if you decide to move your receiver or if you get a new TV, VCR, or DVD player.

- **CONNECTING TO THE NEARBY TV (TV1)**
- **CONNECTING TO THE REMOTE TVS (TV1 OR TV2)**
- **CONNECTING TO YOUR DISH ANTENNA**
- **CONNECTING THE PHONE LINE**
- **CONNECTING A VCR TO THE REMOTE TV**
- **CONNECTING OFF-AIR ANTENNA**
- **USING TROUBLESHOOTING TOOLS**

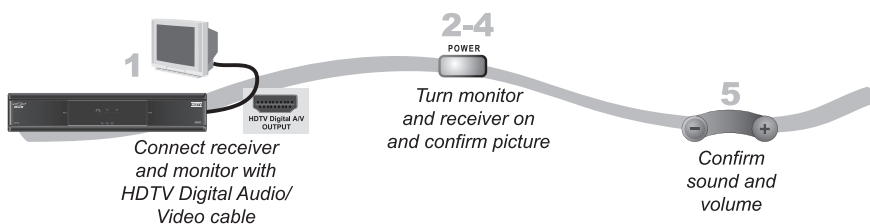
## User Guide

### CONNECTING TO THE NEARBY TV (TV1)

This section describes how to connect receiver TV1 output ports to a nearby TV. Select one of the following methods.

#### HDTV DIGITAL AUDIO/VIDEO CONNECTIONS

The HDTV Digital Audio/Video connection provides high-quality audio and video to your HDTV or HD Monitor in one cable.



1. Connect an HDTV Digital Audio/Video cable between the HDTV Digital Audio/Video connection on the receiver and HDTV set or monitor.
2. Turn on your receiver and TV using the front panel buttons.
3. Confirm that you are getting a picture from the receiver. Consult your HDTV user's guide if you need to change your HDTV to display from the Digital Audio/Video input.
4. If you do not see a picture, see *No Picture on the nearby TV* on page 12-3.

**Note:** In most cases connecting the Digital Audio/Video cable will provide plug-and-play control of the monitor's display resolution and other settings. However, your HDTV may require selecting a different format to display from the receiver during setup.

5. Turn up the volume on your HDTV and confirm you have sound. If you don't have sound, your system may require you to connect audio (red and white) RCA-type cables between the receiver Audio Outputs and audio input connections.

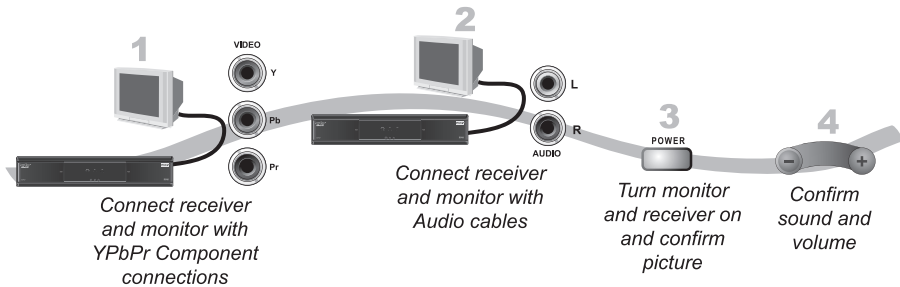
## Connections and Setup

### Connecting To The Nearby TV (TV1)

12

#### YPBPR CONNECTIONS

The YPbPr connections provide high-quality video to your HDTV or HD monitor.



1. Connect between the YPbPr component connections on the receiver and the nearby TV using component video cables.
2. Connect audio (red and white) RCA-type cables between the receiver Audio Outputs and audio input connections that go with the YPbPr connectors on your HDTV or monitor.
3. If you do not see a picture, change the resolution setting on the receiver.
4. Turn up the volume on your HDTV and confirm you have sound. Check the RCA-type connections if you don't have sound.

#### NO PICTURE ON THE NEARBY TV

This section will help you make a picture on the nearby TV in the event that you could not do so in the previous sections.

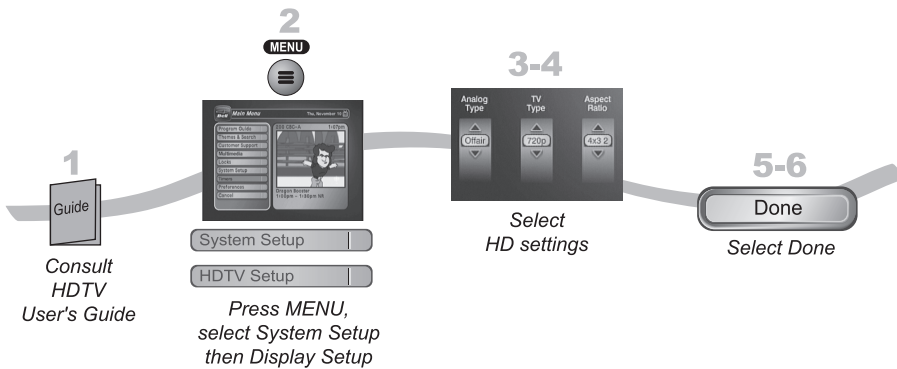
1. Connect RCA-type cable connections between the receiver TV1 Out and the nearby TV.
2. Make sure the receiver and nearby TV are on.
3. Make sure the nearby TV is set to use the RCA-type inputs. Look on the back of your HDTV and consult your HDTV user's guide.
4. Change the HDTV settings as described on page 12-4.
5. Switch to the nearby TV to display from the HD inputs you select in the previous sections. If you have a picture from TV1, you are finished.
6. Repeat steps 4 and 5 until the nearby TV displays video from the receiver.

## User Guide

### SETTING UP TO DISPLAY IN HD

Once the receiver has been activated with qualifying Bell ExpressVu programming, you will be able to receive HD programs to watch. Use the following steps to select the desired HDTV format.

1. Consult your HDTV user's guide for the HD format resolution that the TV supports (1080i or 720p).
2. Press MENU, select System Setup, and then HDTV Setup to open the receiver HDTV Setup screen.
3. Select the HD format settings (Analog Type and TV Type) that matches the format your TV supports.



4. While in this menu, select the Aspect Ratio option that matches your TV:
  - 16x9 is the setting for wide screen HDTV display.
  - 4x3 #1 is the setting to use on a 4x3 TV which uses vertical compression. When fed with a 16x9 program, a compatible TV automatically makes the picture letterbox format (black bars top and bottom), to preserve the correct horizontal and vertical proportions.
  - 4x3 #2 is the setting to use on a 4x3 TV which does NOT have internal vertical compression. When fed with a 16x9 program, such a TV will not show black bars at the top and bottom, and the picture will appear tall and skinny.
5. Press Done.
6. If required, set up the HDTV to display in the format you desire. Some HDTVs will automatically adjust to the resolution setting of the receiver.

## Connections and Setup

### Connecting To The Remote TVs (TV1 or TV2)

12

## CONNECTING TO THE REMOTE TVS (TV1 OR TV2)

This section describes how to connect the receiver CH 21–69 Out connection to the cableready remote TV located in another room away from the receiver. You can use these instructions to connect TVs in your house to see programming from TV1 or TV2. 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 Bell ExpressVu at 1-888-SKY-DISH.

### CONNECTING OTHER TV(S) (TV1 OR TV2)

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 nearby TV tuner port, you must install the attenuator in the cable between the CH 21–69 Out port and the TV tuner.

If you have an off-air antenna or cable connected to your in-home cable system, see *Connecting Off-Air Antenna* 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's 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 pickup 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.

## User Guide

**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 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 step 5.
5. If your TV is in off-air mode for the channels you picked in step 4, circle "Air" below. If your TV is in cable mode for the channels you picked in step 4, circle "Cable" below. If you are using these instructions for TV1 and TV2, pick different channels (for example, Channel 60 for TV1 and Channel 64 for TV2).

**TV1 Channel:** \_\_\_\_\_ **TV2 Channel:** \_\_\_\_\_ **Air/Cable**

6. Set all of your remote TV(s) to the channel mode (Air or Cable) you wrote in step 5.
7. Tune all of your remote TV(s) to the channel(s) you wrote in step 5. This is the channel you will use to receive your satellite programming.
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. Turn on the nearby TV (the TV that gets programming from the TV1 outputs).
10. Make sure the receiver's green TV1 indicator is on.
11. Press MENU. Select System Setup, Installation, and then Modulator Setup.
12. With the Modulator Setup screen displayed on the nearby TV, use Remote Control 1 to do the following:
  - a Under TV2 Out (or TV1 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 (or TV1 Out), use the UP and DOWN ARROWS to change the modulator channel to the one you wrote in step 5.
  - c Select Done.
 

**Note for TV1 Out:** If you locked the receiver, a message will display asking you to enter your password.
13. 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.

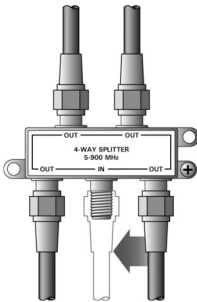
## Connections and Setup

### Connecting To The Remote TVs (TV1 or TV2)

12

14. Confirm that you see a picture from the receiver 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.
15. 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.



16. Find where the TV signal is distributed throughout your house. It should be near where the cable TV service enters the house.
17. 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.
18. 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.
19. 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).

## *User Guide*

- 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).
20. Reconnect the receiver's cable to the input of the splitter.
  21. Make sure you have a good picture on your remote TV(s).
  22. Confirm Remote Control 2 (or Remote Control 1 with a Green UHF Pro key, sold separately) controls the receiver. See page 10-3 for instructions.
  23. Program Remote Control 2's (or Remote Control 1 with a Green UHF Pro key, sold separately) RECOVER to the channel you selected in step 5. See page 10-14 for instructions.

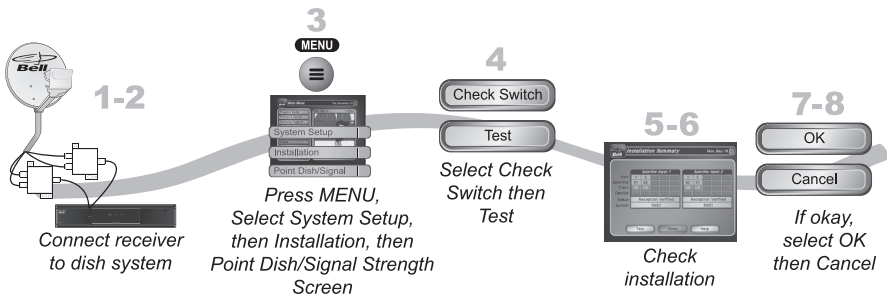


## Connections and Setup

### Connecting To Your Dish Antenna

# 12

## CONNECTING TO YOUR DISH ANTENNA



1. 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.
2. 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 the switch, LNBF in your existing system.
3. On Remote Control 1, press Menu, select System Setup, Installation, and then Point Dish to display the Point Dish screen on the nearby TV.
4. Select Check Switch. Select Test.
5. The receiver begins performing the Check Switch tests. When it is finished, the Installation Summary screen displays.

## User Guide

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.
7. Select OK to go to the Point Dish/Signal screen.
8. Select Cancel to exit the Point Dish menu. At this point, the receiver may walk you through a procedure to download software. If this prompt displays, follow the instructions and do not disturb the receiver until the nearby TV is displaying Bell ExpressVu video. Otherwise, press VIEW LIVE TV. After a few minutes, you should be watching TV.

## CONNECTING THE PHONE LINE

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You must keep the receiver connected to an active telephone line to order Pay-Per-View programs, use all of the Interactive features, or other services from Bell ExpressVu with your remote control.

**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.

**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 Bell ExpressVu. You can obtain a filter from your DSL provider.

### PHONE LINE CONNECTION

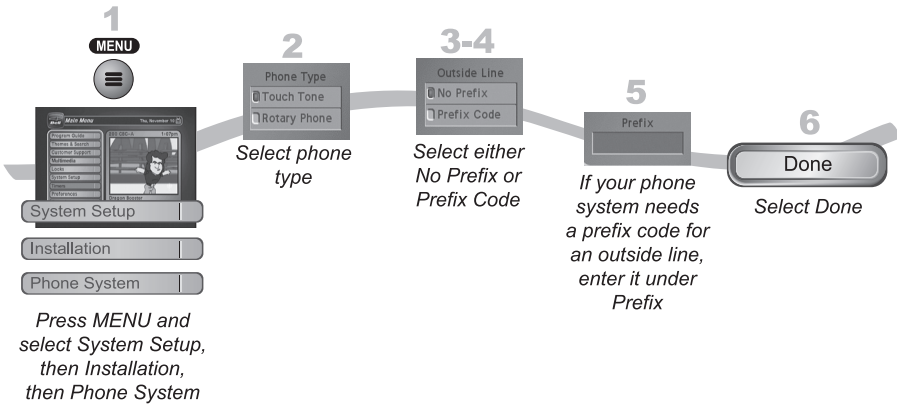
Run a telephone cable with a standard RJ-11 connector from the receiver's back panel Phone Jack to an active telephone connection.

## Connections and Setup Connecting The Phone Line

# 12

### 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. Pressing MENU, then select System Setup, Installation, and then Phone System.
2. Select the Touch Tone or the Rotary Phone option in the Phone Type list.
3. Select either the No Prefix or the Prefix Code option in the Outside Line Prefix list.

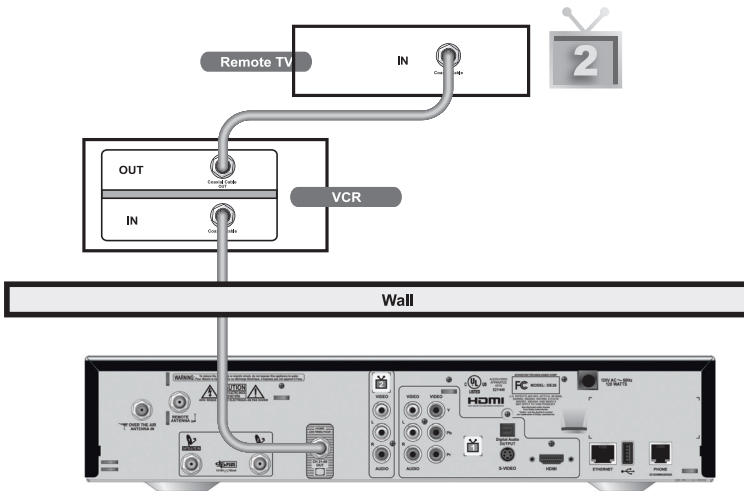
**Note:** Usually, you need a telephone number prefix only for business installations. For most residential installations, all you need to do is set the telephone system type. The default setting of No Prefix will allow correct dialing. If this is the case, select the Save option to save the above setting, and stop here. If you do need to set a prefix, then instead of selecting the Save option, go on to step 5.

4. If you selected No Prefix, select Done.
5. If you selected Prefix Code, the receiver highlights the box where you must enter the exact sequence you dial the phone to obtain an outside line.
6. Select Done.

## User Guide

### CONNECTING A VCR TO THE REMOTE TV

The diagram below provides example of how to connect VCRs to your satellite TV system.



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.

**Note:** Connecting your TV directly to the satellite receiver provides the best audio and video quality.

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 12-6.
5. Set the VCR output to channel 3 or 4.
6. Tune the remote TV to the same channel that you set your VCR to in step 6.

## Connections and Setup Connecting Off-Air Antenna

12

### CONNECTING OFF-AIR ANTENNA

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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.

- The 8VSB TV Antenna/Cable In on your receiver's back panel can be used to receive and view programming on the nearby TV from an off-air antenna or cable service.
- Connect a VHF/UHF off-air antenna to the 8VSB TV Antenna/Cable port.
- Not all off-air broadcasts can be recorded with your receiver.
- The remote TV can view to off-air channels only in Single Mode.
- For remote TVs receiving programming from CH 21-69 Out, the off-air antenna needs to be connected to your TV distribution equipment. TV distribution equipment devices include coax panels, amplifiers or super home nodes, and are available through many companies.
- You can add local off-air channels and assign them network affiliations. Once you have done this, you can access the channels via the Program Guide or the Browse Banner in much the same way as you would satellite channels.

**Note:** The type of antenna required depends on the channels used by, and the locations of, the local broadcasters for your area. Visit [www.antennaweb.org](http://www.antennaweb.org) or contact a professional installer to help you select a suitable antenna.



Make sure to follow the antenna installation instructions correctly. Ground an outdoor antenna per the National Electrical Code (NEC) and any local electrical codes.

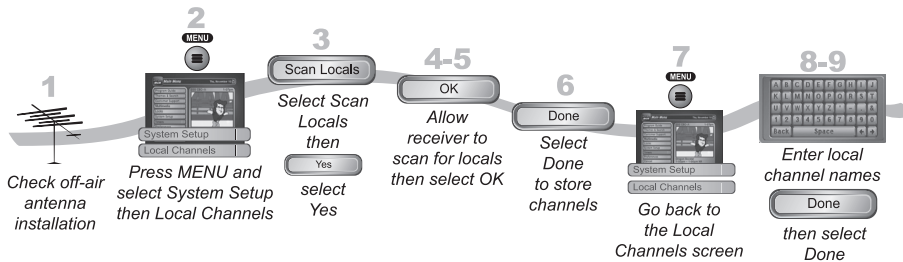


The audio/video quality on local off-air channels depends on the distance and terrain between the broadcast station and your home, and on the placement and quality of the off-air TV antenna you use. If you have questions about offair channels, contact the broadcaster, not Bell ExpressVu.

## User Guide

### SCANNING FOR OFF-AIR CHANNELS

With your off-air antenna adjusted for best reception, use these instructions to scan for offair channels for the nearby TV.



1. Make sure you have your off-air antenna connected to the receiver's 8VSB TV Antenna/ Cable connection.
2. Press MENU, select System Setup, and then Local Channels to open the Local Channels screen. If this is the first time you have opened this screen, it will have no channels listed.
3. Scan for channels by selecting Scan Locals. When the Local Channels screen displays, select Yes.
4. The scan will take a few minutes to complete. When it finishes, the results will show how many channels the scan found.
5. Select OK to go back to the Local Channels screen.

**Note:** If the channel number says None, you have not yet assigned this channel a network affiliation or name. The Arrow at the bottom left means that there are more channels, off the bottom of the screen, which you can get to with the ARROW keys if you wish to edit their names or remove them.

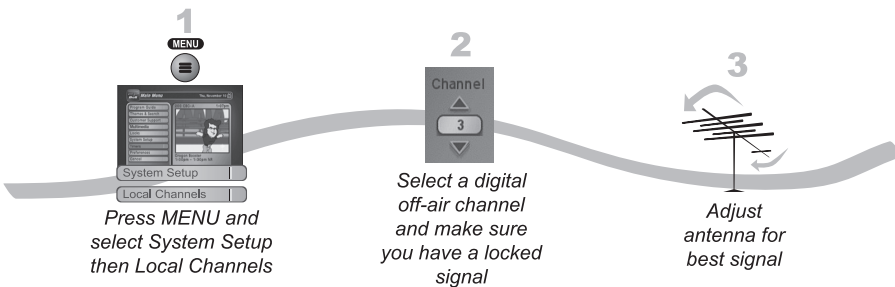
6. If you want to name the off-air channels, continue on. If you do not want to name your offair channels, select Done. You will then be taken out of the menus back to watching TV.
7. Select a channel and then select Edit Name to modify the way the channel name displays on your screen.

## Connections and Setup Connecting Off-Air Antenna

# 12

8. Use the virtual keyboard on the screen to select the letters of your channel name.
9. When you are finished making changes, select Done.

### PEAKING YOUR OFF-AIR ANTENNA



1. Press **MENU**, select **System Setup**, and then **Local Channels** to open the **Local Channels** screen.
2. Highlight the **Channel** field and use the **UP** and **DOWN ARROWS** to select a digital off-air channel. Make sure you see a **green signal strength bar** and a **Locked** indication on the meter.
3. Adjust the orientation of your antenna to maximize the signal strength. If you cannot get a **Locked** indication, you may need to upgrade your antenna or relocate it to a better position.

## User Guide

### ABOUT OFF-AIR TV BROADCASTS

Off-air TV signals are broadcast from stations on the ground, while satellite TV signals are broadcast from satellites in space. You receive off-air TV signals using an indoor or outdoor antenna instead of the satellite dish. You are likely familiar with analog off-air TV signals - these are the signals that have been used to broadcast TV for many years. New digital off-air TV signals are broadcast and received in the same way. Digital off-air TV broadcasting uses advanced technology like that of the Bell ExpressVu to deliver superb picture quality and CD quality sound. However, digital off-air signal reception (like analog off-air signal reception) depends on several things:

- The distance between the broadcast station and your home (the farther away the station, the weaker the signal);
- The broadcast station's power (the lower the power, the weaker the signal);
- Obstacles between the station and your home, such as mountains, buildings, trees, or other objects (these may block or reflect the signal before it reaches you);
- Multiple broadcast stations (to receive good signals from several stations, you may need to compromise in how you aim the antenna or you may need more than one antenna).

The effects of poor digital reception are different from the effects of poor analog reception::

- Poor analog reception usually causes the TV picture to be “snowy” or to include “ghosts,” that is, multiple images caused by receiving reflected signals along with the direct signal from a station.
- Poor digital reception may cause the TV picture to be “pixelized,” that is, broken up into small squares of various colours, or to be lost completely (the TV screen is all black or all blue).
- Digital broadcasts often provide either a very good picture or no picture at all.
- You may be able to receive a poor analog signal but not be able to receive a digital signal at all.

To get the best possible digital signal reception, make sure you use the best off-air antenna for where you live:

- You can receive a limited number of channels using a rabbit ears type antenna on top of the TV set, or a much larger number via a large UHF/VHF indoor/outdoor antenna.
- The higher the quality of the antenna you use, the greater its range and the better its reception will be.



## Connections and Setup Connecting Off-Air Antenna

12

The Consumer Electronics Association maintains a website, [www.antennaweb.org](http://www.antennaweb.org), that you can visit for help in choosing an antenna. You may want to contact a professional TV antenna installer for advice or help in choosing, installing, and aiming an antenna. Keep in mind, digital off-air TV broadcasting is in its infancy. So, digital off-air service may be interrupted because:

- Broadcasters are testing digital signals, and may stop broadcasting without notice.
- Many broadcasters do not yet have permanent broadcast stations and may be operating at less than full power.
- Broadcasters are not legally required to provide full-time digital signals for several years.
- Some digital channels do not broadcast all the time.

If you have questions about off-air channels, contact the broadcasters, not Bell ExpressVu. Bell ExpressVu does not broadcast off-air signals and so cannot do anything to change off-air signal quality. However, the receiver's digital channel setup menus provide a signal strength bar that can help you in aiming the off-air TV antenna for the strongest possible signal.

**Here's something interesting! We all know that there's no Channel 1, but did you know that no TV stations broadcast on Channel 37? That channel is reserved for radio astronomy. Perhaps someday we will receive TV shows from Alpha Centauri.**

## User Guide

### USING TROUBLESHOOTING TOOLS

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Your receiver has troubleshooting tools that a Customer Service Representative may ask you to use if you should ever run into problems while using your equipment. Even though these tools are quite helpful, it is recommended that you only use them when on the phone with a Bell ExpressVu representative.

#### RESETTING YOUR RECEIVER

Reset your receiver as directed by the Customer Service Representative as follows:

1. Press and hold the front panel POWER until only the green TV1 indicator is lit.
2. Let go of the front panel POWER.

It will take a few minutes for your receiver to reset and come back on. When you reset your receiver, your receiver may have to download an updated Program Guide. If this is the case, it may take longer for the receiver to come back on.

#### DIAGNOSTICS

The Customer Service Representative may ask you to open the Diagnostics screen. Remember to have an active phone line connected to your receiver.

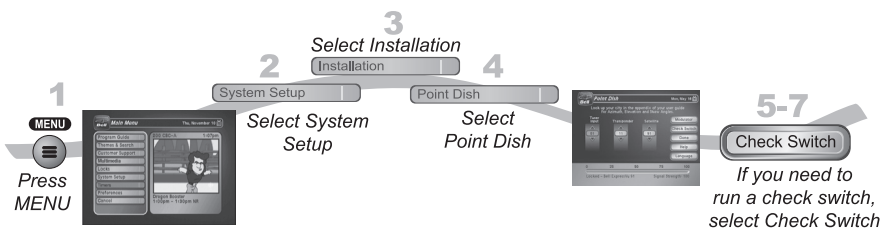
1. Press MENU, select System Setup, and then select Diagnostics. The Diagnostics screen shows you various tests the Customer Service Representative may ask you to perform on your receiver:
  - Connection - Tests for a valid receiver phone connection.
  - Dial Out - If “No Dial Out Pending” is displayed, the receiver does not need to have its smart card records updated.
  - Counters - Shows you a list of diagnostic counters. Use PAGE UP and PAGE DOWN to scroll through the list of counters displayed.
2. Select Done.

## Connections and Setup Using Troubleshooting Tools

# 12

### POINT DISH AND CHECK SWITCH

The Point Dish and Check Switch screens are helpful to the Customer Service Representatives. You may be asked to display these screens when you call Bell ExpressVu. Even though there are items that can be changed, only change them when specifically directed by a Customer Service Representative.



1. Press MENU.
2. Select System Setup.
3. Select Installation.
4. Select Point Dish. This screen shows you information to help maximize your satellite signal. The bar at the bottom of the screen tells you the signal strength. Green is a good signal, while red indicates the signal is not acceptable or is from the wrong satellite.
5. Select Check Switch to display the Installation Summary screen. The Installation Summary screen tells you if you are receiving signals from the satellites and which multidish switches you have installed, if any.
6. Select Test only if directed by the Customer Service Representative.
7. Select Done.

# *User Guide*

## **Notes**