



Scientific  
Atlanta

# Explorer<sup>®</sup>

# Digital Video Recorder

## User's Guide

### Get More Out of Your TV...

#### Watch

- Your favorite shows *anytime* you want...on your schedule
- Two programs (live or pre-recorded) at once with the PIP feature

#### Record

- Two live programs at the same time
- All future episodes of your favorite programs by performing a simple, one-time setup

#### Watch & Record

- Watch one program while recording another
- Watch two programs at once (using the PIP feature) and record one of them
- Watch two programs and record both of them
- Watch a pre-recorded program while recording one or two other programs

#### Play Back Recordings on Other TVs

- Use the Multi-Room<sup>®</sup> DVR\* (MR-DVR) system to play back recordings on up to 4 TVs at the same time
- Use parental controls to block play back of recordings in any room

\*The MR-DVR feature is only available on the 8300 MR-DVR models.

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# Explore Your Entertainment Options

With the Explorer® Digital Video Recorder (DVR), you can explore TV in a way never possible before:

- Record your favorite programs when you're busy
- Create your own personal video library by recording and storing your favorite programs
- Watch your recordings anytime you want
- Pause live TV for up to 1 hour without missing a minute
- Use instant replay anytime you want on live TV or while playing back a recording
- Share recordings with other Scientific-Atlanta digital set-tops in your MR-DVR system

## This guide describes how to use the following Explorer DVRs

- For standard-definition TVs (SDTVs): Explorer 8000™, Explorer 8240™, Explorer 8300™, Explorer 8300MR™
- For high-definition TVs (HDTVs): Explorer 8000HD™, Explorer 8240HD™, Explorer 8300HD™, Explorer 8300HD MR

**Note:** Some features described in this document are not available on all DVR models. For more information, contact your cable service provider.

### Explorer Model

### \*Storage Capacity

8000	Up to 50 hours of non-HD programs (based on an 80 GB capacity hard drive)
8000HD	Up to 90 hours of non-HD programs Up to 20 hours of HD programs (based on a 160 GB capacity hard drive)
8240, 8300, 8300MR	Up to 50 hours of non-HD programs (based on an 80 GB capacity hard drive)
8240HD, 8300HD, 8300HD MR	Up to 90 hours of non-HD programs Up to 20 hours of HD programs (based on a 160 GB capacity hard drive)

\*The total program hours that can be stored depends upon the format and data rate of the programming source, as well as the DVR hard drive storage capacity.

## Take Control of Live Programs

Anytime you tune to a live program, the DVR begins buffering the program — that is, making a temporary recording of it — so you can:

- Pause the live program for up to one hour
- Rewind the program up to the point when you tuned to the channel
- Fast-forward through the portion you have rewound
- Instantly replay the last eight seconds of TV anytime you want
- Save the buffered program to the DVR by recording it

### Buffered Programs

**The channel buffer automatically buffers the last hour of the channel that you are watching and continues to buffer it until you:**



#### Watch the channel for longer than an hour

After an hour, the DVR removes the earlier minutes of the program from its buffer so that only the last hour is kept in the buffer.



#### Tune to another program

When you change channels, the DVR begins to buffer the program you have just tuned to. It removes the program you were watching from the buffer.




#### Turn off the DVR

When you turn off the DVR, it erases everything from its buffer.



#### Have the DVR record the program

When you press **Record** , the DVR records the portion of the live program it has buffered, and begins recording the rest of the live program as it is broadcast.

# Get Started

Getting started is easy. After unpacking your DVR equipment, follow these steps to set up your DVR.

1. Determine the types of connections you need to make, based on your TV type (HDTV or SDTV) and home theater connection requirements.
2. Connect the DVR to your TV based on the connection information described in “Connect the Explorer DVR to Your TV” on page 4.

**Note:** Your cable service provider may have already installed and connected the DVR for you. If not, follow the instructions on page 4 to make the appropriate connections.




3. Prepare the remote control as described in “Prepare the Remote Control to Work With Your TV and DVR” on page 5.
4. Configure the picture display for your TV using the Setup Wizard. See “Prepare the Explorer DVR to Work With Your TV” on page 6.

## Connect the Explorer DVR to Your TV

The DVR family supports a number of connection options to support connections to older TVs, SDTVs with composite inputs, and HDTVs with component inputs or DVI/HDMI inputs. The following table describes the available DVR outputs, including when the output should be used.

For more information about connectivity requirements and connection diagrams, refer to the connectivity guide for your DVR model:







- *Connecting the Explorer® 8300™ Digital Video Recorder*, part number 4003987
- *Connecting the Explorer® 8300HD™ Digital Video Recorder*, part number 4003986
- *Explorer 8000 Home Entertainment Server User's Installation Guide*, part number 4002771
- *Explorer 8000HD Home Entertainment Server User's Guide*, part number 4001025

Output Type	Description
<b>HDMI</b>  <b>or</b> <b>DVI</b> 	<p>Some HDTVs have an High-Definition Multimedia Interface (HDMI™) or Digital Video Interface (DVI) connector. The HDMI connector provides both a digital video and audio connection. The HDMI connector is available only on the 8300HD DVR. The DVI connector is available only on the 8000HD DVR.</p> <p>The DVI connector provides a digital video connection. If your HDTV has a DVI connector and you have an 8300HD DVR, you need an HDMI-to-DVI adaptor and you need to connect a separate audio connection.</p> <p><b>Notes:</b></p> <p>When using the HDMI connection with TVs that do not support Dolby® Digital decoding, additional configuration steps are needed. For more information, see “Important Note Regarding the HDMI Interface on the 8300HD DVR” on the next page.</p> <p>If you connect to an HDTV using the DVI or HDMI ports, you are automatically placed in “HD” mode.</p>
<b>Pr, Pb, Y</b> 	<p>The PrPbY ports, or component outputs, can be used with either an HDTV or a non-HDTV with component inputs. If connecting to a TV using component outputs, you must use the Setup Wizard to select the output formats that your particular TV supports. See “Prepare the Explorer DVR to Work With Your TV” on page 6.</p> <p><b>Note:</b> If connected to an HDTV using the component or composite (Y output, only) outputs, the Setup Wizard prompts you to choose “HD” or “SD” mode.</p>
<b>Y Output</b> (on HD unit configured for SD operation)	<p>This connection is used for connecting to an SDTV.</p>
<b>or TV Video Output</b>	
<b>S-Video Out</b>	<p>This connection can be used for connecting to an SDTV.</p>
<b>Cable Out</b>	<p>This connection can be used when connecting to an SDTV.</p>

## Important Note Regarding the HDMI Interface on the 8300HD DVR

The HDMI interface will automatically configure the audio output for a format supported by the television. Because not all TVs support a Dolby Digital input, the HDMI interface will automatically select a 2-channel stereo audio configuration instead of Dolby Digital. When the output is configured for 2-channel audio, this configuration is carried over to the other digital audio outputs of the 8300HD. This configuration prevents your Home Theater System or Dolby Digital decoder from providing the full Dolby Digital surround sound effect.

On the 8300HD, you may override the automatic selection of audio by the HDMI interface by completing the following steps.


1. Press **Settings**  twice. The General Settings menu appears.
2. Press **Move Up**  or **Move Down**  to select **Audio: Digital Out**.
3. Press **Move Right**  to select **Dolby Digital**. This setting will send Dolby Digital audio to the HDMI, DIGITAL AUDIO OUT, and OPTICAL AUDIO OUT connectors on the 8300HD.
4. Press  **Accept** to accept the option for the DVR.
5. Press **Exit**  to return to normal viewing.

**Note:** If the TV (video/audio monitor) connected to the 8300HD using HDMI is not Dolby Digital capable, it may not produce audio through its speakers when the Audio: Digital Out setting on the 8300HD is set to Dolby Digital. You can either switch the Audio: Digital Out setting back to HDMI when you are not using the home theater or Dolby digital decoder, or you can connect the baseband audio outputs (OUT 1 Audio Left and Right) to the TV.




## Prepare the Remote Control to Work With Your TV and DVR





Set up the remote control (remote) in two steps.

1. Prepare it to work with the make and model of your TV. (For additional information on preparing the remote to work with your make and model of TV, refer to the guide that is included with your remote.)
2. Place it in Cable mode as described in the picture at right.

**Note:** Your cable service provider may have already placed the remote in Cable mode for you. You can verify this by pressing the Power  key to see how the DVR responds.

**Tip:** To find a key on the remote, open the foldout on the back cover of this guide to see the illustration of the remote.

To place the remote in Cable mode, press **Cable** . The Cable  key blinks red when pressed to indicate that it is in Cable mode. When the remote is in Cable mode and you press Power , the green Power LED on the front of the DVR turns on or off depending on the current status of the DVR.

**Note:** Each time you press a key on the remote, one of the four mode keys (, , , or ) blinks red to indicate the mode the remote is in.





## Prepare the Explorer HD DVR to Work With Your TV

The Setup Wizard is a program that helps you set up your DVR to provide the best picture quality that your TV supports. Based on the type of TV you have, the Wizard allows you to select all picture formats supported by your SDTV or HDTV.

**Note:** If you are connecting an SD DVR to an SDTV, no setup is required. Skip this section and go to “Make the Most of Your Entertainment Options” on page 12.

For more information about how programs are formatted and displayed on an HDTV, refer to the *Explorer HDTV Setup Wizard User’s Guide*, part number 4003114.

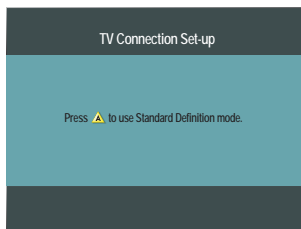
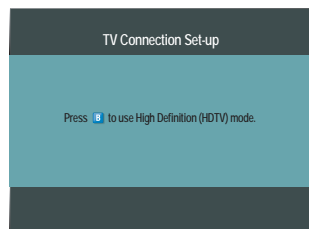
**Important:** Any time that you change connections to use the component (PrPbY) ports, you must run the Setup Wizard again to make sure your TV is receiving its supported picture formats.

### Start the Setup Wizard

To start the Setup Wizard, follow these steps:

1. Make sure that the DVR is powered **OFF**, but still plugged into an active power outlet, and properly connected to the TV. See “Connect the Explorer DVR to Your TV” on page 4.
2. Configure the TV to display the input where the DVR is connected (see your TV user’s guide for more information).
3. Turn the TV **ON**.
4. With the DVR powered **OFF**, press **Guide** and **Info** at the same time. The **TV Connection Set-up** screen appears.
5. The **TV Connection Set-up** screen toggles between an HD and SD mode selection screen every 20 seconds until you make a selection.

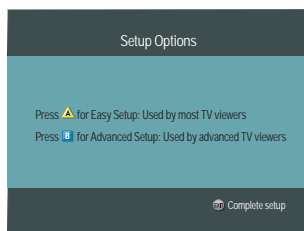
Press the **Guide** and **Info** keys at the same time.



**Note:** The DVR front panel displays either **HD** or **SD** while the TV Connection Set-up HD mode or SD mode screens display on the TV screen.

6. Choose one of the following options:
  - To choose HD mode, press **B** on the remote to start the setup.
  - To choose SD mode, press **A** on the remote to start the setup.

After selecting HD or SD mode, the **Setup Options** screen appears.



7. Choose one of the following options:
  - To choose the **Easy Setup** option, press **A**; then, go to the **Easy Setup Instructions** on page 7.
  - To choose the **Advanced Setup** option, press **B**; then, go to the **Advanced Setup Instructions** on page 7.

## Easy Setup Instructions

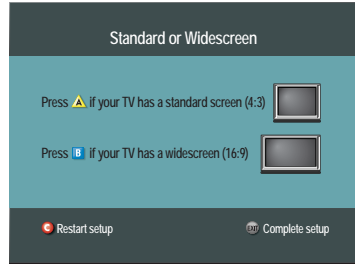
1. Press **▲** or **B** to select the type of TV screen you have. The setup is complete.
2. Press **Power** **POWER** to begin watching TV.

### Notes:

- If you pressed **▲** for the standard screen (4:3) TV setting, the TV is set to receive programming in 480i format on non-HD channels and 1080i format on HD channels.
- If you pressed **B** for the widescreen (16:9) setting, the TV is set to only receive programming in 1080i format (even on non-HD channels).

**Tip:** After you complete the setup, you can press **#** to stretch or zoom the picture.

3. You're ready to begin using your DVR to watch and record programs. Go to "Make the Most of Your Entertainment Options" on page 12.



## Advanced Setup Instructions

1. Press **▲** or **B** to select the type of TV screen you have.
2. Follow the on-screen instructions to select your picture formats.

**Note:** Refer to the user's guide that came with your TV for information about supported display formats.

3. Press **Select** **SELECT** to toggle between the Save and Remove options, or press **B** to see how the next format looks on your TV screen.

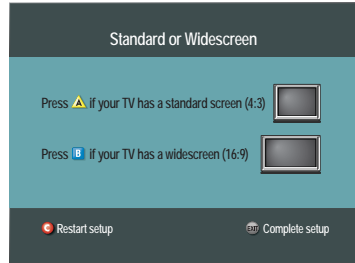
**Important:** If you see a black screen or if the picture quality is not optimal, **do not** press **Select** **SELECT**. Press **B** again to view the next screen format.

4. After saving the picture formats, press **Exit** **EXIT**. The setup is complete.
5. Press **Power** **POWER** to begin watching TV.

**Tip:** After you complete the setup, you can press **#** to stretch or zoom the picture.

6. You're ready to begin using your DVR to watch and record programs. Go to "Make the Most of Your Entertainment Options" on page 12.

**Note:** If you need to make changes to your HDTV picture display, go to "Adjust Your HDTV Picture" on page 8.



## Adjust Your HDTV Picture

After using the Setup Wizard, if you feel that your HDTV picture quality needs improvement, you can adjust the HDTV picture display using options within the Quick Settings and General Settings menus.







If you do not need to make an adjustment to your picture quality, skip this section and go to “Making the Most of Your Entertainment Options” on page 12.

## Adjust Your Picture Format Using Quick Settings


Because the picture quality of a program is affected by many factors, such as how the program was originally recorded and the method used to broadcast the program, you may find that displaying certain programs in a specific picture format provides the picture quality you prefer.

**Note:** If your HDTV uses a composite, DVI, or HDMI port, it automatically selects the best picture format for the program you are watching. DVI ports, however, can choose only from the picture formats that your HDTV supports.

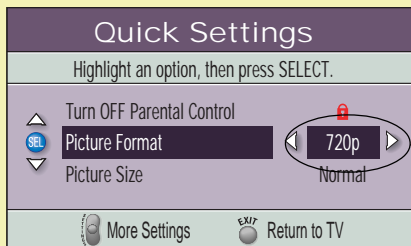
Follow these steps to change the picture format.

1. Press **Settings** . The Quick Settings menu appears.
2. Press **Move Up**  or **Move Down**  to select **Picture Format**.
3. Press **Move Right**  to select the picture format setting.
4. Press **Move Right**  again to display another picture format setting. Each time you press **Move Right** , another setting displays.

**Note:** If you used the Setup Wizard to select picture format settings, those that you selected are available here.

5. Press **Select**  to view the picture with this setting.
6. If necessary, repeat these steps to find a setting that you prefer.

### Quick Settings: Picture Format



Only the picture format settings that you selected using the Setup Wizard are available for selection. For example, if you used the Setup Wizard's Easy Setup method, only the settings 480i and 1080i are available for you to select.

**Note:** If Pass-Through or Auto DVI/HDMI are selected in the General Settings: Set Picture Format (see page 10), you cannot change the Picture Format in the Quick Settings menu. You can only stretch and zoom the picture with the # key on the remote *or* within Quick Settings.









## Adjust Your HD Picture Using General Settings

You can adjust how your DVR displays pictures using the Picture Format and TV Borders General Settings menu options.

### Set Your Default Picture Format

By automating picture adjustments, the DVR uses a method that you choose to automatically select the picture format that provides the best display possible. The methods that you can select from depend partly on the type of video connection your HDTV uses. (See the box on the next page for more details.)

Follow these steps to select a method the DVR will use to display pictures.

1. Press **Settings**  twice. The General Settings menu appears.
2. Press **Move Up**  or **Move Down**  to select **Set: Picture Format**.
3. Press **Move Right**  to select the picture format setting.
4. Press **Move Up**  or **Move Down**  to display each option.  
**Note:** See the box on this page for an explanation of each option.
5. Press  **Accept** to accept the option for the DVR.  
**Note:** The 8300 DVR front panel displays the selected option and scan rate. For example, if you selected Pass-Through, the 8300 DVR front panel displays **AUTO** and **1080i**.
6. Press **Exit**  to return to normal viewing.

### Display Formats for Digital Sources

The following table shows the relationship between the picture format method, the signal the DVR receives, and the format of the picture that displays on your TV screen.

If you chose this picture format method:	And the DVR receives this signal:	The HDTV displays the picture in this format:
<b>Fixed</b>	1080i, 720p, 480i, 480p	The picture format you selected from the Quick Settings menu. (For details, see page 10.)
<b>Pass-Through</b> or <b>Auto-DVI</b>	1080 720p 480i 480p	1080 720p 480i 480p
<b>Upconvert 1</b>	480i/480p 720p/1080i	480p 1080i
<b>Upconvert 2</b>	480i/480p 720p/1080i	480p 720p

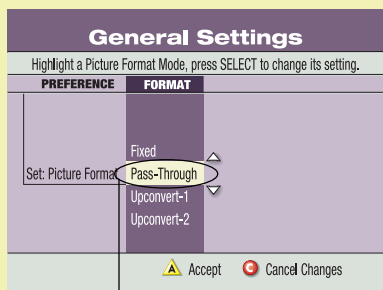
## General Settings: Set Picture Format

### Upconvert 1 and Upconvert 2 -

When possible, the DVR tries to improve the display of a program by upconverting the program.

**Fixed** - All programming is displayed using the picture format you last selected. This setting remains *fixed* until you select a new picture format from the Quick Settings menu. For details, see the previous page.

**Pass-Through or Auto DVI** - Programming is automatically formatted with the picture format that provides the best display. If your HDTV uses a DVI port, select the Auto DVI option.



If your HDTV uses a DVI or HDMI port, **Auto DVI/HDMI** appears here instead of **Pass-Through**.

**Important:** To realize the full benefit and functionality of the Pass-Through feature, your TV must be capable of handling all six TV display modes (1080i, 720p, 480p widescreen, 480i widescreen, 480p standard, and 480i standard). If your TV handles less than six TV display modes, Pass-Through functionality will, in some cases, operate like the Upconvert-1 or Upconvert-2 functions. Refer to the user's guide that came with your TV for information about supported display formats.

If you determine that your TV is capable of handling the six display modes, then you must select all six picture formats using the Setup Wizard program. See "Advanced Setup Instructions" on page 7 of this guide.









**Important:** Do not connect the HDMI (DVI) output to an HDTV that does not support High-Definition Copy Protection (HDCP). If you connect the HDMI (DVI) output cable to an HDTV that does not support HDCP, you cannot see any video output. A message appears instructing you to disconnect the HDMI connection and watch video output through the PrPbY component connectors.

*For more details about these options, see the table on the previous page.*

## Change the Darkness of Bars Used in Picture Displays

The DVR automatically adds bars to certain types of program formats to improve the picture's display.

If you decide to use these automatic settings to watch programs, you can change the darkness of the bars from Light (the default setting) to Medium or Dark. To change the darkness of the bars that the DVR uses, follow these steps:

1. Press **Settings**  twice. The General Settings menu appears.
2. Press **Move Up**  or **Move Down**  to select the option **Set: TV Borders**.
3. Press **Move Right**  to display the Borders options (Light, Medium, or Dark).
4. Press **Move Up**  or **Move Down**  to select the shade you want to apply to the bars (Light, Medium, or Dark).
5. Press  **Accept** so that the DVR accepts this setting. The DVR displays the Set: TV Borders option with your selection shown.
6. To exit from this screen and return to live TV, press **Exit** .



**Caution:** When displayed for too long, any fixed image, such as station logos, Pillarbox bars, or Letterbox bars, can reduce the ability of HDTVs to display colors evenly across the screen. When this occurs, the image becomes permanently burned into the screen leaving a faint image of it on the screen. This occurrence is known as "burn in." For ways to reduce the effects of burn in, refer to the user's guide that came with your HDTV.

## **Make the Most of Your Entertainment Options**

After you connect the DVR to your TV, set up the remote, and run the Setup Wizard, you are ready to begin watching and recording programs using your DVR.

In the following sections, discover how you can:

- Find out when programs are broadcast using the Program Guide
- Watch programs and pay-per-view events
- Control live TV and recordings
- Watch two programs at once with the PIP feature
- Record and play back programs
- Manage programs and recordings