

# Avid Xpress Pro Workflow Guide

**Version 6.6 for Pro Tools|HD Systems on Macintosh**

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## chapter 1

# Introduction

This guide describes how to transfer audio and video from Avid Xpress Pro to Pro Tools for editing, and then transfer your finished audio tracks from Pro Tools back into Avid Xpress Pro for integration with your video.



*This workflow assumes you have Pro Tools and Avid Xpress Pro installed on the same computer.*

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## Avid Terminology

This section provides a brief glossary of Avid terms and, where applicable, their Pro Tools counterparts.

## Media Data (Media Files)

Media data represents raw audio or video material and is stored in individual media files. Every time you record a piece of video or audio material into an application, you are creating a media file containing media data. Audio media data is stored as samples (such as 44,100 or 48,000 samples per second of recording) while video media is typically stored as frames (24, 25, or 30 frames per second of recording).

The size of each media file depends on how much audio or video material it contains. For example, if you record ten minutes of continuous video material at a high resolution, you might end up with a video media file that is

1.8 GB in size, whereas a one minute recording at the same resolution might result in a 180 MB file. Media files tend to be large, since high quality audio and video signals are data intensive. Video data generally requires considerably more storage than audio data.

## Metadata

Metadata is used to describe:

- Information about each media file. This may include sample rate, bit depth, region names, the name of the videotape from which the media file was captured, and even time code values that specify where a file was used in a Pro Tools session.
- Information about Pro Tools sessions or other sequences, including what files are used, where they appear in a timeline, and automation.
- For AAF or OMF sequences, metadata also includes information about unrendered AudioSuite effects (such as real-time EQ) on Avid workstations. Pro Tools skips unrendered effects on import. Rendered effects are media files, that can be imported or skipped on import into Pro Tools.
- For AAF or OMF sequences, information about automation (clip-based gain or key-frame gain).

## **AAF, OMF, and MXF Basics**

AAF and OMF are mechanisms for storing and retrieving media data and metadata so that projects can be freely exchanged between different applications and platforms.

Media data and metadata enable an application that receives AAF and OMF sequence files (such as Pro Tools) to automatically and quickly reassemble the composition. A simple metaphor for this approach is that media data files are the pieces of a puzzle and metadata is the set of instructions for assembling the puzzle.

In the simplest case, only an AAF or OMF sequence is exchanged. If this sequence refers to external media data, the size of the sequence file is relatively small and the export/import process is relatively fast. AAF and OMF sequences can also have media data embedded in them. This creates a single, larger file that is slower to export and import, but which may be easier to manage than thousands of files stored on different volumes.

### **MXF**

MXF is a media file format. There are MXF video files and MXF audio files only. Pro Tools can currently import and play back MXF video files, but not MXF audio files.

### **OMF**

OMF is both a media file and sequence format. OMF media files can be audio or video, and Pro Tools can import and play back OMF audio and video. Pro Tools can also export OMF audio, but not OMF video. An OMF sequence can refer to OMF and/or MXF media files, or have OMF and MXF media files embedded within it. Pro Tools can import an OMF sequence with embedded audio, but not embedded video.

### **AAF**


AAF are only sequences, not audio or video files. An AAF sequence can refer to OMF and/or MXF media files, or have OMF and MXF media files embedded within it. There is no such thing as an AAF audio or video media file. Pro Tools will import, play back and export an AAF sequence that refers to external media files, but it does not support AAF sequences with media files embedded within them.

## Pro Tools and Avid Counterparts

Pro Tools and Avid use different terms to describe the same items. For example, a Pro Tools session is equivalent to an Avid sequence. The following table lists common Pro Tools elements and their Avid equivalents.

### *Pro Tools and Avid terminology counterparts*

Pro Tools	Avid (OMF)
session	sequence
whole file region	master clip
region	subclip
plug-ins	real-time audio effects
automation	automation gain (clip-based gain or key-frame gain)

 *Whole audio files in the Regions List normally appear in bold type. However, master clip audio files imported from AAF or OMF sequences into Pro Tools will not appear in bold type (indicating regions) in the Pro Tools Regions List even though they are audio files.*

## Embedded Media and External Media

There are two ways to handle media files when exporting OMF files: Embedded Media and External File References.

 *Pro Tools with DigiTranslator does not support AAF files with embedded media. Pro Tools with DigiTranslator only supports AAF export with external file references.*

### **Embedded Media (OMF Only)**

Exporting to OMF with embedded media results in one large OMF file containing both the metadata and all associated media files. However, it is important to note that OMF limits file size to 2 GB.

 *Pro Tools supports OMF files that contain embedded audio, but not OMF files that contain embedded video.*

## 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 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 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, the audio clips might not line up on video frame boundaries.

In order to export frame accurate audio clips, Pro Tools 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, 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 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.

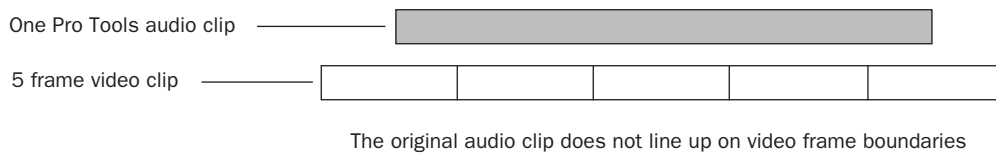


Figure 1. Original audio clip

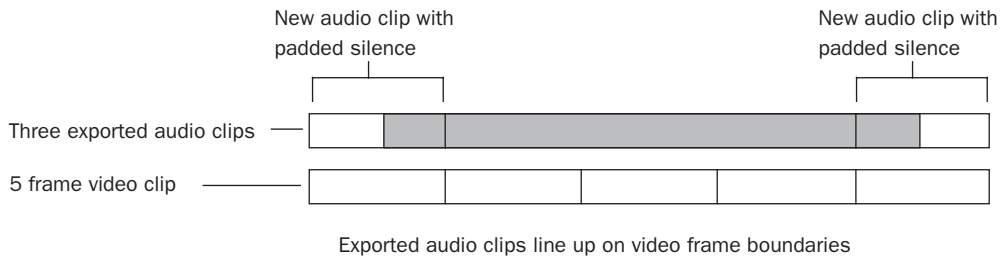


Figure 2. Exported audio clip



## chapter 2

# Workflow

This workflow assumes you have Pro Tools and Avid Xpress Pro installed on the same computer, and involves the following steps:

- 1 “Exporting Audio and Video from Avid Xpress Pro” on page 5
- 2 “Importing Audio and Video into Pro Tools” on page 7
- 3 “Editing Audio Files in Pro Tools” on page 9
- 4 “Exporting Audio from Pro Tools for Avid Xpress Pro” on page 9

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## 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.



Sequence with unrendered tracks

## Using the Send To Templates

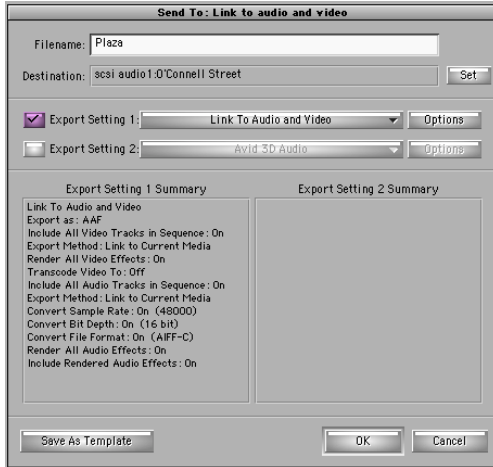
The Send To Templates option lets you create one metadata AAF or OMF file that references audio and video files used in the sequence, and save it to the drive selected in your Avid Preferences.

### To use the Send To Digidesign Pro Tools templates:

- 1 Start Avid Xpress Pro.
- 1 Select a sequence in a bin.


**A** 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 option.


- 2 Choose File > Send To > Digidesign Pro Tools > Link to Audio and Video.



#### Digidesign Pro Tools dialog

- 3 If you want to view or change export settings, click either Options button, and then make any changes (such as switching from the default AAF to the OMF format). If you make any changes, you can use the Save As Template button to create a new template.
- 4 Click Set.
- 5 Navigate to the location where you want the AAF or OMF files to reside.

 *Avid Xpress Pro only recognizes audio and video files stored in the OMFI MediaFiles or the Avid MediaFiles folder.*


 *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.*

- 6 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*.

## Configuring Audio Settings for Your Pro Tools Session

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

- 1 In Avid Xpress Pro, select the Project window and click the Settings tab.
  - 2 Double-click Audio Project.
  - 3 In the Audio Project Settings dialog, note the following, which you will need when you set up your Pro Tools session:
    - Sample Rate
    - Audio File Format
    - Sample Bit Depth
-  *The default Send To Pro Tools 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.*

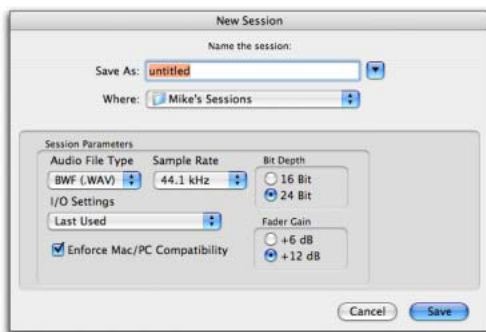
## Importing Audio and Video into Pro Tools

This section explains the basic steps of importing AAF or OMF sequences (or tracks from those sequences) into a Pro Tools session optimized for working with those files.

### Importing an AAF or OMF Sequence as a Pro Tools Session

To open an AAF (or OMF) sequence as a Pro Tools session:

- 1 Launch Pro Tools.
- 2 Choose File > Open Session.
- 3 In the Open Session dialog, navigate to the AAF or OMF sequence you want to import.
- 4 Click Open.

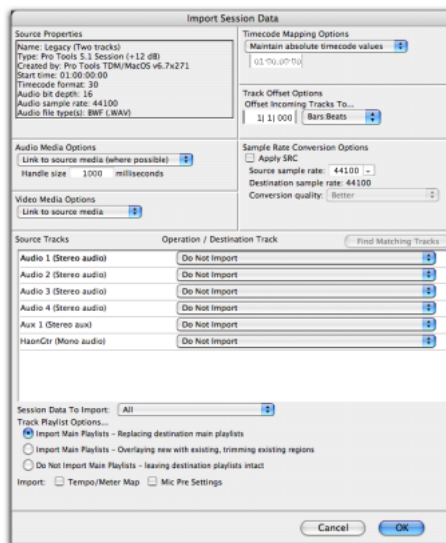


*Pro Tools New Session dialog*

- 5 Name your session in the Save As: field.
- 6 If you want to create session and audio files that can be used in either Windows or Macintosh versions of Pro Tools, select Enforce Mac/PC Compatibility.
- 7 Select the Fader Gain (+12 dB or +6 dB).

8 Select the I/O Settings to use for the session. Several pre-configured I/O Settings are included with your system, or you can select a custom I/O Setting that you have created.

- 9 Click Save.



*Pro Tools Import Session Data dialog*

10 In the Import Session Data dialog, do the following:

- Click on the Audio Media Options pop-up menu and select “Link to Source Media (Where Possible).”
- and –
- Click on the Video Media Options pop-up menu and select Link to source media.

11 Change other parameters, as desired. For more information, see “Exporting Audio from Pro Tools for Avid Xpress Pro” on page 9.

12 Click OK.

Pro Tools will create a new Audio Files folder, a Fade Files folder, a Video Files folder, a cache.wfm file, and a session file where you have designated their locations. This session will match the audio file type, sample rate, and bit depth of the audio in the OMF or AMF you selected.

## Importing Tracks from an AAF or OMF Sequence into a Pro Tools Session

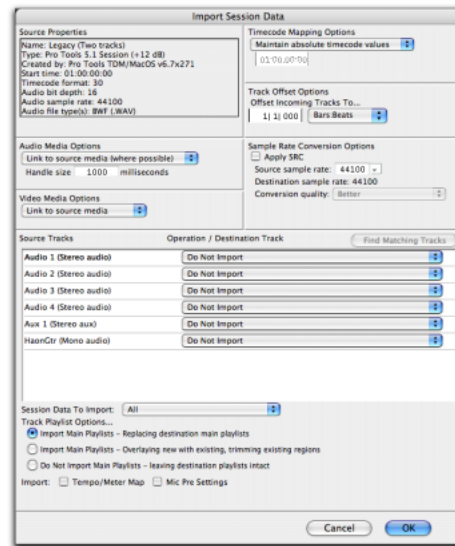
You can import an AAF or OMF sequence into a Pro Tools session if the frame rate of the sequence matches the frame rate of the session.

**⚠** *Importing video into an existing Pro Tools session will replace any older video already occupying the session.*

**To import tracks from an AAF (or OMF) sequence into an existing Pro Tools session:**

- 1 Choose File > Import Session Data.
- 2 In the Open Session dialog, locate the AAF or OMF session you want to import.

3 Click Open.



**Pro Tools Import Session Data dialog**

4 In the Import Session Data dialog, do the following:

- Click on the Audio Media Options pop-up menu and select “Link to Source Media (Where Possible).”
- and –
- Click on the Video Media Options pop-up menu and select Link to source media.

5 For information on other parameters, see “Exporting Audio from Pro Tools for Avid Xpress Pro” on page 9.

6 Click OK.

7 If the source media has a different frame rate than the session (and if the session does not already contain any video), Pro Tools prompts you to allow it to change the frame rate for the session to the media frame rate. (Click OK.)

8 If your audio source media is on a volume that is not suitable for playback (shown as a Transfer volume in the Workspace browser), Pro Tools displays a dialog that guides you to copy the media to a volume designated for Playback or Record. (Click Yes.)


If you import a video file, Pro Tools creates a track for the movie in the timeline and displays the movie on your video monitor.

Now you are ready to edit the audio files in Pro Tools.

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## Editing Audio Files in Pro Tools

Pro Tools does not alter the original audio files created in the Avid Xpress Pro sequence. When you use Pro Tools to perform a destructive edit (such as using AudioSuite processing to replace the original sound) to one of the original files, it creates a new copy of the file and leaves the original untouched.

 See the *Pro Tools Reference Guide* for detailed information on editing audio files in Pro Tools.

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## Exporting Audio from Pro Tools for Avid Xpress Pro


In Pro Tools, you can export audio tracks for use in Avid Xpress Pro using any of the following commands:


- Export Selected Tracks as OMF/AAF
- Bounce to Disk
- Export Selected as Files


For other export methods, see the *Pro Tools Reference Guide*.

## Exporting Tracks as AAF/OMF Sequences

Use Export Selected Tracks as OMF/AAF to export individual tracks or an entire Pro Tools session in AAF or OMF format.

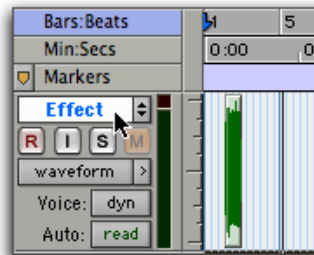
 Tracks are exported in their entirety and time selections are ignored.

 Volume and pan automation is not retained on export if Quantize Edits to Frame Boundaries is enabled (Avid Compatibility Mode).

 The Movie track cannot be exported to AAF or OMF from Pro Tools.

**To export selected audio tracks from Pro Tools as an AAF (or OMF) sequence:**


1 In Pro Tools, select the tracks in the Pro Tools session by Shift-clicking the names of each track.

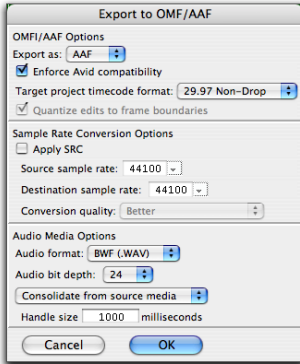


Selecting a track in Pro Tools

2 Choose File > Export Selected Tracks as OMF/AAF.

3 Under OMF/AAF Options, choose AAF (or OMF) from the Export As pop-up menu, and select Enforce Avid Compatibility.

 *Enforce Avid Compatibility limits the sample rate options to 44.1 or 48 kHz. Dithering without noise shaping will be applied to files being exported from 24-bit to 16-bit.*



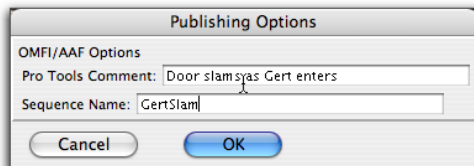
*Pro Tools Export to OMF/AAF dialog*

4 Check that the Target project time code format is correct for the Avid Xpress Pro project.

5 Under the Audio Media Options section, ensure that the Audio format and Audio bit depth match your Avid Xpress Pro Audio settings.

6 Click OK.

7 In the Publishing Options dialog, type the Pro Tools Comment and Sequence Name.

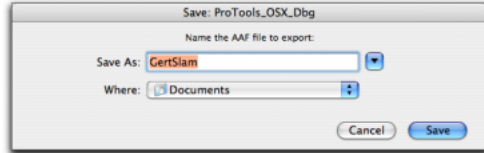


*Pro Tools Publishing Options dialog*

8 Click OK.

Pro Tools will create a sequence with the name you supply. (The Pro Tools comment appears in the Avid Xpress Pro bin in a Pro Tools Comment column.)

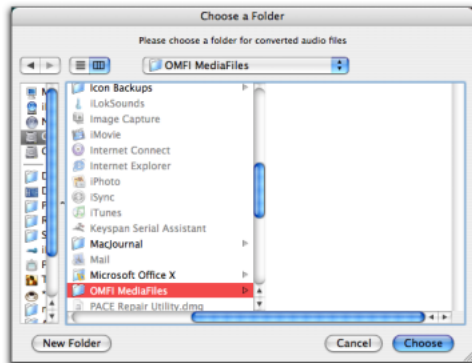
9 In the Name the AAF/OMFI File to Export dialog, navigate to a folder where you can easily locate the Pro Tools composition when it is time to import it into Avid Xpress Pro.



*Pro Tools Name the AAF File to Export dialog (OMFI dialog not shown)*

10 Click Save.

11 In the Please Choose a Folder for Converted Audio Files dialog, navigate to the OMFI MediaFiles folder on an applicable drive.



*Navigating to the OMFI MediaFiles folder*


12 Click Choose.

Pro Tools exports the composition to the desired folder, and exports the related media to the OMFI MediaFiles folder.

13 If you are ready to import the files into Avid Xpress Pro, exit Pro Tools.

### To import a sequence into Avid Xpress Pro:

- 1 Quit Pro Tools if it is open.
- 2 Start Avid Xpress Pro.
- 3 Select a bin where you would like to import the sequence.


 *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 do not delete the files because they are needed for the sequence.*

- 4 Choose File > Import.
- 5 In the Select Files to Import dialog, choose one of the following options from the Enable pop-up menu:
  - AAF Documents (if you are importing AAF)
  - or –
  - OMFI Documents (if you are importing OMF)
- 6 Navigate to the folder that contains the exported Pro Tools composition, and select Files of Type > OMFI or AAF.
- 7 Select the AAF or OMF file.
- 8 Click Open.

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

- 9 Drag the sequence to the Source monitor, and then play the sequence to listen to the audio.
- 10 Drag the original video sequence into the Record Monitor (if it is not already there).

- 11 If you need to add more tracks for the imported sequence, choose Clip > New Audio Track.

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


- 12 Edit the imported tracks into the Timeline.

## Exporting AAF or OMF Files Using Bounce to Disk

Use the Bounce to Disk command to create premixed files of the current Pro Tools session. This does not export all of the individual files on the Timeline, but it does guarantee that the audio in Avid Xpress Pro will be identical to the audio in Pro Tools, including all panning, effects and automation.

### To export to AAF (or OMF) using Bounce to Disk:

- 1 In Pro Tools, finalize the mix.
- 2 Create and select the time range of the sequence that you want to export. (All audible tracks in that time range will be included in the bounce, whether they are selected or not.)
- 3 Choose File > Bounce to Disk.
- 4 Select Publish as OMFI.
- 5 Select Enforce Avid Compatibility.

 *Enforce Avid Compatibility limits the sample rate options to 44.1 or 48 kHz. Dithering without noise shaping will be applied to files being exported from 24-bit to 16-bit.*

- 6 Click Bounce.
- 7 In the Publishing Options dialog, type the Pro Tools Comment and Clip Name.

8 Click OK.

All audible audio in the selection will be exported to two multi-mono audio files.

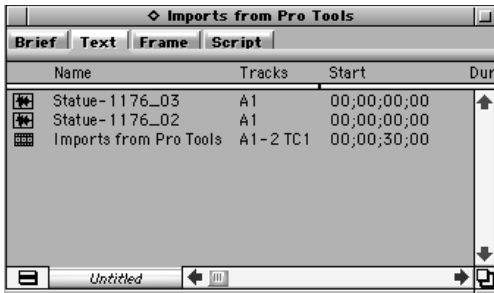
9 In the Save Bounce As dialog, choose the OMFI Media folder on the valid audio drive where you want to save the files.

10 Click Save.

### To import the files into Avid Xpress Pro using the Media Tool:

1 Start Avid Xpress Pro.

2 Select the bin that you want to hold the imported master clip.

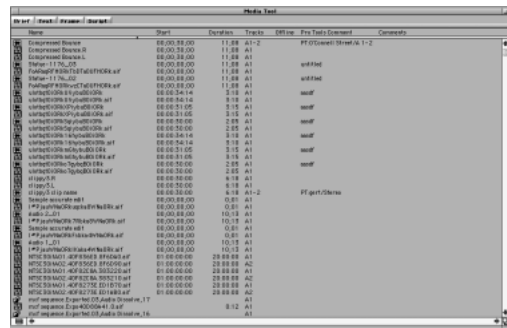


Audio Import Bounce window

3 Choose File > Refresh Media Directories.

**!** This command updates the media database. If you do not use this command, the clip may not appear in the Media Tool.

4 Choose Tools > Media Tool.



### Media Tool

5 In the Media Tool window, select the drive that you used to export the files from Pro Tools.

6 Click 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 for the files you exported from Pro Tools.

9 Drag the master clip to your bin.

10 Edit the master clip into your sequence.