

Using Avid Xpress® Studio

Workflow Guide

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Contents

	Using This Guide	9
	Symbols and Conventions	10
	If You Need Help	11
	Accessing the Online Library	11
	How to Order Documentation	12
	Avid Educational Services	12
Chapter 1	Avid Xpress Studio Workflow Overview	13
	Avid Xpress Studio Applications	14
	Basic Workflow	16
	Avid FX	17
	Avid 3D	17
	Avid Pro Tools LE	18
	Avid DVD by Sonic	19
	File Formats and Media Handling	19
Chapter 2	Using Avid Xpress Pro	21
	Working in Avid Xpress Pro	21
	Creating a Program in Avid Xpress Pro	22
	Opening other Avid Xpress Studio Applications	26
Chapter 3	Using Avid FX	27
	Basic Steps	27
	Opening the Effect Palette	28
	Dragging the Avid FX Effect on to the Timeline	29
	Entering Effect Mode	29
	Displaying the Avid FX Interface	30

	Creating an Effect	31
	Creating a Transition Effect	32
	Adding Media to an Effect	35
	Applying the Effect	38
	Rendering the Effect	38
	Creating Text Effects	39
	Creating a Title	39
	Adding an Effect to Filler	39
	Creating Text in a Title	40
	Animating Text on a Path	44
	Saving and Sharing Your Work	47
	Using the Avid FX Engine	48
	Next Steps	49
Chapter 4	Using Avid 3D	51
	Exporting Media	52
	Send To Avid 3D	53
	Converting OMF Media	53
	Exporting Media to Avid 3D	54
	Viewing AAF Media in Avid 3D	57
	Creating 3D Content	59
	Applying Video Clips as Background or Textures	60
	Creating a Scene for Export to the Avid Editing Application	68
	Exporting Media from Avid 3D	72
Chapter 5	Using Digi 002, Mbox, and Avid Pro Tools LE	79
	Using Pro Tools LE for Finishing Audio	80
	Basic Steps in the Avid Xpress Pro to Pro Tools LE Workflow	80
	Before You Begin	81
	Editing Audio with Avid Studio Xpress Complete	81
	Editing Audio with Avid Xpress Studio Essentials	84
	Frame-Rate Accurate Video Editing and Sample-Rate Accurate Audio Editing	85
	Hardware Requirements	86
	Disk Drive Requirements	86

	QuickTime Movies versus QuickTime Reference Movies	87
	Exporting Audio and Video from Avid Xpress Pro	88
	Using the Send To Avid Pro Tools LE Templates	88
	Determining the Audio Settings to use for Your Pro Tools LE Session.	90
	Importing Audio and Video into Pro Tools LE.	90
	Editing Audio Files in Pro Tools LE	97
	Bringing Your Audio from Pro Tools LE to Avid Xpress Pro.	98
	Exporting Tracks from Pro Tools LE	98
	Before You Begin	98
	Exporting Selected Tracks.	99
	Importing an OMF File into Avid Xpress Pro	101
	Using the Bounce to Disk Command	103
	Using Publish as OMF1 With the Bounce to Disk Command.	103
	Using the Media Tool to Import the Files.	105
	Exporting a Stereo-Interleaved File.	107
	Importing the File into a Bin.	109
Chapter 6	Using Avid DVD by Sonic	113
	Preparing the Sequence.	113
	Encoding the Sequence with Sorenson Squeeze	114
	Producing the DVD with Avid DVD by Sonic	116
	Setting Up the Avid DVD by Sonic Project.	116
	Working in the Avid DVD by Sonic Application	118
	Outputting the Project to DVD	121
	Photoshop File Restrictions	121
	Using Pro Tools LE with Progressive Projects.	123
	Exporting Files to Pro Tools from a Progressive Project	123
	Use the Media Creation Tool to Create OMF Media	124
	MXF File Format Issues.	124
	Creating a New OMF Template for the Send To Command	125
	Using Audio Pulldown with Progressive Projects	130
	23.976p NTSC Projects	130

Video Sources	130
Audio Sources	131
Export to Pro Tools	131
Export from Pro Tools to Avid Xpress Pro	132
24p NTSC Projects	132
Video Sources	132
Audio Sources	133
Export to Pro Tools	134
Export from Pro Tools to Avid Xpress Pro	134
24p PAL Projects	135
Video Sources	135
Audio Sources	137
Export to Pro Tools	140
Export from Pro Tools to Avid Xpress Pro	141
Index	143

Using This Guide

Congratulations on your purchase of the Avid Xpress Studio package of editing applications. You can use your applications to create broadcast-quality output incorporating every possible production element from full-speed, high-resolution footage, to multimedia artwork and animation, to computer-generated effects and titling.

This guide outlines the workflow between the component applications of Avid Xpress Studio.

This guide is intended for all users, from beginning to advanced.




Unless noted otherwise, the material in this document applies to the Windows XP and Mac OS X operating systems. The majority of screen shots in this document were captured on a Windows XP system, but the information applies to both Windows XP and Mac OS X systems. Where differences exist, both Windows XP and Mac OS X screen shots are shown.



The documentation describes the features and hardware of all models. Therefore, your system might not contain certain features and hardware that are covered in the documentation.

Symbols and Conventions

Avid documentation uses the following symbols and conventions:

Symbol or Convention	Meaning or Action
	A note provides important related information, reminders, recommendations, and strong suggestions.
	A caution means that a specific action you take could cause harm to your computer or cause you to lose data.
	A warning describes an action that could cause you physical harm. Follow the guidelines in this document or on the unit itself when handling electrical equipment.
>	This symbol indicates menu commands (and subcommands) in the order you select them. For example, File > Import means to open the File menu and then select the Import command.
►	This symbol indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.
⌘	This symbol represents the Apple or Command key. Press and hold the Command key and another key to perform a keyboard shortcut.
Margin tips	In the margin, you will find tips that help you perform tasks more easily and efficiently.
(Windows), (Windows only), (Macintosh), or (Macintosh only)	This text indicates that the information applies only to the specified operating system, either Windows XP or Macintosh OS X.
<i>Italic font</i>	Italic font is used to emphasize certain words and to indicate variables.
Courier Bold font	Courier Bold font identifies text that you type.
Ctrl+key or mouse action ⌘+key or mouse action	Press and hold the first key while you press the last key or perform the mouse action. For example, ⌘+Option+C or Ctrl+drag.

If You Need Help

If you are having trouble using Avid Xpress Studio:

1. Retry the action, carefully following the instructions given for that task in this guide. It is especially important to check each step of your workflow.
2. Check for the latest information that might have become available *after* the documentation was published in one of two locations:
 - If release notes are available, they ship with your application.
 - If ReadMe files are available, they are supplied in your Avid application folder. ReadMe files are also available from Help.



Release notes and ReadMe files are also available on the Avid Knowledge Center.

3. Check the documentation that came with your Avid application or your hardware for maintenance or hardware-related issues.
4. Visit the online Knowledge Center at www.avid.com/support. Online services are available 24 hours per day, 7 days per week. Search this online Knowledge Center to find answers, to view error messages, to access troubleshooting tips, to download updates, and to read/join online message-board discussions.
5. For Technical Support, please call 800-800-AVID (800-800-2843).
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Accessing the Online Library

The *Avid Xpress Studio Online Library* DVD or CD-ROM contains all the product documentation in PDF format and tutorials. Avid recommends the tutorials as your first resource for learning how to use your application. You can access the documentation and tutorial from the Online Library DVD or CD-ROM or from the Help menu.



You need Adobe® Acrobat® Reader® installed to view the documentation online. You can download the latest version of Acrobat from the Adobe Web site. The tutorial and the effects reference guide requires Apple's QuickTime® application to view the QuickTime movies. You can download the latest version of QuickTime from the Apple® Web site.

To access the online library and tutorial from the Online Library DVD or CD-ROM :

1. Insert the Online Library DVD or CD-ROM into the drive.
2. Double-click the Mainmenu file.

To access the online library and tutorial from the Help:

1. Insert the Online Library DVD or CD-ROM into the drive.
2. In your Avid application, select Help > Online Library.

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Chapter 1

Avid Xpress Studio Workflow Overview

Avid Xpress® Studio comprises the following applications:

- Avid® Xpress Pro
- Avid FX
- Avid 3D
- Avid Pro Tools® LE
- Avid DVD by Sonic™

Once you create a sequence in Avid Xpress Pro, you can enhance it with high-quality titling and effects in Avid FX, with 3D elements in Avid 3D, and with audio processing in Avid Pro Tools LE. You can then encode it for DVD production in Avid DVD by Sonic.

This document outlines the flow of your work going to and from the applications of Avid Xpress Studio in [“Basic Workflow” on page 16](#). It also describes file formats and media handling in [“File Formats and Media Handling” on page 19](#).

Avid Xpress Studio Applications

The following applications are part of Avid Xpress Studio:

- **Avid Xpress Pro:** the base application for Avid Xpress Studio. In Avid Xpress Pro you capture or import your material, work with clips and sequences, and perform all your basic editing tasks. You can put material out to the other applications of the studio and work with that material, but it always comes back to Avid Xpress Pro until you are ready to output it to DVD. See [“Using Avid Xpress Pro” on page 21](#).
- **Avid FX:** operates as an AVX plug-in that you access from within Avid Xpress Pro. Avid FX offers effects such as:
 - 2D and 3D text treatments
 - Multi-layer composites
 - Motion tracking
 - Transitions

For a workflow outline, see [“Avid FX” on page 17](#).

- **Avid 3D:** allows you to create 3D elements such as the following:
 - Flying logos
 - ID bugs
 - Particle effects
 - Special effects
 - Animated backgrounds
 - 3d transition effects, 2D compositing
 - 3D scenes that interact with live action.

For a workflow outline, see [“Avid 3D” on page 17](#).

- **Avid Pro Tools (PT) LE:** a flexible tool for audio production. Its capabilities include the following:
 - Sound effects editing and design
 - Music composition and editing
 - Dialog conforming and editing
 - Voice-over recording and editing
 - Foley recording and editing

- Mixing and signal processing.

For a workflow outline, see [“Avid Pro Tools LE” on page 18](#).

- **Avid DVD by Sonic:** integrates authoring and disc creation into a single application.

For a workflow outline, see [“Avid DVD by Sonic” on page 19](#).

You can find details about workflow using each component application in the following chapters:

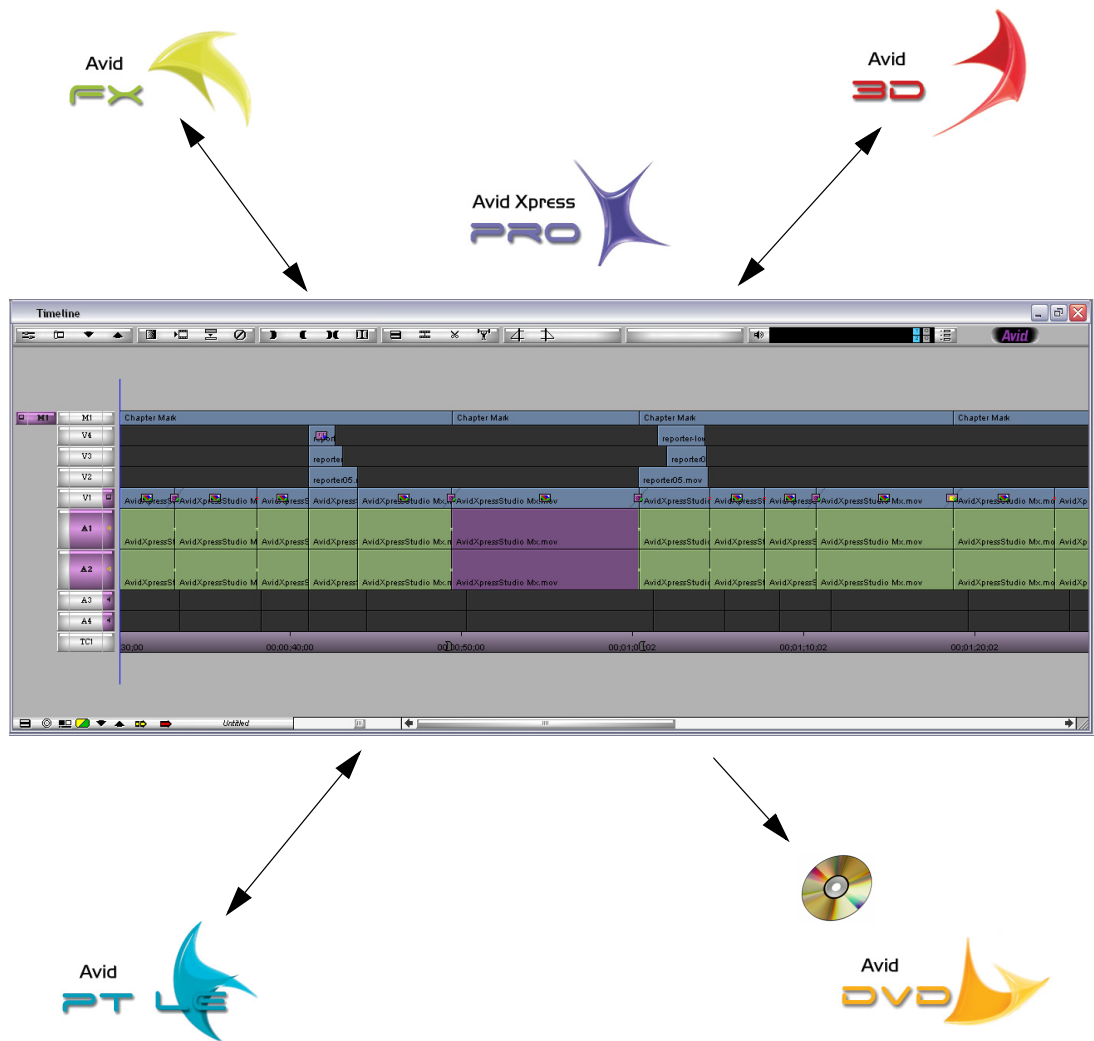
- [Using Avid Xpress Pro](#)
- [Using Avid FX](#)
- [Using Avid 3D](#)
- [Using Digi 002, Mbox, and Avid Pro Tools LE](#)
- [Using Avid DVD by Sonic](#)

Supplemental information about using Pro Tools LE is in [“Using Pro Tools LE with Progressive Projects” on page 123](#).

In addition, see the Avid Xpress Pro Online Library CD-ROM for complete information about Avid Xpress Pro, Avid FX, Avid 3D, Avid Pro Tools LE, and Avid DVD by Sonic. Each application (except for Avid Pro Tools LE) also has online Help that you can select from the Help menu within the application.

Basic Workflow

The following figure illustrates the basic workflow to produce a program with Avid Xpress Studio.



The following sections outline the workflow for each component application.

Avid FX

Do the following to work with Avid FX:

1. In Avid Xpress Pro, open the Effect Palette.
2. Select the Avid FX effect, and drag it onto the Timeline.
3. Enter Effect mode.
4. In the Effect editor, click the Other Options button to display the Avid FX windows.
5. Create your effect.
6. Apply the effect, and then return to the Avid Xpress Pro timeline.
7. Render the effect.

For more detailed information about this workflow, see [“Using Avid FX” on page 27](#).

Avid 3D

Do the following to work with Avid 3D starting in Avid Xpress Pro:

1. Edit your sequence in Avid Xpress Pro. Make sure it is in MXF format.
2. Create a bin named Avid3D Incoming.
3. Select File > Send To > Avid Xpress Studio > Avid 3D.
 - a. Select AutoLaunch.
 - b. Select the default Export Setting 1 to export the sequence to AAF.
 - c. Click OK.

The file is exported as AAF and is sent to Avid 3D, which then opens.

4. Create a new scene or open an existing scene in Avid 3D.
5. Add the sequence to your scene.
6. Add logos, 3D models, warping effects, models, textures, shapes.
7. Export the scene as AAF.
8. Find the file in the Avid3D InComing bin in Avid Xpress Pro.

Do the following to work with Avid 3D starting in Avid 3D:

1. Create a 3D scene within Avid 3D.
2. Export it directly to Avid Xpress Pro as a clip.
3. Edit it into a sequence.

For more detailed information about these workflows, see [“Using Avid 3D” on page 51](#).

Avid Pro Tools LE

Do the following to work with Avid Pro Tools LE:

1. Export your sequence from Avid Xpress Pro. Settings depend on your hardware:
 - Digidesign 002
 - Mbox
2. Close Avid Xpress Pro.
3. Create a new Avid Pro Tools LE session with appropriate settings in the following areas:
 - Audio file format
 - Sample rate
 - Bit depth
4. Import the AAF file into the session.
5. Work with the audio in Avid Pro Tools LE.
6. Export the finished audio to Avid Xpress Pro:
 - Export selected tracks as OMF/AAF.
 - Export selected regions as OMF.
7. Integrate the new audio elements as clips or mixed tracks in Avid Xpress Pro:
 - For exported tracks, import the OMF file into a bin.
 - For individual clips, drag the clips from the Media tool into a bin.

For more detailed information about this workflow, see [“Using Digi 002, Mbox, and Avid Pro Tools LE” on page 79](#).

Avid DVD by Sonic

Do the following to work with Avid DVD by Sonic:

- 1. Create a finished program in Avid Xpress Pro.
- 2. Create MetaSync information.
- 3. Select File > Send To > Avid Xpress Studio > Encoding for Avid DVD by Sonic, and encode the sequence with Sorenson Squeeze.
- 4. Set up the Avid DVD by Sonic project, and create movies and menus in it.
- 5. Output the project to DVD.

For more detailed information about this workflow, see [“Using Avid DVD by Sonic” on page 113](#).

File Formats and Media Handling

The following table presents information about how each component application handles file format and media.

Component Application File Formats and Media Handling

File Format	Avid Xpress Pro	Avid 3D	Avid Pro Tools LE	Avid FX	Avid DVD by Sonic
Standard	NTSC/PAL	NTSC/PAL	NTSC/PAL	NTSC/PAL	NTSC/PAL
Aspect Ratio	4:3, 16:9	4:3, 16:9	4:3, 16:9	4:3, 16:9	4:3, 16:9
Resolutions	720x486, 720x480, 720x576	720x486, 720x480, 720x576	720x486, 720x480, 720x576	720x486, 720x480, 720x576	720x486, 720x480, 720x576
Alpha Channel Support	Import	Import/Export	N/A	Import/Export	N/A
Media File Formats for Input	QuickTime, AVI, Sequential Image files, MXF, OMF, AAF, Still image files	QuickTime, AVI, Sequential Image files, MXF, AAF, Still image files	OMF Audio and MXF Video	QuickTime, AVI, Sequential Image files, MXF, OMF, Still image files	MPEG2 files, QuickTime, AVI, .tif, tga, Still Image files

Component Application File Formats and Media Handling (Continued)

File Format	Avid Xpress Pro	Avid 3D	Avid Pro Tools LE	Avid FX	Avid DVD by Sonic
Media File Formats for Output	QuickTime, AVI, Sequential Image files, MXF, OMF, AAF, Still image files	Sequential Image files, MXF, AAF, Still image files	OMF Audio	QuickTime, AVI, Sequential Image files, MXF, AAF, Still image files	DVD Image, DVD disc
Metadata File Format for Import	AAF	AAF	AAF	N/A	XML
Metadata File Format for Export	AAF	AAF	AAF (audio only)	N/A	N/A
Color Levels	601, RGB, RGB Dithered	RGB	N/A	N/A	N/A
Codecs	DV25, DV25p, Uncompressed, JFIF, 15:1s, 28:1p Playback Only: 35.1p, 14:1p	Same as Avid Xpress Pro Input and Output	Same as Avid Xpress Pro Input only	Same as Avid Xpress Pro Input and Output	Same as Avid Xpress Pro Input only
Interlaced/Deinterlaced and Progressive	Uses Interlaced or Progressive	Need to interpret Fields on import. Need Field Render options for output.	Uses format from Avid Xpress Pro OMF file	Uses whatever the Project is set to in Avid Xpress Pro	N/A

Chapter 2

Using Avid Xpress Pro

Avid Xpress Pro is your editing application in the Avid Xpress Studio suite of applications. In Avid Xpress Pro you capture or import footage, create sequences by assembling video and audio clips, and then edit the sequences by rearranging elements, trimming, and adding effects and titles. You can output your results with digital cut, and you can export the file in various formats.

Avid Xpress Studio adds other tools for enhancing your sequence. You can add effects from Avid FX; you access Avid FX from within Avid Xpress Pro. You can export your sequence to Avid 3D, add 3D elements, and then export it back to Avid Xpress Pro. You can also export your sequence to Avid Pro Tools LE to work on the audio portions of the program, and then export it back to Avid Xpress Pro. When your program is finished, you create a MetaSync track and send it to Avid DVD by Sonic.

See [“Avid Xpress Studio Workflow Overview” on page 13](#) for a workflow overview, and see the Avid Xpress Pro Help for complete details on using Avid Xpress Pro.

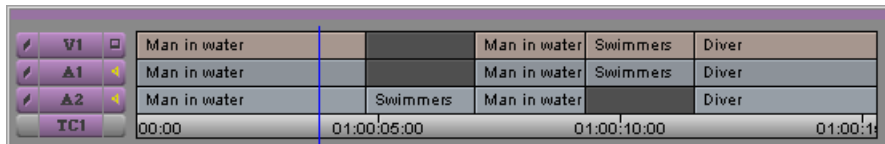
Working in Avid Xpress Pro

The following topics outline how you can use Avid Xpress Pro with the other Avid Xpress Studio applications. You can use the other applications in any order you want, saving Avid DVD by Sonic for the last. For more information on each application, see the chapter about that application’s workflow in this document and the relevant user’s guide and other documentation on the Online Library DVD or CD-ROM.

Creating a Program in Avid Xpress Pro

To create a program in Avid Xpress Pro:

1. Create a project.
2. Capture DV footage over FireWire.
3. Organize the clips into bins.
4. Assemble clips into a sequence.

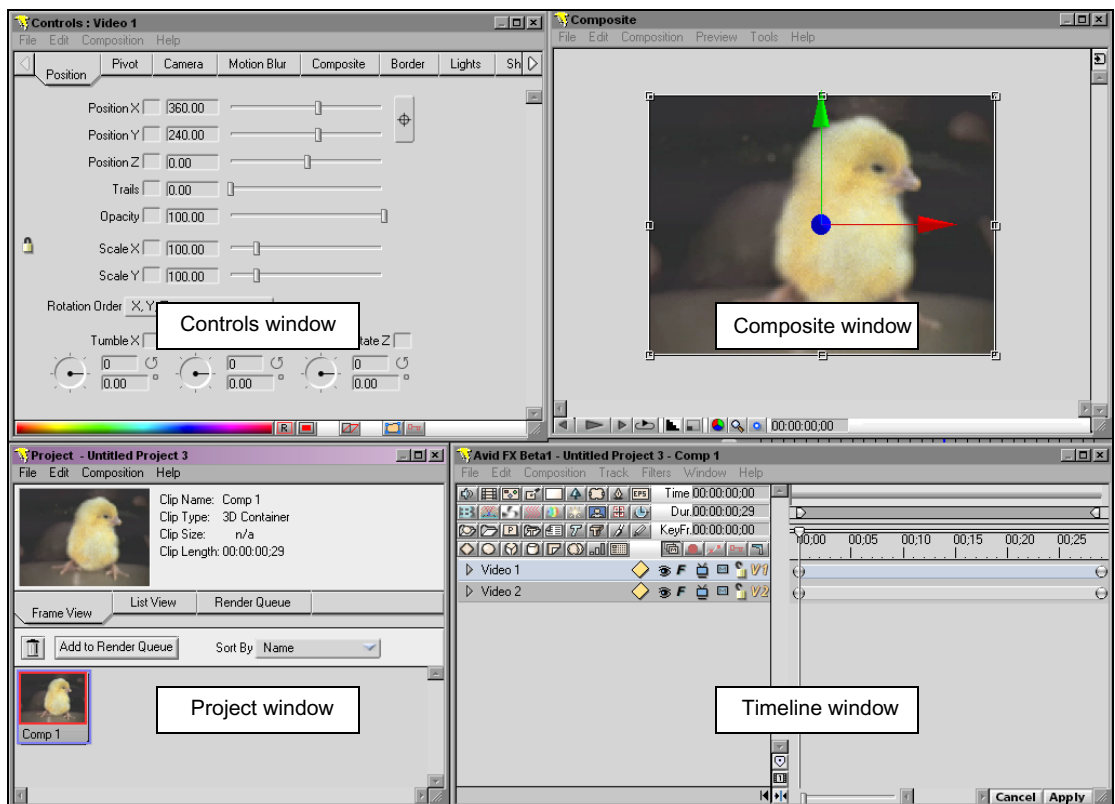


5. Rearrange and trim the elements in the Timeline.
6. Add effects from the Effect Palette.
7. To add an Avid FX element, drag the Avid FX effect from the Effect Palette onto the Timeline, and do the following:
 - a. Enter Effect Mode.

- b. In the Effect Editor, click the Other Options button.



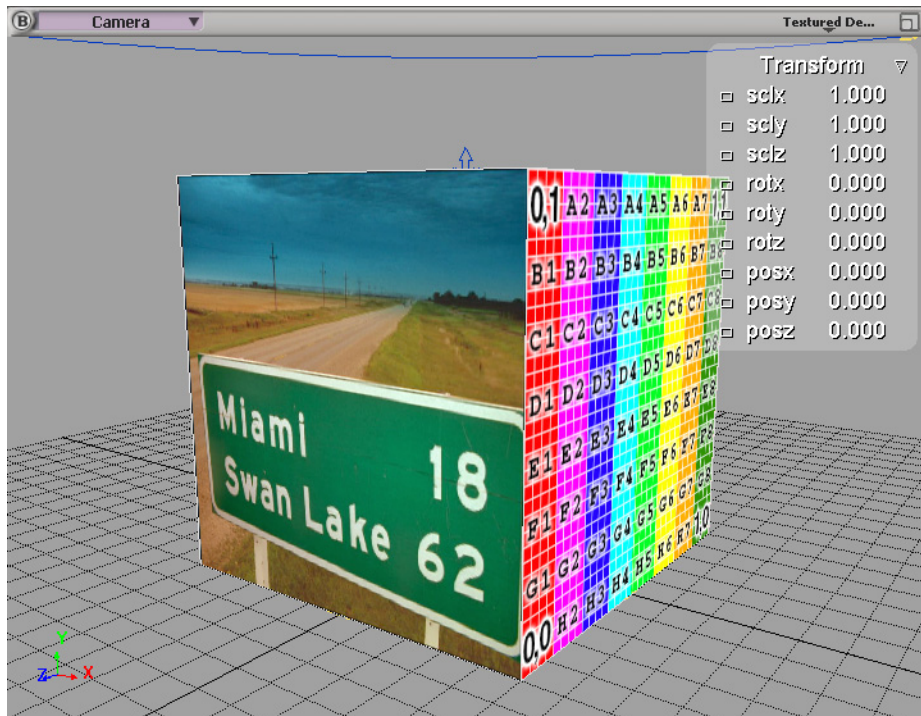
The Avid FX windows open.



Click to apply effect back to Avid

- c. Create your effect.
- d. Apply your effect and return to the Avid Xpress Pro Timeline.

- e. Render your effect.
8. To work in Avid 3D, do the following:
 - a. In Avid Xpress Pro, create a bin called Avid3D Incoming and leave it open.
 - b. Select File > Send To > Avid Xpress Studio > Avid 3D, and export an MXF sequence to AAF.
 - c. If Avid 3D doesn't open, select Studio > Launch Avid 3D.
 - d. Create a new scene or open an existing scene.
 - e. Add the imported video to the scene as a texture, floating image plate, or fixed background.
 - f. Add logos, 3D models, warping effects, models, textures, shapes.



- g. Export the scene as AAF.
- h. Find the file in the Avid3D InComing bin in Avid Xpress Pro.

9. To work in Avid Pro Tools LE, do the following:
 - a. Export your sequence from Avid Xpress Pro, and then close Avid Xpress Pro.



You cannot run Avid Pro Tools LE at the same time as Avid Xpress Pro. If you have not closed Avid Xpress Pro, when you select Launch Pro Tools LE, a message box opens asking if you want to save your work and then quit Avid Xpress Pro.

- b. Create a new Avid Pro Tools session with appropriate settings in the areas of audio file format, sample rate, and bit depth.
 - c. Import the AAF file into the session.
 - d. Work with the audio in Avid Pro Tools LE.
 - e. Export the finished audio to Avid Xpress Pro.
 - f. Integrate the new audio elements as clips or mixed tracks in Avid Xpress Pro.
10. When you are satisfied with your finished program, do the following to create a DVD:
 - a. Create MetaSync information.
 - b. Select File > Send To > Avid Xpress Studio > Encoding for Avid DVD by Sonic, and then encode the file with Sorenson Squeeze.
 - c. In Avid DVD by Sonic, open the file you exported, import any other assets you want to use for creating the DVD, and create movies and menus.

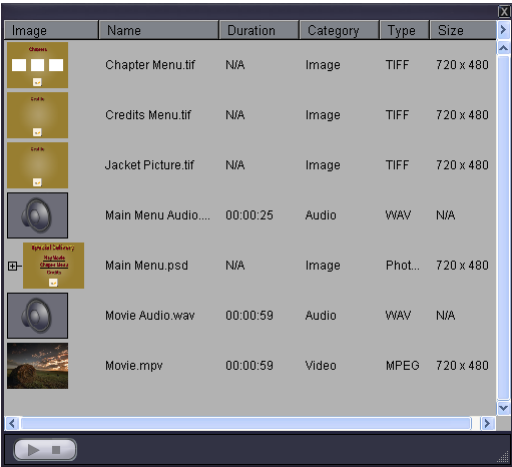


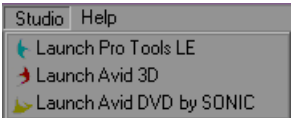
Image	Name	Duration	Category	Type	Size
	Chapter Menu.tif	N/A	Image	TIFF	720 x 480
	Credits Menu.tif	N/A	Image	TIFF	720 x 480
	Jacket Picture.tif	N/A	Image	TIFF	720 x 480
	Main Menu Audio....	00:00:25	Audio	WAV	N/A
	Main Menu.psd	N/A	Image	Phot...	720 x 480
	Movie Audio.wav	00:00:59	Audio	WAV	N/A
	Movie.mpv	00:00:59	Video	MPEG	720 x 480



- 11. Output the project to a disc image, or DVD.
- 12. Save your DVD project and exit the application.

Opening other Avid Xpress Studio Applications

To open other Avid Xpress Studio applications from within Avid Xpress Pro:

- ▶ Select the application from the Studio menu.



-  You can start the Avid FX standalone application by selecting *Start > Programs > Avid Xpress Studio > Avid FX Engine*.
-  You cannot run Avid Pro Tools LE at the same time as Avid Xpress Pro. When you select Launch Pro Tools LE, a message box opens asking if you want to save your work and then quit Avid Xpress Pro.

Chapter 3

Using Avid FX

You can use Avid FX to add a wide range of high-quality titling, compositing, and effects to your Avid Xpress Pro sequences. You can use Avid FX's powerful tools to create your own effects, or choose from Avid FX's library of over 1,500 customizable titles, effects, and transition templates. Avid FX works as an AVX 1.5 plug-in, so you can apply it just like you apply other Avid effects. You can also work with the standalone version of Avid FX, called the Avid FX Engine.

This chapter includes the following sections:

- [Basic Steps](#)
- [Creating Text Effects](#)
- [Saving and Sharing Your Work](#)
- [Using the Avid FX Engine](#)
- [Next Steps](#)

Basic Steps

The basic steps in applying and editing an Avid FX effect are:

1. Open the Effect Palette.
2. Select the the Avid FX effect, and then drag it onto the Timeline.
3. Enter Effect Mode.
4. In the Effect Editor, click the Other Options button to display the Avid FX interface.

5. Create your effect.
6. Apply the effect, and then return to the Avid Xpress Pro Timeline.
7. Render your effect.

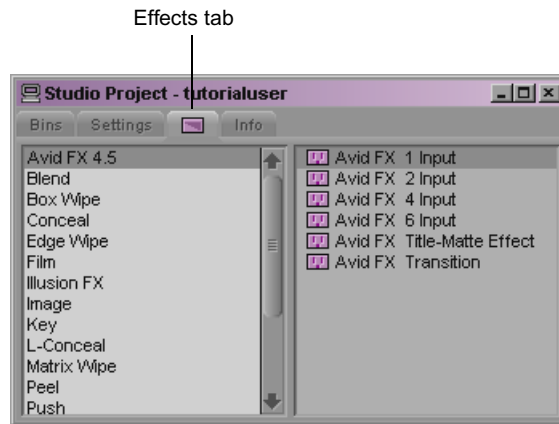
The following sections explain these steps in more detail. These sections show you how to create a transition effect that spins as it scales and exchanges two video clips.

Opening the Effect Palette

To open the Effect palette:

1. Determine where in your sequence you want to apply the transition.
2. Click the Effects tab in the Project window or press Ctrl+8.

The Effect palette is displayed and Avid FX appears at the top of the list.



You can choose from one of the following six effects:

- **Avid FX 1 Input:** Apply this effect if you want to use one Avid track in creating your effect. Avid FX uses the track on which you apply the effect as source media.
- **Avid FX 2 Input:** Apply this effect if you want to use two Avid tracks as source media. Avid FX uses the track on which you apply the effect and the one below it.
- **Avid FX 4 Input:** Apply this effect if you want to use three or four Avid tracks as source media.

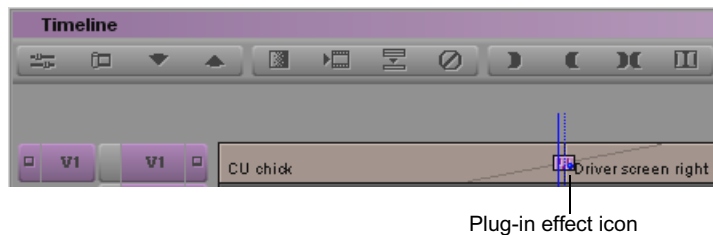
- **Avid FX 6 Input:** Apply this effect if you want to use five or six Avid tracks as source media. It's a good idea to use only the number of inputs you really need. If you have empty tracks, Avid Xpress Pro takes time and computer power to render the empty tracks.
- **Avid FX Title-Matte Effect:** Apply this effect only to edit titles that you have first created with the Title Tool.
- **Avid FX Transition:** Apply this effect to create any kind of transition.

Dragging the Avid FX Effect on to the Timeline

To add an Avid FX effect to a sequence:

- ▶ Drag the Transition effect to a transition between two clips in the Timeline.

The plug-in effect icon is displayed at the transition point.

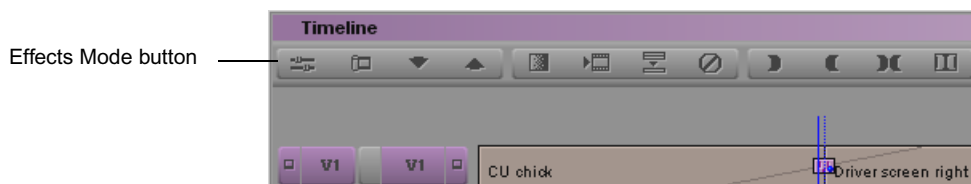


Next you need to open Avid FX to create the transition.

Entering Effect Mode

To enter Effect mode:

- ▶ Place the position indicator over the effect icon, and then click the Effects Mode button.



You are now in Effects mode and the Effect Editor is displayed.



Now you need to display the windows and controls of the Avid FX interface.

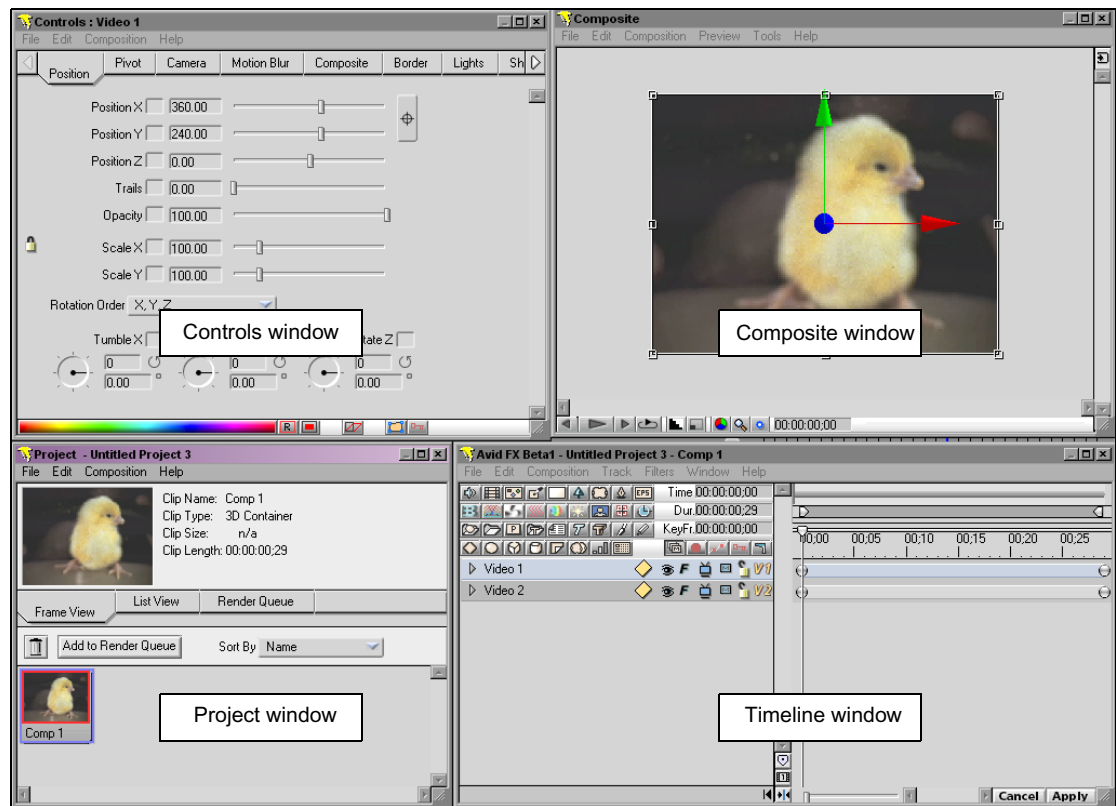
Displaying the Avid FX Interface

To display the Avid FX interface:

- In the Effect Editor window, click the Other Options button.

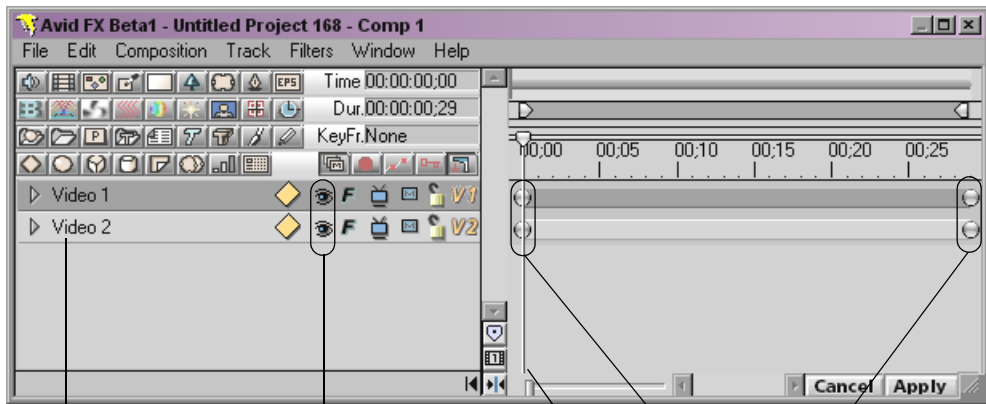
Four Avid FX windows open by default:

- Controls window
- Composite window
- Timeline window
- Project window



Creating an Effect

The Timeline window displays two video tracks: Video 1 represents the outgoing clip and Video 2 represents the incoming clip. The position indicator in the Timeline window is placed on the first frame of both clips; the first frame of the outgoing clip is displayed in the Composite window.



Track names

Toggle Track
Visibility buttons

Position
indicator

Keyframes

To change the video track that is displayed:

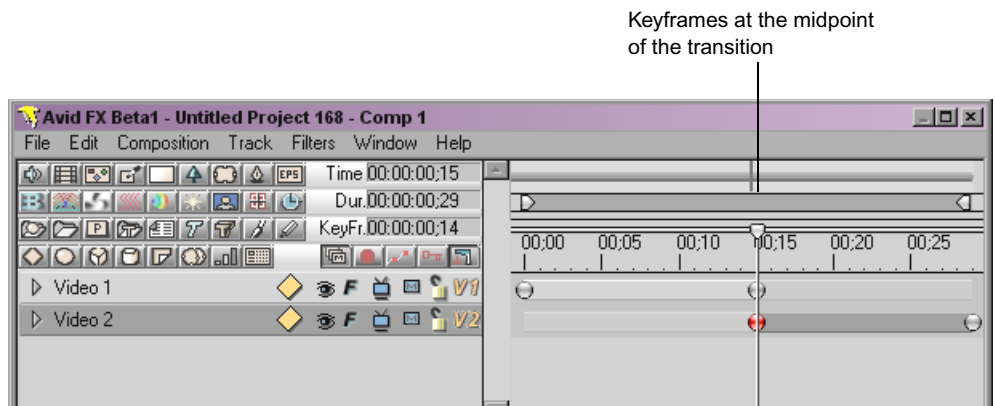
- ▶ Click the Toggle Track Visibility button.

If you want to view the first frame of the incoming clip (Video 2), hide Video 1 by clicking the Toggle Track Visibility button. Click the Toggle Track Visibility button again to show Video 1.

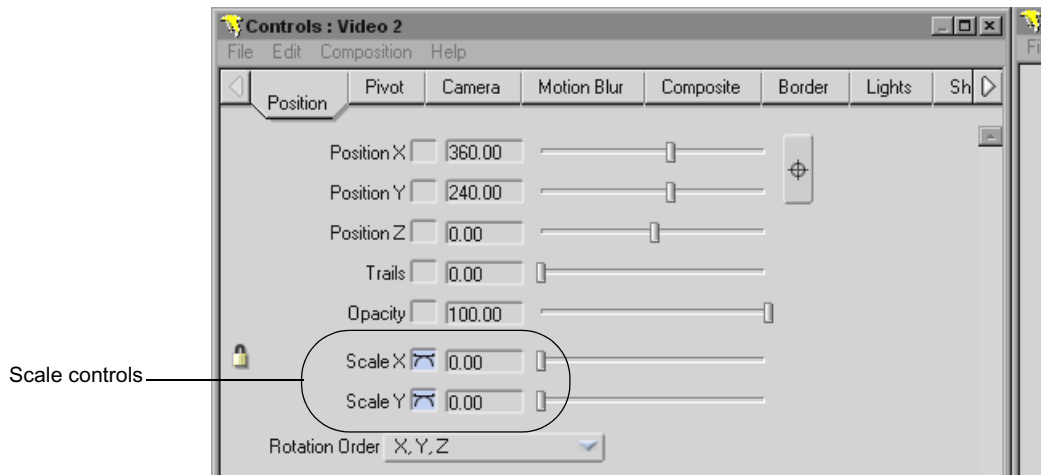
Creating a Transition Effect

To create a transition effect:

1. In the Timeline window, adjust the length of each of the clips by dragging the keyframes:
 - a. Drag the last keyframe of Video Track 1 to the midway point of the duration (frame 00;15).
 - b. Drag the first keyframe of Video Track 2 to the same point.

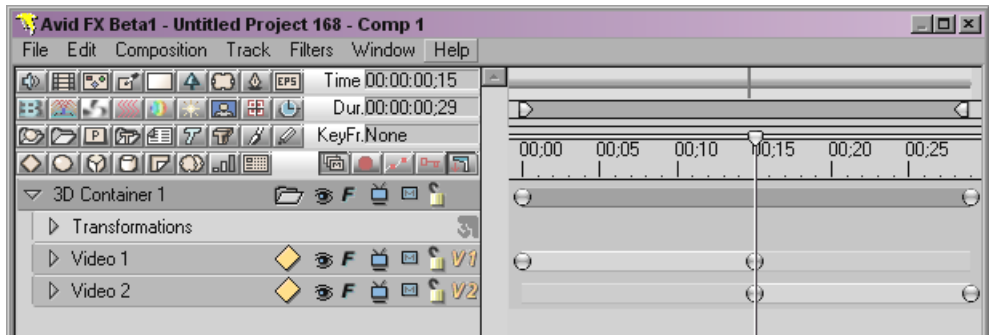


2. Ctrl + click the keyframes you just dragged to select both of them.
The selected keyframes turn red.
3. In the Controls window, adjust the scale for the keyframes to 0.00. You can type the value or drag a slider. Notice that the Scale X and Scale Y controls are locked.



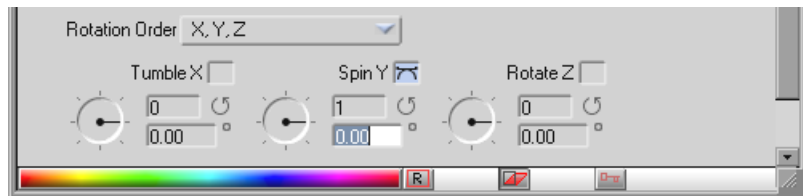
The video for the middle keyframes is now invisible. The video at the beginning and end of the clips is still visible, because the keyframes are set to 100.

4. In the Timeline window, add a container track by selecting both tracks (Ctrl + click each track), and then selecting Track > New 3D Container.

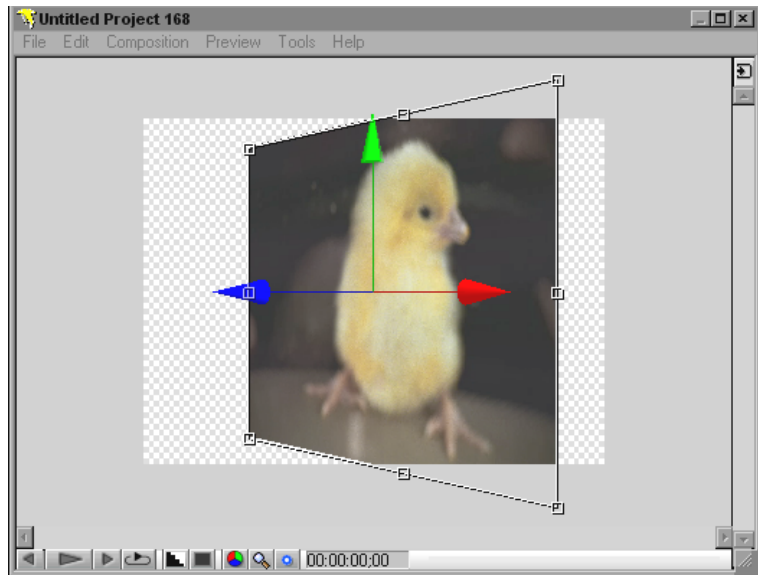


You've just created a container track to hold the two video tracks. The video tracks (and a new track, Transformations) are indented slightly. Container tracks make it easier to work with multilayer effects. Notice that a container track has its own keyframes.

5. Click the first keyframe in the container track, and then, in the Controls Window, adjust the Spin Y to 1 rotation. You can type 1 or use the mouse pointer to spin the dial one complete rotation.



Spinning the dial lets you watch the video move.



6. Press the space bar to preview the effect.

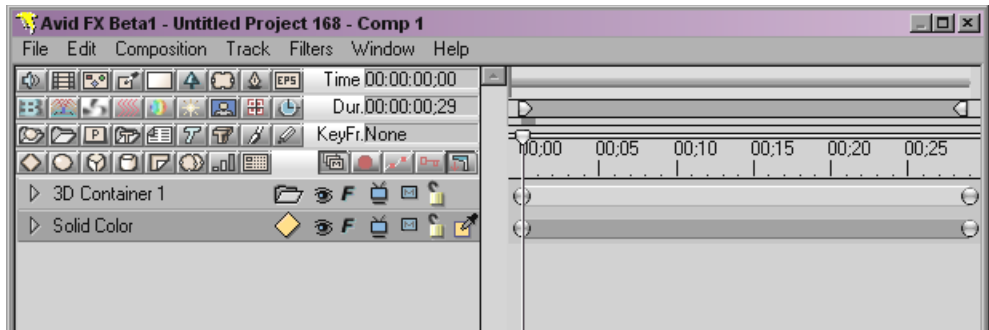
By default, the effect loops until you press the space bar again. You can also drag the Timeline position indicator to scrub through the effect. If you want, try changing the number of rotations or the degree of rotation.

The background of the transition is black, because it was created as a transparency. You can add a more interesting background by adding media on a new track.

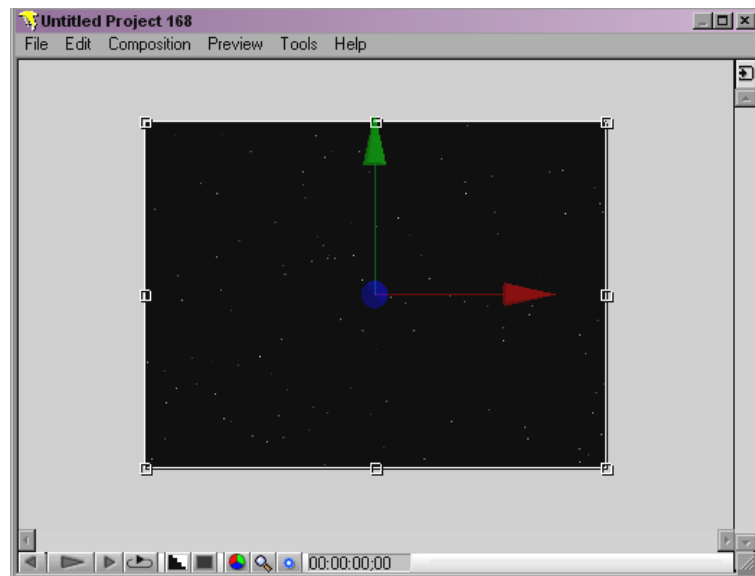
Adding Media to an Effect

To add media to an effect:

1. In the Timeline window, collapse the 3D Container track by clicking the triangular opener, and then deselect the track by clicking in an empty space.
2. Select **Track > New Media > Color**.
A track labeled Solid Color is added above the 3D Container track.
3. Drag the new track below the 3D Container track.

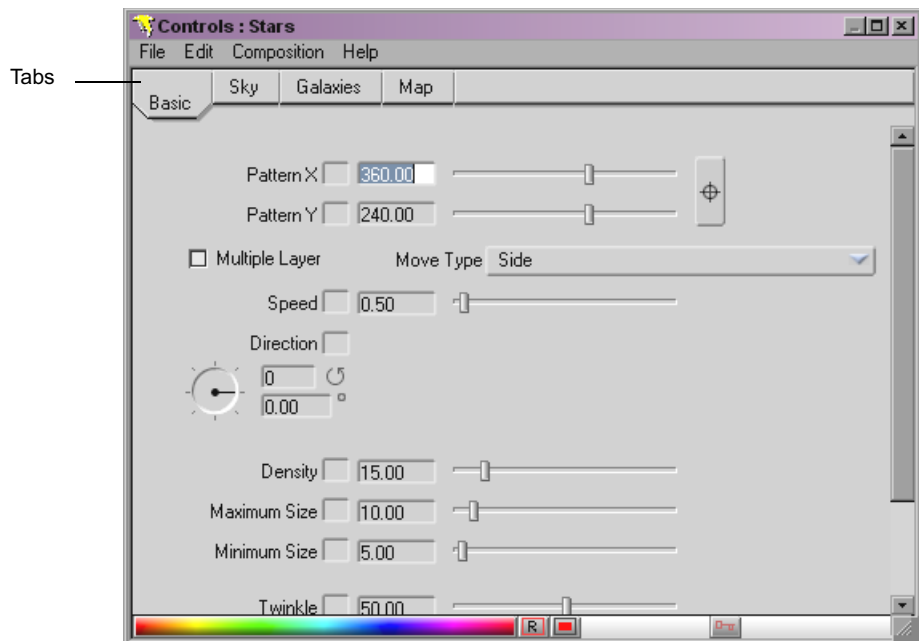


4. Click to highlight the new track, and then select Filters > Generators > Stars.
5. To view the new background media, click the Track Visibility button for the 3D Container track.



Avid FX includes hundreds of filters and textures and ways to adjust them.

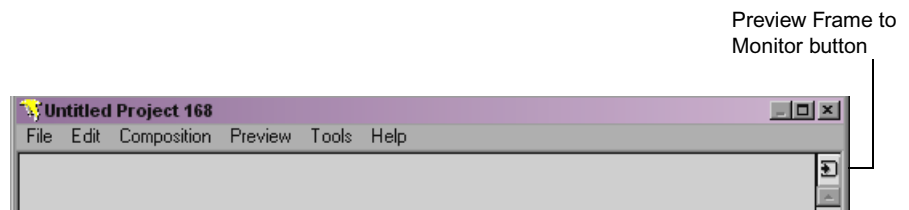
Notice the tabs in the Controls window. You can use the controls in the tabs to vary the number of stars, add galaxies, and make other customizations.



6. In the Timeline, click the Track Visibility button on the 3D Container track again.

Because the Stars track is new media, it takes longer to preview.

7. To display your transition, do one of the following:
 - ▶ Select Preview > Preview to RAM. Avid FX uses the computer's random-access memory (RAM) to preview the effect. The first time preview cycle is slow, as the transition is loaded in memory, but subsequent preview are real time. Press the space bar to stop the preview.
 - ▶ If you have a client monitor connected to the Avid Mojo DNA, in the Composite window, select Preview > Display Frame to Monitor or click the Preview Frame to Monitor button.



Applying the Effect

When you're satisfied with your effect, you can apply it to the sequence.

To apply the effect:

- ▶ Click the Apply button in the Timeline window.
The Avid FX interface closes.

To close the Avid FX interface without applying the effect:

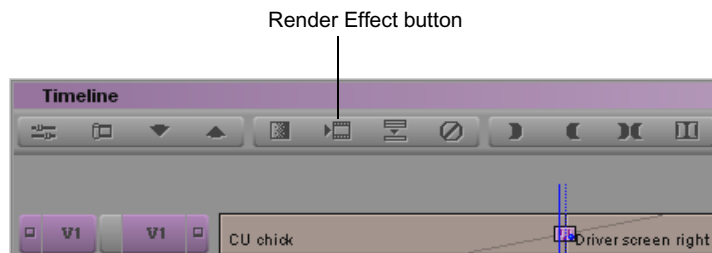
- ▶ Click the Cancel button in the Timeline window.

Rendering the Effect

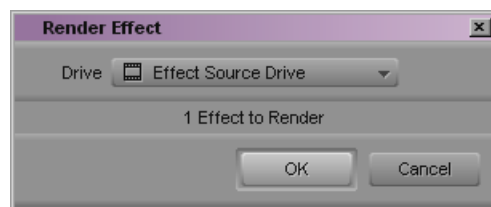
Now you can render the effect in the same way that you render other effects.

To render the effect:

1. Place the position indicator on the effect icon.
2. Click the Render Effect button.



The Render Effect dialog box is displayed.



3. Click OK.

In a few seconds, depending on the complexity of the effect, your effect is ready to play.

Creating Text Effects

Avid FX includes features that let you easily create and animate titles and other text effects. This section describes how to create a simple title, and then animate it around a circle.

Creating a Title

You can add a title over video in the same way you add a transition effect. If you want to create a title (or any effect) without video, insert filler into a sequence and apply the effect to the filler.

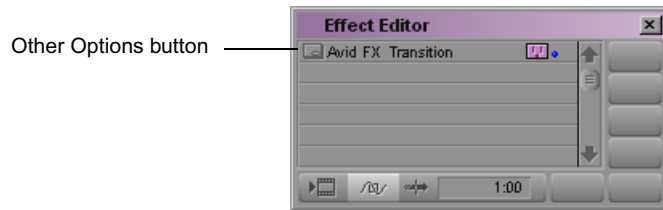


You can also use Avid FX as a standalone application. For more information, see “Using the Avid FX Engine” on page 48.

Adding an Effect to Filler

To add an effect to filler:

1. Open a sequence, or create a new sequence.
2. Select Clip > Load Filler.
The system loads a 2-minute clip of filler into the Source monitor.
3. Mark IN and OUT points to create the length of filler you want.
The length of the filler determines the speed of the animation.
4. Click the Splice-in button to edit the filler into the sequence.
5. Click the Effects tab in the Avid Xpress Pro Project window.
6. Drag the Avid FX 1 Input effect onto the filler clip in the sequence.
7. Enter Effect mode by parking the position indicator over the effect icon and clicking the Effects Mode button.
8. In the Effect Editor, click the Other Options button.



The Avid FX interface is displayed.

Creating Text in a Title

To create text:

1. In the Avid FX Timeline, click the Media icon, and then select Text from the menu.

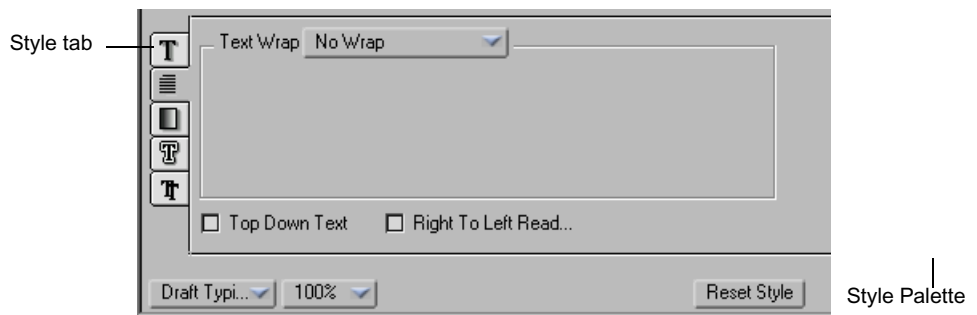


The Text window is displayed.



The Text window contains five panels of controls, which let you adjust the font, size, color, and spacing and other text attributes. By default, the Style tab is displayed.

- Click in the top part of the Text window, and then type the text that you want to animate in a circle. For this example, on the Page tab of the Text window, make sure that Text Wrap is set to No Wrap.



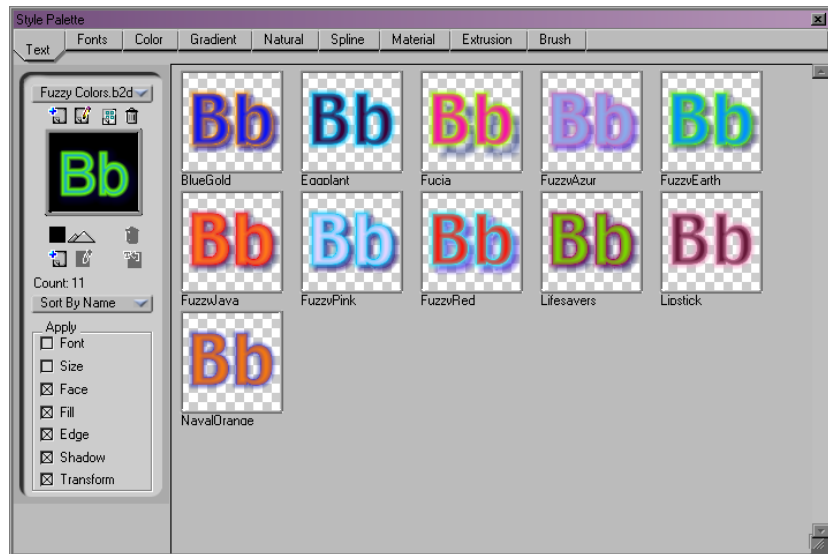
- Click the Style tab again.

4. To view and select one of the hundreds of text styles, click the Style Palette button at the bottom of the Text window.

The Style Palette opens.

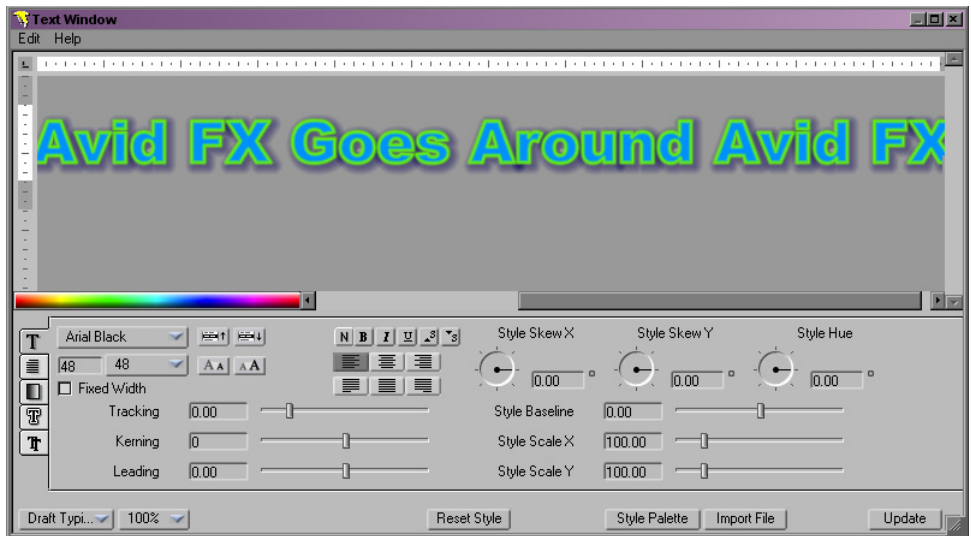
5. Open different sets from the drop-down menu.

A wide range of font choices is displayed, from Basic Black and White to Glows and Fuzzy Colors.



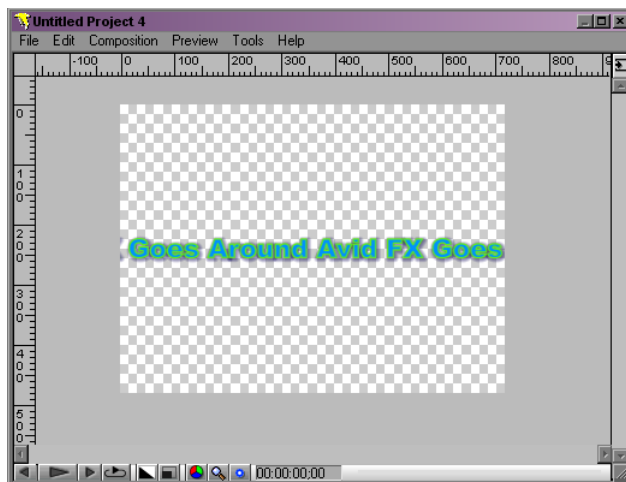
6. Double-click your choice.

The newly styled text is displayed in the Text window.



7. To see what the text look likes in a monitor, click the Update button on the Text window.

The text appears in the Composite window.



The checkerboard pattern indicates that the text is created on a transparent background.

8. Close the Style Palette by clicking the close button.

9. Save your work:
 - a. Select File > Save Project As
 - b. Name your project.
 - c. Click Save.

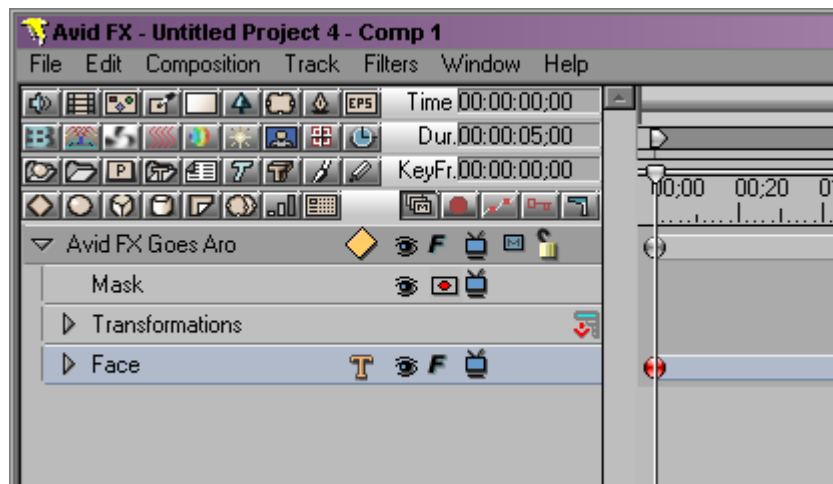
At this point, you could apply the title to the sequence. In this example, let's animate the text first.

Animating Text on a Path

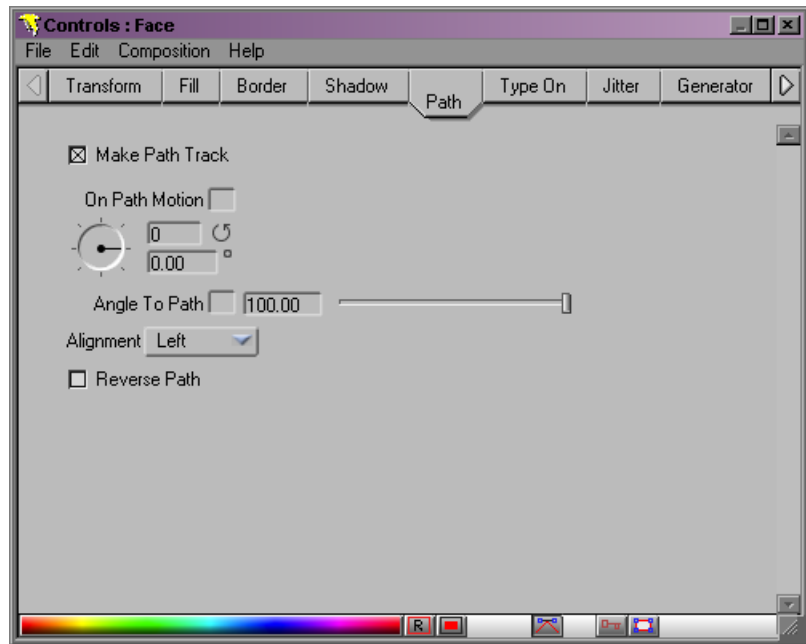
It's easy to place text on a path and animate it. The following example uses a simple circle, but you can use any path that you can create in Avid FX.

To animate text on a path:

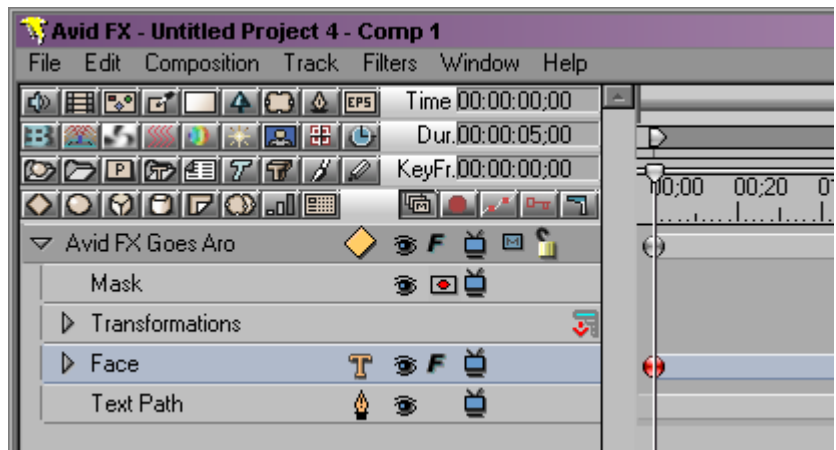
1. In the Timeline window, click the triangular opener to display all tracks in the effect.



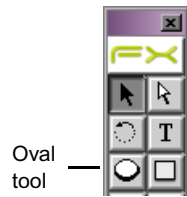
2. Select the first keyframe in the Face track.
3. Click the Path tab in the Controls window, and then select Make Path Track.



The Text Path track is displayed below the Face track in the timeline.

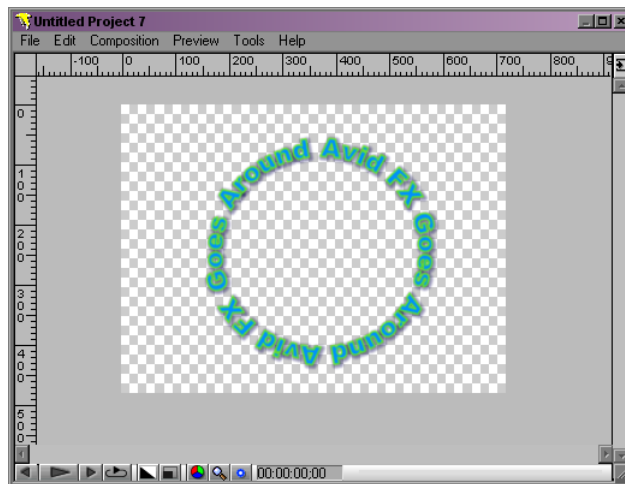


4. Select the Text Path track in the timeline.
The Tool window opens.

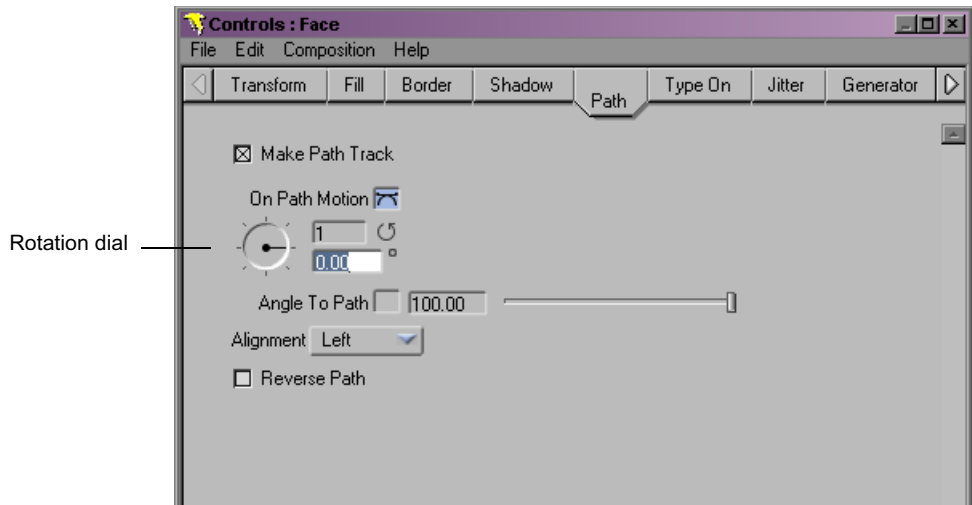


5. With the Text Path track selected, click the Oval tool in the Tool window and draw a circle in the Composite window. If you want, press the Shift key while you drag to constrain the tool to draw a circle instead of an oval.

The Composite window updates, showing the text wrapped around the object in the Text Path track.



6. Click the Face track, and on the Path tab of the Controls window, set the rotation dial to 1.



7. Select Preview > Preview to RAM to preview the animation.
8. Click Apply, and then render the effect in the Avid Xpress Pro Timeline.

Saving and Sharing Your Work

There are several ways to save your work in Avid FX.

To save one or more compositions in a single project:

- ▶ Select Composition > Save Composition.

To save a project, select one of the following:

- ▶ File > Save.
- ▶ File > Save Project As.
- ▶ File > Save Project Copy As.
- ▶ File > Save Project Copy to Library.

Saving to the Library lets you save your effects in the Keyframe Library, a storehouse of hundreds of preset effects. Using the Keyframe Library makes it easy to reuse your titles and graphics. You can create a folder for your projects in the following location:

C:\Program Files\Avid\Avid FX\Keyframe Libraries

To open the Keyframe Library:

- ▶ Select Window > Library Browser.

The folder you created appears at the bottom of the scroll list.

You can also export your titles and effects in several different formats.

To export an effect:

1. Select File > Export in the Timeline window or any other window.
2. Select one of the following:
 - Movie File (for QuickTime, Targa Sequence, or AVI)
 - Targa File
 - Flash File
3. For Movie files, select the file type, and then click OK.
4. Navigate to the folder where you want to store the file, and then click Save.

Using the Avid FX Engine

In addition to applying Avid FX effects directly to an Avid Xpress Pro sequence, you can run Avid FX independently. This standalone version of Avid FX is called the Avid FX Engine.

With the Avid FX Engine, you can create titles, effects, or composites using whatever combination of imported files and generated effects you choose, and then export them for use in other applications. For example, you might use the Avid FX engine to create an animated menu in a DVD project assembled with Avid DVD by Sonic.

To open the Avid FX Engine:

- ▶ Select Start > Programs > Avid Xpress Studio > Avid FX Engine.

To close the Avid FX Engine:

- ▶ Select File > Exit, or click the close box in the Timeline window.

Next Steps

This chapter has described only a few aspects of the many special effects that are available in Avid FX. For step-by-step practice in more sophisticated effects, see the Avid FX Tutorial on the Online Library.

For complete information, see the *Avid FX User's Guide* and the *Avid FX Reference Guide* on the Online Library, and the Avid FX online Help.

Chapter 4

Using Avid 3D

Avid 3D provides editors with a wide range of 3D animation tools. With Avid 3D, you can import clips and sequences from your Avid editing application, and then add 3D elements or 3D effects. Shared media and metadata formats between your Avid editing application and Avid 3D allow you to move media easily between the applications.

You can also use Avid 3D for building and deforming 3D models, creating and extruding text and logos, and designing and applying particle systems. Avid 3D includes an extensive library, which you can use to add models, materials, textures, and shaders to 3D scenes.

There are two basic workflows when using Avid 3D with Avid Xpress Studio:

- Export a clip or sequence from Avid Xpress Pro to Avid 3D, add 3D elements or effects, and then export the media from Avid 3D back to Avid Xpress Pro.
- Create a 3D scene within Avid 3D, export it directly to Avid Xpress Pro as a clip, and then edit it into a sequence.

The following sections describe the procedures used in these workflows:

- [Exporting Media](#)
- [Creating 3D Content](#)
- [Exporting Media from Avid 3D](#)

Exporting Media

You can use clips and sequences from your projects in your Avid editing application as backgrounds and textures in Avid 3D. This allows you to add logos or identification graphics (ID “bugs”) to video, or to use footage to create a variety of 3D effects.

You use the Send To feature to export clips and sequences from your Avid editing application as Advanced Authoring Format (AAF) files. AAF is a cross-platform, multimedia file format that allows interchange of media and composition information between AAF-compliant applications.

There are two general types of data in an AAF file:

- Media such as audio and video
- Composition information, or metadata, that provides the instructions needed to combine and modify the media portions of the AAF file to produce a complete multimedia program



Avid 3D does not import audio information from the AAF file. For information on importing audio, see the Avid 3D User’s Guide in the Avid Xpress Studio online library.

AAF files facilitate the transfer of data from the Avid editing application to Avid 3D by creating pointers to the original media so that the media files themselves are not duplicated. This reduces the space needed for storing media files, and it speeds up the transfer of information between applications.

Before you export your media, you need to prepare your clip or sequence and select which tracks and segments you want to export. For more information on how to export media, see “Exporting and Exchanging Material” in the Help for your Avid editing application.

If the clip or sequence you want to export is in the OMF file format, you need to transcode it to the MXF file format. You can use the Send To feature to automate this transcoding operation, as described in [“Send To Avid 3D” on page 53](#). However, you must first select your transcoding options by using either the Media Creation dialog box or the Transcode command in the Consolidate/Transcode dialog box. For more information on transcode options, see “Media Creation Settings” and “Using the Transcode Command” in the Help for your Avid editing application.

Send To Avid 3D

The Send To feature enables you to send sequences or master clips from your Avid editing system to other applications, automating your workflow. The Send To feature provides you with a choice of several pre-defined templates to streamline your workflow. These templates are set to default parameters and are customized for specific workflows.



Avid recommends you use the pre-defined template default settings, which have been qualified by Avid.

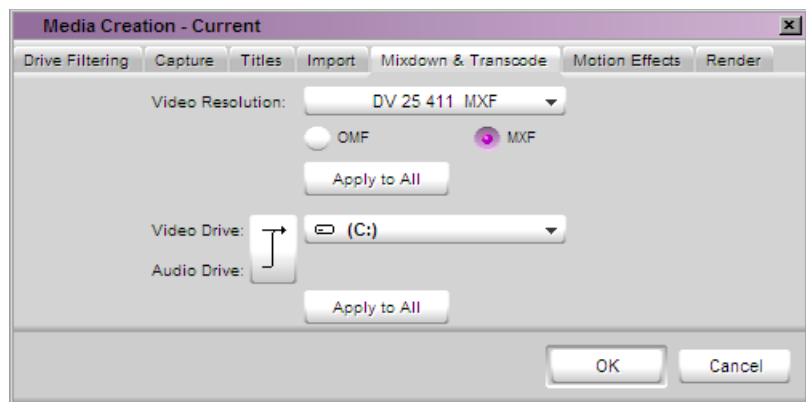
Converting OMF Media

You can export only MXF media from the Avid editing application to Avid 3D. If your source media is in the OMF media file format, you need to convert (transcode) the media from OMF format to MXF format before exporting to Avid 3D. You use the Send To feature to automate the conversion, but first you must set the transcode options in the Media Creation dialog box.

To set transcode options in the Media Creation dialog box:

1. Do one of the following:
 - ▶ Double-click Media Creation in the Settings scroll list.
 - ▶ Select Tools > Media Creation.
2. Click the Mixdown & Transcode tab.

The Mixdown & Transcode tab of the Media Creation dialog box opens.



3. Select MXF as a file format.
4. Click the Video Resolution pop-up menu, and select a video resolution.
The Video Resolution pop-up menu contains a list of the available resolutions.
5. Select a video drive and an audio drive. To select the same drive for both audio and video, click the Single/Dual Drives Mode button until only a single drive pop-up menu opens.



The drive that appears in boldface type has the most available space.

6. Click OK to save your settings.

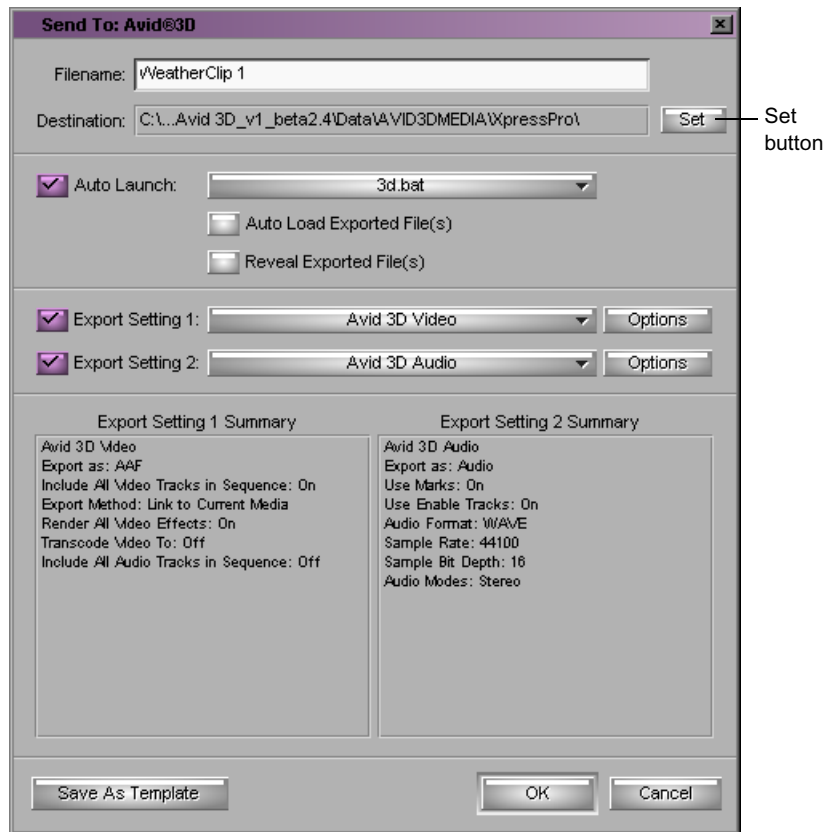
Exporting Media to Avid 3D

Once your media is in the correct format, you can export it to Avid 3D.

To export a clip or sequence from your Avid editing application:

1. Select an MXF clip or sequence in a bin. You can select multiple clips or sequences.
2. Do one of the following:
 - ▶ Select File > Send To > AVID Xpress Studio > Avid 3D.
 - ▶ Right-click the clip or sequence, and select Send To > AVID Xpress Studio > Avid 3D.

The Send To Avid® 3D dialog box opens.



3. (Option) Click the Set button to navigate to a destination for the exported files.



In order for exported media to appear in the appropriate section of Avid 3D's Materials Library, your Avid editing application must store the media files at the default location at C:\Softimage\Avid 3D\Data\AVID3DMEDIA\XpressPro. If you want to store your media in another location, or if you installed Avid 3D on a different drive, see the Avid 3D User's Guide or the Avid 3D Help for information on customizing the location of stored media.

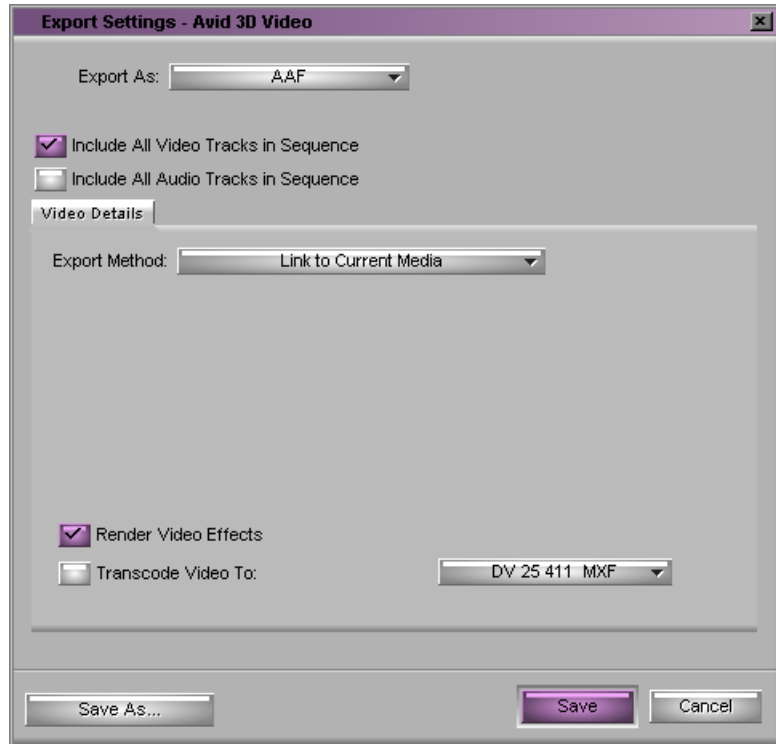
4. Select options as described in the following table:

Avid 3D Options

Option	Suboption	Description
Filename		Type the name you want for the exported file. The default is the title of the clip or sequence you selected to export.
Destination		Use the Set button to navigate to a location other than the default location.
Auto Launch		Select Avid 3D to have the application open automatically once the Send To function is complete.
	Auto Load Exported File(s)	Select if you want the exported AAF file to load automatically in Avid 3D.
	Reveal Exported File(s)	Select if you want the system to display the destination of exported media files.
Export Setting 1		Select the export setting you want to use from the menu (the default is Avid 3D). Export settings are listed in the Export Setting 1 Summary section. If you want to customize your settings, click Options. For more information about export settings, see “Export Settings” in the Help for your Avid editing application.
Export Setting 2		This option is used to export a separate audio wave file to Avid 3D. If you do not want audio, deselect this option.

5. Click Options.

The Export Settings dialog box opens.



6. In the Video Details tab, make sure Render Video Effects is selected.



All effects must be rendered before exporting media to Avid 3D.

7. Click Save to close the Export Settings dialog box.

8. Click OK.

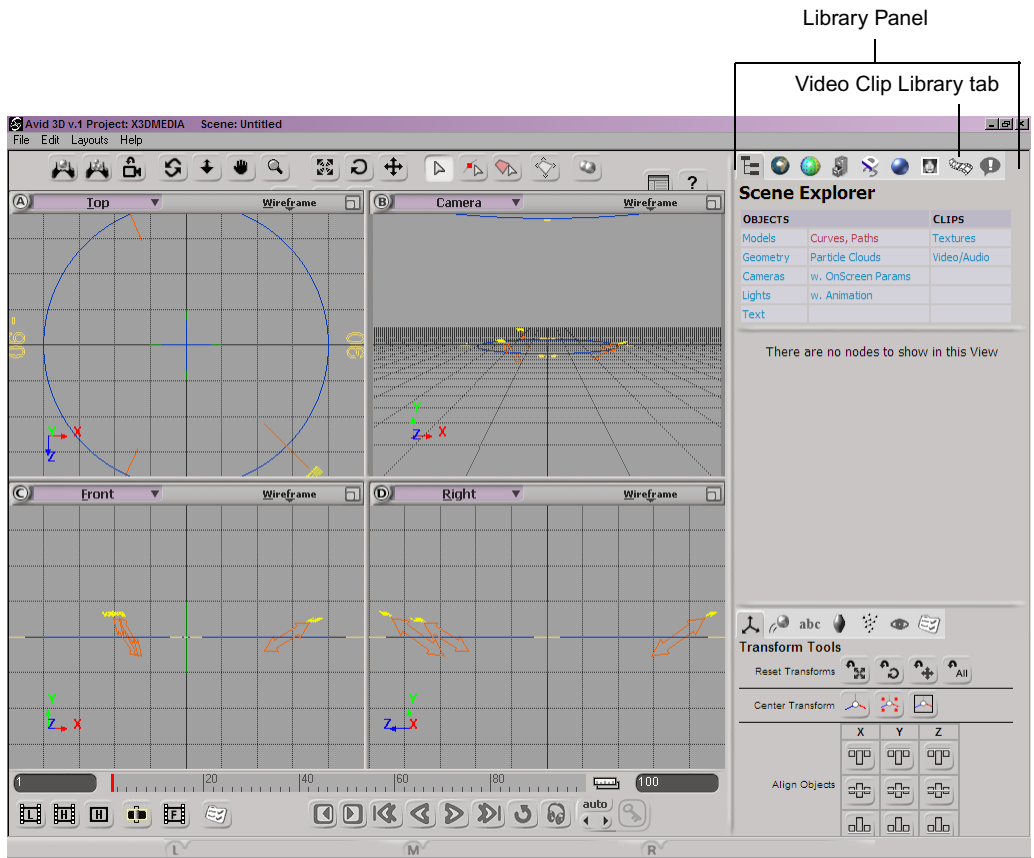
The Avid editing application exports the clip or sequence, and sends the AAF file to Avid 3D.

Viewing AAF Media in Avid 3D

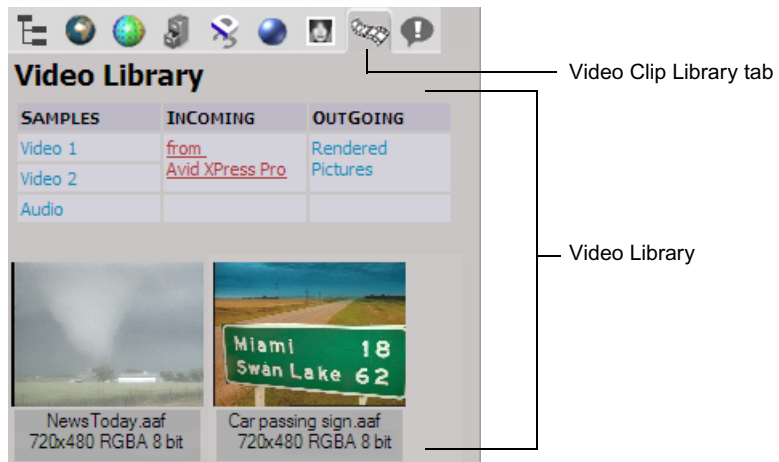
The Send To feature sends your AAF media to Avid 3D and stores it in a folder where Avid 3D can then access the video and use it as an object in a 3D scene.

To view the AAF media in Avid 3D:

1. Open Avid 3D if the application did not automatically launch when you exported the clip using the Send To feature.



2. Click the Video Clip Library tab in the Library Panel.
The Video Library displays.



3. Click From Avid Xpress Pro in the InComing column to view the media sent from the Avid editing application.

Creating 3D Content

Avid 3D provides you with the tools you need in order to add 3D effects and scenes to your sequences. You can create 3D models, logos, extruded text, particle systems, and warping effects. You can add textures, materials, and shaders, and you can customize 3D elements provided in the supplied libraries. For more information on all of these features, see the *Avid 3D User's Guide*.

Because Avid 3D and the Avid editing application use shared media and metadata formats, you can move media between the applications in a number of ways. This section focuses on two separate workflows:

- Use video clips exported from your Avid editing application in your 3D scenes by applying them as background or textures.
- Create a scene in Avid 3D that can be exported to your Avid editing application as a clip, title, or matte key effect.

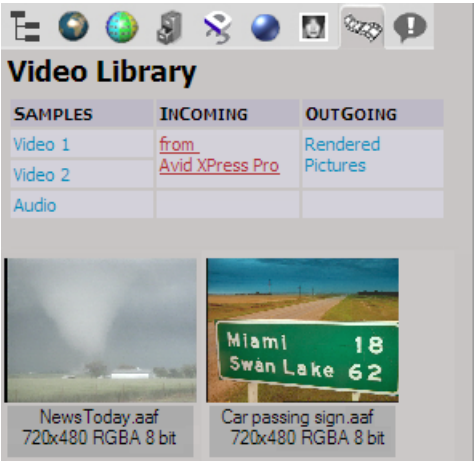
Applying Video Clips as Background or Textures

Clips and sequences that you send to Avid 3D appear in the Video Library. You can use these elements just as you would any 3D object or material when you build your 3D scene.

To add a video background to a scene:

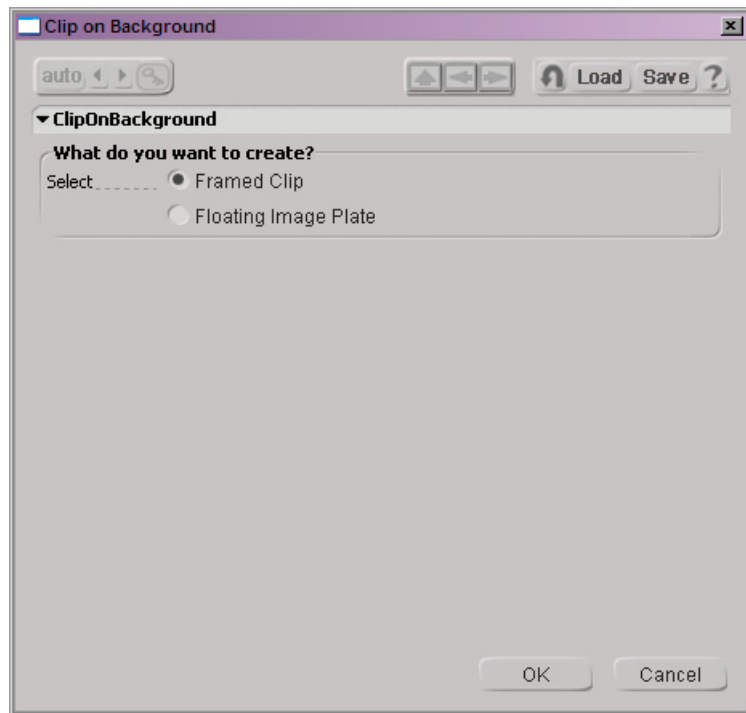
1. Create a new scene or open an existing scene in Avid 3D.
2. Click the Video Clip Library tab, and then click “from Avid Xpress Pro” in the InComing column.

The Video Library displays all movies in the library.



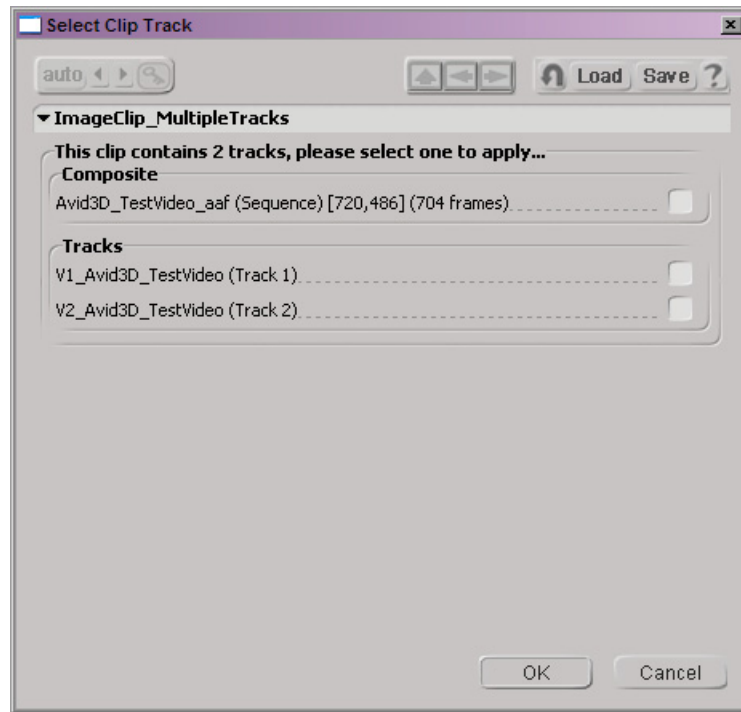
3. Make sure no objects are selected in your scene.
4. Click the video clip you want to use, and drag it to the viewport.

The Clip on Background dialog box opens.



5. In the Clip on Background dialog box, select one of the following options:
 - **Framed Clip** if you want to use the clip as a fixed background.
 - **Floating Image Plate** if you want to modify or reposition the clip as an element in the scene.
6. Click OK.

If the clip contains more than one video track, the Select Clip Track dialog box opens.

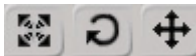


7. Do one of the following:
 - In the Composite area, select your sequence if you want to apply all tracks to your scene.
 - In the Tracks area, select one of the tracks to apply to your scene.

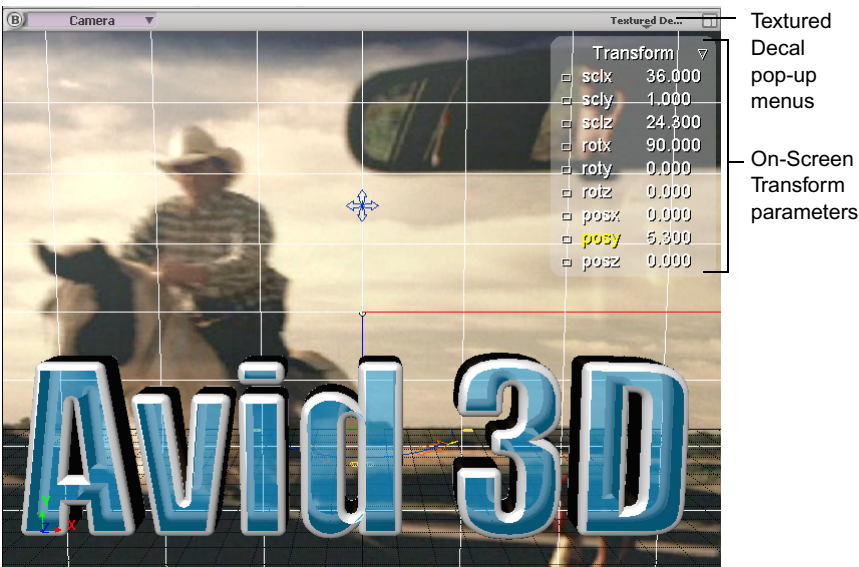
The video appears in the viewport either as a fixed background or as a texture applied to a floating image plate.



8. If your video is not a fixed background, do one of the following to position the image plate in the viewport:



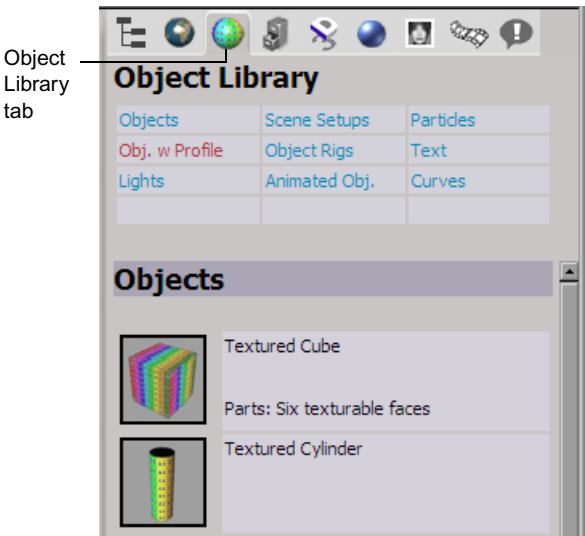
- ▶ Use the Scale, Rotate, and Translate tools on the Main toolbar.
- ▶ Click the Expand icon on the On-Screen Transform parameters and adjust the parameters.



To add video to a textured object:

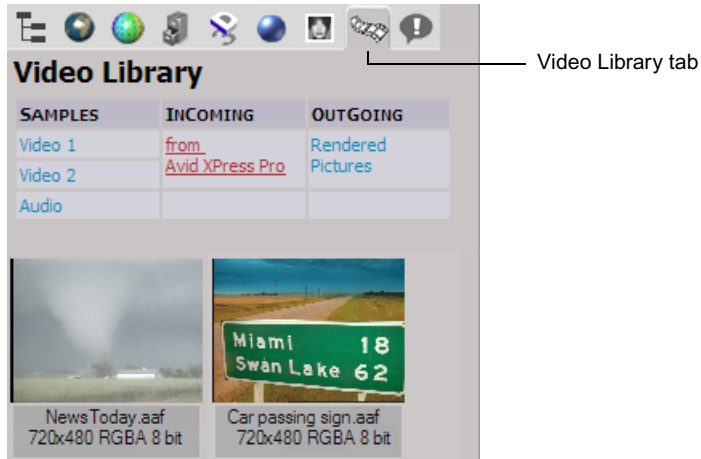
1. Create a new scene or open an existing scene in Avid 3D.
2. Click the Object Library tab, and then click Objects.

The Object Library displays objects in the library.



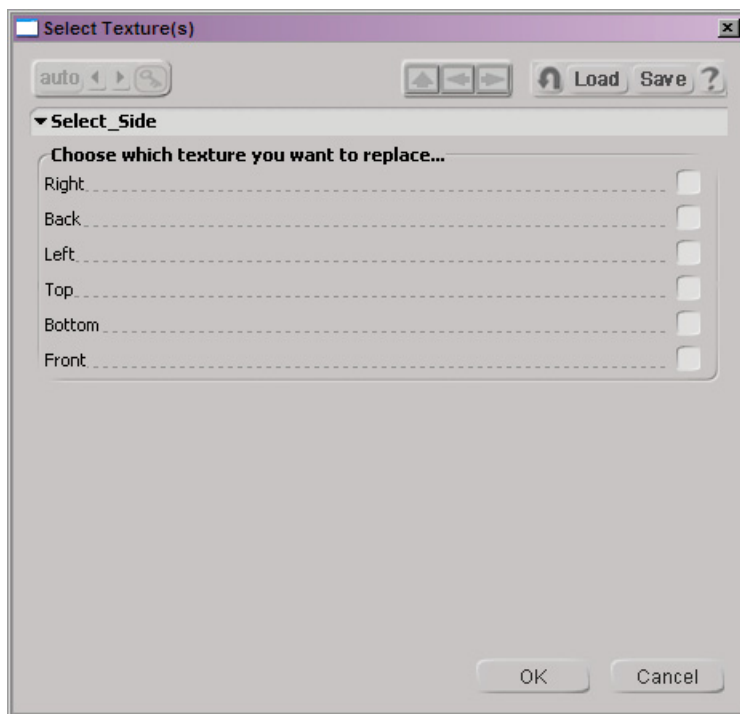
3. Click one of the textured objects, and drag it to the viewport.
4. Click the Video Clip Library tab, and then click “from Avid Xpress Pro” in the InComing column.

The Video Library displays all movies in the library.



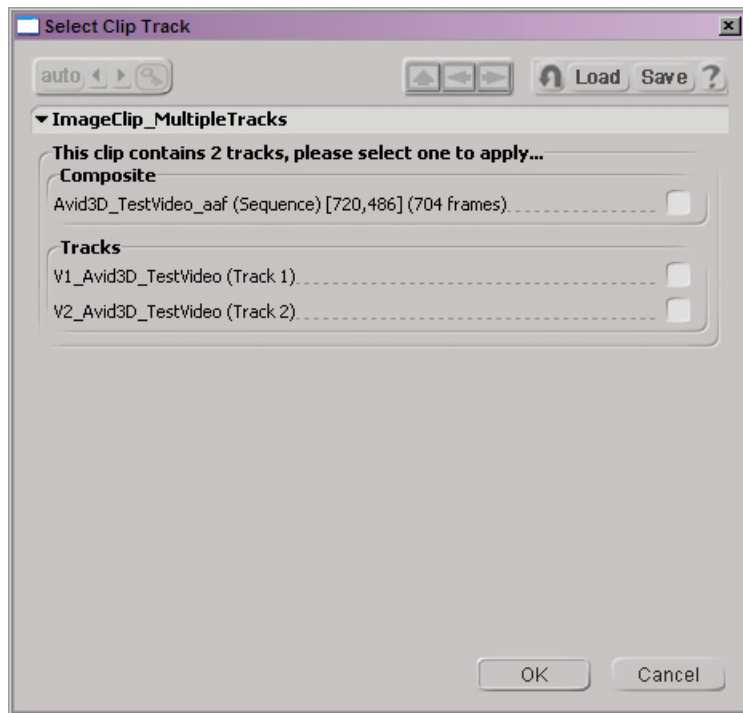
5. Click a video clip and drag it to the textured object.
6. To see the clip, select Open GL from the Textured Decal pop-up menu in the upper right corner of the Scene window.

If the object has more than one side to which the texture can be applied, the Select Texture(s) dialog box opens.



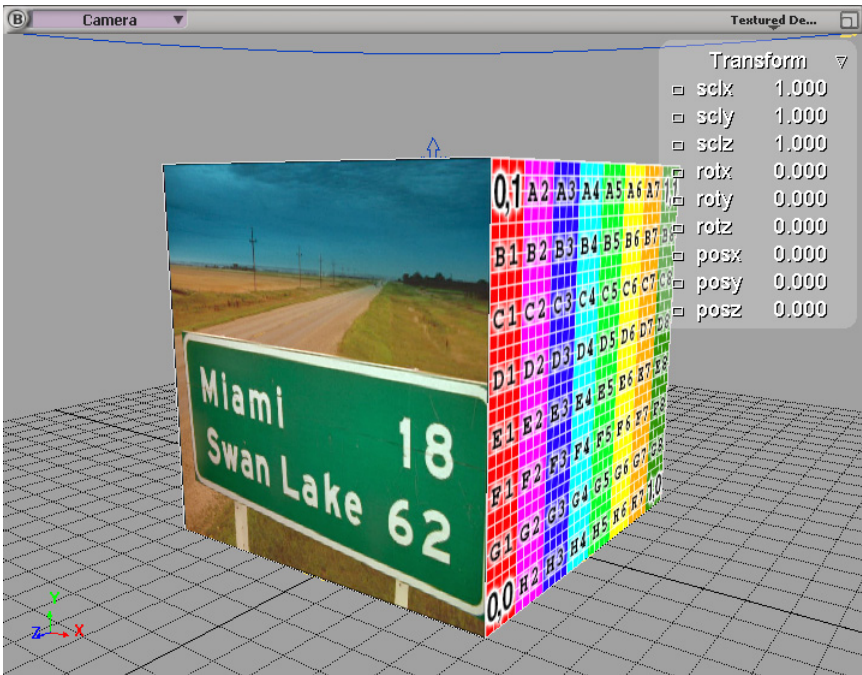
7. Select the side(s) on which you want your video to appear, and then click OK.

If the clip contains more than one video track, the Select Clip Track dialog box opens.



8. Do one of the following:
 - In the Composite area, select your sequence if you want to apply all tracks to your scene.
 - In the Tracks area, select one of the tracks to apply to your scene.
9. Click OK.

The video clip is added to the object as a texture.



The video scales to the size of the selected surface.

10. (Option) Use the On-Screen Transform parameters to resize the textured object so the video displays with the correct width and height.

To test your video:



- Click the Play button in the Playback controls.

Creating a Scene for Export to the Avid Editing Application

The scenes you can export to your Avid editing application include 3D environments, virtual sets, 3D characters, titles, logos, and ID bugs. Creating these scenes is covered in detail in the *Avid 3D User's Guide*. The purpose of this section is to provide a brief overview of the steps necessary for creating content that you can then export to your editing application.

The example used in this section describes how to create 3D text that the Avid editing application can use as an animated title.

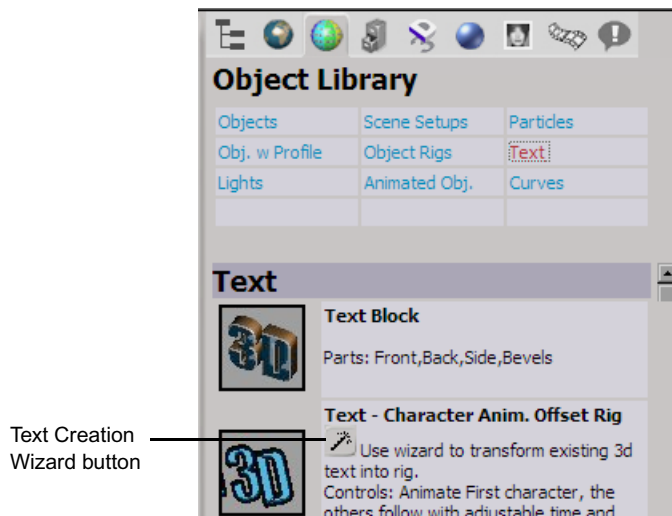


This example uses the Text Creation Wizard to create animated text. You can also use the Text tools in the Tools and Options panel. For more information on the Text tools, see the Avid 3D User's Guide.

To create 3D text:

1. Select File > New to create a scene in Avid 3D.
2. Click the Object Library tab, and then click Text.

The Object Library displays all the text objects in the library.

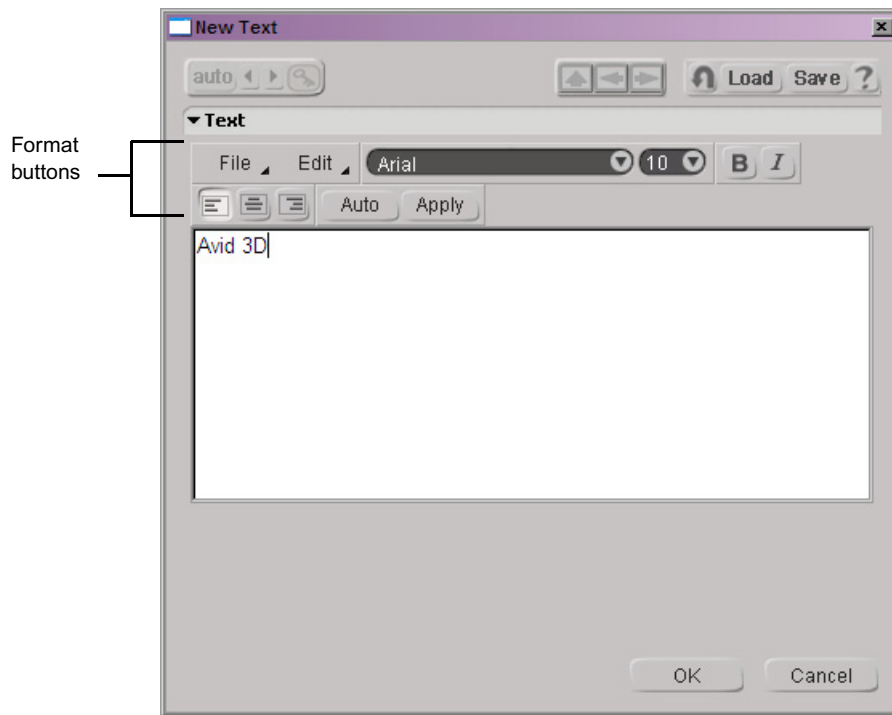


3. In the Text library, click the Text Creation Wizard button.

A message box asks if you want to create a new text string.

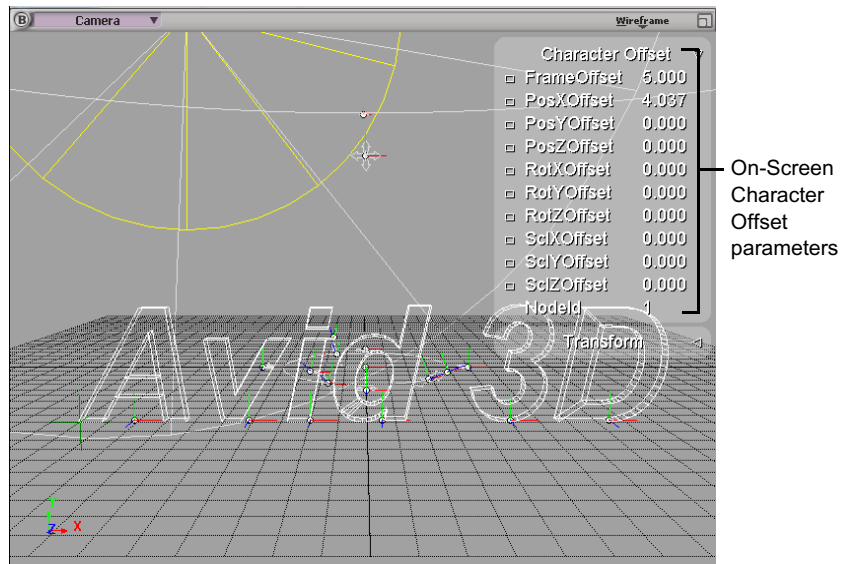
4. Click OK.

The New Text dialog box opens.

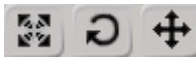


5. Type your text in the text box. You can use the Format buttons to format your text.
6. Click OK.

The text object appears in the viewport.



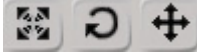
7. You can use the On-Screen Character Offset parameters to position, rotate, and scale elements of the text object. For more information on using the Character Offset controls, see the *Avid 3D User's Guide*.
8. Select the first letter of the text object.
9. Do one of the following to position the text where you want your animation to begin:



- ▶ Use the Scale, Rotate, and Translate tools on the Control bar.
- ▶ Click the Expand icon on the On-Screen Transform parameters and adjust the parameters.

The Text Creation Wizard repositions all other letters behind the first letter.

10. Use the Keyframe tool to set the first keyframe.



11. Do one of the following to reposition the first letter:

- ▶ Use the Scale, Rotate, and Translate tools on the Control bar.
- ▶ Click the Expand icon on the On-Screen Transform parameters, and then adjust the parameters.

The Text Creation Wizard repositions all other letters behind the first letter, using the Frame Offset parameter so the letters follow the lead letter along the motion path.

12. Add another keyframe.

13. Repeat steps 11 and 12 to complete your animation.

14. Save the scene.

You can now render and export the scene to your Avid editing application as a clip with an alpha channel that allows you to edit it into your sequence as a title. For more information on exporting clips from Avid 3D, see [“Exporting Media from Avid 3D” on page 72](#).

Exporting Media from Avid 3D

Once you have created content or effects in Avid 3D, you can export your material directly to your Avid editing application. You use the Render Options dialog box to convert the 3D material to AAF files that Avid 3D exports to the Avid application.



Avid 3D places the exported clip in a bin in your Avid editing project called Avid3D InComing. You must create a bin and name it Avid3D InComing before you export your movie from Avid 3D. The target bin's name is case-sensitive and must be exactly as cited here, including capitalization and spacing.

Avid 3D provides a number of render options that allow you to customize the scenes you can export to your Avid editing application. You set these options using the Render and Preview controls and the Options tab in the Tools and Options Panel.

The following procedure provides an overview of the export function. For more details and a full description of render options, see the *Avid 3D User's Guide*.

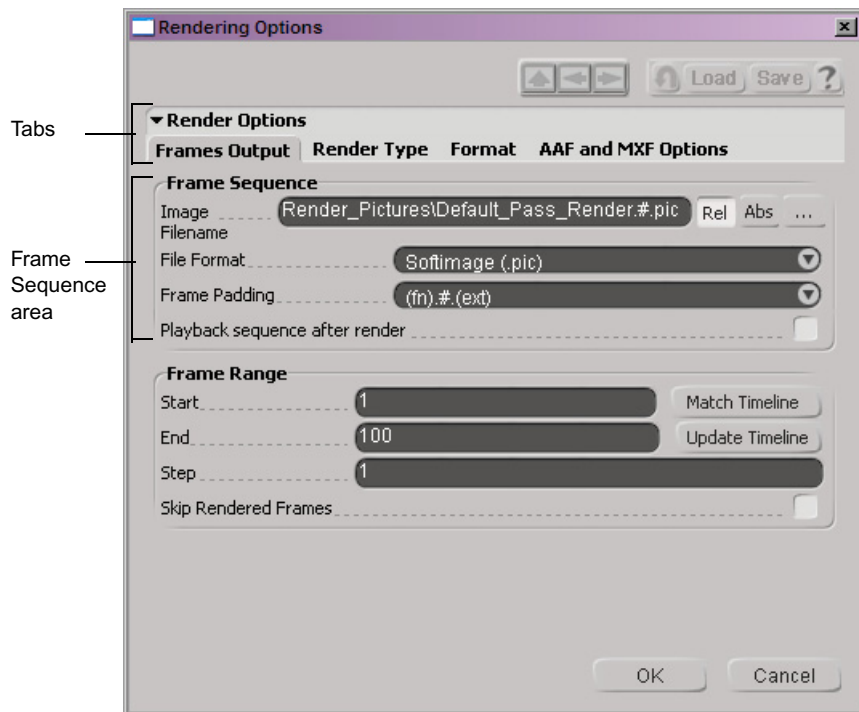
To export a scene to the Avid editing application as an AAF file:

1. Create a bin called Avid3D InComing in your Avid editing project and leave the bin open.
2. Open a scene in Avid 3D.
3. Click one of the Render buttons in the Rendering and Preview controls:



- Render Low-Quality (Textured) — Use this button if speed is more important than quality.
- Render High-Quality (mental ray) — Use this button for the best render quality.

The Render Options dialog box opens.

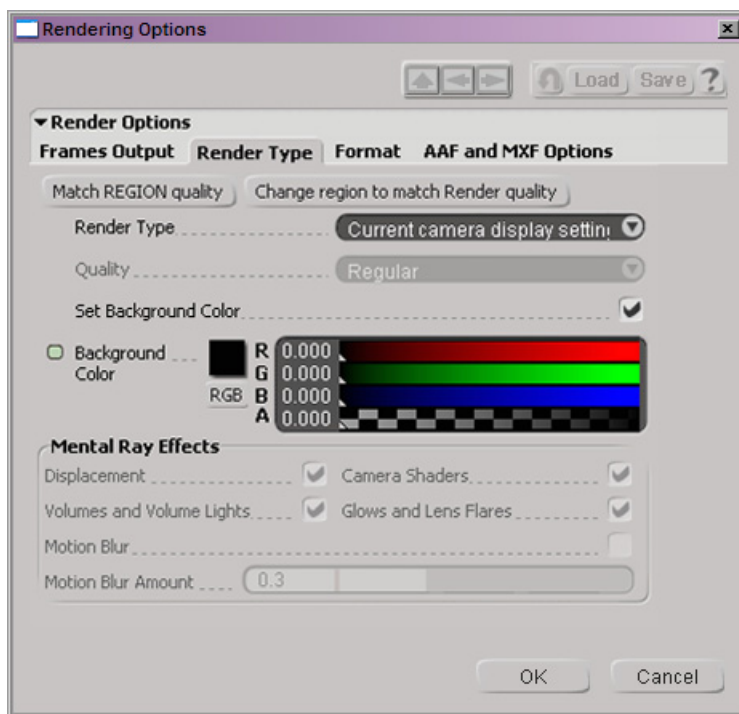


4. (Option) Click the Frames Output tab, and then type a start frame and an end frame for your movie.



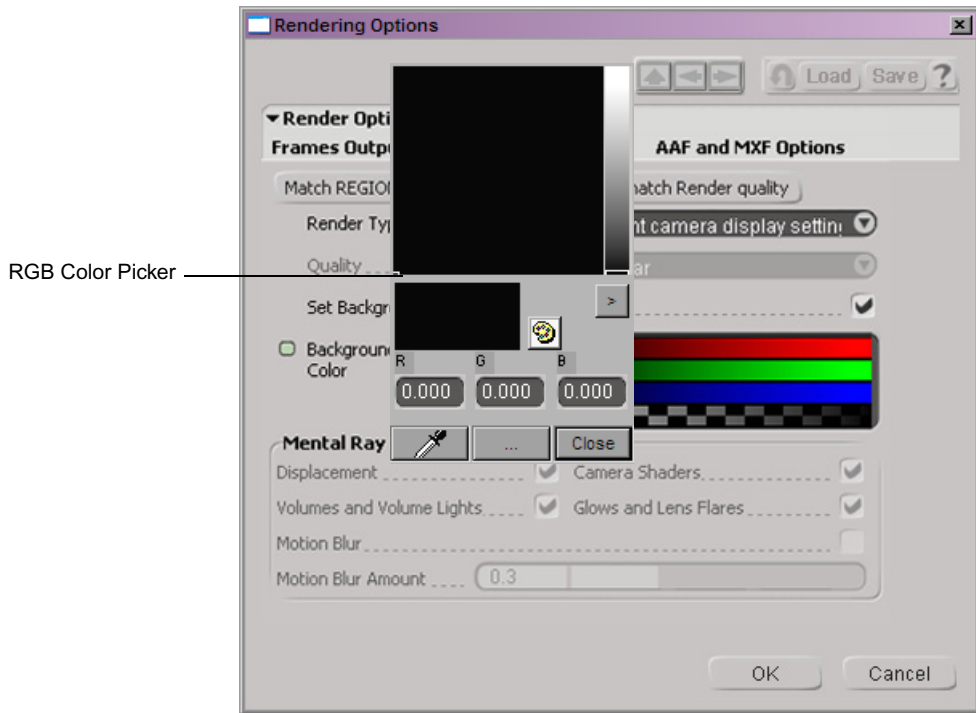
Avid 3D uses the information in the Frames Sequence area to create temporary files while rendering. For information on customizing the render operation, see the Avid 3D User's Guide.

5. Click the Render Type tab, and then select a render option from the Render Type menu:
 - Mental Ray — This provides the highest quality render in Avid 3D.
 - Current camera display settings — This uses the settings in the Camera view.
 - *display type* — You can select any of the display types available in the Display Type menu at the top of the viewport.



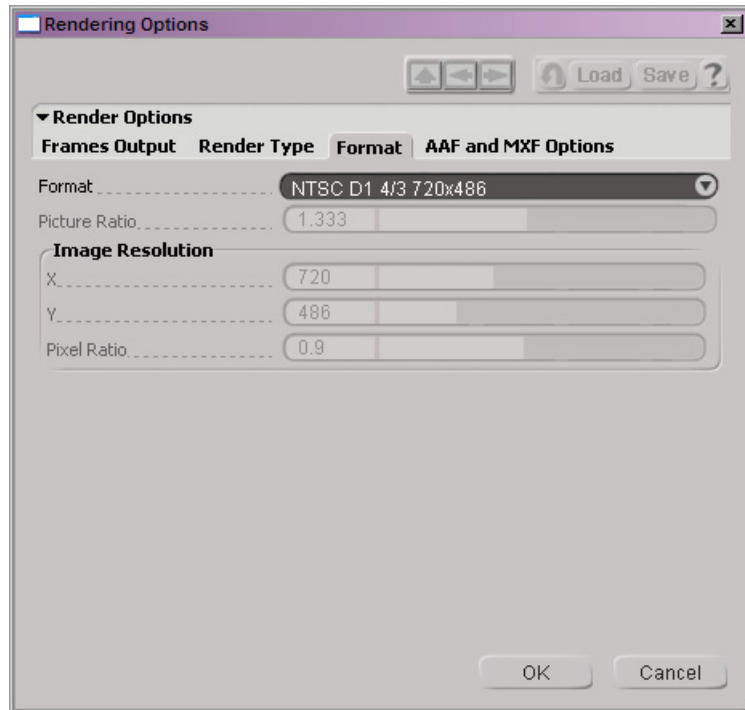
6. (Option) If you selected Mental Ray as a render type, click the Quality menu, and then select an image quality.

7. (Option) If you did not select Mental Ray as your render engine, select Set Background Color, and then use the RGB Color Picker to select a color.



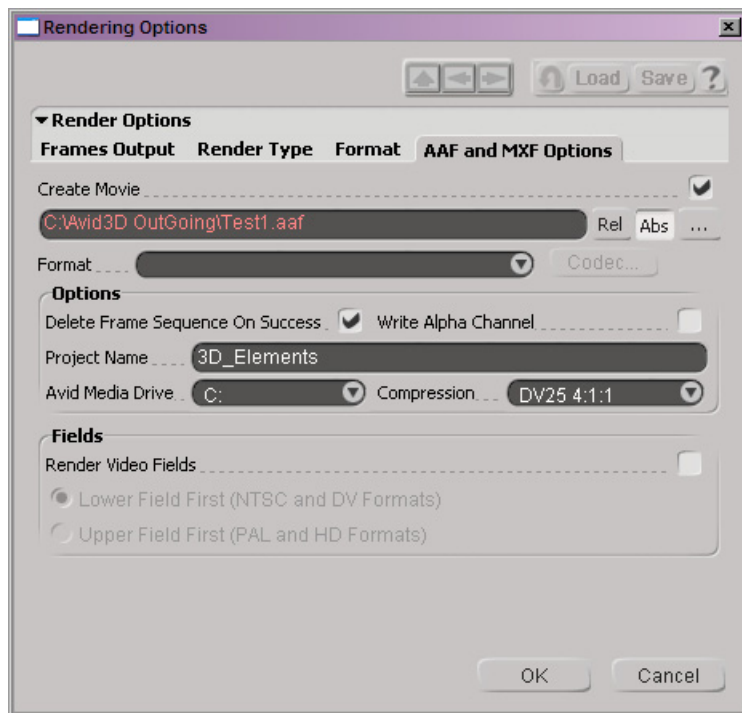
8. (Option) If you selected Mental Ray as your render engine, you can select the following effects in the Mental Ray Effects area:
- Displacement
 - Camera shaders
 - Volumes and Volume Lights
 - Glows and Lens Flares
 - Motion Blur
9. Click the Format tab, and then select one of the following resolutions from the Format menu:
- Custom
 - NTSC D1 4/3 720x486
 - NTSC D1 16/9 720x486

- NTSC DV 720x480
- PAL D1 4/3 720x576
- PAL D1 16/9 720x576



Select Custom to set custom parameters for Picture Ratio and Image Resolution. For more information, see the Avid 3D User's Guide.

10. Click the AAF and MXF Options tab.



11. Select Create Movie.
12. Navigate to the Avid3D Outgoing folder by doing the following:
 - a. Click the Browse (“...”) button, and navigate to a preferred Avid media drive.
 - b. Open the drive, and select the Avid3D Outgoing folder.
 - c. Click OK in the Select a file window.
13. Set the following additional options in the Rendering Options dialog box:
 - a. Type a file name for your AAF file in the Avid3D Outgoing folder.
 - b. Select Format > AAF.
 - c. Select Delete Frame Sequence On Success.
 - d. If you plan to edit your movie into your sequence as a matte key clip, select Write Alpha Channel.
 - e. Type the project name of your Avid editing project.

- f. Select the media drive where you want the MXF media files stored. The default is D.
- g. Select a compression for the rendered movie from the Compression menu:
 - Uncompressed
 - DV25 4:1:1
 - DV50 4:2:2



You must have an Avid Mojo attached to your system to export uncompressed media.

- h. Select Render Video Fields if you want interleaved video for your project, and select one of the following:
 - Lower Field First (NTSC and DV Formats)
 - Upper Field First (PAL and HD Formats)



For more information on field ordering, see the Avid 3D User's Guide or "Field Ordering in Graphic Imports and Exports" in the Help for your Avid editing application.

14. Click OK.

Avid 3D renders the scene, creates an AAF file in the default directory (*media drive:\Avid3D OutGoing*), and places the clip in the Avid3D InComing bin in your Avid editing project.



You must create the Avid3D InComing bin before you export your movie from Avid 3D.

To view the AAF file in your Avid editing application:

1. Click back into your Avid editing project.
2. The clip exported from Avid 3D appears in the Avid3D InComing bin.

You can now edit the clip as you would any other clip or sequence in your project.



If the AAF file does not appear in the Avid3D InComing bin, click out of Avid Xpress Pro and back into Avid Xpress Pro. This should force a rescan of the media drive and the AAF file should appear in the bin.

Chapter 5

Using Digi 002, Mbox, and Avid Pro Tools LE

This chapter explains how Avid Xpress Pro users can use Pro Tools LE to finish the audio for their video projects.

- [Using Pro Tools LE for Finishing Audio](#)
- [Exporting Audio and Video from Avid Xpress Pro](#)
- [Importing Audio and Video into Pro Tools LE](#)
- [Editing Audio Files in Pro Tools LE](#)
- [Bringing Your Audio from Pro Tools LE to Avid Xpress Pro](#)

Using Pro Tools LE for Finishing Audio

Pro Tools LE is a flexible tool for all types of audio production. You can use Pro Tools LE to perform a broad range of functions including:

- Sound effects editing and design
- Music composition and editing
- Dialog conforming and editing
- Voice-over and ADR recording and editing
- Foley recording and editing
- Mixing and signal processing

Basic Steps in the Avid Xpress Pro to Pro Tools LE Workflow

The workflow between Avid Xpress Pro and Pro Tools LE has three basic transactions:

1. **Export a sequence from Avid Xpress Pro to Pro Tools LE.** This step delivers working audio and video but it is optional; some workflows start directly in Pro Tools LE before picture editing has begun.
2. **Import the audio and video files into Pro Tools LE, perform your audio finishing, and export new audio files.** Once audio and music production is completed in Pro Tools LE, this step delivers individual audio clips, tracks with unmixed audio clips, or mixed tracks.
3. **Import the audio files into Avid Xpress Pro for integration with the finished video tracks.**

This chapter describes each step of this workflow. See [“Using Pro Tools LE with Progressive Projects” on page 123](#) for information specific to film projects and progressive projects.

Before You Begin

This section describes some things you should know before you get started, including:

- Two Avid Xpress Studio configurations
- Aspects of frame-rate and sample-rate editing
- Hardware and disk drive requirements
- Two kinds of QuickTime movies

Editing Audio with Avid Studio Xpress Complete

Avid Xpress Studio Complete includes Pro Tools LE, Avid Mojo DNA hardware, and a Digi 002. In this configuration, you can use the Digi 002 as your primary audio I/O device for Avid Xpress Pro as well as for editing audio with Pro Tools LE. You can also use the Digi 002 as a control surface to control many aspects of the Avid Xpress Pro user interface.

If the Digi 002 is turned on and properly connected to your computer before you start Avid Xpress Pro, Avid Xpress Pro automatically recognizes the device and uses it as the primary audio device. If the Digi 002 is not connected or is in Standalone mode, Avid Xpress Pro uses the Avid Mojo DNA hardware as the primary audio device.

For information on connecting the Digi 002 and Mbox hardware to your Avid Xpress Pro system, see the *Avid Xpress Studio Hardware Setup Instructions*.

You can also use the Digi 002 as a standalone mixer. However, you cannot use the Digi 002 as a mixer while you are using it as the audio I/O device for Avid Xpress Pro.

You can perform your audio work “to picture” with real-time video playback. When using Avid Xpress Pro with Avid Mojo DNA hardware and a Digi 002, Pro Tools LE can stream video out from the Avid Mojo DNA hardware’s analog video outputs to a client monitor.

To use the Digi 002 as your primary audio device while you work in Avid Xpress Pro:

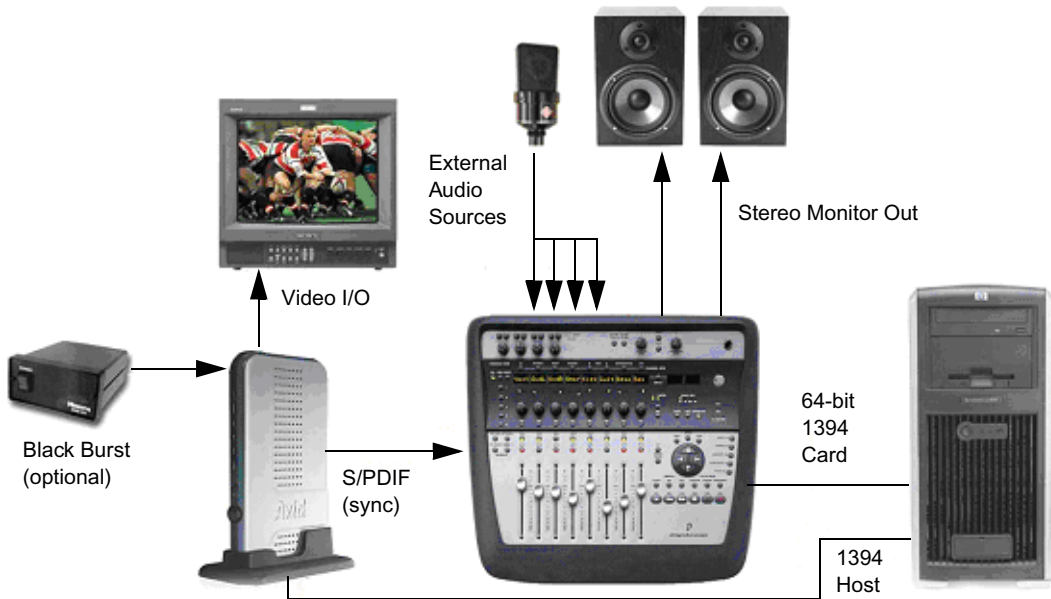
1. (Optional) Connect a black burst generator to the Ref connector on the Avid Mojo DNA.



Avid recommends using a black burst generator when performing an audio-only capture.

2. Connect one end of an RCA cable to the analog audio output connectors labeled CLK on the Avid Mojo DNA (white audio output) and connect the other end to the S/PDIF In on the Digi 002. This allows the Digi 002 to receive audio sync from the Avid Mojo DNA and the optional black burst generator.
3. Connect the video output (composite or S-video) on the Avid Mojo DNA to a client monitor.

The following illustration shows the Digi 002 with the optional hardware.



To use the Digi 002 as a control surface for Avid Xpress Pro:

1. Turn on the Digi 002 before starting Avid Xpress Pro.
2. Start Avid Xpress Pro, and then click the Settings tab in the Project window.
3. Double-click Controller Settings.
4. Select the Digi 002 options from the Controller, Port, and Gain Controller Port pop-up menus.
5. (Option) Click Edit Settings, view or change the button settings, and then click OK.
6. Click OK in the Controller Settings dialog box to save your changes.

For information on using the Digi 002 as a control surface on your Avid Xpress Pro system, see “Using an External Fader or Mixer” in the Avid Xpress Pro Help.

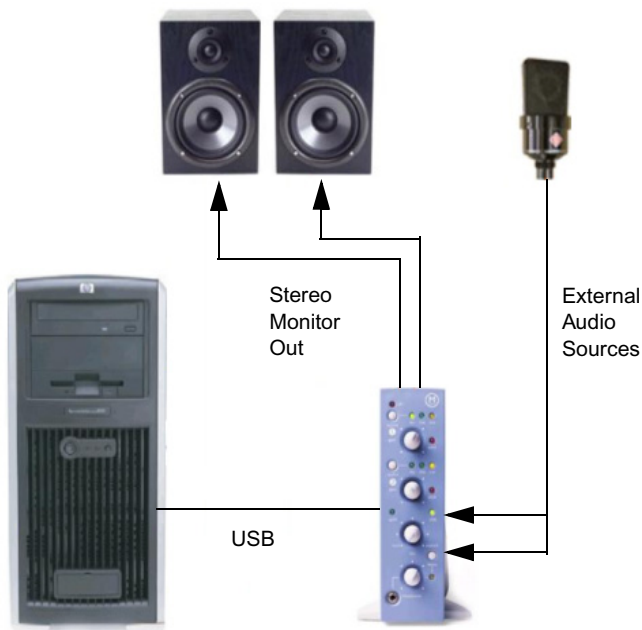
Editing Audio with Avid Xpress Studio Essentials

Avid Xpress Studio Essentials includes Pro Tools LE and a Digidesign Mbox. Avid Xpress Studio Essentials can use the Mbox as the primary audio device for Avid Xpress Pro as well as for editing audio with Pro Tools LE.

You can perform your audio work “to picture” with real-time video playback for synchronization when you are working with an Mbox.

When using Pro Tools LE and an Mbox, Pro Tools LE can play video in a floating QuickTime window within the Pro Tools LE user interface.

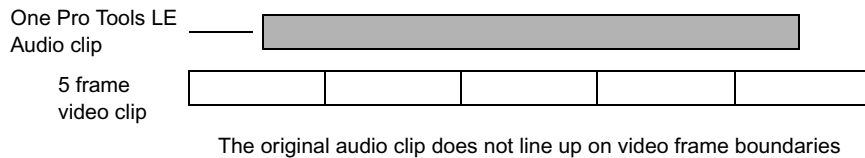
You can also use the Mbox as your primary audio device. You can use it for audio playback, audio input, and audio output, as shown in the following illustration.



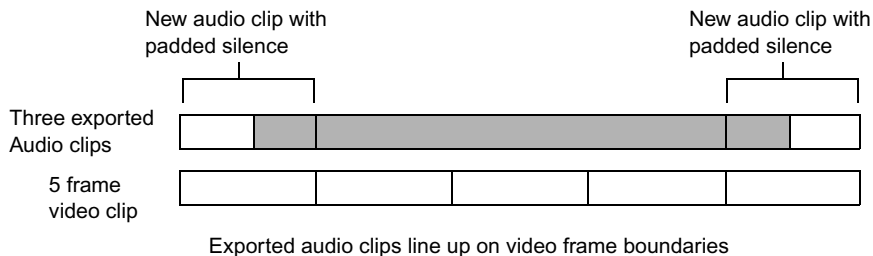
Frame-Rate Accurate Video Editing and Sample-Rate Accurate Audio Editing

Avid Xpress Pro edits with frame accuracy. This means that in a 30-fps project, you can edit at 30 different locations for every one second of video. Pro Tools LE edits with sample rate accuracy. In a 48-kHz session, there are potentially 48000 locations to edit for every second of audio.

When Pro Tools LE exports an AAF or OMF composition, it must ensure that the audio media files line up on frame boundaries. To do this, it might have to split an existing audio clip into three clips. For example, the following illustration shows a 5-frame video clip and a corresponding audio clip. In Pro Tools LE, the audio clips might not line up on video frame boundaries.



In order to export frame accurate audio clips, Pro Tools LE splits the audio media on frame boundaries and fills any gaps with silence. The following illustration shows the resulting audio clips that are exported to Avid Xpress Pro.



When you use Export Selected Tracks as OMF/AFF to export tracks from Pro Tools LE, a number of additional media files appear in the bin. Some are named Sample accurate edit. These are the additional media files that Pro Tools LE creates to make sure that Avid Xpress Pro receives frame-accurate audio. You also see the sample-accurate edit media files if you zoom in on portions of the imported audio in the Timeline.

Hardware Requirements

The following requirements apply to using Avid Xpress Pro and Pro Tools LE on the same system:

- Pro Tools LE requires Basic disk drives for audio. You cannot use Pro Tools LE to edit audio on Dynamic disk drives (striped drives are Dynamic disk drives). For more information, see [“Disk Drive Requirements” on page 86](#).
- To import AAF files from Avid Xpress Pro into Pro Tools LE, you must have the Digidesign DV Toolkit™ installed on your system and an authorized iLok USB Smart Key (iLok) must be attached to your system.
- Pro Tools LE does not support 9-pin serial deck control. In order to perform a frame-accurate digital cut, export the audio to Avid Xpress Pro and perform the digital cut from Avid Xpress Pro. For more information on frame accuracy, see [“Frame-Rate Accurate Video Editing and Sample-Rate Accurate Audio Editing” on page 85](#).



For information on connecting the Digi 002 and Mbox hardware to your Avid Xpress Pro system, see the Avid Xpress Studio Hardware Setup Instructions.

Disk Drive Requirements

You cannot use Pro Tools LE to edit audio on a striped drive or other Dynamic disk drive. Pro Tools LE requires Basic disk drives. For more information on disk drives, see the *Avid Pro Tools LE User Guide* on the online library CD-ROM or DVD.

When you import an AAF file into Pro Tools LE, if the source audio files are on a Dynamic disk drive, Pro Tools LE displays a dialog box asking if you want to copy the files to a Basic disk drive.

When capturing material, you can instruct Avid Xpress Pro to capture video to striped drives and capture audio to a separate Basic disk drive. You can specify the drives in the Capture tool. You can also use the Media Creation tool to specify the drive that is used to capture, import, and create audio files.

To use the Media Creation tool:

1. Make sure that a Basic disk drive is attached to your system.
2. In Avid Xpress Pro, select Tools > Media Creation.

3. Click the following tabs, and specify your Basic drive for audio files:

- Capture tab
- Import tab
- Mixdown and Transcode tab



The Media Creation tool does not identify a drive as a Basic drive. You must determine whether a drive is a Basic drive before you open the Media Creation tool.

QuickTime Movies versus QuickTime Reference Movies

The following Send To templates create QuickTime movies:

- Avid Pro Tools LE (MBox_Ref) creates a QuickTime Reference movie.
- Avid Pro Tools LE (MBox_Mov) creates a QuickTime movie.



For more information about using Send To templates, see “Exporting Audio and Video from Avid Xpress Pro” on page 88.

A QuickTime reference movie is a QuickTime movie that contains composition information but no movie data. The movie instead contains pointers to the original media in the OMFI MediaFiles directory. Because the QuickTime reference movie does not contain media, the file is much smaller than a QuickTime movie, usually only a few kilobytes per file. Exporting a sequence as a QuickTime reference movie is faster and takes up less disk space than exporting a sequence as a QuickTime movie.

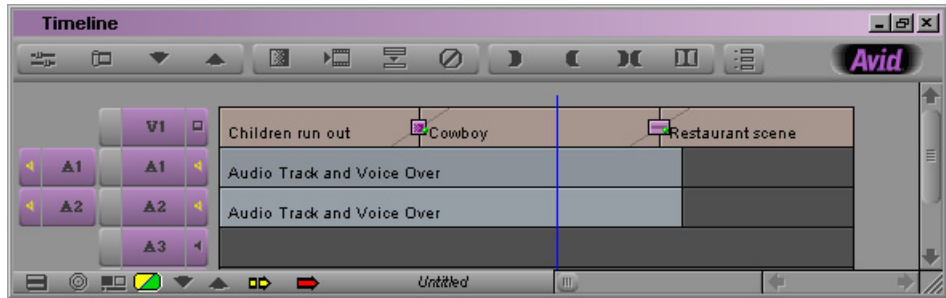
The drawback to using a QuickTime Reference movie is that the height and width of the movie are directly related to the resolution of the original media files. For example, if you are using 2:1 or uncompressed media, the movie can be large when you display it in Pro Tools LE. You cannot modify the size of the movie in Pro Tools LE.

QuickTime movies are self-contained files. They take longer to encode and take up more disk space. However, the height and width are adjustable when you export them from Avid Xpress Pro. The “Avid Pro Tools LE (MBox_Mov)” template uses a size that is useful on most screen resolutions. You can also create a new template with a custom size.

You can experiment to determine whether QuickTime movies or QuickTime Reference movies work better for your purposes.

Exporting Audio and Video from Avid Xpress Pro

Before you export, create a sequence with audio tracks as described in the Avid Xpress Pro Help. The following illustration shows a sequence with two audio tracks and two unrendered video effects.



Using the Send To Avid Pro Tools LE Templates

To use the Send To Avid Pro Tools LE templates:

1. Select a sequence with audio tracks in a bin.



AAF exports ignore IN and OUT marks, but QuickTime exports do not. The default templates that create QuickTime movies automatically deselect Use IN and OUT marks to ensure that the QuickTime movie matches the audio.

2. Select File > Send To > Avid Xpress Studio, and then select one of the following templates:

- Avid Pro Tools LE (002) — Creates one AAF file that references the audio and video media files used in the sequence. When you edit the audio in Pro Tools LE, you can play the video in the client monitor.

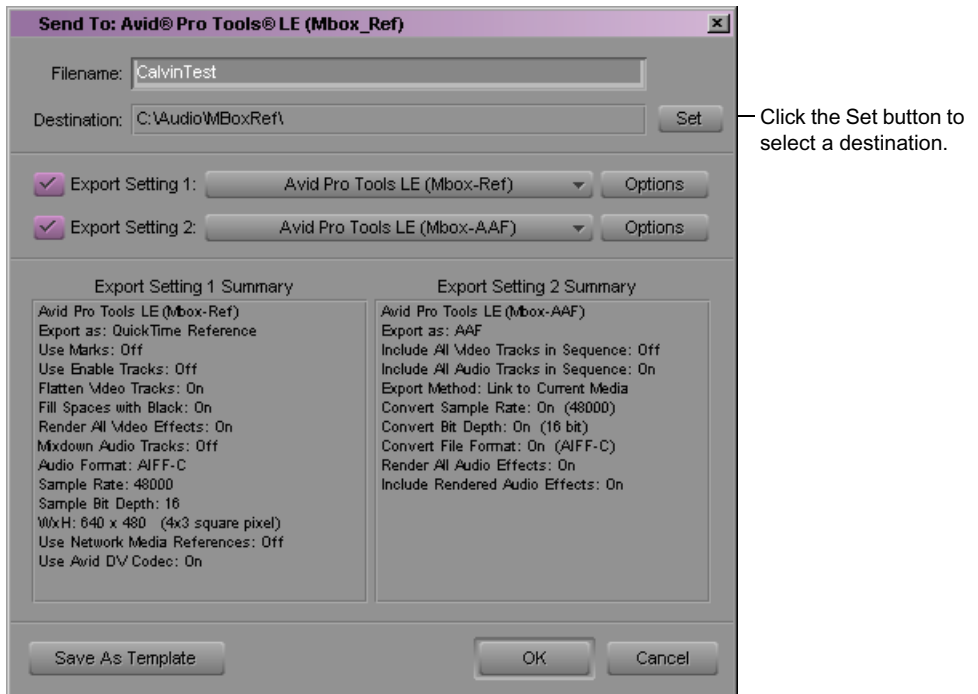
If you don't have a client monitor attached to your system, use one of the following Mbox options.

- Avid Pro Tools LE (MBox_Ref) — Creates an AAF file that references the audio files in the sequence and creates a QuickTime Reference movie for video display in Pro Tools LE.
- Avid Pro Tools LE (MBox_Mov) — Creates an AAF file that references the audio files in the sequence and creates a QuickTime movie for video display in Pro Tools LE.



For a comparison of QuickTime movies and QuickTime Reference movies, see “QuickTime Movies versus QuickTime Reference Movies” on page 87.

The corresponding Send To: Avid Pro Tools LE dialog box opens. The following illustration shows the Avid Pro Tools LE (MBox_Ref) dialog box.



The Export Settings dialog box displays a summary of the default settings.

3. Click Set, and then navigate to a location to store the exported files.
4. (Option) Click either Options button to view the export settings, and then make any changes. If you make any changes, you can use the Save As Template button to create a new template.



This workflow assumes that you use the default values. This means that you are exporting using the Project sample rate, audio file format, and sample bit depth.

5. Click OK.

Avid Xpress Pro performs the requested operations and exports the files to the destination folder. If Avid Xpress Pro has to render effects or perform audio file conversions, a new sequence appears in the bin with the name *filename.Export.01*, and a new audio master clip appears in the bin with the name *filename.new.01*.

Determining the Audio Settings to use for Your Pro Tools LE Session

To determine the audio settings to use for your Pro Tools LE session:

1. Select the Project window and click the Settings tab.
2. Double-click Audio Project.

The Audio Project Settings dialog box opens.

3. Take note of the following settings. You need them when you set up your Pro Tools LE session.
 - Sample Rate
 - Audio File Format
 - Sample Bit Depth

The default Send To Pro Tools LE templates use the current Audio Project settings for the above values. If you changed the values when you performed the export, take note of those values.

Importing Audio and Video into Pro Tools LE

Depending on the Send To Pro Tools LE template that you used to perform your export, you now have the following files:

- Avid Pro Tools LE (002) — An AAF file that references the audio and video media files used in the sequence
- Avid Pro Tools LE (MBox_Ref) — An AAF file that references the audio files in the sequence and a QuickTime Reference movie
- Avid Pro Tools LE (MBox_Mov) — An AAF file that references the audio files in the sequence and a QuickTime movie

This workflow uses a fast method of creating a new Pro Tools LE session. If you choose File > Open Session and open the AAF file you exported from Avid Xpress Pro, Pro Tools LE creates a new session using the following values from the AAF file:

- Audio file type (audio file format in Avid Xpress Pro)
- Sample Rate
- Bit Depth

If you use other methods of creating a new session you must ensure that your new session uses the same values that are in the AAF file you exported from Avid Xpress Pro. See [“Determining the Audio Settings to use for Your Pro Tools LE Session” on page 90.](#)



In order to view the video in the AAF file created by the Avid Pro Tools LE (002) template, you must have a Digi 002 and an external monitor attached to your system.

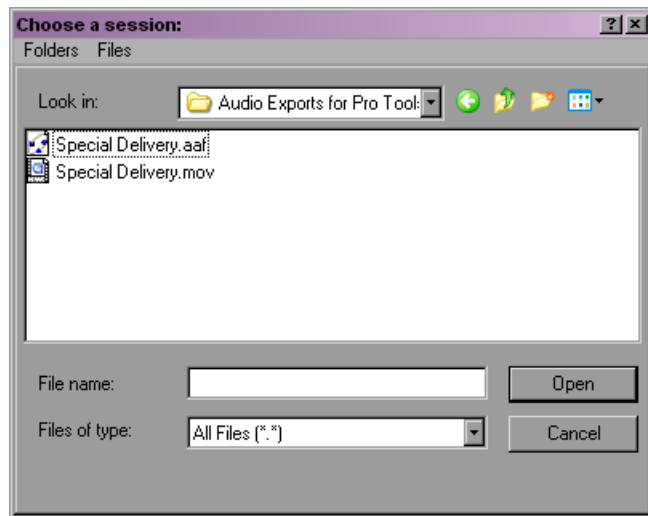
To create a new session and import the files into Pro Tools LE:

1. In Pro Tools LE, select File > Open Session.

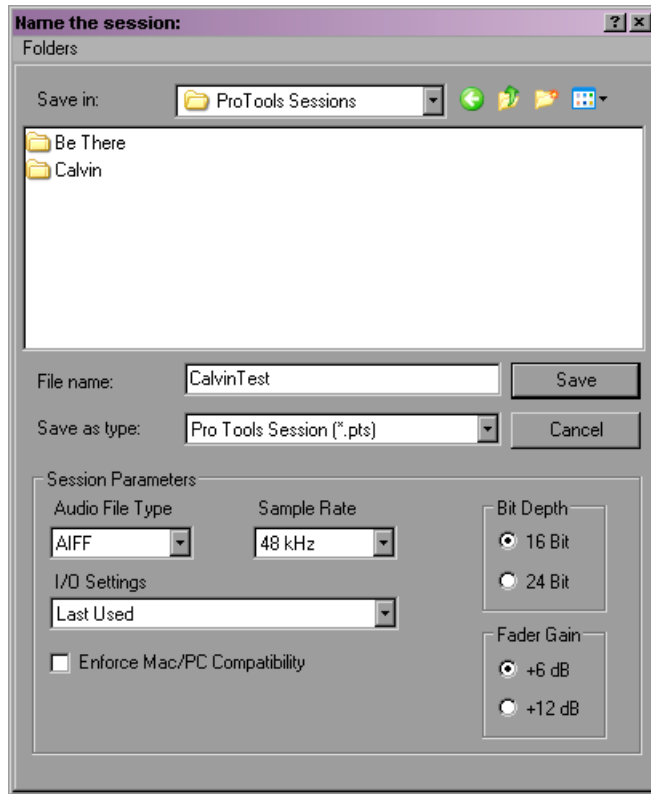
The Choose a session dialog box opens.

2. Navigate to the AAF file that you want to import.
 - For the Avid Pro Tools LE (002) template, this AAF file references both the audio and video from the Avid Xpress Pro sequence that you exported.
 - For the Mbox_Ref and Mbox_Mov templates, this file references the audio files used in the sequence. You import the QuickTime Reference movie or QuickTime movie separately.

The following illustration shows files created by the Mbox_Ref or Mbox_Mov template. The QuickTime movie is a separate file.



3. Select the AAF file and click Open.
The Name the session dialog box opens.



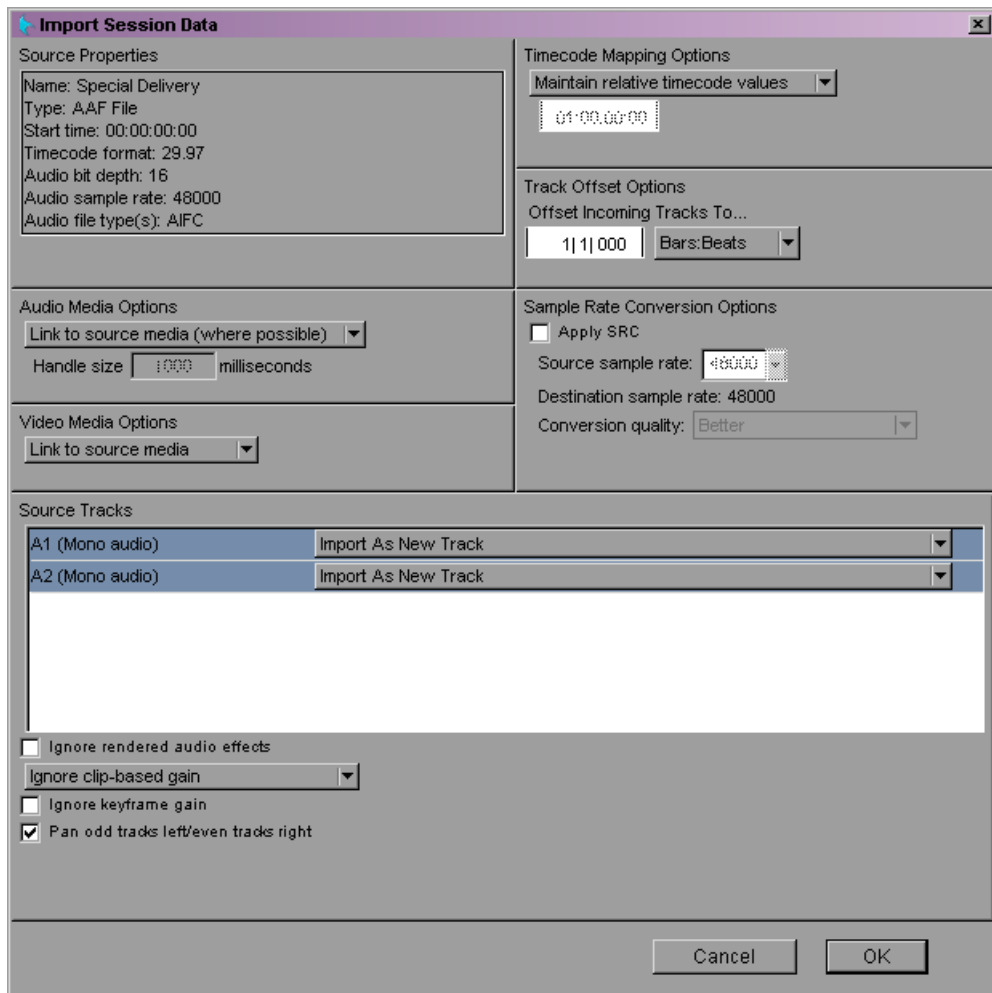
4. In the Save in area, navigate to the location where you want to create a new folder for the Session. This location must be on a Basic disk drive. See [“Disk Drive Requirements” on page 86](#).
5. In the File name text box, type a name for the session. Pro Tools LE uses this name to create a new folder and a new session.

Because you used File > Open Session and opened the exported AAF file, the Session Parameters automatically have the following values from your AAF file:

- Audio File Type (Audio File Format in Avid Xpress Pro)
- Sample Rate
- Bit Depth

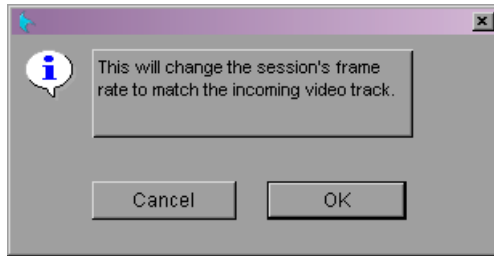
6. Click Save.

The Import Session Data window opens.



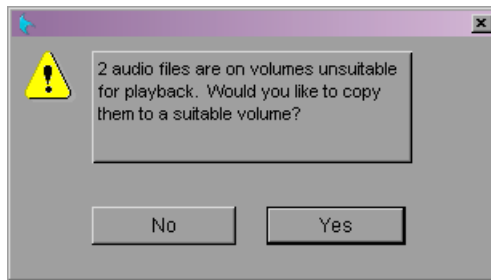
7. Select the following:
 - Audio Media Options - Link to source media (where possible)
 - Video Media Options - Link to source media
8. Click OK.

If the source media has a different frame rate than the session, Pro Tools LE asks if you want to change the session frame rate.



9. Click OK.

If your audio source media is on a Dynamic disk drive, Pro Tools LE displays a dialog box that allows you to copy the media to a Basic disk drive.



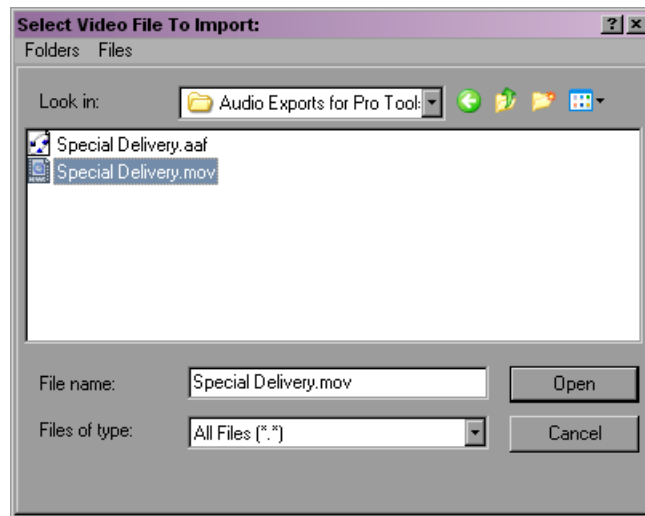
10. Click Yes, and then follow the prompts to navigate to a Basic drive.

Pro Tools LE imports the session data and creates tracks for the audio. If you used the 002 template, Pro Tools LE also creates a track for the video.

11. If you are importing files created by the MBox_Ref or MBox_Mov templates, do the following:

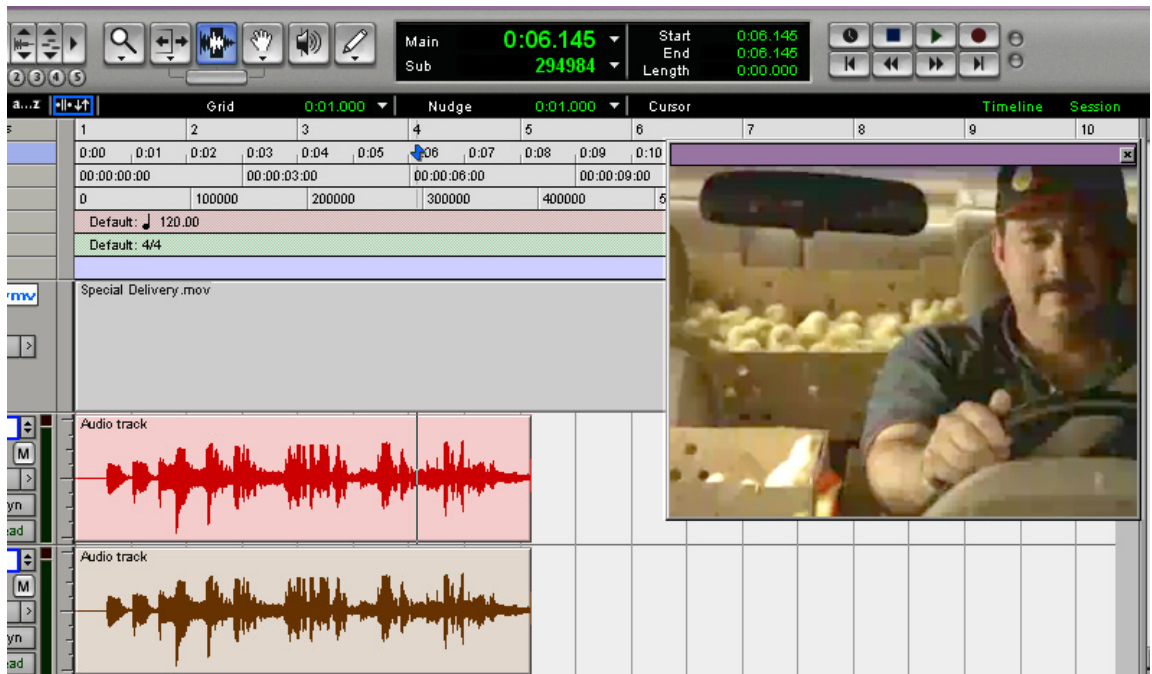
- a. Select Movie > Import Movie.

The Select Video File to Import dialog box opens.



- b. Navigate to the QuickTime Reference movie or QuickTime movie that you created when you performed the Send To operation in Avid Xpress Pro.
- c. Select the movie.
- d. Click Open.

Pro Tools LE creates a track for the movie in the Timeline and displays the movie in a QuickTime movie window. The following illustration shows the Pro Tools LE session and the QuickTime movie.



Now you are ready to edit the audio files in Pro Tools LE while viewing the video in a floating QuickTime window or on a client monitor.

Editing Audio Files in Pro Tools LE

Even though the audio files that you import point to the original audio files in the Avid Xpress Pro sequence, your editing session does not change the files. By default, Pro Tools LE does not perform destructive edits on the audio files that you import. When you export the finished audio files, Pro Tools LE creates new audio files. You import these new audio files into Avid Xpress Pro.

As you edit the audio files, you can view the corresponding video file either on your client monitor or in a QuickTime window. For information on editing the audio files, see the tutorial in the *Avid Pro Tools LE User Guide* or the *Pro Tools LE Reference Guide*.

Bringing Your Audio from Pro Tools LE to Avid Xpress Pro

There are two basic methods of exporting audio tracks from Pro Tools LE for use with Avid Xpress Pro:

- Export selected Tracks as OMF/AAF.
- Use the Bounce to Disk or the Export Selected as Files commands to export the files.

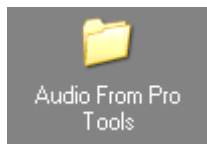
For other export methods, see the *Avid Pro Tools LE User Guide*.

Exporting Tracks from Pro Tools LE

To export tracks from Pro Tools LE, you need to create a folder, export the tracks as OMF/AAF, and then import the OMF file into Avid Xpress Pro, as described in the following sections.

Before You Begin

Before you perform the export from Pro Tools, create a folder on your system where you can store the exported Pro Tools composition. For this example, we create a folder named Audio From Pro Tools on the Desktop.



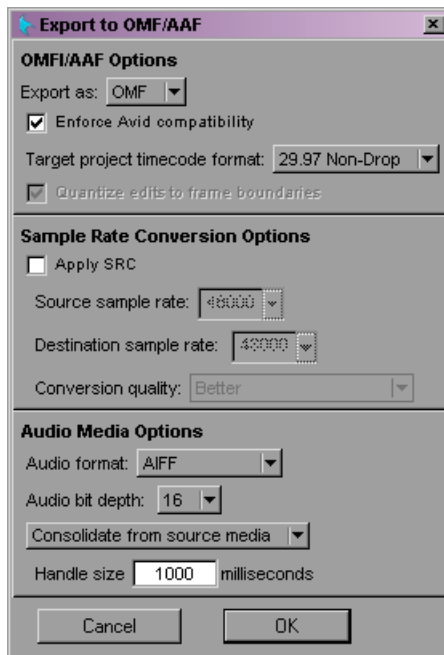
In this example we store the composition in the Audio From Pro Tools folder and store the associated media files in the OMFI MediaFiles folder.

Exporting Selected Tracks

To export selected tracks from Pro Tools LE:

1. Select the tracks in the Pro Tools LE session (choose either mixed or unmixed tracks).
2. Select File > Export Selected Tracks as OMF/AAF.

The Export to OMF/AAF dialog box opens.



3. In the OMF/AAF Options area, select Export As > OMF, and select Enforce Avid compatibility.



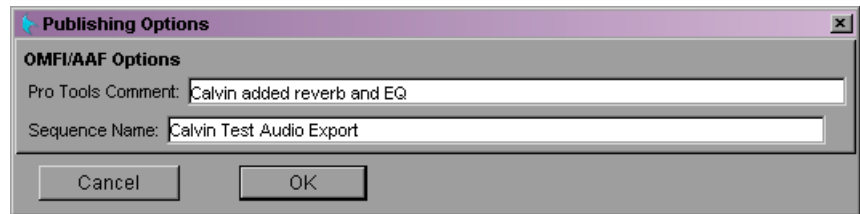
The Enforce Avid compatibility option limits the sample rate options to 44.1 or 48 kHz. Dithering without noise shaping is applied to files being exported from 24-bit to 16-bit.

4. Make sure that the Target project timecode format selection is correct for the Avid Xpress Pro project.

This is probably correct because Pro Tools LE automatically detected the value when you imported the AAF file into Pro Tools LE.

5. In the Audio Media Options area, make sure that the Audio format and Audio bit depth match your Avid Xpress Pro audio settings.
6. Select Consolidate from source media from the pop-up menu.
7. Click OK.

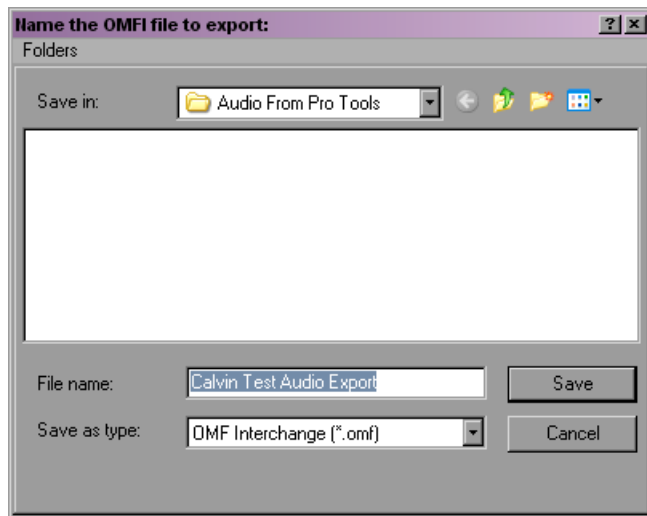
The Publishing Options dialog box opens.



8. Type a comment in the Pro Tools Comment text box, and then type a name in the Sequence Name text box.
9. Click OK.

Pro Tools LE creates a sequence with the name you supply. The Pro Tools comment appears in the Avid Xpress Pro bin in a Pro Tools Comment column.

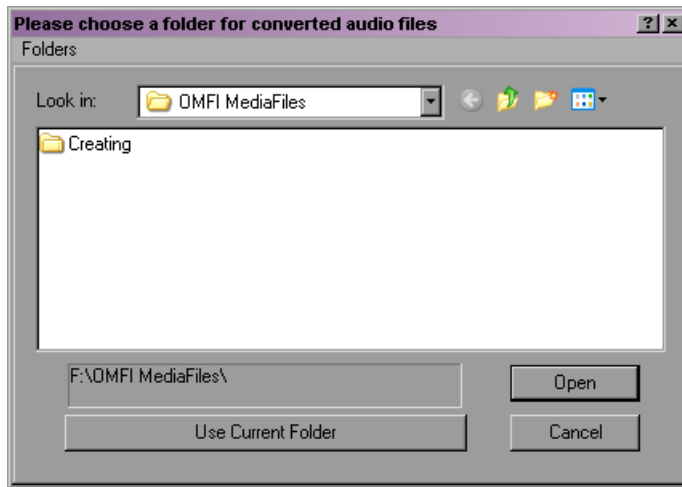
The Name the OMFI file to export dialog box opens.



10. Navigate to a folder where you can easily locate the Pro Tools composition when it is time to import it into Avid Xpress Pro. In this example, we select the Audio From Pro Tools folder that we created earlier.

11. Click Save.

The Please choose a folder for converted audio files dialog box opens.



12. Navigate to the OMFI MediaFiles folder.

13. Click Use Current Folder.

Pro Tools LE exports the composition to the Audio From Pro Tools folder and exports the related media files to the OMFI MediaFiles folder.

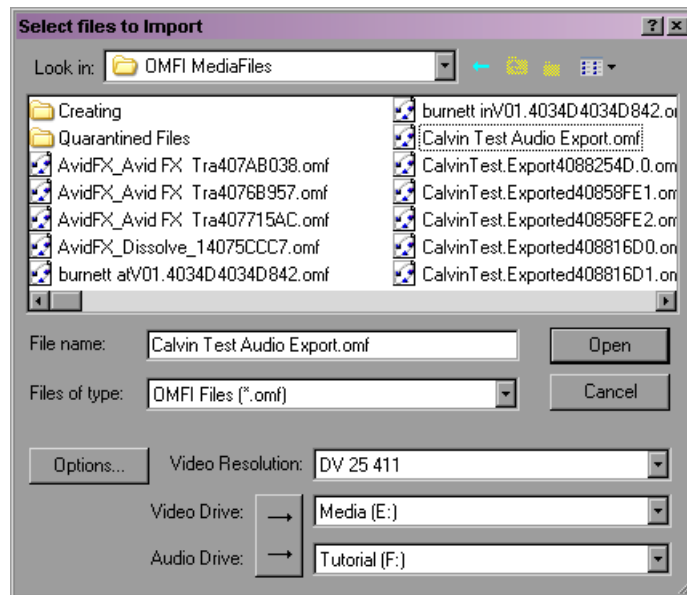
14. Quit Pro Tools LE.

Importing an OMF File into Avid Xpress Pro

To import a sequence into Avid Xpress Pro:

1. Start Avid Xpress Pro.
2. Select a bin where you would like to import the sequence.
3. Select File > Import.

The Select Files to Import dialog box opens.



4. Navigate to the folder that contains the exported Pro Tools composition, and then select Files of Type > OMFI Files.
5. Select the OMF file.
6. Select the target drive for the audio media files.
7. Click Open.

The new sequence appears in the selected bin, along with a number of related audio clips.

You might find it useful to designate a bin for imports and then copy the sequence to the bin you are working in. This can help reduce the number of files in your working bin. You can close the bin containing the additional media files, but don't delete the files because they are needed for the sequence.

8. Drag the sequence to the Source monitor, and then play the sequence to listen to the audio.
9. Drag the original video sequence into the Record Monitor.
10. Select Clip > New Audio Track to add enough tracks for the imported sequence.



You might find it useful to leave the original audio tracks in place to compare synchronization with the imported sequence.

11. Edit the imported tracks into the Timeline.

Using the Bounce to Disk Command

The *Avid Pro Tools LE User Guide* describes how to use the Bounce to Disk and Export Selected as Files commands to export OMF files from Pro Tools LE. This section describes how to use the Bounce to Disk command to export files to Avid Xpress Pro.

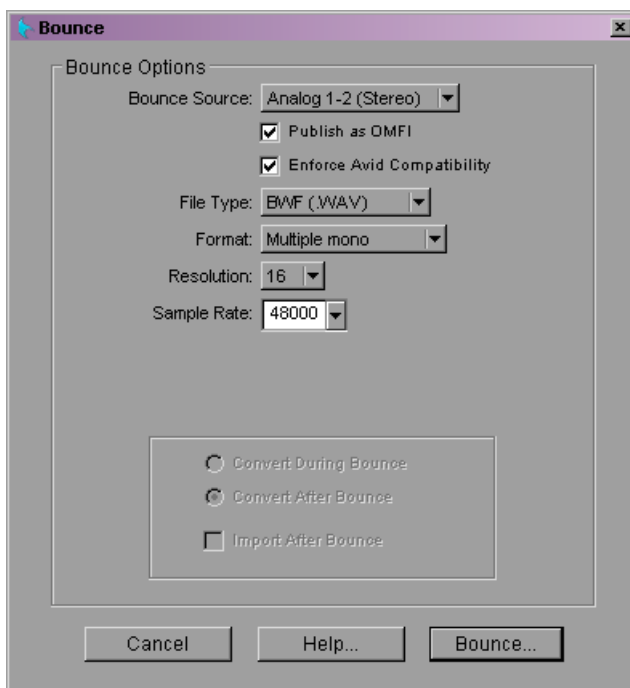
The method you use to import files into Avid Xpress Pro depends on whether you use the Publish as OMFI option when you perform the Bounce to Disk operation in Pro Tools LE.

Using Publish as OMFI With the Bounce to Disk Command

To use the Bounce to Disk command with the Publish as OMFI option:

1. Start Pro Tools LE, and then open the session that contains the tracks you want to export.
2. Select the tracks.
3. Select File > Bounce to Disk.

The Bounce dialog box opens.

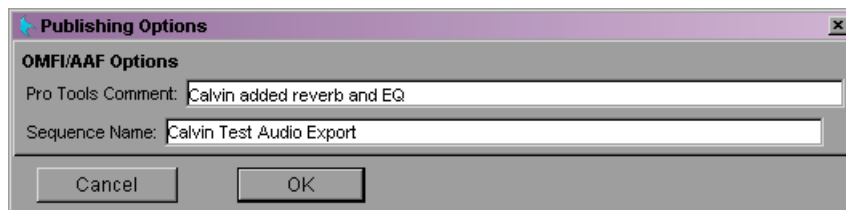


4. Select the following options:

- Publish as OMFI
- Enforce Avid compatibility
- File Type > BWF (WAV) or File Type > AIFF
- Format > Multiple mono
- Resolution (bit depth) (from your Avid Xpress Pro project)
- Sample Rate (from your Avid Xpress Pro project)

5. Click Bounce.

The Publishing Options dialog box opens.



6. Type a comment in the Pro Tools Comment text box, and then type a name in the Sequence Name text box.

7. Click OK.

Pro Tools LE creates a master clip with the name you supply. The Pro Tools comment appears in the Avid Xpress Pro bin in a Pro Tools Comment column.

The Save Bounce As dialog box opens.

8. Name the file, and then navigate to the OMFI MediaFiles folder.

9. Click Save.

Pro Tools LE mixes down the selected tracks to multiple mono audio files and stores the files in the OMFI MediaFiles folder.

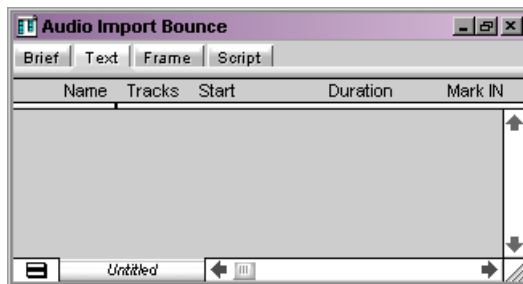
10. Quit Pro Tools LE.

Using the Media Tool to Import the Files

Use this procedure if you selected the Publish as OMFI option with the Bounce to Disk command and then exported the files to the OMFI MediaFiles folder.

To use the Media Tool to import the files:

1. Start Avid Xpress Pro.
2. Select the bin that you want to hold the imported master clip.



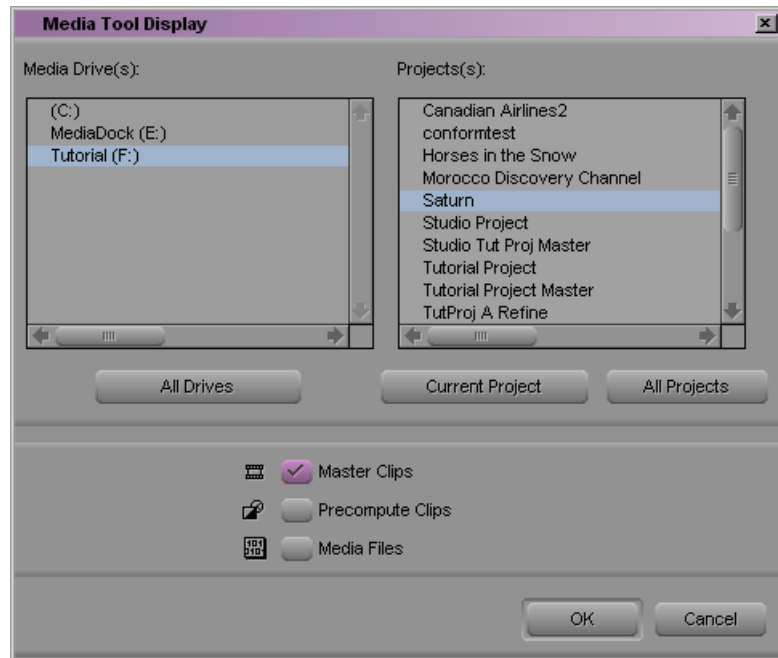
3. Select File > Refresh Media Directories.



This command updates the media database. If you don't use this command, the clip does not appear in the Media Tool.

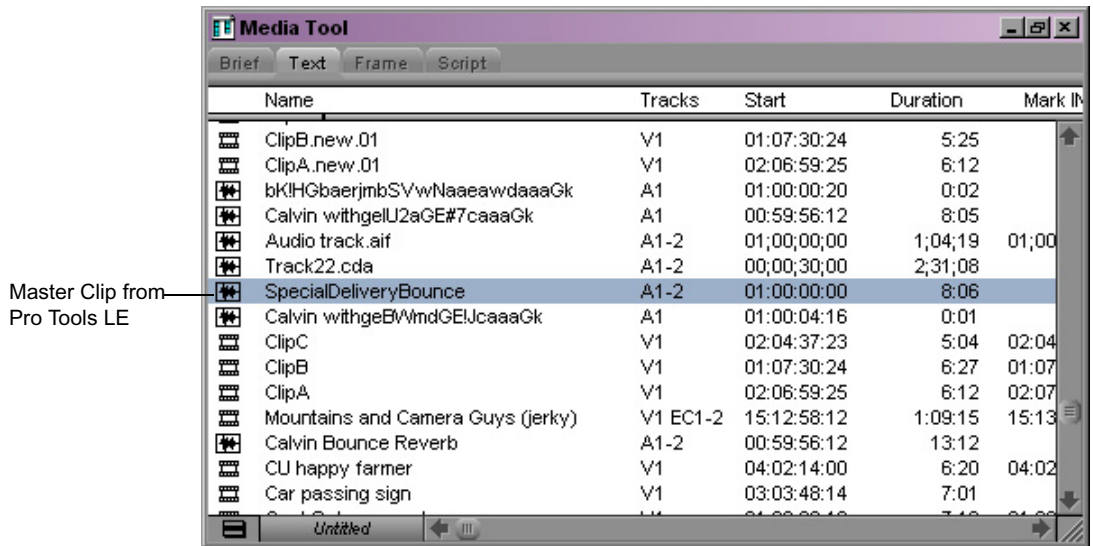
4. Select Tools > Media Tool.

The Media Tool opens.

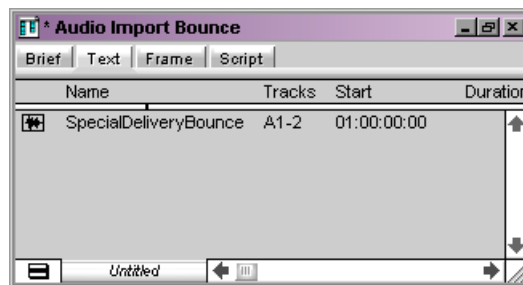


5. Select the drive that you used to export the files from Pro Tools LE.
6. Select All Projects, and make sure that Master Clips is selected.
7. Click OK.

The Media Tool displays all the master clips on the selected drive.



8. Locate the master clip with the same name as the files you exported from Pro Tools LE.
9. Drag the master clip to your bin.



10. Edit the master clip into your sequence.

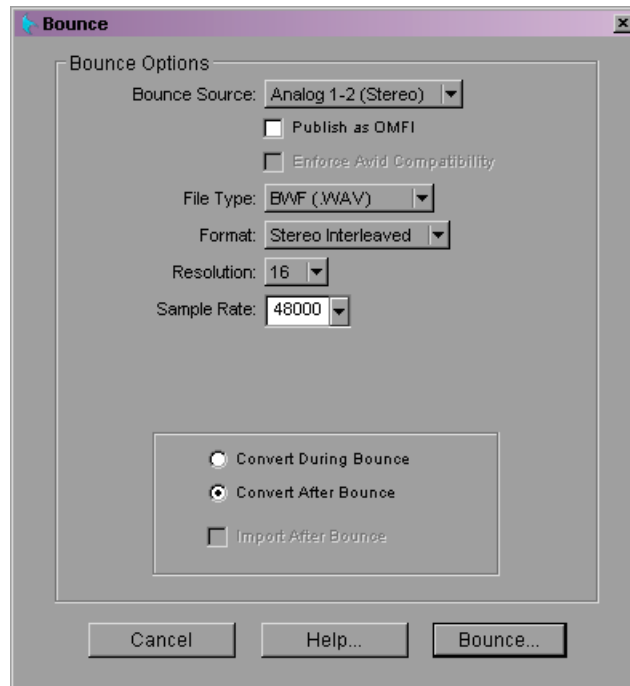
Exporting a Stereo-Interleaved File

When you create a stereo-interleaved file, you can export the resulting file to any folder on your system. Then you can import it into your Avid Xpress Pro project.

To use the Bounce to Disk command to create a stereo-interleaved file:

1. Start Pro Tools LE, and then open the session that contains the tracks you want to export.
2. Select the tracks.
3. Choose File > Bounce to Disk.

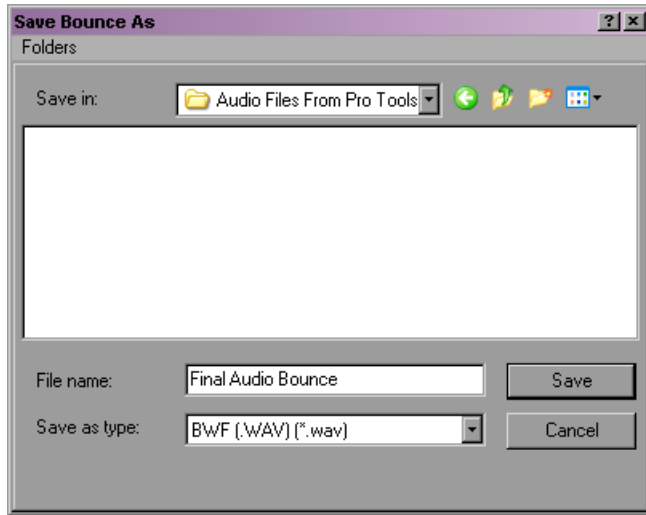
The Bounce dialog box opens.



4. Select the following options:
 - File Type > BWF (WAV) or File Type > AIFF
 - Format > Stereo Interleaved
 - Resolution (bit depth) (from your Avid Xpress Pro project)
 - Sample Rate (from your Avid Xpress Pro project)
 - Convert after Bounce
5. Deselect Publish as OMFI.

6. Click Bounce.

The Save Bounce As dialog box opens.



7. Name the file and navigate to a folder on your system.

8. Click Save.

Pro Tools LE mixes down the tracks you selected to a stereo-interleaved file and stores the files in the folder you selected.

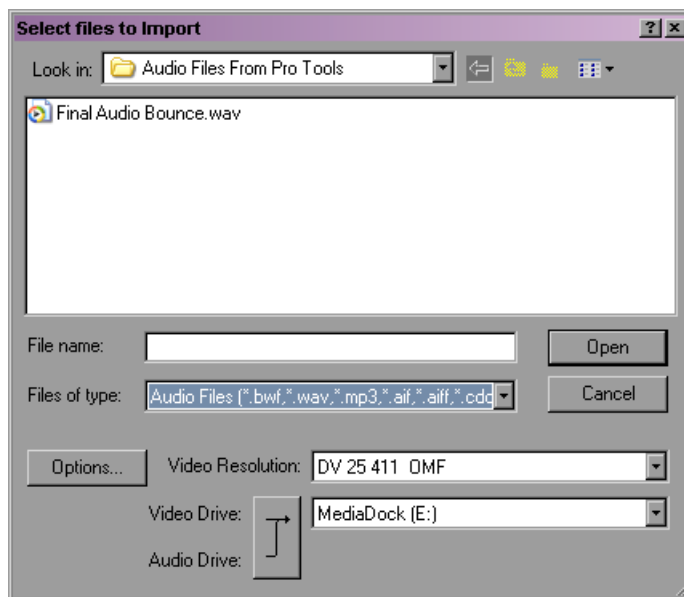
Importing the File into a Bin

When you export a stereo-interleaved file to a folder on your system, you can import the files into Avid Xpress Pro as a master clip.

To import the files into a bin:

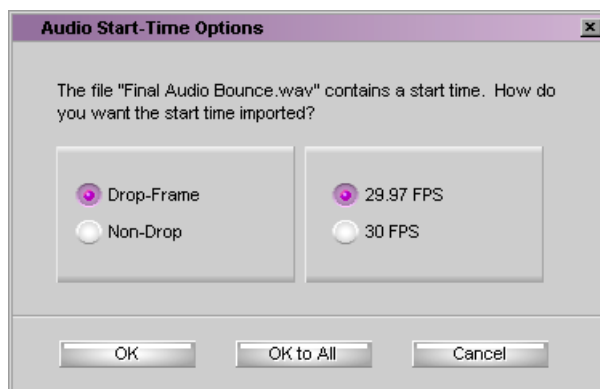
1. Start Avid Xpress Pro.
2. Select the bin that you want to hold the imported master clip.
3. Select File > Import.

The Select Files to Import dialog box opens.



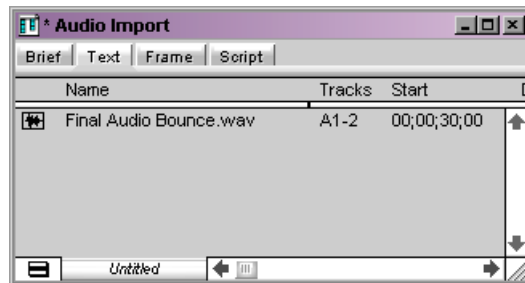
4. Select Files of Type > Audio Files, and then navigate to the folder that contains the audio file.
5. Select the file that was created by the Bounce to Disk command and click Open.

If the Audio Start-Time Options dialog box opens, select the timecode options used by your project.



6. Click OK.

Avid Xpress Pro creates a new master clip from the files and places it in the bin.



7. Drag the master clip into the Source monitor and click the Play button to listen to the audio.
8. Edit the master clip into your sequence.

Chapter 6

Using Avid DVD by Sonic

Many projects are delivered on DVD because they can be played on any computer with a DVD drive or on any DVD player. The following workflow allows you to send your finished sequence from Avid Xpress Pro to Avid DVD by Sonic for output to a DVD disc. This workflow makes it easy to export a completed sequence from Avid Xpress Pro including chapter marks and reference frames, send it to Sorenson Squeeze where it can be encoded, and then send it to Avid DVD by Sonic for DVD authoring and creation.

This workflow consists of the following:

- [Preparing the Sequence](#)
- [Encoding the Sequence with Sorenson Squeeze](#)
- [Producing the DVD with Avid DVD by Sonic](#)
- [Outputting the Project to DVD](#)

Preparing the Sequence

To prepare a finished sequence:

1. Select your finished sequence in Avid Xpress Pro.
2. Select Clip > New Meta Track.
A new MetaSync track is added to the sequence.
3. Select File > Import.
4. Make sure Files of Type is set to MetaSync files, and then navigate to the folder where the DVD Producer .aio file is located:

```
\Program Files\Avid\AvidXpress Pro\Avid AEOs\Avid DVD  
Producer.aio
```

5. Select the DVD Producer aeo file.

The Chapter Button Reference Frame file and the Chapter Mark enhancement file appear in the bin.

6. Double-click the Chapter Mark enhancement file.

7. Edit the enhancement into the Timeline by doing the following:

- ▶ Mark IN and OUT points in the timeline, mark an IN point in the enhancement in the Source monitor, and then either drag the enhancement to the Meta track or click an edit button (Splice or Overwrite).

The default (maximum) duration of a clip is 4 hours. Dragging a clip without IN or OUT points creates a 4-hour clip in the Timeline. This length allows an enhancement to be active for a long-form production.

8. Add Reference frames by scrubbing the timeline indicator to the desired frame.

9. Alt + double-click the Chapter Button Reference Frame enhancement clip in the bin.

A marker is added to the chapter span indicating it will use this frame as the Chapter button in Avid DVD by Sonic.

Encoding the Sequence with Sorenson Squeeze

1. Select the sequence you prepared in Avid Xpress Pro.
2. Select File > Send To > Avid Xpress Studio > Encoding for Avid DVD by Sonic.

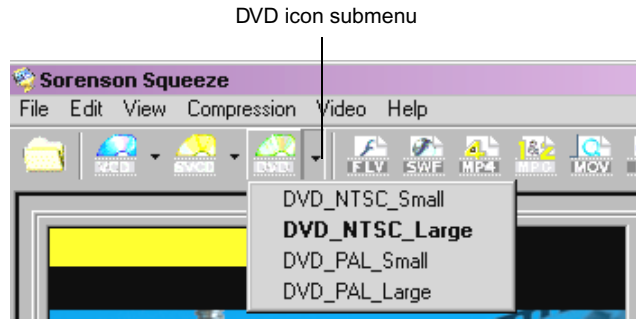
The Send To dialog box opens.



3. Click Set, and then choose a destination folder where you want the exported files located.
4. Make sure Auto Launch is selected in the second pane, and make sure Squeeze.exe is selected from the pop-up menu.
5. Make sure “Auto Load Exported File(s)” is selected.
6. Make sure “Export MetaSync Track(s) as” is set to XML.
7. Click OK.

Sorenson Squeeze automatically opens with the selected sequence loaded.

8. Select the DVD icon submenu, and then select *DVD_project type_Large*.



9. Default settings files appear in the Squeeze output pane.
10. Click Squeeze It to encode the files.

Squeeze creates an MPV and WAV file and places them in the same folder you designated in step 3.
11. Close the Sorenson Squeeze application.

Producing the DVD with Avid DVD by Sonic

Once you start the Avid DVD by Sonic application, you can use the following workflow to create a final DVD. See the Avid DVD by Sonic Help or the *Avid DVD by Sonic User Guide* for detailed information on the following procedures.

Setting Up the Avid DVD by Sonic Project

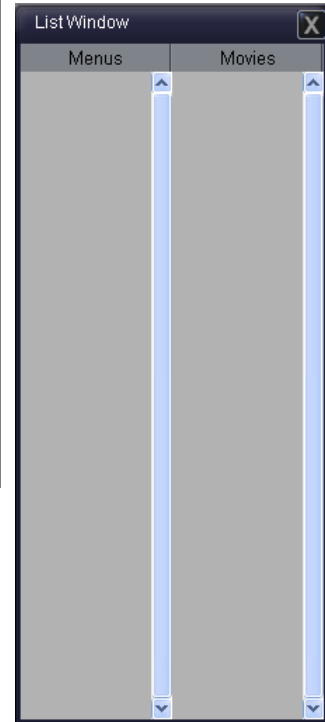
To set up the project:

1. Start Avid DVD by Sonic, select your project type, either NTSC or PAL, and then click OK.

An empty Palette Window and empty List window open.



Palette Window



List Window

2. Using Windows Explorer, access the folder you designated in Step 3 of [“Encoding the Sequence with Sorenson Squeeze” on page 114](#).
3. Drag the _Large files from the folder to the empty Palette window in the Avid DVD by Sonic application.
4. Add any other assets you want to use for creating the DVD, for example, Photoshop files, by doing one of the following:
 - ▶ Right-click in the Palette window, select Add Files to Project, and then select the files you want to add.
 - ▶ Drag and drop the items into the Palette window.

The media files are added to the project and appear in the Palette window. Information about each file is displayed in the Palette window’s columns for Name, Duration, Category, Type, and Size. See [“Photoshop File Restrictions” on page 121](#) for information on adding Photoshop files to your project.

5. Save the Project by selecting File > Save.



The Image column in the Palette window displays a thumbnail for each file. Thumbnails for Photoshop files are displayed with a Plus symbol that can be clicked to show or hide the layers contained in the file.

Working in the Avid DVD by Sonic Application

To create movies and add additional tracks and objects:

1. Create movies by dragging video clips from the Palette window to the Movies column in the List window.
2. Double-click the movie in the List window to open the movie in the Timeline window.
3. Add audio tracks by dragging the audio file from the List window to the timeline.

4. Select the movie in the Movie list, right-click, and then select Import metadata. Select the XML file located in the same folder designated in step 3 of [“Encoding the Sequence with Sorenson Squeeze” on page 114](#).
5. Create menus by dragging still images, Photoshop layers, or video clips to the Menus column in the List window, and then double-click the item.

The menu editor opens.

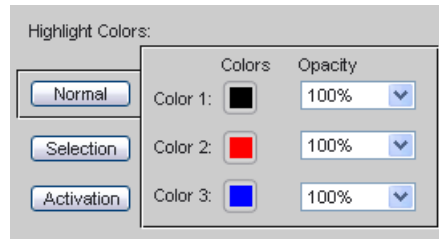
6. Ctrl + drag a chapter point label from the Movie Timeline window into the Menu Editor Window, and then place it where you want to create a chapter button in the menu.

The thumbnail displayed is the one you designated in step 9 of [“Preparing the Sequence” on page 113](#).

7. Continue to Ctrl + drag chapter point labels from the Movie Timeline window into the Menu Editor Window.
8. Continue adding graphics and text objects to menus.
9. Link additional movies to menus by dragging them to the Menu Editor window.
10. For each menu, set button highlight colors. A menu’s Highlight Colors determine how its buttons appear when displayed normally, selected, and activated. Do the following:
 - a. In the List window, select the menu for which you want to set the Highlight Colors.
 - b. If the Menu Editor window is not open, select Windows > Show Menu Editor Window or press F4.
 - c. If the menu’s overlay layer is not visible, click the Show Overlay button so it becomes selected. The overlay graphics appear.
 - d. If the Properties window is not open, select Windows > Show Properties Window, or press F3.



- e. In the Highlight Colors section of the Properties window, configure the Normal colors by doing the following:



Click the Normal button. The Menu Editor window displays the buttons as they appear when *not* selected.

For each of the three Normal colors (Color 1, Color 2, and Color 3), select a Color and an Opacity. The new colors are displayed in the Menu Editor window.

- f. Configure the Selection colors by doing the following:

Click the Selection button. The Menu Editor window displays the buttons as they appear when selected.

For each of the three Selection colors (Color 1, Color 2, and Color 3), select a Color and an Opacity. The new colors are displayed in the Menu Editor window.

- g. Configure the Activation colors by doing the following:

Click the Activation button. The Menu Editor window displays the buttons as they appear when activated.

For each of the three Selection colors (Color 1, Color 2, and Color 3), select a Color and an Opacity. The new colors are displayed in the Menu Editor window.

11. Proof the project in Simulation mode by selecting File > Simulation.
12. Use the Remote Control window to test playback order, remote control interaction, button navigation, and link destinations.
13. Select File > Save.

Outputting the Project to DVD

To output the project to a DVD:

1. Insert a disc in your recorder. The disc must be DVD+R format.
2. Select Build > Make DVD Disc.
3. The Make DVD Disc window opens.
4. Leave the Source menu set to Current Project.
5. Select your DVD or CD Recorder from the Recorder menu. If your device does not appear in the menu, check that it is a supported device and make sure it is turned on. If necessary, click Search to scan for available devices.
6. Set the Write Speed for the recorder.
7. Enter a value for the number of copies you want to make.
8. Click Next.
9. Check the Summary window.
10. Click Build to write the DVD to disc.

If you selected multiple copies, you are prompted to insert a new disc as each is completed.

Photoshop File Restrictions

If you are adding Photoshop files to your project, the Photoshop dimensions for NTSC should be 720 x 480 pixels. The Photoshop file dimensions for PAL should be 720 x 576 pixels. See the *Avid DVD by Sonic User Guide* for more information.

The Photoshop files should contain only two layers, named Background and Overlay. If the file contains any extra layers, Avid DVD by Sonic cannot use the file to create a menu. See the *Avid DVD by Sonic User Guide* for more information on creating Photoshop files for menus.

Appendix A

Using Pro Tools LE with Progressive Projects

This appendix summarizes the following information relating to progressive project interchange between Avid Xpress Pro and Pro Tools LE:

- [Exporting Files to Pro Tools from a Progressive Project](#)
- [Using Audio Pulldown with Progressive Projects](#)

Exporting Files to Pro Tools from a Progressive Project

If you work in a progressive project in Avid Xpress Pro and plan to perform **perf-slip editing** before you export your audio files to Pro Tools LE, you should modify your workflow so that you export OMF files to Pro Tools LE. The default Send To templates perform an AAF export and you need to modify the template.



If you are not going to perform per-slip editing in Avid Xpress Pro, you can use the default Send To templates and ignore this section.

This section describes how to create a new template and describes other issues related to modifying your workflow.

Use the Media Creation Tool to Create OMF Media

If you plan to perform perf-slip edits in Avid Xpress Pro, you need to set up the Media Creation tool so that you create OMF media before you begin capturing media into your project.

To use the Media Creation tool to create OMF media:

1. Select Tools > Media Creation.
2. Click the Mixdown & Transcode tab.
3. Click the OMF button and select a resolution from the Video Resolution pop-up menu.
4. Click the Apply to All button under the OMF button. This applies the same settings to the following tabs:
 - Titles
 - Import
 - Capture
 - Render
5. Click OK.

MXF File Format Issues

If you already have MXF media in a sequence that you are exporting to Pro Tools via OMF, you must transcode the MXF media to OMF before you perform the Send To export. Before you perform the transcode, operation you must open the Media Creation tool and change the Mixdown and Transcode tab to OMF as described in the previous section. For more information on using the Transcode command, see the Avid Xpress Pro Help.



You only need to transcode media to OMF if you perform perf-slip editing Avid Xpress Pro and then export to Pro Tools LE.



If you are plan to export to Avid 3D, you must transcode the master clip to MXF before exporting to Avid 3D.

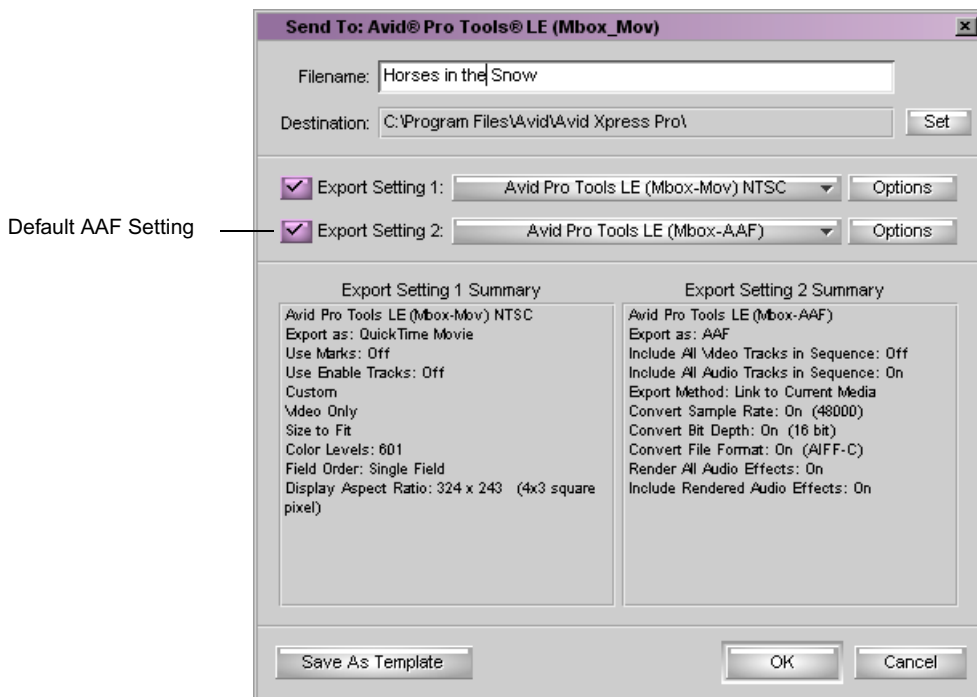
Creating a New OMF Template for the Send To Command

This section describes how to modify an existing Send To template to export OMF 2.0 media.

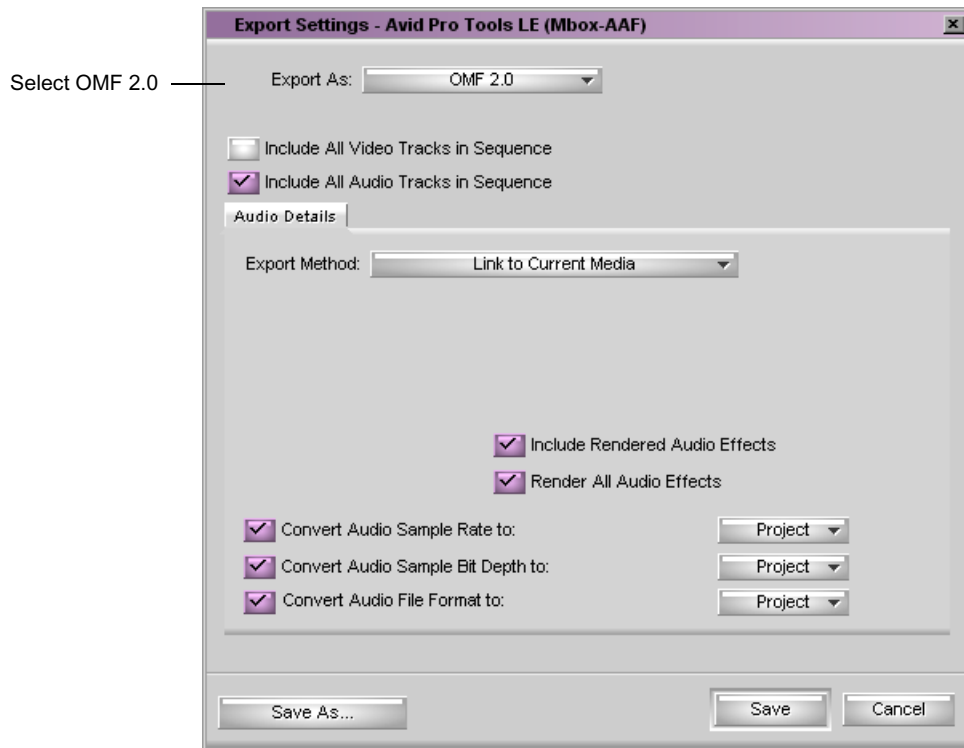
To create a new default OMF template from an existing template:

1. In Avid Xpress Pro, select a sequence with audio tracks in a bin.
2. Select File > Send To > Avid Xpress Studio, and then select the template you want to use as a base. In this example we select Avid Pro Tools LE (MBox_Mov).

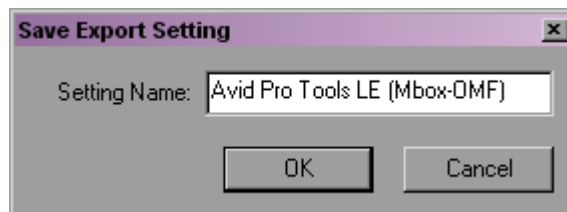
The corresponding Send To Avid Pro Tools LE dialog box opens. The following illustration shows the Avid Pro Tools LE (MBox_Mov) dialog box.



3. Click the Options button for the Export Setting that specifies AAF.
The Export Settings dialog box opens.



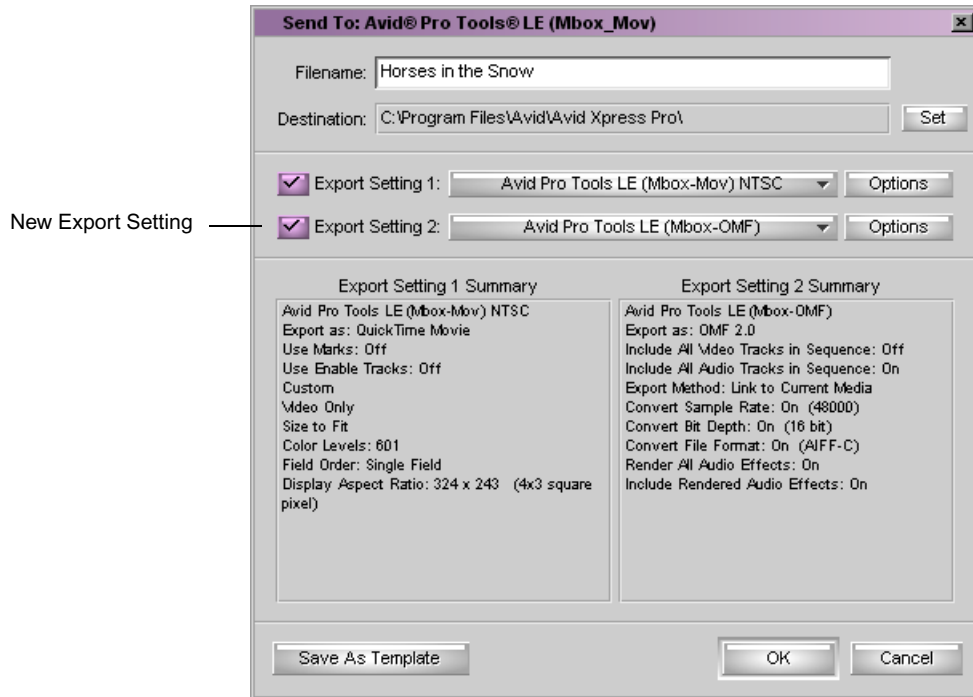
4. Select Export As > OMF 2.0.
5. Click Save As to create a new Export Setting.
The Save Export Setting dialog box opens.



6. Name the new setting. For example, the preceding illustration shows the text changed from AAF to OMF.
7. Click OK.

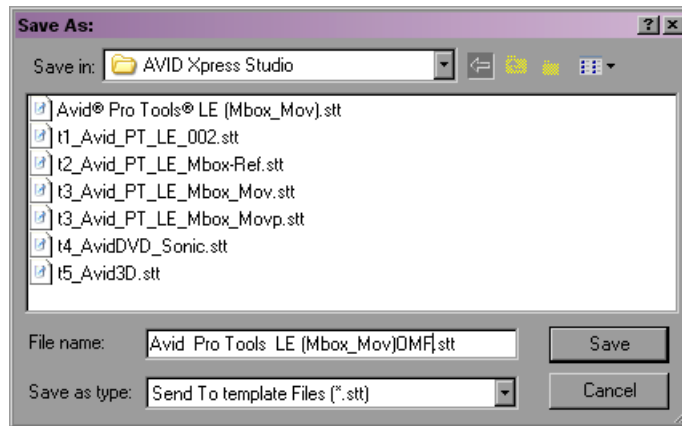
8. Click Save.

The new setting appears in the Export Settings list of the Send To dialog box.



9. Click Save As Template to create a new template.

The Save As dialog box opens.



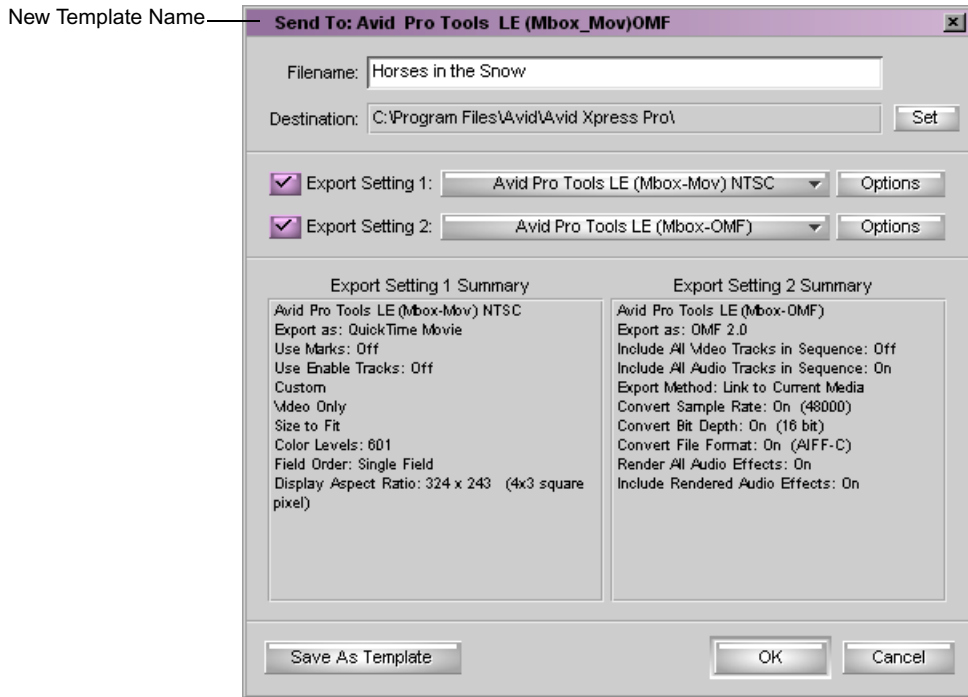
10. Type a name for the template in the File Name text box, and then click Save. For example, the preceding illustration adds OMF to the name.



Keep the .stt extension on the template name.

11. Click Save.

The new template opens.



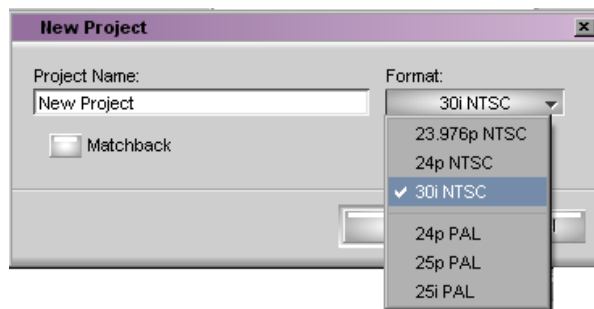
12. Click Cancel to close the dialog box, or click OK to export the file.

The next time you choose Select File > Send To > Avid Xpress Studio, the new template appears in the list.

Using Audio Pulldown with Progressive Projects

The term pulldown describes the process of slowing down an audio file to match the video. This is sometimes necessary when you capture audio at 30 fps or 24 fps (film speed) and need to match it to 29.97 fps (video speed). The term pullup is the opposite, where audio captured at video speed is sped up to match film speed.

Avid Xpress Pro supports six project types as shown in the following illustration:



Three of the project types (30i NTSC, 25i PAL, and 25p PAL) deal with audio and video program material that does not typically change speed during the post production process.

The remainder of this appendix focuses on the other three project types (23.976p NTSC, 24p NTSC, and 24p PAL), summarizing the recommended workflows and requirements surrounding audio pullup and audio pulldown.

23.976p NTSC Projects

Video Sources

Video sources for 23.976p NTSC projects contain images that are shot at 24 fps or 23.976 fps, but are mapped onto 29.97 fps video tape in a process similar to the way a telecine system operates. That is, two fields are created from each progressive image and then three fields for every other image. The fields are stored on video tape using industry standard 2:3:2:3 or 2:3:3:2

cadencing. During capture, Avid Xpress Pro reconstitutes the original 24 fps progressive images. Avid Xpress Pro then plays back the images at 23.976 fps, adding in the standard 2:3:2:3 or 2:3:3:2 cadencing automatically.



Avid Xpress Pro supports playback of 23.976p projects at 24 fps if Avid Mojo DNA hardware is connected.

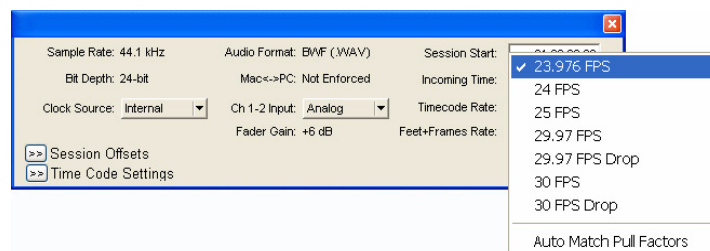
Audio Sources

Audio sources for 23.976p NTSC projects typically contain project material that is at “video speed” when played back at standard sample rates (44.1 kHz or 48 kHz).

Export to Pro Tools

Pro Tools can play back 24p video media at 23.976 fps while playing back 48 kHz audio. This means that exporting an Avid Xpress Pro sequence from a 23.976p project is straight forward; that is, no conversion is necessary during export or import. For example, an AAF sequence exported from a 23.976p NTSC project contains a composition whose edit rate is 23.976, linking to 24p video media and “video speed” 48 kHz audio files.

Once you import this AAF file into Pro Tools, make sure the Session Setup window is set for 23.976 timecode rate (with Auto Match Pull Factors deselected), as shown in the following illustration.



Export from Pro Tools to Avid Xpress Pro

After completing the audio session, you might want to integrate the finished audio with the finished picture, and then output it to tape or to encoded files. Because Pro Tools LE does not support 9-pin serial deck control, Avid recommends that you export the finished audio as AAF or OMF, and then import it into Avid Xpress Pro for integration with the finished picture and delivery.

24p NTSC Projects

Video Sources

Video sources for 24p NTSC projects contain images that are shot at 24 fps or 23.976 fps, but are encoded onto 29.97 fps video tape in a process similar to the way a telecine system operates. That is, two fields are created from each progressive image and then three fields for every other image. The fields are then stored on video tape using industry standard 2:3:2:3 or 2:3:3:2 cadencing. During capture, Avid Xpress Pro reconstitutes the original 24 fps progressive images. Avid Xpress Pro then plays back the images at 24 fps.



Avid Xpress Pro supports capture of 24 fps material if Avid Mojo DNA hardware is connected.

Avid Xpress Pro can play back 24p NTSC projects at either 23.976 or true 24 fps display rates. This setting does not affect the sync relationship between audio and video; rather, it affects absolute playback of audio and video.

To change the playback speed:

1. Click the Settings tab in the Project window.
2. Double-click Film and 24p Settings.

The Film and 24P Setting dialog box opens.



3. Change the Edit Play Rate, and then click OK.



The Edit Play Rate setting does not affect AAF/OMF export. Regardless of the value of this setting, Avid Xpress Pro exports a 24-fps sequence.

Audio Sources

Audio sources for 24p NTSC projects contain project material that is at “film speed” when played back at standard sample rates (44.1 kHz or 48 kHz).

When you perform a video-plus-audio capture into a 24p NTSC project, Avid Xpress Pro automatically enables pulldown so that the captured audio material is sped up to film speed on playback. For audio-only captures, you must manually set the pulldown switch. In other words, you must manually enable pulldown during the capture of “video speed” audio sources and manually disable pulldown during the capture of “film speed” audio sources.

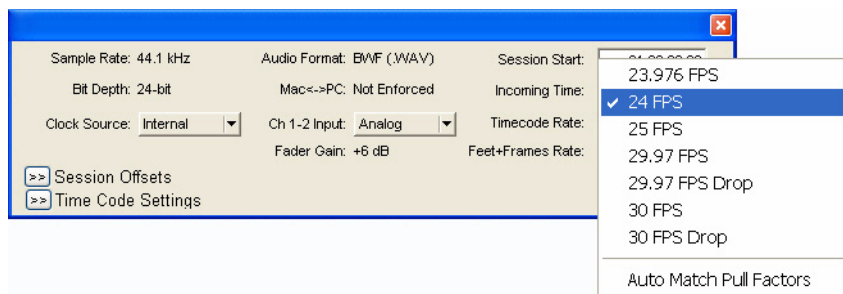


Avid Xpress Pro supports capture of audio in 24p NTSC projects if Avid Mojo DNA hardware is connected.

Export to Pro Tools

Pro Tools can play back 24P video media at 24 fps while playing back 48 kHz audio. This means that exporting an Avid Xpress Pro sequence from a 24p NTSC project is straightforward. That is, no conversion is necessary during export or import. For example, an AAF sequence exported from a 24p NTSC project contains a composition whose edit rate is 24, linking to 24p video media and “film speed” 48 kHz audio files.

Once this AAF file is imported into Pro Tools, make sure that the Session Setup window is set to 24-fps timecode rate (with Auto Match Pull Factors deselected) as shown in the following illustration.



Export from Pro Tools to Avid Xpress Pro

After completing the audio session, you might want to integrate the finished audio with the finished picture and output it to tape or to encoded files. Because Pro Tools LE does not support 9-pin serial deck control, Avid recommends that you export the finished audio as AAF or OMF and import it into Avid Xpress Pro for integration with the finished picture and delivery (by way of Digital Cut, encoding, and so on).

Avid Xpress Pro provides the option of playing back 24p NTSC projects at 23.976 fps for digital cut to video tape as described above. In this case, the video and audio are both pulled down by Avid Xpress Pro in real time. However, in this case the audio sample rate is now 47.952kHz. Some video VTRs do not allow sync or can cause artifacts in the high frequencies.

24p PAL Projects

Video Sources

Video sources for 24p PAL projects contain images that are shot at 24 fps, but are encoded onto 25 fps video tape in a “frame-for-frame” transfer. That is, the 24 fps source material is played back at 25 fps (4.1percent speedup) so that each video frame represents a single source frame. During capture, Avid Xpress Pro reconstitutes the original progressive images by de-interlacing the frames. Avid Xpress Pro then plays back the images at 24 fps.



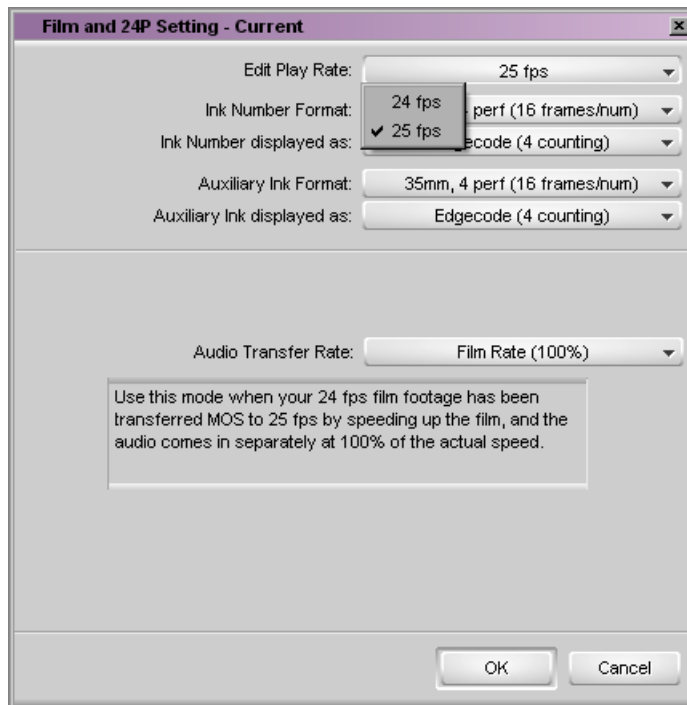
Avid Xpress Pro can capture audio or video in a 24p PAL project if Avid Mojo DNA hardware is connected.

Avid Xpress Pro can play back 24p PAL projects at either 24 fps or 25 fps display rates. This setting does not affect the sync relationship between audio and video, rather it affects absolute playback of audio and video.

To change the playback speed:

1. Click the Settings tab in the Project window.
2. Double-click Film and 24p Settings.

The Film and 24P Setting dialog box opens.



3. Change the Edit Play Rate, and then click OK.



The Edit Play Rate setting does not affect AAF/OMF export. Regardless of the value of this setting, Avid Xpress Pro exports a 24 fps sequence.

Audio Sources



Avid Xpress Pro can capture audio in a 24p PAL project if Avid Mojo DNA hardware is connected.

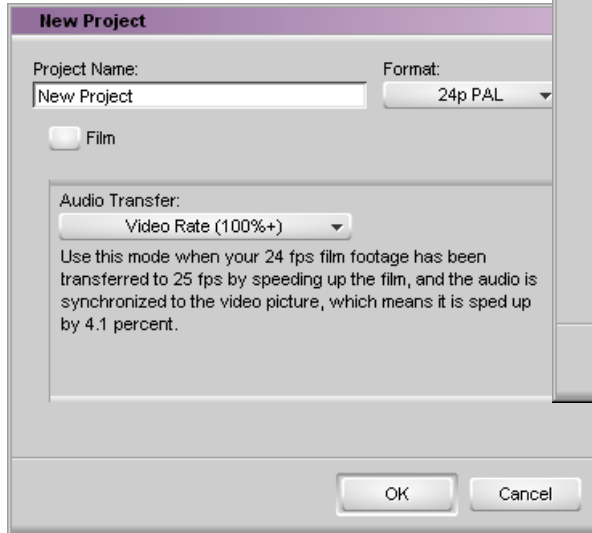
There are two methods for capturing audio into a 24p PAL project using Avid Xpress Pro:

1. Method 1 – audio is captured from 25 fps sources. The audio on these sources is sped up by 4.1percent, so Avid Xpress Pro stamps these sound files at PAL pulldown (non-standard) sample rates: 46080 instead of 48000, 42336 instead of 44100.
2. Method 2 – audio is captured from 24 fps sources. The audio on these sources is film speed, so Avid Xpress Pro stamps these sound files at standard sample rates of 44.1 kHz or 48 kHz.

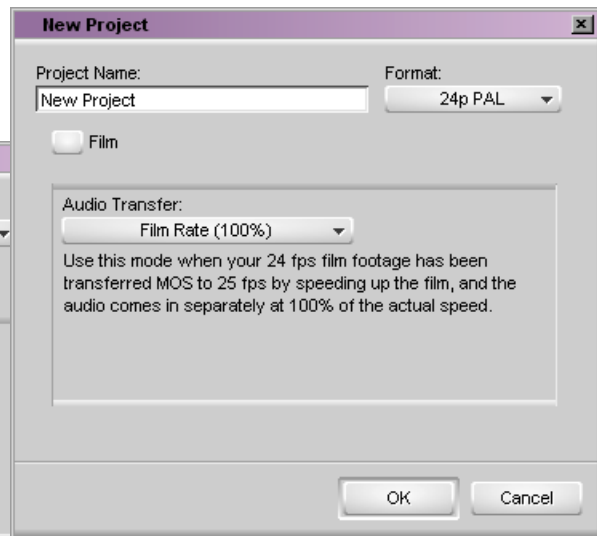


For highest audio quality, Method 2 is best because it does not require speed changes or sample rate conversion. Avid recommends that you use Method 2 whenever possible. This is a double system workflow and always requires a two-pass capture operation – one for picture and one for sound. If you use the BWF file import feature, you can save time during the audio capture stage.

Whether you are in Method 1 or Method 2 modality depends on a project setting called Audio Transfer Rate, available in the Film and 24P Setting dialog box. Audio Transfer Rate is a setting that can be changed at any time while working in a 24p PAL project. However, Avid recommends that you do not switch rates once a project has started. You establish the Method 1 or Method 2 setting when you first create a 24p PAL project, as shown in the following illustration.



Method 1

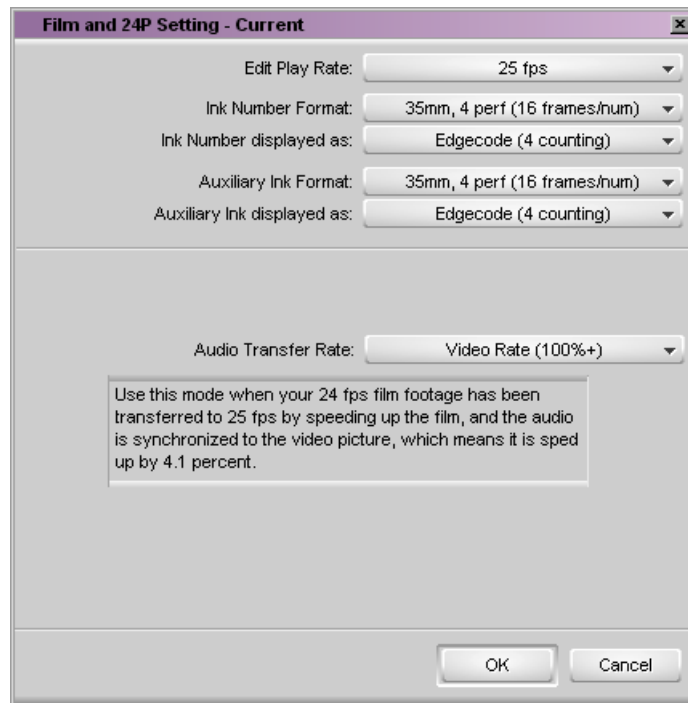


Method 2

To change the transfer rate within a project:

1. Click the Settings tab in the Project window.
2. Double-click Film and 24p Settings.

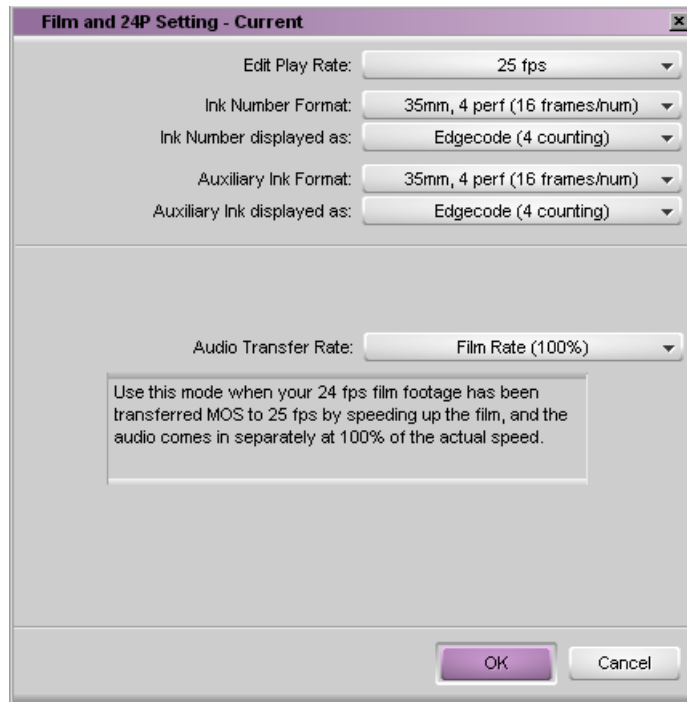
The Film and 24P Setting dialog box opens.



Changing to Method 1 within a project

3. Change the Audio Transfer Rate and click OK.

The preceding illustration shows the audio transfer rate for Method 1. The following illustration shows the audio transfer rate for Method 2.



Changing to Method 2 within a project

Method 1 produces sound files that are at non-standard nominal sample rates (42336 or 46080). Avid Xpress Pro uses real-time sample rate conversion to play back 42336 or 46080 files so the audio is appropriately slowed down and pitched down during playback. Avid Xpress Pro can work with sequences that intermix 46080 and 48000 files.

Export to Pro Tools

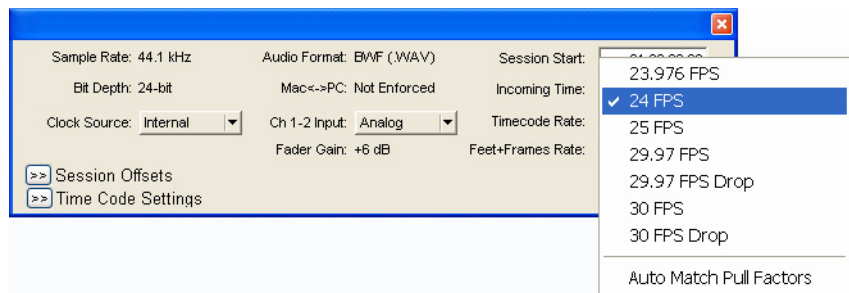
An AAF sequence exported from a 24p PAL project contains a composition whose edit rate is 24, linking to 24p video media. The AAF file might also link to film speed 48 kHz audio files or Method 1 46080 sample rate files.

Pro Tools does not support import of an AAF file that links to audio files with intermixed sample rates. To solve this problem, the Send To templates automatically convert the audio to a uniform, standard sample rate.



In order for the Send To template to properly convert to standard sample rates during export from a 24p PAL project, the Audio Transfer Rate must be set to Film Rate (Method 2). This is necessary for the 24p PAL sequence interchange to work properly.

Once the AAF file is imported into Pro Tools, make sure the session setup window is set for 24 FPS timecode rate (with Auto Match Pull Factors deselected), as shown in the following illustration.



These settings should be automatically set after importing a 24p PAL sequence.

Export from Pro Tools to Avid Xpress Pro

After completing the audio session, you might want to integrate the finished audio with the finished picture and output it to tape or to encoded files. Because Pro Tools LE does not support 9-pin serial deck control, Avid recommends that you export the finished audio as AAF or OMF and import it into Avid Xpress Pro for integration with the finished picture and delivery (by way of Digital Cut, encoding, and so on).

Avid Xpress Pro provides the option of playing back 24p PAL projects at either 24 fps or 25 fps as described above.



The Audio Transfer Rate setting can affect the sample rate of audio files imported into Avid Xpress Pro. If you want to import a 48 kHz interleaved WAV file into Avid Xpress Pro, make sure the Audio Transfer Rate setting has

the desired value. If it is set for Method 1, the imported file is converted to a 46080 sound file. If it is set for Method 2, the imported file is converted to a 48000 sound file. This dependency on the Audio Transfer Rate setting applies to importing raw sound files, but does not affect AAF imports.

Index

Numerics

- 23.976 NTSC projects and Pro Tools LE [123](#), [130](#)
- 24p NTSC projects and Pro Tools LE [132](#)
- 24p PAL projects and Pro Tools LE [135](#)
- 3D animation
 - content [59](#)
 - objects [64](#)
 - scenes [68](#)
 - text [69](#)
 - textures [65](#)

A

- AAF
 - described [52](#)
 - exporting (Avid 3D) [52](#)
 - exporting from Avid 3D [73](#)
 - importing (Pro Tools LE) [91](#)
- Accuracy
 - frame rate [85](#)
 - sample rate [85](#)
- Alpha channel support, described [19](#)
- Applications, described [14](#)
- Aspect Ratio, described [19](#)
- Audio
 - editing (Pro Tools LE) [97](#)
 - editing with Digi 002 [81](#)
 - editing with Mbox [84](#)
 - exporting from Avid Xpress Pro [88](#)
 - exporting from Pro Tools LE [98](#)
 - importing into Pro Tools LE from Avid Xpress Pro [90](#)

- settings (Pro Tools LE) [90](#)
- Audio IO device
 - Digi 002 [81](#)
 - Mbox [84](#)
- Audio playback speed
 - changing in Avid Xpress Pro [132](#), [135](#)
- Audio transfer rate
 - Method 1 and Method 2 [137](#)
- Avid 3D
 - adding video background [60](#)
 - adding video textures [64](#)
 - Character Offset controls [71](#)
 - creating 3D content [59](#)
 - creating scenes [68](#)
 - export settings options [56](#)
 - exporting scenes [72](#)
 - media files [55](#)
 - Object Library [64](#)
 - On-Screen parameters [63](#), [68](#)
 - overview [51](#)
 - rendering formats [75](#)
 - rendering options [73](#)
 - Rotate tool [63](#), [71](#), [72](#)
 - Scale tool [63](#), [71](#), [72](#)
 - Send To options [56](#)
 - sending media to [52](#)
 - text [69](#)
 - Text Creation Wizard [69](#)
 - textured objects [65](#)
 - titles [69](#)
 - Translate tool [63](#), [71](#), [72](#)
 - Video Library [58](#)
 - workflow overview [17](#), [18](#), [59](#)

Avid DVD by Sonic

- adding tracks and objects in 118
- creating movies in 118
- outputting the project to a DVD 121
- setting up a project 116
- workflow overview 19

Avid FX

- background media 35
- exporting from 48
- interface 30
- Keyframe Library 47
- saving work 47
- text effects 39
- text on a path 44
- Timeline window 31
- transition effect, creating 32
- using 27
- workflow overview 17

Avid FX Engine 48

Avid Pro Tools LE. *See* Pro Tools LE

Avid Xpress Pro

- described 21
- working with Pro Tools LE 80

Avid Xpress Studio

- basic workflow 16
- component applications 13, 14

Avid Xpress Studio Complete

- described 81

Avid Xpress Studio Essentials

- described 84

B

Background

- adding video in Avid 3D 60

Basic disk drive

- and Pro Tools LE 86

Basic workflow 16

Blackburst generator

- and Digi 002 82

Bounce to Disk command (Pro Tools LE) 103

Buttons

- Highlight Colors (Avid DVD by Sonic) 119
- Render High-Quality (Avid 3D) 73
- Render Low-Quality (Avid 3D) 73

Show Overlay (Avid DVD by Sonic) 119

C

Chapter Mark file (Avid DVD by Sonic) 114

Chapter Reference file (Avid DVD by Sonic) 114

Character Offset controls (Avid 3D) 71

Clips

- exporting from Avid 3D 72
- exporting from Avid editing application to Avid 3D 52

Codecs, described 20

Color levels, described 20

Creating

- new text string (Avid 3D) 69

D

Digi 002

- as control surface 81, 83
- configuration for playing video 82

Drive requirements (Pro Tools LE) 86

DVD

- creation workflow overview 19
- outputting project to (Avid DVD by Sonic) 121
- producing with Avid DVD by Sonic 116

DVD Producer aeo file

- locating 113

Dynamic disk drive

- and Pro Tools LE 86

E

Edit play rate

- changing in Avid Xpress Pro 132, 135

Editing

- audio files (Pro Tools LE) 97

Effects

- creating with Avid FX 27

Encoding files, with Sorenson Squeeze (Avid DVD by Sonic) 116

Enhancement files

- for Avid DVD by Sonic 114

Export Selected as Files command
Pro Tools LE 98

- Export Selected Tracks as OMF/AAF
 - Pro Tools LE 98
- Export settings
 - options for Avid 3D 56
- Exporting
 - 3D scenes 72
 - AAF files from Avid 3D 73
 - AAF files from Avid Xpress Pro 52
 - audio 88
 - clips to Avid 3D 52
 - formats in Avid 3D 75
 - from Avid FX 48
 - from Pro Tools LE 98
 - sequences to Avid 3D 52
 - stereo-interleaved file (Pro Tools LE) 107

F

- File formats, described 19
- Film projects and Pro Tools LE 123
- Frame-rate accuracy (Avid Xpress Pro) 85

I

- Importing
 - audio and video (Pro Tools LE) 90
 - OMF into Avid Xpress Pro (Pro Tools LE) 101
 - stereo-interleaved file as master clip 109
 - using Media Tool 105
- Interlaced/ Deinterlaced format, described 20

K

- Keyframe Library (Avid FX) 47

M

- Mbox
 - as primary audio device 84
- Media file formats
 - for input, described 19
 - for output, described 19
- Media files
 - default location for Avid 3D 55
- Media handling, described 19

- Media Tool
 - using to import files 105
- Metadata file format
 - for export, described 20
 - for import, described 20
- Method 1 and Method 2 audio transfer 137
- Movies
 - creating in Avid DVD by Sonic 118
 - QuickTime 87

O

- Object Library
 - viewing objects in Avid 3D 64
- Object Library tab (Avid 3D) 64
- OMF
 - importing into Avid Xpress Pro 101
- OMF/AAF
 - exporting as (Pro Tools LE) 99
- On-Screen parameters
 - Character Offset controls (Avid 3D) 71
 - Transform controls (Avid 3D) 63, 68
- Opening applications from within Avid Xpress Pro 21

P

- Palette Window
 - displaying media files in (Avid DVD by Sonic) 117
- Photoshop
 - file restrictions (Avid DVD by Sonic) 121
- Pro Tools LE
 - and digital cut 86
 - Bounce to Disk command 103
 - displaying video 82, 84
 - drive requirements 86
 - editing audio files 97
 - editing with 80
 - Export Selected as Files command 98
 - Export Selected Tracks as OMF/AAF command 98
 - exporting audio files 98
 - film projects 123
 - hardware requirements 86

- importing audio from Avid Xpress Pro 90
- progressive projects 123
- running at the same time as Avid Xpress Pro 21, 21
- using the Send To templates 88, 125
- workflow 80
- workflow overview 14, 18, 18

Progressive format, described 20

Projects

- setting up in Avid DVD by Sonic 116

Q

QuickTime

- movies, described 87

QuickTime reference movies

- described 87

R

Render High-Quality button (Avid 3D) 73

Render Low-Quality button (Avid 3D) 73

Rendering

- Avid 3D scenes 72

- formats in Avid 3D 75

- options in Avid 3D 73

Resolutions, described 19

Rotate tool (Avid 3D) 63, 71, 72

S

Sample-rate accuracy (Pro Tools LE) 85

Scale tool (Avid 3D) 63, 71, 72

Send To

- Avid 3D 52, 53

- Avid DVD by SONIC 113

- Avid Pro Tools LE 88

- options for Avid 3D 56

- using predefined templates 53

Sequences

- exporting to Avid 3D 52

Sorenson Squeeze (Avid DVD by Sonic) 116

Squeeze It

- using to encode files 116

Standalone mode 81

Standard file format, described 19

Stereo-interleaved file

- importing as master clip (Avid Xpress Pro) 109

Stereo-interleaved file (Pro Tools LE) 107

Studio menu, selecting applications from 21

T

Text

- Character Offset controls (Avid 3D) 71

- creating in Avid 3D 69

- formatting in Avid 3D 70

Text Creation Wizard (Avid 3D) 69

Textured objects (Avid 3D) 65

Textures

- adding video in Avid 3D 64

Timeline window (Avid FX) 31

Titles

- animated 69

- Character Offset controls (Avid 3D) 71

- creating with Avid 3D 69

- creating with Avid FX 39

- formatting in Avid 3D 70

- Text Creation Wizard (Avid 3D) 69

Transition effect

- creating with Avid FX 32

Translate tool (Avid 3D) 63, 71, 72

V

Video

- exporting 72

- exporting to Avid 3D 52

Video background

- adding to 3D scenes 60

Video Clip Library tab 58

Video Library

- viewing media in Avid 3D 58

Video textures

- adding to 3D scenes 64

W

Workflow overview

- Avid 3D 17, 18

Avid DVD by Sonic [19](#)
Avid FX [17](#)
Avid Pro Tools LE [14](#), [18](#)
Workflow, described [16](#)

