VERSION 6.0

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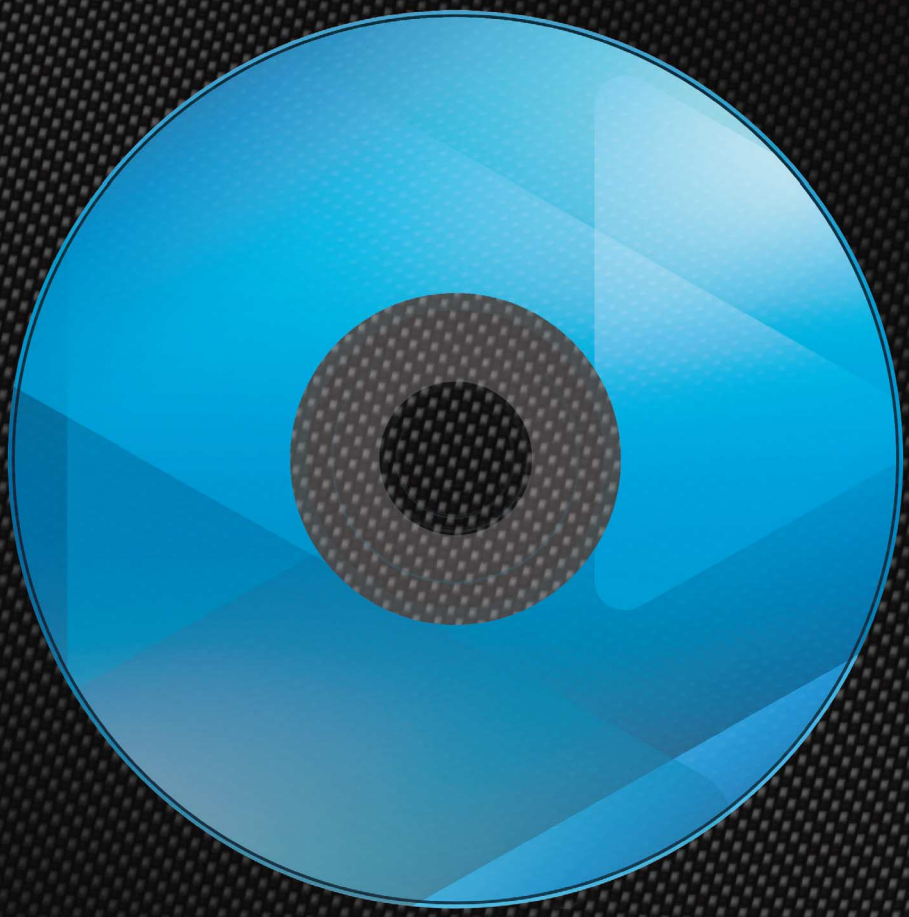

DVD Architect™ Pro

User Manual

What's new in version 6.0?

- Support for burning stereoscopic 3D Blu-ray Disc. *For more information, see Working with Stereoscopic 3D Media on Blu-ray Disc on page 161*.
- Interactive tutorials

Welcome

After DVD Architect™ Pro software is installed and you start it for the first time, the registration wizard appears. This wizard offers easy steps that allow you to register the software online with Sony Creative Software Inc. Alternatively, you can register online at *https://www.sonycreativesoftware.com/reg/software* at any time.

Registering your product will provide you with exclusive access to a variety of technical support options, notification of product updates, and special promotions exclusive to registered DVD Architect Pro users.

Registration assistance

Registration assistance is available online at *http://www.sonycreativesoftware.com/reg/faq* or by fax at (608) 250-1745.

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For a detailed list of Customer Service options, we encourage you to visit *http://www.sonycreativesoftware.com/support/custserv.asp*. Use the following numbers for telephone support during normal weekday business hours:

Telephone/Fax/E-mail	Country
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Chapter 1 Introduction

Welcome to DVD Architect Pro software

DVD Architect™ Pro software has everything you need to create and burn professional DVDs and Blu-ray Disc™ projects on your computer. You'll be creating picture slideshows, single-movie discs, music/video compilations, and menu-based discs on your computer in no time!

System requirements

- Microsoft® Windows® Vista® (Service Pack 2 or later) or Windows 7
- 1 GHz processor
- 400 MB hard-disk space for program installation
- 1 GB RAM
- OHCI-compatible IEEE-1394DV card (for external-monitor preview)
- Windows-compatible sound card
- Supported DVD-R/-RW/+R/+RW drive or BD-R/-RE drive
- Microsoft DirectX® 9.0c or later
- Microsoft .NET Framework 3.0 (included on application disc)
- Apple® QuickTime® 7.1.6 or later

You must provide your registration information to Sony Creative Software Inc., a US company, in order to activate the software. Product requires online registration within 30 days.

Installing DVD Architect Pro software

1. Place the DVD Architect Pro application disc in the drive. The setup screen appears if AutoPlay is enabled for your DVD-ROM drive.

   If you have disabled the AutoPlay feature, click the **Start** button and choose **Run**. In the Run window that appears, type the DVD-ROM drive's letter and add **:\setup.exe**. Click **OK** to start the installation.
2. Click **Install**, and then follow the on-screen prompts to install the appropriate version of DVD Architect Pro for your computer.

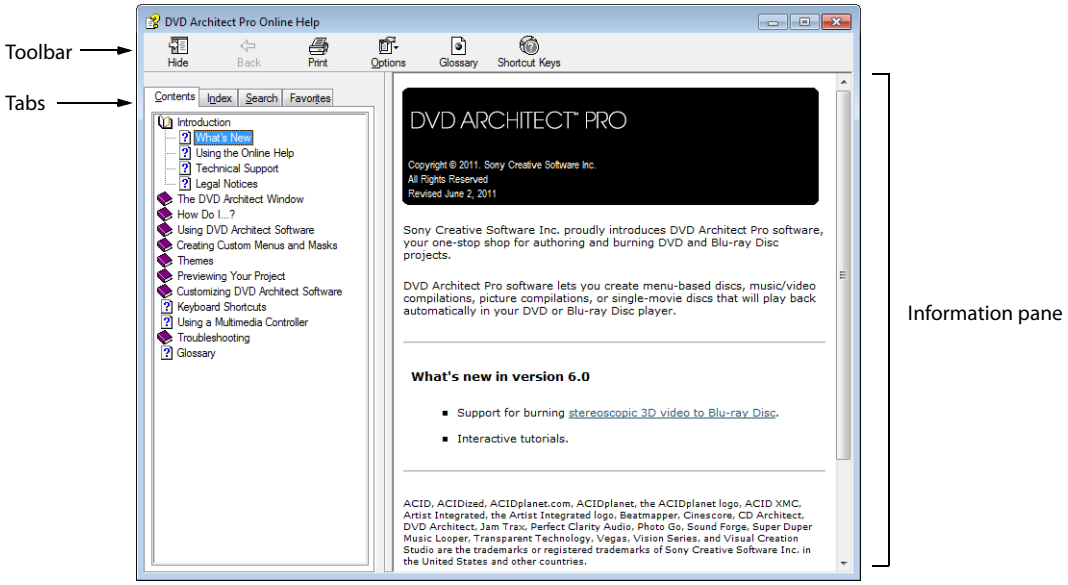
Getting help

You can access three types of help within DVD Architect Pro software:

- Online help
- Interactive tutorials
- Help on the Web

Online help

To access online help, choose **Contents and Index** from the **Help** menu or press F1.



Interactive tutorials

You can learn more about many of the features in DVD Architect Pro by using the interactive tutorials installed with the software.

You can access the tutorials at any time by choosing **Interactive Tutorials** from the **Help**.

Help on the Web

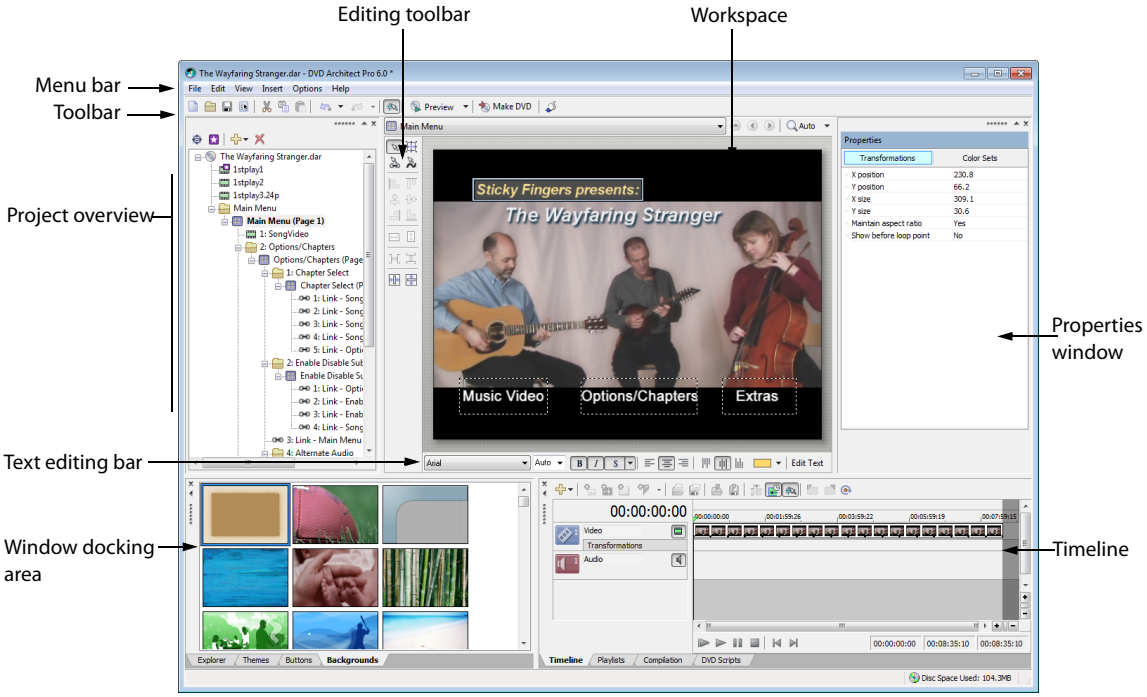
Additional DVD Architect Pro software help and information is available on the Sony Creative Software Inc. Web site. From the **Help** menu, choose **Sony on the Web** to view a listing of Web pages pertaining to DVD Architect Pro software and Sony Creative Software Inc. The software starts your system's Web browser and attempts to connect to the appropriate page on the Sony Creative Software Inc. site.

Chapter 2 Learning the DVD Architect Pro Workspace

DVD Architect™ Pro software is designed to make it easy to create a professional-looking DVD or Blu-ray Disc™. Many of the editing operations, commands, and shortcut keys are common to other popular software applications, as well as other Sony Creative Software Inc. applications.

Main window

When you start the application, the main window appears.



Saving and recalling window layouts - Ctrl+Alt+D or Alt+D

A window layout stores the sizes and positions of all windows and floating window docks in the DVD Architect Pro workspace. You can store up to ten window layouts so you can quickly recall customized layouts for specific editing tasks.

For more information, see Saving and recalling window layouts on page 179.

Main window components

The work area is divided into four primary areas and is described in the following table.

Component	Description
Project Overview window	Where you assemble your project and can see the big picture.
Workspace	Where you edit menus and pages.
Properties window	Where you edit properties for media and objects in your project.
Window docking area	Where you find media, themes, buttons, and backgrounds, and perform timeline editing on playlists, compilations, scripts, and titles in your project.

You can resize these sections by dragging the dividers between them or by pressing F11.

Press	Description
F11	Minimizes and restores the docking area at the bottom of the window.
Shift+F11	Maximizes and restores the left and right docking areas (Project Overview and Properties windows).
Ctrl+F11	Minimizes and restores the window docking area, Project Overview, and Properties windows.

Toolbar

The main toolbar allows you to quickly access the most commonly used functions and features. To specify which buttons are displayed, choose **Customize Toolbar** from the **Options** menu. To toggle display of the main toolbar, choose **Toolbar** from the **View** menu.

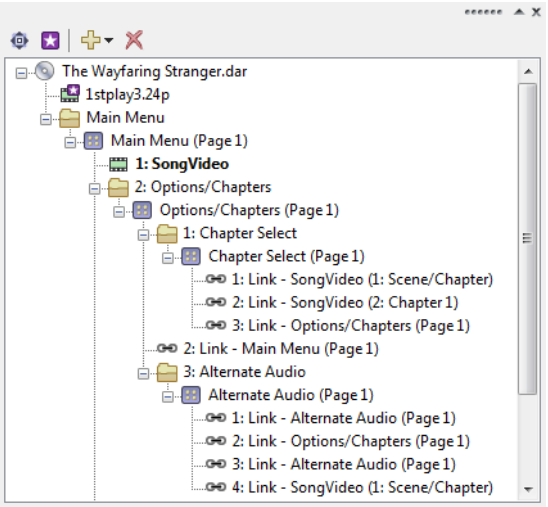
	New Project Creates a new project.
	Open Project Opens an existing project.
	Save Project Saves the current project.
	Properties Opens the Project Properties dialog.
	Cut Cuts selected events or time range.
	Copy Copies selected events or time range.
	Paste Pastes items from the clipboard into your project.

	Undo Reverses the last command performed.
	Redo Reverses an undo command.
	Enable Snapping Enables snapping to grid lines.
	Preview Shows or hides the Preview window.
	Make DVD Opens the Make DVD wizard.
	Make Blu-ray Disc Opens the Make Blu-ray Disc wizard.

Project Overview window (Ctrl+Alt+1)

The Project Overview window provides a high-level view of the menus and titles in your project. You can use this window to arrange the menus and titles in your project and add or delete titles.

To toggle the display of the window, choose **Project Overview** from the **View** menu.



	Toggle Display of End Actions Displays or hides end actions.
	Set Disc Start Sets the selected menu or title as the disc start item.

	Insert Object Show or hides the Insert Object drop-down list.
	Delete Object Deletes the selected title or menu.

Workspace (Alt+0)

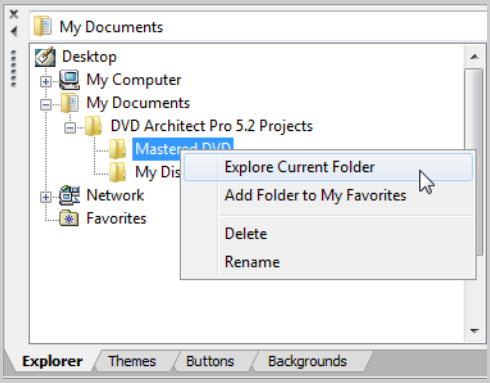
The workspace is the portion of the DVD Architect Pro window where you design your project. The workspace represents the currently selected menu or object.

To set input focus to the workspace for keyboard editing, choose **Focus to Workspace** from the **View** menu.

Across the top of the workspace, there is a toolbar that helps you navigate through your project and zoom in/out of the DVD Architect Pro workspace.

	Address bar	With a drop-down menu, this allows you to navigate through the menus and titles of the parent folder.
	Back to Parent	Allows you to navigate back to the parent folder of your project. **Tip:** *You can also use the Backspace key.*
	Previous Page	Allows you to navigate back to the previous page in your project. **Tip:** *You can also use the Page Up key.*
	Next Page	Allows you to navigate to the next page in your project. **Tip:** *You can also use the Page Down key.*
Auto	Zoom Settings	Click the down arrow next to the button to choose the magnification of the page in the workspace. When **Auto Zoom** is selected, the image will zoom to fit the current workspace size.

Tip: *To browse a file's current location on your drive or network, right-click the file in the Explorer window or in the DVD Architect Pro workspace and choose* **Explore Current Folder** *(or select the* **Video** *or* **Audio** *box in the Properties window, click the down arrow button (), and then choose* **Explore Containing Folder** *from the menu) to open the Windows Explorer. For more information, see* *Explorer window (Alt+3) on page 17*.



Editing toolbar (Alt+1)

The editing toolbar allows you to edit objects that you select in the workspace. To toggle display of this toolbar in the workspace, choose **Editing Toolbar** from the **View** menu.

Selection Tool Selects and moves objects.	**Align Right** Aligns all selected objects to the right edge of the object that has focus.
Sizing Tool Selects and resizes objects.	**Align Bottom** Aligns all selected objects to the bottom edge of the object that has focus.
Navigation Tool Verifies and edits which buttons will be activated when you press Up, Down, Left, or Right buttons on the DVD or Blu-ray Disc player remote control.	**Make Same Width** Makes all selected objects the same width as the object that has focus.
Keyframe Tool Inserts a keyframe. Keyframes are used to animate objects by cropping them or changing their size or position.	**Make Same Height** Makes all selected objects the same height as the object that has focus.
Align Left Aligns all selected objects to left edge of object that has focus.	**Space Across** Adjusts the selected objects so an equal amount of horizontal space exists between the objects.
Align Top Aligns all selected objects to the top edge of the object that has focus.	**Space Down** Adjusts the selected objects so an equal amount of vertical space exists between the objects.
Align Horizontal Center Aligns all selected objects to the horizontal center of the object that has focus.	**Horizontal Centering** Aligns selected objects to the horizontal center of the screen.
Align Vertical Center Aligns all selected objects to the vertical center of the object that has focus.	**Vertical Centering** Aligns selected objects to the vertical center of the screen.

Text bar (Alt+2)

The text bar allows you to edit various properties for text objects you select in the workspace. To toggle the display of the text bar, choose **Text Bar** from the **View** menu.

Arial **Font** Allows you to choose the typeface that will be used for text.	**Justify Right** Aligns text to right edge of text box.
22 **Font Size** Allows you to choose the size (in points) of the typeface that will be used for text.	**Justify Top** Aligns text to top edge of text box.
B **Bold** Sets text in bold typeface.	**Justify Vertical Center** Aligns text to vertical center of text box.
I **Italic** Sets text in italic typeface.	**Justify Bottom** Aligns text to bottom edge of text box.
S **Shadow** Allows you to select position, color, and blurring of a shadow behind text.	**Font Foreground Color** Allows you to set foreground color for text.
Justify Left Aligns text to left edge of text box.	Edit Text **Edit Text** Makes selected text box editable.
Justify Center Aligns text in center of text box.	

Window Docking Area (F11)

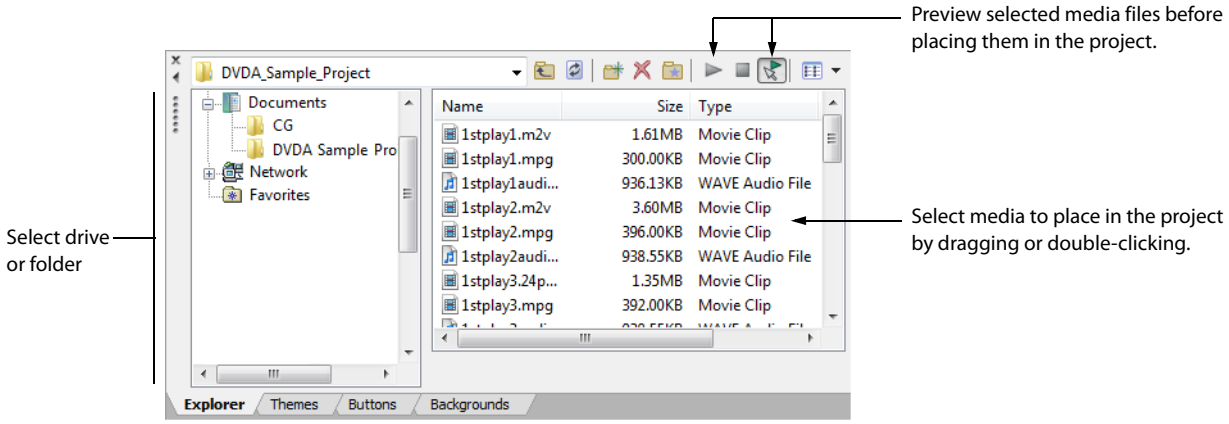
You can dock (anchor) windows around the edges of the DVD Architect Pro window to keep frequently used windows available, but out of the way, while you are working with a project.

You can dock several windows in the same area of the screen and the windows will be layered. Click a window's tab to bring it to the top.

Explorer window (Alt+3)

The Explorer window is similar to the Windows® Explorer. Use the **Explorer** tab to select media files to drag to the workspace or Project Overview window. From the **View** menu, choose **Explorer** to show or hide the Explorer window.

You can also use the Explorer to perform common file-management tasks such as creating folders, renaming files and folders, and deleting files and folders. Use the **Start Preview** ( ) and **Auto Preview** ( ) buttons to preview files before adding them to the project. If you have the **Auto Preview** button selected, any video or graphic file you click in the Explorer will automatically display in the workspace.



Using Explorer window views

You can control the information that is displayed in the Explorer window by clicking the **Views** button ( ) and selecting a view.

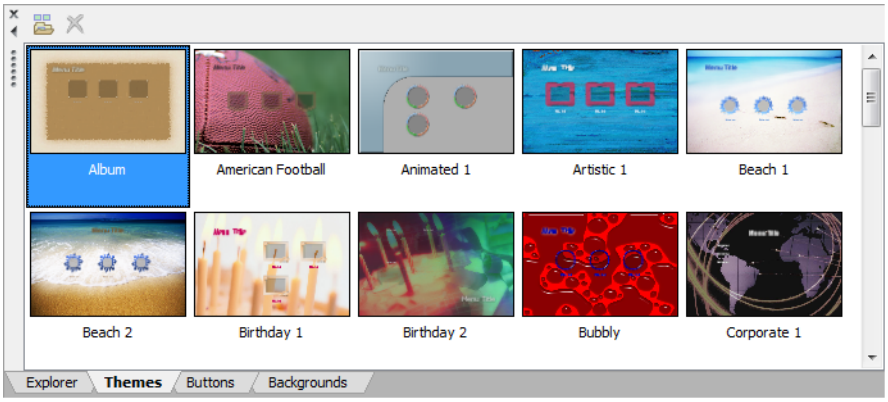
View	Description
Tree View	Displays all of the available drives and folders that you can choose from to find files.
Summary View	Displays everything shown in the Tree View, but adds an area below the file list where summary information for the selected file is displayed, such as the file type and properties.
Details	Displays all the properties for each file. The information is presented in a table format. You can sort the files according to a category by clicking the column label for that category.
All files	Displays all file types in the selected folder.

Themes window (Alt+4)

The Themes window is used to apply a theme to your menu-based project. From the **View** menu, choose **Themes** to show or hide the Themes window.

A theme is a style sheet for a menu page. Each theme can contain a background image, button type, layout style, button behaviors, text style, and embedded navigation behaviors. You can apply themes to specific menu pages as you work. Each new page you add to that menu will default to using the same theme.

DVD Architect Pro software includes some themes for you to use, and you can also create your own themes and apply them to your projects. *For more information, see Working with themes on page 108.*



Double-click a theme to apply it to a menu.

Apply Theme Allows you to apply themes to specific menu pages as you work.	**Delete Theme** Allows you to delete your own custom themes.

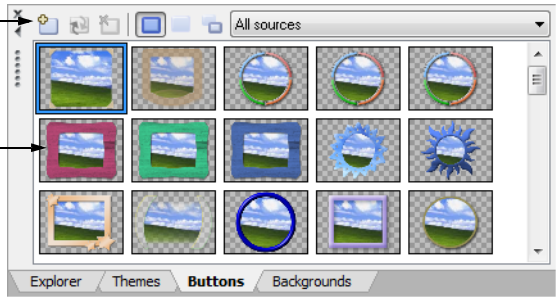
Buttons window (Alt+5)

The Buttons window displays buttons that are available from installed themes and from your DVD Architect Pro installation. From the **View** menu, choose **Buttons** to show or hide the Buttons window.

You can use the **Buttons** window to add new buttons to your menus, replace existing buttons, or remove frames from existing buttons.

Use the toolbar to add or replace buttons.

Drag a button to the workspace to add it to a menu.

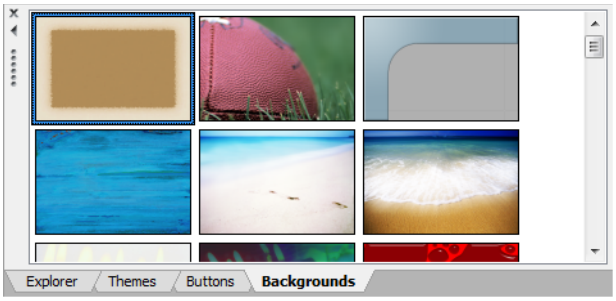


Insert Button Adds the selected button (with no link) to the current menu.	**Show Framed Buttons** Shows only buttons with frames in the Buttons window.
Replace Button Replaces the selected button in the workspace with the selected button in the Buttons window.	**Show Non-Framed Buttons** Shows only buttons without frames in the Buttons window.
Remove Frame Removes the frame from the selected button in the workspace.	**Show All Buttons** Shows buttons with or without frames in the Buttons window.

Backgrounds window (Alt+6)

The Backgrounds window displays menu backgrounds that are available from installed themes and from your DVD Architect Pro installation. From the **View** menu, choose **Backgrounds** to show or hide the Backgrounds window.

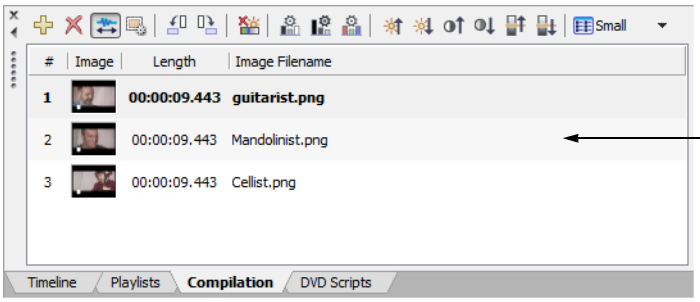
You can use the **Backgrounds** window to add a background to a menu page or change an existing background.



Compilation window (Alt+7)

The Compilation window displays a listing of the items in a music/video compilation or picture compilation. From the **View** menu, choose **Compilation** to show or hide the Compilation window.

You can use this window to arrange the items in a compilation, set image stretching or scaling, rotate an image, or set a picture's display duration.



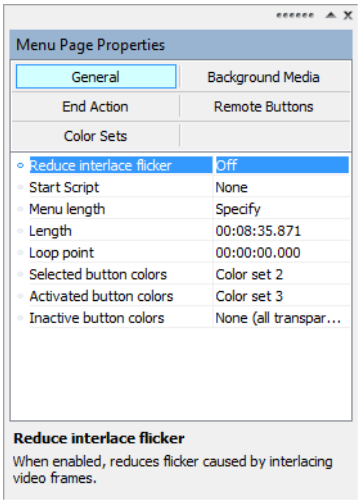
Drag items to rearrange, or right-click to display a shortcut menu with additional options.

	Insert Item Adds images to a picture compilation or audio, video, or still images to a music/video compilation.
	Delete Items Removes items from a compilation.
	Fit Compilation to Audio Automatically adjusts the duration of all slides to match the length of the audio file. Applies only to picture compilations.
	Generate Slide Show Animations Allows you to pan, zoom, and/or crop pictures in a slideshow. Applies only to picture compilations.
	Rotate Counterclockwise Rotates the image counterclockwise.
	Rotate Clockwise Rotates the image clockwise.
	Reset Effect Properties Resets all effect properties.
	Auto Levels Automatically adjusts the brightness and contrast. The most abundant colors (either light or dark) are enhanced.
	Auto Levels (Dark) Automatically adjusts the brightness and contrast. The least abundant colors (either light or dark) are enhanced.

	Auto Level Channels Automatically adjusts brightness and contrast. Adjustment is performed independently on each color channel.
	Increase Brightness Increases the brightness of the image.
	Decrease Brightness Decreases the brightness of the image.
	Increase Contrast Increases the contrast of the image.
	Decrease Contrast Decreases the contrast of the image.
	Increase Contrast Center Adjusts the anchor point around which green contrast is adjusted.
	Decrease Contrast Center Adjusts the anchor point around which green contrast is adjusted.
	Thumbnail Size Displays small, medium, or large thumbnail images.

Properties window (Alt+8)

The Properties window includes controls that you can use to edit nearly every detail of your project. From the **View** menu, choose **Properties** to show or hide the Properties window.



The contents of the Properties window change depending on the current selection. For example, if you have a menu open in the workspace, you can edit page properties and button properties. If you have a title open in the Timeline window, you can edit information about the media file.

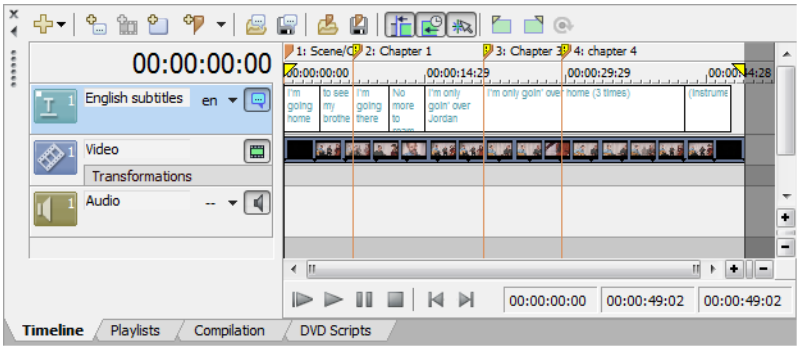
Property	Description
Graphics	Edits the position, size, and appearance of graphical elements on a menu or compilation.
Button	Edits the action and appearance of the selected menu button.
Menu Page	Adjusts the length, background media, end actions, and remote control button behavior for the selected page.
Subtitle	Adjusts subtitle text positions and adjusts which color set is used to draw subtitle text.
Media	Adjusts the end actions and remote control button behavior for the selected media file.
Picture Compilation	Adjusts the end actions and remote control button behavior for the selected picture compilation.
Music/Video Compilation	Adjusts the end actions and remote control button behavior for the selected music/video compilation.
Playlist	Adjusts the settings for each item in a playlist or to set the end action for the selected playlist.
Script	Adjusts settings for each statement in your DVD script. **Note:** *Scripting is not available for Blu-ray Disc projects.*

For more information, see The Properties Window on page 113.

Timeline window (Alt+9)

The Timeline window is a chronological representation of a video, picture compilation, music/video compilation, or the background media for a menu. From the **View** menu, choose **Timeline** to show or hide the Timeline window.

The timeline displays your main audio and video tracks, subtitle and additional audio tracks, chapter markers, and transport controls you can use to preview your media within the DVD Architect Pro workspace.

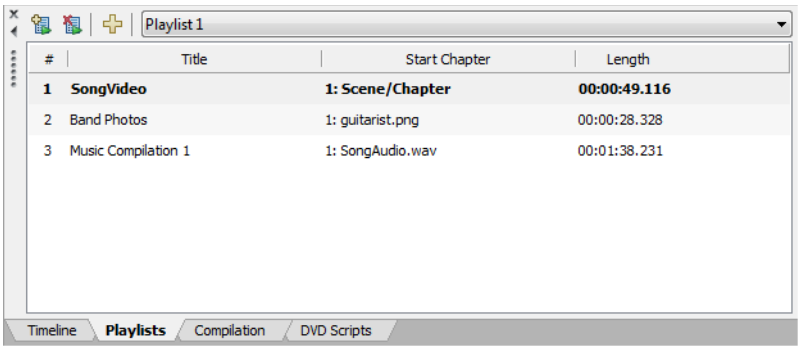


	Insert Track Shows or hides the Insert Track drop-down list.
	Insert Subtitle Text Event Adds a subtitle text event to the selected track.
	Insert Video Event Adds a video event.
	Insert Button Inserts a button into the workspace.
	Insert Scene/Chapter Marker Inserts a scene chapter marker.
	Insert Chapter Marker Adds a chapter marker.
	Insert Buttons on Video Marker Inserts a button on video marker.
	Import Subtitles Imports subtitles from a script file.
	Export Subtitles Exports subtitle content to a script file.

	Load Markers Loads markers from a file.
	Save Markers Saves markers to a file.
	Auto Ripple Toggles Auto Ripple mode.
	Quantize to Frames Forces events and markers to frame boundaries.
	Enable Timeline Snapping Enables timeline snapping.
	Set In Point Sets the in point for the title to the cursor position.
	Set Out Point Sets the out point for the title to the cursor position.
	Set Loop Point Sets the loop point to indicate the point where looped playback begins.

Playlists window (Ctrl+Alt+2)

You can use playlists to play a sequence of movies, chapter markers, music/video compilations, or picture compilations. A playlist can contain only titles that are part of the project, which are played from start to finish, and an end action determines what happens at the end of the playlist. From the **View** menu, choose **Playlists** to show or hide the Playlists window. *For more information, see* *Creating Playlists on page 83*.



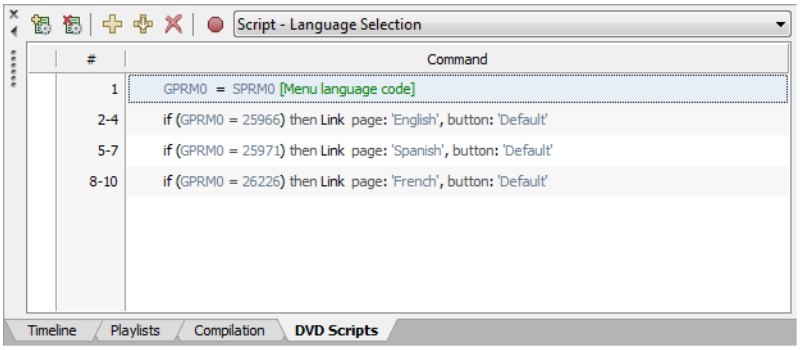
	Insert Playlist Adds a new playlist to your project.
	Delete Playlist Removes the current playlist from your project.
	Insert Playlist Items Displays the Select Title dialog where you can add titles to the current playlist.

Current playlist	Allows you to choose the playlist that you want to display.
Playlist item list	Lists the titles in the playlist.

DVD Scripts (Ctrl+Alt+3)

From the **View** menu, choose **DVD Scripts** to display the DVD Scripts window. You can use the Script Properties controls in the Properties window to adjust settings for each statement in your DVD script.

Note: *Scripting is not available for Blu-ray Disc projects.*



Item		Description
	Insert DVD Script	Click to add a new DVD script to your project. *For more information, see Creating a script on page 152.*
	Delete DVD Script	Click to remove the current script from your project.
	Insert Statement	Click to add a statement to your script. The Script Properties information is displayed in the Properties window, allowing you to choose your statement type and construct your statement.
	Append Statement	Click to add a statement to the end of your script. The Script Properties information is displayed, allowing you to choose your statement type and construct your statement.
	Delete Statement	Click to remove the selected statement(s) from your script.
	Toggle Breakpoint	Click to insert a breakpoint to the currently selected command(s) or label(s) in the script.
DVD scripts list		Choose an existing script from the drop-down list to specify the script you want to display.
Script statement list		Lists the statements in the script. You can drag statements within this area to rearrange them. You can use the Script Properties controls to set the statement type, commands, and conditions.

Note: *Breakpoints are useful for debugging scripts. In the preview mode, breakpoints suspend playback and display the debugger area in the lower-left corner of the preview window, allowing you to step through the script in a certain area and then resume playback.*

Crop and Adjust (Ctrl+Alt+4)

From the **View** menu, choose **Crop and Adjust** to display the Crop and Adjust window, where you can crop a video or graphic or adjust its appearance. You can set these changes to occur over time through the use of keyframes. *For more information, see Cropping and adjusting video and graphics on page 45.*

Chapter 3 Getting Started

This chapter details what you need to know to start authoring your project using DVD Architect™ Pro software.

How it works

The basic process for creating a DVD or Blu-ray Disc™ is essentially the same regardless of the type of project you choose to create. The steps listed below are discussed in more detail in this and other chapters:

1. Start a new project and specify the type of project you want to create (menu based, music/video compilation, picture compilation, or single movie). *For more information, see Starting a new project on page 25.*
2. Choose and add your media. *For more information, see Choosing your media files on page 27 and Adding files to your project on page 27.*
3. Preview your project. *For more information, see Previewing Projects on page 163.*
4. Save your project. *For more information, see Saving your project on page 33.*
5. Prepare and burn your project. *For more information, see Preparing and Burning Your Project on page 167.*

Rendering files for your project

To ensure that your project preparation and burning process goes smoothly, you should save your media files in the supported formats prior to bringing them into your DVD Architect Pro project. DVD Architect Pro software supports a wide variety of file formats, but some will require transcoding or recompression by the project-preparation process, lengthening the amount of time needed to complete this operation, and possibly resulting in degradation of quality.

Note: *The AVC, MainConcept™ MPEG-2, AC-3, and Wave/Wave64 encoders in Vegas® Pro software provide templates that, if used without any modifications, result in files that do not require recompression (unless the file size is too large to fit on a disc).*

For more information, see Rendering Files for Your Project on page 193.

Starting a new project

You can design your project to be as simple or as complex as you'd like, consisting of stills, video, and audio. Organization of these components is an important piece of the creation process. In the software, organization is handled by a project file (*.dar) that saves the relevant information about source file locations, insertion points, chapters, text, and more. This project file is not a multimedia file, but is instead used to create the final product when your editing is finished.

1. From the **File** menu, choose **New**. The New Project dialog is displayed.
2. On the General tab, click the type of project that you want to create:

Type of project	Description
Menu Based	Produces a disc that displays a menu when played. Users can move through the menu items and select what they'd like to view. You can add any kind of media to a menu-based disc. In addition, you can add multiple menus and titles (music/video compilations, picture compilations, and movies). *For more information, see Creating a Menu-Based Project on page 35.*
Music/Video Compilation	Produces a disc containing a compilation of audio or video files. You can choose a still image or video to associate with each audio file. Music /video compilations contain no menus, but users can skip forward and backward through tracks using their remote control. *For more information, see Creating a Music/Video Compilation on page 61.*
Picture Compilation	Produces a disc that displays a slideshow of still images. You can choose one background audio track to play while the pictures are displayed. Picture compilations contain no menus, but users can skip forward and backward through pictures using their remote control. *For more information, see Creating a Picture Compilation on page 67.*

Type of project	Description
Single Movie	Produces a disc containing a single movie. Single movies contain no menus or other media (aside from introductory video/audio, if desired). *For more information, see Creating a Single-Movie Disc or Title on page 75.*

3. Choose a setting from the **Disc format** drop-down list to determine the final disc format to which your project will be output: DVD or Blu-ray Disc.
4. Choose a setting from the **Project video format** drop-down list. The video format determines the following information about your project:
   - Whether a disc is NTSC or PAL. You cannot use both NTSC and PAL content on the same disc.
   - The default frame size and aspect ratio for media that will be recompressed. You can use the Optimize Disc dialog to choose distinct recompression settings for each media file. *For more information, see Adjusting video recompression settings on page 30.*
   - The frame size and aspect ratio of all menus. All menus must use the same aspect ratio and resolution.
5. Choose a setting from the **Project audio format** drop-down list to determine the format that will be used for audio that will be recompressed. You select a title and use the **Audio** settings in the Optimize Disc dialog to choose distinct recompression settings for each media file. *For more information, see Adjusting audio recompression settings on page 31.*
6. Select the **Start all new projects with these settings** check box if you want to use the current settings every time you create a new project.

Note: *The project settings you chose in the New Project dialog can be changed at any time while you are working on a project, with the exception of the type of project you chose to create. To change any of these settings, choose* **Properties** *from the* **File** *menu. For more information, see Setting Project Properties on page 143.*

7. Click the **Summary** tab, and complete the information in the fields as desired. This information is saved with the project.

Field	Description
Title	Type the title of the project.
Artist	Type the name of the artist who performed in the project.
Engineer	Type the name of the person who mixed or edited the project.
Copyright	Type copyright information about the project.
Comments	Type any comments you want to associate with the project.

8. Click **OK** to create your project.

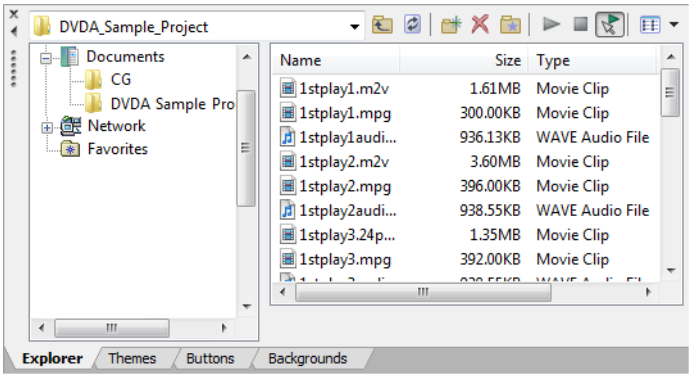
Opening an existing project

1. From the **File** menu, choose **Open**. The Open dialog is displayed.
2. Locate and select the project (.dar) file you want to open.
3. Click the **Open** button.

Tip: *If media files cannot be located when you open a project, you can choose to leave the media offline and continue to edit your project. If you restore the source media file at a later time, the project will open normally.*

Choosing your media files

DVD Architect Pro software supports a wide variety of media files. You can use the Explorer window to find and add media files to your project.



For more information, see Explorer window (Alt+3) on page 17.

Note: *DVD Architect Pro software includes support for many file types and can convert your media to the formats required for output as needed. However, for best performance (decreased disc preparation time and recompression), use existing rendered files. For more information about the types of files that can be used without recompression, see Rendering files for your project on page 25.*

Downloading media from the Web

You can also download media files from the Web for use in your project.

1. From the **File** menu, choose **Get Media from the Web**. Your Web browser starts and attempts to connect to the Internet.
2. Search for and download files to use in your project.

Previewing media files

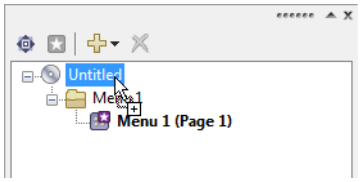
You can preview media files from the Explorer window at any time before adding them to your project. To do so, simply click once on the file to select it, and then click the **Start Preview** button ( ). To stop the preview, click the **Stop Preview** button ( ).

You can enable automatic previewing of selected files by clicking the **Auto Preview** button ( ). When this option is enabled, any file you select in the Explorer window is automatically previewed. To stop the preview, click the **Stop Preview** button ( ). To disable this option, click the **Auto Preview** button again.

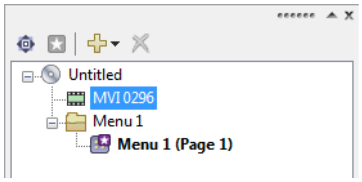
Adding files to your project

Once you've located a file you want to use, add it to the project using one of the following methods:

- Double-click the file. The file is added as a button on the currently selected menu.
- Drag the file from the Explorer window to the DVD Architect Pro workspace.
- Drag the file from the Explorer window to a menu in the Project Overview window.
- Drag a file from the Explorer window to the root folder in the Project Overview window. Dragging a file to the root folder adds the media to your project without creating a button on a menu.



Drag a file to the root folder...



...to add the media to the project without creating a button on a menu.

You can use this unassociated media as a transition between menus via end actions or as a destination for button actions or

the Menu button on the remote control.

Tip: *Select the* **Automatically link similar audio and video files** *check box on the General tab of the Preferences dialog if you want the software to look for and link audio files with the same base name when you add a video-only file to your project.*

For example, if you had a video-only MPEG file (MyProject.mpg) and an audio file (MyProject.wav) in the same folder, the software will automatically use MyProject.wav as the audio track when you add MyProject.mpg to a menu.

For more information, see General tab on page 182.

After you've added your media, you can use the top portion of the DVD Architect Pro workspace to lay out your project.

For more information, see:

- *Creating a Menu-Based Project on page 35*
- *Creating a Music/Video Compilation on page 61*
- *Creating a Picture Compilation on page 67*
- *Creating a Single-Movie Disc or Title on page 75*

Setting the disc start item

The start item is the item that plays by default when your disc is played in a DVD or Blu-ray Disc player. In a menu-based project, for example, the main menu is typically your start item.

Note: *If you have designated a DVD start script, the script will execute prior to the disc start item you set. (Scripting is not available for Blu-ray Disc projects.)*

Use the **Set Disc Start** button ( ) in the Project Overview window to assign an item from your project as the disc start item.

1. Select an object in the Project Overview window.
2. Click the **Set Disc Start** button ( ).

   The start item is displayed with a video strip icon ( ) if it is an object and a menu icon ( ) if it is a menu.

Adding introduction (first play) media

Use the **Insert Introduction Media** option in the Project Overview window to add a media file to your project and set it as your disc start item.

You could use introduction media to add copyright information or a corporate logo that is displayed before your disc starts playing.

1. Select an object in the Project Overview window.
2. Click the **Insert Object** button ( ) and choose **Introduction Media** from the menu. The Insert Media dialog is displayed.
3. In the Insert Media dialog, select the media file you want to use and then click **Open**.

   The file you selected is set as the disc start item, and the previous disc start item is added to the new media file as an end action link. *For more information about end actions for media, see End Action on page 128.*

   The start item is displayed with a video strip icon ( ) in the Project Overview window.

Setting your project properties

When you start a new project, you select various properties for the project. However, if you need to view those properties or make changes to them while you're working on the project, you can do so at any time by choosing **Properties** from the **File** menu. The Project Properties dialog is displayed containing two tabs: Properties and Summary.

If your projects typically use the same settings, select the **Start all new projects with these settings** check box at the bottom of the dialog.

For more information, see Setting Project Properties on page 143.

Optimizing your project

To display the Optimize Disc dialog, choose **Optimize Disc** from the **File** menu. You can use this dialog to optimize your project before burning or mastering to identify and correct potential problems or to force recompression to specific formats.

Using the Optimize Disc dialog, you can perform the following actions:

- View the estimated project and individual media file sizes.
- View and change project and file format settings.
- Verify which media files will require recompression during the preparation process:
  - A green check mark (✓) indicates a file is compliant.
  - A yellow warning sign (⚠) indicates a file requires recompression.
  - A green warning sign (⚠) indicates some files are compliant and some files require recompression.
  - A red warning sign (⚠) indicates you have specified to force recompression.

To determine the best file format settings for your use, see Rendering files for your project on page 25.

Determining whether menus and titles are compliant

Use the following guidelines to determine whether your menus and titles will require recompression during the preparation process.

Menus

Menus always use the settings displayed above the **Project Properties** button. All menus use the same audio format, aspect ratio (16:9 or 4:3), and frame size, but you can mix frame rates for menus within a single project.

A menu's video will not be recompressed if it meets the following requirements:

- Any background video must match the project video format.
- No graphics can be added to the menu.
- Buttons must use highlighting only. Using button thumbnails or text will require recompression.

A menu's audio will not be recompressed if its background audio matches the project audio format.

If a menu requires recompression, it will be recompressed using the **Video format**, **Audio format** and the **Frame rate** setting from the Recompress settings section of the Optimize Disc dialog.

Media files

Media files will not be recompressed if rendered in a compliant format. *For more information, see Rendering files for your project on page 25.*

If a media file requires recompression, it will be recompressed using the **Project video format** and **Project audio format** settings. You can select a media file in the Optimize Disc dialog and use the controls in the Recompress settings section to override the default project formats.

Music/video compilations

A music/video compilation's video will not be recompressed if it meets the following requirements:

- Any background video or images must match the project video format.
- No graphics can be added to the compilation.

The audio will not be compressed if it matches the project audio format.

If a music/video compilation requires recompression, it will be recompressed using the project video and audio format settings. You can select a music/video compilation in the Optimize Disc dialog and use the controls in the Recompress settings section to override the default project formats.

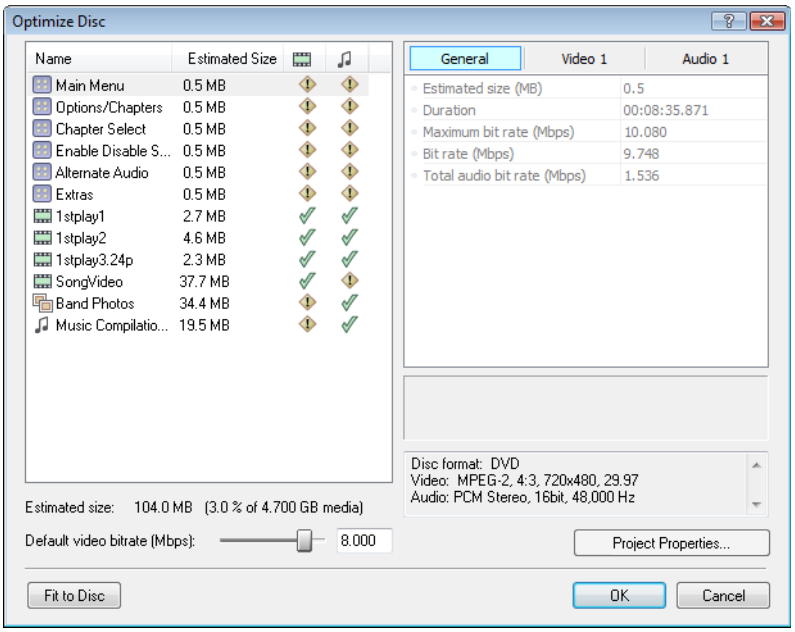
Picture compilations

The video portion of a picture compilation is always recompressed using the project video format, but you can select a music/video compilation in the Optimize Disc dialog and use the controls in the Recompress settings section to override the default video format.

The audio will not be recompressed if it is rendered in any compliant audio format. If the audio requires recompression, it will be recompressed using the project audio format. You can select a picture compilation in the Optimize Disc dialog and use the controls in the Recompress settings section to override the default audio format.

Using the Optimize Disc dialog to fine-tune your project

To display the Optimize Disc dialog, choose **Optimize Disc** from the **File** menu. Each menu and title in your project is displayed on the left side of the dialog with the estimated size of each item and an indication of whether the item will be recompressed.



Adjusting video recompression settings

1. Select a menu or video title from the list.
2. Click the **Video 1** button to display the controls. Information about the video format of the selected item is displayed. If your title has multiple video tracks, a separate **Video** button is displayed for each track.

> **Note:** *If the video is already compliant, you need to select the* **Recompress** *control, click the down arrow button (▾), and choose* **Yes** *from the menu to edit its recompression settings.*

3. Click the expand button (⊞) next to the **Recompress Settings** heading to expand the controls if they are not already expanded.
4. Select the **Use default bit rate** box and click the down arrow button (▾) to display a menu.
   - Choose **Yes** if you want the selected video to use the bit rate from the **Default video bit rate** slider at the bottom of the Optimize Disc dialog.
   - Choose **No** if you want to specify a custom bit rate for the selected video. You can then select the **Bit rate (Mbps)** control to specify the bit rate you want to use. Type a number in the box, use the spin control, or click the down arrow button (▾) to display a slider you can use to adjust the bit rate.

5. Select the **Aspect ratio** control, click the down arrow button (), and choose a command from the menu if you want to choose a new video format for the recompressed video.

Note: *This control is not available when a menu is selected. All menus in a project must have the same aspect ratio and resolution. Use the Project Properties dialog to control the aspect ratio and resolution of your project's menus. For more information, see* *Disc properties on page 143*.

If	Then
You choose **From project**	The setting from Project Properties dialog is used. The settings are displayed above the **Project Properties** button.
You choose a widescreen video format	Your video will be displayed in 16:9 on a widescreen television and will be letterboxed on a normal television.

6. Select the **Resolution** control, and click the down arrow button (), choose a setting from the menu to change the frame size of the recompressed video.

Note: *This control is not available when a menu is selected. All menus in a project must have the same aspect ratio and resolution. Use the Project Properties dialog to control the aspect ratio and resolution of your project's menus. For more information, see* *Disc properties on page 143*.

7. Select the **Frame rate** control, click the down arrow button (), and choose a command from the menu if you want to change the frame rate of the recompressed video.
8. Select the **Progressive** control, click the down arrow button (), and choose a setting from the menu to indicate whether you want to render the title or menu as progressive-scan video (applicable to DVD projects only).
   - Choose **Yes** to recompress a menu or title as progressive-scan video.
   - Choose **No** to recompress a menu or title as interlaced video.
   - Choose **Auto** to allow the software to determine the appropriate format: if the source media is progressive-scan video, the video or title will be recompressed as progressive; if the source media is interlaced, the video or title will be recompressed as interlaced.

     When you choose **Auto** for a music/video compilation, each compilation item is recompressed as a separate title and will match the format of the source media. If the audio is longer than the video, the compilation item will be recompressed as progressive-scan video to prevent artifacts when the last frame is held.

Notes:

- *When using background video in DVD menus, we recommend rendering the video in progressive-scan format before adding it to your project. Leave the* **Progressive** *setting at* **Auto***, and the noncompliant menu will be rendered as progressive-scan video. Progressive-scan menus will provide the sharpest-looking text and highest level of DVD player compatibility.*

  If you need to use interlaced video as a menu background, choose **No** *from the menu. When you choose* **No***, the noncompliant menu will be rendered as interlaced video.*
- *When creating Blu-ray Disc projects, menus must match the field order set by your project's video format.*

Adjusting audio recompression settings

1. Select a menu or audio file from the list.
2. Click the **Audio 1** button to display the controls. Information about the audio format of the selected item is displayed. If your title has multiple audio tracks, a separate **Audio** button is displayed for each track.

Note: *If the audio is already compliant, you need to select the* **Recompress** *control, click the button, and choose* **Yes** *from the menu to edit its recompression settings.*

3. Click the expand button () next to the **Recompress settings** heading to expand the controls if they are not already expanded.

4. Select the **Format** box and click the down arrow button ( ) to display a menu. Choose a setting from the menu to determine the file type and settings (bit rate or bit depth and sample rate) that will be used to recompress the selected file.

   For more information about audio settings, see Audio defaults on page 144.

Adjusting project-wide settings

The area at the bottom of the Optimize Disc dialog shows information about your project. The **Project video format** and **Project audio format** settings from the Project Properties dialog are displayed, and your project size is estimated based on these formats and the **Default video bit rate** setting.

1. Drag the **Default video bit rate** slider or type a value in the edit box to adjust the size of your project:
   - 9.8 Mbps is the maximum bit rate for DVD players.
   - 28 Mbps is the maximum bit rate for Blu-ray Disc projects burned to DVD media.
   - 48 Mbps is the maximum bit rate for Blu-ray Disc projects burned to Blu-ray Disc media.
   - Increasing the bit rate can improve quality, but you can fit less media on the disc.
   - Decreasing the bit rate can allow you to fit more video on the disc, but quality will be decreased.
2. To change the video or audio format of your project, click the **Project Properties** button. *For more information, see Disc properties on page 143.*
3. If you want to automatically adjust the project video bit rate, click the **Fit to Disc** button to fit a project that is greater than the **Target media size** setting on the Disc Properties tab. *For more information, see Disc properties on page 143.*

Note: *Only video that requires recompression will be adjusted. When your project cannot be made to fit on a disc, you can change the video settings so all titles and menus will be recompressed, or you can remove video from your project.*

Editing a media file's source project

When your DVD Architect Pro project uses source media files that are rendered with an embedded project path reference, you can easily open the source project from the Explorer window in the associated application if you need to edit the media. By saving your project path reference when you render files in ACID 5.0, ACID Music Studio 6.0, Sound Forge 8.0, Vegas 6.0, or Vegas Movie Studio 6.0 or later, you can quickly access the media from DVD Architect Pro via the **Edit Source Project** shortcut menu.

Note: *The project information in the rendered file is only a reference to a project file. If you modify the source project file after rendering, the project data will no longer match the rendered file. To edit a project using a path reference, the project file and all media must be available on your computer.*

1. Right-click a media file in the Explorer window.
2. From the shortcut menu, choose **Edit Source Projec**t. An ACID, Vegas, or Sound Forge window will open with the source project.

   If you are editing a source project using a computer other than the computer where the project was created, then the editing computer must meet the following requirements:
   - The software that was used to create the project must be installed and the project file extension (.acd, .acd-zip, .veg, .vf, or .frg) must be registered on the editing computer.
   - The editing computer must have the same version (or later) of the software as the computer where the project was created.
   - The project file must exist on the editing computer using the same file path as on the computer where the project was created.
   - The project's source media must exist on the editing computer. If the media files do not use the same file path as on the computer where the project was created, you will be prompted to choose a new folder or replacement files.
3. Edit the project as necessary.
4. Render the edited project using the same name as the original media file and close the editing application.

Note: *If you are editing an existing title, your project will automatically be updated with the latest rendered media file.*

Saving your project

When you save your work, it is saved in a project file (*.dar). Project files are not rendered media files.

1. From the **File** menu, choose **Save.**

> **Note:** *The first time you save a project, the Save As dialog appears. In subsequent saves, the dialog is bypassed, your existing file name is retained, and your project is updated to include any implemented changes.*

2. Select the drive and folder where you want to store the project.
3. Type the project name in the **File Name** box.
4. Click the **Save** button.

Saving a copy of your project (Save As)

After you have been working with your project, you can use the **Save As** command on the **File** menu to create a copy of the project file with a different name. Saving a number of different versions of a project is a low-risk way to try new techniques.

1. From the **File** menu, choose **Save As**. The Save As dialog is displayed.
2. Select the drive and folder where you want to store the project.
3. Type a new name in the **File name** box.
4. Choose a setting from the **Copy media** drop-down list if you want to copy your project's assets to the same folder as your project file:
   - **Normal** saves a standard DVD Architect Pro project without copying media.
   - **Copy user media with project** creates copies of your media files in the project folder.
   - **Copy user and theme media with project** creates copies of your media files and any required theme files in the project folder.
5. Click the **Save** button.

Chapter 4 Creating a Menu-Based Project

When you start a menu-based project with DVD Architect™ Pro, a main menu is created by default. You can add more menus to allow the user to play movies and navigate to other menus by selecting buttons.

Think of menus as an outline of your project: each menu can contain background media, graphics, text, and links to music/video compilations, picture compilations, or movies.

You can apply a theme to your menus to achieve a consistent appearance and layout, or you can customize the appearance of each menu and its objects individually. *For more information, see Working with themes on page 108.*

Pages extend menus across multiple screens; add a page when you want to add more items to a menu than will fit on a single page.

Notes:

- *When using background video in DVD menus, we recommend rendering the video in progressive-scan format before adding it to your project. Leave the* **Progressive** *setting at* **Auto***, and the noncompliant menu will be rendered as progressive-scan video. Progressive-scan menus will provide the sharpest-looking text and highest level of DVD player compatibility.*

  If you need to use interlaced video as a menu background, choose **No** *from the menu. When you choose* **No***, the noncompliant menu will be rendered as interlaced video.*

  Some DVD players will not display the last frame of a menu correctly when using interlaced background video.

- *When creating Blu-ray Disc™ projects, menus must match the field order set by your project's video format.*

Building menus

When a user places the disc in a DVD or Blu-ray Disc player, a main menu is displayed. The main menu contains links to submenus or titles (music/video compilations, picture compilations, or media files). When you start the software and create a menu-based project, a default main menu page is displayed for you. You can begin assembling your main menu using the existing appearance and layout, or you can edit the appearance of the main menu using themes or by adding your own background image/video, text, and audio. You can begin adding submenus and media whenever you're ready!

Adding a submenu

You can add submenus to a project to organize your content.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Insert** menu, choose **Submenu**. A new menu is created below the current menu, and a button is added to the current menu as a link to the submenu.

   Alternatively, click the **Insert Object** button () and choose **Menu** in the Project Overview window.
3. Double-click the submenu in the Project Overview window (or double-click the submenu's button in the workspace) to edit the layout and add titles (such as movies, music, or compilations) or playlists.

Note: *You can edit the button by selecting it and making changes to the controls in the Button Properties pane in the Properties window. For more information, see Button Properties on page 115.*

Adding a submenu from a file

You can add submenus from a file to create a new menu using a .psd file that contains menu background, buttons, and related mask images in a single layered file. *For more information about layered graphics, see Creating custom menus and buttons using layered graphics on page 102.*

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Insert** menu, choose **Submenu from File** and browse to the file. A new menu is created below the current menu, and a button is added to the current menu as a link to the submenu.
3. Double-click the submenu in the Project Overview window (or double-click the submenu's button in the workspace) to open the new menu in the workspace.
4. Add links for each button.
   a. Select a button in the workspace.
   b. On the Button Properties pane, click the **Action** button.
   c. Click **Command**, click the down arrow button (), and choose **Link**.
   d. Click **Destination**, click the down arrow button (), and choose the button's destination from the menu.

> **Tip:** *If you're linking to a title, the title must be in your project before you can choose it as a destination. Drag the media file from the Explorer window to the Project Overview window to add it to your project.*

5. Edit the menu as needed.

Reapplying a file's layout to menu objects

You can automatically update menu objects at any time after importing a menu from a layered image file. The update will restore the initial look of the menu, which includes button sizes and locations. Any buttons that you added after importing the layered file will be removed and any buttons that you deleted after importing the layered file will be restored.

> **Note:** *Nonvisual changes, such as button links, are preserved.*

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to reapply the layout.
2. From the **Edit** menu, choose **Reapply Layout From File** to update the objects.

Inserting pages

Adding pages

You can add pages to a menu if you have more content than will fit on one page. For example, your main menu could be two pages long if necessary.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Insert** menu, choose **Page**. An arrow button is added to the current menu as a link to the page.

> **Note:** *You can edit the button by selecting it and making changes to the controls in the Button Properties pane in the Properties window. For more information, see Button Properties on page 115.*

3. Double-click the page in the Project Overview window (or double-click the arrow button in the workspace) to edit the layout and add media.

Deleting pages

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.

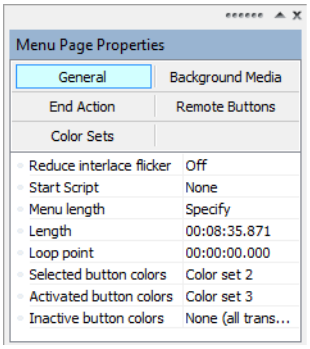
2. From the **Edit** menu, choose **Delete Page**.

Changing page order

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Edit** menu, choose **Page Order**, and then choose **Move Forward** or **Move Back** to move the current menu forward or backward.

Editing menu page properties

The Menu Page Properties pane in the Properties window allows you to adjust the length, background media, end actions, and remote control button behavior for the selected page.



To edit the menu's properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Click the property button that you would like to edit.
3. Click the specific property, click the down arrow button (), and choose a setting from the menu.

For more information, see Menu Page Properties on page 121.

Adding titles

The buttons and graphics displayed on a menu are called *objects*. Some of these objects, such as graphics and static text, are used for design purposes, and others, such as buttons, are used for navigation purposes.

- In a DVD project, each full-screen menu can hold up to 36 buttons; widescreen menus can hold up to 18 buttons.
- In a Blu-ray Disc project, each menu can hold up to 255 buttons.

Media such as videos, music/video compilations, and picture compilations are called *titles*. When you add a title to your project, an object is automatically created on your menu.

Use the Button Properties controls to edit button settings. *For more information, see Button Properties on page 115.*

Inserting a picture compilation

To add a picture compilation to your menu or page, choose **Picture Compilation** from the **Insert** menu. *For more information on picture compilations, see Creating a Picture Compilation on page 67.*

Tip: *Click the* **Insert Object** *button ( ) and choose* **Picture Compilation** *in the Project Overview window.*

Inserting a music/video compilation

To add a music/video compilation to your menu or page, choose **Music/Video Compilation** from the **Insert** menu. *For more information on music/video compilations, see Creating a Music/Video Compilation on page 61.*

Tips:

- *Click the* **Insert Object** *button (* *) and choose* **Music/Video Compilation** *in the Project Overview window.*
- *Buttons can be added to picture, music, or video compilations. For more information, see Adding buttons to videos on page 79.*

Inserting a single-movie title

To add a single-movie title to your menu or page, choose **Media** from the **Insert** menu. *For more information on adding movies, see Creating a Single-Movie Disc or Title on page 75.*

Tip: *Click the* **Insert Object** *button (* *) and choose* **Media** *in the Project Overview window.*

Note: *Once you have inserted a single-movie title and added chapter markers, you can automatically create a scene selection menu based on your markers. For more information, see Inserting a scene selection menu on page 41.*

Editing title order

From the **File** menu, choose **Order Titles** to display the Order Titles dialog, where you can change the order in which titles are arranged on the disc.

Reordering titles can be useful when fine-tuning the layer break on dual-layer discs or to ensure that the titles in a playlist will play back sequentially when a user interrupts playback by pressing the Next button on the DVD or Blu-ray Disc remote control.

1. From the **File** menu, choose **Order Titles**. The Order Titles dialog is displayed.

   By default, the title order matches the order in which you added titles to the project.
2. Select a title and click the **Move Up** or **Move Down** buttons to change the selected title's order.
3. Repeat step 2 as needed.
4. Click **OK** to close the Order Titles dialog and save your changes.

Adding graphics

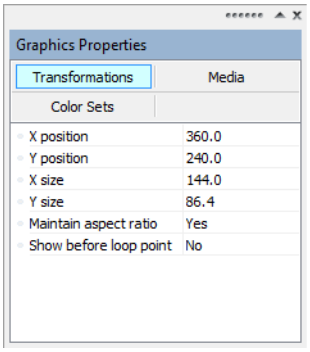
You can add an image or video to serve as a design element for a menu or page. If you add a video to a menu, it will automatically begin playback when the user accesses the menu.

Note: *Graphics are for design purposes only and cannot be used for navigation.*

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Insert** menu, choose **Graphic**. The Insert Graphic dialog is displayed.
3. Locate and select the file you want to use.
4. Click the **OK** button. The image or video is added to your menu.

Editing graphics properties

The Graphics Properties pane in the Properties window allows you to adjust the position, size, and appearance of graphical elements on a menu or compilation.



To edit the graphic's properties, perform the following actions:

1. Select a graphic with the Selection tool ( ) or Sizing tool ( ).
2. Click the property button that you would like to edit.
3. Select the specific property, click the down arrow button ( ) and choose a setting.

For more information, see Graphics Properties on page 113.

Inserting and editing text

Inserting text on a menu or page

1. From the **Insert** menu, choose **Text**. A text box is placed on the current menu or page.
2. Type your desired text.
3. Drag the text box to position it on the menu or page.

Setting a menu's title text object

A title object is used when you apply themes to a menu. The title object will also be used as the menu's title in the Project Overview window if the menu has not been renamed. After renaming a menu in the Project Overview window, changing the title object will set the object that will be used for themes, but it will not rename the menu.

Right-click a text object and choose **Title Object** from the shortcut menu to use the selected text as the menu's title object.

Formatting text

1. Select a text box with the Selection tool ( ) or Sizing tool ( ). The text bar below the menu displays the text settings.

> **Tip:** *From the* **View** *menu, choose* **Text Bar** *to display or hide the text bar.*

2. Choose a font from the drop-down list to set the typeface for your text.
3. Choose a font size from the drop-down list. Choose **Auto** to have the text automatically adjust to fit the size of the text box.
4. Click the **Bold** ( ), **Italic** ( ), or **Shadow** ( ) buttons to toggle your font effects as desired.
5. To apply a shadow, click the down arrow next to the **Shadow** button ( ). A pop-up window is displayed to allow you to set the position, color, and blurring of the shadow text.
6. Set your text justification options as desired. *For more information, see Text bar (Alt+2) on page 16.*
7. Click the down arrow next to the color swatch button ( ) to display the color picker, where you can set the red, green, blue, and alpha channels for your text.

Editing text

1. Select a text box in the current menu.
2. From the **Edit** menu, choose **Edit Text** (or press F2). The text becomes editable.

3. Edit the text as necessary.
4. Press one of the following keys to commit your text changes:
   - F2
   - Ctrl+Enter
   - Tab

Moving text

1. Select a text box with the Sizing tool ( ).
2. Move the selected text using one of the following options:
   - Drag the text box.
   - Click the Transformations button in the Properties window. Drag an object in the workspace or type values in the X position and Y position boxes to set the object's center point.

Note: *The X and Y coordinates are based on the frame size of your project. For example, if you're creating an NTSC project with a frame size of 720x480, (0,0) is the top-left corner of the frame, and (720,480) is the lower-right corner.*

Setting loop points

When a menu's action is set to loop, you can specify a loop point to indicate the point where looped playback will begin.

Notes: *Menu buttons will not appear until playback reaches the loop point if* **Show before loop point** *is set to* **No** *in the Button Properties window. For more information, see* *Button Properties on page 115*.

If **Show before loop point** *is set to* **Yes** *in the Button Properties window, buttons will appear before the loop point. Keyframe animation may be applied to the buttons. For more information, see* *Crop and video effects keyframes on page 48*.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Set the menu's end action.
   a. On the Menu Page Properties window, click the **End Action** button.
   b. Click **Command**, click the down arrow button ( ), and select **Loop**.

Note: *If the menu's end action is not set to Loop, the menu loop point will set the point at which buttons are displayed, but the menu will not loop.*

3. Set your menu's length.
   a. On the Menu Page Properties pane, click the **General** button.
   b. Click **Menu length**, click the down arrow button ( ), and select one of the following options:

Item	Description
Auto calculate	The software will determine the menu length based on the background audio, video, and button animations.
Specify	When selected, it allows you to type a number in the **Length** box or click the down arrow button ( ) to display a slider to set the length of the background video if one exists. **Tip:** *If you type a value in the* **Length** *box that is longer than the background video, the background video will end, and any animated thumbnails will continue to play until the end of the menu. If you want the menu to loop smoothly when your menu duration is longer than the video, create a new background video that matches the desired menu length.*

4. Click **Loop point**, click the down arrow button ( ) button, and drag the slider or type a value in the box to set the point at which buttons will be displayed and when looped playback will begin. The loop point is shown with a green marker in the Timeline window.

> **Tip:** *Click the* **Set Loop Point** *button ( ) in the Timeline window.*

Inserting a scene selection menu

A scene selection menu lets a user choose a specific scene in a video.

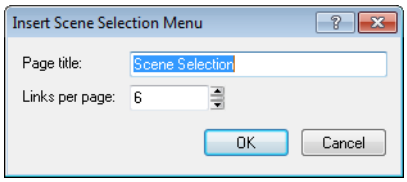
You can quickly and easily create a scene selection menu from an existing video title.

Creating a menu that continues playback after playing the selected scene (automatic scene selection menus)

1. Insert your video title and add your scene/chapter markers. These markers are used to create your scene selection menu.

   For more information about inserting video titles, see *Adding a movie title to a menu on page 75*.

   For more information about adding scene/chapter markers, see *Inserting scene/chapter markers on page 76*.
2. Return to the menu to which you added the video title and select its button in the workspace or select the title in the Project Overview window.
3. Right-click the video title and choose **Insert Scene Selection Menu** from the shortcut menu in the Project Overview window. The Insert Scene Selection Menu dialog is displayed.



4. In the **Page title** box, type the title you want to be displayed on the new menu.
5. In the **Links per page** box, type the number of links you want to display per page. For example, if your video includes 15 scene/chapter markers, typing 5 in this box will create a scene-selection menu with three pages.
6. Click the **OK** button to create the menu and pages. You can then edit the menu as necessary.

> **Tip:** *If you want to create individual thumbnails that link to chapter points without creating a scene-selection menu, add an empty button to your menu and use its button action to link to a title and chapter.*

Creating a menu that returns to the menu after playing the selected scene/chapter (manual scene selection menus)

1. Add a title to the menu you want to use as a scene selection menu. *For more information, see* *Adding a movie title to a menu on page 75*.
2. Select the title's button in the workspace or select the title in the Project Overview window.
3. From the **Edit** menu, choose **Copy**. The button is copied to the clipboard.
4. From the **Edit** menu, choose **Paste**. A copy of the button is added to your menu.

> **Note:** *Even though you're creating multiple copies of your title, the title will be saved to the disc only once. Multiple titles that use the same video, audio, and subtitle tracks will only be saved once on the disc. For more information, see* *Optimizing your project on page 29*.

5. Repeat step 4 for each scene you want to be able to play from the menu.
6. Set the in and out points for each button.
   a. Double-click the button in the workspace or double-click the title in the Project Overview window to open it.

b. In the Timeline window, position the cursor where you want the button to begin playback and click the **Set In Point** button ( ).

c. Position the cursor where you want the button to stop playback and click the **Set Out Point** button ( ).

7. Repeat step 6 for each button.

Creating a scene selection only disc

This procedure assumes your title includes scene/chapter markers. You can add scene/chapter markers in the Timeline window.

1. From the **File** menu, choose **New**.
2. Select the **Single Movie** icon , and then click **OK**. The Open Media dialog is displayed.
3. Select the video file you want to use, and then click **OK**.
4. In the Project Overview window, right-click the video and choose **Insert Scene Selection Menu** from the shortcut menu. The Insert Scene Selection Menu dialog is displayed.
5. In the **Page title** box, type the title you'd like to be displayed on the new menu.
6. In the **Links per page** box, specify the number of links you'd like to have displayed on each page. For example, if your video includes fifteen scene/chapter markers, typing **5** in this box will create a scene-selection menu with three pages.
7. Click the **OK** button to create the menu and pages. You can then edit the menu as necessary.
8. In the Project Overview window, select the menu page (that is, Scene Selection (Page 1)) and click the **Set Disc Start** button ( ).

Inserting a setup menu

You can use button actions to create a setup menu that allows the user to choose which audio and subtitle tracks will be used when your project is played. *For more information, see Button Properties on page 115.*

Note: *If a button action or end action changes the audio or subtitle track after it is selected on your setup menu, the new track will be used by default when you navigate between titles unless another button action, end action, or user action (via the DVD or Blu-ray Disc remote control) changes the track.*

1. Add a menu to your project.
2. Add a button for each audio track in your project:
   a. From the **Insert** menu, choose **Empty Button**.
   b. Press F2 and edit the button's text to describe the audio track it will select.
   c. In the Button Properties pane, click the **Action** button and use the **Destination chapter** drop-down list to determine what happens when the button is clicked:

If	Then
You want the button to select an audio track without navigating away from the setup menu	Choose your setup menu from the **Destination** drop-down list.
You want to navigate away from the setup menu after choosing an audio track	Choose a media file or menu from the **Destination chapter** drop-down list.

   For example, choosing a media file would allow you to automatically start playback of a title using the selected audio. Choosing a menu could navigate to a scene selection menu or a separate setup menu for choosing the subtitle track.

   d. In the Button Properties controls, choose a track from the **Set audio track** drop-down list to determine which audio track will be played in a destination title.

Note: *If you use the* **Set audio track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.*

   e. Repeat steps a through d for each audio track in your project.
3. Add a button for each subtitle track in your project:

a. From the **Insert** menu, choose **Empty Button**.

b. Press F2 and edit the button's text to describe the subtitle track it will select.

c. In the Button Properties controls, use the **Destination chapter** drop-down list to determine what happens when the button is clicked:

If	Then
You want the button to select a subtitle track without navigating away from the setup menu	Choose your setup menu from the **Destination chapter** drop-down list.
You want to navigate away from the setup menu after choosing a subtitle track	Choose a media file or menu from the **Destination chapter** drop-down list.

For example, choosing a media file would allow you to automatically start playback of a title using the selected subtitles. Choosing a menu could navigate to a scene selection menu or a separate setup menu for choosing the audio track.

d. In the Button Properties controls, choose a track from the **Set subtitle track** drop-down list to determine which subtitle track will be played in a destination title.

Note: *If you use the* **Set subtitle track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.*

e. Repeat steps a through d for each subtitle track in your project.

4. If you want the current tracks to be used throughout the disc, change the button properties for all links to your media so **No change** is selected for the **Set audio track** and **Set subtitle track** controls.

Adding navigation buttons

Navigation buttons help users move through your menus and pages. As you create menus and pages, navigation buttons are automatically created for you. For example, if the main menu is selected when you add a submenu, a button link to the new menu is added to the main menu, and a button link to the main menu is added to the new menu.

If you delete the default navigation buttons, you can create new buttons by choosing a command from the **Insert** menu:

Command	Description
Back Button	Allows navigation to the main menu.
Next Button	Allows navigation to the next page.
Previous Button	Allows navigation to the previous page.
Empty Button	Allows you to add an empty button as a placeholder. You can edit the button's properties later.

Note: *The* **Back Button**, **Next Button**, *and* **Previous Button** *commands are available only if the target menu or page exists.*

You can use the Button Properties controls in the Properties window to edit the button image used and its link properties. *For more information, see* *Button Properties on page 115*.

Creating menu transitions

You can combine button actions and media end actions to play a media file as a transition between menus and between menus or titles.

1. Drag the transition media file from the Explorer (or Microsoft® Windows® Explorer) to the root folder in the Project Overview window. Dragging a file to the root folder adds the media to your project without creating a button on a menu.
2. Set the transition media's end action to link to the menu or title that you want to display after the transition.
3. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
4. Select a button.
5. Set the button action to play the transition media.

   When a user activates the button, the button plays the transition media, and the transition media's end action displays the

target menu or title.

6. Repeat steps 1 through 5 for each button on the menu.

   You can create multiple copies of your transition media at the root of the Project Overview window and specify a different menu as an end action for each instance. The transition media will only be saved to the disc once.

Note: *Multiple titles or media files that use the same video, audio, and subtitle streams will only be saved once on the disc. For more information, see* *Optimizing your project on page 29*.

Creating custom menus

For the ultimate control over the appearance of your menus, you can create custom menus using your favorite graphics application. *For more information, see* *Creating custom menus and buttons using layered graphics on page 102*.

Using color sets

Each menu page or title in your project can have up to four color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color. By choosing different color sets, you can display button highlighting using one color set to indicate that the button is selected and a different color set to indicate that it has been activated, or you can assign distinct colors to subtitle events.

If the window isn't already visible, choose **Properties** from the **View** menu and click the expand button (⊞) next to the **Color Sets** heading to expand the controls.

Editing a color set

1. On the Graphics Properties, Menu Page Properties, Button Properties, Subtitle Properties, Media and Event Properties, Music Compilation Properties, Picture Compilation Properties, or Playlist Properties pane, click the **Color Sets** button.
2. Click the expand button (⊞) next to the color set you want to edit.
3. Choose a setting from the **Color Set X** drop-down list to indicate whether you want the color set to be available to your entire project (**Project wide**) or only the currently selected menu or title (**Custom**).
4. Select the **Mode** box, click the down arrow button (▾), and choose a setting from the drop-down list to specify the colors in your color set:

Item	Description
Blend colors	You only need to choose the color set's fill color; the other colors will be determined automatically by the software.
Specify colors	You need to choose the fill color, anti-alias color, outline/background color, and transparent color.

5. Select the color you want to edit:

Item	Description
Fill color	Use to display subtitle text and highlighting on menu buttons.
Anti-alias color	Used to smooth the edges of menu button highlighting and subtitle text. The color should be a blend of the fill color and the outline/background color.
Outline/Background color	Used to display the outline or background color for menu buttons or subtitle text.
Transparency color	Used to determine the transparent portions of subtitle text and menu button highlighting.

6. Click the drop-down arrow next to the selected color swatch to display a color picker, where you can edit the selected color. Click the **Change Color Space** button (▦) to switch between RGB and HSL color modes.

Note: *If you choose an out-of-gamut color while using the color picker, then a warning (⚠) is displayed. Click the color swatch below the warning to correct the color.*

Applying color sets

You can apply color sets to buttons using the **Selected button colors**, **Active button colors,** and **Inactive button colors** drop-down lists in the Menu Page Properties pane. *For more information, see Color Sets on page 125*.

To apply color sets to subtitles, select the events you want to change, click the **Subtitle Event** button in the Media and Subtitle pane and choose a color set from the **Colors** drop-down list.

Changing an object's size

Resizing an object

1. Select a button, graphic, or text box with the Sizing tool ( ).
2. Click the **Transformations** button on the Properties window, and drag the object's handles or type values in the **X size** and **Y size** boxes to achieve the desired size.
3. If you do not want an image to be stretched when you change the height or width, select the **Maintain aspect ratio** box, click the down arrow button ( ), and choose **Yes**.

Tip: *If you are resizing a text box and you want the text to automatically adjust to fit the box, choose* **Auto** *from the* **Font Size** *drop-down list.*

Making all selected objects the same height or width

1. Select the objects you want to adjust. Hold Ctrl or Shift to select multiple objects.
2. While holding the Ctrl or Shift key, select the object whose size you want to copy.
3. Click the **Make Same Width** ( ) or **Make Same Height** ( ) button. All selected objects are adjusted so they match the object that has focus (the last object you selected).

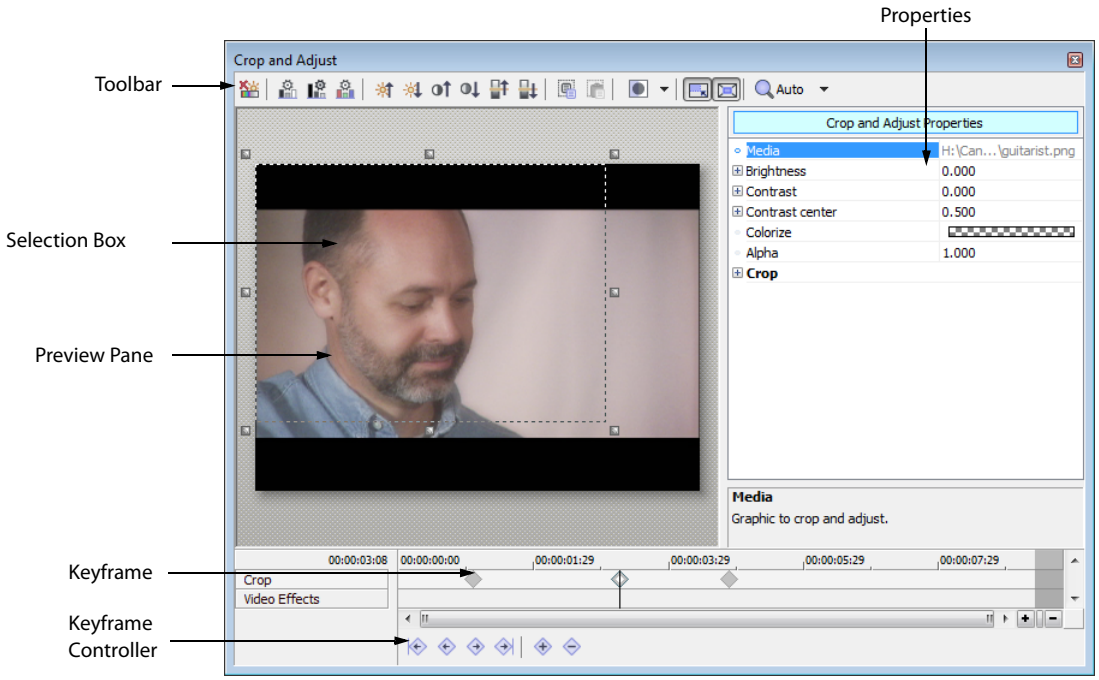
Note: *If you resize an object in one direction only, the object will not resize if* **Maintain aspect ratio** *is set to* **Yes** *on the Transformations page of the Properties window because the image cannot be resized in one direction and still maintain its aspect ratio. You can turn off the* **Maintain aspect ratio** *setting or resize the object in both directions.*

Cropping and adjusting video and graphics

Use the Crop and Adjust window to crop a video or graphic or adjust its appearance. You can set these changes to occur over time through the use of keyframes. The window includes a preview pane so that you can monitor your progress and compare the processed and unprocessed image.

Displaying the Crop and Adjust window

From the View menu, choose **Crop and Adjust** to display or hide the Crop and Adjust window. You can also right-click a graphic in the workspace and choose **Crop and Adjust** from the shortcut menu (or select the **Video** box in the Properties window, click the down arrow button ( ), and then choose **Crop and Adjust** from the menu).



Using the toolbar

Use the toolbar to make quick adjustments to a video or image. You can use the display in the Crop and Adjust window to preview your adjustments.

Note: *Expand the* **Brightness**, **Contrast**, *and* **Contrast center** *controls on the right side of the dialog to see the results of your adjustments.*

	Reset Effect Properties Removes all effects from the media
	Auto Levels Automatically adjusts the brightness and contrast based on the contents of the selection box. The most abundant colors (either light or dark) are enhanced).
	Auto Levels (Dark) Automatically adjusts the brightness and contrast based on the contents of the selection box. The least abundant colors (either light or dark) are enhanced.
	Auto Level Channels Automatically adjusts brightness and contrast per channel based on the contents of the selection box. Adjustment is performed independently on each color channel.
	Increase Brightness Increases the brightness of the image.
	Decrease Brightness Decreases the brightness of the image.

	Increase Contrast Center Adjusts the anchor point around which green contrast is adjusted.
	Decrease Contrast Center Adjusts the anchor point around which green contrast is adjusted.
	Copy Crop Rectangle to Clipboard Copies the current selection to the clipboard.
	Paste Crop Rectangle from Clipboard Pastes the current selection from the clipboard.
	Bypass Effects on Regions Creates a split-screen preview that bypasses all video effects without removing them from your media. By clicking the drop-down arrow to the right of the button, you can choose which portion of the preview will display bypassed effects.
	Lock Aspect Ratio Click if you want the selection box to retain its aspect ratio during resizing. When this button is not selected, the height and width can be resized independently. Press Alt at any time to override these settings.

	Increase Contrast Increases the contrast of the image.
	Decrease Contrast Decreases the contrast of the image.
	Size About Center Click if you want the selection box to retain its center point when you resize the box by dragging its edges. When this button is not selected, the opposite side of the selection box will remain anchored when you drag the edges to resize it. Press Alt at any time to override these settings.
Auto	**Zoom Settings** Allows you to choose the magnification of the image. When **Auto** is selected, the image will zoom to fit the current window size.

Crop and adjust properties

Use the Crop and Adjust Properties controls to specify the settings for adjusting an image's appearance or cropping. Select the specific control and click the down arrow button () to display the individual controls.

Item	Description
Media	Displays the location and file name of the currently selected media file.
Brightness	Use the **Brightness** controls to adjust the brightness of the image. • Select the **Brightness** box, click the down arrow button (), and drag the slider (or type a value in the box) to adjust the overall brightness of the image. —or— • Click the expand button () next to the **Brightness** box to display individual controls for the red, green, and blue channels in the image. Select the **Red**, **Green**, or **Blue** box, click the down arrow button (), and drag the slider (or type a value in the box) to adjust the brightness of an individual color channel.
Contrast	Use the **Contrast** controls to adjust the contrast of the image: • Select the **Contrast** box, click the down arrow button (), and drag the slider (or type a value in the box) to adjust the overall contrast of the image. —or— • Click the expand button () next to the **Contrast** box to display individual controls for the color channels in the image. Select the **Red**, **Green**, or **Blue** box, click the down arrow button (), and drag the slider (or type a value in the box) to adjust the contrast of an individual color channel.
Contrast center	Use the **Contrast** center controls to set the anchor point around which contrast is adjusted: • Select the **Contrast** center box, click the down arrow button (), and drag the slider (or type a value in the box) to adjust the overall contrast of the image. —or— • Click the expand button () next to the Contrast center box to display individual controls for the color channels in the image. Select the **Red**, **Green**, or **Blue** box, click the down arrow button (), and drag the slider (or type a value in the box) to adjust the contrast center of an individual color channel.

Colorize	Use the **Colorize** controls to add a color tint to the image:
	1. Select the **Colorize** box and click the down arrow button () to display a color picker.
	2. Edit the selected color by performing any of the following actions:
	  • Drag the **R**, **G**, and **B** sliders to choose a color, and drag the vertical alpha slider to set transparency.
	  • Type values in the **R**, **G**, **B**, and **A** boxes.
	  • Select the eyedropper tool to sample a color from your screen.
	  • Click the **Change Color Space** button () to switch between RGB and HSL color modes.
	When you're using the color picker, a warning () is displayed when you choose an out-of-gamut color. Click the color swatch below the warning to correct the color.

Alpha	Click the down arrow button () and drag the slider (or type a value in the box) to adjust the transparency of the image: drag left to increase transparency, or drag right to make the image more opaque.

Item	Description
Crop	Use the **Crop** controls to add a crop to the edges of the graphic to frame the image: • Select the **Left** box, click the down arrow button (), and drag the slider (or type a value in the box) to trim the left edge of the image. • Drag the **Top** slider (or type a value in the box) to trim the top edge of the image. • Drag the **Right** slider (or type a value in the box) to trim the right edge of the image. • Drag the **Bottom** slider (or type a value in the box) to trim the bottom edge of the image.

Cropping graphics

Perform either of the following procedures to crop a video or image:

Drag the handles on the selection box to adjust its size, or drag from the center of the box to change its position. The selection box represents the portion of the image that will be visible.

Notes:

- *Click the* **Lock Aspect Ratio** *button ( ) if you want the selection box to retain its aspect ratio during resizing.*
- *Right-click the selection box and choose* **Match Output Aspect** *to force the height:width ratio of the selection box to match the* **Video format** *setting in your Project Properties.*

—or—

1. Click the expand button () next to the **Crop** box to expand the controls.
2. Use the **Crop** controls to add a crop to the edges of the graphic to frame the image:
   a. Select the **Left** box, click the down arrow button (), and drag the slider (or type a value in the box) to trim the left edge of the image.
   b. Drag the **Top** slider (or type a value in the box) to trim the top edge of the image.
   c. Drag the **Right** slider (or type a value in the box) to trim the right edge of the image.
   d. Drag the **Bottom** slider (or type a value in the box) to trim the bottom edge of the image.

Crop and video effects keyframes

Keyframes can be used in DVD Architect Pro to animate objects by cropping them or changing their size or position over time. Your keyframes define an object's settings at a given point in time. The Keyframe Controller, displayed at the bottom of the Crop and Adjust window, allows you to add and remove keyframes and control the parameters for individual keyframes. *For more information, see* *Crop and adjust properties on page 47*.

Each keyframe contains a set of parameters for a specified point on the timeline. The settings for intermediate frames are interpolated. Additional keyframes can be added to create more complex effects.

Crop and video effects keyframes are created using the Crop and Adjust window, while transformation (size and position) keyframes are created using the Timeline window. *For more information, see* *Transformation keyframes on page 52*.

Note: *Animated button highlights are not supported. If a button has keyframe animation applied, button highlighting is not animated or may not be visible when you burn your project. You will see the button highlighting when you preview your DVD Architect Pro project but not after it is burned.*

Adding keyframes

1. In the Keyframe Controller, click to position the cursor where you want to add a keyframe.
2. Click the **Insert Keyframe** button ( ). A keyframe is added to the Keyframe Controller timeline.

   The new keyframe's attributes are copied from the previous keyframe.

Tip: *To quickly add a keyframe, double-click on the Keyframe Controller timeline, or position the cursor on the Keyframe Controller timeline and modify your cropping properties.*

Deleting keyframes

1. Select a keyframe by clicking it.
2. Click the **Delete Keyframe** button ( ).

Navigating between keyframes

To jump to the next or previous keyframe, click the **Previous Keyframe** ( ) and **Next Keyframe** ( ) buttons (or press Ctrl+Left Arrow or Ctrl+Right Arrow).

To jump to the first or last keyframe, click the **First Keyframe** ( ) or **Last Keyframe** ( ) button.

Changing interpolation curves between keyframes

The interpolation curve determines the rate of animation between two keyframe settings. To change the interpolation curve, right-click a selected keyframe and choose a command from the shortcut menu. The curve type is updated for all selected keyframes.

Command	Description	Looks like
Linear ( )	Keyframe parameters are interpolated in a linear path.	
Fast ( )	Keyframe parameters are interpolated in a fast logarithmic path.	
Slow ( )	Keyframe parameters are interpolated in a slow logarithmic path.	
Smooth ( )	Keyframe parameters are interpolated along a smooth, natural curve.	
Sharp ( )	Keyframe parameters are interpolated along a sharp curve.	
Hold ( )	No animation will take place. The keyframe's settings will be maintained until the next keyframe.	

Moving keyframes

After you've set your keyframes, you may need to adjust their positions along the Keyframe Controller timeline. Drag a keyframe to a new position in the timeline to change its position.

Hold Ctrl or Shift while clicking to select multiple keyframes. A selected keyframe is displayed as , and an unselected keyframe is displayed as a .

Editing crop settings

After you've inserted your keyframes, you can use the **Crop** controls in the Crop and Adjust window's Properties pane to specify your cropping settings for individual keyframes.

1. In the Keyframe Controller, select the keyframe you want to edit.

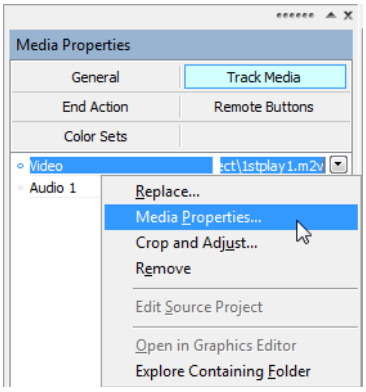
2. In the Properties pane, click the button next to the **Crop** box to display the controls.
3. Edit the crop settings. *For more information, see Cropping graphics on page 48.*

Viewing and editing media properties

The Media Properties window allows you to display information about the selected media file. The application will try to detect the properties of your media files automatically. In most cases, you will not need to edit file properties.

Note: *Editing media properties will affect all instances of the media throughout your project.*

1. Double-click a media file in the Project Overview window or the workspace area.
2. On the Media Properties pane, click **Track Media**.
3. Select the path to the file in the **Audio** or **Video** box.
4. Click the down arrow button ( ) and choose **Media Properties** from the menu.



The Media Properties window is displayed. The following sections describe the controls under each heading in the Media Properties window.

General

The **File name** displays the name of the selected media file.

Video Stream

Item	Description
Media attributes	Displays the size, resolution, and length of the selected media file.
Media format	Displays the format of the selected media file.
Frame rate	Displays the frame rate of the selected media file.
Field order	Allows you to choose the field order of the selected media file. It is recommended to review the documentation for your capture/video output card to ensure proper field order. • **None (progressive scan)** - Use for viewing on a computer; interlacing is ignored. • **Upper field first** - Use for video that will be viewed on a television. • **Lower field first** - Use if the **Upper field first** displays shaky output or if your hardware manual specifies lower field first.
Pixel aspect ratio	Allows you to choose the pixel aspect ratio of the selected media file. It is recommended to review the documentation for your capture/video output card to ensure proper settings.
Alpha channel	Allows you to choose how the alpha channel will be handled for the selected media file. • **Undefined:** Video provides no alpha channel information and ignores any alpha channel information and in the file. • **None:** Video has no alpha channel or there is an alpha channel but it's completely opaque (solid). • **Straight (unmatted):** Transparency information is maintained in only the alpha channel. Alpha information must be applied to the RGB channels before compositing. • **Premultiplied:** The standard method of handling alpha information. Transparency information is maintained in the alpha and RGB channels, and the image is ready for compositing. No RGB component exceeds the alpha value. • **Premultiplied (dirty):** Similar to **Premultiplied**, but RGB components may exceed the alpha. This setting is used mainly for images created by 3D applications involving compositing of 3D images over a non-solid color image background.
Background color	If you selected **Premultiplied** or **Premultiplied (dirty)** from the **Alpha channel** drop-down, then this allows you to choose the background color of the selected media file.

Audio Stream

Item	Description
Media attributes	Displays the size, resolution, and length of the selected media file.
Media format	Displays the format of the selected media file.

Opening in graphics editor

If you need to edit a graphics file from your project, right-click a graphic in the workspace and choose **Open in Graphics Editor** from the shortcut menu (or select the **Video** box in the Properties window, click the down arrow button (▼), and then choose **Open in Graphics Editor** from the menu) to start your graphic-editing application and modify the selected image.

After you have edited and saved the file, DVD Architect Pro software automatically detects the updated file and updates it in the project.

You can specify the location of your preferred graphics editor on the Video tab in the Preferences dialog. *For more information, see Video tab on page 183*.

Moving and arranging objects

You have many options for moving, arranging, and aligning objects on your menus manually or automatically. Snapping features give you more precise control over the movement and alignment of your objects.

Changing the position of an object

1. Select a button, graphic, or text box with the Selection tool ( ).
2. On the Menu Page Properties pane of the Properties window, click **General**.
3. Drag an object in the workspace or type values in the **X position** and **Y position** boxes to set the object's center point.

   The X and Y coordinates are based on the frame size of your project. For example, if you're creating an NTSC project with a frame size of 720x480, (0,0) is the top-left corner of the frame, and (720,480) is the lower-right corner.

Tips: *Hold Shift while dragging to defeat horizontal snapping. Hold Ctrl while dragging to defeat vertical snapping. Hold Alt while dragging to constrain to horizontal or vertical motion.*

Transformation keyframes

Transformation keyframes allow you to change the size and position of a graphic over time, creating an animated effect. For example, you could use this feature to make a menu's button appear to move or to fly in from offscreen, or you could hide a menu's button until playback reaches the loop point.

Transformation keyframes are inserted and displayed in the timeline below your video track, and the keyframe size and position changes can be edited in the Properties window and in the workspace. You can use this feature for menus, picture compilations, and music/video compilations.

Using the timeline, you can drag keyframes to adjust their position, add and delete keyframes, and change the interpolation curve between keyframes.

Notes:

- *Crop and video effect keyframes are set in the Crop and Adjust window and are not visible in the timeline. For more information, see* *Crop and video effects keyframes on page 48*.
- *To insert transformation keyframes for a button,* **Show before loop point** *must be set to* **Yes** *for the object in the Transformations page in the item's Properties window, and the loop point must be set to a point later than 00:00:00.000 on the timeline. For more information, see* *Animating buttons with keyframes on page 81*.
- *Transformation keyframes are not available for buttons on video or for graphics inserted on video titles. For more information, see* *Adding buttons to videos on page 79*.

Adding transformation keyframes

1. In the workspace, select the item to which you want to add a keyframe.
2. In the Timeline window, right-click in the Transformations keyframe bar below your video track and choose **Insert** from the shortcut menu. A keyframe is added to the Transformation keyframe bar.
3. Subsequent keyframe's attributes are copied from the previous keyframe.

Tips: *To quickly add a keyframe, perform any of the following steps:*

- *Double-click on the Transformation keyframe bar.*
- *Position the cursor on the Transformation keyframe bar and modify your Transformation properties in the Properties window.*
- *Select the keyframe tool in the workspace and drag the object.*

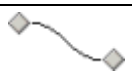
For more information, see *The Keyframe tool on page 53*.

Removing keyframes

Right-click a keyframe and choose **Delete** from the submenu.

Changing the interpolation curve between keyframes

The interpolation curve determines the rate of animation between two keyframe settings. To change the interpolation curve, right-click a selected keyframe and choose a command from the shortcut menu. The curve type is updated for all selected keyframes.

Command	Description	Looks like
Linear ( )	Keyframe parameters are interpolated in a linear path.	
Fast ( )	Keyframe parameters are interpolated in a fast logarithmic path.	
Slow ( )	Keyframe parameters are interpolated in a slow logarithmic path.	
Smooth ( )	Keyframe parameters are interpolated along a smooth, natural curve.	
Sharp ( )	Keyframe parameters are interpolated along a sharp curve.	
Hold ( )	No animation will take place. The keyframe's settings will be maintained until the next keyframe.	

Moving keyframes

After you've set your keyframes, you may need to adjust their positions along the timeline. Drag a keyframe to a new position in the timeline to change its position.

Hold Ctrl or Shift while clicking to select multiple keyframes. A selected keyframe is displayed as , and an unselected keyframe is displayed as a .

Editing size and position settings

After you've inserted a keyframe, you can set the size and/or position settings for the object in the Transformation page of the Properties window.

Note: *You can use the keyframe tool in the workspace for a visual representation of an item's keyframe size and position settings.*

1. In the workspace, select the object to which you have added keyframes.
2. In the Properties window, click the Transformations button.
3. Edit the size and position settings on the Transformations page.

The Keyframe tool

From the **Edit** menu, choose **Editing Tool**, and then choose **Keyframe Tool** ( ) to view and edit information about the size and position changes defined by an object's transformation keyframes. *For more information, see Transformation keyframes on page 52.*

Tip: *If you want to view size and position changes even when the keyframe tool is not selected, choose* **Workspace Overlays** *from the View menu, and then choose* **Show Keyframe Overlay** *from the submenu. Select objects with the keyframe overlay displayed to see a graphical display of size and position changes for the object.*

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Select an object in the workspace with the Keyframe tool ( ). Lines and arrows are displayed to indicate the currently assigned path. Control points mark the location of keyframes along the path.

3. Drag the keyframe control points to edit an object's position or path. Using the control points, you can also create Bézier curves that the object will follow during the animation. If you have multiple keyframes, intermediate control points are inserted as pairs so you can set your tangent. Edit the intermediate control points by right-clicking and choosing an option from the shortcut menu:

Item	Description
Smooth	As you drag a control point, the tangent follows a straight line, and the paired control points remain equidistant from the main path.
Straight	As you drag a control point, the tangent follows a straight line, but the other control point retains its original distance from the main path.
Corner	As you drag a control point, the location of the other control point remains fixed, allowing you to create an angled tangent from the main path.

Tip: *These settings cannot be applied to end control points, which mark the first and last keyframes in a series.*

Note: *You can also use the Transformations page in the Properties window to view and edit object size and position.*

Editing button order for a menu

From the **Edit** menu, choose **Button Order** to display the Button Order dialog, where you can set the order for buttons on the selected menu.

The #1 button is the default selected button when you navigate to a menu unless you've used the **Destination button** control on the Action or End Action page of the Properties window to specify a different destination button.

For information editing buttons on video, see Editing button order for a video on page 79.

1. Choose the menu you want to edit using one of the following methods:
   - Select a menu in the Project Overview window.
   - Click the down arrow in the address bar to select a menu.
   - Click the **Back to Parent** ( ), **Previous Page** ( ), and **Next Page** ( ) buttons in the workspace to navigate your menus.
2. From the **Edit** menu, choose **Button Order**. The Button Order dialog is displayed.

   By default, the button order matches the order in which you added buttons to the menu. If you started with a blank menu and added a picture compilation and then a music/video compilation, the picture compilation would be the default (first) button.
3. Select a button and click the **Move Up** or **Move Down** buttons to change the selected button's order.
4. Repeat step 3 as needed.

   For a menu, the #1 button is the default selected button. The order of subsequent buttons has no effect on your menu.

5. Click **OK** to close the Button Order dialog and save your changes.

Aligning objects in a menu

1. Select the Selection tool ( ) or Sizing tool ( ).
2. Select the objects you want to align. You can select multiple objects at once using the Shift key for consecutive files or the Ctrl key for nonconsecutive files.
3. While holding the Ctrl or Shift key, select the object to which you want to align the selected objects.
4. Click a button on the left edge of the workspace:

Tool	Name	Description
	Align Left	Aligns all selected objects to the left edge of the last-selected object.
	Align Horizontal Center	Aligns all selected objects to the horizontal center of the last-selected object.
	Align Right	Aligns all selected objects to the right edge of the last-selected object.
	Align Top	Aligns all selected objects to the top edge of the last-selected object.
	Align Vertical Center	Aligns all selected objects to the vertical center of the last-selected object.
	Align Bottom	Aligns all selected objects to the bottom edge of the last-selected object.

Automatically aligning objects based on current theme

If you've applied a theme to a menu, menu objects can automatically align when you add media to the menu.

Select the **Double-clicking files in Explorer reapplies theme layout** check box on the **General** tab of the Preferences dialog if you want to automatically realign objects according to the current theme when you double-click media files in the Explorer window. When you double-click a file, the new file is added, and the objects are realigned on the menu.

When the check box is cleared, the media files are added to the menu and existing object positions are preserved.

From the **Edit** menu, choose **Reapply Theme Layout** to realign objects at any time. *For more information on themes, see Working with themes on page 108.*

Note: *If you created menus using layered .psd files, choose* **Reapply Layout from File** *from the* **Edit** *menu to restore the menu to match the appearance of the saved .psd file. For more information, see Reapplying a file's layout to menu objects on page 36.*

Centering objects

1. Select the Selection tool ( ) or Sizing tool ( ).
2. Select the objects you want to align. You can select multiple files at once using the Shift key for consecutive files or the Ctrl key for nonconsecutive files.
3. Click a button on the left edge of the workspace:
   - The **Horizontal Centering** button ( ) moves the selected objects to the horizontal center of the screen.
   - The **Vertical Centering** button ( ) moves the selected objects to the vertical center of the screen.

Adjusting object spacing

1. Select the Selection tool ( ) or Sizing tool ( ).
2. Select the objects you want to adjust. You can select multiple files at once using the Shift key for consecutive files or the Ctrl key for nonconsecutive files. You must have at least three objects selected to adjust the objects' vertical or horizontal spacing.
3. Click a button on the left edge of the workspace:
   - The **Space Across** button ( ) adjusts the selected items so an equal amount of horizontal space exists between the objects.
   - The **Space Down** button ( ) adjusts the selected items so an equal amount of vertical space exists between the objects.

Deleting objects

1. Select the Selection tool ( ) or Sizing tool ( ).
2. Select the objects you want to delete. You can select multiple files at once using the Shift key for consecutive files or the Ctrl key for nonconsecutive files.
3. From the **Edit** menu, choose **Delete**. The objects are deleted from the menu and from your project.

Enabling snapping

To use snapping, choose **Enable Snapping** from the **Options** menu. Once snapping is enabled, there are several options to which objects can snap:

- The grid in the workspace.
- The borders of other objects.
- Title and action safe areas.

Tip: *To temporarily override horizontal snapping, hold the Shift key. To temporarily override vertical snapping, hold the Ctrl key.*

Snapping to the grid

Once snapping is enabled, choose **Snap to Grid** from the **Options** menu to allow objects to snap to the workspace's grid. To show or hide the grid, choose **Workspace Overlays** from the **View** menu, and then choose **Show Grid** from the submenu.

Note: *To change the color or spacing of the grid, choose* **Grid Settings** *from the* **Options** *menu.*

Snapping to other objects

Once snapping is enabled, choose **Snap to Objects** from the **Options** menu to allow objects to snap to other objects on the menu.

Snapping to safe areas

Once snapping is enabled, choose **Snap to Safe Areas** from the **Options** menu to allow objects to snap to the title safe or action safe areas.

The title safe area indicates the region within which titles will always be visible on a television monitor. To show or hide this area, choose **Workspace Overlays** from the **View** menu, and then choose **Show Title Safe Area** from the submenu.

The action safe area indicates the region within which motion will always be visible on a television monitor. To show or hide this area, choose **Workspace Overlays** from the **View** menu, and then choose **Show Action Safe Area** from the submenu.

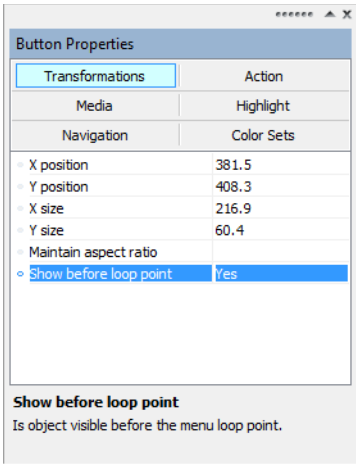
Using automatic button actions

Usually, a user must press the Enter button on the DVD or Blu-ray Disc remote control to perform an action. However, with the automatic button feature, the button's action is performed when the button is selected. *For more information, see Action on page 116.*

Note: *Automatic button actions are useful for navigation buttons, such as previous/next page buttons in multipage menus. This will allow the disc to automatically advance to the next page as soon as the* **Next Page** *button is selected.*

Button properties

The Button Properties pane in the Properties window is available when you have a button selected in the workspace. Use these controls to change the appearance, behavior, and navigation settings for the selected button.



To edit the button's properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Select a button with the Selection tool ( ), Sizing tool ( ), or Navigation tool ( ).
3. Click the property button that you would like to edit.
4. Click the specific property, click the down arrow button ( ), and choose a setting from the drop-down list.

For more information, see Button Properties on page 115.

Copying and pasting attributes

Copying and pasting attributes allows you to quickly apply settings from one item in your project to another. You can paste any one or all of the following attributes:

- Button Frame
- Media Effects
- Text Properties
- Size
- Size and Position

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu that has the object that you want to copy.
2. Select the object or objects with the Selection tool ( ) or Sizing tool ( ).
3. From the **Edit** menu, choose **Copy**.
4. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu that has the object that you would like to edit.
5. Select a button, text box, or graphic with the Selection tool ( ) or Sizing tool ( ).

> **Tip:** *Press Ctrl or Shift while clicking to select multiple items.*

6. From the **Edit** menu, choose **Paste Attributes**, and then choose one of the following items from the submenu:

Item	Description
Button Frame	Replaces the button frame and associated mask of the selected object with the attributes from the button you copied.
Media Effects	Replaces media effects of the selected object with the attributes from the object you copied.
Text Properties	Replaces text properties of the selected object with the attributes from the text you copied. **Note:** *The actual text is not replaced.*

Item	Description
Size	Changes the size of the selected object with the size of the object you copied.
Size and Position	Changes the size and position of the selected object with the size and position of the object you copied.
All	Replaces all attributes of the selected object with the attributes of the copied object.

When you are copying and pasting attributes and have multiple objects selected, the software will assign attributes according to the following rules:

- If you copy a single object and paste size and position (or all attributes) to multiple selected objects, attributes will be pasted to the first object only to avoid creating overlapping objects.
- Properties are pasted from objects of the same type: text attributes are pasted to text objects, graphic properties are pasted to graphic objects, and button properties are pasted to buttons. However, you can paste size, position, and media effects between buttons and graphic objects.
- Button properties are pasted based on the order in the Project Overview window: for example, if you copy buttons 1 through 3 in one menu and then paste attributes to buttons 1 through 3 in another menu, attributes will be pasted from button 1 to button 1, button 2 to button 2, and button 3 to button 3. If you copy buttons 1 through 3 in one menu and then paste attributes to buttons 5 through 7 in another menu, attributes will be pasted from button 1 to button 5, button 2 to button 6, and button 3 to button 7.
- Properties are pasted based on object position: for example, if you copy two text objects in one menu and then paste attributes to two text objects in another menu, the attributes from each text object in the source menu will be pasted to the closest text object in the destination menu.

The Navigation tool

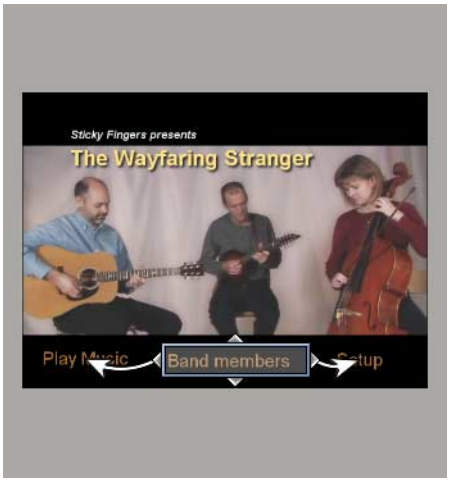
Navigation controls determine which button is selected when you use the Up, Down, Left, and Right buttons on your DVD or Blu-ray Disc remote control.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Edit** menu, choose **Editing Tool**, and then choose **Navigation Tool**.

> **Tip:** *Click the* **Navigation Tool** *button ( ) in the Editing Toolbar area.*

3. Select a button in the workspace. Arrows are displayed to indicate the current navigation.

> **Note:** *White arrows represent autolinked navigation while blue arrows represent links that have been manually set.*



4. Drag the navigation anchors to edit a button's navigation. Refer to the following tips for additional information on button navigation.

If	Then
You want the application to automatically assign navigation based on the button layout	Right-click a navigation anchor and choose **Autolink** from the shortcut menu (or double-click the anchor). **Note:** *This setting only affects the navigation anchor that you click.*
You want to link a button to the current page	Right-click a navigation anchor and choose **Link to Self** from the shortcut menu.

Setting object order

Object order specifies the layering of objects on your menu. Objects with lower numbers are located toward the bottom. The larger the number, the closer the object is to the front.

Viewing object order

To view the numbers assigned to each object in the current menu, choose **Workspace Overlays** from the **View** menu, and then choose **Show Object Order** from the submenu.

Changing object order

1. Click the object you want to move forward or backward in the layer.
2. From the **Edit** menu, choose **Object Order**, and then choose the appropriate layering command from the submenu:
   - **Move to Top** Moves the selected object to the top layer.
   - **Move to Bottom** Moves the selected object to the bottom layer.
   - **Move Forward** Moves the selected object forward one layer.
   - **Move Back** Moves the selected object back one layer.

Chapter 5 Creating a Music/Video Compilation

You can create a DVD Architect™ Pro project that contains a single music or video compilation, or you can add a music/video compilation to an existing menu.

A music/video compilation contains a list of audio or video files. You can display text (such as a song title or caption) while each file plays, and for music/video compilations, you can choose a video or image to display in the background.

In a video compilation, you create a series of videos that play sequentially. This sort of video compilation behaves much like a playlist, but it will be written to disc as a single video title set. If you have a project with many short videos, this loophole in the 99-title-set limitation imposed by the DVD specification can save you from rerendering and combining media. *For more information, see* *Adding a playlist to a menu on page 83*.

Tip: *If the audio in a compilation item is longer than the video, the last frame is frozen until the end of the audio. If the video is interlaced, some DVD players will not display this frame correctly. Recompressing your compilation as progressive-scan video will avoid this problem.*

On the Video tab of the Optimize Disc dialog, click the **Progressive** *box and choose* **Yes** *or* **Auto** *for your music/video compilation. If you choose* **Yes**, *each compilation item is recompressed as a separate progressive-scan title. If you choose* **Auto**, *each compilation item is recompressed as a separate title and will match the format of the source media. If the audio is longer than the video, the compilation item will be recompressed as progressive-scan video to prevent artifacts when the last frame is held. For more information, see* *Optimizing your project on page 29*.

Note: *Each title in a DVD project can have no more than 99 chapter markers. Each title in a Blu-ray Disc project can have no more than 255 chapter markers.*

In a compilation with more songs or videos than chapter markers, you can navigate to the last chapter marker with the Next Chapter button on the remote control, and then use the Fast Forward button to navigate past the last chapter.

For more information about starting projects and locating media, see *Getting Started on page 25*.

Adding a music/video compilation to a menu

If you want to add a music or video compilation to a menu in an existing menu-based project, the process is easy.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu from which you want to link to the music/video compilation.
2. From the **Insert** menu, choose **Music/Video Compilation**. A button is added to the menu as a link to the compilation.

Tip: *Click the* **Insert Object** *button (* *) in the Project Overview window and then choose* **Music/Video Compilation**.

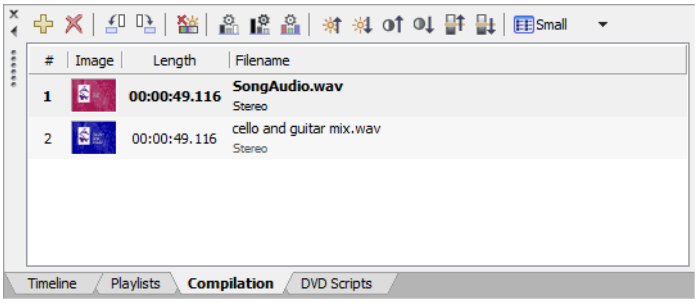
3. Double-click the music/video compilation's button to begin assembling your compilation.

Tip: *Buttons can be added to music or video compilations. For more information, see* *Adding buttons to videos on page 79*.

Adding audio

There are several ways to add audio to your compilation:

- Use the Explorer window to locate and select audio files and drag them to the Compilation window. You can select multiple files at once using the Shift key for consecutive files or the Ctrl key for nonconsecutive files. Files are added to the compilation list wherever you drop them.



- Use the Explorer window to locate audio files. Double-click a file to add it to the bottom of the list in the Compilation window.
- From the **Insert** menu, choose **Slide**. The Insert Slide dialog is displayed. Select a song and click the **Open** button. The song is inserted above the currently selected song in the list.

Note: *If you want the song name automatically inserted on the slide for each song, choose* **Auto-Insert Track Title** *from the* **Options** *menu. Otherwise, you can manually add the text to each slide. For more information, see* *Adding and editing text on page 63*.

Replacing an audio file

There are several ways to replace a song's audio:

- Right-click a song in the Timeline and choose **Set Audio** from the shortcut menu. The Set Audio dialog is displayed. Select a new song and click the **Open** button. The audio is replaced with your new selection.
- Drag an audio file from the Explorer window or Microsoft Windows® Explorer onto an existing song in the Compilation window. The existing song is replaced with the dragged file.
- Drag an audio file from the Explorer window or Microsoft Windows Explorer and drop it on a song in the Timeline window.
- Select a song in the Compilation window. From the **Edit** menu, choose **Slide Audio** and then choose **Set From File**. The Set Audio dialog is displayed. Select a new song and click the **Open** button. The audio is replaced with your new selection.
- On the Music/Video Compilation Properties pane, click the **Slide** button. Click **Audio**, click the down arrow button (), and choose **Replace** from the menu. The Open Media dialog is displayed. Select a new song and click the **Open** button. The audio is replaced with your new selection.

Adding and editing images or videos

Inserting images or videos

You can choose an image or video for each song in your compilation. The image or video will display on screen while the song is playing.

There are several ways to add an image or video to a song:

- Select a song. In the Explorer window, double-click an image. The image is added to the selected song.
- Select a song. From the **Edit** menu, choose **Slide Video/Image**, and then choose **Set** from the submenu. The Set Video/Image dialog is displayed. Select an image and click the **Open** button. The image or video is added to the song.
- Select an image in the Explorer window and drag it to a song.
- Right-click a song and choose **Set Video/Image** from the shortcut menu. The Set Video/Image dialog is displayed. Select an image and click the **Open** button. The image or video is added to the song.

- On the Music/Video Compilation Properties pane, click the **Slide** button. Click **Video**, click the down arrow button (), and choose **Replace** from the menu. The Open Media dialog is displayed. Select a new video or image file and click the **Open** button. The video or image is replaced with your new selection.

Replacing an image or video

1. Right-click the image you want to replace and choose **Set Video/Image** from the shortcut menu. The Set Video/Image dialog is displayed.
2. Select a replacement file and click the **Open** button.

Setting image stretching or scaling

You can use the tools at the top of the Compilation window to rotate a song's image or set the stretch type that will be used to scale the image.

1. Select an item in the Compilation window.
2. On the Music/Video Compilation Properties pane, click the **Slide** button.
3. Click **Stretch type**, click the down arrow button () and choose one of the following stretch types:
   - **Letterbox** The image is displayed without scaling, and black letterboxing bars are added above and below or on the sides as needed.
   - **Zoom to fit** The image is magnified to fill the screen.
   - **Stretch to fit** The image is stretched to fill the screen. This may cause distortion in the image.

Rotating an image

1. Select a song in the Compilation window.
2. Click the **Rotate counterclockwise** () or **Rotate clockwise** () button.

Adjusting brightness and contrast or editing the image

1. Double-click a music/video compilation in the Project Overview window (or navigate in the workspace) to open the music/video compilation that you want to edit.
2. Select an item in the Compilation window.
3. Use the buttons at the top of the Compilation window to adjust the appearance.

   For more information, see Compilation window (Alt+7) on page 19.

   —or—

   On the Music/Video Compilation Properties pane, click the **Slide** button. Select **Video**, click the down arrow button () and choose **Crop and Adjust** (to display the Crop and Adjust dialog) or **Open in Graphics Editor** (to edit the image in an external image editor) from the menu.

   For more information, see Cropping and adjusting video and graphics on page 45.

Adding and editing text

Adding text

You can add text to be displayed while each song is playing.

Note: *If you want the song name automatically inserted for each song, choose* **Auto-Insert Track Title** *from the* **Options** *menu.*

1. Select a song in the Compilation window.
2. From the **Insert** menu, choose **Text**. A text box is added to the workspace.
3. Type your text in the text box.

Formatting text

1. Select a song in the Compilation window.
2. If necessary, click the Selection tool ( ) or Sizing tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, click the text box and use the text bar to edit your text properties:
   - Choose a font from the drop-down list to set the typeface for your text.
   - Choose a font size from the drop-down list. Choose **Auto** to have the text automatically adjust to fit the size of the text box.
   - Click the **Bold** ( ), **Italic** ( ), or **Shadow** ( ) buttons to toggle your font effects as desired.
   - Set your text justification options as desired. *For more information, see Text bar (Alt+2) on page 16.*
   - Click the down arrow next to the color swatch button ( ) to display the color picker, where you can set the red, green, blue, and alpha channels for your text.

Editing text

1. Select a song in the Compilation window.
2. If necessary, click the Selection tool ( ) or Sizing tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, click the text box and choose **Edit Text** from the **Edit** menu (or press F2). The text becomes editable.
4. Edit the text as necessary.
5. Press one of the following keys to commit your text changes:
   - F2
   - Ctrl+Enter
   - Tab

Moving text

1. Select a song in the Compilation window.
2. If necessary, click the Selection tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, drag the text box to the desired location, or click **Transformations** in the Properties window to type a new location for the text box in the **X position** and **Y position** boxes.

Tip: *You can also use transformation keyframes to animate text in your project. For more information, see Transformation keyframes on page 52.*

Deleting text

1. Select a song in the Compilation window.
2. If necessary, click the Selection tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, select the text box you want to delete.
4. From the **Edit** menu, choose **Delete**.

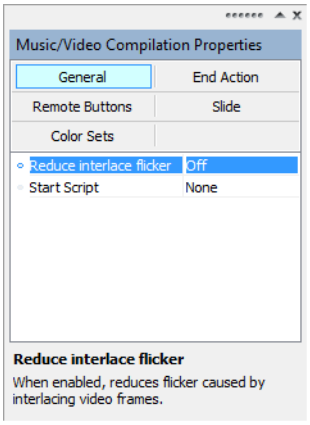
Tip: *You can add graphics to text and use keyframes to animate them. For information about adding graphics and using keyframes, see Adding graphics on page 38 and Transformation keyframes on page 52.*

Setting thumbnail display

You can set the size of the thumbnail displayed for the song images in the Compilation window. Click the down arrow button ( ) to the right of the **Thumbnail Size** button (Small) and choose **Small**, **Medium,** or **Large** to select the desired size.

Music/video compilation properties

The Music/Video Compilation Properties pane in the Properties window allows you to adjust the end actions and remote control button behavior for the selected music or video compilation.



To edit the music or video compilation's properties, perform the following steps:

1. If the window isn't already visible, choose **Properties** from the **View** menu.
2. Double-click a music or video compilation in the Project Overview window (or navigate in the workspace) to open the compilation you want to edit.
3. Click a button at the top of the Properties window.

For more information, see Music/Video Compilation Properties on page 135.

Chapter 6 Creating a Picture Compilation

You can use DVD Architect™ Pro software to create a picture compilation disc or add a picture compilation to a menu in a menu-based project.

Note: *Each title in a DVD project can have no more than 99 chapter markers. Each title in a Blu-ray Disc project can have no more than 255 chapter markers.*

In a compilation with more pictures than chapter markers, you can navigate to the last chapter marker with the Next Chapter button on the remote control, and then use the Fast Forward button to navigate past the last chapter.

For more information about starting projects and locating media, see Getting Started on page 25.

Tip: *If you want the file name of your images to be automatically inserted on a slide, make sure the* **Auto-Insert Slide Text** *option is enabled on the* **Options** *menu before you add pictures to your compilation. If you do not want any text to appear on your slides, make sure this option is disabled before you add pictures to your compilation. If this option is enabled or disabled after you have started adding pictures, it only applies to the pictures added from that point.*

Adding a picture compilation to a menu

If you want to add a picture compilation to a menu in an existing menu-based project, the process is easy.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu from which you want to link to the picture compilation.
2. From the **Insert** menu, choose **Picture Compilation**. A button is added to the menu as a link to the compilation.

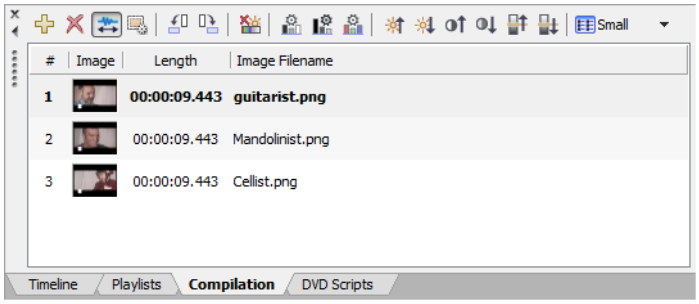
Tip: *Click the* **Insert Object** *button (*) *in the Project Overview window and then choose* **Picture Compilation**.

3. Double-click the compilation's button to begin assembling your compilation.

Adding and editing images

Inserting images

There are several ways to add images to your compilation:



- Use the Explorer window to locate and select image files and drag them to the Compilation window. You can select multiple files at once using the Shift key for consecutive files or the Ctrl key for nonconsecutive files. Files are added to the compilation list wherever you drag them.
- Use the Explorer window to locate image files. Double-click on a file to add it to the bottom of the list in the Compilation window.

- From the **Insert** menu, choose **Slide**. The Insert Slide dialog is displayed. Select a file and click the **Open** button. The image is inserted above the currently selected slide in the list.
- From the **Insert** menu, choose **Empty Slide**. An empty slide is inserted above the currently selected slide in the list.

Note: *If you want the image file name automatically inserted on each slide, choose* **Auto-Insert Slide Text** *from the* **Options** *menu. Otherwise, you can manually add the text to each slide. For more information, see* *Adding and editing text on page 71*.

Replacing an image

There are several ways to replace a slide image:

- Select a slide in the Compilation window. From the **Edit** menu, choose **Slide Image** and then choose **Set**. The Set Image dialog is displayed. Select a new image and click the **Open** button. The image is replaced with your new selection.
- Right-click a slide in the list and choose **Set Image** from the shortcut menu. The Set Image dialog is displayed. Select a new image and click the **Open** button. The image is replaced with your new selection.
- Drag a file from the Explorer window onto an existing slide in the compilation. The image is replaced with the dragged file.
- On the Picture Compilation Properties pane, click the **Slide** button. Click **Image**, click the down arrow button (), and choose **Replace** from the menu. The Open Media dialog is displayed. Select a new image and click the **Open** button. The image is replaced with your new selection.

Generating slideshow animation

If you want to spice up a picture compilation, you can add animation to your static images. For example, you could pan across an image or zoom in to simulate camera motion.

Important: *Generated animation is created by creating a crop keyframe at the beginning and end of each picture. Any cropping applied via the Crop and Adjust dialog will be overwritten when you generate slideshow animation. For more information, see* *Crop and video effects keyframes on page 48*.

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the picture compilation you want to edit. *For more information, see* *Project Overview window (Ctrl+Alt+1) on page 14*.
2. In the Compilation window, select the pictures you want to animate, or press Ctrl+A to generate animation for all pictures. *For more information, see* *Compilation window (Alt+7) on page 19*.

Tip: *Select a single image when you want to be able to control the specific type of animation that is used for that image. For example, what if you wanted to use pan or zoom animation throughout a picture compilation but wanted to be sure to use panning on a wide landscape image?*

Press Ctrl+A to select all images in the compilation. You can then use the Generate Slideshow Animation dialog to set up pan or zoom animation throughout the compilation.

Next, click the landscape image to select it (and remove the other images from the selection). You can now use the Generate Slideshow Animation dialog to set up panning animation for that image.

3. Click the **Generate Slideshow Animation** button () in the Compilation window. The Generate Slideshow Animation dialog is displayed.
4. Select the **Animation** box, click the down arrow button (), and choose the type of animation you want to create:

Setting	Description
Pan only	Crops the image and moves the crop rectangle across the picture to create the appearance of your still images moving across the screen. You can choose the direction and speed of the motion.
Zoom only	Crops the image and changes the size of the crop rectangle over time to zoom in or out. You can choose whether you want to zoom in, out, or both, and set the maximum zoom level.

Setting	Description
Pan or zoom	Panning or zooming is applied to each picture.
Pan and zoom	Panning and zooming are applied to each picture.

5. If you want to crop the image before applying animation, select the **Edge crop** box, click the down arrow button (), and drag the slider to set the percentage you want to offset the crop rectangle from the original image size.
6. If you selected **Pan only**, **Pan or zoom**, or **Pan and zoom** in step 4, use the Panning controls to fine-tune the pan animation that will be applied to your images.

Control	Description
Direction	Select the box, click the down arrow button (), and choose a setting from the menu to set the direction for panning.
Speed	Select the box, click the down arrow button (), and drag the slider to set the panning speed.

7. If you selected **Zoom only**, **Pan or zoom**, or **Pan and zoom** in step 4, use the Zooming controls to fine-tune the zoom animation that will be applied to your images.

Control	Description
Direction	Select the box, click the down arrow button (), and choose a setting from the menu to choose whether you want to zoom in, out, or alternate between images.
Maximum zoom	Select the box, click the down arrow button (), and drag the slider to set the maximum zoom level. If you use the **Edge crop** control to crop the image, the maximum zoom is based on the edge-cropped image.

8. If you want the cropped images to match the aspect ratio of your DVD Architect Pro project, select the **Match output aspect** box, click the down arrow button (), and choose **Yes** from the menu. Forcing the crop rectangle to match the project aspect ratio prevents the likelihood of seeing black borders around your pictures.
9. Click **OK** to close the dialog and generate the animation. A Crop and Adjust keyframe is created at the beginning and end of each slide to create animation.
10. Click the **Preview** button (Preview) to preview your settings.
11. If you need to change your settings, you can use either of the following procedures:
    - Click the **Generate Slideshow Animation** button () in the Compilation window and use the Generate Slideshow Animation dialog.
    - For even more control, use the keyframe controller in the Crop and Adjust dialog to adjust individual keyframes for each picture. With this method, you can control the exact position of the crop rectangle for precise control over the pan or zoom animation. *For more information, see* *Crop and video effects keyframes on page 48*.

Setting image stretching or scaling

You can use the tools at the top of the Compilation window to rotate an image or set the stretch type that will be used to scale the image.

1. Select an image in the Compilation window.
2. On the Picture Compilation Properties pane, click the **Slide** button.
3. Click **Stretch type**, click the down arrow button () and choose one of the following stretch types:
    - **Letterbox** The image is displayed without scaling, and black letterboxing bars are added above and below or on the sides as needed.
    - **Zoom to fit** The image is magnified to fill the screen.
    - **Stretch to fit** The image is stretched to fill the screen. This may cause distortion in the image.

Rotating an image

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the picture compilation that you want to edit.
2. Select an image in the Compilation window.

3. Click the **Rotate counterclockwise** ( ) or **Rotate clockwise** ( ) button.

Adjusting brightness and contrast or editing the image

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the picture compilation that you want to edit.
2. Select an image in the Compilation window.
3. Use the buttons at the top of the Compilation window to adjust the appearance.

   For more information, see Compilation window (Alt+7) on page 19.

   —or—

   On the Picture Compilation Properties pane, click the **Slide** button. Select **Video**, click the down arrow button ( ) and choose **Crop and Adjust** (to display the Crop and Adjust dialog) or **Open in Graphics Editor** (to edit the image in an external image editor).

   For more information, see Cropping and adjusting video and graphics on page 45.

Setting display duration from the Picture Compilation Properties window

You can adjust the duration of a slide from the Picture Compilation Properties window.

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the picture compilation that you want to edit.
2. Select an image (or multiple images) in the Compilation window.
3. On the Picture Compilation Properties pane, click the **Slide** button.
4. Click **Length** and type the length of time you want each slide to display or click the down arrow button ( ) and drag the slider.

Note: *If you've added background audio and you want the length of your slideshow to match the length of your background audio, click the* **Fit compilation to audio** *button ( ). Based on the length of your audio, the length of time each slide is displayed is automatically adjusted.*

Setting display duration from the timeline

Another way to set the duration of slides is through the adjustment of markers on the timeline. This is especially helpful if you want to precisely match your pictures to audio.

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the picture compilation you want to edit.
2. In the Timeline window, drag the marker tab ( ) to a new position.

Note: *A marker is automatically inserted at the beginning of each slide.*

Inserting an empty slide

You can insert an empty slide anywhere in your project by choosing the **Empty Slide** option from the **Insert** menu. The empty slide is inserted above the currently selected slide in the Compilation window. Once you have inserted an empty slide, you can add text and/or graphics to it.

Adding and editing text

Adding text

You can add text to each slide of your compilation.

> **Note:** *If you want the image file name automatically inserted on each slide, choose* **Auto-Insert Slide Text** *from the* **Options** *menu.*

1. In the Compilation window, select the slide to which you want to add text.
2. From the **Insert** menu, choose **Text**. A text box is added in the workspace.
3. Type your text in the text box.

Formatting text

1. Select the image containing the text you want to format.
2. If necessary, click the Selection tool ( ) or Sizing tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, click the text box and use the text bar to edit your text properties:
   - Choose a font from the drop-down list to set the typeface for your text.
   - Choose a font size from the drop-down list. Choose **Auto** to have the text automatically adjust to fit the size of the text box.
   - Click the **Bold** ( ), **Italic** ( ), or **Shadow** ( ) buttons to toggle your font effects as desired.
   - Set your text justification options as desired. *For more information, see* *Text bar (Alt+2) on page 16*.
   - Click the down arrow next to the color swatch button ( ) to display the color picker, where you can set the red, green, blue, and alpha channels for your text.

Editing text

1. Select a song in the Compilation window.
2. If necessary, click the Selection tool ( ) or Sizing tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, click the text box and choose **Edit Text** from the **Edit** menu (or press F2). The text becomes editable.
4. Edit the text as necessary.
5. Press one of the following keys to commit your text changes:
   - F2
   - Ctrl+Enter
   - Tab

Moving text

1. Select the image containing the text you want to move.
2. If necessary, click the Selection tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, drag the text box to the desired location, or click **Transformations** in the Properties window to type a new location for the text box in the **X position** and **Y position** boxes.

> **Tip:** *You can also use transformation keyframes to animate text in your project. For more information, see* *Transformation keyframes on page 52*.

Deleting text

1. Select the image containing the text you want to delete.

2. If necessary, click the Selection tool ( ) in the editing toolbar to make it the active tool.
3. In the workspace, select the text box you want to delete.
4. From the **Edit** menu, choose **Delete**.

Inserting a graphic

You can insert any number of graphics to display on top of a selected slideshow image.

1. In the Compilation window, select the slide to which you want to add the graphic.
2. From the **Insert** menu, choose **Graphic**. The Insert Graphic dialog is displayed.
3. Locate and select the file you want to use.
4. Click the **OK** button.
5. To reposition the graphic, click the Selection tool ( ) on the editing toolbar and drag the graphic to the desired location, or click the **Transformations** button on the Graphics Properties pane to type a new location for the graphic box in the **X position** and **Y position** boxes.
6. To resize the graphic, click the Sizing tool ( ) on the editing toolbar and drag any of the handles to resize the graphic, or click the **Transformations** button on the Graphics Properties pane to type a new size for the graphic box in the **X size** and **Y size** boxes.

Tip: *You can also use transformation keyframes to animate graphics in your project. For more information, see* *Transformation keyframes on page 52*.

Inserting audio

You can select an audio file to play in the background while your compilation is being viewed.

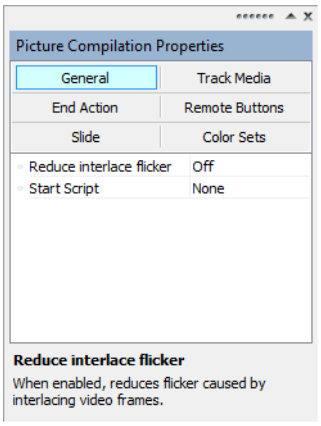
1. Drag an audio file to the workspace or to an audio track in the Timeline window.
2. Click the **Fit compilation to audio** button ( ) to automatically adjust the duration of all slides to match the length of the audio file. *For more information, see* *Audio tracks on page 87*.

Setting thumbnail display

You can set the size of the thumbnail displayed for the slides in the Compilation window. Click the down arrow button to the right of the **Thumbnail Size** button (Small) and choose **Small**, **Medium,** or **Large** to select the desired size.

Picture compilation properties

The Picture Compilation Properties pane in the Properties window allows you to adjust the end actions and remote control button behavior for the selected picture compilation.



To edit the picture compilation's properties, perform the following steps:

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Click the property button that you would like to edit.
3. Click the specific property, click the down arrow button (), and choose a setting from the drop-down list.

For more information, see Picture Compilation Properties on page 131.

Chapter 7 Creating a Single-Movie Disc or Title

You can use DVD Architect™ Pro software to create a single-movie DVD or Blu-ray Disc™ or add a single-movie title to a menu in a menu-based project.

If you're creating a single-movie project, you already know how to start a project and locate your media. *For more information, see Getting Started on page 25.*

Adding a movie title to a menu

If you want to add a single-movie title to a menu in an existing menu-based project, the process is easy.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu from which you want to link to the movie.
2. From the **Insert** menu, choose **Media**. The Insert Media dialog is displayed.

> **Tip:** *Click the* **Insert Object** *button ( ) in the Project Overview window, and then choose* **Media**.

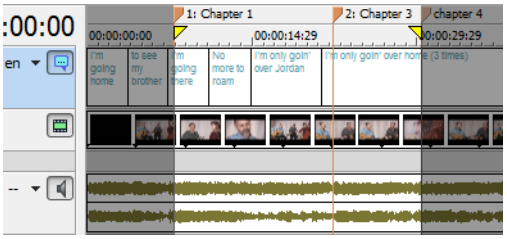
3. Locate and select the file you want to use.
4. Click the **OK** button. A button is added on the menu as a link to the video.
5. Double-click the movie's button in the workspace to open the video file.

After you've chosen your media file, you can use the Timeline window to set in and out points and add chapter markers.

Setting in and out points

You can set in and out points if you don't want to burn your entire video file. When preparing your project, the software will trim the video to include only the portion between these points.

1. Double-click a title in the Project Overview window (or navigate in the workspace) to open the video.
2. In the Timeline window, click to position the cursor where you want the video to begin.
3. Click the **Set In Point** button ( ). A yellow triangle is placed on the timeline to mark the in point. Chapter 1 represents the point at which playback will begin. When you change the in point, the first chapter marker will be updated to match the in point.
4. Click to position the cursor on the timeline where you want the video to end.
5. Click the **Set Out Point** button ( ). A yellow triangle is placed on the timeline to mark the out point.



Working with markers

You can insert scene/chapter markers, chapter markers, and buttons-on-video markers in video files. You can also rename, move, delete, load, and save markers.

Notes:

- *Markers must be at least one second apart.*
- *A DVD project can contain a maximum of 99 chapters and 255 markers per title.*
- *A Blu-ray Disc™ project can contain a maximum of 255 chapters per title.*
- *In a music/video compilation, markers always occur at the beginning of the compilation and between items. These markers cannot be moved or deleted.*

Inserting scene/chapter markers

Using the Timeline window, you can place scene/chapter markers in your video file for viewers to use as navigation points. Scene/chapter markers allow you to move to certain portions of the video and begin playback.

You can also use scene/chapter markers to link to a point in a video using end actions or to automatically create scene selection menus using the **Insert** > **Scene Selection** command.

For more information about automatic scene selection menus, see Creating a menu that continues playback after playing the selected scene (automatic scene selection menus) on page 41.

For more information about linking to chapter markers using actions, see Linking titles to chapter markers on page 78.

1. Double-click a title in the Project Overview window (or navigate in the workspace) to open the video.
2. In the Timeline window, click to position the cursor where you want to place the marker.
3. Click the down arrow next to the **Insert Scene/Chapter Marker** button ( ) and choose **Insert Scene/Chapter Marker**.

Inserting chapter markers

Chapter markers are used to denote different sections of your project. You can place chapter markers in your video file for viewers to use as navigation points to skip through the project.

Chapter markers are ignored when you create scene selection menus using the **Insert** > **Scene Selection** command, but you can use chapter markers to manually create scene selection menus or link to a point in a video using end actions.

For more information about manual scene selection menus, see Creating a menu that returns to the menu after playing the selected scene/chapter (manual scene selection menus) on page 41.

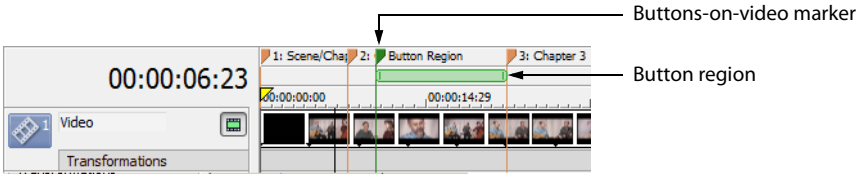
For more information about linking to chapter markers using end actions, see Linking titles to chapter markers on page 78.

1. Double-click a title in the Project Overview window (or navigate in the workspace) to open the video.
2. In the Timeline window, click to position the cursor where you want to place the marker.
3. Click the down arrow next to the **Insert Chapter Marker** button ( ) and choose **Insert Chapter Marker**.

Inserting buttons-on-video markers

Adding buttons to a video allows you to add interactivity to your project. When you add buttons to a video, the button regions in the timeline must be placed between two markers. Unlike scene/chapter markers and chapter markers, buttons-on-video markers are ignored by the DVD or Blu-ray Disc remote control's previous/next chapter buttons.

When you add a button to a video, a button region is created in the Timeline window. Buttons-on-video markers can be moved so you can easily adjust the length of your button regions. *For more information, see Adding buttons to videos on page 79.*



1. Double-click a title in the Project Overview window (or navigate in the workspace) to open the video.
2. In the Timeline window, click to position the cursor where you want to place the marker.
3. Click the down arrow next to the **Insert Buttons on Video Marker** button ( ) and choose **Insert Buttons on Video Marker**. You can drag the edge of the button region to align with buttons-on-video markers.

Notes:

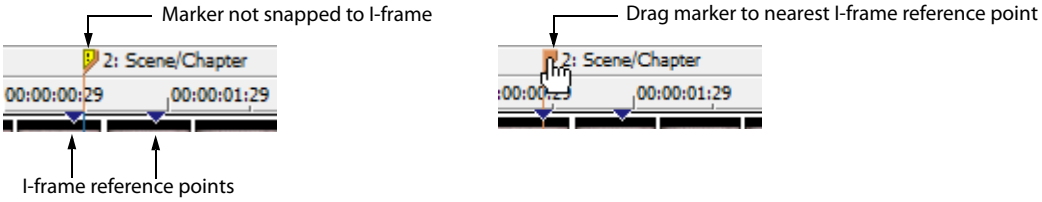
- *Markers must be at least one second apart.*
- *A 4:3 DVD project can contain a maximum of 36 buttons per title or menu.*
- *A 16:9 widescreen DVD project can contain a maximum of 18 buttons per title or menu.*
- *A Blu-ray Disc™ project can contain a maximum of 255 buttons per title or menu.*

Snapping markers to I-frames

In DVD projects, markers must occur at I-frames. If a marker does not occur at an I-frame, the yellow exclamation tag ( ) will appear. To snap the marker to the I-frame, drag the marker along the timeline to one of the I-frame reference points ( ). When the marker has snapped to the I-frame, the yellow exclamation tag ( ) will clear from the marker. *For more information, see Moving markers on page 77.*

Notes:

- *If a marker is not on an I-frame, you can recompress the video title to add an I-frame at that location. However, if you don't manually recompress the title, DVD Architect Pro will automatically move the marker to an I-frame. For more information about recompressing video titles, see Optimizing your project on page 29.*
- *This feature is not applicable to Blu-ray Disc projects. Markers do not need to occur at I-frames in Blu-ray Disc projects.*



Renaming markers

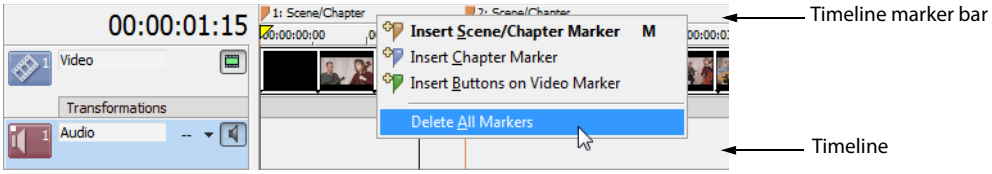
1. Right-click the scene/chapter marker, chapter marker, or buttons-on-video marker on the timeline and choose **Rename Marker** from the shortcut menu.
2. Type a new name in the edit box.
3. Press Enter.

Moving markers

To change the position of a scene/chapter marker, chapter marker, or buttons-on-video marker, drag the marker on the timeline to the new location.

Deleting markers

To delete a marker on the timeline, right-click the marker and choose **Delete Marker** from the shortcut menu. You can also right-click timeline's marker bar and choose **Delete All Markers** from the shortcut menu to clear all markers.



Note: *DVD Architect Pro automatically inserts an initial scene/chapter marker in all video files. You cannot delete this marker.*

Loading markers

Click the **Load Markers** button ( ) to clear existing markers and reload any marker changes you made in the file with a video editor such as Vegas® Pro software.

Saving markers

Use the **Save Markers** button ( ) to save all markers to your media file. If you do not save your markers, the marker information is saved only in the project file.

Note: *DVD Architect Pro saves the marker location but not the marker type. When you load markers, all will be imported as Scene/Chapter markers.*

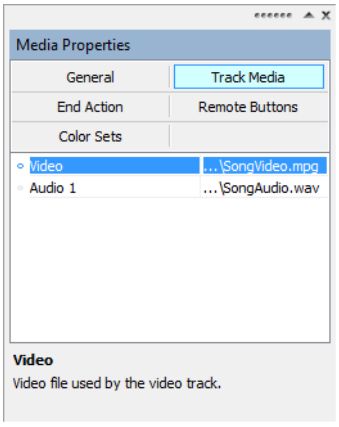
Linking titles to chapter markers

You can link the end action of a button, music/video compilation, picture compilation, playlist, media file, or script to a chapter marker in a media file.

1. Select the title you want to link to a chapter.
2. Click the **End Action** button in the Properties window.
3. Select the **Command** box, click the down arrow ( ), and choose **Link**.
4. In the **Destination Chapter** drop-down list, select the chapter marker to which you want to link.

Media properties

The Media Properties pane in the Properties window adjusts the end actions and remote control button behavior for the selected media file.



To edit media properties, perform the following steps:

1. If the window isn't already visible, choose **Properties** from the View menu.
2. Double-click a media file in the Project Overview window (or navigate in the workspace) to open the media you want to edit.
3. Click a button at the top of the Properties window.

For more information, see Media Properties on page 127.

Adding buttons to videos

You can add buttons to a video title to make your projects more interactive. For example, add a button to a video title to take the viewer to a disc's outtakes or special features like those found on commercial discs.

Tip: *You can also add buttons to picture and music/video compilations. To add a picture compilation to your project, see Adding a picture compilation to a menu on page 67. To add a music/video compilation to your project, see Adding a music/video compilation to a menu on page 61.*

1. Double-click a video title in the Project Overview window (or navigate in the workspace) to open it.
2. In the Timeline window, click to position the cursor where you want to add the button to your project.
3. Add a button using any of the following methods:
   - From the **Insert** menu, choose **Empty Button**.
   - From the Timeline window, click **Insert Button** ( ).
   - From the Buttons window, double-click a button to insert it into the workspace.
   - From the Buttons window, click a button and drag it into the workspace.
   - From the Buttons window toolbar, click **Insert Button** ( ).

Notes:

- *A 4:3 DVD project can contain a maximum of 36 buttons per title or menu.*
- *A 16:9 widescreen DVD project can contain a maximum of 18 buttons per title or menu.*
- *A Blu-ray project can contain a maximum of 255 buttons per title or menu.*

4. You can use the Button Properties controls in the Properties window to edit the button image used and the button action. *For more information, see Button Properties on page 115.*
5. When you add a button to a video, a button region is created in the Timeline window. This button region indicates how long the button will be visible in your project. You can insert buttons-on-video markers in the Timeline window so you can easily adjust the length of your button regions. *For more information, see Inserting buttons-on-video markers on page 76.*

Note: *Deleting all buttons in a button region will eliminate the entire button region.*

6. To add another button to a video, repeat steps 2-5 as needed. When you have multiple buttons in your video, you can edit the button order.

Editing button order for a video

From the **Edit** menu, choose **Button Order** to display the Button Order dialog, where you can set the order for buttons on the video title.

The #1 button is the default selected button when you navigate to a menu or video title unless you've used the **Destination Button** control on the Action or End Action page of the Properties window to specify a different destination button. *For information about editing buttons for menus, see Editing button order for a menu on page 54.*

When you use buttons on video, the button order determines which button is selected by default and when playback moves across button regions.

For example, imagine you have three buttons each in three button regions:

Button Region 1	
Button 1	Director's Interview: The making of this scene
Button 2	Cast Interview: The making of this scene
Button 3	Main Menu

Button Region 2	
Button 1	Cast Interview: The making of this scene
Button 2	Director's Interview: The making of this scene
Button 3	Main Menu

When the audience plays your disc, the same button number will be selected when playback passes from one button region to the next.

Notice that button 1 and button 2 are reversed in the two button regions. If button 2 is selected, the button highlight will switch from "Cast Interview: The making of this scene" to "Director's Interview: The making of this scene" when playback switches from button region 1 to button region 2.

Use the Button Order dialog to make sure your button order is consistent throughout your video.

1. Double-click a title in the Project Overview window (or navigate in the workspace) to open the video.
2. In the Timeline window, click to position the cursor in the button region you want to edit.
3. From the **Edit** menu, choose **Button Order**. The Button Order dialog is displayed.

   By default, the button order matches the order in which you added buttons to the video. The first button you add is the default button.
4. Select a button and click the **Move Up** or **Move Down** buttons to change the selected button's order.
5. Repeat step 4 as needed.
6. Click **OK** to close the Button Order dialog and save your changes.

Animating buttons with keyframes

You can make buttons fade or fly in to a menu by using keyframe animation. *For more information, see Crop and video effects keyframes on page 48.*

Moving a button into position on a menu

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit. *For more information, see Project Overview window (Ctrl+Alt+1) on page 14.*
2. On the General page of the Menu Page Properties pane, verify that the menu length is long enough to accommodate the animation and that the menu loop point is set to the point where you want menu animation to end. *For more information, see Menu Page Properties on page 121.*
3. In the workspace, select the button you want to animate. If you can't see the button, click in the timeline to place the cursor after the loop point.

   The Button Properties pane is displayed in the Properties window. *For more information, see Button Properties on page 115.*
4. On the Transformations page in the Button Properties pane, click the **Show before loop point** box, click the down arrow button (), and choose **Yes** from the menu so you can animate the button before the loop point.
5. Add keyframes to move the button:
   a. Double-click the Transformations keyframe bar below your video track. A keyframe is added to the Transformations keyframe bar.
   b. Drag the keyframe to the beginning of the timeline, and click the keyframe to select it.
   c. Using the keyframe tool () in the workspace, drag the button to the position where you want its motion to begin.

> **Tip:** *You can also use the Transformations page in the Button Properties pane to edit the button position.*

   d. Double-click the Transformations keyframe bar to create the next keyframe.
   e. Use the keyframe tool to set the button position for the selected keyframe.
   f. Repeat steps d and e as needed to create your button motion.
6. Set the button's final position:
   a. Position the last keyframe so it matches the menu's loop point marker in the Timeline window.
   b. Use the keyframe tool () in the workspace to set the button's final position.

      Preview your menu and edit keyframes as needed.

Fading a button in to make it appear gradually

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit. *For more information, see Project Overview window (Ctrl+Alt+1) on page 14.*
2. On the General page of the Menu Page Properties pane, verify that the menu length is long enough to accommodate the animation and that the menu loop point is set to the point where you want menu animation to end. *For more information, see Menu Page Properties on page 121.*
3. In the workspace, select the button you want to animate (if you can't see the button, click in the timeline to place the cursor after the loop point).

   The Button Properties pane is displayed in the Properties window. *For more information, see Button Properties on page 115.*
4. On the Transformations page in the Button Properties pane, click the **Show before loop point** box, click the down arrow button (), and choose **Yes** from the menu so you can animate the button before the loop point.
5. Make the button transparent at the beginning of the menu:
   a. Right-click the button in the workspace and choose **Crop and Adjust** from the shortcut menu. The Crop and Adjust dialog is displayed. *For more information, see Displaying the Crop and Adjust window on page 45.*
   b. Click to position the cursor at the beginning of the timeline in the keyframe controller.
   c. Click the **Insert Keyframe** button ().
   d. Click the **Alpha** box in the Crop and Adjust Properties box and click the down arrow button () to display a slider.

e. Drag the **Alpha** slider to the left to make the button transparent.

6. Make the button opaque at the menu's loop point:

   a. In the Timeline window, click the menu's loop point marker. The cursor in the Crop and Adjust Keyframe Controller is updated to match this position.

   b. In the Crop and Adjust window, click the **Insert Keyframe** button ( ).

   c. Click the **Alpha** box in the Crop and Adjust Properties box and click the down arrow button ( ) to display a slider.

   d. Drag the **Alpha** slider to the right to make the button opaque.

During playback, your button is not visible when the menu starts, and it fades in gradually until the menu's loop point, when it is fully opaque.

Chapter 8 Creating Playlists

A playlist contains a user-defined sequence of movies, chapter markers, music/video compilations, or picture compilations. A playlist can contain only titles that are part of the project, which are played from start to finish, and an end action determines what happens at the end of the playlist. Playlists do not increase the size of your project.

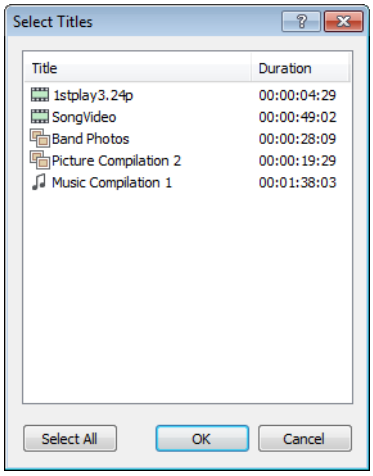
Notes:

- *Each playlist in a DVD project can contain a maximum of 99 titles with 99 chapters in each title.*
- *Each playlist in a Blu-ray Disc™ project can contain a maximum of 999 titles with 255 chapters in each title.*

Tip: *If you want to create a series of videos that play sequentially, you can create a music/video compilation made up of video files. This sort of video compilation behaves much like a playlist, but it will be written to your disc as a single video title set. If you have a project with many short videos, this method can save you from rerendering and combining media.*

Adding a playlist to a menu

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. From the **Insert** menu, choose **Playlist**. The Select Titles dialog is displayed.



3. In the Select Titles dialog, choose the titles that you want to include in your playlist, and then click **OK**. A button is added to the current menu as a link to the playlist.
4. To control which starting chapter, audio track, and subtitle track are played when each title is played, use the Playlist Properties pane. *For more information, see Playlist Properties on page 139.*

Adding a playlist without a link

You have the ability to add a playlist to your project without adding a menu link. You can use this method to build your playlist, and then you can add buttons to your project when you are ready to link to the playlist.

1. Perform one of the following actions:
   - In the Project Overview window, click the **Insert Object** button ( ) and choose **Playlist**.
   - Click the **Insert Playlist** button ( ) on the Playlists window toolbar.
   - Right-click in the Project Overview window and choose **Insert Playlist** from the shortcut menu.
2. In the Select Titles dialog, choose the titles that you want to include in your playlist, and then click **OK**.

3. To control which starting chapter, audio track, and subtitle track are played when each title is played, use the Playlist Properties. *For more information, see Playlist Properties on page 139.*

Adding titles to a playlist

1. Double-click a playlist in the Project Overview window (or choose a playlist from the drop-down list at the top of the Playlists window) to open the playlist you want to edit.
2. Add titles to your playlist by completing the following steps:
   a. Click the **Insert Playlist Items** button ( ) in the Playlists window toolbar to display the Select Titles dialog.
   b. Choose the titles that you want to include in your playlist.
   c. Click **OK**. The titles are added to the end of your playlist.

> **Tip:** *You can also drag titles from the Project Overview window to the Playlists window.*

3. To control which chapter, audio track, and subtitle track are played when each title is played, use the Playlist Properties. *For more information, see Playlist Properties on page 139.*

Deleting titles from a playlist

1. In the Playlists window, select the titles that you want to delete.
2. From the **Edit** menu, choose **Delete**. The items are deleted from the playlist.

Rearranging titles in a playlist

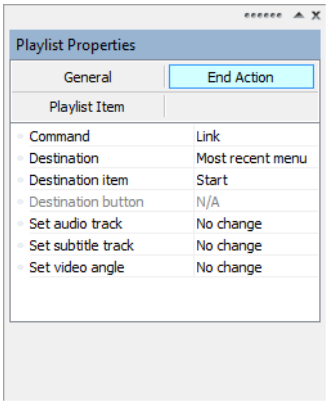
You can quickly rearrange the titles in the Playlists window by selecting the title that you would like to move, dragging it and then dropping it to another position in the Playlists window.

Renaming a playlist

1. Right-click a playlist in the Project Overview window and choose **Rename** from the shortcut menu.
2. Type a new name in the edit box.
3. Press Enter.

Playlist properties

The Playlist Properties pane in the Properties window allows you to adjust settings for each item in a playlist, specify the playback order, or to set the end action for the selected playlist.



To edit the playlist's properties, perform the following steps:

1. Double-click a playlist in the Project Overview window (or navigate in the workspace) to open the playlist you want to edit or choose a playlist from the drop-down list at the top of the Playlists window.
2. Select the playlist item that you would like to edit.
3. Click the **General, End Action**, or **Playlist Item** button.
4. Select the specific control, click the down arrow button (), and choose a setting from the drop-down list.

For more information, see Playlist Properties on page 139.

Chapter 9 Adding Audio, Video, and Subtitles

You can add multiple audio, video, and subtitle tracks using DVD Architect™ Pro software. This will allow you to add support for multiple languages and multiple viewing angles.

Audio tracks

You can add multiple audio tracks to videos and picture compilations to add support for multiple languages, audio description, and running commentaries.

When your disc is played, the DVD or Blu-ray Disc™ player will attempt to determine the appropriate default audio track. If the player cannot determine the correct language, the first track is used. If multiple tracks match the player's language setting — if you have an English dialogue track and an English commentary track, for example — the first track that matches the player's language is used. The viewer can choose which track is played during playback.

Adding audio tracks

You can add up to eight audio tracks for each title.

1. Double-click a title in the Project Overview window (or navigate in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Click the **Insert Track** button ( ) in the Timeline window and choose **Insert Audio Track**. A blank audio track is added to the timeline. You can add an audio file by dragging it to the track or using the Media Properties pane in the Properties window.
4. Click the arrow next to the **Track Language** button ( ) and choose a language to identify the track.
5. Repeat steps 3 and 4 as necessary to create the audio tracks for your project.

When setting up your project, it's a good practice to use the same track sequence for all videos, picture compilations, and music/video compilations. If you transition playback between titles, the disc will continue to play the same track number.

For example, assume the first title on your disc has the following track order:

Track	Language
1	English
2	French
3	Spanish

Now assume the second title on your disc has the following track order:

Track	Language
1	French
2	English
3	Spanish

If you're playing English dialogue in the first title, audio track 1 continues playing when you skip to the second title, so you'd hear French dialogue in the second title. Using the same track sequence for all titles will ensure consistency across your project. If necessary, insert blank audio tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition between titles. However, a user could manually choose a blank audio track without realizing that it was intentionally left blank.

Note: *Various brands and models of DVD players behave differently with blank audio tracks.*

Replacing audio in a track

You can replace the audio in a track by dragging a new file from the Explorer window or Windows Explorer, or you can edit the controls on the **Track Media** page on the Media Properties pane of the Properties window. *For more information, see Media Properties on page 127.*

Setting the audio track for timeline playback

Select the **Activate Track** button ( ) in an audio track header in the Timeline window to determine which track is played when you click the **Play From In Point** ( ) or **Play** ( ) button in the Timeline window.

Changing audio track colors

1. Right-click the header and choose **Track Display Color** from the shortcut menu.
2. Choose a color from the submenu to set the selected track's color in the track list and the audio waveform in the timeline.

Note: *Track color settings are saved with your project.*

Video tracks

You can add multiple video tracks to videos to add support for multiple viewing angles. During playback, the user can press the **Angle** button on the DVD or Blu-ray Disc player remote control to change angles. Video track number 1 will play the title's main video. Any additional video tracks that you add will play when the **Angle** button on the remote control is pressed.

The maximum overall bit rate for titles with multiple video angles is lower than the maximum for single-angle titles. The maximum bit rates in each type of project (DVD or Blu-ray Disc) for the number of video angles in a title is listed below:

DVD project	
Number of Angles	Maximum bit rate (Mbps)
1	9.8
2-6	8
7-9	7.5

Blu-ray project	
Number of Angles	Maximum bit rate (Mbps)
1	48
2	30
3-4	24
5-6	20
7-8	18
9	16

Warning: *Any title that contains multiple video tracks will be recompressed when you prepare your project so the main video and the alternate angles can be combined into a new video file. To avoid recompression artifacts (and unnecessary processing time), use AVI files for your multiangle video titles.*

Adding video tracks

You can add up to eight video tracks for each title.

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Click the **Insert Track** button ( ) and choose **Insert Video Track** in the Timeline window. A blank video track is added to the timeline.

Note: *You can add a video file by dragging it to the track or using the Media Properties pane in the Properties window.*

Adding video to tracks

Unlike a standard video track, additional video tracks can contain multiple events from different media files and you can trim the ends of the events.

1. Drag a video from the Explorer window to a track in the Timeline window. A video event is created where you drop the file.

> **Tip:** *Click the* **Insert Video Event** *button (* *) in the Timeline window and browse to the file that you want to add.*

2. Drag either end of an event to trim its length as needed.
3. Drag the event to position it on the timeline.

> **Note:** *If the* **Auto Ripple** *button (* *) is selected, video events that occur later in the same track move automatically. When the* **Auto Ripple** *button is not selected, only the video event you drag will move; the positions of all existing video events are preserved.*

Setting the video track for timeline playback

Select the **Activate Track** button ( ) in the track header in the Timeline window to determine which track is played when you click the **Play From In Point** ( ) or **Play** ( ) button in the Timeline window.

Changing video track colors

1. Right-click the header and choose **Track Display Color** from the shortcut menu.
2. Choose a color from the submenu to set the selected track's color in the track list and the video waveform in the timeline.

> **Note:** *Track color settings are saved with your project.*

Video event properties

The Media and Event Properties pane in the Properties window allows you to adjust the color settings and cropping for the events on the additional video tracks.

To edit the video event's properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Select an alternate video event in the Timeline window.
3. Click the **Event Media** property button.

Video

The **Video** control displays the path to the video file that will be used.

Select a command from the menu to view media properties or crop and adjust media settings.

Subtitles

Subtitles display on-screen text during videos, picture compilations, and music/video compilations. Subtitles are intended to be used as various text translations of audio dialogue. By adding multiple subtitle tracks, you can support multiple languages.

When your disc is played, the DVD or Blu-ray Disc player will attempt to determine the appropriate default subtitle track. If the player cannot determine the correct language, the first track is used. If multiple tracks match the player's language setting — if you have an English dialogue track and an English commentary track, for example — the first track that matches the player's language is used. The viewer can choose which subtitle track is displayed during playback.

Each set of subtitles is added as a separate track in the timeline. You can add up to 32 subtitle tracks for each title (16 tracks for widescreen assets).

Adding a subtitle track

1. Double-click a title in the Project Overview window (or navigate in the workspace) to open the video.
2. From the **View** menu, choose **Timeline** to display the Timeline window.
3. Click the **Insert Track** button ( ) and choose **Insert Subtitle Track** in the Timeline window. An empty subtitle track is added to the timeline above the video track.
4. Click the arrow next to the **Track Language** button ( ) and choose a language to identify the track.
5. Repeat steps 3 and 4 as necessary to create the subtitle tracks for your project.

When setting up your project, it's a good practice to use the same track sequence for all videos, picture compilations, and music/video compilations. If you transition playback between titles, the disc will continue to play the same track number.

For example, assume the first title on your disc has the following track order:

Track	Language
1	English
2	French
3	Spanish

Now assume the second title on your disc has the following track order:

Track	Language
1	French
2	English
3	Spanish

If you're playing English dialogue in the first title, audio track 1 continues playing when you skip to the second title, so you'd hear French dialogue in the second title. Using the same track sequence for all titles will ensure consistency across your project.

If necessary, insert blank subtitle tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition between titles. However, a user could manually choose a blank subtitle track without realizing that it was intentionally left blank.

Note: *Various brands and models of DVD players behave differently with blank subtitle tracks.*

Adding subtitle text

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Click to position the cursor in the timeline where you want to add the subtitle text.
4. Create a subtitle event by doing one of the following actions:

Action	Description
Click the **Activate Track** button ( ) on the track where you want to add subtitles and then choose **Subtitle Text** from the **Insert** menu.	An event is added to the track, and the text box in the workspace is made editable so you can change the text. If a subtitle event exists at the cursor position, another text box is added to the workspace within the current subtitle event. • If the **Auto Ripple** button ( ) is selected, subtitle events to the right of the cursor are shifted downstream to accommodate the new event. • If the **Auto Ripple** button is not selected, a new event is created at the cursor position, and the positions of all existing events are preserved.
Click the **Insert Subtitle Text Event** button ( ).	This will add a subtitle event at the cursor position in all selected tracks. The text box in the workspace is not made editable, but you can edit the text later.

5. Repeat steps 3 and 4 to create subtitle text as needed through the project.

Creating a graphic subtitle

To create a graphic subtitle, open your image-editing software and create a new project. Your subtitle graphic should match the frame size in DVD Architect Pro. For example, if the frame resolution is 4:3 NTSC (720 pixels x 480 pixels) in DVD Architect Pro, the subtitle graphic should be 720 pixels x 480 pixels.

Note: *If you use a graphic that does not match the frame size, adjust its position after importing it. For more information, see* *Graphics Properties on page 113*.

Now you can choose the type of highlight mapping for your project.

Highlight mapping	Background color	Text color
Transparency Graphics can have one layer (transparency with text) or two layers (a transparent background layer and text layer).	Transparent	Black
Intensity This option gives the text a more polished, smooth look. Note: Anti-alias colors are mapped to the four colors in the color set.	Black	White
Color channel This option allows you to use different colors simultaneously. To change the text color, see the text immediately following this table.	Black	Red, blue, or green

To change the text color when using the color channel option:

- In the Graphics Properties pane, select **Color Sets**.
- Click the expand button (⊞) next to any of the listed color sets.
- Choose the color you want to edit. *For more information, see* *Editing a color set on page 44*.

Color Set Mode	Corresponding Color
1: fill color	Red
2: anti-alias color	Green
3: outline/background color	Blue
4: transparent color	Transparent

Inserting a graphic subtitle

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Click the **Insert Track** button (⊕▾) in the Timeline window and choose **Insert Subtitle Track**. An empty subtitle track is added to the timeline above the video track.
4. Click to position the cursor in the timeline where you want to add a subtitle text event.
5. From the **Insert** menu, choose **Graphic** to open the Insert Graphic dialog.
6. In the Insert Graphic dialog, browse to the .psd file (or other graphic file) and select **Open** to insert the subtitle graphic into the workspace.
7. Right-click the graphic in the workspace and choose **Make Graphic Actual Size** from the shortcut menu.
8. Click the **Media** button in the Graphics Properties pane and choose a setting from the **Highlight mapping** menu to indicate how to use the colors in the graphic. *For more information, see* *Creating a graphic subtitle on page 91*.
9. Select the subtitle event in the Timeline window and use the **Subtitle Event** page in the Media and Subtitle Properties pane to choose the color set for the event.

Importing subtitles from a file

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. From the **Insert** menu, choose **Subtitle Track**. A new subtitle track is added to the timeline.
4. Click the **Import Subtitles** button ( ) in the Timeline window. The Import Subtitles dialog is displayed to allow you to browse to a .sub or .txt file.
5. When you click **Open**, the contents of the selected subtitle file are added to the track.

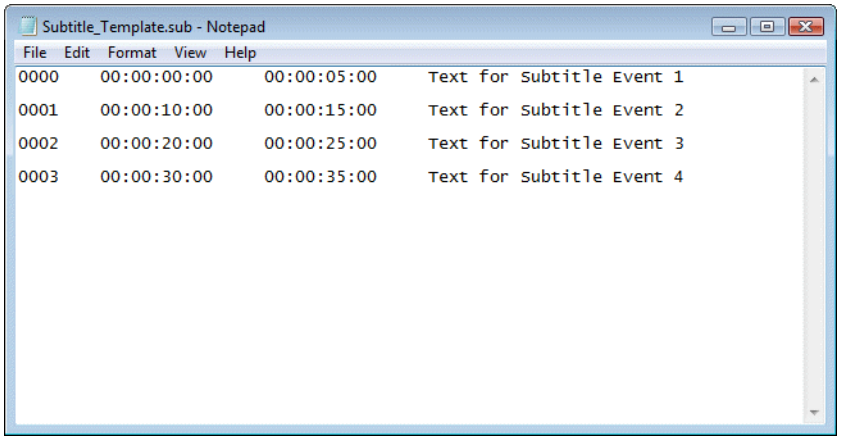
   Each line in the file creates a subtitle event, and the events are spaced equally through the duration of the video. For example, the following text file would create three subtitle events:

```
No, 'tis not so deep as a well, nor so wide as a
church-door; but 'tis enough, 'twill serve: ask for
me to-morrow, and you shall find me a grave man.
```

6. You can then adjust the timing of the events to correspond with the spoken words in the audio track.

Creating a subtitle (.sub) file with timecode-based subtitle events

1. Open a new document in a text editor.
2. Create an entry for each subtitle event containing a subtitle number, timecode in position, timecode out position, and subtitle text:
   a. Type a number to identify the subtitle event, and then press Tab.
   b. Type the timecode position where you want the event to appear on screen and then press Tab.
   c. Type the timecode position where you want the event to disappear from the screen and then press Tab.
   d. Type the subtitle text you want to display on screen, and then press Enter.
3. Repeat step 2 for each subtitle event. When you're finished, you'll have a file that looks something like the following sample:



4. Save the text document with a .sub file extension.
5. You can now import the subtitles from your .sub file. *For more information, see Importing subtitles from a file on page 92.*

Exporting subtitles

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Select a subtitle track in the Timeline window.
4. Click the **Export Subtitles** button ( ) in the Timeline window. The Export Subtitles dialog is displayed to allow you to specify a file name and location for your file.

Creating subtitles from regions in a Vegas project

If you've used Vegas® software to create the video for your DVD Architect Pro project, you can use regions in the Vegas project to create subtitles. The length of the region determines the subtitle event length, and the region text is used as subtitle text.

1. Save the regions in your Vegas project to a text file.
   a. Open your project in Vegas software.
   b. Create regions in the project where the name of the region is the subtitle text you want to display.
   c. Verify that no regions are overlapping.
   d. From the **Tools** menu, choose **Scripting**, and then choose **Run Script** from the submenu. The Run Script dialog is displayed.
   e. Run the **Export Regions As Subtitles.js** script to save your regions list as a text file.
2. Switch to the DVD Architect Pro window.
3. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
4. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
5. From the **Insert** menu, choose **Subtitle Track**. A new subtitle track is added to the timeline.
6. Click the **Import Subtitles** button ( ) in the Timeline window. The Import Subtitles dialog is displayed.
7. In the Import Subtitles dialog, browse to the file you saved in step 1.
8. When you click **Open**, the contents of the selected subtitle file are added to the track.

Adjusting subtitle event timing

A subtitle event's position on the timeline determines when it is displayed in your project, and its duration determines how long it is displayed on screen.

Editing a single event's position

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Drag an event in the timeline to change its position.

   If the **Auto Ripple** button ( ) is selected, subtitle events to the right of the event you drag will move with the event you drag.

   If the **Auto Ripple** button is not selected, only the event you drag will move; the positions of all existing events are preserved.

Note: *Events will snap to the cursor and to other event edges. If you want to trim an event to a specific time, position the cursor at that point on the timeline and drag your event edge to the cursor. If you want two subtitle events to be adjacent on the timeline, turn off Auto Ripple and drag an event edge until it snaps to the other event's edge. You can turn snapping on or off by choosing* **Enable Snapping** *from the* **Options** *menu.*

Note: *Events are forced to frame boundaries when the* **Quantize to Frames** *button ( ) is selected in the Timeline window.*

Editing a series of events

1. Select the first subtitle event you want to edit.
2. Position the cursor and click the **Play** button ( ) to start playback in the timeline.
3. During playback, use the following shortcut keys to adjust your subtitle events:

Shortcut Key	Description
[	Sets the start of the subtitle event at the cursor position.
]	Sets the end of the subtitle event at the cursor position and selects the next subtitle event. Hold Shift while pressing] to set the end of the subtitle event without selecting the next event.
\	Sets the end of the current subtitle event and the start of the next subtitle event at the cursor position.
T	Creates a subtitle event at the cursor position. Press T again before the cursor passes the end of the event to set the end of the event and create a new event

4. Repeat step 3 to set the position of each subsequent subtitle event.

Adjusting a subtitle event's length

A subtitle event's length on the timeline determines how long it is displayed on screen.

Note: *Subtitle events in DVD projects cannot exceed 12 minutes when playing your project with a DVD player. If an event exceeds 12 minutes, the subtitle will be displayed on screen only for the first 12 minutes.*

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Hover over the edge of an event. The trim cursor is displayed ( ).
4. Drag an event edge to change its length.

   If the **Auto Ripple** button ( ) is selected, subtitle events to the right of the event you drag will move with the event you drag.

   If the **Auto Ripple** button is not selected, only the event you drag will move; the positions of all existing events are preserved.

Notes:

- *Events will snap to the cursor and to other event edges. If you want to trim an event to a specific time, position the cursor at that point on the timeline and drag your event edge to the cursor. If you want two subtitle events to be adjacent on the timeline, turn off Auto Ripple and drag an event edge until it snaps to the other event's edge. You can turn snapping on or off by choosing* **Enable Snapping** *from the* **Options** *menu.*
- *Events are forced to frame boundaries when the* **Quantize to Frames** *button ( ) is selected in the Timeline window.*

Copying formatting across subtitle events

1. Double-click a title in the Project Overview window (or double-click a button on a menu in the workspace) to open it.
2. From the **View** menu, choose **Timeline** to display the Timeline window if it isn't already visible.
3. Select a subtitle event and edit it. If you want to select multiple events, hold Ctrl or Shift while clicking events. The event you want to edit should be the last event you click.
   - Use the **Transformations** page in the Properties pane or drag a text object in the workspace to change its position. *For more information, see* *Transformations on page 126*.
   - Use the text bar to change the subtitle's font, size, or justification. *For more information, see* *Text bar (Alt+2) on page 16*.

- Use the **Subtitle Event** page in the Properties window to change the color set used to display subtitle text. *For more information, see Subtitle Event on page 126.*

4. Right-click the event you edited and choose a command from the shortcut menu to indicate where you want to apply the formatting:
   - Choose **Apply Formatting to Selected Events** to apply the formatting and position of the text object you click to other selected subtitle events.
   - Choose **Apply Formatting to Selected Tracks** to apply the formatting and position of the text object you click to other selected subtitle events.

Note: *If subtitle events have multiple text boxes, formatting will be applied to the appropriate text boxes if possible based on object order. For example, if the event you edit has three text boxes with object order 1, 2, and 3, editing the text box with object order 2 will modify only text boxes with object order 2 on the selected events or active track.*

Setting a subtitle to display automatically

You can set an object to automatically display subtitles during DVD playback, regardless of the users settings.

Note: *To do this, subtitles for an object need to be created in your project. For more information, see Adding a subtitle track on page 90.*

1. In the workspace, select the object for which you have created subtitles.
2. In the Button Properties pane, click the **Action** button.
3. Select the **Set subtitle track** control, click the down arrow button (), and choose **1**.
4. Double-click the object in the workspace to open it.
5. In the Media Properties pane, click the **Remote Buttons** button.
6. Select the **Subtitle track change** control, click the down arrow button (), and choose **Off**.

Editing a subtitle event's color set

You can use the Subtitles Event page in the Properties window to adjust which color set is used to draw subtitle text. You can adjust color sets independently for each subtitle track. *For more information about color sets, see Subtitle Event on page 126.*

Setting the subtitle track for timeline playback

Select the **Activate Track** button () in a subtitle track header in the Timeline window to determine which track is played when you click the **Play From In Point** () or **Play** () button in the Timeline window.

Changing subtitle track colors

1. Right-click the header and choose **Track Display Color** from the shortcut menu.
2. Choose a color from the submenu to set the selected track's color in the track list and the audio waveform in the timeline.

Note: *Track color settings are saved with your project.*

Subtitle properties

You can use the Properties window to adjust subtitle text positions and adjust which color set is used to draw subtitle text. You can choose which color set is used for each subtitle event independently.

To edit subtitle properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.

2. Select a subtitle event in the Timeline window or a text box in the workspace. The Properties window will display different controls depending on your current selection.
3. Click the specific control, click the down arrow button (), and choose a setting from the drop-down list.

Chapter 10 Using Masks, Menus, and Themes

DVD Architect™ Pro software allows you to create custom masks, menus, and themes. This gives you ultimate control while creating your projects.

A mask determines which portion of an image will be visible. You can apply masks to button thumbnails, button frames, and image highlights.

Custom menus allow you to modify the appearance of your menus. You can create custom menus using your favorite graphics application and import the .psd file as a menu.

Themes take the guesswork out of creating your project. By choosing a theme, you can quickly create a snazzy new menu using predefined images and background music.

Creating custom masks

Masks determine which portion of an image will be visible. You can apply masks to button thumbnails, button frames, and image highlights. Consider the following example.

This menu page contains two copies of the same button so you can see the button's normal and highlighted states. Three masks were used to create this button:

- A thumbnail mask is applied so only the portion of the image within the wooden frame is visible.
- A frame mask is applied so the user can see through the frame to the menu background and the button thumbnail.
- A highlight mask (identical to the frame mask) is applied so the wooden frame and the thumbnail within the frame are highlighted when the button is selected.

Thumbnail

Thumbnail Mask

Frame

Frame/Highlight Mask

DVD Architect Pro software uses the color value of the red channel to determine which portions of an image are visible: white (Red=255, Green=255, Blue=255) represents the portions of the thumbnail (or frame) that will be visible, black (Red=0, Green=0, Blue=0) represents the portions that will be masked out, allowing the menu background to show through. Gray areas are partially visible.

Thumbnail masks

A thumbnail mask limits the portion of a thumbnail image that will be visible under a button. Themes can apply thumbnail masks automatically, or you can create your own.

When you select a button in the workspace, the Properties window displays information about the selected button. To see more information about the thumbnail image and its mask, click the **Media** button in the Button Properties pane and look under the **Thumbnail Properties** heading.

- The **Thumbnail Media** box displays the path to the current thumbnail file.
- The **Mask** box displays the path to the current mask file.

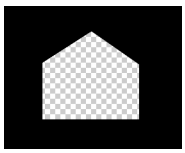
Tip: *If you're using layered .psd files, you can choose which layer you want to use as the frame or mask image. Click the button to expand the* **Thumbnail Media** *or* **Mask** *heading, and choose the layer you want to use from the* **Layer** *drop-down list (or choose* **Composited layer** *to use the mixed layers).*

In the following example, the white portion of the mask image represents the portion of the thumbnail image that will be visible in the menu.

Thumbnail + Thumbnail Mask = Masked Thumbnail

You can create your own masks using the image-editing application of your choice. Create the mask as an image the same size as your thumbnail image or as a layer in the thumbnail image. The masked area can be any shape and you can use any supported media file format as a mask.

Tip: *You can use gradients to feather the edges of a masked image.*

Sample	Description
	When an image that does not support transparency (such as BMP or JPG) is used as a mask, any pixel with a red value of 255 is transparent in the mask. In this example, the white area represents the portion of the thumbnail that will be visible.
	When an image that supports transparency (such as PNG or PSD) is used as a mask, transparent portions of the mask image represent portions of the thumbnail image that will be visible.

Frame masks

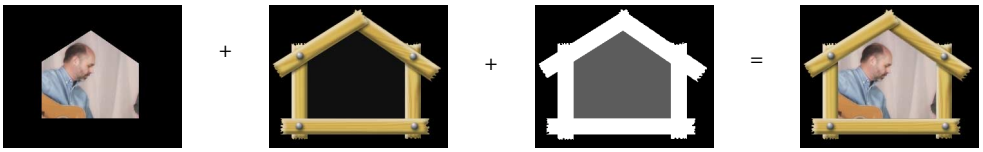
A frame mask limits the portion of a thumbnail frame image that will be visible around a button. Themes can apply frame masks automatically, or you can create your own.

When you select a button in the workspace, the Properties window displays information about the selected button. To see more information about the frame image and its mask, click the **Media** button in the Button Properties pane and look under the **Frame Properties** heading.

- The **Frame Media** box displays the path to the current frame file.
- The **Mask** box displays the path to the current mask file.

Tip: *If you're using layered .psd files, you can choose which layer you want to use as the thumbnail or mask image. Click the expand button (⊞) to expand the* **Frame Media** *or* **Mask** *heading, and choose the layer you want to use from the* **Layer** *drop-down list (or choose* **Composited layer** *to use the mixed layers).*

In the following example, the white portion of the thumbnail mask image represents the portion of the frame that will be visible in the menu. The black and gray portions represent sections where the menu background and underlying thumbnail will show through.



Masked Thumbnail + Frame + Frame/Highlight Mask = Masked Thumbnail

You can create your own masks using the image-editing application of your choice. Create the mask as an image the same size as your frame image or as a layer in the frame image. The masked area can be any shape and you can use any supported media file format as a mask.

Tip: *You can use gradients to feather the edges of a masked image.*

Sample	Description
—or—	When an image that does not support transparency (such as BMP or JPG) is used as a mask, any pixel with a red value of 255 is transparent in the mask. In these examples, the white and red areas represents the portion of the frame that will be visible.
	When an image that supports transparency (such as PNG or PSD) is used as a mask, transparent portions of the mask image represent portions of the frame image that will be visible.

Highlight masks

A highlight mask determines where highlighting will be applied when a button is selected, activated, or inactive. A highlight mask can be applied in two different ways:

- Per button: Select a button and click the **Highlight** button at the top of the Button Properties pane. Use the **Style** drop-down list to choose a predefined highlighting style, or choose **Custom** to use a custom mask file.

  Creating a button highlight mask is just like creating a frame mask. *For more information, see Frame masks on page 99.*

- Per menu: If you're designing your menus in a graphics program, you can adapt your menu background files to create a mask file that you can apply to the menu. Select a menu in the workspace and click the **Background Media** button at the top of the Menu Page Properties pane. Use the **Highlight mask** control to choose the mask file you want to use, and use the **Highlight mask mapping** control to indicate how transparency is determined from the mask.

The following steps will guide you through the process of creating a menu highlight mask.

1. If you designed your menu as described in *Creating custom menus and buttons using single-layer graphics on page 106*, you'll have a menu background image file that looks similar to the following image:

2. Using the menu background that you created, create a new layer or file for your highlight mask. In the following example, black sections indicate the areas we want to highlight:

3. Apply the mask to your menu:
   a. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu that you want edit.
   b. Click the **Background Media** button at the top of the Menu Page Properties pane.
   c. Select the **Highlight mask** box, click the down arrow button (), and choose **Replace** from the menu
   d. Browse to the file you want to use.
   e. If the mask is contained in a layer within the mask file, click the expand button () to the left of the **Highlight mask** box to expand the controls. Select the **Layer** box, click the down arrow button (), and choose the layer you want to use.

4. Choose a setting from the **Highlight mask mapping** control to indicate how transparency is determined from the mask. For the sample mask image we created in step 2, we'll use the **Transparency** setting.

   The mapping mode you use depends on your specific highlight mask image.

Mapping Mode	Description
Transparency	Maps the alpha channel of the menu highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list on the General page of the Menu Page Properties pane. The most opaque pixels (those with alpha values of 192 to 255) are mapped to the color set's fill color (color 1), and the most transparent pixels (those with alpha values of 0 to 63) are mapped to the color set's transparent color (color 4).
Intensity	Maps the average pixel intensity of the menu highlight mask to the four colors used in the color set selected in the **Selected button colors, Activated button colors**, or **Inactive button colors** drop-down list. The lightest pixels (those with an average intensity of 192 to 255) are mapped to the color set's fill color (color 1), and the darkest pixels (those with an average intensity of 0 to 63) are mapped to the color set's transparent color (color 4).
Color Channel	Maps color channels in the menu highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list. A pixel containing any red channel component uses the color set's fill color (color 1), a pixel containing any green channel component uses the color set's anti-alias color (color 2), a pixel containing any blue component uses the color set's outline/ background color (color 3), and a completely black pixel uses the color set's transparent color (color 4).

5. Choose the color sets that you want to use to highlight buttons on the menu when they are selected, activated, or inactive:
   a. Click the **General** button in the Menu Page Properties pane.
   b. Choose a setting from the **Selected button colors** drop-down list to choose the color set that will be used to highlight buttons on the menu when they are selected using the arrow buttons on the remote control.
   c. Choose a setting from the **Activated button colors** drop-down list to choose the color set that will be used to highlight the selected buttons on the menu when the user presses the Enter button on the remote control.
   d. Choose a setting from the **Inactive button colors** drop-down list to choose the color set that will be used to highlight buttons on the menu when they are not selected.
6. Verify that your buttons do not have their own highlight mask settings:
   a. Select all the buttons in the workspace. Hold Ctrl or Shift while click to select multiple objects.
   b. Click the **Highlight** button at the top of the Button Properties pane.
   c. Choose **Custom** from the **Style** drop-down list.
   d. Choose **None** from the **Mask** drop-down list.

   The menu background and highlight mask combine to produce the following result when the button on the right is selected.

Creating custom menus and buttons using layered graphics

For control over the appearance of your menus, you can create custom menus and buttons using your favorite graphics application and import the .psd file as a menu. *For more information, see Adding a submenu from a file on page 36.*

Naming requirements for layers

DVD Architect Pro software will determine which layers will be used for each part of a menu based on the layer name in your .psd file using the following format: Type-ID-Subtype-Name.

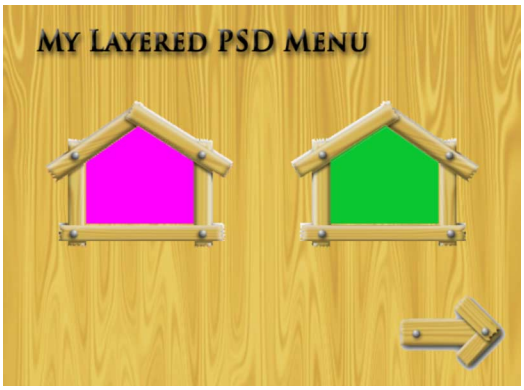
Important: *Layer names cannot contain spaces.*

Item	Description	
Type	Indicates the contents of the layer.	
	background	Used for menu background images and menu highlight masks
	button	Used for button images and masks.
ID	A numeric identifier that is used to represent related items. For example, the layers used to create button 1 in your menu would be named as follows: • button-01-thumbnail • button-01-thumbnailmask • button-01-frame The button ID also determines a menu's button order: button-01 will be the first button, button-02 will be the second button, and so on.	
Subtype	Indicates the type of image contained in the layer.	
	thumbnail	A layer containing a thumbnail image for a menu or button. Can be abbreviated **tmb**.
	thumbnailmask	A layer containing a button's thumbnail mask. Can be abbreviated **tmbmsk**.
	highlight	A layer containing a highlight mask for a menu background or button. Can be abbreviated **hlt**. By default, a highlight layer uses color channel mapping to determine transparency. If you want to specify the mapping mode, use the following subtypes: **highlightrgb**, **highlightintensity** (can be abbreviated **highlightint**), or **highlighttransparency** (can be abbreviated **highlighttrans** or **hlttrans**).
	frame	A layer containing a button frame. Can be abbreviated **frm**.
	framemask	A layer containing a button's frame mask. Can be abbreviated **frmmsk**.
Name	An optional label for an object. Use **Up**, **Back**, **Prev**, and **Next** to identify layers that are used to create navigation buttons.	

For instance, a layer named **button-04-highlightintensity-back** would be used to define the highlight mask for the fourth button on a menu. Transparency is determined using intensity mapping, and the button will be imported as the **Back** button.

Creating a layered .psd menu

The following procedure will demonstrate how to create this menu using a layered .psd file that contains the menu background, buttons, and related mask images on separate layers.



Note: *In general, try to avoid making major changes (such as adding, removing, or renaming layers) after you've created a menu using a .psd file. If you edit and save a menu's .psd file while working with your DVD Architect Pro project, the software will release the file when it loses focus and reload the .psd when focus is restored to the DVD Architect Pro window. The following actions may occur depending on the changes you make to the .psd file:*

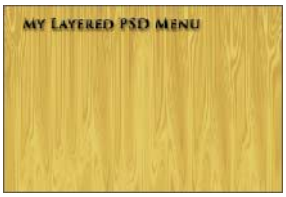
- *If you change the contents of a layer, the corresponding object's image will be updated when you restore focus to the DVD Architect Pro window.*
- *If you add a layer with an invalid name, the layer is ignored.*
- *If you add a layer, the layer is not detected until you choose* **Reapply Layout from File** *from the* **Edit** *menu.*
- *If you remove a layer, the corresponding object's image will be removed.*
- *If you rename a layer to an invalid name, the corresponding object's image will be removed.*
- *If you rename a layer to a valid name, the object corresponding to the previous layer name will be taken offline. The object associated with the new layer name is added when you choose* **Reapply Layout from File** *from the* **Edit** *menu.*

1. In your image-editing application, start a new image.

   Your image should match the height of the output format frame size and the width should include compensation for the output format's pixel aspect ratio:

Output Format	Aspect Ratio	Menu Size
4:3 NTSC (720 x 480)	.9091	655 x 480
Widescreen NTSC (720 x 480)	1.2121	873 x 480
4:3 PAL (720 x 576)	1.0926	787 x 576
Widescreen PAL (720 x 576)	1.4568	1049 x 576
1280 x 720	1.0	1280 x 720
1440 x 1080	1.3333	1920 x 1080
1920 x 1080	1.0	1920 x 1080

2. Create layers for your menu background images:
   a. Create a layer set named **background-01-group** (optional).
   b. Create a layer named **background-01** for the menu background. Static titles, images, and other background elements should be merged into this layer.



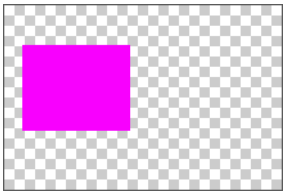
The woodgrain background and text were originally created on separate layers, but they were merged into a single layer.

   c. Create a layer named **background-01-highlight** for the menu's highlight mask (optional).

The red areas represent portions of the menu where highlighting will be applied.

If your .psd file will use button-specific highlight mask images, you can omit this layer.

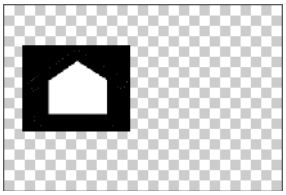
3. Create layers for your button images. In the sample menu, the house-shaped button on the left is **button-01**.
   a. Create a layer set named **button-01-group** (optional).
   b. Create a layer named **button-01-thumbnail** for the main button image (optional).



The simple magenta field represents the button's thumbnail image.

You can omit this layer if you plan to use the Media page in the Button Properties pane to assign a thumbnail. For example, you could use this method to use a title's video as an animated or still thumbnail.

   c. Create a layer named **button-01-thumbnailmask** for the button's mask image (optional). The mask determines which part of the thumbnail will be visible inside the button.

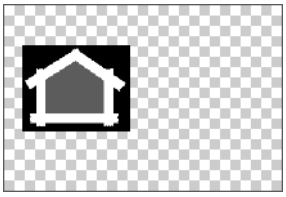


The white area represents the portion of the thumbnail that will be visible in the button. The black area sets the size of the button and represents the portion of the thumbnail that is masked to allow the menu background to show through.

   d. Create a layer named **button-01-frame** for the button's frame image (optional). The frame image is displayed around the button.

The button frame is a wood-textured pentagon that was created using several layers that were merged to a single layer.

   e. Create a layer named **button-01-framemask** for the frame's mask image (optional). The frame mask determines which portion of the frame image will be visible.



The white area represents the portion of the frame that will be visible. The black area matches the size of the button (established in step C above) and represents the portion of the button that is masked to allow the menu background to show through.

f. Create a layer named **button-01-highlight** for the button's highlight mask (optional). The highlight mask determines where highlighting will be applied when a button is selected or activated.

The **button-01-framemask** layer was duplicated and renamed to allow highlighting to be applied to the visible frame.

The white area represents the portion of the button that will be highlighted when the button is selected or activated. The gray area in the center will be partially highlighted.

If your .psd file will use a menu-specific highlight mask, you can omit this layer.

4. Repeat step 3 as needed, incrementing the ID for each button. In the sample menu, the house-shaped button on the right is **button-02**.
5. Create layers for navigation buttons as needed. In the sample menu, the arrow-shaped button in the bottom-right corner is **button-03-group**.

Note: *If you omit navigation button layers, empty buttons will be used.*

a. Create a layer set named **button-03-group** (optional).

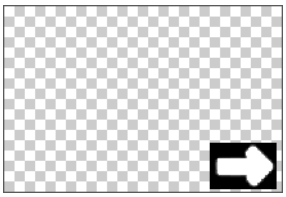
b. Create a layer named **button-03-thumbnail-next** for the main button image (optional).

Appending "next" to the end of the layer name tells DVD Architect Pro software that this layer is used for a next navigation button. Your menu could also include **button-03-thumbnail-up**, **button-03-thumbnail-back**, or **button-03-thumbnail-prev**.

The button is a wood-textured arrow that was created using several layers that were merged to a single layer.

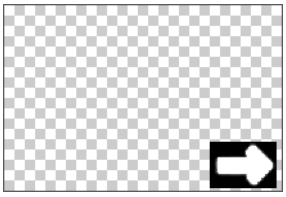
You can omit this layer if you plan to use the Media page in the Button Properties pane to assign a thumbnail. For example, you could use this method to use a title's video as an animated or still thumbnail.

c. Create a layer named **button-03-thumbnailmask-next** for the button's mask image (optional). The mask determines which part of the thumbnail will be visible inside the button.



The white area represents the portion of the thumbnail that will be visible in the button. The black area sets the size of the button and represents the portion of the thumbnail that is masked to allow the menu background to show through.

d. Create a layer named **button-03-highlight-next** for the button's highlight mask. The highlight mask determines where highlighting will be applied when a button is selected or activated.



The **button-03-thumbnailmask-next** layer was duplicated and renamed to restrict highlighting to the arrow.

The white area represents the portion of the button that will be highlighted when the button is selected or activated.

If your .psd file will use a menu-specific highlight mask, you can omit this layer.

Creating custom menus and buttons using single-layer graphics

You can create custom menus using your favorite graphics application. If the application does not support layers, use the following procedure.

1. Use your image-editing application to create your menu.
   a. Your image size should match the height of the output format frame size, and the width should include compensation for the output format's pixel aspect ratio.

Output Format	Aspect Ratio	Menu Size
4:3 NTSC (720 x 480)	.9091	655 x 480
Widescreen NTSC (720 x 480)	1.2121	873 x 480
4:3 PAL (720 x 576)	1.0926	787 x 576
Widescreen PAL (720 x 576)	1.4568	1049 x 576
1280 x 720	1.0	1280 x 720
1440 x 1080	1.3333	1920 x 1080
1920 x 1080	1.0	1920 x 1080

   b. Include the background, buttons, and text that you want to display in a single layer.
2. Create a highlight mask image to determine where highlighting will be applied when a button is selected or activated. *For more information, see Highlight masks on page 100.*
3. Add a menu to your project. *For more information, see Adding a submenu on page 35.*
4. Remove the default text from the menu.
5. Add your background image.
   a. Click the **Background Media** button on the Menu Page Properties pane.
   b. Select the **Video** control, click the down arrow button (), and choose **Replace** to browse to your custom background image.
   c. Select the **Stretch type** control, click the down arrow button (), and choose **Stretch to Fit**.
6. Add buttons to the menu.
   a. From the **Insert** menu, choose **Empty Button**.
   b. Select the Sizing tool (), click the new button's default text label, and press Delete.
   c. Using the Sizing tool, drag the empty button rectangle and drop it over a button image in your menu background.
   d. Drag the edges of the empty button with the Sizing tool (or use the controls on the Transformations page of the Button Properties pane) to resize the empty button so the entire button image is contained within the empty button's rectangle.

> **Note:** *If the button image extends beyond the empty button rectangle, button highlighting will be applied only to the portion of the button within the rectangle.*

   e. Click the **Action** button at the top of the Button Properties window and choose a menu or title from the **Destination** drop-down to set the button's target.

> **Note:** *If the title you want to use as a destination isn't part of your project yet, you can drag a media file from the Explorer window to the root of the Project Overview window to add it to your project without creating a button in the current menu.*

7. Repeat step 6 for each menu button.
8. Remove the default button highlighting.
   a. Select all the buttons in the workspace. Hold Ctrl or Shift while click to select multiple objects.
   b. Click the **Highlight** button at the top of the Button Properties pane.
   c. Choose **Custom** from the **Style** drop-down list.
   d. Choose **None** from the **Mask** drop-down list.
9. Apply your menu highlight mask.

a. Click the **Background Media** button at the top of the Menu Page Properties pane.

b. Select the **Highlight mask** box, click the down arrow button (), and choose **Replace** from the menu.

c. Browse to the file that you want to use.

d. Choose a setting from the **Highlight mask mapping** control to indicate how transparency is determined from the mask.

10. Choose the color sets that you want to use to highlight buttons on the menu when they are selected, activated, or inactive.

a. Click the **General** button at the top of the Menu Page Properties pane.

b. Choose a setting from the **Selected button colors** drop-down list to choose the color set that will be used to highlight buttons on the menu when they are selected using the arrow buttons on the remote control.

c. Choose a setting from the **Activated button colors** drop-down list to choose the color set that will be used to highlight the selected buttons on the menu when the user presses the Enter button on the remote control.

d. Choose a setting from the **Inactive button colors** drop-down list to choose the color set that will be used to highlight buttons on the menu when they are not selected.

Working with themes

A theme is a style sheet for a menu page. Each theme will include all pertinent information about the menu, including layout parameters (for example, button sizes, positioning, and spacing), font and text parameters, and graphics and audio information.

Applying themes

You can apply a theme to an entire project when you start the project, or you can apply themes to specific menu pages as you work. You use the **Themes** window at the bottom of the workspace to select and apply the themes. Once you apply a theme to a menu, the properties of the menu immediately change to those defined in the theme.

> **Note:** *To undo the application of a theme, click the* **Undo** *button ( ).*

Several themes are included for you to use in your projects. You can also create your own themes by editing an existing theme.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Double-click a theme in the **Themes** window to apply it to the selected menu.

> **Note:** *You can also apply a theme by dragging it from the Themes window to the workspace or by selecting the theme and clicking the* **Apply Theme** *button ( ).*

Applying a theme's alignment to menu objects

You can automatically align menu objects when adding media to a menu.

Select the **Double-clicking files in the Explorer reapplies theme layout** check box on the **General** tab of the Preferences dialog if you want to automatically realign objects according to the current theme when you double-click media files in the Explorer. When you double-click a file, the new file is added, and the objects are realigned on the menu.

When the check box is cleared, the media files are added to the menu and existing object positions are preserved.

From the **Edit** menu, choose **Reapply Theme Layout** to realign objects at any time.

Deleting a theme

1. In the Themes window, select the theme that you would like to delete.

> **Note:** *Default DVD Architect Pro themes or themes used in your project cannot be deleted.*

2. Click the **Delete Theme** button ( ). A warning dialog is displayed asking you to confirm your theme deletion.
3. Click the **Yes** button to continue.

Creating custom themes

To create your own theme, you'll need an understanding of XML.

Themes are installed into the following folders:

- Windows XP: C:\Documents and Settings\Your Username\Application Data\Sony\DVD Architect\5.2\Themes
- Windows Vista: C:\Users\Your Username\AppData\Roaming\Sony\DVD Architect Pro\5.2\Themes

Each theme is saved as a .thm file, which is essentially a .zip file that contains the theme's XML file and media.

> **Note:** *In previous versions of DVD Architect Pro, themes were installed in a subfolder below the program folder. However, not all users could access the Program Files folder and the theme information. With the current folder location, if two or more people are using DVD Architect Pro from the same computer the theme information will be duplicated.*

The easiest way to create your own themes is to work on a copy of an existing theme.

1. Create a copy of the theme you want to modify and rename the file.
2. Open the .thm file in a program such as WinZip® and extract the files to a working folder.
3. Edit the theme's files as necessary:
   - You must change the <NAME> tag in the <THEME-INFORMATION> section to a unique name for the theme. Otherwise, your theme will not be detected.
   - Change the <AUTHOR>, <COPYRIGHT>, and <ABOUT> tags as well with your own information.
   - The default.xml file contains all information about the layout, including button positioning/spacing, font, text, graphics, and audio information. Do not rename this file. Check all tags and references in this file prior to saving, because any errors or mistakes will cause your theme to go undetected.
   - The media files in the theme are used for button and menu graphics, backgrounds, and audio. You can use any file format that DVD Architect Pro software supports, including .bmp, .png, .jpg, .gif, .avi, and .wav.
4. Resave the .zip file, renaming it to a .thm file, in the themes subfolder below the program folder. The new theme will be detected the next time you start the program and displayed in the **Themes** tab.

Warning: *If there are any mistakes or missing files referenced in the default.xml file, the theme will not load.*

Exporting menu as a theme

Have you created a menu that you would like to use over and over, but don't have time to create it time and time again? If your answer is yes, then we have a solution for you! You can now save the characteristics of a menu — such as background video or audio; button positions; sizes, shapes, and text fonts; and formatting — and add them to the Themes window for use at any time.

You can design your own menu or work on a copy of an existing menu and then export it as a theme.

Note: *The Buttons window will only display buttons that are defined in the grid theme type.*

Learning about positional and grid themes

When you export a menu as a theme using the simple view, the theme is exported as a positional theme. If you click the Advanced button, you can choose to export a grid-based theme, which gives you more control over the elements in the theme.

Refer to the following table for details about the data that each theme stores:

Theme Type		Theme Elements
Positional	Grid	
X	X	menu title (including text, color, position, size and text properties)
X	X	menu length
X	X	menu loop point
X	X	color set information for selected, activated, and inactive buttons
X	X	information about effects (cropping, brightness, contrast, and colorization for each saved graphical element)
X		text and graphics with the menu
X	X	information about buttons (size, position, image media, text, text properties, image and text layout)
	X	grid layout information
X	X	reduce interlace flicker setting
	X	background video, audio media, and highlight mask images and settings

Working with positional themes

Applying a positional theme

When applying a positional theme, items on the menu display exactly as defined in the current theme.

Applying a positional theme type will operate differently depending on whether or not buttons currently exist on the menu to which the theme is being applied.

- If no buttons exist, then all buttons from the theme are added, sized, and positioned as defined in the theme.
- If one or more buttons exist, then the buttons are updated based on their matches in the theme. However, if there are more buttons on the menu than the number defined in the theme, then the extra buttons on the menu will not change.

Text and graphical elements will be updated based on the theme:

- If more text or graphical elements exist on the menu than are defined in the theme, then extra elements will not be updated.
- If fewer text or graphical elements exist on the menu than are defined in the theme, then extra elements will be added.

Exporting as a positional theme

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu that you want to use to create your theme.
2. From the **File** menu, choose **Export Menu as Theme**. The Export Menu as Theme dialog is displayed.

Tip: *In the workspace, right-click the menu and choose* **Export Menu as Theme**.

3. In the **Name** box, type a name for the theme.

> **Note:** *Your theme name can have no more than 16 characters, including spaces.*

4. Click the **Save** button. The Themes window is refreshed and your theme is added.

Working with grid themes

Applying a grid theme

When applying a grid them, existing buttons are repositioned and resized on the menu to display in a row and column format.

> **Note:** *No buttons are added or deleted.*

Saving a grid theme

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu that you want to use to create your theme.
2. From the **File** menu, choose **Export Menu as Theme**. The Export Menu as Theme dialog is displayed.

> **Tip:** *In the workspace, right-click the menu and choose* **Export Menu as Theme**.

3. In the **Name** box, type a name for the theme.

> **Note:** *Your theme name can have no more than 16 characters, including spaces.*

4. Click the **Advanced** button to modify theme specifications.
5. Select **Theme type**, click the down arrow button (▼), and choose **Grid** from the drop-down list.
6. Edit your grid layout properties. *For more information, see Modifying grid layout properties on page 111.*
7. Click the **Save** button. The Themes window is refreshed and your theme is added.

Modifying grid layout properties

Select the specific property, click the down arrow button (▼), and choose a setting from the drop-down list.

> **Tip:** *If you want to view changes in the workspace as you edit the properties, select the* **Preview changes** *check box.*

Orientation

Specifies the button arrangement within the grid.

Item	Description
Horizontal	Arranges buttons horizontally. 1 2 3 4 5 6
Vertical	Arranges buttons vertically. 1 3 5 2 4 6

Horizontal alignment

Specifies the horizontal alignment for all buttons that are non-navigational in the menu.

Item	Description
Left	Horizontally aligns buttons to the left of the cells in the grid.
Center	Horizontally aligns buttons to the center of the cells in the grid.
Right	Horizontally aligns buttons to the right of the cells in the grid.

Vertical alignment

Specifies the vertical alignment for all buttons that are non-navigational in the menu.

Item	Description
Top	Vertically aligns buttons to the top of the cells in the grid.
Center	Vertically aligns buttons to the center of the cells in the grid.
Bottom	Vertically aligns buttons to the bottoms of the cells in the grid.

Margin

Allows you to specify the left, right, top and bottom margins of the grid for button placement.

Item Spacing

Allows you to specify the horizontal and vertical spacing between items.

Item, Next, Previous and Up Button

Click the expand button (⊞) button to the left of the **Item Button**, **Next Button**, **Previous Button** and **Up Button** and edit the appropriate property settings.

Item	Description
Button rectangle	Allows you to specify the **Left**, **Right**, **Top** and **Bottom** position of the button.
Image rectangle	Allows you to specify the **Left**, **Right**, **Top** and **Bottom** position of the image related to the button.
Text rectangle	Allows you to specify the **Left**, **Right**, **Top** and **Bottom** position of the text related to the button.
Button style	Allows you to select how the buttons will display on your menus. **Text only:** Displays a text-only link. **Image only:** Displays only a graphical button. **Text and image:** Displays a graphical button with a text label.

Chapter 11 The Properties Window

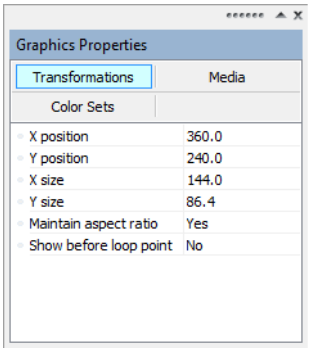
From the **View** menu, choose **Properties** to show or hide the Properties window.

The Properties window gives you total control over menu and object settings.

Note: *The contents of the Properties window will vary depending on the current selection: if you have a graphical element selected in the workspace, Graphics Properties are displayed; if you have a music/video compilation selected, Music/Video Compilation Properties are selected; and so on.*

Graphics Properties

The Graphics Properties pane in the Properties window allows you to adjust the position, size, and appearance of graphical elements on a menu or compilation.



To edit the graphic's properties, perform the following steps:

1. Select a graphic with the Selection tool ( ) or Sizing tool ( ).
2. Click the property button that you would like to edit.
3. Select the specific property, click the down arrow button ( ) and choose a setting.

The following sections describe the controls under each heading in the Graphics Properties pane.

Transformations

Item	Description
X position **Y position**	Edit the **X position** and **Y position** values to change the center of the selected graphic's position. These coordinates are based on the frame size of your project. For example, if you're creating an NTSC project with a frame size of 720x480, (0,0) is the top-left corner of the frame, and (720,480) is the lower-right corner. Perform any of the following to change the setting: • Select the number and type a new value. • Use the spin controls to adjust the value. • Select the value and click the down arrow button ( ) to display a slider that you can use to adjust the value.
X size **Y size**	Edit the **X size** and **Y size** values to change the size of the selected graphic. Perform any of the following to change the setting: • Select the number and type a new value. • Use the spin controls to adjust the value. • Select the value and click the down arrow button ( ) to display a slider that you can use to adjust the value.
Maintain aspect ratio	Select the **Maintain aspect ratio** box, click the down arrow button ( ), and choose **Yes** from the drop-down list if you do not want an image to be stretched when you change the height or width.
Show before loop point	Specifies whether the selected item is displayed before the menu's specified loop point. *For more information, see Setting loop points on page 40.*

Media

The controls on the Media page determine the image displayed for a graphical element and adjust its appearance.

You can use still images or video files as graphics. If you use a video file, you can choose to display a static frame, or you can animate the graphic by playing the video.

Item	Description
Object Media	Displays the path to the current media file. Select the control and click the down arrow button ( ) to display a menu, where you can choose a file, view media properties, crop and adjust media settings, remove the current file, or open it in a graphics editor. **Tip:** *To change a file quickly, drag a file from the Explorer window to the* **Object Media** *box.*
Start time	Select the **Start time** box, click the down arrow button ( ), and drag the slider (or type a value in the box) to indicate which frame is displayed (for a still image) or the frame at which playback will begin (for an animated graphic).
Style	Select the **Style** box, click the down arrow button ( ), and choose a command from the menu to indicate whether you want to display a still image or animated graphic.

Color Sets

Color sets determine which colors are used to indicate selected, activated, and inactive buttons on your menu page.

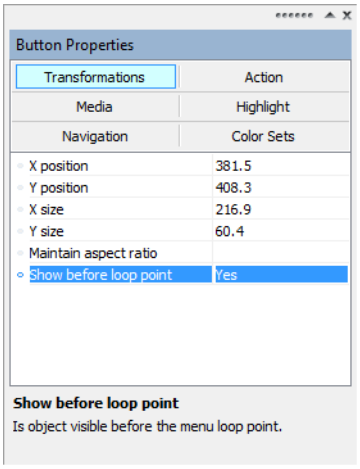
You can have four project-wide color sets that are available to every menu page in your project, and each menu page in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

Use the Color Sets page to edit the color sets that will be available for the selected menu, and then use the General page in the Menu Page Properties pane to choose which color sets are used for the selected, activated, and inactive buttons on your menu.

For more information, see Using color sets on page 44.

Button Properties

The Button Properties pane in the Properties window is available when you have a button selected in the workspace. Use these controls to change the appearance, behavior, and navigation settings for the selected button.



To edit the button's properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Select a button with the Selection tool ( ), Sizing tool ( ), or Navigation tool ( ).
3. Click the property button that you would like to edit.
4. Click the specific property, click the down arrow button ( ), and choose a setting from the drop-down list.

The following sections describe the controls under each heading in the Button Properties pane.

Transformations

Item	Description
X position **Y position**	Edit the **X position** and **Y position** values to change the center of the selected button's position. These coordinates are based on the frame size of your project. For example, if you're creating an NTSC project with a frame size of 720x480, (0,0) is the top-left corner of the frame, and (720,480) is the lower-right corner. Perform any of the following to change the setting: • Select the number and type a new value. • Use the spin controls to adjust the value. • Select the value and click the down arrow button ( ) to display a slider that you can use to adjust the value.
X size **Y size**	Edit the **X size** and **Y size** values to change the size of the selected button. Perform any of the following to change the setting: • Select the number and type a new value. • Use the spin controls to adjust the value. • Select the value and click the down arrow button ( ) to display a slider that you can use to adjust the value.
Maintain aspect ratio	Select the **Maintain aspect ratio** box, click the down arrow button ( ), and choose **Yes** from the drop-down list if you do not want the button image to be stretched when you change the height or width.
Show before loop point	Select the **Show before loop point** box, click the down arrow button ( ), and choose **Yes** from the drop-down list if you want the button to be displayed before a menu's loop point. By default, buttons are not displayed before playback reaches the set loop point.

Action

The controls on the Action page determine what happens when a user selects a button on your menu.

Tip: *Use the* **Set audio track** *and* **Set subtitle track** *controls to create language-selection menus.*

Item	Description
Command	Determines the button's behavior. • **Link** You can link to any menu, media file, and chapter point. Use the **Destination**, **Destination chapter**, **Destination item**, or **Destination button** controls to set the target. • **Stop** The button will halt playback of the current title. • **Resume** The button will resume playback of the current title from the point when a Menu button was selected. If the title specified in the **Destination** control is not the last title played, playback will begin at the start.
Destination	When **Link** is selected in the **Command** drop-down list, choose the menu, title, playlist, or DVD script that will be displayed when the button is activated. When **Resume** is selected in the **Command** drop-down list, choose the video, picture compilation, or music/video compilation that will resume playback when the button is activated. **Note:** *Scripting is not available for Blu-ray Disc projects.*
Destination chapter **Destination item**	When your button links to a video, music/video compilation, picture compilation, or playlist, choose the specific chapter that will be displayed. When your button links to a menu, choose **Start** or **Loop Point** to indicate the point from which the menu will be played. *For more information, see Setting loop points on page 40.*
Destination button	When your button links to a menu, choose the button you want to use as the default selected button in the destination menu. If you choose **Default**, the first button listed under the menu in the Project Overview window is used as the default.
Set audio track	Choose a setting from the drop-down list to choose which audio track will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set audio track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty audio tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding audio tracks on page 87.*
Set subtitle track	Choose a setting from the drop-down list to choose which subtitle track will be played in a destination title. Choose **Off** to turn subtitles off, or choose **No change** to use the last-set track. **Note:** *If you use the* **Set subtitle track** *control to change the subtitle track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty subtitle tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding a subtitle track on page 90.*

Item	Description
Set video angle	Choose a setting from the drop-down list to choose which video angle will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set video angle** *control to change the video angle, the new angle will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the angle.*
Auto-activate	Choose **Yes** or **No** from the drop-down list to indicate whether you want the button action to be performed automatically when the button is selected: • When **Yes** is selected, the user doesn't need to press the Enter button on the remote control. • When **No** is selected, the user will select a button with the arrow buttons on the remote control and then press the Enter button to activate it.

Media

The controls on the Media page determine the image and mask files used to display buttons and adjust the appearance of the images.

You can use still images or video files as thumbnails. If you use a video file, you can choose to display a static image, or you can animate the button by playing the video.

Item	Description
Button style	Select the box, click the down arrow button (), and choose a command from the drop-down list to determine how the button is displayed on your menu: • **Text only** The button is displayed as a text-only link. • **Image only** The button is displayed as a graphical button only. • **Text and image** The button is displayed as a graphical button with a text label.
Thumbnail Media	Displays the path to the current thumbnail file. Select the control and click the down arrow button () to display a menu, where you can choose a file, view Media Properties, crop and adjust media settings, remove the current file, open the file in your selected graphics editor, or explore the file's containing folder on your drive. **Tips:** • *To change a file quickly, drag a file from the Explorer window to the* **Thumbnail Media** *box.* • *Click to position the cursor on a specific frame in the Timeline window, right click the title's icon in the Project Overview window, and choose* **Set Thumbnail from View** *from the shortcut menu to set the button's thumbnail to a specific frame in the source media file.*
Layer	If the current thumbnail file uses layers, you can choose to display a single layer or the combined layers for your thumbnail image. **1.** Click the expand button () next to the **Thumbnail Media** heading to expand the controls. **2.** Select the **Layer** box and click the down arrow button (). **3.** Choose a layer from the drop-down list. If you want to display the combined layers, choose **Composited layer**.
Mask	Displays the path to the current mask file. A thumbnail mask determines which portion of the thumbnail will be visible. Select the control and click the down arrow button () to display a menu, where you can choose a mask file, view Media Properties, crop and adjust media settings, or remove the current file. *For more information, see Creating custom masks on page 97.*

Item	Description
Layer	If the current mask file uses layers, you can choose to use a single layer or the combined layers as a mask for your thumbnail image. **1.** Click the expand button (⊞) next to the **Mask** heading to expand the controls. **2.** Select the Layer box and click the down arrow button (▾). **3.** Choose a layer from the drop-down list. If you want to use the combined layers as a mask, choose **Composited layer**.
Start time	If you're using an animated file as a thumbnail, the **Start time** setting determines the point at which playback will start in the animated button. If you want to display a single frame from an animated file as a static image, the **Start time** setting determines which frame is displayed. To change the start time, select the box and type a new setting or select the box and click the down arrow button (▾) to display a slider that you can use to adjust the setting.
Style	Determines whether the button is displayed as a still image or an animated button: • **Still** Choose **Still** to display a static image in the button. If your thumbnail file is animated, the **Start time** setting determines which frame is displayed. • **Animated** The animated thumbnail file is played in the button frame.
Frame Media	Displays the path to the current frame image file. Select the control and click the down arrow button (▾) to display a menu, where you can choose a file, view Media Properties, crop and adjust media settings, or remove the current file.
Layer	If the current frame file uses layers, you can choose to display a single layer or the combined layers for your thumbnail image. **1.** Click the expand button (⊞) next to the **Frame Media** heading to expand the controls. **2.** Select the **Layer** box and click the down arrow button (▾). **3.** Choose a layer from the drop-down list. If you want to display the combined layers, choose **Composited layer**.
Mask	Displays the path to the current mask file. A frame mask determines which portion of the frame will be visible. Select the control and click the button to display a menu, where you can choose a file, view Media Properties, crop and adjust media settings, or remove the current file. *For more information, see Creating custom masks on page 97.*
Layer	If the current mask file uses layers, you can choose to use a single layer or the combined layers as a mask for your thumbnail image. **1.** Click the expand button (⊞) next to the **Mask** heading to expand the controls. **2.** Select the Layer box and click the down arrow button (▾). **3.** Choose a layer from the drop-down list. If you want to use the combined layers as a mask, choose **Composited layer**.
Start time	If you're using an animated file as a button frame, the **Start time** setting determines the point at which playback will start in the animated frame. If you want to display a single frame from an animated file as a static button frame, the **Start time** setting determines which frame is displayed. To change the start time, select the box and type a new setting or select the box and click the down arrow button (▾) to display a slider that you can use to adjust the setting.
Style	Determines whether the frame is displayed as a static image or an animated frame: • **Still** Choose **Still** to display the frame as a static image. If your frame file is animated, the **Start time** setting determines which frame is displayed. • **Animated** The animated file is played as the button frame.

Highlight

Note: *Animated button highlights are not supported. If a button has keyframe animation applied, button highlighting is not animated or may not be visible when you burn your project. You will see the button highlighting when you preview your DVD Architect Pro project but not after it is burned. For more information, see* *Crop and video effects keyframes on page 48*.

Item	Description
Style	Highlight controls determine the appearance of a button when it is selected and activated. • **Rectangle** Displays a colored rectangle over the button's text and image. • **Mask overlay** Highlights the button's text and image. • **Text rectangle** Displays a colored rectangle around the button text. • **Image rectangle** Displays a colored rectangle around the button image. • **Text mask overlay** Highlights the button text. • **Image mask overlay** Highlights the button image. • **Underline** Displays an underline under the button. • **Custom** Allows you to specify a custom highlighting mask image and transparency style.
Mask	If you selected **Custom** from the **Style** menu, select the **Mask** box and click the down arrow button ( ) to display a menu where you can choose a mask file, view media properties, crop and adjust media settings, remove the current file, or open in a graphics editor.
Layer	If the current mask file uses layers, you can choose to display a single layer or the combined layers for your mask. **1.** Click the expand button ( ) next to the **Mask** heading to expand the controls **2.** Select the **Layer** box and click the down arrow button ( ). **3.** Choose a layer from the drop-down list. If you want to display the combined layers, choose **Composited layers**.
Mask mapping	To specify how transparency is determined from the mask, select the **Mask mapping** control, click the down arrow button ( ), and choose a setting from the drop-down list.
	Transparency Maps the alpha channel of the button highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list on the General page of the Menu Page Properties pane. The most opaque pixels (those with alpha values of 192 to 255) are mapped to the color set's fill color (color 1), and the most transparent pixels (those with alpha values of 0 to 63) are mapped to the color set's transparent color (color 4). *For more information, see* *Using color sets on page 44*.
	Intensity Maps the average pixel intensity of the button highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list. The lightest pixels (those with an average intensity of 192 to 255) are mapped to the color set's fill color (color 1), and the darkest pixels (those with an average intensity of 0 to 63) are mapped to the color set's transparent color (color 4). *For more information, see* *Using color sets on page 44*.

Item	Description	
	Color channel	Maps the color channels in the button highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list. A pixel containing any red channel component uses the color set's fill color (color 1), a pixel containing any green channel component uses the color set's anti-alias color (color 2), a pixel containing any blue component uses the color set's outline/background color (color 3), and a completely black pixel uses the color set's transparent color (color 4). *For more information, see Using color sets on page 44.*

Navigation

The controls on the Navigation page determine which button is selected when you use the Up, Down, Left, and Right buttons on your DVD or Blu-ray Disc remote control.

Item	Description
Left	Select the box and choose a command from the menu to determine which button is selected when you press the corresponding button on your remote control. Choose **Auto** if you want the software to automatically determine navigation based on button layout.
Right	
Up	
Down	

Tip: *You can also use the navigation tool to view and edit button navigation. For more information, see The Navigation tool on page 58.*

Color Sets

Color sets determine which colors are used to indicate selected, activated, and inactive buttons on your menu page.

You can have four project-wide color sets that are available to every menu page in your project, and each menu page in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

Use the Color Sets page to edit the color sets that will be available for the selected menu, and then use the General page in the Menu Page Properties pane to choose which color sets are used for the selected, activated, and inactive buttons on your menu. *For more information, see Using color sets on page 44.*

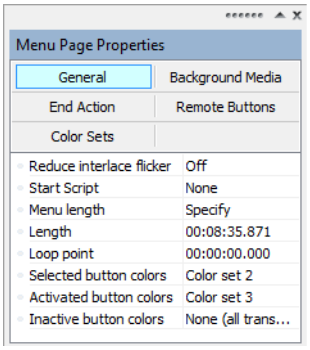
Button Region

The button region control allows you to set the highlight colors for buttons within button regions on the timeline. *For more information, see Inserting buttons-on-video markers on page 76.*

Item	Description
Selected button colors	Select the down arrow button (▾) and choose a color set that will be used to display the sel ected button on a page. Choose **None** if you do not want to use color sets to display button highlighting.
Activated button colors	Select the down arrow button (▾) and choose a color set that will be used to display the selected button when you press **Enter** on the DVD or Blu-ray Disc remote control to activate it. Choose **None** if you do not want to use color sets to display button highlighting.
Default colors	Select the down arrow button (▾) and choose a color set that will be used to display unselected buttons on the menu. Choose **None** if you do not want to use color sets to display button highlighting.
Use subtitle colors	If there are buttons placed in a graphic subtitle, you can set the color of the unselected buttons. Select the down arrow button (▾) and choose **No** if you do not want to use color sets for unselected buttons. Select **When available** if a color set has been designated for the subtitle.

Menu Page Properties

The Menu Page Properties pane in the Properties window allows you to adjust the length, background media, end actions, and remote control button behavior for the selected page.



To edit the menu's properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Click the property button that you would like to edit.
3. Click the specific property, click the down arrow button (▾), and choose a setting from the menu.

The following sections describe the controls under each heading in the Menu Page Properties pane.

General

Item	Description
Reduce interlace flicker	Choose a setting from the drop-down list to turn flicker reduction on or off. Turn flicker reduction on when using still images that contain horizontal lines.
Start script	If you have already created at least one DVD script in your project, select the Start Script box, click the down arrow button (▾), and choose the script that will be played when the music/video compilation is accessed. **Note:** *Scripting is not available for Blu-ray Disc™ projects.*
Menu length	A menu's length determines how much time is available for animated menu objects. For example, if your menu length is 30 seconds, an animated button could display up to 30 seconds of video. Choose a setting from the **Menu length** drop-down list: • When **Auto calculate** is selected, the software will determine the menu length based on the background audio, video, and button animations. • When **Specify** is selected, you can type a number in the **Length** box or click the down arrow button (▾) to display a slider you can use to match the length of the background video if one exists. **Note:** *If you type a value in the* **Length** *box that is longer than the background video, the background video will end, and any animated thumbnails will continue to play until the end of the menu. If you want the menu to loop smoothly when your menu duration is longer than the video, create a new background video that matches the desired menu length.*
Length	If you chose **Specify** from the **Menu length** drop-down list, select the box and type a number in the box (or click the down arrow button (▾) to display a slider you can drag) to set the length of the menu.

Item	Description
Loop point	Choose a setting from the drop-down list or drag the slider to set the point at which buttons will be displayed and when looped playback will begin. You can also apply keyframe animation to buttons before the loop point. The loop point is shown with a green marker in the Timeline window. *For more information, see Crop and video effects keyframes on page 48.* **Note:** *If the menu's end action is not set to* **Loop**, *the menu loop point will set the point at which buttons are displayed, but the menu will not loop.*
Selected button colors	Choose a color set that will be used to display the selected button on a page. Choose **None** if you do not want to use color sets to display button highlighting.
Activated button colors	Choose a color set that will be used to display the selected button when you press Enter on the DVD or Blu-ray Disc remote control to activate it. Choose **None** if you do not want to use color sets to display button highlighting.
Inactive button colors	Choose a color set that will be used to display unselected buttons on the menu. Choose **None** if you do not want to use color sets to display button highlighting. **Note:** *The* **Inactive button colors** *control must be set to* **None** *for Blu-ray Disc projects.*

Background Media

Background media plays in the background of a menu when it is displayed. You can choose to use no background media, the media associated with the menu's current theme, or specific audio and/or video files.

Notes:

- *When using background video in DVD menus, we recommend rendering the video in progressive-scan format before adding it to your project. Leave the* **Progressive** *setting at* **Auto**, *and the noncompliant menu will be rendered as progressive-scan video. Progressive-scan menus will provide the sharpest-looking text and highest level of DVD player compatibility.*

  If you need to use interlaced video as a menu background, choose **No** *from the menu. When you choose* **No**, *the noncompliant menu will be rendered as interlaced video.*

  Some DVD players will not display the last frame of a menu correctly when using interlaced background video.
- *When creating Blu-ray Disc projects, menus must match the field order set by your project's video format.*

Item	Description
Video	The **Video** box displays the path to the background video file that will be used in the menu. Select the control and click the down arrow button (▾) to display a menu, where you can choose a file, view media properties, crop and adjust media settings, remove the current file, open the file in your selected graphics editor, or explore the file's containing folder on your drive. **Tips:** • *To change a file quickly, drag a file from the Explorer window to the* **Video** *box.* • *If you use a background video in your menu, we recommend rendering the video in progressive-scan format before adding it to your project. On the Video tab of the Optimize Disc dialog, click the* **Progressive** *box and choose* **Auto** *to render the noncompliant menu as progressive-scan video. Progressive-scan menus will provide the sharpest-looking text and highest level of DVD and Blu-ray Disc player compatibility.* *If you need to use interlaced video as a menu background, click the* **Progressive** *box and choose* **No**. *When you choose* **No**, *the noncompliant menu will be rendered as interlaced video.* **Warning:** *Some players will not display the last frame of a menu correctly when using interlaced background video.*

Item	Description
Layer	If the current background video is a still image that uses layers, you can choose to display a single layer or the combined layers for your menu background. **1.** Click the expand button (⊞) next to the **Video** heading to expand the controls **2.** Select the **Layer** box and click the down arrow button (▾). **3.** Choose a layer from the drop-down list. If you want to display the combined layers, choose **Composited layers**.
Audio	The **Audio** box displays the path to the background audio file that will be used in the menu. Select control and click the down arrow button (▾) to display a menu, where you can choose a file, view media properties, or remove the current file.
Highlight mask	If you want to apply a mask to your menu to define highlighting for selected and inactive buttons, select the **Highlight mask** control and click the down arrow button (▾) to display a menu, where you can choose a file, view media properties, crop and adjust media settings, or remove the current file. The menu highlight mask and button highlight mask are combined, and the **Selected button colors**, **Activated button colors**, or **Inactive button colors** color set is applied to the masked area for each button depending on its current state. *For more information, see Creating custom masks on page 97.*
Layer	If the highlight mask image uses layers, you can choose to use a single layer or the combined layers for your highlight mask. **1.** Click the expand button (⊞) next to the **Highlight mask** heading to expand the controls. **2.** Select the **Layer** box and click the down arrow button (▾). **3.** Choose a layer from the drop-down list. If you want to use the combined layers, choose **Composited layer**.
Highlight mask mapping	To specify how transparency is determined from the mask, select the **Highlight mask mapping** control, click the down arrow button (▾), and choose a setting from the drop-down list.
	Transparency Maps the alpha channel in the menu highlight mask to the four colors used in the color set selected in the **Selected button colors**, **Activated button colors**, or **Inactive button colors** drop-down list. The most opaque pixels (those with alpha values of 192 to 255) are mapped to the color set's fill color (color 1), and the most transparent pixels (those with alpha values of 0 to 63) are mapped to the color set's transparent color (color 4). *For more information, see Using color sets on page 44.*
	Intensity Maps the average pixel intensity of the menu highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list. The lightest pixels (those with an average intensity of 192 to 255) are mapped to the color set's fill color (color 1), and the darkest pixels (those with an average intensity of 0 to 63) are mapped to the color set's transparent color (color 4). *For more information, see Using color sets on page 44.*
	Color channel Maps the color channels in the menu highlight mask to the four colors used in the color set selected in the **Selected button colors** or **Activated button colors** drop-down list. A pixel containing any red channel component uses the color set's fill color (color 1), a pixel containing any green channel component uses the color set's anti-alias color (color 2), a pixel containing any blue component uses the color set's outline/background color (color 3), and a completely black pixel uses the color set's transparent color (color 4). *For more information, see Using color sets on page 44.*

Item	Description
Stretch type	Select the box, click the down arrow button (▾), and choose a setting from the drop-down list to indicate how background video or images will be scaled to fit the menu page. • **Letterbox** The background media fills the width of the menu, and black letterboxing bars are displayed above and below or to the right and left as needed. • **Zoom to fit** The background is magnified to fill the menu. If the aspect ratio of the image doesn't match your project's aspect ratio, the image will extend beyond the screen. • **Stretch to fit** The background is stretched horizontally and vertically to fill the menu. If the aspect ratio of the image doesn't match your project's aspect ratio, the image will be distorted.

End Actions

A menu's end action determines what happens at the end of the menu if a user doesn't select a button.

Item	Description
Command	Determines what happens after the menu plays once. • **Loop** The menu will play continuously, repeating playback from the loop point until the user activates another button. Menu buttons are not displayed until playback reaches the loop point. If you want the menu to loop smoothly, ensure the background video length matches the menu length. • **Hold** The menu will play once and then display a static menu until the user activates another button. • **Activate button** The button you specify will be activated after the time set by the **Timeout** control has passed if the user hasn't activated another button. You can use this setting to automatically stop or resume playback or display another menu page or title if the user doesn't choose another action within a set time.
Timeout	When **Activate button** is selected in the **Command** drop-down list, the button you choose will be activated if the user doesn't choose another action before the timeout duration has passed. To change the duration, select the box and type a new setting or select the box and click the down arrow button (▾) to display a slider that you can use to adjust the setting. If the **Timeout** setting is longer than the menu length, the last frame is held until the timeout duration.
Button	When **Activate button** is selected in the **Command** drop-down list, choose the button you want to activate if the user hasn't activated another button before the **Timeout** duration has passed. Choose **Selected** if you want to activate the user's currently selected button.

Remote Buttons

For each menu, you can allow or suspend operation of individual buttons on the DVD or Blu-ray Disc remote control. Turning buttons on or off helps to ensure the viewer will see your project as you intended it.

For example, you can use the **Remote Buttons** controls to prevent the user from navigating away from the menu before it's finished playing.

To turn each button on or off, select the box, click the down arrow button (▾), and choose **On** or **Off** from the drop-down list.

Note: *When* **Off** *is selected from the menu, the button is not available.*

Item	Description
Title play	Allows the user to press the Title button on the remote to skip to a specific video, music/video compilation, or picture compilation.
Stop	Allows the user to press the Stop button on the remote to stop the disc.
Time/chapter search	Allows the user to press the Time button on the remote to skip to a specific play time or chapter.
Previous/up	Allows the user to press the Previous/Up button on the remote to navigate to the previous chapter or menu page.

Item	Description
Next	Allows the user to press the Next button on the remote to navigate to the next chapter or menu page.
Fast scan	Allows the user to press the Fwd button on the remote to seek forward through a video, music/video compilation, or picture compilation.
Backward scan	Allows the user to press the Rev button on the remote to seek backward through a video, music/video compilation, or picture compilation.
Top menu	Allows the user to press the Menu button on the remote to navigate to the top menu of the disc.
Menu	These controls are not available for menu pages.
Resume	Allows the user to press the Resume (Menu) button on the remote to resume playback of a title after exiting it by pressing the Menu button.
Button navigation	Allows the user to press the Up, Down, Left, and Right buttons on the remote to navigate between menu buttons.
Pause	Allows the user to press the Pause button on the remote to temporarily suspend playback.
Audio track change	Allows the user to press the Audio button on the remote to choose which audio track is played. **Note:** *Choose* **No Change** *to use the last-set track.*
Subtitle track change	Allows the user to press the Subtitle button on the remote to choose which subtitle track is displayed. **Note:** *Choose* **No Change** *to use the last-set track.*
Video angle change	Allows the user to press the Angle button on the remote to choose which video track is played.
Video mode	Allows the user to press the Video Mode button on the remote to switch widescreen, letterboxed, and pan-and-scan presentation in a 16:9 video.

Fixing button navigation

If your DVD or Blu-ray Disc remote Next button goes to the next title instead of the next chapter or if the Previous button doesn't navigate to the previous title in a playlist, then you will need to turn off **Title play**.

1. In the Project Overview window, double-click the title that you want to edit.
2. In the Properties window, click the **Remote Buttons** button.
3. Select **Title play** and choose **Off** from the drop-down menu.

Tip: *You can use the Order Titles dialog to make the title order match the playlist order. For more information, see* *Editing title order on page 38**.*

Color Sets

Color sets determine which colors are used to indicate selected, activated, and inactive buttons on your menu page.

You can have four project-wide color sets that are available to every menu page in your project, and each menu page in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

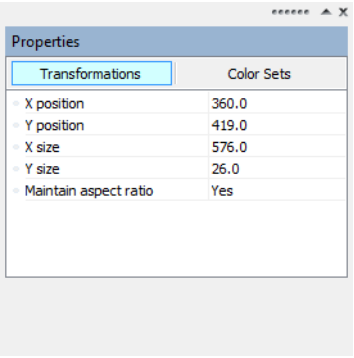
Use the Color Sets page to edit the color sets that will be available for the selected menu, and then use the General page to choose which color sets are used for the selected, activated, and inactive buttons on your menu.

Note: *In Blu-ray Disc projects, color sets are not supported for inactive buttons.* **None (all transparent)** *must be chosen from the* **Inactive button colors** *drop-down list.*

For more information, see Using color sets on page 44.

Subtitle Properties

You can use the Properties window to adjust subtitle text positions and adjust which color set is used to draw subtitle text. You can choose which color set is used for each subtitle event independently.



To edit subtitle properties, perform the following steps:

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Select a subtitle event in the Timeline window or a text box in the workspace. The Properties window will display different controls depending on your current selection.
3. Click the specific control, click the down arrow button (), and choose a setting from the drop-down list.

The following sections describe the controls under each heading in the Subtitle Properties pane.

Transformations

The Transformations page is displayed in the Properties window when you select a subtitle text box in the workspace.

Item	Description
X position **Y position**	Edit the **X position** and **Y position** values to change the center of the selected text box's position. These coordinates are based on the frame size of your project. For example, if you're creating an NTSC DV project with a frame size of 720x480, (0,0) is the top-left corner of the frame, and (720,480) is the lower-right corner. • Select the number and type a new value. • Use the spin controls to adjust the value. • Select the value and click the down arrow button () to display a slider that you can use to adjust the value.
X size **Y size**	Edit the **X size** and **Y size** values to change the size of the selected text box. • Select the number and type a new value. • Use the spin controls to adjust the value. • Select the value and click the down arrow button () to display a slider that you can use to adjust the value.
Maintain aspect ratio	Select the **Maintain aspect ratio** box, click the down arrow button (), and choose **Yes** from the drop-down list if you do not want the text to be stretched when you change the height or width of the text box.

Subtitle Event

The Subtitle Event page is displayed in the Properties window when you select a subtitle event in the Timeline window.

Choose a setting from the **Colors** drop-down list to assign a color set to the selected subtitle events.

You can create a custom color set for each title in your project using the Color Sets page in the Media Properties window.

Note: *Subtitle events are drawn over the entire screen. If the color set's transparent color is not fully transparent, the screen will be tinted.*

Color Sets

Color sets determine which colors are used to display subtitles.

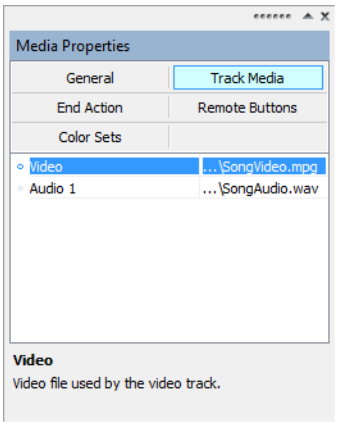
You can have four project-wide color sets that are available to every menu page in your project, and each title in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

Use the Color Sets page to edit the color sets that will be available for the selected title, and then use the Subtitle Event page to choose which color sets are used for the current subtitle.

For more information, see Using color sets on page 44.

Media Properties

The Media Properties pane in the Properties window adjusts the end actions and remote control button behavior for the selected media file.



To edit media properties, perform the following steps:

1. If the window isn't already visible, choose **Properties** from the View menu.
2. Double-click a media file in the Project Overview window (or navigate in the workspace) to open the media you want to edit.
3. Click a button at the top of the Properties window.

The following sections describe the controls under each heading in the Media Properties pane.

General

Item	Description
Reduce interlace flicker	Select the **Reduce interlace flicker** box, click the down arrow button (▾), and choose a setting from the drop-down list to turn flicker reduction on or off. Turn flicker reduction on when using still images that contain thin horizontal lines.
Start Script	If you have already created at least one DVD script in your project, select the **Start Script** box, click the down arrow button (▾), and choose the script that will be played when the media file is accessed. **Note:** *Scripting is not available for Blu-ray Disc projects.*

Track Media

The **Video** and **Audio** controls in the Track Media page determine which files are used to play a title's audio and video.

Item	Description
Video	Displays the path to the video file that will be used. Select the **Video** control and click the down arrow button ( ) to display the a menu, where you can choose a file, view media properties, crop and adjust media settings, remove the current file, edit the file in your specified graphics editor, or explore the file's containing folder on your drive. **Tip:** *To change a file quickly, drag a file from the Explorer window to the* **Video** *box.*
Audio	Displays the path to the audio file that will be used. If a title has multiple audio tracks, there will be a separate **Audio** control for each track. Select the **Audio** control and click the down arrow button ( ) to display the a menu, where you can choose a new file, view media properties, or remove the current file. **Tip:** *To change a file quickly, drag a file from the Explorer window to the* **Audio** *box.*

End Action

A media file's end action determines what happens after the media file ends.

Item	Description
Command	Determines what happens after the last track plays. • **Link** You can link to any menu, media file, and chapter point. Use the **Destination**, **Destination chapter**, **Destination item**, or **Destination button** controls to set the target. You can also use the **Destination button** control to choose the default selected button in the destination menu. • **Stop** Your disc will stop playing.
Destination	When **Link** is selected in the **Command** drop-down list, choose the menu or media file that will be displayed. **Note:** *If you want the user's remote control navigation to follow the same path as your end actions, set the media file's end action and the remote's Menu button to the same target destination.* *If no menu has been displayed,* **Most recent menu** *will display the first menu on the disc.*
Destination chapter **Destination item**	When your end action links to a video, music/video compilation, or picture compilation, choose the specific chapter in the destination file that will be displayed. When your end action links to a menu, choose **Start** or **Loop Point** to indicate the point from which the menu will be played.
Destination button	When your end action links to a menu, you can choose the button you want to use as the default selected button in the destination menu. If you choose **Default**, the first button listed under the menu in the Project Overview window is used as the default.

Item	Description
Set audio track	Choose a setting from the drop-down list to choose which audio track will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set audio track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty audio tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding audio tracks on page 87.*
Set subtitle track	Choose a setting from the drop-down list to choose which subtitle track will be played in a destination title. Choose **Off** to turn subtitles off, or choose **No change** to use the last-set track. **Note:** *If you use the* **Set subtitle track** *control to change the subtitle track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty subtitle tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding a subtitle track on page 90.*
Set video angle	Choose a setting from the drop-down list to choose which video angle will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set video angle** *control to change the video angle, the new angle will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the angle.*

Remote Buttons

For each media file, you can allow or suspend operation of individual buttons on the DVD or Blu-ray Disc remote control. Turning buttons on or off helps to ensure the viewer will see your project as you intended it.

If you have an animated menu, for example, turning off buttons will prevent the user from navigating away from the menu before it's finished playing. To turn each button on or off, choose **On** or **Off** from the menu.

Note: *When* **Off** *is selected from the menu, the button is not available.*

Item	Description
Title play	Allows the user to press the Title button on the remote to skip to a specific video or music/video compilation.
Stop	Allows the user to press the Stop button on the remote to stop the disc.
Time/chapter search	Allows the user to press the Time button on the remote to skip to a specific play time or chapter.
Previous/up	Allows the user to press the Previous/Up button on the remote to navigate to the previous chapter or menu page.
Next	Allows the user to press the Next button on the remote to navigate to the next chapter or menu page.
Fast scan	Allows the user to press the Fwd button on the remote to seek forward through a video, music/video compilation, or picture compilation.

Item	Description
Backward scan	Allows the user to press the Rev button on the remote to seek backward through a video, music/video compilation, or picture compilation.
Top menu	Allows the user to press the Menu button on the remote to navigate to the top menu of the disc.
Menu	Allows the user to press the Menu button on the remote during playback. Click the expand button (+) to expand the **Menu** controls so you can define the behavior of the Menu button for a title. *For more information, see End Action on page 128.* **Note:** *The Menu button is not supported for Blu-ray Disc projects.*
Resume	Allows the user to press the Resume (Menu) button on the remote to resume playback of a title after exiting it by pressing the Menu button.
Button navigation	Allows the user to press the Up/Down/Left/Right buttons on the remote to navigate between menu buttons.
Pause	Allows the user to press the Pause button on the remote to temporarily suspend playback.
Audio track change	Allows the user to press the Audio button on the remote to choose which audio track is played. **Note:** *Choose* **No Change** *to use the last-set track.*
Subtitle track change	Allows the user to press the Subtitle button on the remote to choose which subtitle track is displayed. **Note:** *Choose* **No Change** *to use the last-set track.*
Video angle change	Allows the user to press the Angle button on the remote to choose which video track is played. **Note:** *Choose* **No Change** *to use the last-set track.*
Video mode	Allows the user to press the Video Mode button on the remote to switch widescreen, letterboxed, and pan-and-scan presentation in a 16:9 video.

Color sets

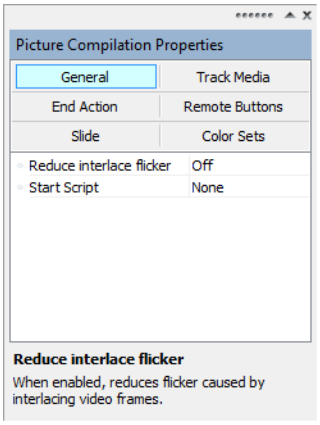
You can use the Color Sets controls in the Properties window to adjust which color set is used to draw subtitle events.

You can have four project-wide color sets that are available to every title in your project, and each title in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

For more information, see Using color sets on page 44.

Picture Compilation Properties

The Picture Compilation Properties pane in the Properties window allows you to adjust the end actions and remote control button behavior for the selected picture compilation.



To edit the picture compilation's properties, perform the following steps:

1. Double-click a picture compilation in the Project Overview window (or navigate in the workspace) to open the menu you want to edit.
2. Click the property button that you would like to edit.
3. Click the specific property, click the down arrow button (▾), and choose a setting from the drop-down list.

The following sections describe the controls under each heading in the Picture Compilation Properties pane.

General

Item	Description
Reduce interlace flicker	Select the **Reduce interlace flicker** box, click the down arrow button (▾), and choose a setting from the drop-down list to turn flicker reduction on or off. Turn flicker reduction on when using still images that contain thin horizontal lines.
Start Script	If you have already created at least one DVD script in your project, select the **Start Script** box, click the down arrow button (▾), and choose the script that will be played when the selected compilation is accessed. **Note:** *Scripting is not available for Blu-ray Disc projects.*

Track Media

Item	Description
Audio	The **Audio** box displays the path to the background audio file that will be used. If a picture compilation has multiple audio tracks, there will be a separate **Audio** control for each track. Select the control and click the down arrow button (▾) to display a menu, where you can choose a file, view media properties, or remove the current file. **Tip:** *You can also change the audio by dragging a new audio file from the Explorer window to the* **Audio** *box or to a slide in the Compilation window.*

End Action

Item	Description
Command	Determines what happens after the last slide is displayed. • **Link** You can link to any menu, media file, and chapter point. Use the **Destination**, **Destination chapter**, **Destination item**, or **Destination button** controls to set the target. • **Stop** Your disc will stop playing after the last slide.
Destination	When **Link** is selected in the **Command** drop-down list, choose the menu or media file that will be displayed. **Note:** *If you want the user's remote control navigation to follow the same path as your end actions, set the media file's end action and the remote's Menu button to the same target destination.* *If no menu has been displayed,* **Most recent menu** *will display the first menu on the disc.*
Destination chapter **Destination item**	When your end action links to a video, music/video compilation, picture compilation, or playlist, choose the specific chapter in the destination file that will be displayed. When your end action links to a menu, choose **Start** or **Loop Point** to indicate the point from which the menu will be played. *For more information, see Setting loop points on page 40.*
Destination button	When your end action links to a menu, you can choose the button you want to use as the default selected button in the destination menu. If you choose **Default**, the first button listed under the menu in the Project Overview window is used as the default.
Set audio track	Choose a setting from the drop-down list to choose which audio track will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set audio track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty audio tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding audio tracks on page 87.*
Set subtitle track	Choose a setting from the drop-down list to choose which subtitle track will be played in a destination title. Choose **Off** to turn subtitles off, or choose **No change** to use the last-set track. **Note:** *If you use the* **Set subtitle track** *control to change the subtitle track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty subtitle tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding a subtitle track on page 90.*

Item	Description
Set video angle	Choose a setting from the drop-down list to choose which video angle will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set video angle** *control to change the video angle, the new angle will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the angle.*

Remote Buttons

For each picture compilation, you can allow or suspend operation of individual buttons on the DVD or Blu-ray Disc remote control. Turning buttons on or off helps to ensure the viewer will see your project as you intended it.

If you have an animated menu, for example, turning off buttons will prevent the user from navigating away from the menu before it's finished playing.

To turn each button on or off, select the box, click the down arrow button (), and choose **On** or **Off** from the menu.

Note: *When* **Off** *is selected from the menu, the button is not available.*

Item	Description
Title play	Allows the user to press the Title button on the remote to skip to a specific video or music/picture compilation.
Stop	Allows the user to press the Stop button on the remote to stop the disc.
Time/chapter search	Allows the user to press the Time button on the remote to skip to a specific play time or chapter.
Previous/up	Allows the user to press the Previous/Up button on the remote to navigate to the previous chapter or menu page.
Next	Allows the user to press the Next button on the remote to navigate to the next chapter or menu page.
Fast scan	Allows the user to press the Fwd button on the remote to seek forward through a video, music/video compilation, or picture compilation.
Backward scan	Allows the user to press the Rev button on the remote to seek backward through a video, music/video compilation, or picture compilation.
Top menu	Allows the user to press the Menu button on the remote to navigate to the top menu of the disc.
Menu	Allows the user to press the Menu button on the remote during playback. Click the expand button () to expand the **Menu** controls so you can define the behavior of the Menu button for a title. *For more information, see* *End Action on page 132*. **Note:** *The Menu button is not supported for Blu-ray Disc projects.*
Resume	Allows the user to press the Resume (Menu) button on the remote to resume playback of a title after exiting it by pressing the Menu button.
Button navigation	Allows the user to press the Up/Down/Left/Right buttons on the remote to navigate between menu buttons.
Pause	Allows the user to press the Pause button on the remote to temporarily suspend playback.
Audio track change	Allows the user to press the Audio button on the remote to choose which audio track is played. **Note:** *Choose* **No Change** *to use the last-set track.*
Subtitle track change	Allows the user to press the Subtitle button on the remote to choose which subtitle track is displayed. **Note:** *Choose* **No Change** *to use the last-set track.*
Video angle change	Allows the user to press the Angle button on the remote to choose which video track is played.

Item	Description
Video mode	Allows the user to press the Video Mode button on the remote to switch widescreen, letterboxed, and pan-and-scan presentation in a 16:9 video.

Slide

The Slide page of the Properties window displays the settings for the selected slide.

Item	Description
Image	The **Image** box displays the path to the image file that will be used. Select the control and click the down arrow button ( ) to display a menu, where you can choose a file, view media properties, crop and adjust media settings, remove the current file, edit the image in your specified graphics editor, or explore the image's containing folder on your drive. **Tip:** *You can also change the slide image by dragging a new image from the Explorer window to the* **Image** *box or to a slide in the Compilation window.*
Stretch type	Select the **Stretch type** box, click the down arrow button ( ), and choose a setting from the drop-down list to indicate how the image will be scaled to fit the screen. • **Letterbox** The image fills the width of the menu, and black letterboxing bars are displayed above and below or to the right and left as needed. • **Zoom to fit** The image is magnified to fill the screen. If the aspect ratio of the image doesn't match your project's aspect ratio, the image will extend beyond the screen. • **Stretch to fit** The image is stretched horizontally and vertically to fill the screen. If the aspect ratio of the image doesn't match your project's aspect ratio, the image will be distorted.
Length	The **Length** box displays the duration that the selected slide will be displayed. To change the duration, select the box, click the button, and drag the slider (or type a value in the edit box).
Orientation	To rotate the selected slide, select the **Orientation** box, click the down arrow button ( ), and choose a setting from the menu. **Tip:** *You can also rotate the slide image using the* **Rotate Clockwise** *( ) and* **Rotate Counterclockwise** *( ) buttons in the Compilation window.*

Color Sets

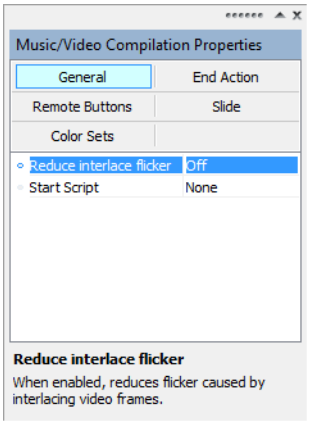
You can use the Color Sets page in the Properties window to adjust which color set is used to draw subtitle text.

You can have four project-wide color sets that are available to every title in your project, and each title in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

For more information, see Using color sets on page 44.

Music/Video Compilation Properties

The Music/Video Compilation Properties pane in the Properties window allows you to adjust the end actions and remote control button behavior for the selected music or video compilation.



To edit the music or video compilation's properties, perform the following steps:

1. If the window isn't already visible, choose **Properties** from the **View** menu.
2. Double-click a music or video compilation in the Project Overview window (or navigate in the workspace) to open the compilation you want to edit.
3. Click a button at the top of the Properties window.

The following sections describe the controls under each heading in the Music/Video Compilation Properties pane.

General

Item	Description
Reduce interlace flicker	Select the **Reduce interlace flicker** box, click the down arrow button (), and choose a setting from the drop-down list to turn flicker reduction on or off. Turn flicker reduction on when using still images that contain thin horizontal lines.
Start Script	If you have already created at least one DVD script in your project, select the **Start Script** box, click the down arrow button (), and choose the script that will be played when the music/video compilation is accessed. **Note:** *Scripting is not available for Blu-ray Disc projects.*

End Action

A music/video compilation's end action determines what happens after the last song is played.

Item	Description
Command	Determines what happens after the last track plays. • **Link** You can link to any menu, media file, and chapter point. Use the **Destination**, **Destination chapter**, **Destination item**, or **Destination button** controls to set the target. You can also use the **Destination button** control to choose the default selected button in the destination menu. • **Stop** Your disc will stop playing after the last song.

Item	Description
Destination	When **Link** is selected in the **Command** drop-down list, choose the menu or media file that will be displayed. **Note:** *If you want the user's remote control navigation to follow the same path as your end actions, set the media file's end action and the remote's Menu button to the same target destination.* *If no menu has been displayed,* **Most recent menu** *will display the first menu on the disc.*
Destination chapter **Destination item**	When your end action links to a video, music/video compilation, or picture compilation, choose the specific chapter in the destination file that will be displayed. When your end action links to a menu, choose **Start** or **Loop Point** to indicate the point from which the menu will be played.
Destination button	When your end action links to a menu, you can choose the button you want to use as the default selected button in the destination menu. If you choose **Default**, the first button listed under the menu in the Project Overview window is used as the default.
Set audio track	Choose a setting from the drop-down list to choose which audio track will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set audio track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.*
Set subtitle track	Choose a setting from the drop-down list to choose which subtitle track will be played in a destination title. Choose **Off** to turn subtitles off, or choose **No change** to use the last-set track. **Note:** *If you use the* **Set subtitle track** *control to change the subtitle track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.*
Set video angle	Choose a setting from the drop-down list to choose which video angle will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set video angle** *control to change the video angle, the new angle will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the angle.*

Remote Buttons

For each music/video compilation, you can allow or suspend operation of individual buttons on the DVD or Blu-ray Disc remote control and set the behavior of the Menu button. Turning buttons on or off helps to ensure the viewer will see your project as you intended it.

If you have an animated menu, for example, turning off buttons will prevent the user from navigating away from the menu before it's finished playing.

To turn each button on or off, select the box, click the down arrow button (▾), choose **On** or **Off** from the drop-down list.

Note: *When* **Off** *is selected from the menu, the button is not available.*

Item	Description
Title play	Allows the user to press the Title button on the remote to skip to a specific video or music/video compilation.
Stop	Allows the user to press the Stop button on the remote to stop the disc.
Time/chapter search	Allows the user to press the Time button on the remote to skip to a specific play time or chapter.
Previous/up	Allows the user to press the Previous/Up button on the remote to navigate to the previous chapter or menu page.

Item	Description
Next	Allows the user to press the Next button on the remote to navigate to the next chapter or menu page.
Fast scan	Allows the user to press the Fwd button on the remote to seek forward through a video, music/video compilation, or picture compilation.
Backward scan	Allows the user to press the Rev button on the remote to seek backward through a video, music/video compilation, or picture compilation.
Top menu	Allows the user to press the Menu button on the remote to navigate to the top menu of the disc.
Menu	Allows the user to press the Menu button on the remote during playback. Click the expand button (⊞) to expand the **Menu** controls so you can define the behavior of the Menu button for a title. *For more information, see End Action on page 135.* **Note:** *The Menu button is not supported for Blu-ray Disc projects.*
Resume	Allows the user to press the Resume (Menu) button on the remote to resume playback of a title after exiting it by pressing the Menu button.
Button navigation	Allows the user to press the Up/Down/Left/Right buttons on the remote to navigate between menu buttons.
Pause	Allows the user to press the Pause button on the remote to temporarily suspend playback.
Audio track change	Allows the user to press the Audio button on the remote to choose which audio track is played. **Note:** *Choose* **No Change** *to use the last-set track.*
Subtitle track change	Allows the user to press the Subtitle button on the remote to choose which subtitle track is displayed. **Note:** *Choose* **No Change** *to use the last-set track.*
Video angle change	Allows the user to press the Angle button on the remote to choose which video track is played.
Video mode	Allows the user to press the Video Mode button on the remote to switch widescreen, letterboxed, and pan-and-scan presentation in a 16:9 video.

Slide

The Slide page of the Properties window displays the settings for the slide selected in the Compilation window.

Item	Description
Video	The **Video** control displays the path to the image or video file that will be used. Select the control and click the down arrow button (▾) to display a menu, where you can choose a file, view media properties, crop and adjust media settings, remove the current file, open the file in your specified graphics editor, or explore the file's containing folder on your drive. **Tip:** *You can also change the slide image by dragging a new image from the Explorer window to the* **Video** *box or to a song in the Compilation window.*
Audio	The Audio control displays the path to the background audio file that will be used. Select the control and click the down arrow button (▾) to display a menu, where you can choose a file, view media properties, remove the current file, or open the file in your specified graphics editor. **Tip:** *You can also change the audio by dragging a new audio file from the Explorer window to the* **Audio** *box or to a slide in the Compilation window.*

Item	Description
Stretch type	Select the box, click the down arrow button (), and choose a setting from the drop-down list to indicate how the image will be scaled to fit the screen. • **Letterbox** The image fills the width of the menu, and black letterboxing bars are displayed above and below or to the right and left as needed. • **Zoom to fit** The image is magnified to fill the screen. If the aspect ratio of the image doesn't match your project's aspect ratio, the image will extend beyond the screen. • **Stretch to fit** The image is stretched horizontally and vertically to fill the screen. If the aspect ratio of the image doesn't match your project's aspect ratio, the image will be distorted.
Orientation	To rotate the video for the selected song, select the box, click the down arrow button (), and choose a setting from the menu. **Tip:** *Click the* **Rotate Clockwise** *() and* **Rotate Counterclockwise** *() buttons in the Compilation window.*

Color Sets

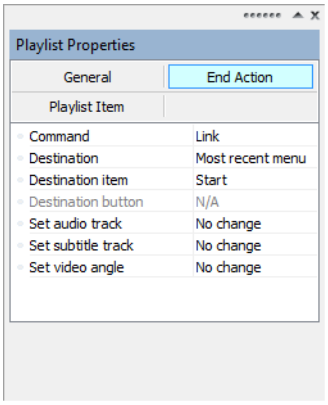
You can use the Color Sets controls in the Properties window to adjust which color set is used to draw subtitle text.

You can have four project-wide color sets that are available to every title in your project, and each title in your project can also have up to four custom color sets with four colors each. Each color set includes a fill color, outline/background color, anti-alias color, and transparent color.

For more information, see Using color sets on page 44.

Playlist Properties

The Playlist Properties pane in the Properties window allows you to adjust settings for each item in a playlist, specify the playback order, or to set the end action for the selected playlist.



To edit the playlist's properties, perform the following steps:

1. Double-click a playlist in the Project Overview window (or navigate in the workspace) to open the playlist you want to edit or choose a playlist from the drop-down list at the top of the Playlists window.
2. Select the playlist item that you would like to edit.
3. Click the **General, End Action**, or **Playlist Item** button.
4. Select the specific control, click the down arrow button (), and choose a setting from the drop-down list.

The following sections describe the controls under each heading in the Playlist Properties pane.

General

Item	Description
Play mode	Determines the order of play for items in your playlist: • **Sequential** Plays the items in the order you selected in your playlist. • **Random** Plays the items in your playlist in a random order.
Infinite	If you selected random playback, the **Infinite** control determines the number of items to play from your playlist. • **Yes** Playback includes all items in your playlist, and continues until the user makes another selection. • **No** Playback includes only the number of items you specify in the **Count** box, which DVD Architect Pro randomly selects from your playlist. Once playback of the specified number of items is complete, the disc returns to the destination specified in the End Action properties.

End Action

Item	Description
Command	Determines what happens after the last item in the playlist is played. • **Link** you can link to any menu, media file, and chapter point. Use the **Destination**, **Destination chapter**, **Destination item**, or **Destination button** controls to set the target. You can also use the **Destination button** control to choose the default selected button in the destination menu. • **Stop** your disc will stop playing after the last item.

Item	Description
Destination	When Link is selected in the **Command** drop-down list, choose the menu, title, or playlist that will be displayed. **Note:** *If no menu has been displayed,* **Most recent menu** *will display the first menu on the disc.*
Destination chapter **Destination item**	When your end action links to a video, music/video compilation, picture compilation, or playlist, choose the specific chapter in the destination file that will be displayed. When your end action links to a menu, choose **Start** or **Loop Point** to indicate the point from which the menu will be played.
Destination button	When your end action links to a menu, you can choose the button you want to use as the default selected button in the destination menu. If you choose **Default**, the first button listed under the menu in the Project Overview window is used as the default.
Set audio track	Choose a setting from the drop-down list to choose which audio track will be played in a destination title. Choose **No change** to use the last-set track. **Note:** *If you use the* **Set audio track** *control to change the audio track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty audio tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding audio tracks on page 87.*
Set subtitle track	Choose a setting from the drop-down list to choose which subtitle track will be played in a destination title. Choose **Off** to turn subtitles off, or choose **No change** to use the last-set track. **Note:** *If you use the* **Set subtitle track** *control to change the subtitle track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.* *When setting up your project, we recommend using the same track sequence for all videos, picture compilations, and music/video compilations. If necessary, insert empty subtitle tracks to maintain the track sequence so that the disc will continue to play the same track number when you transition playback between titles.* *For more information, see Adding a subtitle track on page 90.*
Set video angle	Choose a setting from the drop-down list to choose which video angle will be played in a destination title. Choose No change to use the last-set track. **Note:** *If you use the* **Set video angle** *control to change the video angle, the new angle will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the angle.*

Playlist Item

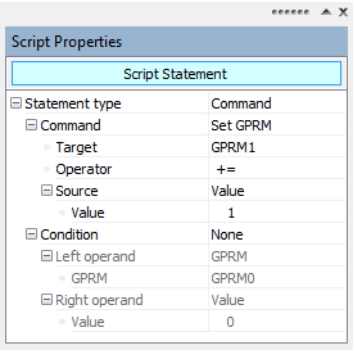
Item	Description
Start chapter	Choose a chapter from the drop-down list to choose where playback will begin when this item is played in the selected playlist.
Set audio track	Choose a setting from the drop-down list to choose which audio track will be played when this item is played in the selected playlist. Choose **No change** to use the last-set track.

Item	Description
Set subtitle track	Choose a setting from the drop-down list to choose which subtitle track will be played when this item is played in the selected playlist. Choose **No change** to use the last-set track.
Set video angle	Choose a setting from the drop-down list to choose which video angle will be played when this item is played in the selected playlist. Choose **No change** to use the last-set angle. **Note:** *If you use the* **Set video angle** *control to change the video track, the new track will be used when you navigate between titles unless another button action, end action, or user action (via the remote control) changes the track.*

Script Properties

The Script Properties pane in the Properties window allows you to adjust settings for each statement in your DVD script.

Note: *Scripting is not available for Blu-ray Disc projects.*



To edit a script's properties, perform the following steps:

1. If the window isn't already visible, choose **Properties** from the **View** menu.
2. Double-click a DVD script in the Project Overview window (or navigate in the workspace) to select the script you want to edit (or choose a script from the drop-down list at the top of the DVD Scripts window).
3. In the DVD Scripts window, click the statement you want to edit. The Script Properties are displayed in the Properties window.

For more information, see Creating a script on page 152.

Chapter 12 Setting Project Properties

When you start a new project, you select various properties for the project. However, if you need to view those properties or make changes to them while you're working on the project, you can do so at any time by choosing **Properties** from the **File** menu. The Project Properties dialog is displayed containing two tabs: Properties and Summary.

If your projects typically use the same settings, select the **Start all new projects with these settings** check box at the bottom of the dialog.

Disc properties

You can use the controls on the Disc Properties page to adjust general settings for your disc.

Item	Description
Disc format	Choose a setting from the drop-down list to indicate whether you want to create a Blu-ray Disc project or a DVD project.
Target media size (GB)	Choose a setting from the drop-down list to specify the capacity of your media. This setting will be used to calculate how much space is available on disc. If you want to burn a Blu-ray Disc project to DVD media, choose 8.50 or 4.70 **Tip:** *You can also change this setting by right-clicking the Disc Space Used display in the bottom-right corner of the DVD Architect Pro window and choosing a command from the shortcut menu.*
Video defaults	Displays the default video settings for your project. You can use the controls below the **Video defaults** row to adjust the settings. The default video settings determine the following information about your project: • Whether a disc is NTSC or PAL. You cannot use both NTSC and PAL content on the same disc (DVD projects only). • The default frame size and aspect ratio for media that will be recompressed. You can use the **Optimize Disc** dialog to choose distinct recompression settings for each media file. *For more information, see Optimizing your project on page 29.* • The frame size and aspect ratio of all menus. All menus must use the same aspect ratio and resolution.
Video format	If you're creating a DVD project, the video format is always MPEG-2. If you're creating a Blu-ray Disc project, you can choose whether you want to use MPEG-2 or AVC video.
Bit rate (Mbps)	Select the control, click the down arrow button (▾), and drag the slider to adjust the size of your project: • 9.8 Mbps is the maximum bit rate for DVD players. • 28 Mbps is the maximum bit rate for Blu-ray Disc projects burned to DVD media. • 48 Mbps is the maximum bit rate for Blu-ray Disc projects burned to Blu-ray media. Increasing the bit rate can improve quality, but you can fit less media on the disc. Decreasing the bit rate can allow you to fit more video on the disc, but quality will be decreased.
Aspect Ratio	Select the control, click the down arrow button (▾), and choose a setting to indicate whether you want to create a standard-aspect (4:3) or widescreen (16:9) project.
Resolution	Select the control, click the down arrow button (▾), and choose a setting to indicate the default frame size of your project: • 720x480 • 720x576 • 1280x720 • 1440x1080 • 1920x1080

Item	Description
Frame rate	Select the control, click the down arrow button (), and choose a setting to indicate the default frame rate for your project. The television frame rate in the US, North and Central America, parts of South America, and Japan (NTSC) is 29.970 frames per second (fps). In many parts of the world, including Europe and much of Asia, the television standard is PAL at 25.000 fps. France, Russia, and most of Eastern Europe use SECAM, which is a variation on PAL and also uses 25.000 fps.
Progressive	Indicates whether the selected frame rate is a progressive-scan format.
Audio defaults	Displays the default audio settings for your project. You can use the controls below the **Audio defaults** row to adjust the settings that will be used for audio that will be recompressed. You can select a title and use the **Audio** settings in the Optimize Disc dialog to choose distinct recompression settings for each media file. *For more information, see Optimizing your project on page 29.*
Audio format	Select the control, click the down arrow button (), and choose a setting to indicate the format whether you want to use PCM stereo audio, AC-3 Stereo audio, or AC-3 5.1-surround audio.
Bit rate (AC-3 only)	If your audio format is AC-3, select the control, click the down arrow button (), and choose a setting to indicate the bit rate for your audio. • DVD projects can use a bit rate of 96 Kbps to 448 Kbps. • Blu-ray Disc projects can use a bit rate of 96 Kbps to 640 Kbps.
Bit depth (PCM only)	If your audio format is PCM, select the control, click the down arrow button (), and choose a setting to indicate the number of bits used to represent each audio sample.
Sample rate (PCM only)	If your audio format is PCM, select the control, click the down arrow button (), and choose a setting to indicate the sample rate for your audio. • DVD projects can use a sample rate of 48 KHz or 96 KHz. • Blu-ray Disc projects can use a sample rate of 48 KHz, 96 KHz, or 192 KHz.
Last prepare folder	Displays the path to the folder that was most recently used to prepare your project. *For more information, see Preparing a DVD project on page 167.*
Last mastering output folder	Displays the path to the folder that was most recently used to master a DVD project. *For more information, see Writing a master for replication on page 172.*
Last prepare image	Displays the path to the .iso file that was created the last time you prepared a Blu-ray Disc project. *For more information, see Preparing a Blu-ray Disc project on page 175.*
Initial audio track	Select the control, click the down arrow button (), and choose which audio stream will be played when the disc is inserted into the DVD or Blu-ray Disc player. **Notes:** • *If you choose* **Default***, the DVD or Blu-ray Disc player will attempt to determine the appropriate default audio track. If the player cannot determine the correct language, the first track is used. If multiple tracks match the player's language setting if you have an English dialogue track and an English commentary track, for example the first track that matches the player's language is used. The viewer can choose which track is played during playback.* • *If you choose a track that does not exist in your project, the initial track will default to the first audio track.*
Initial subtitle track	Select the control, click the down arrow button (), and choose which subtitle stream will be played when the disc is inserted into the DVD or Blu-ray Disc player. **Notes:** • *If you choose* **Default***, the DVD or Blu-ray Disc player will attempt to determine the appropriate default track. If the player cannot determine the correct language, the first track is used. If multiple tracks match the player's language setting, the first track that matches the player's language is used. The viewer can choose which track is played during playback.* • *If you choose a track that does not exist in your project, the initial track will default to the first subtitle track.*

Item	Description
Initial video angle	Select the control, click the down arrow button (), and choose which video angle will be played when the disc is inserted into the DVD or Blu-ray Disc player. **Notes:** • *If you choose* **Default***, the DVD or Blu-ray Disc player will attempt to determine the appropriate default track. The viewer can choose which track is played during playback.* • *If you choose a track that does not exist in your project, the initial track will default to the first video track.*
DVD-only features	The **Extras folder**, **Jacket picture**, **DVD start script**, and **Parental control** settings are available only when creating a DVD project.
Extras folder	If you want to burn DVD-ROM content to your disc, type the path to the folder that contains the files you want to include (or select the box and click the **Change Media** button () to choose a folder). When you choose a folder, all files within that folder will be written to the root of your project. If you want to place the content in a subfolder at the root of the disc, create a subfolder within your specified extras folder: • For example, if c:\media\extras\ is your extras folder, all files within the folder will be written to the root of the disc. • For example, if c:\media\extras\ is your extras folder, you could place the files you want to burn in a c:\media\extras\DVD-ROM subfolder so that the DVD-ROM folder and its contents would be written to the root of the disc. **Note:** *You can add any type of files or subfolder to the Extras folder, but this content will be available only when browsing the disc on a computer.* Click the **Change Media** button () to browse to a folder. Click the **Clear Media** button () to remove a folder. **Note:** *Not available for Blu-ray Disc projects.*
Jacket picture	The jacket picture feature allows you to specify a still image that will display when the **Stop** button has been pressed on the remote control. Commercially produced discs often use an image of the disc cover (hence the name), but you can use any image. Click the **Change Media** button () to browse to a folder. Click the **Clear Media** button () to clear the current jacket picture. **Notes:** • *Not all DVD players support the jacket picture feature.* • *Not available for Blu-ray Disc projects.*
DVD start script	If you want to specify the start script that will be executed when your project is played in a DVD player, click the box and choose an available script from the drop-down list. If you have not yet created any scripts, the only available option will be **None**. *For more information, see DVD Scripts (Ctrl+Alt+3) on page 23.* **Notes:** • *The start script will execute prior to any item designated as the start item in your project.* • *Not available for Blu-ray Disc projects.*

Item	Description
Parental control	You can restrict the disc's playback by selecting the parental controls (ratings) set by the Motion Picture Association of America (MPAA). • Off: There are no parental controls. • 1 (G) — General audiences. All ages may watch the content. • 2 • 3 (PG) — Parental guidance suggested. Some content may not be suitable for children. • 4 (PG-13) — Parents strongly cautioned. Some content may be inappropriate for children under age 13. • 5 • 6 (R) — Restricted. No children under age 17 should watch this content without a parent or adult guardian present. • 7 (NC-17) — No one aged 17 and under should watch the content. • 8 **Note:** *Not available for Blu-ray Disc projects.*
Application ID	Identifies the application. DVD Architect Pro is the default entry.
Volume name	Enter the disc volume name. **Note:** *The volume name is limited to 32 characters and can contain only capital letters (A-Z), digits (0-9), and underscores (_). DVD Architect Pro software will automatically correct text that does not comply with these rules.*
Volume set name	Enter the name of a set of volumes. **Note:** *The volume set name is limited to 59 characters.*

Copy protection

You can use the controls on the Copy Protection tab to secure DVD content.

Notes:

- *DVD Architect Pro software only sets the CSS and Macrovision flags; the encryption must be added by the mastering or replication facility.*
- *Copy-protection settings are not used for Blu-ray Disc projects.*

Item	Description
Disc copyrighted	Indicates whether the project contains copyrighted material: • Choose **Yes** if your project contains copyrighted material. You can then set the number of allowed copy generations and whether you want to use CSS and Macrovision. • Choose **No** if your project does not contain copyrighted material. When No is selected, you cannot set the number of allowed copy generations or use CSS or Macrovision.

Item	Description
Copy generations (CGMS)	If you indicated that your project contains copyrighted material, then you can use the **Copy generations** drop-down list to set a flag that indicates whether you want to allow your project to be copied by DVD recorders and some personal video recorders (PVRs). • **Unlimited:** There is no limit on the number of copies that can be made; the disc can be copied, and those copies can be copied. • **One:** Single-generation copies can be made; the disc can be copied, but those copies cannot be copied. • **None:** No copies can be made. **Notes:** • *You can optionally use CSS and Macrovision protection.* • *The CGMS (content generation management system) protection flag may not be recognized by all PVRs or personal computers.*
CSS	Allows you to set the CSS (Content Scramble System) flag on your disc. • **On:** Sets a flag that tells the disc replication facility to apply CSS digital encryption to the disc to prevent duplication. • **Off:** Sets a flag that indicates that CSS digital encryption should not be applied during replication.
Macrovision	• **Off:** Sets a flag that tells the disc replication facility that Macrovision copy protection should not be encoded. • **Type I:** Sets a flag that tells the replication facility to add Automatic Gain Control (AGC). AGC adds pulses during the vertical blanking intervals that distort the picture when a user attempts to make an analog copy. • **Type II:** Sets a flag that tells the replication facility to add AGC and a two-line Colorstripe. • **Type III:** Sets a flag that tells the replication facility to add AGC and a four-line Colorstripe.

Regions

You can use the settings on the Regions tab to determine the regions in which a DVD can be played.

Region coding is how Hollywood studios stagger movie releases across the planet. These codes ensure that a disc isn't released before the movie is out in that country's theatres.

Notes:

- *Region information is not encoded on discs you burn with DVD Architect Pro software; the software sets a region flag that is encoded by a replication facility.*
- *Region settings are not used for Blu-ray Disc projects.*

Item	Description
All regions	Choose **Yes** from the drop-down list if you want to be able to play your disc in any player regardless of geographical location. Choose **No** if you want to be able to allow or prevent playback for specific regions.
Region 1	Allows or prevents playback of your disc in North America.
Region 2	Allows or prevents playback of your disc in Japan, Europe, Middle East, Egypt, South Africa, and Greenland.
Region 3	Allows or prevents playback of your disc in Southeast Asia (including Hong Kong).
Region 4	Allows or prevents playback of your disc in Australia, New Zealand, Central/South America, Pacific Islands, and Caribbean.
Region 5	Allows or prevents playback of your disc in Northwest Asia (including Korea), and North Africa.
Region 6	Allows or prevents playback of your disc in China.

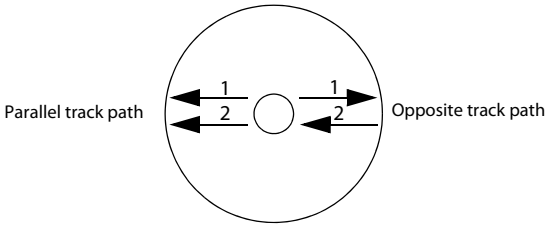
Item	Description
Region 7	Reserved
Region 8	Allows or prevents playback of your disc in Airplanes (In-Flight Entertainment).

Mastering

You can use the settings on the Mastering tab to adjust settings for creating a disc master for replication. *For more information, see Writing a master for replication on page 172.*

Note: *Mastering is not available for Blu-ray Disc projects.*

Item	Description
Output format	Allows you to specify the file format used when writing mastering files: • **DDP 2.00** — DDP (Disc Description Protocol) 2.00 is widely supported by replication facilities. This format supports CSS copy protection and region coding. • **DDP 2.10** — Similar to DDP 2.00, but slightly more advanced. This format supports CSS copy protection and region coding. • **CMF 1.0** —CMF (Cutting Master Format) supports CSS and region coding.
DVD-ROM type	Choose the type of DVD-ROM you are mastering: • **DVD-1 (1.4 G) —** 8-cm, single-sided, single-layer DVD with a capacity of approximately 1.4 GB. • **DVD-2 (2.7 G)** — 8-cm, single-sided, single-layer DVD with a capacity of approximately 2.7 GB. • **DVD-3 (2.9 G)** — 8-cm, double-sided, single-layer DVD with a capacity of approximately 2.9 GB. • **DVD-4 (5.3 G)** — 8-cm, double-sided, double-layer DVD with a capacity of approximately 5.3 GB. • **DVD-5 (4.7 G)** — 12-cm, single-sided, single-layer DVD with a capacity of approximately 4.7 GB. • **DVD-9 (8.5 G**) — 12-cm, single-sided, double-layer DVD with a capacity of approximately 8.5 GB. • **DVD-10 (9.4 G)** — 12-cm, double-sided, single-layer DVD with a capacity of approximately 9.4 GB. • **DVD-18 (17 G)** — 12-cm, double-sided, double-layer DVD with a capacity of approximately 17 GB.
Number of sides	Allows you to specify the number of sides (one-sided or two-sided) that the mastered DVD will contain.
Current side	Allows you to specify for which side you're currently creating master files. **Note:** *Available only when* **Number of sides** *is 2.*
Number of layers	Allows you to specify the number of layers that the mastered DVD will contain. Choose **1** if your project will be burned to a single-layer DVD, or choose **2** if your project will be burned to a dual-layer DVD.

Item	Description
Direction of translation	Allows you to specify the direction in which reading will occur on the second layer of a dual-layer disc: • **Parallel track path** — Read from the inner radius of the disc to the outer radius. When the laser reaches the end of the first layer, it must move back to the inner radius and then refocus on the second layer. • **Opposite track path** — Read from the inner radius of the disc to the outer radius on the first layer and from the outer radius to the inner radius of the second layer.  **Notes:** • *This setting is available only when the specified number of layers is 2.* • *The first layer is always read from the inner radius of the disc to the outer radius.*
Disc diameter	Allows you to choose the physical diameter of the mastered DVD.
Advanced: **DVD-ROM capacity (sectors)**	This field allows you to adjust the number of sectors on the DVD-ROM to match manufacturing requirements. Click in the field and move the slider left or right to decrease or increase the sector capacity.
Customer information	Allows you to include or omit optional customer information, which can be included with mastering output. • **Content owner** The owner or copyright holder of the media contained on the disc. • **Content category** Type up to eight letters to identify the contents of the disc. • **Disc ID** Type a unique identifier for the disc. This ID is for use by the content owner and can use any format. • **Title name** The title of the disc. • **Customer** Information about the customer for whom the disc is being produced. • **Authoring studio** Information about the studio that created the contents of the disc. • **Disc set number** If the disc is from a multidisc collection, use this setting to identify the disc. For example, if this disc is part two of a three-part series, type 2 in this box. • **Maximum set number** If the disc is from a multidisc collection, use this setting to identify the number of discs in the series. For example, if this disc was part of a three-part series, type 3 in this box. • **Memo** Type any additional comments in this section. Note the following output format information: • The DDP 2.00 output format does not support customer information. • Customer information is optional when using the DDP 2.10 output format. • The CMF 1.0 output format requires customer information. You can, however, save blank customer information fields with the master

Summary tab information

You can use the boxes on the Summary tab to enter information about the project if desired. This information is stored with the DVD Architect Pro project.

Item	Description
Title	Enter the title of the project.
Artist	Enter the name of the artist who performed in the project.
Engineer	Enter the name of the person who mixed or edited the project.
Copyright	Enter copyright information about the project.

Item	Description
Comments	Enter any comments you want to associate with the project.
Start all new projects with these settings	Select this check box to use the current dialog settings as the default.

Chapter 13 Using Scripting

Scripting in DVD Architect™ Pro gives you even more options for creativity when designing your project. Among other things, you can customize the play order of your disc, create simple games, and add navigation clues. The scripting feature in DVD Architect Pro is based on the DVD-Video specification.

Notes:

- *Your project can contain up to 4,095 scripts.*
- *Scripting is not available for Blu-ray Disc™ projects.*

The following are some examples of what you can do with scripting in DVD Architect Pro:

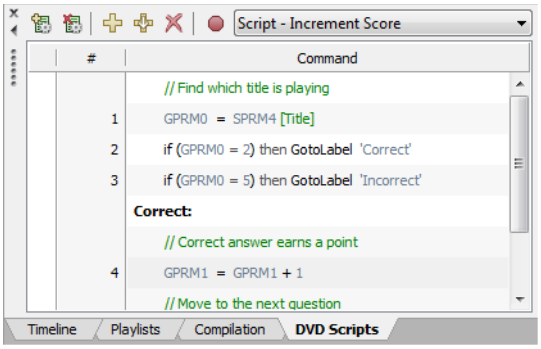
- Create a quiz-style game that keeps score based on the user's selections and customizes the result based on the score.
- Play random videos.
- Choose menus or videos to play based on the DVD player's language, parental management, and other settings.
- Require a passcode to "unlock" the DVD for playback.

Scripts have two main functions for DVD playback: jumping to a new location (such as a track or menu) or playing a different stream (audio, video, or subtitle). You can assign a script to almost anything in your project that supports scripts, such as menus, buttons, and end actions.

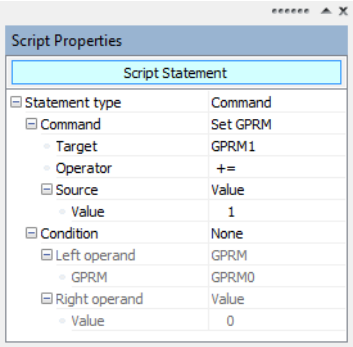
Each script can contain any combination of three statement types: commands, labels, or comments.

- *Commands* execute an action for a step in your script. Commands can utilize the standard capabilities in most DVD players, allowing you to further expand and customize your options for DVD playback. These DVD player functions are accessed by the script command using the player's General Purpose Register Memories (GPRMs) and System Parameter Register Memories (SPRMs).
- *Labels* are used to mark sections of a script to which you want to link. You can link from one section of a script to another using your defined label.
- *Comments* are used within the script to help you identify and track the purpose of statements. Comments are ignored by the script.

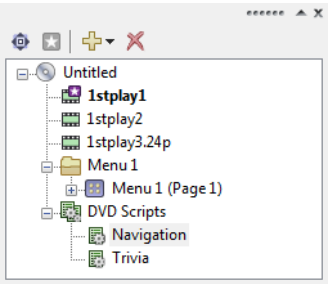
Scripts are created using the DVD Scripts window. . .



. . .and script statements are defined using the Script Properties window.



Once you've inserted a DVD script, it is displayed at the bottom of the Project Overview window:



Adding an existing script to a menu or title

To add an existing script to a menu or object, drag a script from the DVD Scripts heading in the Project Overview window to the item in the workspace.

Creating a script

If you want to add a script to a menu in an existing menu-based project, perform the following procedure.

1. Double-click a menu in the Project Overview window (or navigate in the workspace) to open the menu from which you want to link to the script.
2. From the **Insert** menu, choose **Script**. A button is added to the menu as a link to the script.

> **Tip:** *Click the* **Insert Object** *button (* *) in the Project Overview window and choose* **DVD Script**.

3. Use the DVD Scripts window to rearrange, add, or delete statements in the script.

Inserting a statement in a script

1. Double-click a DVD script in the Project Overview window (or choose a script from the drop-down list at the top of the DVD Scripts window) to open the script you want to edit.
2. In the DVD Scripts window, click the line where you want to insert a statement.
3. Click the **Insert Statement** button (). The new statement is inserted above the selected line.
4. Edit your statement in the Script Properties window. *For more information, see Editing a script's statements in the Script Properties window on page 153.*

Appending a statement to a script

1. Double-click a DVD script in the Project Overview window (or choose a script from the drop-down list at the top of the DVD Scripts window) to open the script you want to edit.
2. Click the **Append Statement** button (). The new statement is appended to the end of your script.
3. Edit your statement in the Script Properties window. *For more information, see Editing a script's statements in the Script Properties window on page 153.*

Removing a statement from a script

1. Double-click a DVD script in the Project Overview window (or choose a script from the drop-down list at the top of the DVD Scripts window) to open the script you want to edit.
2. Select a statement in the DVD Scripts window.
3. Press Delete or click the **Delete Statement** button (). The selected statement is removed from your script.

Rearranging statements in a script

1. Double-click a DVD script in the Project Overview window (or choose a script from the drop-down list at the top of the DVD Scripts window) to open the script you want to edit.
2. Drag statements in the DVD Scripts window up or down to change their order.

Editing a script's statements in the Script Properties window

You can use the Script Properties controls in the Properties window to adjust settings for each statement in your DVD script.

To edit a script's properties, perform the following actions:

1. If the window isn't already visible, choose **Properties** from the **View** menu.
2. Double-click a DVD script in the Project Overview window (or navigate in the workspace) to select the script you want to edit (or choose a script from the drop-down list at the top of the DVD Scripts window).
3. In the DVD Scripts window, click the statement you want to edit. The Script Properties display in the Properties window.

Editing a command

Commands statement types determine what happens at this step in the script. You can use commands to assign values or set links to a GPRM (General Purpose Register Memory), skip to other sections of the script, set the audio, video, and subtitle tracks, resume or stop playback, and more. Optionally, you can also set specific conditions that must be present for these commands to be executed.

To create a command statement, choose **Command** from the **Statement type** drop-down list. Choose the type of command from the **Command** drop-down list:

Command Type	Description
Nop	No operation is currently invoked in this command. This is the default setting for all commands. A **Nop** command is ignored by the script.
Link	Links to a title or menu on your project. When adding a link, you can use the **Destination**, **Destination chapter**, and **Destination button** controls to customize the link. • **Destination** Choose the menu, title, playlist, or script that will be displayed. • **Destination chapter** When your statement links to a video, music/video compilation, or playlist, choose the specific chapter that will be displayed. • **Destination button** When your statement links to a menu, choose the button you want to use as the default selected button in the destination menu.
GotoLabel	Links to a label elsewhere in the current script. When the script is run, it will begin executing statements listed after the label. Choose a setting from the **Label** drop-down list to select the label to which you want to link. *For more information, see Editing a label on page 155.*
Set GPRM	Assigns a value or asset to a GPRM: • **Target** Sets the GPRM you want to use for this asset (0-5). • **Operator** Modifies the target's value. There are 11 operators from which to choose. • **Source** Sets the source (SPRM, GPRM, value, or link, depending upon the operator you selected) for the command. Use the controls below to choose the SPRM or GPRM index, the numeric value, or the link destination. *For more information, see General Purpose Register Memories (GPRMs) on page 157.*
Link GPRM	Links to the specified GPRM. For example, you can assign a GPRM to a link using the **Set GPRM** command, and then use the **Link GPRM** command to execute the link in your script.
SetMode GPRM	Sets the specified GPRM to either register or counter mode. • **Target** Sets the GPRM you want to use for this command (0-5). • **Mode** Sets the mode (counter or register) for the command.
SetStreams	Sets the audio or subtitle track or the video angle. • **Set audio track** Choose a setting from the drop-down list to select which audio track will be played. Choose **No change** to use the last-set track. • **Set subtitle track** Choose a setting from the drop-down list to select which subtitle track will be played. Choose **No change** to use the last-set track. • **Set video angle** Choose a setting from the drop-down list to select which video track will be played. Choose **No change** to use the last-set track.
Resume	Resume playback at the specified destination. In the **Destination** drop-down list, choose the media file that will be accessed.
Stop	Stop playback. You can also specify that playback is stopped only if the specified conditions are met.

Next, you can set the conditions that must be present for the command to execute:

Item	Description	
Condition	**None**	No conditions must be met; the command will always execute as specified in the Command drop-down list.
	<	Less than. The command will be executed if the specified GPRM is less than the specified right operand item.
	<=	Less than or equal. The command will be executed if the specified GPRM is less than or equal to the specified right operand item.
	=	Equal. The command will be executed if the specified GPRM is equal to the specified right operand item.
	>=	Greater than or equal. The command will be executed if the specified GPRM is greater than or equal to the specified right operand item.
	>	Greater. The command will be executed if the specified GPRM is greater than the specified right operand item.
	!=	Not equal. The command will be executed if the specified GPRM is not equal to the specified right operand item.
	&	And. The script performs a bitwise AND comparison. If the result of the bitwise AND comparison is 0, then the condition is false and the command is not executed. If the result of the bitwise AND comparison is anything other than 0, then the condition is true and the command is executed.
Left operand	Choose the GPRM you want to use for this condition (0-5).	
Right operand	Choose the right operand item you want to use for this condition: • **SPRM** Choose the SPRM variable to compare to your specified GPRM in the left operand. • **GPRM** Choose the GPRM to compare to your specified GPRM in the left operand. • **Value** Choose the numeric value to compare to your specified GPRM in the left operand.	

Editing a label

A label statement type inserts a label in the script. Labels can be used to mark sections of a script to which you want to link.

To create a label statement, choose **Label** from the **Statement type** drop-down list. In the **Label** box, type the text you want to display in the label.

Once you've set a label statement, you can create a **GoToLabel** command to link from one section of a script to another using your defined label, and the script will begin executing the statements after the label.

Notes:

- *When you set a* **GotoLabel** *command, this label will display as an option in the* **Label** *control drop-down list.*
- *Label statements can only be used to link within a script; links from one script to a label in another script are not supported.*

Editing a comment

The Comment statement type inserts a comment in the script. Comments are ignored by the script and not seen by the DVD viewer, but you can use them during the script building and testing process to organize your script or add information.

To insert a comment statement, choose **Comment** from the **Statement type** drop-down list. In the **Comment** box, type the text you want to appear in the comment.

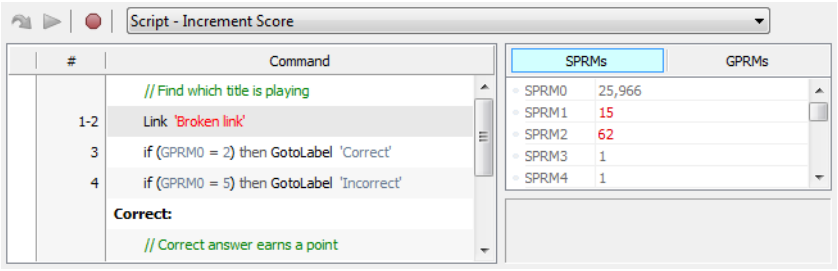
Testing a script

You can use the Script Debugger pane in the Preview window to test and debug your DVD scripts.

1. Click the drop-down arrow next to the **Preview** button (Preview) on the main toolbar and choose a preview mode:

Preview Mode	Description
Preview Current	Starts the preview with the current page.
Preview Disc	Starts the preview at the beginning of your disc (including any introductory media).

2. Once the Preview window is displayed, click the **DVD Script Debugger** button ( ) to display the Script Debugger pane at the bottom of the Preview frame.



3. Use the controls in the Script Debugger pane to test your script:

Item	Description
Step Next	Click to skip to the next command line in the script. **Tip:** *You can also press Shift+F5.*
Run	Click to run the script from the current breakpoint. **Tip:** *You can also press F5.*
Toggle Breakpoint	Click to insert a breakpoint to the currently selected command(s) or label(s) in the script. During script debugging, playback will stop at the breakpoint until you resume by clicking the **Run** button. **Tip:** *You can also press Ctrl+R.*
Current script	Choose a script from the drop-down list to specify the script you want to display.
#/Command list	Displays the steps and commands in the script.
SPRMs/GPRMs	Click the SPRMs or GPRMs button to view the current settings for both memory registers.

Renaming a script

1. Right-click a DVD script in the Project Overview window and choose **Rename** from the shortcut menu.
2. Type a new name in the edit box.
3. Press Enter.

Deleting a script

Right-click a DVD script in the Project Overview window and choose **Delete** from the shortcut menu.

Setting a DVD start script

A DVD start script is the script that will execute when the DVD is inserted in a DVD player. This script takes precedence over the item you've designated as your disc start item. *For more information, see Setting the disc start item on page 28.*

To set your project start script, right-click a DVD script in the Project Overview window and choose **DVD Start Script** from the shortcut menu.

> **Tip:** *You can also set the DVD start script in the Disc Properties section of the Project Properties window. For more information, see Disc properties on page 143.*

General Purpose Register Memories (GPRMs)

DVD scripts use General Purpose Register Memories (GPRMs) to temporarily store values or assets assigned by a script command. For example, you can assign a GPRM's value to another GPRM's value, an SPRM's value, a number, or link to an asset in your project.

Since only six GPRMs (0-5) are available for storage, you should attempt to plan your script ahead of time and use the GPRMs wisely.

System Parameter Register Memories (SPRMs)

DVD players use variables, called System Parameter Register Memories (SPRMs), to specify the current settings for the player, such as the audio stream, camera angle, or parental level. You can use the power of scripting in DVD Architect Pro to access these variables during the navigation and playback of your project, allowing you to customize the viewing experience based on certain conditions.

The SPRMs are defined below:

SPRM	Description
0	Menu language code *For more information, see Language codes on page 158.*
1	Audio track number
2	Subtitle track number
3	Video angle number
4	Title number
5	Video title set (VTS) number
6	Title program chain number
7	Chapter number
8	Highlighted button number
9	Navigation timer
10	Navigation timer destination (which track to play when navigation timer in SPRM 9 expires)
11	Player audio mixing mode for karaoke
12	Country code for parental management
13	Parental management level
14	Player configuration for video
15	Player configuration for audio
16	Initial audio language code
17	Initial audio language code extension
18	Initial language
19	Initial subtitle language extension
20	Player region code *For more information, see Region codes on page 159.*
21	Reserved
22	Reserved
23	Reserved

Language codes

The following table lists the language codes supported by DVD Architect Pro software.

Use the number from the Value column when writing scripts.

Language	Code	Value	Language	Code	Value	Language	Code	Value
Abkhazian	ab	24930	Hindi	hi	26729	Rhaeto-Romance	rm	29293
Afar	aa	24929	Hungarian	hu	26741	Romanian	ro	29295
Afrikaans	af	24934	Icelandic	is	26995	Russian	ru	29301
Albanian	sq	29553	Indonesian	in	26990	Samoan	sm	29549
Amharic	am	24941	Interlingua	ia	26977	Sangho	sg	29543
Arabic	ar	24946	Interlingue	ie	26981	Sanskrit	sa	29537
Armenian	hy	26745	Inupiak	ik	26987	Scots Gaelic	gd	26468
Assamese	as	24947	Irish	ga	26465	Serbian	sr	29554
Aymara	ay	24953	Italian	it	26996	Serbo-Croatian	sh	29544
Azerbaijani	az	24954	Japanese	ja	27233	Sesotho	st	29556
Bashkir	ba	25185	Javanese	jw	27255	Setswana	tn	29806
Basque	eu	25973	Kannada	kn	27502	Shona	sn	29550
Bengali	bn	25198	Kashmiri	ks	27507	Sindhi	sd	29540
Bhutani	dz	25722	Kazakh	kk	27499	Sinhalese	si	29545
Bihari	bh	25192	Kinyarwanda	rw	29303	Siswati	ss	29555
Bislama	bi	25193	Kirghiz	ky	27513	Slovak	sk	29547
Breton	br	25202	Kirundi	rn	29294	Slovenian	sl	29548
Bulgarian	bg	25191	Korean	ko	27503	Somali	so	29551
Burmese	my	28025	Kurdish	ku	27509	Spanish	es	25971
Byelorussian	be	25189	Laothian	lo	27759	Sundanese	su	29557
Cambodian	km	27501	Latin	la	27745	Swahili	sw	29559
Catalan	ca	25441	Latvian	lv	27766	Swedish	sv	29558
Chinese	zh	31336	Lingala	ln	27758	Tagalog	tl	29804
Corsican	co	25455	Lithuanian	lt	27764	Tajik	tg	29799
Croatian	hr	26738	Macedonian	mk	28011	Tamil	ta	29793
Czech	cs	25459	Malagasy	mg	28007	Tatar	tt	29812
Danish	da	25697	Malay	ms	28019	Telugu	te	29797
Dutch	nl	28268	Malayalam	ml	28012	Thai	th	29800
English	en	25966	Maltese	mt	28020	Tigrinya	ti	29801
Esperanto	eo	25967	Maori	mi	28009	Tonga	to	29807
Estonian	et	25972	Marathi	mr	28018	Tsonga	ts	29811
Faroese	fo	26223	Moldavian	mo	28015	Turkish	tr	29810
Fiji	fj	26218	Mongolian	mn	28014	Turkmen	tk	29803
Finnish	fi	26217	Nauru	na	28257	Twi	tw	29815
French	fr	26226	Nepali	ne	28261	Ukrainian	uk	30059
Frisian	fy	26233	Norwegian	no	28271	Urdu	ur	30066
Galician	gl	26476	Occitan	oc	28515	Uzbek	uz	30074
Georgian	ka	27489	Oriya	or	28530	Vietnamese	vi	30313
German	de	25701	Oromo	om	28525	Volapuk	vo	30319
Greek	el	25964	Pashto	ps	28787	Welsh	cy	25465
Greenlandic	kl	27500	Persian	fa	26209	Wolof	wo	30575
Guarani	gn	26478	Polish	pl	28780	Xhosa	xh	30824
Gujarati	gu	26485	Portuguese	pt	28788	Yiddish	ji	27241
Hausa	ha	26721	Punjabi	pa	28769	Yoruba	yo	31087
Hebrew	iw	26999	Quechua	qu	29045	Zulu	zu	31349

Region codes

When you set a region code (1-8) for a project, a SPRM20 value is automatically inserted in the Script Debugger Pane.

Note: *The SPRM20 value can not be changed manually.*

If your project is encoded for multiple regions, the SPRM value allows your project player to read the bitmask and determine if the player is compatible with the disc. The region codes and the corresponding SPRM codes are below.

Region code	Region code description	SPRM20 value
1	North America	1
2	Japan, Europe, Middle East, South Africa, and Greenland	2
3	Southeast Asia and Hong Kong	4
4	Australia, New Zealand, Mexico, South America, Central America, the Pacific Islands, and the Caribbean	8
5	Northwest Asia (including Korea) and North Africa	16
6	China	32
7	Reserved	N/A
8	Airplanes (In-flight entertainment)	128

Chapter 14 Working with Stereoscopic 3D Media on Blu-ray Disc

When creating a Blu-ray Disc project, you can use Vegas Pro to render stereoscopic video for your project.

Important: *The following features are not available for 3D titles:*

- *Buttons on video*
- *Crop and adjust*
- *The* **Recompress** *control in the Optimize Disc dialog*
- *The* **Reduce interlace flicker** *control on the Media Properties pane*

1. Shoot your 3D video with a 3D camera.
2. Import your 3D video into a stereoscopic 3D Vegas Pro project.
3. Render your clip using the Sony AVC/MVC plug-in with one of the following templates:
   - MVC 1280x720-60p, 25 Mbps video stream
   - MVC 1280x720-50p, 25 Mbps video stream
   - MVC 1920x1080-24p, 25 Mbps video stream

   Rendering using these templates creates BD-compliant video streams that will be burned to disc with no recompression.

   Two files will be created when you render your stereoscopic 3D video. The base stream is a full-resolution 2D AVC video, and the dependent stream is an MVC video that contains video data for the other eye.
4. When rendering is complete, add your base (.avc) stream to your DVD Architect project as you would add standard 2D media. DVD Architect will automatically detect the dependent (.mvc) stream.

   You can mix 2D and 3D media in a single project, but menus are displayed only in 2D.

Tip: *If you want to burn a 3D video in 2D for your project, you can remove the dependent stream from the folder where the base stream is saved.*

5. Prepare and burn your project to disc.

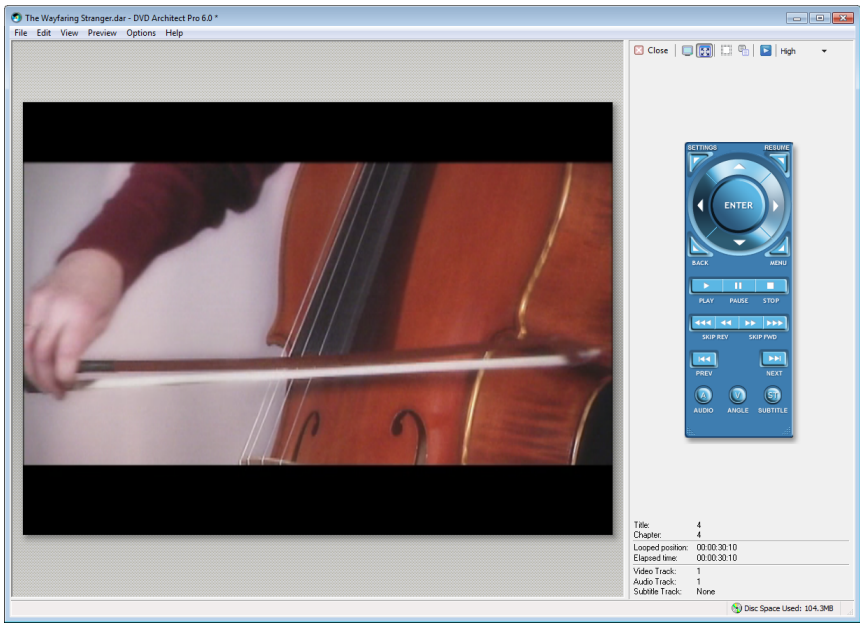
Note: *When you preview a 3D video, only the base stream will be displayed.*

Chapter 15 Previewing Projects

You can preview your project before you begin the project-preparation process. The most common method for previewing is from within the DVD Architect™ Pro window. In this method, you can simulate how your project will look on a television screen and how it will perform in a DVD or Blu-ray Disc™ player. You can also preview on an external monitor or secondary Windows display. Both methods are covered in this chapter.

Preview window

The Preview window allows you to preview your DVD Architect Pro project on a simulated television screen with a virtual remote control.



Preview toolbar

Close	**Close Preview** Closes the Preview window.
	Preview on External Monitor Allows you to preview your project on an external monitor device.
	Stretch Preview to Window Stretches the preview to the full viewing window.
	View Safe Areas Displays the Title Safe and Action Safe areas in the Preview window.

	Copy to Clipboard Allows you to copy to the clipboard.
	DVD Script Debugger Allows you to debug your DVD script.
High	**Preview Quality** Allows you to change the preview quality.

Previewing your project

To ensure that your project looks just the way you intended it, you can preview your DVD Architect Pro project on a simulated television screen with a virtual remote control.

1. Click the drop-down arrow next to the **Preview** button (Preview) on the main toolbar to choose a preview mode:

Preview Mode	Description
Preview Current	Starts the preview with the current page.
Preview Disc	Starts the preview at the beginning of your disc (including any introductory media).

   The preview window is displayed.

2. Use the **Preview Quality** button to set your playback quality.

> **Note:** *Decreasing the preview quality can allow you to preview your project when your computer cannot render the project in real time.*

3. If you want to verify whether any of your objects are outside the title and action safe areas, click the **View Safe Areas** button (). The grids for the Title Safe and Action Safe areas display while your project is previewing. If you see clipping during the preview, you can make corrections in your project.
4. Use the buttons on the remote control to navigate and play your project.
5. Click the **Preview on External Monitor** button () if you want to send your project to the external monitor device specified on the **Video Device** tab of the **Preferences** dialog.

   For more information, see Previewing on an external video monitor on page 164.
6. To end the preview and return to the main window, click the **Close** button (Close).

Previewing on an external video monitor

You can feed video directly from the DVD Architect Pro window to a television monitor or secondary Windows display. With this feature, you can free up valuable space in the DVD Architect Pro window by viewing a full-screen preview of your project on a different display, or you can make your final editing decisions on a broadcast monitor (which differs significantly from a computer monitor) before preparing or burning your project.

> **Note:** *External monitor output is for verifying colors, menu layout, and safe areas only and is not an indication of playback synchronization of the final burned disc.*

Prior to previewing on an external monitor, you'll need to configure your system to use this feature. From the **Options** menu, choose **Preferences** and then click the Video Device tab to configure an external monitor. Your video will be sent to this device when you click the **Preview on External Monitor** button () in the Video Preview window.

For more information, see Video Device tab on page 184.

Previewing video on a secondary Windows display

If your Windows desktop is extended across multiple displays, you can use one of those displays to preview your project.

Important: *If you intend to deliver your project in an interlaced format, previewing on a computer monitor is not a substitute for previewing on an interlaced broadcast monitor.*

Windows secondary display preview requirements:

- A multiple-output graphics card that supports 3D acceleration (or multiple graphics cards: you could install AGP and PCI video cards in your system, for example).

  You can also use the Windows Secondary Display device on a computer with a single monitor. When you enable the external monitor, the video preview will fill your screen.
- A CRT, LCD, or projector connected to your computer's secondary video output.
- The **Extend my Windows desktop onto this monitor** check box must be selected on the **Settings** tab or the Display Properties dialog (Start > Settings > Control Panel > Display).

Configuring a secondary Windows display

1. Use the **Video Device** tab in the Preferences dialog to configure the display you want to use as a video preview monitor.

   For more information, see Configuring a Windows Secondary Display on page 184.
2. Click the **Preview on External Monitor** button ( ) in the Video Preview window.

   You can turn off external preview by clicking the secondary display and pressing Esc.
3. To end the preview and return to the main window, click the **Close** button (Close).

Previewing video on an external monitor via IEEE-1394

You can send video directly from the timeline to a television monitor. With this feature, you can make your final editing decisions on a broadcast monitor (which differs significantly from a computer monitor) before preparing or burning your project.

To use an external monitor, you must have the following:

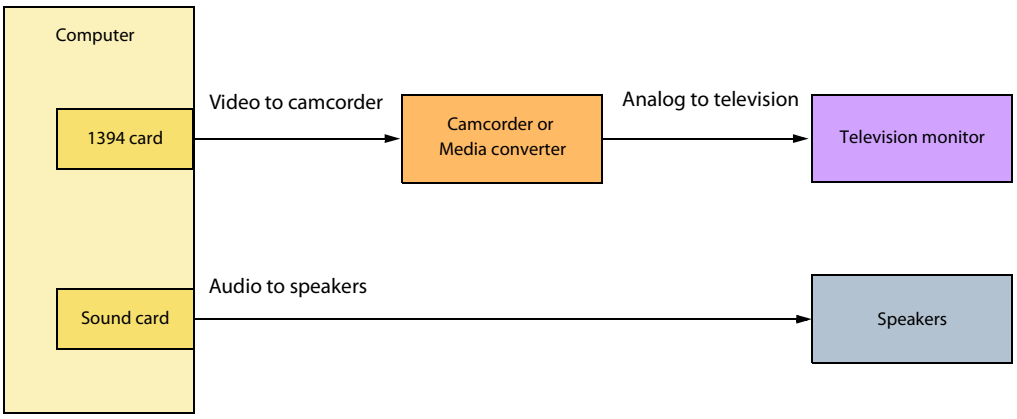
- OHCI-compliant IEEE-1394 DV card
- DV camcorder or DV-to-analog converter

While configuring your computer for DV external monitor previewing is not difficult, the setup may require some troubleshooting. The Sony Creative Software Inc. forum is a good resource for peer-to-peer system troubleshooting:

http://www.sonycreativesoftware.com/forums

Hardware setup

The diagram below shows the preferred setup for sending video to an external television monitor.



The video conforms to DV format and feeds through the 1394 card to the DV device (camcorder or DV-to-analog media converter). The DV device sends analog output to the television monitor.

Note: *The DV device must support pass-through in order to use an external monitor. Some PAL camcorders do not support this feature.*

Configuring an external monitor

1. Use the **Video Device** tab in the Preferences dialog to configure the display you want to use as a video preview monitor.

   For more information, see Configuring an OHCI-compliant IEEE 1394/DV device on page 184.

   The output is directed to the camcorder through the IEEE-1394 card. You can preview this output on the camcorder's LCD screen or connect the camera to a television monitor to preview the output there. Once you have verified that the external monitor settings are working correctly, you can use it to preview your project.
2. Click the **Preview on External Monitor** button ( ) in the Video Preview window.
3. To end the preview and return to the main window, click the **Close** button (Close).

Chapter 16 Preparing and Burning Your Project

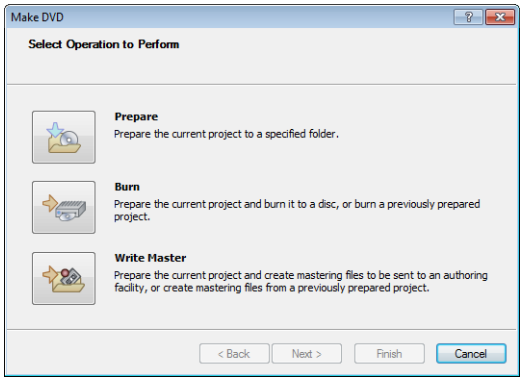
Once you've finished building your project using DVD Architect™ Pro software and are satisfied with the results you see after previewing, you're ready to begin the final stage: preparing and burning your project.

Preparing and burning DVD projects

Preparing a DVD project

During the prepare process, DVD Architect Pro software develops the files and structure necessary to burn your project without actually starting the burning process.

1. Click the **Make DVD** button ( ). The Make DVD wizard is displayed.



2. Click the **Prepare** button. The Select Prepare Folder page is displayed.
3. In the **Prepare folder** box, type the path to the folder where you want to prepare your project, or click **Browse** to choose a folder.

> **Note:** *You can only prepare to a folder that is empty or a folder that you have previously prepared to.*

4. If you've previously prepared the project, the Smart prepare section will display the estimated percentage of the project that has not been changed and that can be reused. If you want to turn off smart prepare and prepare the entire project, perform the following steps:
   a. Click the **Advanced** button. The Smart Prepare Options dialog is displayed.
   b. Clear the **Enable smart prepare** check box.
   c. Click the **OK** button to continue.

> **Tip:** *Smart prepare technology can drastically reduce project preparation times if you need to edit a portion of your project. When you reprepare your project, only the portions of the project that have changed will be prepared.*

   d. Click **Next**.

5. The files in your project are analyzed to ensure that they are ready for burning and a message list is displayed with the results. You can also view the final size of your project.

   a. Review the messages and make any necessary adjustments.

Message Type		Description
	Informational	Produces a valid DVD and does not require any action.
	Warning	Produces a valid DVD and does not require any action.
	Error	Produces an invalid DVD and must be resolved.

   b. Click the **Optimize** button to display the Optimize Disc dialog where you can make changes to individual media file and project settings (often allowing you to resolve warnings or errors). *For more information, see Optimizing your project on page 29.*

   c. Click the **Next** button.

6. The subtitle and menu highlight mask files in your project are analyzed to ensure that they are ready for burning and a message list is displayed with the results. Review the messages and make any necessary adjustments.

7. Click the **Finish** button. Your project is rendered to the folder you specified.

8. The application displays a dialog box indicating that the prepare completed successfully; click the **OK** button to continue.

Burning a DVD project

DVD Architect Pro allows you to burn current projects, previously prepared projects, or previously mastered projects. *For information about preparing a project for burning, see Preparing a DVD project on page 167. For more information about mastering, see Writing a master for replication on page 172.*

1. Click the **Make DVD** button ( ). The Make DVD wizard is displayed.

2. Click the **Burn** button. The Select Prepare Folder page is displayed.

3. Choose the location where you want to prepare your project or the location of an already-prepared or mastered project that you want to burn.

Note: *You can only prepare to a folder that is empty or a folder that you have previously prepared to.*

Option	Description
Current project	Select the **Current project** radio button and type the path to the folder where you want to prepare your project in the **Prepare/Burn folder** box (or click **Browse** to choose a folder). If you've previously prepared the project, the Smart prepare section will display the estimated percentage of the project that has not been changed and that can be reused. If you want to turn off smart prepare and prepare the entire project, perform the following steps: 1. Click the **Advanced** button. The Smart Prepare Options dialog is displayed. 2. Clear the **Enable smart prepare** check box. 3. Click the **OK** button to continue. **Tip:** *Smart prepare technology can drastically reduce project preparation times if you need to edit a portion of your project. When you reprepare your project, only the portions of the project that have changed will be prepared.*
Previously prepared folder	Select the **Previously prepared folder** radio button and type the path to the folder that contains a prepared project in the **Prepared folder** box (or click **Browse** to choose a folder).
Previously mastered folder	Select the **Previously mastered folder** radio button to burn a previously mastered project. Type the path to the folder that contains a previously mastered project in the **Mastered folder** box (or click **Browse** to choose a folder).

4. Click the **Next** button.

5. If you selected the **Current project** radio button in step 3, DVD Architect Pro software displays a list of messages about your project and estimates the project's final size on the Review Message List page.
   a. Review the messages and make any necessary adjustments.

Message Type		Description
	Informational	Produces a valid DVD and does not require any action.
	Warning	Produces a valid DVD and does not require any action.
	Error	Produces an invalid DVD and must be resolved.

   b. Click the **Optimize** button to display the Optimize Disc dialog where you can make changes to individual media files and project settings (often allowing you to resolve warnings or errors). *For more information, see Optimizing your project on page 29.*
   c. Click the **Next** button.
6. The subtitle and menu highlight mask files in your project are analyzed to ensure that they are ready for burning and a message list is displayed with the results. Review the messages and make any necessary adjustments.
7. Select the burn parameters:
   a. In the **Volume name** box, type the name of your disc.
   b. From the **Device** drop-down list, choose your DVD/Blu-ray Disc™ burner or **ISO Image Writer**.
   c. Perform one of the following actions:

If	Then
You chose your DVD burner	In the **Speed** drop-down list, choose your burning speed.
You chose **ISO Image Writer**	In the **File name** field, click the **Browse** button () to browse to the location where you would like to save the file.

   d. Select the **Advanced** button to display the Advanced Burn Parameters dialog. The Drive Info tab lists information about the drive to which the disc will be burned. The Media Info tab lists information about the type of media currently in your burner. The Labels tab has information about the volume name, volume set name, and application ID, which you can adjust if necessary. Click **OK** to return to the Select Burn Parameters page.
   e. If you're using a -RW disc, you can select one of the **Erase mode** radio buttons to erase the disc before burning.

Option	Description
Do not erase	Does not erase the contents of the disc.
Quick erase	Erases only the table of contents.
Full erase	Erases all data from the disc.

   f. Select the **Burn disc** radio button if you want to burn your project, or select the **Test only** button to perform a test burn without activating your burner's laser.

Note: *Test burns are not available with single- or dual-layer discs using +R/+RW media or if you cleared the* **Use legacy disc drivers** *check box on the* **Burning** *tab of the Preferences dialog.*

   g. Select the Eject disc when done check box so the DVD drive will open when the burn is completed.
8. Click the **Finish** button to start burning.
9. When burning a previously mastered folder, after clicking the **Finish** button, click **Continue** to burn the next mastered layer.

Note: *When burning a dual-layer mastered project, each layer must be burned to separate discs. You cannot burn both layers to one dual-layer disc.*

10. If you are preparing and burning a dual-layer disc, the Choose Layer Break Behavior page is displayed to allow you to choose if you want to choose a layer break or if you would like the software to choose a break for you.

a. Select one of the following options:

Option	Description
Choose a layer break point automatically	The software will choose a layer break for you. **Tip:** *If the layer break must occur in a compilation, you'll be unable to burn your project. To resolve the situation, try the following:* • Reordering title may allow a suitable layer break to be found. *For more information, see Editing title order on page 38.* • Changing the length of slides in the compilation may allow a suitable layer break to be found. *For more information, see Setting display duration from the Picture Compilation Properties window on page 70.*
Prompt me to choose a layer break point only if the break must be placed within a title	After the project is prepared, the software will interrupt the mastering process to prompt you to choose a layer break point if a break point cannot be placed at the beginning of a title.
Prompt me to choose the layer break point	After the project is prepared, the software will interrupt the mastering process to prompt you to choose a layer break point.

b. Click the **Finish** button. DVD Architect Pro software prepares the project.

11. If you are burning a dual-layer disc from a prepared project, the Select Layer Break page is displayed to assist you with placing the layer break.

Notes:

- *All media after the selected layer break will be placed on the second layer.*
- *If you're preparing and mastering, the Select Layer Break page will be displayed only if you did not choose the* **Choose a layer break point automatically** *radio button in step 10 or if the software is unable to find a preferred layer break point.*

a. At the top of the page, select a setting from the drop-down list to indicate whether you want the preferred layer break points or all available layer break points to be displayed. Break points are determined by chapters in your titles:
   - A preferred layer break point occurs at the beginning of a title. These chapter markers are preferred because they will not result in a visible pause when the DVD or Blu-ray Disc player changes layers.
   - If no preferred layer break points are available, you can choose to display all possible layer break points. If you choose a nonpreferred break point, viewers may notice a pause when the player changes layers.
   - If no layer break points are available, you can close the wizard and add a chapter marker manually. The wizard will suggest a title and approximate location.
   - If layer break points are not available in suitable locations, try rearranging the titles in the Project Overview window. By changing the title order, you may be able to achieve that layer break at a more desirable location.

b. Select the layer break point that you want to use.

12. The application displays a dialog box prompting you to burn another disc.
   - Click the **Yes** button to burn another copy. The application displays the Make DVD - Select Burn Parameters page where you can begin the process again.
   - Click the **No** button if you do not want to burn another copy of your DVD.

Burning 8 cm discs to 12 cm discs

You can burn a camcorder-prepared DVD (8 cm disc) onto a standard DVD (12 cm disc) using DVD Architect Pro. Connect the camcorder via the USB port to the computer and insert a writable DVD into your DVD drive.

Note: *To locate the camcorder's USB connection, please review the camcorder's user instructions.*

1. Click the **Make DVD** button (). The Make DVD wizard is displayed.
2. Click the **Burn** button. The Select Prepare Folder page is displayed.
3. Select the **Previously prepared folder** radio button and click Browse to choose the USB drive.

Note: *The DVD must be finalized in the camcorder before the disc can be copied.*

4. Click the **Next** button.
5. Select the burn parameters:
   a. In the **Volume name** box, type the name of your disc.
   b. From the **Device** drop-down list, choose your DVD burner or **ISO Image Writer**.

If	Then
You chose your DVD burner	In the **Speed** drop-down list, choose your burning speed.
You chose **ISO Image Writer**	In the **File name** field, click the **Browse** button (...) to browse to the location where you would like to save the file.

   c. Select the **Advanced** button to display the Advanced Burn Parameters dialog. The Drive Info tab lists information about the drive to which the DVD will be burned. The Media Info tab lists information about the type of media currently in your DVD burner. The Labels tab has information about the volume name, volume set name, and application ID, which you can adjust if necessary. Click **OK** to return to the Select Burn Parameters page.
   d. Select the **Burn disc** radio button if you want to burn your project, or select the **Test only** button to perform a test burn without activating your burner's laser.

Note: *Test burns are not available if you cleared the* **Use legacy disc drivers** *check box on the* **Burning** *tab of the Preferences dialog.*

   e. Select the **Eject disc when done** box so the DVD drive will open when the burn is completed.
6. Click the **Finish** button to start burning.
7. The application displays a dialog box prompting you to burn another disc.
   - Click the **Yes** button to burn another copy. The application displays the Make DVD - Select Burn Parameters page where you can begin the process again.
   - Click the **No** button if you do not want to burn another copy of your DVD.

Writing a master for replication

DVD Architect Pro software allows you to create a disc master for replication.

Note: *Mastering is not available for Blu-ray Disc projects.*

1. Click the **Make DVD** button ( ). The Make DVD wizard is displayed.
2. Click the **Write Master** button.
3. On the Select Prepare Folder page, choose the location where you want to prepare your project or the location of an already-prepared project that you want to burn.

Note: *You can only prepare to a folder that is empty or a folder that you have previously prepared to.*

Option	Description
Current project	Select the **Current project** radio button and type the path to the folder where you want to prepare your project in the **Prepare/Burn folder** box (or click **Browse** to choose a folder). If you've previously prepared the project, the Smart prepare section will display the estimated percentage of the project that has not been changed, which can be reused. If you want to turn off smart prepare and prepare the entire project, perform the following steps: 1. Click the **Advanced** button. The Smart Prepare Options dialog is displayed. 2. Clear the **Enable smart prepare** check box. 3. Click the **OK** button to continue. **Tip:** *Smart prepare technology can drastically reduce project preparation times if you need to edit a portion of your project. When you reprepare your project, only the portions of the project that have changed will be prepared.*
Previously prepared folder	Select the **Previously prepared folder** radio button and type the path to the folder that contains a prepared project in the **Prepared folder** box (or click **Browse** to choose a folder).

4. Click the **Next** button.
5. If you selected the **Current project** radio button in step 3, DVD Architect Pro software displays a list of messages about your project and estimates the project's final size on the Review Message List page.
   a. Review the messages and make any necessary adjustments.

Message Type		Description
	Informational	Produces a valid DVD and does not require any action.
	Warning	Produces a valid DVD and does not require any action.
	Error	Produces an invalid DVD and must be resolved.

   b. Click the **Optimize** button to display the Optimize Disc dialog where you can make changes to individual media file and project settings (often allowing you to resolve warnings or errors). *For more information, see* *Optimizing your project on page 29*.
   c. Click the **Next** button.
6. The subtitle and menu highlight mask files in your project are analyzed to ensure that they are ready for burning and a message list is displayed with the results. Review the messages and make any necessary adjustments.

7. On the Update Mastering Properties page, you can choose to update the settings from the Project Properties dialog.
   a. Click the **Copy Protection** button at the top of the dialog and choose your copy protection settings. *For more information, see Copy protection on page 146.*
   b. Click the **Regions** button at the top of the dialog and choose the region settings for your disc. *For more information, see Regions on page 147.*

> **Note:** *Region information is not encoded on DVDs you burn with DVD Architect Pro software; the software sets a region flag that is encoded by a replication facility.*

   c. Click the **Mastering** button at the top of the dialog and choose your mastering settings. *For more information, see Mastering on page 148.*
   d. Click the **Next** button.
8. On the Select Mastering Output Parameters page, choose your mastering settings:
   a. In the **Volume name** box, type the name of your disc.
   b. From the **Device** drop-down list, choose your hard drive or your DLT (digital linear tape) drive.
   c. If you're saving your master to a file on disk, type the path to the folder you want to use, or click the **Browse** button to choose a folder.
   d. If you selected your DLT drive from the **Device** drop-down list and need to erase the tape, select the **Erase first, then write to tape** check box. A dialog box confirming that you want to erase the tape is displayed; click the **Yes** or **No** button to continue.

> **Note:** *Erasing the tape may take a long time and oftentimes cannot be canceled.*

   e. Click the **Next** button.
9. If you are preparing and mastering a dual-layer disc, the Choose Layer Break Behavior page is displayed to allow you to choose if you want to choose a layer break or if you would like the software to choose a break for you.
   a. Select one of the following options:

Option	Description
Choose a layer break point automatically	The software will choose a layer break for you. **Tip:** *If the layer break must occur in a compilation, you'll be unable to burn your project. To resolve the situation, try the following:* • *Reordering title may allow a suitable layer break to be found. For more information, see Editing title order on page 38.* • *Changing the length of slides in the compilation may allow a suitable layer break to be found. For more information, see Setting display duration from the Picture Compilation Properties window on page 70.*
Prompt me to choose a layer break point only if the break must be placed within a title	After the project is prepared, the software will interrupt the mastering process to prompt you to choose a layer break point if a break point cannot be placed at the beginning of a title.
Prompt me to choose the layer break point	After the project is prepared, the software will interrupt the mastering process to prompt you to choose a layer break point.

   b. Click the **Finish** button. DVD Architect Pro software prepares the project.

10. If you are mastering a dual-layer disc from a prepared project, the Select Layer Break page is displayed to assist you with where to place the layer break.

Notes:

- *All media after the selected layer break will be placed on the second layer.*
- *If you're preparing and mastering, the Select Layer Break page will be displayed only if you did not choose the* **Choose a layer break point automatically** *radio button in step 10 or if the software is unable to find a preferred layer break point.*

a. At the top of the page, select a setting from the drop-down list to indicate whether you want the preferred layer break points or all available layer break points to be displayed. Break points are determined by chapters in your titles:
   - A preferred layer break point occurs at the beginning of a title. These chapter markers are preferred because they will not result in a visible pause when the DVD or Blu-ray Disc player changes layers.
   - If no preferred layer break points are available, you can choose to display all possible layer break points. If you choose a nonpreferred break point, viewers may notice a pause when the player changes layers.
   - If no layer break points are available, you can close the wizard and add a chapter marker manually. The wizard will suggest a title and approximate location.
   - If layer break points are not available in suitable locations, try rearranging the titles in the Project Overview window. By changing the title order, you may be able to achieve that layer break at a more desirable location.

b. Select the layer break point that you want to use.

11. Click the **Finish** button to start preparing, if necessary, and writing your mastering files.

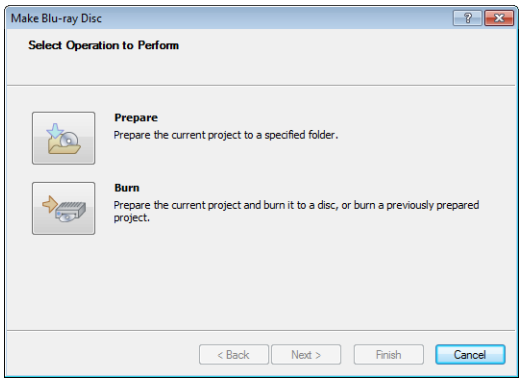
12. The application displays a dialog box indicating that the mastering completed successfully; click the **OK** button to continue.

Preparing and burning Blu-ray Disc projects

Preparing a Blu-ray Disc project

During the prepare process, DVD Architect Pro software develops the image file (.iso) needed to burn your project without actually starting the burning process.

1. Click the **Make Blu-ray Disc** button ( ). The Make Blu-ray Disc wizard is displayed.



2. Click the **Prepare** button. The Select Image page is displayed.
3. In the **Prepare image** box, type the file path and file name of your new image file where you want to prepare your project, or click **Browse** to choose a location and file name.
4. Click **Next**.
5. The files in your project are analyzed to ensure that they are ready for burning and a message list is displayed with the results. You can also view the final size of your project.
   a. Review the messages and make any necessary adjustments.

Message Type	Description
Informational	Produces a valid disc and does not require any action.
Warning	Produces a valid disc and does not require any action.
Error	Produces an invalid disc and must be resolved.

   b. Click the **Optimize** button to display the Optimize Disc dialog where you can make changes to individual media file and project settings (often allowing you to resolve warnings or errors). *For more information, see* *Optimizing your project on page 29*.
6. Click the **Finish** button. Your project is prepared as an image file in the folder you specified.

   The application displays a dialog box indicating that the prepare completed successfully; click the **OK** button to continue.

Burning a Blu-ray Disc project

DVD Architect Pro allows you to burn current projects or previously prepared projects. *For information about preparing a project for burning, see* *Preparing a Blu-ray Disc project on page 175*.

1. Click the **Make Blu-ray Disc** button ( ). The Make Blu-ray Disc wizard is displayed.
2. Click the **Burn** button. The Select Image page is displayed.

3. Choose the location where you want to prepare your project or the location of an already-prepared image that you want to burn.

Option	Description
Current project	Select the **Current project** radio button and type the file path and file name of your new image file in the **Prepare/burn image** box (or click **Browse** to choose a location and file name).
Previously prepared image	Select the **Previously prepared image** radio button and type the path to an existing image file in the **Prepare/burn image** box (or click **Browse** to choose an existing image).

4. Click the **Next** button.
5. If you selected the **Current project** radio button in step 3, DVD Architect Pro displays a list of messages about your project and estimates the project's final size on the Review Message List page.
   a. Review the messages and make any necessary adjustments.

Message Type		Description
	Informational	Produces a valid disc and does not require any action.
	Warning	Produces a valid disc and does not require any action.
	Error	Produces an invalid disc and must be resolved.

   b. Click the **Optimize** button to display the Optimize Disc dialog where you can make changes to individual media files and project settings (often allowing you to resolve warnings or errors). *For more information, see* *Optimizing your project on page 29*.
6. Click the **Next** button.
7. Select the burn parameters:
   a. In the **Volume name** box, type the name of your disc.
   b. From the **Device** drop-down list, choose your Blu-ray Disc burner.
   c. In the **Speed** drop-down list, choose your burning speed.
   d. Select the **Advanced** button to display the Advanced Burn Parameters dialog. The Drive Info tab lists information about the drive to which the disc will be burned. The Media Info tab lists information about the type of media currently in your burner. Click **OK** to return to the Select Burn Parameters page.
   e. If you're using a -RE disc, you can select one of the Erase mode radio buttons to erase the disc before burning.

Option	Description
Do not erase	Does not erase the contents of the disc.
Quick erase	Erases only the table of contents.
Full erase	Erases all data from the disc.

   f. Select the Burn disc radio button if you want to burn your project, or select the Test only button to perform a test burn without activating your burner's laser.

> **Note:** *Test burns are not available when using BD-RE media or when the* **Use legacy disc drivers** *check box is cleared on the* **Burning** *tab of the Preferences dialog.*

   g. Select the **Eject disc when done** check box so the Blu-ray Disc drive will open when the burn is completed.
8. Click the **Finish** button to start burning.
9. When burning a previously prepared dual-layer image, after clicking the **Finish** button, click **Continue** to burn the next layer. The layer break is selected automatically.
10. The application displays a dialog box prompting you to burn another disc.
    - Click the **Yes** button to burn another copy. The application displays the Make Blu-ray Disc - Select Burn Parameters page where you can begin the process again.
    - Click the **No** button if you do not want to burn another copy of your project.

Erasing discs

From the **File** menu, choose **Erase Disc** to delete data from a rewritable disc.

1. From the **File** menu, choose **Erase Disc**. The Erase Disc dialog is displayed.
2. From the **Drive** drop-down list, choose the drive that contains the disc you want to erase.
3. Choose the speed of the drive from the **Speed** drop-down list.

> **Note:** *The* **Speed** *drop-down list is not available if you cleared the* **Use legacy disc drivers** *check box on the* **Burning** *tab of the Preferences dialog.*

4. Choose an erase mode:
   - Choose the **Quick** radio button to erase only the disc's table of contents.
   - Choose the **Full** radio button to erase all data from the disc.
5. Click the **OK** button to start erasing.

Chapter 17 Customizing DVD Architect Pro Software

You can customize DVD Architect™ Pro software to suit your project needs and working preferences. In this chapter, you will find information about functions that allow you to customize the appearance of DVD Architect Pro software and set the application's preferences.

Changing grid settings

The workspace's grid allows you to arrange and align objects on your menus more precisely. You can also customize the grid's properties, such as color, size, or position.

To view or change grid settings, choose **Grid Settings** from the **Options** menu. The Grid Settings dialog is displayed. The items on this dialog are explained below.

Tip: *If you will use the same grid settings on most projects, select the* **Start all new projects with these settings** *check box at the bottom of the Grid Settings dialog.*

Setting	Description
Width	Sets the width of grid squares.
Height	Sets the height of grid squares.
X offset	Sets the horizontal center offset for the placement of the grid.
Y offset	Sets the vertical center offset for the placement of the grid.
Lock sizes	Locks the grid size so the height and width are equal.
Color	Sets the red, green, blue, and alpha channels for your grid.
Start all new projects with these settings	Use the grid settings you have specified whenever a new project is created.
Show grid	Displays the grid in the workspace.

Saving and recalling window layouts

A window layout stores the sizes and positions of all windows and floating window docks in the DVD Architect Pro workspace.

You can store any number of window layouts on your computer, and up to ten window layouts are available in the View menu (and via keyboard shortcuts) so you can quickly recall frequently used layouts.

Notes: *Window layouts are saved in the following folders:*

- *Windows XP: C:\Documents and Settings\Your User Name\Application Data\Sony\DVD Architect Pro\5.2*
- *Windows Vista: C:\Users\Your User Name\AppData\Roaming\Sony\DVD Architect Pro\5.2*

You can transfer layouts between computers by copying the .DVDArchWindowLayout files.

Saving a window layout

1. Arrange the windows and docked windows as desired.

   Tip: *Press Ctrl+Alt+D, release the keys, and then press a number on your keyboard (not the numeric keypad) to save the layout in that space.*

2. From the **View** menu, choose **Window Layouts**, and then choose **Save Layout As** from the submenu. The Save Layout As dialog is displayed.

   Choose **Save Layout** from the submenu if you want to update the current window layout. A bullet is displayed next to the current layout.

3. In the **Name** box, type the name you want to use to identify the layout. This name will be used in the Organize Layouts dialog.
4. Choose a setting from the **Shortcut** drop-down list to set the shortcut that will be used to load the layout.

   For example, if you choose 4, you could press Alt+D, release the keys, and then press 4 on your keyboard to load the layout.
5. The **Folder** box displays the path to the folder where the layout will be saved.

   Window layouts are saved in the following folders by default:

   - Windows XP: C:\Documents and Settings\Your Username\Application Data\Sony\DVD Architect Pro\5.2
   - Windows Vista: C:\Users\Your Username\AppData\Roaming\Sony\DVD Architect Pro\5.2\

   You can click the **Browse** button to choose a different folder.
6. Click **OK** to save the new layout.

Loading a saved layout

From the **View** menu, choose **Window Layouts**, and then choose the window layout you want to use from the submenu.

Tip: *To load a layout quickly, press Alt+D, release the keys, and then press a number on your keyboard (not the numeric keypad) to recall the layout saved in that in that space. If no layout is saved in that space, nothing will happen when you press the shortcut.*

If you've modified the current window layout, choose **Window Layouts**, and then choose **Reload Selected Layout** from the submenu to reset the window layout to the last-saved version.

Adding a layout to the View > Window Layouts submenu

1. From the **View** menu, choose **Window Layouts**, and then choose **Organize Layouts** from the submenu. The Organize Layouts dialog is displayed.
2. Select a layout in the **Available layouts in current folder** box.

   This box lists the .DVDArchWindowLayout files in the folder displayed in the **Current layout folder** box. If the layout you want to use is saved in a different folder, you can click the **Browse** button to choose a new folder.
3. Select a layout in the **Current layouts in menu** box.
4. Click the **Assign** (or **Replace**) button to add the layout to the **View** > **Window Layouts** submenu.

   You can click the **Move Up** or **Move Down** buttons to change the order of the layouts in the menu.
5. Click the **Activate** button to apply the selected layout to the DVD Architect Pro workspace.
6. Click **OK** to close the Organize Layouts dialog and apply your changes.

Removing a layout from the View > Window Layouts submenu

1. From the **View** menu, choose **Window Layouts**, and then choose **Organize Layouts** from the submenu. The Organize Layouts dialog is displayed.
2. Select a layout in the **Current layouts in menu** box.
3. Click the **Clear** button to remove the selected layout from the **View** > **Window Layouts** submenu.

   If you want to replace the selected layout, select a layout in the **Available layouts in current folder** box and click the **Replace** button.
4. Click **OK** to close the Organize Layouts dialog and apply your changes.

Note: *Removing a layout from the* **View** > **Window Layouts** *submenu does not remove the .DVDArchWindowLayout file from your computer.*

Deleting a layout from your computer

1. From the **View** menu, choose **Window Layouts**, and then choose **Organize Layouts** from the submenu. The Organize Layouts dialog is displayed.

2. Select a layout in the **Current layouts in menu** box.
3. Click the **Delete Layout** button to remove the selected layout from your computer.

> **Note:** *You cannot delete a layout that is included in the* **Current layouts in menu** *list. First, select the layout in the* **Current layouts in menu** *list and click the* **Clear** *button. Next, select the layout in the* **Available layouts in current folder** *list and click the* **Delete Layout** *button.*

4. Click **OK** to close the Organize Layouts dialog and apply your changes.

Using the toolbar

The main toolbar is automatically displayed below the menu bar. However, you can hide and customize the toolbar to suit your preferences. The settings that you apply to the toolbar remain set until you change them again.

Hiding and displaying the toolbar

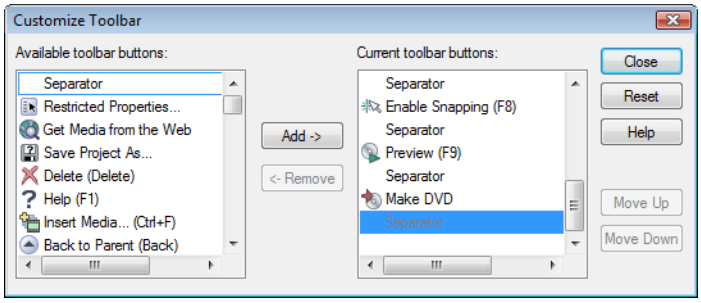
If you prefer to use shortcut keys when working with your project, you can hide the toolbar to create more workspace. Choose **Toolbar** from the **View** menu to hide it. The check mark next to the command is removed and the toolbar disappears. The toolbar remains hidden until you choose **Toolbar** from the **View** menu to display it again.

Reordering toolbar buttons

The main toolbar's button order can be changed to suit your preferences. You can reorder the buttons via the Customize Toolbar dialog.

The Customize Toolbar dialog allows you to control the order and functionality available on the main toolbar. You can return the toolbar to its default settings by clicking the **Reset** button.

1. From the **Options** menu, choose **Customize Toolbar**. The Customize Toolbar dialog is displayed.



2. In the **Current toolbar buttons** list, select the button that you want to move and click the **Move Up** or **Move Down** button.
3. Click **Close** to save the toolbar changes and close the dialog.

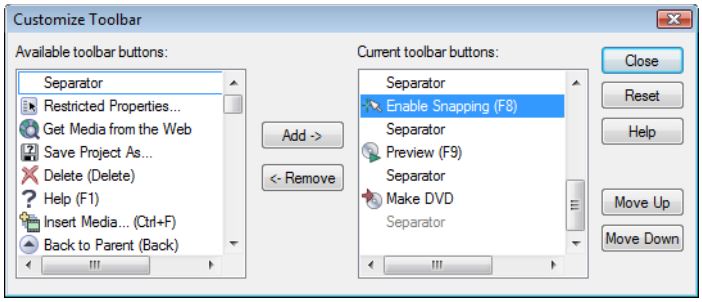
Adding buttons to the toolbar

A series of buttons are available that you can add to the main toolbar. These buttons are listed in the Customize Toolbar dialog. You can also add separators on the toolbar to organize the buttons to suit your preferences.

You can return the toolbar to its default settings by clicking the **Reset** button on the dialog.

1. From the **Options** menu, choose **Customize Toolbar**. The Customize Toolbar dialog is displayed.
2. In the **Available toolbar buttons** list, use the scroll bars to locate the button that you want to add, and then select it.
3. On the **Current toolbar buttons** pane, select the button that you want the newly added button to proceed in order.

   For example, if you want to add the **Insert Media** button and want it to precede the **Enable Snapping** button, select the **Enable Snapping** button in the **Current toolbar buttons** list.



4. Click the **Add** button. The new button is added above the selected button in the **Current toolbar buttons** list.

> **Tip:** *You can also double-click a button to add it to the toolbar.*

5. Click **Close** to save the toolbar settings and close the dialog.

Removing buttons from the toolbar

You may remove buttons and separators from the main toolbar. If you have added buttons to the toolbar, removing unused or unwanted buttons allows you to maximize the toolbar's space. You can remove toolbar buttons via the Customize Toolbar dialog.

You may return the toolbar to its default settings by clicking the **Reset** button on this dialog.

1. From the **Options** menu, choose **Customize Toolbar**. The Customize Toolbar dialog is displayed.
2. On the **Current toolbar buttons** pane, select the button that you want to remove.
3. Click **Remove**. The button is removed from the **Current toolbar buttons** pane and will not appear on the toolbar.

> **Tip:** *You can also double-click a button to remove it from the toolbar.*

4. Click **Close** to save the toolbar settings and exit the dialog.

Setting DVD Architect Pro preferences

The preferences options are different from project properties. Project properties are unique to each project, while preferences affect how the software functions. Any changes that you make to the preferences remain set until you change them again or reset to use the default presets.

You can access the Preferences dialog by choosing **Preferences** from the **Options** menu. This dialog contains six tabs: **General**, **Video**, **Video Device**, **Editing**, **Display**, **Preview**, **Burning**, and **Mastering**. The following sections explain the settings on each tab.

General tab

The **General** tab includes a variety of settings and allows you to specify general user options.

Preference	Description
Show logo splash screen on startup	Select this check box to briefly show the DVD Architect Pro logo while the program is loading. The logo does not increase loading time.
Use Microsoft DV Reader	Select this check box to use the Microsoft DV codec for displaying and rendering DV. This option can help resolve problems viewing DV.
Double-clicking files in Explorer reapplies theme layout	Select this check box to automatically realign objects according to the current theme when you double-click media files in the Explorer window: the new file is added, and the objects are realigned on the menu. When the check box is cleared, the media files are added to the menu and existing object positions are preserved.
Use best stretching algorithm during rendering	Select this check box if you want bi-cubic stretching to be used during rendering. This setting produces higher-quality images, but rendering time is increased. When the check box is cleared, bi-linear stretching is used.

Preference	Description
Automatically open last project on startup	When check box is selected, the last project that was open when you exited will reopen.
Media goes offline on loss of focus	When this check box is selected, media files are released when DVD Architect Pro software does not have focus. The files will be reloaded when you switch back to DVD Architect Pro software.
Multimedia keyboard support	Select this check box to use a multimedia keyboard to control playback of a project.
Disable popup animations	Select this check box to turn off the animation applied to text boxes when you edit text. This animation helps you locate which text box you're editing.
Automatically link similar audio and video files	Select this check box if you want the software to look for and link audio files with the same base name when you add a video-only file to your project. For example, if you had a video-only MPEG file (MyProject.mpg) and an audio file (MyProject.wav) in the same folder, MyProject.wav will automatically be used as the audio track when you add MyProject.mpg to a menu. Clear the check box if you want to add your audio files manually.
Skip drive database; autodetect drive capabilities	When the check box is cleared, an internal configuration file will be used to determine your drive's capabilities. If you encounter problems burning discs, select this check box, and your drive will be tested to determine its capabilities.
Disable screen saver during preview	Select this check box if you want to suspend your screen saver when you're previewing your project.
Double-clicking themes applies them to all pages of a menu	Select this check box if you want to apply a theme to all pages in a menu when you double-click a theme in the Themes tab. When the check box is cleared, the theme is applied to the current page only.
Automatically name markers	Select this check box if you want DVD Architect Pro software to automatically assign names to markers when you add them to videos. When the check box is cleared, an edit box is displayed after you add a marker. *For more information, see Inserting a scene selection menu on page 41.*
Display filename labels on media events in trackview	Select this check box if you want to display the names of source files for audio and video events in the Timeline window.
Enable Windows XP Theme support	When this check box is selected, the DVD Architect Pro window will inherit the appearance of the current theme when using Windows XP. When the check box is cleared, user interface elements will maintain the classic Windows appearance.
Check project file type associations at startup	When this check box is selected, DVD Architect Pro will check whether .dar files are associated with DVD Architect Pro software and will prompt you to restore the file association if necessary.
Allow pulldown removal when opening 24p DV	Select this check box if you want to remove pulldown when you open 24 fps progressive-scan DV video files. When the check box is cleared, 24p video is read as 29.97 fps interlaced video (60i).
Always estimate maximum size	When this check box is selected, DVD Architect Pro will estimate the maximum possible size when calculating available disc space for your project. When the check box is cleared, DVD Architect Pro will use the standard estimation method, which provides more accurate results.
Use Direct Sound Surround Mapper	Select this box if your audio has unwanted pops or clicks.
Recently used project list	Select the check box and enter a number in the edit box if you want to list your most recently used projects at the bottom of the File menu.
Default All	Restores the General page to the default settings.

Video tab

The Video tab allows you to choose the graphics editor that you want to use when you choose to edit a graphic in your DVD Architect Pro project. *For more information, see Opening in graphics editor on page 51.*

The **Preferred graphics editor** box displays the path to the application that will be used. Click the **Browse** button to choose a different application, or click the **Clear** button to remove the associated application.

When the **Preferred graphics editor** box is empty, DVD Architect Pro software will use the application associated with the file type when you right-click a graphic and choose **Open in graphics editor** from the shortcut menu.

Video Device tab

This Video Device tab allows you to configure an external monitor. Your video will be sent to this device when you choose **Preview on External Monitor** from the **Options** menu or click the **Preview on External Monitor** button ( ) in the Video Preview window.

Configuring an OHCI-compliant IEEE 1394/DV device

If you have an OHCI-compliant IEEE 1394/DV device, you can configure it to work with DVD Architect Pro software.

1. From the **Options** menu, choose **Preferences** to display the Preferences dialog.
2. Select the **Video Device** tab.
3. In the **Device** drop-down list, select **OHCI-Compliant IEEE 1394/DV**. Information about the device displays in the **Details** area.
4. Use the **Format** controls to adjust the video to display properly on your external monitor.
   a. Choose the desired format from the **Format** drop-down list.
   b. Select a radio button to indicate when you want to adjust the output to the selected format.

Setting	Description
Only when the project does not match any DV format	Select this radio button if you want to adjust the video only if the project settings do not conform to a standard DV format.
Always	Select this radio button if you want to adjust the video output to the selected format whenever you preview on the external monitor. Use this setting when you do not have a preview device that supports your required project format. For example, if you're creating a PAL project, but you don't have a PAL monitor, you could use this setting to preview on an NTSC monitor.

5. To replace all custom functions with the default settings, click the **Default All** button.

Configuring a Windows Secondary Display

If you have a Windows secondary display device, you can configure it to work with DVD Architect Pro software.

Note: *You can also use the Windows Secondary Display device on a computer with a single monitor. When you enable the external monitor, the preview window will fill your screen.*

1. From the **Options** menu, choose **Preferences** to display the Preferences dialog.
2. Select the **Video device** tab.
3. In the **Device** drop-down list, select **Windows Secondary Display**. Information about the device displays in the **Details** area.
4. From the **Display adapter** drop-down list, choose the device where your preview monitor is connected.

   You can click the **Identify displays** button to determine which display corresponds to each setting in the drop-down list. A number will be displayed on each monitor.

Note: *If the monitor number is displayed in red, the graphics card does not support 3D acceleration or acceleration has been turned off. In Windows, you can go to* **Start** > **Settings** > **Control Panel** > **Display** > **Settings** >**Advanced** > **Troubleshoot** *to turn on acceleration if your adapter supports it.*

5. From the **Display mode** drop-down list, choose the frame size and refresh rate you want to use for the secondary display.

Setting	Description
Use Current Settings	Video is displayed using the monitor's resolution and refresh rate specified in the Windows Display Properties control panel.

Setting	Description
Automatic Size Settings	The software will attempt to choose the optimum resolution and refresh rate. This setting overrides the Windows Display Properties setting as long as the secondary display window is active.
Pick Custom Settings	You can choose the resolution and refresh rate you want to use. This setting overrides the Windows Display Properties setting as long as the secondary display window is active.

6. Select the **Scale output to fit display** check box if you want the video preview to fill the display.
7. Select the **Apply deinterlace filter** check box if you're previewing interlaced video on a noninterlaced display. This filter can reduce the artifacts you often see on the edges of moving areas.

Note: *The* **Apply deinterlace filter** *check box will be unavailable if your video adapter does not support pixel shading.*

8. If you want to adjust color reproduction for video previews, use the color management controls.
   a. Select the **Use color management** check box.
   b. Select the **Use Studio RGB** check box if your source media conforms to studio RGB color (black=16 and white=235) and you will be previewing on your computer's CRT or LCD monitor. When the check box is selected, the studio RGB range is expanded to 0 to 255 to conform to a computer display.

      Clear the check box if you will be previewing on a TV monitor or if your source media does not conform to studio RGB color.
   c. From the **Monitor color profile** drop-down list, choose the color profile that best matches your display.

      You can obtain ICC/ICM color profiles from the display manufacturer, or you can create your own if you have a calibration system.

Note: *The* **Use color management** *check box will be unavailable if your video adapter does not support gamma adjustment.*

9. To replace all custom functions with the default settings, click the **Default All** button.

Editing tab

The Editing tab allows you to specify options for editing your project.

Preference	Description
Action safe area (%)	Allows you to specify a percentage for the border size in the video's safe area. Video within this safe area will always be visible on a television monitor. The Safe Action borders are displayed when you choose **Show Action Safe Area** from the **Options** menu.
Title safe area (%)	Allows you to specify a percentage for the border size in the video's safe title area. Video within this safe area will always be visible on a television monitor. The Safe Title borders are displayed when you choose **Show Title Safe Area** from the **Options** menu.
Paste offset	Type values in the **X** and **Y** boxes if you want to offset items when you paste them. If you enter 0 in both boxes, objects will be pasted directly over the source object when you copy and paste in the same menu.
Brightness/contrast modifier (%)	Allows you to control how much brightness/contrast is added or subtracted when you click on the increase/decrease contrast, increase/decrease brightness and increase/decrease contrast center buttons.
Limit number of undo buffers to (0 to 9999)	Select this check box and type a number in the box if you want to limit the number of undo buffers that will be created. Reducing the number of undo buffers can conserve memory.
Default All	Restores the Editing page to the default settings.

Display tab

The **Display** tab allows you to specify options for the appearance of the DVD Architect Pro workspace.

Preference	Description
Icon color saturation	Drag the slider to adjust the color intensity of icons in the DVD Architect Pro window. Drag to the left to decrease the color saturation, or drag to the right to increase it.
Icon color tint	Drag the slider to adjust the amount of tinting that is applied to the icons in the DVD Architect Pro window. Drag the slider to the right to add an average of the Windows title bar colors to the icons. Drag to the left to decrease the amount of tinting applied. **Tip:** *You can use the Display Properties control panel to change your active window title bar colors. In Windows XP, open the Display Properties control panel and select the Appearance tab. Then click the* **Advanced** *button and choose* **Active Title Bar** *from the* **Item** *drop-down list. In Windows Vista, open the Appearance and Personalization control panel and click the* **Customize Colors** *link in the Personalization section. Next, click the* **Open classic appearance properties for more color options** *link. Then click the* **Advanced** *button and choose* **Active Title Bar** *from the* **Item** *drop-down list.*
Selected item color	Click to display a color picker, where you can set the color for selected items in the workspace using red, green, blue, and alpha values.
Button overlap color 1	Click to display a color picker, where you can set the color for buttons that overlap in the DVD Architect Pro workspace using red, green, blue, and alpha values.
Button overlap color 2	Click to display a color picker, where you can set the color for buttons that overlap in the DVD Architect Pro workspace using red, green, blue, and alpha values.
Default All	Restores the Display page to the default settings.

Preview tab

The **Preview** tab allows you to specify options for previewing your projects.

Preference	Description
Fast forward/rewind amount	Type a value in the box to specify how far playback will be advanced/reversed when you click the and buttons while previewing your project.
Super fast forward/rewind amount	Type a value in the box to specify how far playback will be advanced/reversed when you click the and buttons while previewing your project.
Region	Choose a region code from the drop-down list to indicate the region to be used during project previews. **Note:** *Region codes are not available for Blu-ray Disc projects.*
Aspect ratio	Choose an aspect ratio from the drop-down list to indicate whether your project should be previewed in standard (4:3) or widescreen (16:9) format by default.
Parental control	Choose a parental management level from the drop-down list to simulate for project previews. **Note:** *Parental control is not available for Blu-ray Disc projects.*
Menu	Choose a menu language from the drop-down list to specify the default language for your disc menus while previewing your project.
Audio	Choose an audio language from the drop-down list to specify the default language for your audio tracks while previewing your project.
Subtitles	Choose a subtitle language from the drop-down list to specify the default language for subtitles while previewing your project.
Default All	Restores the Preview page to the default settings.

Burning tab

The Burning tab allows you to specify options for project preparation and burning.

Preference	Description
Free space display type	Choose a setting from the drop-down list to choose how your project size is represented in the bottom-right corner of the window (as Disc Space Used).
Default prepare folder	Displays the path to the folder where DVD Architect Pro software will prepare your project. Click the Browse button to choose a different folder.
Temporary files folder	Displays the path to the folder where DVD Architect Pro software will store temporary files it creates. Click the Browse button to choose a different folder.
Minimum video bit rate	Allows you to specify the minimum allowed bit rate that will be used when DVD Architect Pro software compresses the selected video.
Use legacy disc drivers	Select this check box to use the legacy DVD Architect Pro disc drivers for burning discs. Clear this check box to use the Microsoft Image Mastering API (IMAPI) disc drivers to burn discs in DVD Architect Pro software. This can be useful if burning discs with the legacy disc drivers is not working as you expect.
Default All	Restores the Burning page to the default settings.

Mastering tab

The Mastering tab allows you to specify options for project preparation and mastering.

Preference	Description
Mastering output folder	Displays the path to the folder where DVD Architect Pro software will master your project output. Click the Browse button to choose a different folder. **Note:** *Mastering is not available for Blu-ray Disc projects.*
Default All	Restores the Mastering page to the default settings.

Appendix A Shortcuts

Keyboard shortcuts

Project file

Press	Result
Ctrl+N	Create a new project
Ctrl+O	Open an existing project
Ctrl+S	Save modified project back to the file
Alt+Enter	Display the Project Properties dialog
Alt+F4	Exit the application

Magnification and view

Press	Result
Alt+0	Set input focus to the workspace
Alt+1	Show/hide editing toolbar
Alt+2	Show/hide text bar
Alt+3	Show/set input focus to the Explorer window
Alt+4	Show/set input focus to the Themes window
Alt+5	Show/set input focus to the Buttons window
Alt+6	Show/set input focus to the Backgrounds window
Alt+7	Show/set input focus to the Compilation window
Alt+8	Show/set input focus to the Properties window
Alt+9	Show/set input focus to the Timeline window
Ctrl+Alt+1	Show/set input focus to the Project Overview window
Ctrl+Alt+2	Show/set input focus to the Playlists window
Ctrl+Alt+3	Show/set input focus to the DVD Scripts window
Ctrl+Alt+4	Show/set input focus to the Crop and Adjust window
F11	Show/hide bottom panel
Shift+F11	Show/hide side panel
Ctrl+G	Show/hide grid
Ctrl+B	Show/hide button masks
Home/End	Show first/last page
Page Up/Page Down	Show previous/next page
Alt+D, then press 0-9	Recall window layout
Ctrl+Alt+D, then press 0-9	Save window layout

General editing

Press	Result
Ctrl+Z	Undo last action
Ctrl+Shift+Z	Redo last action
Ctrl+X	Cut
Ctrl+C	Copy
Ctrl+V	Paste
Delete	Delete
Ctrl+A	Select All
F2	Edit selected text
Tab	Move selection between objects
Ctrl+Home/End	Move object to top/bottom
Ctrl+Page Up/Page Down	Move object forward/back
Up Arrow/Down Arrow	Move selected objects up/down by grid spacing
Right Arrow/Left Arrow	Move selected objects right/left by grid spacing
D	Switch to next editing tool
Shift+D	Switch to previous editing tool
Ctrl+D	Selection tool
Ctrl+Shift+G	Edit grid settings
F8	Enable snapping
Ctrl+F8	Snap to grid
Shift+F8	Snap to objects
Ctrl+Shift+F8	Snap to safe areas

Inserting objects and titles

Press	Result
Ctrl+T	Insert text
Ctrl+M	Insert submenu
Ctrl+L	Insert picture compilation
Ctrl+K	Insert music/video compilation
Ctrl+F	Insert media

Timeline window

Press	Result
Up Arrow/Down Arrow	Zoom in/out
Home/End	Move cursor to set in/out point
Ctrl+Home/End	Move cursor to beginning/end of timeline
Alt+Home/End	Move cursor to beginning/end of viewable area of timeline (when zoomed in)
Left Arrow/Right Arrow	Move cursor left/right
Spacebar	Move one frame left/right
Shift+Spacebar	Preview current title in workspace starting at the set in point
M	Insert chapter
I/O	Set in/out points
L	Set loop point
Ctrl+Q	Insert audio track
Ctrl+Shift+Q	Insert video track
Ctrl+Alt+Q	Insert subtitle track

Press	Result
Ctrl+Shift+T	Insert subtitle text on active track and make subtitle text editable
T	Insert subtitle text on all selected tracks without editing text

Preview

Press	Result
Page Up/Page Down —or— Prev Track/Next Track (Windows multimedia keyboard only)	Previous/next chapter or page
Ctrl+Left Arrow/Right Arrow	Fast forward/reverse
Ctrl+Shift+Left Arrow/Right Arrow	Super fast forward/reverse
F9	Preview current title in Preview window starting at the timeline cursor position
Ctrl+F9	Preview disc in Preview window
Shift+F9	Preview current title in Preview window starting at the set in point
Spacebar	Preview current title in Preview window starting at the timeline cursor position
Shift+Spacebar	Preview current title in workspace starting at the set in point

Mouse shortcuts

Press	Result
Ctrl+drag object	Copy object
Shift+drag object	Override snapping
Alt+drag object	Constrain motion horizontally or vertically
Ctrl+drag edge of object with sizing tool	Resize object from center
Shift+drag edge of object with sizing tool	Resize proportionally
Ctrl+Shift+drag edge of object with sizing tool	Resize object proportionally from center

Appendix B Rendering Files for Your Project

To ensure that your project preparation and burning process goes smoothly, you should save your media files in the supported formats prior to bringing them into your DVD Architect Pro project. DVD Architect Pro software supports a wide variety of file formats, but some will require transcoding or recompression by the project-preparation process, lengthening the amount of time needed to complete this operation, and possibly resulting in degradation of quality.

Note: *The AVC, MainConcept™ MPEG-2, AC-3, and Wave/Wave64 encoders in Vegas® Pro software provide templates that, if used without any modifications, result in files that do not require recompression (unless the file size is too large to fit on a disc).*

The settings to produce media files that do not require recompression follow.

Blu-ray Disc projects

You can burn Blu-ray Disc projects to BD recordable discs using the BDMV format:

- A 25 GB single-layer BD recordable disc can store approximately 3 hours, 42 minutes of AVC video (15 Mbps) or 2 hours, 15 minutes of MPEG-2 video (25 Mbps).
- A 50 GB dual-layer BD recordable disc can store approximately 7 hours, 25 minutes of AVC video (15 Mbps) or 4 hours, 31 minutes of MPEG-2 video (25 Mbps).

AC-3 audio (.ac3) for Blu-ray Disc projects

Sample Rate	Bit Rate	Channels
48,000 Hz	192 Kbps (64 Kbps to 640 Kbps is supported)	Stereo
48,000 Hz	448 Kbps (64 Kbps to 640 Kbps is supported)	5.1 surround

PCM audio (.wav or .w64) for Blu-ray Disc projects

Sample Rate	Bit Depth	Channels	Compression
48,000 Hz	16 or 24 bit	Stereo	Uncompressed
96,000 Hz	16 or 24 bit	Stereo	Uncompressed

AVC video for Blu-ray Disc projects

If you're using Vegas Pro software, you can use the AVCHD rendering templates to render a compliant video file including 5.1 surround AC-3 audio.

Template Name	Frame Size	Frame Rate (fps)	Aspect Ratio	Max. Bit Rate
AVCHD NTSC 5.1 Surround	1440x1080	29.970	16:9	40 Mbps
AVCHD PAL 5.1 Surround	1440x1080	25	16:9	40 Mbps

If you're rendering with a different application, the following settings will produce compliant AVC media.

Frame Size	Frame Rate (fps)	Aspect Ratio	Max. Bit Rate
720x480	29.970 interlaced	4:3	40 Mbps
720x480	29.970 interlaced	16:9	40 Mbps
720x576	25 interlaced	4:3	40 Mbps
720x576	25 interlaced	16:9	40 Mbps
1280x720	29.970 interlaced	16:9	40 Mbps
1280x720	50	16:9	40 Mbps
1280x720	24.000	16:9	40 Mbps
1280x720	23.976	16:9	40 Mbps
1440x1080	29.970 interlaced	16:9	40 Mbps
1440x1080	25 interlaced	16:9	40 Mbps
1440x1080	24.000	16:9	40 Mbps
1440x1080	23.976	16:9	40 Mbps
1920x1080	29.970 interlaced	16:9	40 Mbps
1920x1080	25 interlaced	16:9	40 Mbps
1920x1080	24.000	16:9	40 Mbps
1920x1080	23.976	16:9	40 Mbps

MPEG-2 video for Blu-ray Disc projects

If you're using Vegas Pro software, you can use the Blu-ray rendering templates to render your video stream. You'll need to render your audio stream separately according to the parameters listed in the *AC-3 audio for Blu-ray Disc projects* or *PCM audio for Blu-ray Disc projects* sections above.

Template Name	Frame Size	Frame Rate (fps)	Aspect Ratio	Maximum Group of Pictures	Max. Bit Rate
Blu-ray 1920x1080-24p, 25 Mbps video stream	1920x1080	23.976	16:9	24	40 Mbps
Blu-ray 1920x1080-50i, 25 Mbps video stream	1920x1080	25	16:9	25	40 Mbps
Blu-ray 1920x1080-60i, 25 Mbps video stream	1920x1080	29.970	16:9	30	40 Mbps
Blu-ray 1440x1080-24p, 25 Mbps video stream	1440x1080	23.976	16:9	24	40 Mbps
Blu-ray 1440x1080-50i, 25 Mbps video stream	1440x1080	25	16:9	25	40 Mbps
Blu-ray 1440x1080-60i, 25 Mbps video stream	1440x1080	29.970	16:9	30	40 Mbps
Blu-ray 1440x1080-24p, 8 Mbps video stream	1440x1080	23.976	16:9	24	40 Mbps
Blu-ray 1440x1080-50i, 8 Mbps video stream	1440x1080	25	16:9	25	40 Mbps
Blu-ray 1440x1080-60i, 8 Mbps video stream	1440x1080	29.970	16:9	30	40 Mbps

If you're rendering with a different application, the following settings will produce compliant MPEG-2 video stream.

Frame Size	Frame Rate (fps)	Aspect Ratio	Maximum Group of Pictures	Max. Bit Rate
720x480	29.970 interlaced	4:3	30	40 Mbps
720x480	29.970 interlaced	16:9	30	40 Mbps
720x576	25 interlaced	4:3	25	40 Mbps
720x576	25 interlaced	16:9	25	40 Mbps
1280x720	29.970 interlaced	16:9	60	40 Mbps
1280x720	50	16:9	50	40 Mbps
1280x720	24.000	16:9	24	40 Mbps
1280x720	23.976	16:9	24	40 Mbps
1440x1080	29.970 interlaced	16:9	30	40 Mbps
1440x1080	25 interlaced	16:9	25	40 Mbps
1440x1080	24.000	16:9	24	40 Mbps
1440x1080	23.976	16:9	24	40 Mbps
1920x1080	29.970 interlaced	16:9	30	40 Mbps
1920x1080	25 interlaced	16:9	25	40 Mbps
1920x1080	24.000	16:9	24	40 Mbps
1920x1080	23.976	16:9	24	40 Mbps

DVD Projects

You can burn DVD projects to single- and dual-layer DVDs:

- A 4.7 GB single-layer DVD recordable disc can store over two hours of MPEG-2 video.
- An 8.5 GB dual-layer DVD recordable disc can store approximately 4 hours of MPEG-2 video.

AC-3 audio (.ac3) for DVD projects

Sample Rate	Bit Rate	Channels
48,000 Hz	192 Kbps (64 Kbps to 640 Kbps is supported)	Stereo
48,000 Hz	448 Kbps (64 Kbps to 640 Kbps is supported)	5.1 surround

PCM audio (.wav or .w64) for DVD projects

Sample Rate	Bit Depth	Channels	Compression
48,000 Hz	16, 20, or 24 bit	Stereo	Uncompressed
96,000 Hz	16, 20, or 24 bit	Stereo	Uncompressed

NTSC MPEG video (.m2p, .mp2, .mpg, .mpeg, .mpv)

If you're using the MainConcept MPEG-2 encoder in Vegas Pro software, use the **DVD Architect NTSC video stream** or **DVD Architect 24p NTSC video stream** template to render your video stream. You'll need to render your audio stream separately according to the parameters listed in *AC-3 audio (.ac3) for DVD projects on page 196* or *PCM audio (.wav or .w64) for DVD projects on page 196*.

Template Name	Frame Size	Frame Rate (fps)	Aspect Ratio	Maximum Group of Pictures	Max. Bit Rate
DVD Architect NTSC video stream	720x480	29.970	4:3	36	9.8 Mbps
DVD Architect NTSC widescreen video stream	720x480	29.970	16:9	36	9.8 Mbps

If you're rendering with a different application, the following settings will produce a compliant NTSC MPEG-2 video stream.

Frame Size	Frame Rate (fps)	Aspect Ratio	Maximum Group of Pictures	Max. Bit Rate
720x480	29.97 or 23.976 + 2-3 pulldown	4:3	36	9.8 Mbps
704x480	29.97 or 23.976 + 2-3 pulldown	4:3	36	9.8 Mbps
352x240	29.97 or 23.976 + 2-3 pulldown	4:3	36	9.8 Mbps
352x480	29.97 or 23.976 + 2-3 pulldown	4:3	36	9.8 Mbps
720x480	29.97 or 23.976 + 2-3 pulldown	16:9	36	9.8 Mbps
704x480	29.97 or 23.976 + 2-3 pulldown	16:9	36	9.8 Mbps

Note: *The MainConcept MPEG-2 encoder in Vegas Pro renders with the Low Delay flag turned off. If you're rendering with a different encoder, ensure Low Delay is turned off.*

PAL MPEG video (.m2p, .mp2, .mpg, .mpeg, .mpv)

If you're using the MainConcept MPEG-2 encoder in Vegas software, use the **DVD Architect PAL video stream** or **DVD Architect PAL Widescreen video stream** template to render your video stream. You'll need to render your audio stream separately according to the parameters listed in *AC-3 audio (.ac3) for DVD projects on page 196* or *PCM audio (.wav or .w64) for DVD projects on page 196*.

Template Name	Frame Size	Frame Rate (fps)	Aspect Ratio	Maximum Group of Pictures	Max. Bit Rate
DVD Architect PAL video stream	720x576	25	4:3	30	9.8 Mbps
DVD Architect PAL widescreen video stream	720x576	25	16:9	30	9.8 Mbps

If you're rendering with a different application, the following settings will produce a compliant PAL MPEG-2 video stream.

Frame Size	Frame Rate (fps)	Aspect Ratio	Maximum Group of Pictures	Max. Bit Rate
704x576	25	4:3	30	9.8 Mbps
352x576	25	4:3	30	9.8 Mbps
352x288	25	4:3	30	9.8 Mbps
704x480	25	16:9	30	9.8 Mbps

Note: *The MainConcept MPEG-2 encoder in Vegas Pro renders with the Low Delay flag turned off. If you're rendering with a different encoder, ensure Low Delay is turned off.*

Appendix C Using a Multimedia Controller

DVD Architect™ Pro software supports several multimedia controllers that you can use for mouse-free editing and playback. Now you can increase your productivity and still have a free hand for your coffee mug.

This chapter is intended to show you how DVD Architect Pro software interacts with several multimedia controllers that we're familiar with and have tested. Other controllers may also work.

For specific information about your multimedia controller, please refer to the manufacturer's documentation.

Contour ShuttlePro default settings

ShuttlePro.pref and ShuttlePro v2.pref files are included with your DVD Architect Pro installation. You can use these files to configure the Contour A/V Solutions ShuttlePro or ShuttlePro v2 for use with DVD Architect Pro software. After you use the ShuttlePro Control Panel to import the appropriate .pref file, the controls will behave as follows.

Tip: *If you have version 2.5 or later of the Shuttle Pro driver, you can use the driver's Export Settings Info feature to create a graphical representation of your current settings.*

Top Button Row		Go to Set In Point (Timeline)	Rewind (Timeline)	Forward (Timeline)	Go to Set Out Point (Timeline)	
Second Button Row	Set In Point (Timeline)	Set Subtitle Start Point (Timeline)	Set Subtitle End (Timeline)		Set Next Subtitle (Timeline)	Set Out Point (Timeline)
Shuttle Ring						
			Turn left or right for variable-speed cursor positioning in the Timeline window			
Jog Dial			Move One Frame Left (Timeline)	Move One Frame Right (Timeline)		
Bottom Button Row		Play/Pause (Timeline)			Zoom In (Timeline)	
		Play/Stop (Timeline)			Zoom Out (Timeline)	

Contour ShuttleXpress (formerly SpaceShuttle) default settings

DVD Architect Pro software includes a ShuttleXpress.pref file that you can use to configure the Contour A/V Solutions ShuttleXpress for use with DVD Architect Pro software. After you use the ShuttleXpress Control Panel to import the ShuttleXpress.pref file, the controls will behave as follows.

Tip: *If you have version 2.5 or later of the ShuttleXpress driver, you can use the driver's Export Settings Info feature to create a graphical representation of your current settings.*

Buttons	Play/Stop (Timeline)	Select Subtitle Start (Timeline)	Set Subtitle End Numeric Keypad 5		Set Next Subtitle (Timeline)	Play/Pause (Timeline)
Shuttle Ring						
			Turn left or right for variable-speed cursor positioning in the Timeline window			
Jog Dial			Move One Frame Left (Timeline)	Move One Frame Right (Timeline)		

Navigating the timeline with a ShuttlePro or ShuttleXpress

Use shuttle ring and jog dial to navigate the timeline. The shuttle ring moves the cursor left or right, and the jog dial moves the cursor in one-frame increments.

Navigating the timeline with a PowerMate or other controller

If you have a multimedia controller such as the Griffin Technology PowerMate, you can map your controller to the Alt+Left/Right Arrow frame jog keys.

Map the single-button function to the F9 key for Preview.

Appendix D Troubleshooting

In this chapter

- *Error messages* on page 201
- *Warning messages* on page 206
- *Informational messages* on page 210

Error messages

Could not suggest a valid layer break

The smart prepare data for your project is corrupt or not accessible. To recover this data, reprepare your project. *For more information, see Preparing a DVD project on page 167 or Preparing a Blu-ray Disc project on page 175.*

DVD script uses too many instructions

Each DVD script can contain a maximum of 128 instructions. DVD script statements are used by DVD Architect Pro software to create DVD instructions, so you will need to remove statements from your DVD script before you can prepare your project. Follow the steps below to delete statements.

1. Double-click a DVD script in the Project Overview window (or choose a script from the drop-down list at the top of the DVD Scripts window) to open the script you want to edit.
2. Select a statement in the DVD Scripts window.
3. Press Delete or click the **Delete Statement** button ( ).

Extra content folder is not allowed in Blu-ray Disc

The Extras content folder is not available for Blu-ray Disc projects. Clear the Extras folder specified on the Disc Properties page in the Project Properties dialog. *For more information, see Disc properties on page 143.*

Insert chapter marker in title

The specified title requires an additional chapter marker between the identified chapters. You can add chapter markers from the Timeline window. *For more information, see Working with markers on page 76.*

Media file is offline

One or more of the media files in your project is offline.

Close and reopen the project, and you'll be prompted to specify a new location or replacement file.

Media file is referenced by too many titles

The media file listed in the error message is associated with more than 99 titles.

Delete some buttons that link to the media file, or consider using a playlist. Each project can contain up to 255 playlists with 255 playlist items each.

Menu highlight is too complex

If a subpicture graphic is overly complex (overall or on a horizontal line), it cannot be compressed to meet the requirements of the DVD specification.

This message indicates that the menu's highlight mask is too complex overall.

If you're using a custom mask image (when the **Custom** highlighting style is selected in the Button Properties controls), try the following:

- You can reduce overall complexity by reducing the amount of detail in the highlight mask image.
- Look for areas in the image that alternate between colors and reduce colors in those areas.
- Reduce the number of colors in the image.

If you're using a text mask (when the **Mask overlay** or **Text mask overlay** highlighting style is selected in the Button Properties controls), try the following:

- Apply a different highlighting style.
- Reduce the amount of button text.
- Reduce the number of buttons on each menu page.

Menu highlight is too complex due to horizontal lines

If a subpicture graphic is overly complex (overall or on a horizontal line), it cannot be compressed to meet the requirements of the DVD specification.

This message indicates that the menu's highlight mask is too complex horizontally.

If you're using a custom mask image (when the **Custom** highlighting style is selected in the Button Properties controls), try the following:

- Look for areas in the image that alternate between colors in a horizontal line and reduce colors in those areas.
- You can reduce overall complexity by reducing the amount of detail in the highlight mask image.
- Reduce the number of colors in the image.

If you're using a text mask (when the **Mask overlay** or **Text mask overlay** highlighting style is selected in the Button Properties controls), try the following:

- Apply a different highlighting style.
- Reduce the amount of button text.
- Reduce the number of buttons on each menu page.

One or more files in the extra content folder are too large

The maximum allowed file size for a file in your extras folder is 2 GB.

Delete the offending files from your extras folder and prepare your project again.

The path to the extras folder is displayed on the Disc Properties page in the Project Properties dialog. *For more information, see Disc properties on page 143*.

One or more menu links overlap

This message indicates that a button or text box is overlapping another link. If you're creating a DVD project, you can burn your project with overlapping links, but your disc can be more difficult to navigate: when you highlight one link, the overlapping link may also be highlighted. If you're creating a Blu-ray Disc project, you cannot prepare your project with overlapping menu links; you must fix the issue before proceeding.

Navigate to the page and move the link as necessary. When you preview the page, move the highlight among links until you can see which objects overlap.

Playlist has more than 255 items

Each playlist can contain a maximum of 255 items.

> **Note:** *DVD projects are limited to 99 titles (videos, music/video compilations, or picture compilations). Each playlist can reference a title more than once, but the playlist can have no more than 255 items.*

1. Double-click a playlist in the Project Overview window (or choose a playlist from the drop-down list at the top of the Playlists window) to open the playlist you want to edit.
2. Select the items in the Playlists window that you want to remove from the selected playlist.
3. Delete the selected items, or press Ctrl+X to cut the items to the clipboard.
4. If you want to paste the items to a new playlist, click the **Insert Playlist** button ( ) in the Playlists window to create a new playlist, click **OK** to close the Select Titles dialog, and then press Ctrl+V to paste the items into the new playlist.

Project has more than 4,095 scripts

Each DVD project can contain a maximum of 4,095 scripts. Right-click a DVD script in the Project Overview window and choose **Delete** from the shortcut menu.

Subtitle event is too complex

If a subpicture graphic is overly complex (overall or on a horizontal line), it cannot be compressed to meet the requirements of the DVD specification.

This message indicates a subtitle event that is too complex overall. Try the following to reduce overall complexity:

- Divide the event into multiple events.
- Turn off text outlining.
- Use a different font or font size.

Subtitle event is too complex due to horizontal lines

If a subpicture graphic is overly complex (overall or on a horizontal line), it cannot be compressed to meet the requirements of the DVD specification.

This message indicates a subtitle event that is too complex in a horizontal line. Try the following to reduce horizontal complexity:

- Add line breaks to the subtitle event.
- Turn off text outlining.
- Use a different font or font size.

The estimated size of all menus is greater than the maximum

The total size of all menus cannot exceed 1 GB. Your project's estimated menu size exceeds the limit, and your project cannot be prepared until you reduce the total menu size.

Deleting background images and audio from your menus may help you conserve space.

The extra content folder can neither contain the prepare folder, nor be contained by the prepare folder

The project's extra content folder cannot contain—or be contained by—the folder where you prepare your project.

Move the extra content folder and then update the Extras folder specified on the Disc Properties page in the Project Properties dialog. *For more information, see Disc properties on page 143.*

The extra content folder contains too many files

You can have a maximum of 10,000 files in your extras folder.

Delete some files from your extras folder and prepare your project again.

The path to the extras folder is displayed on the Disc Properties page in the Project Properties dialog. *For more information, see Disc properties on page 143*.

The extra content folder is too large

The extras folder contains more files than the space available on your disc.

Delete some files from your extras folder and prepare your project again.

The path to the extras folder is displayed on the Disc Properties page in the Project Properties dialog. *For more information, see Disc properties on page 143*.

The inactive button default colors should be set to None

Color sets are not supported for inactive buttons in Blu-ray Disc projects. You must set the **Inactive button colors** drop-down list to **None (all transparent)** on the General tab of the Menu Page Properties. *For more information, see General on page 121*.

The menu end action is broken

The link for the specified menu's end action is broken.

This can occur when you delete items from your project. For example, if the end action of menu one is set to activate a button that navigates to menu two, the end action of menu one will be broken if you delete menu two from your project.

1. Navigate to the menu with the broken end action and click the expand button (⊞) next to the Menu Page Properties heading to expand the Menu Page Properties controls.
2. Click the expand button (⊞) next to the **End Action** heading to expand the controls.
3. Choose a new setting from the Button drop-down list to resolve the broken link.

The music/video compilation contains more than 255 slides

A music/video compilation can have no more than 255 songs/videos.

1. Double-click a music/video compilation in the Project Overview window (or double-click a button on a menu in the workspace) to open the associated compilation.
2. Use the Compilation window to remove songs or videos from the compilation.

The number of markers exceeds the maximum

The number of markers in the media file exceeds the maximum of 255.

Edit the file and delete some markers.

The overall bit rate is greater than X Mbps

For Blu-ray Disc projects, the maximum overall bit rate for an asset depends upon the number of video angles. *For information on maximum bit rates for assets with video angles, see Video tracks on page 88*. You must adjust the individual video and/or audio bit rates of the specified title before you can continue preparing your disc.

The project has more than 255 playlists

Each disc can contain a maximum of 255 playlists.

1. From the **View** menu, choose **Playlists** to display the Playlists window if it isn't already visible.
2. Select the playlists you want to remove.
3. Click the **Delete Playlist** button ( ).

The project has too many titles that use unique media

Each project can contain no more than 99 media files.

Rerender your media to combine related clips and use chapter markers in the media files rather than creating multiple files where possible.

> **Tip:** *To avoid rerendering, you can create a music/video compilation made up of video files. This video compilation behaves much like a playlist, but it will be written to your DVD as a single video title set. If you have a project with many short videos, this loophole in the 99-title-set limitation imposed by the DVD specification can save you from rerendering and combining media.*

The project may not be compatible with some DVD players because it uses too many titles

Most players do not support more than 99 titles. Select titles in the Project Overview window and delete them.

The remote menu button action is broken

The action assigned to the Menu button on the remote control refers to a broken link.

This can occur when you delete items from your project. For example, if the Menu button is set to link to a menu, the Menu button action will be broken if you delete menu two from your project.

1. Navigate to the title with the broken action and click the expand button ( ) next to the **Media Properties** heading to expand the Media Properties controls.
2. Click the expand button ( ) next to the **Remote Buttons** heading to expand the controls.
3. Click the expand button ( ) next to the **Menu** heading to expand the controls, and then choose a new setting from the **Destination** drop-down list to resolve the broken link.

The timeout of a menu occurs before the loop point

The menu's loop point establishes the point at which buttons will be displayed. If the menu's timeout occurs earlier than the loop point, the menu's buttons will not be displayed.

Use the General page in the Menu Page Properties pane to adjust the loop point so it occurs before the timeout, or use the End Action page to adjust the timeout so it occurs after the menu's loop point. *For more information, see Menu Page Properties on page 121*.

The title has more than 16 subtitle tracks

Widescreen titles can have a maximum of 16 subtitle tracks.

Navigate to the title and remove tracks, or change the aspect ratio of the asset in the Optimize Disc dialog.

The video has a bit rate that is too high to play properly on some players

When the bit rate of a video is too high, it may not play back properly on some players. Recompress with a lower bit rate.

1. Select the title in the Optimize Disc dialog and click the Video tab.
2. Select the **Recompress** box, click the down arrow button ( ), and choose **Yes** from the menu.
3. Select the **Use default bit rate** box, click the down arrow button ( ), and choose **Yes** from the menu to recompress using the project's default bit rate.

There are too many menu pages

Your project has too many menu pages. Each project can contain a maximum of 1023 pages.

Delete pages as necessary, and then prepare your project again. *For more information, see Deleting pages on page 36.*

There are too many titles

A Blu-ray Disc project can have a maximum of 999 unique titles. Select titles in the Project Overview window and delete them.

There is not enough space in the temporary files folder for preparing the disc

There is not enough space in your temporary files folder to prepare your project. You can specify a different folder on the Burning tab of the Preferences dialog.

Choose a folder on the drive where you have the most available space.

For more information, see Burning tab on page 187.

Title is too short

A multiangle title in a Blu-ray Disc project must be at least 10 seconds long. Either edit the specified title to make it at least 10 seconds, or select the title in the Project Overview window and replace it with a different title of at least 10 seconds.

Too many buttons on a menu

Menus in a DVD widescreen project can have a maximum of 18 buttons, and menus in a DVD full-screen project can have a maximum of 36 buttons. Menus in a Blu-ray Disc project can have a maximum of 255 buttons.

Navigate to the menu and delete objects as necessary.

Video cannot be recompressed because its bit rate is too low

When the bit rate of a video is too low, it may not play back properly on some players. Recompress with a higher bit rate.

1. Select the title in the Optimize Disc dialog and click the Video tab.
2. Select the **Recompress** box, click the down arrow button (), and choose **Yes** from the menu.
3. Select the **Use default bit rate** box, click the down arrow button (), and choose **Yes** from the menu to recompress using the project's default bit rate.

Warning messages

DVD scripts are not compatible with Blu-ray Disc

Your project contains one or more DVD scripts. DVD scripts do not work on Blu-ray Disc and will be ignored in your project. You can delete them using the DVD Scripts window. *For more information, see Deleting a script on page 156.*

Jacket picture is not supported on Blu-ray Disc

The jacket picture feature is not supported in Blu-ray Disc projects. The jacket picture file you specified in Project Properties will be ignored. You can delete your selected in the **Jacket picture** box on the Disc Properties tag of the Project Properties dialog by clicking the **Clear Media** button ().

One or more buttons is outside the action safe area

When an object is outside the safe area, it is likely to be clipped when viewed on a television.

Navigate to the page and move the object as necessary.

Tip: *To display or hide safe area borders in the workspace, choose* **Workspace Overlays** *from the* **View** *menu and then choose* **Show Title Safe Area** *or* **Show Action Safe Area** *from the submenu. Safe areas are displayed as borders around your video to represent the visible areas for action and titles. The outer border marks the area that will be visible on a television screen, and the inner border is the suggested area for titles.*

One or more buttons on a menu are broken

The destination for one or more buttons on the specified menu is invalid.

This can occur when you delete items from your project or add empty buttons to menus.

1. Navigate to the menu with the broken action.
2. Select a button.
3. Click the expand button (⊞) next to the **Button Properties** heading to expand the Button Properties controls.
4. Click the expand button (⊞) next to the **Action** heading to expand the controls.
5. If the **Destination** drop-down list to displays **Broken Link**, choose a new setting from the drop-down list to resolve the broken link.
6. Repeat steps 2 through 5 for each button on the menu.

One or more chapter markers are too close

You can create markers that are less than one second apart by importing markers or by moving a movie's in/out points too close to a marker.

Navigate to the movie and adjust markers or in/out points before burning.

One or more menu links are off screen

This warning indicates that a button or text box is at least 1 pixel off screen.

Navigate to the page and move the link as necessary.

Tip: *To display or hide safe area borders in the workspace, choose* **Workspace Overlays** *from the* **View** *menu and then choose* **Show Title Safe Area** *or* **Show Action Safe Area** *from the submenu. Safe areas are displayed as borders around your video to represent the visible areas for action and titles. The outer border marks the area that will be visible on a television screen, and the inner border is the suggested area for titles.*

One or more slides in compilation are too close for chapter markers

Chapter markers must be one second apart. If a picture or song/video duration is less than one second, chapter markers cannot be created.

If your item is a picture, navigate to the picture compilation and adjust your picture duration. *For more information, see* *Setting display duration from the Picture Compilation Properties window on page 70*.

If your item is a song or video, perform one of the following actions:

- Navigate to the music/video compilation and change the song or video. *For more information, see* *Replacing an audio file on page 62 or Replacing an image or video on page 63*.
- Use an audio or video editing application to adjust the duration of your media file. The media file is automatically updated in DVD Architect Pro.

Region coding is not currently supported on Blu-ray Disc

Region coding is not currently supported in Blu-ray Disc projects. The region codes you specified in Project Properties will be ignored, and your Blu-ray Disc will be accessible in all regions. You can change your region code selections by clicking the Regions button in the Project Properties dialog, clicking in the **All regions** box, and choosing **Yes** from the drop-down list.

The audio will be recompressed

Audio in your project is not in the proper format and will be recompressed during disc preparation.

For more information about the audio formats that DVD Architect Pro can support without recompression, see Rendering Files for Your Project on page 193.

If you're using a supported format and still see this message, use the Optimize Disc dialog to choose a specific audio format instead of the **Automatic** setting. *For more information, see Optimizing your project on page 29.*

The end action of a title is broken

The link for the specified title's end action is broken.

This can occur when you delete items from your project. For example, if the end action of a title is set to link to menu two, the title's end action will be broken if you delete menu two from your project.

1. Navigate to the title with the broken action and click the expand button (⊞) next to the **Media Properties** heading to expand the Media Properties controls.
2. Click the expand button (⊞) next to the **End Action** button to expand the controls.
3. Choose a new setting from the **Destination** drop-down list to resolve the broken link.

The estimated size of the project is larger than the default space available on media

There may not be enough space available on your disc to burn your project.

You can use the Optimize Disc dialog to fine-tune your recompression settings or use the Project Overview window to delete assets from the project.

The **Target media size (GB)** drop-down list on the Disc Properties tab of the Project Properties dialog determines the amount of space the application uses to calculate the space available on the disc. *For more information, see Disc properties on page 143.*

The estimated total size of all menus is close to the maximum

The total size of all menus cannot exceed 1 GB. Your project's estimated menu size is close to the limit, and your project may fail during preparation.

Deleting background images and audio from your menus may help you conserve space.

The extra content folder is invalid

The **Extras folder** specified on the Disc Properties page in the Project Properties dialog does not exist.

This error can occur if you move, delete, or rename the folder after setting your project properties.

The loop length of a menu is shorter than the minimum recommended length

The length of a menu in your project is shorter than the recommended length of five seconds when looping is enabled.

Navigate to the menu and expand the Menu Page Properties controls. Perform one of the following procedures to resolve the error:

- Choose **Auto calculate** from the **Menu length** drop-down list.
- Choose **Specify** from the **Menu length** drop-down list and type a different value in the **Length** box.
- Change the menu's end action to **Hold**.

The menu or title is orphaned and not reachable

This can occur when you add a menu, video, picture compilation, or music/video compilation that is not linked.

1. Navigate to the menu from which you want to link to the menu or title.
2. From the **Insert** menu, choose **Empty Button**.
3. Click the expand button (⊞) next to the **Button Properties** heading to expand the Button Properties controls.
4. Click the expand button (⊞) next to the **Action** heading to expand the controls.
5. Choose the orphaned menu or title from the **Destination** drop-down list.

The number of chapters is more than the maximum

You can have no more than 99 chapter markers in each title in a DVD project. You can have no more than 255 chapter markers in each title in a Blu-ray Disc project.

Navigate to the movie and delete markers before burning.

The overall bit rate is greater than 28 Mbps

The overall bit rate of the specified file is too high for burning Blu-ray onto a DVD. The overall bit rate includes video, audio, and subtitles.

If your project's target media size is 25 or 50 GB and you choose to continue, your title may not play properly in some players. If your project's target media size is 4.7 or 8.5 GB, you must adjust individual bit rates for video and audio before you can continue with the disc preparation and burning process.

You can adjust individual bit rates for video and audio from the Project Properties dialog.

The play mode for playlist is set to Random

The play mode the specified playlist is set to **Random**. Random playlists are not supported for Blu-ray Discs. This playlist will be played sequentially.

The script contains a broken link

The specified script contains a Link command with a broken link destination.

To edit a script's properties, perform the following actions:

1. If the Script Properties window isn't already visible, choose **Properties** from the **View** menu.
2. Double-click the specified DVD script in the Project Overview window (or choose the script from the drop-down list at the top of the DVD Scripts window) to open the script.
3. In the DVD Scripts window, review the script statements for a **Link** command that displays as 'Broken link'. Click the statement.
4. In the Script Properties pane, click the **Destination** box and choose a title or menu from the drop-down list to which you want to link.

The script contains a GotoLabel command which points to an invalid label

The specified script contains a GotoLabel command which points to an invalid label in the script.

To edit a script's properties, perform the following actions:

1. If the Script Properties window isn't already visible, choose **Properties** from the **View** menu.
2. Double-click the specified DVD script in the Project Overview window (or choose the script from the drop-down list at the top of the DVD Scripts window) to open the script.
3. In the DVD Scripts window, review the script statements for a GotoLabel command that displays as 'Invalid label'. Click the statement.
4. In the Script Properties pane, click the **Label** box and choose a label from the drop-down list.

Note: *Label statements can only be used to link within a script. Links from one script to a label in another script are not supported.*

The video has a length of zero

You cannot burn a video with a length of zero to a disc.

Adjust the video's Set In and Set Out points as necessary.

The video will be recompressed

Video in your project is not in the proper format and will be recompressed during disc preparation.

For more information about the audio formats that DVD Architect Pro software can support without recompression, see *Rendering Files for Your Project on page 193*.

If you're using a supported format and still see this message, use the Optimize Disc dialog to choose a specific video format instead of the **Automatic** setting. *For more information, see* *Optimizing your project on page 29*.

There are more than X slides in compilation

Each title on your DVD can have no more than 99 chapter markers. Each title on your Blu-ray Disc can have no more than 255 chapter markers.

If your compilation contains additional pictures or songs/videos beyond these limits, you can still burn your project, but chapter markers will be created only for the first 99 or 255 items.

Navigate to the picture or music/video compilation and delete items as necessary.

There are no slides in compilation

A picture or music/video compilation must have at least one picture or song/video.

Navigate to the picture or music/video compilation and add pictures or songs/videos as necessary.

There may not be enough space in the temporary files folder for preparing the disc

There may not be enough space in your temporary files folder to prepare your project. You can continue, but preparation may fail. You can specify a different folder on the Burning tab of the Preferences dialog.

Choose a folder on the drive where you have the most available space.

Informational messages

One or more menu links overlap

This message indicates that a button or text box is overlapping another link. If you're creating a DVD project, you can burn your project with overlapping links, but your disc can be more difficult to navigate: when you highlight one link, the overlapping link may also be highlighted. If you're creating a Blu-ray Disc project, you cannot prepare your project with overlapping menu links; you must fix the issue before proceeding.

Navigate to the page and move the link as necessary. When you preview the page, move the highlight among links until you can see which objects overlap.

One or more text objects are outside the title safe area

When a text object is outside the safe area, it is likely to be clipped when viewed on a television.

Navigate to the page and move the text as necessary.

Tip: *To display or hide safe area borders in the workspace, choose* **Workspace Overlays** *from the* **View** *menu and then choose* **Show Title Safe Area** *or* **Show Action Safe Area** *from the submenu. Safe areas are displayed as borders around your video to represent the visible areas for action and titles. The outer border marks the area that will be visible on a television screen, and the inner border is the suggested area for titles.*

Some video angles in the title have no events on the track

The title listed in this error message has an additional video track that has no events.

Navigate to the title, select the Timeline window, and delete the track or add events.

For information about adding alternate video angles, see Video tracks on page 88.

The end action uses the most recent menu command before a menu is reached

The remote button action for a title is set to display the most recently displayed menu before a menu is displayed. The Menu button will navigate to the top menu or stop if there are no menus.

1. Navigate to the title.
2. Click the expand button (⊞) next to the **Media Properties** heading to expand the Media Properties controls.
3. Click the expand button (⊞) next to the **End Action** heading to expand the controls.
4. Choose a new setting from the **Destination** drop-down list.

The remote button uses the most recent menu command before a menu is reached

The remote button action for a title is set to display the most recently displayed menu before a menu is displayed. The Menu button will navigate to the top menu or stop if there are no menus.

1. Navigate to the title.
2. Click the expand button (⊞) next to the **Media Properties** heading to expand the Media Properties controls.
3. Click the expand button (⊞) next to the **Remote Buttons** heading to expand the controls.
4. Click the expand button (⊞) next to the **Menu** heading to expand the controls.
5. Choose a new setting from the **Destination** drop-down list.

Appendix E Glossary

Adaptive Delta Pulse Code Modulation (ADPCM)

A method of compressing audio data. Although the theory for compression using ADPCM is standard, there are many different algorithms employed. For example, Microsoft's ADPCM algorithm is not compatible with the International Multimedia Association's (IMA) approved ADPCM.

A-Law

A compounded compression algorithm for voice signals defined by the Geneva Recommendations (G.711). The G.711 recommendation defines A-Law as a method of encoding 16-bit PCM signals into a non-linear 8-bit format. The algorithm is commonly used in United States' telecommunications. A-Law is very similar to µ-Law, however, each uses a slightly different coder and decoder.

Alpha Channel

The alpha channel determines how transparency is handled in a file. TGA and TIF image files commonly have an Alpha channel that is automatically detected by DVD Architect Pro software.

Analog

When discussing audio, this term refers to a method of reproducing a sound wave with voltage fluctuations that are analogous to the pressure fluctuations of the sound wave. This is different from digital recording in that these fluctuations are infinitely varying rather than discrete changes at sample time.

Audio Compression Manager (ACM)

The Audio Compression Manager, from Microsoft, is a standard interface for audio compression and signal processing for Windows. The ACM can be used by Windows programs to compress and decompress .wav files.

Bit

A bit is the most elementary unit in digital systems. Its value can only be 1 or 0, corresponding to a voltage in an electronic circuit. Bits are used to represent values in the binary numbering system. As an example, the 8-bit binary number 10011010 represents the unsigned value of 154 in the decimal system. In digital sampling, a binary number is used to store individual sound levels, called samples.

Bit Depth

The number of bits used to represent a single sample. Higher values will increase the quality of the playback and any recordings that you make. While 8-bit samples take up less memory (and hard disk space), they are inherently noisier than 16 or 24-bit samples.

Brightness

Adjusting brightness adds or subtracts values from the color channels in an image to make the image lighter or darker. The maximum brightness setting adds 255 (pure white), and the minimum setting adds 0 (pure black).

Byte

Refers to a set of 8 bits. An 8-bit sample requires one byte of memory to store, while a 16-bit sample takes two bytes of memory to store.

Clipboard

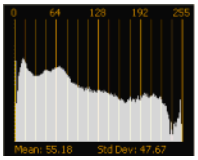
The clipboard is where data that you have cut or copied in DVD Architect Pro software is stored. You can then paste the data back into DVD Architect Pro software at a different location or paste it into other applications, such as Microsoft Word, or another instance of DVD Architect Pro software. Some data, such as audio, can not be pasted into applications such as Microsoft Word or Notepad, but the text data from the Edit Details window can be pasted. This allows you to then print or format the data.

CODEC

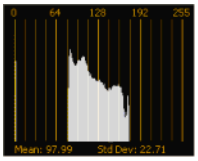
An acronym for Coder/Decoder. Commonly used when working with data compression.

Contrast

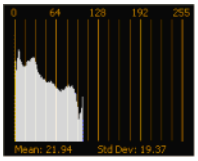
Adjusting contrast multiplies color values in an image to stretch the existing color channel values across a broader or narrower portion of the spectrum. The contrast center determines the anchor point for stretching.



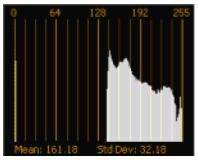
Histogram of original image.



Contrast decreased with a contrast center of 0.5: the histogram is squeezed into a narrower portion of the spectrum anchored from the center of the graph.



Contrast decreased with a contrast center of 0.0: the histogram is squeezed into a narrower portion of the spectrum anchored at the left edge of the graph.



Contrast decreased with a contrast center of 1.0: the histogram is squeezed into a narrower portion of the spectrum anchored at the right edge of the graph.

Device Driver

A program that enables Windows to connect different hardware and software. For example, a sound card device driver is used by Windows software to control sound card recording and playback.

Drag and Drop

A quick way to perform certain operations using the mouse in DVD Architect Pro software. To drag and drop, you click and hold a highlighted selection, drag it (hold the left-mouse button down and move the mouse) and drop it (let go of the mouse button) at another position on the screen.

Event

An event is an occurrence of a media file on the timeline.

Frame Rate (Audio)

Audio uses frame rates only for the purposes of synching to video or other audio. In the latter case, the rate of 30 non-drop is typically used. In the former case 30 drop is usually used.

Frame Rate (Video)

The speed at which individual images in the video are displayed on the screen during playback. A faster frame rate results in smoother motion in the video. The television frame rate in the US (NTSC) is 29.97 frames per second (fps). In many parts of Europe and Japan, the television standard is PAL at 25 fps.

Gamma

Determines the brightness of the video and is used to compensate for differences between the source and output video and sometimes needs to be calibrated to match the source or destination. Higher gamma values result in lighter or brighter video as displayed on your computer's monitor.

Markers

Markers mark different sections of your project. Markers are saved with your DVD Architect Pro project file and can also be saved to the media file.

Marker Type	Description
Scene/chapter markers	Used as navigation points for a video file as well as for linking to points in a video using end actions or to automatically create scene selection menus using the **Insert** > **Scene Selection** command.
Chapter markers	Used as navigation points for a video file. Ignored when creating scene selection menus using the **Insert** > **Scene Selection** command.
Buttons-on-video markers	Used to add interactivity to your project. These markers are ignored by the remote control's previous/next chapter buttons.

Mask

A mask determines which portion of an image will be visible. Masks in DVD Architect Pro software use the value of the red channel to determine transparency: 0 is transparent and 255 is opaque.

In the following example, the black portions of the mask image have a red value of 0 (black: R=0, G=0, and B=0) and will cause the corresponding portions of the thumbnail image to be transparent. The white portions of the mask have a red value of 255 (white: R=255, G=255, and B=255) and will cause the corresponding portions of the thumbnail to be opaque. Intermediate red values are partially transparent.

Thumbnail + Mask = Button

In the following example, the black portions of the thumbnail mask make the corresponding portions of the thumbnail transparent so only a circular portion of the thumbnail is visible. The black portions of the frame mask make the corresponding portions of the frame image transparent so only the ring is visible.

Thumbnail + Thumbnail Mask + Frame + Frame Mask = Button

Nyquist Frequency

The Nyquist Frequency (or Nyquist Rate) is one half of the sample rate and represents the highest frequency that can be recorded using the sample rate without aliasing. For example, the Nyquist Frequency of 44,100 Hz is 22,050 Hz. Any frequencies higher than 22,050 Hz will produce aliasing distortion in the sample if no anti-aliasing filter is used while recording.

Pan

To place a mono or stereo sound source perceptually between two or more speakers.

Peak Data File

The file created when a file is opened for the first time. This file stores the information regarding the graphic display of the waveform so that opening a file is almost instantaneous in direct edit mode. This file is stored in the directory that the file resides in and has a .sfk extension. If this file is not in the same directory as the file, or is deleted, it will be recalculated the next time you open the file.

Pixel Aspect

The pixel aspect determines whether the pixels are square (1.0) which refers to computers, or rectangular (settings other than 1.000) which typically refers to televisions. The pixel aspect ratio is unrelated to the frame's aspect ratio.

Ruler Tags

Small tab-shaped controls above the time ruler that represent the location of markers and loop points in the timeline.

Ruler, Time

The time ruler is the area on the timeline above the tracks that shows the horizontal axis units.

Sample Rate

The sample rate (also referred to as the sampling rate or sampling frequency) is the number of samples per second used to store a sound. High sample rates, such as 44,100 Hz provide higher fidelity than lower sample rates, such as 11,025 Hz. However, more storage space is required when using higher sample rates.

Shortcut Menu

A context-sensitive menu that appears when you right-click on certain areas of the screen. The functions available in the shortcut menu depend on the object being clicked on as well as the state of the program. As with any menu, you can select an item from the shortcut menu to perform an operation. Shortcut menus are used frequently in DVD Architect Pro software for quick access to many commands. An example of a shortcut menu can be found by right-clicking on any waveform display in a data window.

For information on the available DVD Architect Pro software shortcuts, see *Shortcuts on page 189*.

Society of Motion Picture and Television Engineers (SMPTE)

SMPTE timecode is used to synchronize time between devices. The timecode is calculated in Hours:Minutes:Second:Frames, where Frames are fractions of a second based on the frame rate. Frame rates for SMPTE timecode are 24, 25, 29.97 and 30 frames per second.

Sound Card

The sound card is the audio interface between your computer and the outside world. It is responsible for converting analog signals to digital and vice versa. DVD Architect Pro software will work with any Windows-compatible sound card.

Stereo

Mixer implementation that includes two discrete channels.

Surround

Mixer implementation that includes six discrete channels.

Time Format

The format by which DVD Architect Pro software displays the time ruler and selection times. These include Time, Seconds, Frames, and all standard SMPTE frame rates.

Title

A title in a disc can be any video, music/video compilation, or picture compilation. In the Project Overview window, a title is represented by one of the following icons:

	Video Title
	Picture Compilation
	Music/Video Compilation

Track

A discrete timeline for audio data. Audio events sit on audio tracks and determine when a sound starts and stops. Multiple audio tracks are mixed together to give you a composite sound that you hear through your speakers.

µ-Law

µ-Law (mu-Law) is a companded compression algorithm for voice signals defined by the Geneva Recommendations (G.711). The G.711 recommendation defines µ-Law as a method of encoding 16-bit PCM signals into a non-linear 8-bit format. The algorithm is commonly used in European and Asian telecommunications. µ-Law is very similar to A-Law, however, each uses a slightly different coder and decoder.

Undo Buffer

This is the temporary file created before you do any processing to a project. This undo buffer allows the ability to rewrite previous versions of the project if you decide you do not like changes you have made to the project. This undo buffer is erased when the file is closed or the **Clear Edit History** command is invoked.

Undo/Redo

These commands allow you to change a project back to a previous state, when you do not like the changes you have made, or reapply the changes after you have undone them. The ability to Undo/Redo is only limited by the size of your hard drive.

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