



Video Satellite Guide

Version 10.0

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Guide Part Number 9329-65121-00 REV A 10/11

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Chapter 1: Introduction

Video Satellite is a powerful post-production option for Pro Tools®, employing a separate computer running Avid Media Composer® or Symphony Nitris® DX software for synced video playback, capture, and conversion.



Use of Avid Symphony Nitris DX in a Video Satellite system requires Symphony™ software version 5.0 or higher.

Media Composer or Symphony software with the Video Satellite option can output and capture video through any of the following Avid video peripherals:

- Avid Nitris DX
- Avid Mojo DX
- Avid Mojo SDI (Media Composer 5.5.x and lower only)



Symphony software with the Video Satellite option can output and capture video with the Avid Nitris DX video peripheral only.

Video Output Options

Video Satellite lets you output video using any of the following configurations:

- Playback to an external NTSC or PAL video monitor (Avid Nitris DX, Mojo DX, or Mojo SDI required)
- Playback to an external HD-SDI video monitor with Avid Nitris DX or Mojo DX
- Playback to an external HDMI video monitor (Avid Nitris DX or Mojo DX required)
- Playback to an external analog HD video monitor with Avid Nitris DX
- Full-screen playback on your primary or secondary computer monitor using DVI output


Playback to an External NTSC or PAL Video Monitor

(Avid Nitris DX, Mojo DX, or Mojo SDI Only)

Media Composer requires an Avid video peripheral for high-quality, frame edge-aligned playback of SD video (or 1080 HD video converted to SD video) to an external NTSC or PAL monitor.

Symphony requires an Avid Nitris DX peripheral for video output.

When outputting 1080 HD video using this configuration, you can either transcode an HD sequence to SD video or down-convert an entire HD project to SD video in real time.

 *720p projects cannot be down-converted.*

When using an Avid Nitris DX or Mojo DX peripheral, 1080 HD video can be down-converted to SD video in real time, in software mode.

Hardware-based down-convert is not supported with Video Satellite.

Playback to an External HD-SDI Video Monitor

(Avid Nitris DX or Mojo DX Only)


Media Composer requires an HD-capable Avid video peripheral (Nitris DX or Mojo DX) for high-quality, frame edge-aligned playback of native HD video to an external HD-SDI monitor.


Symphony requires an Avid Nitris DX peripheral for video output

Full-Screen Playback using DVI Output to a Computer Monitor

With a supported video card installed, Media Composer Video Satellite provides full-screen playback of SD or HD video through a DVI port to your primary or secondary computer monitor.

When you play back video on a monitor with a refresh rate that differs from the video frame rate (as is often the case during playback of video through a DVI output), the output yields visual artifacts and offsets in synchronization between audio and video. For example, this occurs during playback of a 24 fps video clip on a DVI monitor with a refresh rate of 75 Hz.

 *If your workflow requires high-quality playback, you must output video through an Avid video peripheral to an NTSC or PAL monitor for SD and downconverted HD, or to an HDMI or HD-SDI monitor for native HD.*

 *For detailed information on the quality of DVI output to your primary or secondary monitor, see Chapter 3, “Video Satellite Workflows.”*

Supported Video Resolutions

Media Composer and Symphony Video Satellite supports the import, capture, and playback of a wide range of video resolutions and frame rates (including HD video):

For detailed information on supported resolutions and frame rates, see Avid Media Composer online help or visit the Avid website (www.avid.com).

To launch online help in Media Composer:

- Choose Help > Online Help.

Support for Avid Interplay

Media Composer, Symphony, and Pro Tools systems support integration with Avid's Interplay asset management system.

Avid Interplay lets Pro Tools and Avid editors integrate the complete workflow of each project by managing assets, tracking versions, and providing powerful metadata and commenting capabilities. Interplay also automates the data flow, eliminating errors and shielding users from complex import/export steps.

When connected to an Interplay system, Media Composer can:

- Check out projects and sequences from Interplay, and export media as needed for Pro Tools
- Check in projects and sequences, including final audio created in Pro Tools

When equipped with the Pro Tools Avid Interplay Option, Pro Tools can:

- Open sequences checked into Interplay
- Export audio tracks directly back to the sequence on Interplay, either adding to or replacing existing audio tracks

For detailed workflows on the following, see the *Pro Tools Avid Interplay Guide*:

- Checking in a sequence to Interplay for Pro Tools
- Importing a sequence into Pro Tools from Interplay.
- Exporting edited audio tracks to Interplay from Pro Tools.
- Importing Pro Tools audio files back into Media Composer

Support for Avid ISIS 7000, ISIS 5000, and MediaNetwork Storage Systems

Avid ISIS® and Unity MediaNetwork are high-speed network storage systems that let multiple users store and share media through a gigabit Ethernet connection (for ISIS) or fibre channel connection (for MediaNetwork).

Media Composer, Symphony, and other Avid video applications can use a Avid shared storage system to share the same media as follows:

- Stream audio and video media in real time
- Share projects, AAF and OMF sequences, and audio and video media.
- Share AAF sequences using the Avid Interplay asset management system (Avid Interplay system required)

Pro Tools can use an Avid shared storage system to share media with Avid video systems as follows:

- Stream audio and video media in real time
- Share audio and video media in a push-pull workflow
- Share Pro Tools sessions, AAF and OMF sequences, and audio and video media.
- Share AAF sequences using the Avid Interplay asset management system (Avid Interplay system required)

Avid Video Terminology

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

Clip A Clip in Media Composer is like a whole file clip in Pro Tools. It references one or more media files that play in synchronization, for instance, a video file and its two audio tracks. Clips are stored in bins.

Subclip A Subclip in Media Composer is like a clip in Pro Tools. It is a shorter version of the clip from which it was created. Subclips are also stored in bins.

Avid Sequence An Avid sequence is equivalent to a Pro Tools session. It is a collection of clips and subclips organized in a Timeline. Sequences are stored in bins.

AAF/OMF Sequence AAF and the older OMF are standards designed specifically for exchanging sequences between applications.

Media Composer and Pro Tools can import and play AAF or OMF sequences. Media Composer can export AAF or OMF sequences for import into Pro Tools. Pro Tools can export tracks from a session as an AAF or OMF sequence for import into Media Composer or other Avid editing applications.

Bins Bins are like folders where you organize clips and sequences. Bins are stored in the individual project folders.

Projects Projects are where you organize a number of bins. Bins can also be shared between projects.

In one project, you could create a new bin to hold all of your video clips and a bin to hold your sound effects, and a bin for sequences. You could close that project, open a new project and open the sound effects bin from the first project to use the same audio in a different sequence. Projects are stored at a user definable location.

Source Monitor The Source Monitor is the Video window above the Timeline (on the left). Use the Source Monitor to select what will be added to the sequence in the Timeline.

Record Monitor The Record Monitor is the Video window above the Timeline (on the right). Playback of the sequence in the Timeline is viewed in the Record Monitor.

Timeline The Media Composer Timeline shows the assorted audio and video elements arranged in a linear sequence, as in Pro Tools.

Client Monitor The client monitor is an external NTSC, PAL, HD or DVI monitor used to display the video output of Media Composer.

Additional Pro Tools and Avid Terminology Counterparts

Pro Tools	Avid
plug-ins	real-time audio effects
automation	volume automation, pan automation
Bounce to Disk	Audio/Video Mixdown

AAF, OMF, and MXF Basics

AAF and OMF files are mechanisms for storing and retrieving media data and metadata so that projects can be freely exchanged between different applications and operating systems (such as between Pro Tools and Avid video editing applications, on Mac or Windows).

Media data and metadata enable an application that receives AAF and OMF sequence files 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 points to existing media files, 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.

Pro Tools supports AAF and OMF sequences that contain embedded audio media.

Pro Tools does not support AAF or OMF sequences containing embedded video media, except if you are importing such sequences into a Video Satellite track. In such cases, only video metadata is imported into the track.



For the purposes of this guide, AAF sequences are emphasized and referenced over the older OMF sequence standard.

MXF

MXF is a media file format. There are MXF video files and MXF audio files, but there are no “MXF sequences.” An AAF sequence may refer to or include MXF media files, but OMF sequences cannot refer to or include MXF files.

Media Composer Support for MXF Media

Media Composer supports the following actions when working with MXF media:

- Creating MXF media when capturing, transcoding, rendering, or using other methods to create media
- Import of MXF media files created in other Avid applications
- Export of MXF audio and video files

Pro Tools Support for MXF Media

Pro Tools supports the following actions when working with MXF media:

- Capture of MXF video media in real time (Avid video peripheral required)
- Import of MXF video and audio media
- Export of MXF audio media

Pro Tools cannot export MXF video files.

Video files digitized in Pro Tools are technically of the MXF format, but are intended only for use in Pro Tools and are not tested for compatibility with other applications.

AAF

AAF sequences are the best way to exchange projects and maintain valuable metadata. An AAF sequence can refer to OMF and/or MXF media files, or have OMF and MXF media files embedded within them. There is no such thing as an AAF audio or video media file.

Media Composer Support for AAF Sequences

Media Composer supports the following actions when working with AAF sequences:

- Import and export of AAF sequences with embedded video files (MXF or OMF) and/or audio files (MXF, WAV, or AIFF)
- Import and export of AAF sequences that refer to external (linked) video files (MXF or OMF) and/or audio files (MXF, WAV, or AIFF)

Pro Tools Support for AAF Sequences

Pro Tools supports the following actions when working with AAF sequences:

- Import and export of AAF sequences that contain embedded or refer to external (linked) MXF, WAV, or AIFF audio files
- Import of AAF sequences that refer to external (linked) MXF or OMF video files
- Import of AAF sequences containing video to a satellite track, in which case Pro Tools imports only the metadata (cuts and clip names) and not the video data.

Pro Tools does not export video files, tracks or metadata as part of AAF sequences.

OMF

OMF is both a media file and sequence format. OMF media files can be audio or video.

Media Composer Support for OMF Media and Sequences

Media Composer supports the following actions when working with OMF media and sequences:

- Import and export of OMF sequences with embedded OMF video files and WAV or AIFF audio files
- Import and export of OMF sequences that refer to external (linked) OMF video files and WAV or AIFF audio files

Pro Tools Support for OMF Media and Sequences

Pro Tools supports the following actions when working with OMF media and sequences:

- Import of OMF video files created by Media Composer or other Avid applications
- Export of OMF audio files
- Import and playback of OMF sequences that refer to external (linked) audio files or contain embedded audio files
- Import and playback of OMF sequences that refer to external (linked) OMF video files
- Export of OMF sequences that refer to external (linked) audio files or contain embedded audio files
- Video satellite systems only: Import of OMF sequences containing embedded video to a satellite track, in which case Pro Tools imports only the metadata (cuts and clip names) and not the video
- Pro Tools does not export video files, tracks or metadata as part of OMF sequences

Embedded Media

Exporting to OMF or AAF with embedded media results in one large OMF or AAF file containing both the metadata and all associated media files. However, it is important to note that file size is limited to 3.4 GB.

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.

MXF Media Data Locations On the volumes you have designated for media storage, Media Composer stores all MXF media:

- When stored locally, MXF media is placed in the *Avid MediaFiles/MXF/1* folder. Media Composer can also read MXF media located at *Avid MediaFiles/MXF/2*, *Avid MediaFiles/MXF/3*, and so on.
- When stored in a shared environment, MXF media is placed in a folder called *Avid MediaFiles/MXF/client.1* (where *client* represents the name of the client computer).

This guide refers to the root folder name (*Avid MediaFiles*) whenever referencing this folder.

OMF Media Data Locations On the volumes you have designated as media drives, Media Composer and Symphony store all OMF media in the *OMFI MediaFiles* folder.

Metadata

Metadata is used to describe:

- Information about each media file. This may include sample rate, bit depth, clip names, the name of the videotape from which the media file was captured, and even timecode 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 clip-based gain, volume and pan automation.

Embedded Media and Linked Media

There are two ways to handle media files when exporting AAF or OMF files:

- Embedded media (in which the media files are embedded in an AAF or OMF sequence)
- Linked media (in which media files are referenced by an AAF or OMF sequence)

Pro Tools lets you import AAF or OMF sequences containing embedded audio files. You can also import AAF or OMF sequences containing embedded video files, but only if you are importing them to a Video Satellite track. In such a case, only the video metadata is imported.

Frame-Accurate Video Editing and Sample-Accurate Audio Editing

Media Composer and Symphony edit 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 destined for an Avid application, it must ensure that the audio 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 Media Composer.

When you use Export Selected Tracks as OMF/AFF to export tracks from Pro Tools with Enforce Avid Compatibility enabled, a number of additional media files labeled Sample Accurate Edit appear in the Avid bins. These are the additional media files that Pro Tools creates to ensure that Media Composer receives frame-accurate audio. You also see the sample-accurate edit media files if you zoom in on the imported audio in the Timeline.

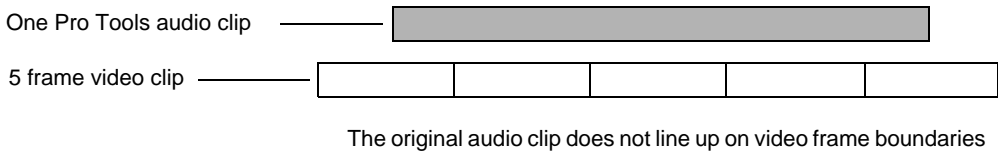


Figure 1. Original audio clip

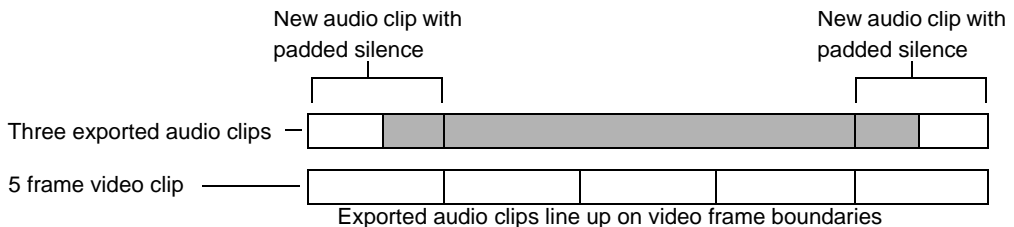




Figure 2. Exported audio clip

System Requirements and Compatibility

Video Satellite requires the following system components:

- Avid-qualified Mac or Windows computer
- Pro Tools with Avid HD Native or Pro Tools|HD hardware with a SYNC HD or SYNC I/O peripheral
- A second Avid-qualified Mac or Windows computer for Media Composer or Symphony
- Media Composer or Symphony System Identification Number and serial number, or Avid Application Key (included with Media Composer or Symphony)
- iLok USB Smart Key (included with Video Satellite option)
- Avid video peripheral (optional, required for high-quality video output)

 *Symphony requires an Avid Nitris DX peripheral.*

 *Mac-based Video Satellite systems are only qualified for use along with Mac-based Pro Tools systems.*

Avid can only assure compatibility and provide support for hardware and software it has tested and approved.

For complete system requirements and a list of qualified computers, operating systems, hard drives, and third-party devices, visit:

www.avid.com/compatibility

Avid Video Peripherals

For high-quality frame edge-aligned playback of SD video (or 1080 HD video converted to SD video), you must add the I/O capabilities of an Avid video peripheral, which includes composite, component, S-Video and, with devices that support it, SDI.

For high-quality frame edge-aligned playback of native HD video, you must add an HD-capable Avid video peripheral, like Nitris DX or Mojo DX.

Supported Avid Video Peripherals

Media Composer supports the following Avid video peripherals:

- Avid Nitris DX
- Avid Mojo DX
- Avid Mojo SDI (Media Composer 5.5.x and lower only)

Symphony requires an Avid Nitris DX peripheral. Original Symphony Nitris hardware is not supported.

When using an Avid video peripheral, the following is required:

- An NTSC/PAL black burst generator
 - or –
- A tri-level sync generator (when working with HD-capable Avid video peripherals)

Conventions Used in This Guide

Pro Tools guides use the following conventions to indicate menu choices and key commands:

Convention	Action
File > Save	Choose Save from the File menu
Control+N	Hold down the Control key and press the N key
Control-click	Hold down the Control key and click the mouse button
Right-click	Click with the right mouse button

The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:



User Tips are helpful hints for getting the most from your system.



Important Notices include information that could affect your data or the performance of your system.



Shortcuts show you useful keyboard or mouse shortcuts.



Cross References point to related sections in this guide and other Avid guides.

About www.avid.com

The Avid website (www.avid.com) is your best online source for information to help you get the most out of your Pro Tools system. The following are just a few of the services and features available.

Product Registration Register your purchase online.

Support and Downloads Contact Avid Customer Success (technical support); download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Knowledge Base or join the worldwide Pro Tools community on the User Conference.

Training and Education Study on your own using courses available online or find out how you can learn in a classroom setting at a certified Pro Tools training center.

Products and Developers Learn about Avid products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

News and Events Get the latest news from Avid or sign up for a Pro Tools demo.

Chapter 2: Installing Video Satellite

Pro Tools and a Media Composer or Symphony video satellite are known collectively as a *video satellite system*, and comprise the following components:

- A dedicated Pro Tools computer with:
 - Pro Tools HD software
 - Pro Tools|HD card(s) or Avid HD Native card
 - Pro Tools HD audio interface
 - SYNC HD or SYNC I/O
 - Video reference (connected to the SYNC HD or SYNC I/O)
 - Local and/or shared audio storage
- A second, dedicated Media Composer or Symphony computer with:
 - Local and/or shared storage for audio and video
 - Avid video peripheral (optional)
 - Client monitor for video playback (optional)
 - Video reference (connected to the Avid video peripheral and the VTR if present)
 - Optional VTR
 - Keyspan USA-19HS adapter for 9-pin deck connection (Mac only)
 - RS-232 to RS-422 serial adapter (Mac only)
- Ethernet connection, either directly through an Ethernet hub or over a larger Ethernet network

To install Media Composer or Symphony Video Satellite option:

1 Install any optional hardware: See “Installing Hardware” on page 14.

2 Install Media Composer or Symphony: See “Installing Media Composer or Symphony Software” on page 16 for details.

3 Authorize Media Composer and the Video Satellite option: See “Authorizing your Video Satellite System” on page 17.

4 Establish an Ethernet connection between the Media Composer and Pro Tools systems: See “Making Ethernet Connections with Video Satellite Systems” on page 21.

5 Link the Media Composer and Pro Tools systems: See “Connecting Media Composer to Pro Tools” on page 22.

The necessary software to run Video Satellite with your Pro Tools system is installed by default.

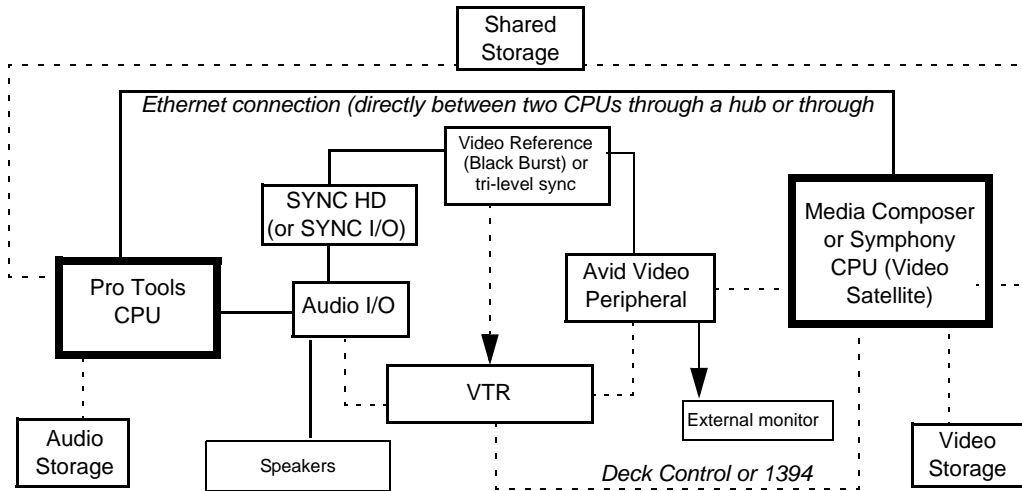


Figure 3. Diagram of Pro Tools and a Media Composer or Symphony video satellite system (with required components connected with solid lines and optional components connected with dotted lines)

Installing Hardware

This section describes installation procedures for the following:

- Avid video peripheral
- Audio monitoring setups
- VTR

Installing an Avid Video Peripheral

For full installation instructions, see the documentation included with your Avid Video Peripheral.

Monitoring Audio from Media Composer or Symphony

The timing of the audio output of Media Composer or Symphony is plus or minus approximately 1/2 frame. While this is not as precise as the audio output of Pro Tools, it may still be useful to listen to the audio output from

Media Composer or Symphony in your Pro Tools session. If desired, route the audio outputs from the video peripheral into the analog or digital inputs of your Pro Tools audio peripheral. If using digital inputs, be sure that the Pro Tools Clock Reference is set to the digital input, or pops and clicks may occur.

However, make sure that the Ref Present LED in the Pro Tools Session Setup window is lit to confirm that the system is still aligned to video reference.

Connecting a VTR

You can use Media Composer or Symphony for capturing audio and video from tape, or for laying audio and video back to tape. There are four types of connections which need to be made:

- Video I/O
- Audio I/O
- Deck Control
- Video reference (black burst)

Connecting Video I/O to the VTR

Connecting a VTR to an Avid Video Peripheral

If an Avid video peripheral is connected to the system, connect the VTR's video I/O to the Avid video peripheral.

To connect a VTR's video I/O to an Avid video peripheral:


- 1 Connect the Avid video peripheral Composite IN, Component IN, S-Video IN, SDI IN, or HD-SDI IN connectors to the corresponding output or outputs on your VTR.
- 2 Connect the Avid video peripheral Composite OUT, Component OUT, S-Video OUT, SDI OUT, or HD-SDI OUT connectors to the corresponding inputs on your VTR.

Connecting a VTR with No Avid Video Peripheral Present

If no Avid video peripheral is connected to the system—but the VTR supports input and output of audio and video as a DV-stream over FireWire—connect the VTR directly to the Media Composer or Symphony computer.

To connect a VTR's video I/O without an Avid video peripheral:

- 1 Connect one end of a 1394 (FireWire) cable to the 1394 connector on the VTR.

 *This only supports DV video formats such as DV25, DVCPro 100 and HDV.*

- 2 Connect the other end of the 1394 (FireWire) cable to an available FireWire port on the Media Composer or Symphony computer.

Connecting Audio I/O to the VTR

Connect the audio inputs and outputs on the VTR to the audio inputs and outputs on the primary Pro Tools HD audio interface.

Configuring Machine Control with a VTR

Because the VTR is usually controlled by Media Composer or Symphony in a video satellite system, you need to connect the video satellite computer directly to the VTR.

If the VTR is DV-based (which means it accepts Deck Control over FireWire), connect the VTR to the Media Composer computer over FireWire.

Connecting a serial 9-pin cable is not necessary if you are using a DV-based VTR that accepts deck control commands over FireWire.

In this case, the serial 9-pin cable is not necessary since the FireWire connection between the VTR and the Media Composer or Symphony client computer is sufficient. (See your VTR documentation for detailed support information.)

If the VTR requires 9-pin control, you need to set it up differently.

To connect a VTR using 9-pin to a Mac computer:


- 1 Plug a Keyspan USA-19HS adapter into a USB port on the computer, and install the included driver software.
- 2 Connect the Keyspan serial port to the deck, using a 9-pin RS-232 to RS-422 adapter and RS-422 cable (not provided).

To connect a VTR using 9-pin to a Windows computer:

- Connect the computer's COM port to the deck, using a 9-pin RS-232 to RS-422 adapter and RS-422 cable (not provided).

Connecting Video Reference

If an Avid video peripheral is connected to the Media Composer or Symphony computer, it must have an appropriate video reference signal (black burst or tri-level sync).

 *Always make sure to connect the proper sync signal to your Avid DNA peripheral before opening a project.*


To connect a video reference signal to your VTR:

- Connect a black burst or house sync output to a video input on your VTR (preferably a reference video input).

Setting Sync Lock for Avid Mojo SDI

When you create a new project with Media Composer connected to an Avid Mojo SDI, Sync Lock in Media Composer defaults to Internal. It is recommended that Sync Lock be changed to Reference to allow the Avid Mojo SDI to lock to external video reference.

This setting will be retained for the duration of the project, but will need to be reset each time you start a new project.

 *It is not necessary to follow these steps when creating new projects with other Avid video peripherals.*

To change Sync Lock to Reference:

- 1 In Media Composer, choose Tools > Video Output Tool.
- 2 In the Sync Lock pop-up menu, select Reference.

Installing Media Composer or Symphony Software

To install Media Composer or Symphony software on Mac:

- 1 Quit any open applications.
- 2 Insert the Avid Media Composer or Symphony disc.
- 3 Run the installer for your Avid editing suite and follow the on-screen instructions.
- 4 When prompted, click Yes, restart my computer.

To install Media Composer or Symphony software in Windows:

- 1 Start your computer and log in to Windows with Administrator privileges. If the Found New Hardware Wizard dialog appears (for any connected Avid hardware), leave it open.
- 2 Quit any open applications.
- 3 Insert the Avid Media Composer or Symphony disc.
- 4 Run the installer for your Avid editing suite and follow the on-screen instructions.
- 5 When prompted, click Yes, restart my computer.

Upgrading from an Earlier Version of Media Composer or Symphony

If you're upgrading from an older version of Media Composer or Symphony, you should remove the previous version of the software, and certain support files.

To uninstall Media Composer or Symphony before installing a newer version on Mac:

- 1 Quit all applications.
- 2 Go to Applications/Avid_Uninstallers
- 3 Open the uninstaller folder for your Avid editing application.
- 4 Run the uninstaller for your Avid editing suite and follow the on-screen instructions.
- 5 Reboot the system.
- 6 Install and authorize Media Composer or Symphony software. For details, see "Installing Media Composer or Symphony Software" on page 16 and "Authorizing your Video Satellite System" on page 17.

To uninstall Media Composer or Symphony before installing a newer version in Windows:

- 1 Uninstall Media Composer or Symphony using the Programs and Features control panel.
- 2 Uninstall Avid Audio Drivers using the Programs and Features control panel.
- 3 Reboot the system.
- 4 Install and authorize Media Composer or Symphony software. For details, see "Installing Media Composer or Symphony Software" on page 16 and "Authorizing your Video Satellite System" on page 17.

Authorizing your Video Satellite System

You will need to authorize both the Media Composer software and the Video Satellite option.


Authorizing Media Composer

Authorize the Media Composer software using one of the following methods:

- Authorize Media Composer or Symphony automatically on the internet using Avid's Activation tool.
- Authorize Media Composer or Symphony manually by phone by calling Avid customer service, or using an Internet connection on a different computer.
- Upgrade from a dongle-based version of Media Composer or Symphony to a software license.
- Upgrade from a dongle-based version of Media Composer or Symphony and continue authorizing the software using your dongle (current service contract required).

To authorize Media Composer or Symphony automatically using the internet:


- 1 Launch Media Composer or Symphony. The Activation tool opens.
- 2 Select “I want to activate my software using this computer’s Internet connection.”
- 3 Click Continue. The Avid Activation dialog box opens.
- 4 Enter your system identification number in the System ID text box. The system identification number is located on the inside cover of the *Installation Guide for Avid Editing Systems*, included with Media Composer.
- 5 Enter your serial number in the Serial Number text box. Your serial number is located on the inside cover of the *Installation Guide for Avid Editing Systems*, included with Media Composer.

 If you purchased Media Composer or Symphony online, you received your system identification number and serial number from Avid by email.

- 6 Click Activate. The Activation tool confirms your system information. When software activation is complete, a message informs you that your software has been successfully activated.
- 7 Click OK. A registration dialog appears.
- 8 Do one of the following:
 - Click Register Later if you don’t want to register Media Composer or Symphony now. You can register at any time by selecting Special > Register Your Software.
 - or –
 - Click Register Now if you want to register Media Composer or Symphony now. The Avid Product Registration web page opens in your default browser, with your system information automatically entered.

To activate Media Composer or Symphony manually:

- 1 Launch Media Composer or Symphony. The Activation tool opens.
- 2 Select “I want to activate my software by phone or by using another computer’s Internet connection.”
- 3 Click Continue. The Avid Activation dialog box opens.
- 4 Enter your system identification number in the System ID text box. The system identification number is located on the inside cover of the *Installation Guide for Avid Editing Systems*, included with Media Composer or Symphony.
- 5 Enter your serial number in the Serial Number text box. Your serial number is located on the inside cover of the *Installation Guide for Avid Editing Systems*, included with Media Composer or Symphony.

 If you purchased Media Composer or Symphony online, you received your system identification number and serial number from Avid by email.

- 6 If you are activating the software by phone, call your local Avid Support Center. Avid Support Center contact information is available online at <http://www.avid.com/support/contact>. Your Avid representative provides an activation code for your software. Once you have your activation code, proceed to step 12.
- 7 If you are using another computer to activate your software, open a web browser on the second computer and navigate to the Activation web page at <http://activate.avid.com>.
- 8 Enter your machine identification number in the Avid Machine ID text box. Your Avid Machine ID number is located on the Avid Activation Dialog box.

9 Enter your system identification number in the System ID text box.

10 Enter your serial number in the Serial Number text box.

11 Click Submit. The Avid Activation page generates your activation code.

12 Transfer the activation code to the system you want to activate. You can copy the code to a text file and use a removable storage device such as a USB drive, or you can transfer the data over your network.

13 In the Avid Activation dialog box, enter the activation code in the Activation Code text box.

14 Click Activate. The Activation tool confirms your system information. When software activation is complete, a message informs you that your software has been successfully activated.

15 Click OK. A registration dialog appears.

16 Do one of the following:

- Click Register Later if you don't want to register Media Composer or Symphony now. You can register at any time by selecting Special > Register Your Software.
- or –
- Click Register Now if you want to register Media Composer or Symphony now. The Avid Product Registration web page opens in your default browser, with your system information automatically entered.

To upgrade Media Composer or Symphony automatically from a dongle to a software license:

1 Make sure your Avid Application Key dongle is attached to your system.

2 Launch Media Composer or Symphony. The Activation tool opens.

3 Select “I want to activate my software using this computer's Internet connection.”

4 Click Continue. The Avid Activation dialog box opens, and lists the System ID from the dongle in the System ID text box.

5 Enter your serial number in the Serial Number text box. Use the serial number that you received from Avid by e-mail.

6 Click Activate. A message box appears, informing you that activating your software license updates your dongle information.

7 Click Continue. The Activation tool confirms your system information. When software activation is complete, a message informs you that your software has been successfully activated.

8 Click OK. A registration dialog appears.

9 Do one of the following:

- Click Register Later if you don't want to register Media Composer or Symphony now. You can register at any time by selecting Special > Register Your Software.
- or –

10 Click Register Now if you want to register Media Composer or Symphony now. The Avid Product Registration web page opens in your default browser, with your system information automatically entered.

To upgrade Media Composer or Symphony manually from a dongle to a software license:

- 1 Make sure your Avid Application Key dongle is attached to your system.
- 2 Launch Media Composer or Symphony. The Activation tool opens.
- 3 Select “I want to activate my software by phone or by using another computer’s Internet connection.”
- 4 Click Continue. The Avid Activation dialog box opens, and lists the System ID from the dongle in the System ID text box.
- 5 Enter your serial number in the Serial Number text box. Use the serial number that you received from Avid by e-mail.
- 6 If you are activating the software by phone, call your local Avid Support Center. Avid Support Center contact information is available online at <http://www.avid.com/support/contact>. Your Avid representative provides an activation code for your software. Once you have your activation code, proceed to step 12.
- 7 If you are using another computer to activate your software, open a web browser on the second computer and navigate to the Activation web page at <http://activate.avid.com>.
- 8 Enter your machine identification number in the Avid Machine ID text box. Your Avid Machine ID number is located on the Avid Activation Dialog box.
- 9 Enter your system identification number in the System ID text box.
- 10 Enter your serial number in the Serial Number text box.
- 11 Click Submit. The Avid Activation page generates your activation code, and opens a page that asks for a confirmation code. Do not close the confirmation code page.

12 Transfer the activation code to the system you want to activate. You can copy the code to a text file and use a removable storage device such as a USB drive, or you can transfer the data over your network.

13 In the Avid Activation dialog box, enter the activation code in the Activation Code text box.

14 Click Activate. The Activation tool confirms your system information. When software activation is complete, a message informs you that your software has been successfully activated.

15 Click OK. A confirmation code is displayed.

16 On the computer connected to the Internet, enter the confirmation code, and click OK.



If the Confirmation Code text box is not visible, click “Click here to enter your dongle confirmation code.”

To upgrade Media Composer or Symphony and continue to authorize the software with a dongle:

1 Make sure your Avid Application Key dongle is attached to your system.



You can only activate your application with a dongle if you are upgrading from an earlier version of Media Composer or Symphony to the current version and have a current Avid service contract. In this case, the dongle option is available in the Activation Tool. If you received a dongle upgrader card with your upgrade, please see the instructions in your upgrade kit.

2 Launch Media Composer or Symphony. The Activation tool opens.

3 Select “I am upgrading from a previous version and would like to continue using my dongle.”

4 Click **Continue**. The Activation tool confirms your system information. When the activation is complete, a message informs you that your software has been successfully activated.

5 Click **OK**.

Authorizing the Video Satellite Option

To authorize the Video Satellite option:

- Insert the iLok key that is authorized for the Video Satellite option into an available USB port on your Media Composer computer.

If authorizing a Windows system, a dialog will display a message indicating that the computer is identifying and recognizing the iLok key.

If you've previously used the Video Satellite option with Avid Media Station|PT, you can continue to use the original iLok authorization that came with that option. The authorization will need to be moved from the Pro Tools system it is currently on, to the Media Composer or Symphony system you now wish to authorize.

If the authorization is on an iLok key by itself, simply move that iLok key from the Pro Tools system to a free USB port on the Media Composer or Symphony system.

If the iLok key contains other software authorizations and needs to stay with the Pro Tools system, you will need to purchase an additional iLok key (from your local dealer or from www.avid.com) and transfer the authorization, titled "Video Satellite Option PT 7.4," to it by visiting www.ilok.com.

Once this is done, the new iLok key can be used to authorize the Video Satellite option on the Media Composer or Symphony system.

Making Ethernet Connections with Video Satellite Systems

To exchange transport commands and files on remotely mounted storage, the computers in a video satellite system communicate over Ethernet with the standard TCP/IP protocol using 100 Base-T or 1000 Base-T connections. The computers may either be connected directly through a hub or switch, or over a Local Area Network (LAN).

Using a Direct Connection


Use a direct connection for any of the following conditions:

- When the satellite will always be connected to the same Pro Tools system
- When a LAN is not available
- To avoid possible conflicts on the LAN with other network traffic

To connect the systems directly:

1 Connect a CAT5e Ethernet cable between the Pro Tools system and a standard Ethernet hub or switch.

2 Connect another CAT5e cable between the Media Composer system and the same hub or switch.

 *Direct connection over a crossover Ethernet cable without a hub or switch may work with some systems, but is untested.*

Using a LAN connection

Use a LAN for any of the following conditions:


- When the video satellite is located in a separate room from the Pro Tools system
- When you want Pro Tools and Media Composer computers on a LAN to access the Internet or connect to other locations on your network

To connect a video satellite system to a LAN:

1 Connect both systems to a standard 100 Base-T or 1000-Base-T Ethernet network as you would any other computer.

2 Make sure that both systems are operating on the same subnet.

By default, both systems communicate using TCP/IP port 28282, though that can be changed if necessary.

 *If you find you need to enter the IP address after each reboot, try turning off DHCP.*

Connecting Media Composer to Pro Tools

Before the Media Composer system can be used as a video satellite with Pro Tools, the connection between the two systems must be established over ethernet. The Pro Tools system must be configured as an *administrator* and the Media Composer system must be configured as a *satellite*.

To configure a Media Composer system as a video satellite:

1 In the Project window, click the Settings Tab and click Video Satellite.

2 In the Video Satellite Settings window, select Video Satellite Mode.

3 Click OK.

To configure a Pro Tools system as an administrator:

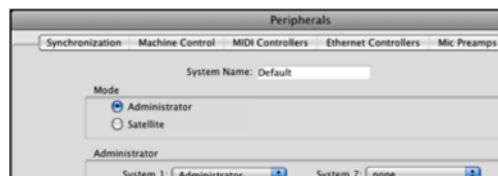
1 Choose Setup > Peripherals and click Satellites.

2 In the System Name text box, enter a name for the system.

3 Under Mode, choose Administrator.

4 Under Administrator, choose the current system from one of the System pop-up menus.

5 Click OK.



Configuring a Pro Tools system as an administrator in the Satellites page of the Peripherals dialog

When a Media Composer system has been configured as a satellite, it becomes available on the administrator system.

Chapter 3: Video Satellite Workflows

This chapter describes the following workflows for using Pro Tools with Media Composer or Symphony configured as a video satellite:

- Changing Video Output Settings
- Cross-mounting media storage on remote systems
- Opening Avid sequences that have been delivered to you in an Avid bin
- Opening AAF sequences that have been exported from another Avid application or Pro Tools
- Connecting Pro Tools to a satellite
- Linking Pro Tools to a satellite
- Capturing audio and video
- Batch capturing audio and video
- Laying back audio and video
- Digitally exporting audio and video

Changing Video Output Settings

This section describes how to change the following video output settings for projects in Media Composer or Symphony:

- Video quality
- Full-screen playback settings

Changing Video Quality

The Media Composer or Symphony Timeline includes a Video Quality icon that lets you change the video quality. This setting is saved for each project.



Video Quality icon (at the bottom of the Timeline)


Click the icon to change the video quality as follows:

Draft Quality (Yellow/Green) Outputs a 1/4-resolution picture to all the monitors, but allows more real-time video effects. This is the default setting for every new project.

Best Performance Quality (Yellow) Outputs 1/16-resolution and supports the most real-time effects, but is the lowest-quality output.

Full Quality (Green) Outputs full resolution picture using the attached video peripheral. The DVI output is always Draft quality unless you select both Full Quality in the Video Quality Menu and Display Both Fields in the in the Full Screen Playback dialog. When combined with the Display Both Fields option in the Full Screen

Playback Settings dialog (see “Changing Video Output Settings for Full-Screen Playback” on page 24), this setting provides full-resolution output to the DVI port.

 *Performing a Digital Cut always changes the output to the tape deck to Full Quality automatically.*

Changing Video Output Settings for Full-Screen Playback

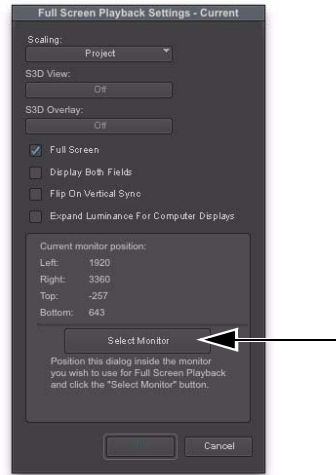
(Media Composer Only)

The Full Screen Playback Settings dialog lets you make the following optional changes for outputting full screen playback:

- Change the video output monitor (if you have more than one monitor connected)
- Prevent frame-tearing in full screen playback
- Adjust luminance for standard computer monitors

To change video output options:

- 1 In the Project window, click the Settings tab.
- 2 Double-click the Full Screen Playback setting.
- 3 To designate the video output monitors in a multiple monitor setup, drag the Full Screen Playback Settings dialog so that it is displayed on the monitor you want to designate as the video output monitor.




Select Monitor button in the Full Screen Playback Settings dialog

4 Choose Select Monitor.

5 You can also change the following options:

Display Both Fields When combined with the Full Quality setting in the Video Quality icon (see “Changing Video Quality” on page 23), this setting provides full-resolution output to the DVI port.

Flip On Vertical Sync If you notice that your video output is “tearing” (horizontal distortion on rapidly moving or heavily edited sequences), select this option.

 *Changing these settings may cause sync issues or cause the video output to stutter.*

Expand Luminance for Computer Displays If you are outputting full screen playback to a standard computer monitor, select this option for a more accurate video image. If you are outputting full screen playback to a professional quality monitor through Component, DVI, or HDMI outputs, you may want to deselect this option.

6 Click OK to save your changes.

Video Frame Rate vs. Monitor Refresh Rate


When you play back video on a monitor with a refresh rate that differs from the video frame rate (as is often the case during playback of video through a DVI output), the output yields visual artifacts and offsets in synchronization between audio and video. For example, this occurs during playback of a 24 fps video clip on a DVI monitor with a refresh rate of 75 Hz.

If your workflow requires high-quality playback, you must output video through an Avid video peripheral to an NTSC or PAL monitor.


The artifact and audio/video sync issues occur as follows:

Frame “Tearing” & Video “Stutter” Frame “tearing” is the horizontal distortion on rapidly moving or heavily edited sequences. Video “stutter” is the subtle shifting of video during playback.

You can remedy one of these issues at a time (but not simultaneously) using the Flip On Vertical Sync option, located in the Full Screen Playback Settings dialog.

 See “Changing Video Output Settings for Full-Screen Playback” on page 24.

Audio/Video Synchronization Offset Audio/video synchronization varies slightly with each frame. Though usually not noticeable to the eye, more precise measuring devices cause offsets in AV sync of up to 1/2 frame or more. This is normal whenever using the output of a computer’s monitor card, and does not affect capture, editing, or layback.

 For more information, see “Changing Video Output Settings for Full-Screen Playback” on page 24.

Cross-Mounting Media Storage on Remote Systems

To simplify the transfer of sequence and media files between Pro Tools and satellite systems that are not connected to shared storage, it can be helpful to mount the media storage of one system on the desktop of the other system. This practice is known as *cross-mounting*, and the computer on which you are mounting that storage is known as the *remote system*.

For example, you most likely want the local video storage—which is physically connected to the satellite system—to appear on the desktop of both the satellite and Pro Tools systems. In addition, some workflows are simpler if the local audio storage—which is physically connected to the Pro Tools system—also appears on the desktop of the satellite system.

Cross-mounting audio or video storage on a remote system involves the following steps:

- Choosing a storage configuration.
- Sharing the desired volume so that it can be mounted on the remote system.
- Cross-mounting the shared volume on the remote system.

Choosing a Storage Configuration

While it is possible to cross-mount both the audio and video storage on both systems at the same time, the workflows in this chapter only require that you cross-mount one or the other.

Mounting the video storage on the Pro Tools system is the preferred configuration for most common satellite workflows.

Mount the audio storage on the satellite system if you frequently use any of the following workflows:

- You receive updated versions of AAF sequences with additional audio files.
- You export audio from Pro Tools for import into Media Composer or Symphony.
- Your satellite system is connected to a shared storage system, but your Pro Tools system is not.
- Your satellite system is connected to Avid Interplay, but your Pro Tools system is not.

Sharing Media Storage for Mounting on a Remote System

This section describes how to share media storage for mounting on remote computers.

Sharing Mac OS X Media Storage for Mounting on Windows

You can share a Mac OS X volume so that it can be mounted on a remote Windows machine.

To Enable File Sharing on Mac OS X:

1 Enable the volumes and/or folders you want to share by doing one of the following:

- Right-click the volume or folder you wish to share and check the Shared Folder box.
- or –
- Go to System Preferences > Sharing and use the + icon under Shared Folders to navigate to the volume or folder you wish to share.

2 In System Preferences > Sharing, check and select File Sharing and take note of the computer's name.

3 Under Users, set the permissions for each shared folder or volume as needed.


4 Choose Options, and make sure that “Share Files and Folders using SMB” is checked, along with all account names that need access to the shared materials.

Sharing Windows Media Storage for Mounting on a Remote Computer

You can share a Windows volume for mounting on Mac OS X or another Windows system. The process is slightly different depending on whether the computer you are sharing is part of a domain or part of a workgroup.

To share a Windows 7 volume:

- 1 On the Windows 7 computer containing the volume you want to share, click the Start button.
- 2 In the Start menu, click Computer.
- 3 Right click the volume you want to share, and select Properties.
- 4 Select Sharing, then Advanced Sharing.
- 5 Select the Share this Folder option.
- 6 Type a name in the Share Name field to identify this share. This name can be anything, but it is probably easiest if you use the name of the shared volume.

 *You should share the entire volume if possible and not just individual folders. This makes it easier for you to re-link files in your Pro Tools session.*

- 7 Select any other options in this dialog.
- 8 Click OK to share this volume.

You are now ready to mount this shared volume on another computer. See “Cross-Mounting Shared Media Storage on a Remote System” on page 28



When you manually copy files from a Mac volume to a mounted Windows volume, a “ghost” file appears for each file that you copy. The ghost file has a nearly identical name to the original file, except that it is prefixed with the characters ._ and a greyed out icon. For example, copying the filename Macintosh.doc would create another file called ._Macintosh.doc. These files do not affect anything and can be deleted without causing any issues.

Cross-Mounting Shared Media Storage on a Remote System

This section describes how to cross-mount a shared volume on a remote system.

Cross-Mounting Windows Media Storage on Mac OS X

You can mount a shared Windows volume on Mac OS X.


To mount a shared Windows volume on Mac OS X:

- 1 In Mac OS X, go to the desktop.
- 2 Choose Go > Connect to Server.



Connect to Server dialog

- 3 In the Server Address field, type `SMB://computer`, where *computer* represents the name of the computer that contains or is connected to the desired volume.

 To learn the name of the Windows machine: on the Windows computer, right-click *My Computer* and select *Properties*, then click the *Computer Name* tab in the *Properties* window.

For example, to connect to the Media Composer computer called *MyComputer*, you would type:

`SMB://MyComputer`


- 4 Click **Connect**.

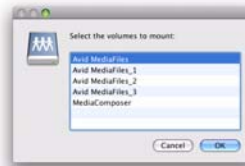
- 5 In the System Authorization dialog, enter the username and password information for the user who has share privileges on the Windows computer.



System authorization dialog

- 6 Click **OK**.
- 7 In the volume select dialog, select the volume you want to mount on the Mac OS X desktop.

 The name shown in the menu is the Share name created in “Sharing Media Storage for Mounting on a Remote System” on page 26, and may not be the same as the actual volume name.



Select the volume dialog

- 8 Click **OK**.
- 9 Mac OS X mounts the volume on the desktop.

Cross-Mounting Mac OS X or Windows Media Storage in Windows

You can mount another computer's shared volume on a Windows computer.

To mount the shared volume in Windows 7

1 On the Windows 7 computer you want to use to access a shared volume, click the Start button.

1 In the Start menu, click Computer.

2 Click the Tools menu and select Map Network Drive...

3 In the Map Network Drive window, select the drive letter you wish to map the network drive to from the Drive: menu.

4 Type or browse to the location of the network resource you want to access.

5 Click the Finish button in the Map Network Drive window.

6 You'll now see the shared volume in the Computer window, ready to access.



To create a shortcut for the shared volume storage on the desktop, Right-click the shared volume and select Create Shortcut. This will let you to easily re-mount the shared volume after you reboot.



If you find you need to enter the IP address after each reboot, try turning off DHCP.



When mapping Mac OS X volumes on the Windows system, the Mac system may appear as a generic name such as "Mac000a958ce06c". If this occurs, try renaming the Mac Computer Name in System Preferences > Sharing > File Sharing and rebooting the Mac. If the Mac is not seen by the Windows system, try rebooting one or both systems.

Opening Sequences for Playback on a Video Satellite System

To play back a video sequence on a video satellite system, you must first ensure that video files are placed on the video storage connected to the Media Composer or Symphony system, and that audio files are placed on the audio storage connected to the Pro Tools system. The workflow you choose depends on two factors:

- Whether you are opening a native Avid sequence as opposed to an AAF sequence
- Whether the sequence you are opening resides on a volume which is suitable for direct playback

To open a native Avid sequence, see one of the following sections:

- "Opening an Avid Sequence from a Volume Supporting Direct Playback" on page 30.
- "Opening an Avid Sequence from a Volume Not Supported for Playback" on page 33.

To open an AAF sequence, see "Opening an AAF Sequence for Playback on a Video Satellite System" on page 39.

Receiving Avid Sequences or AAF Sequences

The steps you use to open a sequence depend on which of the following you have received:

- An Avid bin containing a native Avid sequence (a sequence which has been created in an Avid editing application such as Media Composer or Symphony).
- An AAF sequence which has been exported from an Avid application specifically for import into Pro Tools, Media Composer, or other applications.

Opening an Avid Sequence from a Volume Supporting Direct Playback

This section describes how to open a sequence that is currently stored on a volume suitable for playback in Media Composer (such as local video storage, Unity MediaNetwork, or ISIS).

For details on importing AAF sequences, see “Opening an AAF Sequence for Playback on a Video Satellite System” on page 39.

Opening an Avid Sequence on Local Storage or Avid Shared Storage with Pro Tools Not Playing from Avid Shared Storage

This section describes how to open a sequence with the following configuration:

- Media Composer or Symphony will open the sequence either from the video storage volume or an Avid shared storage system.
- Pro Tools is not connected to the Avid shared storage system (if any).

This workflow involves the following steps:

- Opening the sequence in Media Composer or Symphony directly from the local storage or Avid shared storage workspace.
- Creating an AAF export from Media Composer or Symphony, copying audio to the audio storage.
- Importing the AAF sequence into Pro Tools.

Opening an Avid Sequence with Pro Tools Playing from ISIS 7000, ISIS 5000, or Unity MediaNetwork

This section describes how to open a sequence with the following configuration:

- Media Composer or Symphony will open the sequence from an Avid shared storage system.
- Pro Tools will play the audio directly from the Avid shared storage system.

This workflow involves the following steps:

- 1 Open the sequence in Media Composer or Symphony directly from the Avid shared storage workspace.
- 2 Create an AAF export from Media Composer or Symphony, consolidating audio to the dedicated Avid shared storage audio workspace.
- 3 Open the AAF sequence in Pro Tools, linking to the audio on the Avid shared storage audio workspace.

To open and play back an Avid sequence with Pro Tools playing from Avid shared storage:

- 1 Launch Media Composer, and open the project containing the sequence.
- 2 Open the bin containing the sequence you are working with.
- 3 Drag the sequence into the Record Monitor to place it in the Timeline.
- 4 Select and Right-click the sequence, and choose Export.

5 In the Export As dialog, click Options.



Export As dialog

6 In the Export Settings dialog, do the following:

- Make sure the Export As pop-up menu is set to AAF.
- and –
- Enable the options for Include All Video Tracks and Include All Audio Tracks in Sequence.

7 Click the Video/Data Details tab, and select Link to (Don't Export) Media from the Export Method pop-up menu.




Export Settings dialog (Video/Data Details tab)

8 Click the Audio Details tab, and select Consolidate Media from the Export Method pop-up menu.



Export Settings dialog (Audio Details tab)

9 Click Save.

 You can also click Save As to save the Export settings you just created. See “Saving, Recalling, and Using Export Settings to Export AAF Sequences” on page 38 for details.

10 In the Export As dialog, locate the desired folder on the dedicated Avid shared storage audio workspace.

11 Click Save.

12 In Pro Tools, choose File > Open Session, and select the AAF in the Avid shared storage audio workspace.

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

- Under Audio Media Options, select Link to Source Media.
- and –
- Under Video Media Options, select Link to Source Media.

14 Under the Source Tracks section of the Import Session Data dialog, do all of the following:

- To import the metadata (cuts and clip names) exported from a video satellite into a new video track, select New Satellite Track. (The video itself will not be imported.)
- To import video into a new video track in Pro Tools, select New Video Track (SD video only, Avid video peripheral required).
- For each audio track you want to import, select New Track.

15 Select any other options, and click OK.

The AAF sequence opens in Pro Tools.

Opening an Avid Sequence with Pro Tools Connected to Avid Shared Storage but Not Streaming

This section describes how to open a sequence with the following configuration:

- Media Composer or Symphony will open the sequence from a Avid shared storage system.
- Pro Tools is connected to the Avid shared storage system but cannot play the media directly from it.

This workflow involves the following steps:

- Opening the sequence in Media Composer or Symphony directly from the Avid shared storage workspace.
- Creating an AAF export from Media Composer or Symphony, linking to existing audio files.
- Opening the AAF sequence in Pro Tools, copying the audio files to the local audio storage.

To open an Avid sequence by copying audio from shared workspaces:

- 1 Launch Media Composer, and open the project containing the bin and sequence you wish to open.
- 2 Open the bin containing the sequence you are working with.
- 3 Drag the sequence into the Record Monitor to place it in the Timeline.
- 4 Select and right-click the sequence, and choose Export.

- 5 In the Export As dialog, click Options.



Export As dialog

- 6 In the Export Settings dialog, do the following:

- Make sure the Export As pop-up menu is set to AAF.
- and –
- Enable the options for Include All Video Tracks and Include All Audio Tracks in Sequence.

- 7 Click the Video/Data Details tab, and select Link to (Don't Export) Media from the Export Method pop-up menu.



Export Settings dialog (Video/Data Details tab)

- 8 Click the Audio Details tab, and select Link to (Don't Export) Media from the Export Method pop-up menu.



Export Settings dialog (Audio Details tab)

9 Click **Save**.



*You can also click **Save As** to save the Export settings you just created. See “Saving, Recalling, and Using Export Settings to Export AAF Sequences” on page 38 for details.*

10 In the Export As dialog, locate any folder on the Avid shared storage workspace that is accessible to the Pro Tools system.

11 Click **Save**.

12 In Pro Tools, choose **File > Open Session**, and select the AAF sequence on the Avid shared storage workspace.

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

- Under **Audio Media Options**, select **Copy from Source media**.
- and –
- Under **Video Media Options**, select **Link to Source Media**, (to import metadata only) or **Copy from Source Media** (to import the video data, SD only, Avid video peripheral required)

14 Under the **Source Tracks** section of the Import Session Data dialog, do one of the following:

- If you chose **Link to Source Media** in the **Video Media Options** section, select **New Satellite Track**. This will import the metadata (cuts and clip names) exported from a video satellite into a new video track. (The video itself will not be imported.)
- or –
- If you chose **Copy from Source Media** in the **Video Media Options** section, select **New Video Track**. This will import video into a new video track in Pro Tools.

15 For each audio track you want to import, select **New Track**.

16 Select any other options, and click **OK**.

The AAF sequence opens in Pro Tools. Audio files are copied in the background to the session's Audio Files folder.

Opening an Avid Sequence from a Volume Not Supported for Playback

This section describes how to open a sequence stored on a volume that is not suitable for playback in Media Composer or Symphony (such as a DVD or Ethernet-mounted network volume). This workflow assumes you are receiving a bin from another Avid editing application.

For details on importing AAF sequences, see “Opening an AAF Sequence for Playback on a Video Satellite System” on page 39.

This workflow involves the following steps:

- 1** Copy the Avid bin to the desired Project folder.
- 2** Copy the media to the video storage.
- 3** In Media Composer, do one of the following:
 - Open the project containing the bin.
 - or –
 - Create a new project and open the bin within the project.
- 4** Open the desired sequence within the bin.
- 5** Export an AAF sequence from Media Composer.
- 6** In Pro Tools, import the AAF sequence, making sure to copy the audio files to the audio storage.

Copying the Avid Sequence to the Satellite Video Storage

To copy an Avid sequence and its referenced video to the video storage drive on Media Composer:

1 Locate the bin containing the sequence on the hard drive, DVD, or generic network volume.

2 Copy the bin and the media to the satellite video storage, as follows:

- Copy all OMF video files and OMF-wrapped AIFF or WAV files to the OMFI MediaFiles folder.
- and –
- Copy all MXF files to the Avid MediaFiles folder.

3 Do one of the following:

- From within an Avid project, choose File > Open Bin, and select the bin you wish to open.
- or –
- Copy the bin containing the sequence to the desired project folder (the location of which depends on where you keep your project and whether the project is shared or private).



OMF video files have the .omf file extension and are usually stored in the OMFI MediaFiles folder. OMF-wrapped audio files have the .wav or .aif extension and are also stored in the OMFI MediaFiles folder. MXF files have the .mxf file extension and are usually stored in the Avid MediaFiles folder.

Exporting an Avid Sequence as an AAF Sequence with Audio Storage Mounted on the Satellite

This section describes how to export an AAF sequence for Pro Tools when the audio storage is mounted on the satellite.

To export an AAF sequence for Pro Tools with audio storage mounted on the satellite:

1 On the Pro Tools system, do one of the following:

- Create a session with the desired name and ensure that the frame rate matches the frame rate of the AAF sequence.
- or –
- Open an existing session into which you wish to import the AAF sequence.

2 On the satellite system, open the project containing the sequence you wish to export.

3 Open the bin containing the sequence you want to export.

4 Drag the sequence into the Record Monitor to place it in the Timeline.

5 Select and right-click the sequence, and choose Export.

6 In the Export As dialog, click Options.

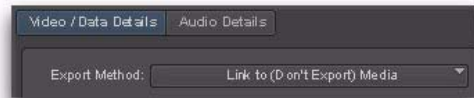


Export As dialog

7 In the Export Settings dialog, do the following:

- Make sure the Export As pop-up menu is set to AAF.
- and –
- Enable the Include All Video Tracks in Sequence and Include All Audio Tracks in Sequence options.

8 Click the Video/Data Details tab, and select Link to (Don't Export) Media from the Export Method pop-up menu.



Export Settings dialog (Video/Data Details tab)

9 Click the Audio Details tab, and select one of the following options from the Export Method pop-up menu:

Consolidate Media This option is faster and uses less storage because only those parts of the audio files which are actually used in the sequence are copied. You have the option to add “handles” on either end of the files in case you need to extend them once in Pro Tools.

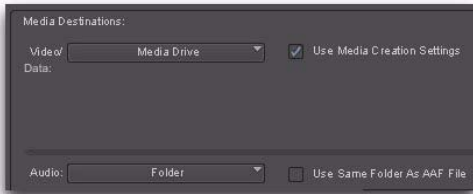
Copy All Media This option is slower and uses more storage, but allows you access to the full file once in Pro Tools. If this export is an update to an existing sequence where you copied instead of consolidated, only new files will be copied as long as you are exporting the AAF to the same session folder.



Export Settings dialog (Audio Details tab)

10 In the Media Destination section, do the following:

- Select Folder from the Audio pop-up menu.
- and –
- Select the Use Same Folder As AAF File option.



Export Settings dialog (Media Destination section)

11 Click Save.



You can also click Save As to save the Export settings you just created. See “Saving, Recalling, and Using Export Settings to Export AAF Sequences” on page 38 for details.

12 In the Export As dialog, select the desired session folder on the Pro Tools audio storage.

13 Click Save.

This creates an OMFI MediaFiles folder (for OMF media) or Avid MediaFiles folder (for MXF media) in the Pro Tools session folder on the audio storage. The AAF sequence will be also be created in the session folder. The AAF sequence must be in the same folder as the media folders in order to relink properly.

14 In Pro Tools, choose File > Import > Session Data.

15 Locate the AAF sequence exported from Media Composer, and click Open.

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

- Under Audio Media Options, select Link to Source Media (Where Possible).
- and –
- Under Video Media Options, select Link to Source Media.

17 Under the Source Tracks section of the Import Session Data dialog, do the following:

- To import the metadata (cuts and clip names) exported from a video satellite into a new video track, select New Satellite Track. (The video itself will not be imported.)
- To import video into a new video track in Pro Tools, select New Video Track (SD video only, Avid video peripheral required.)
- For each audio track you want to import, select New Track.

18 Select any other options, and click OK.

The AAF opens in Pro Tools.

Exporting an Avid Sequence as an AAF Sequence with Video Storage Mounted on the Pro Tools System

This section describes how to export an AAF sequence for Pro Tools when the video storage is mounted on the Pro Tools system.

To export an AAF sequence for Pro Tools with video storage mounted on the Pro Tools system:

- 1 On the satellite system, open the project containing the sequence you wish to export.
- 2 Open the bin containing the sequence you wish to export.
- 3 Drag the sequence into the Record Monitor to place it in the Timeline.
- 4 Select and right-click the sequence, and choose Export.
- 5 In the Export As dialog, click Options.



Export As dialog

6 In the Export Settings dialog, do the following:

- Make sure the Export As pop-up menu is set to AAF.
- Enable the Include All Video Tracks in Sequence option.
- Enable the Include All Audio Tracks in Sequence option.

7 Click the Video/Data Details tab, and select Link to (Don't Export) Media from the Export Method pop-up menu.



Export Settings dialog (Video/Data Details tab)


8 Click the Audio Details tab, and select Link to (Don't Export Media) from the Export Method pop-up menu.



Export Settings dialog (Audio Details tab)

9 Click Save.

10 In the Export As dialog, save the AAF sequence to a convenient location on the video storage.

 We recommend that you create a “Drop Box” folder on the root of the video storage for exchanging files. Do not save the AAF sequence in any of the media folders.

11 Click Save.

Media Composer or Symphony saves the AAF sequence file to the destination folder.

12 On the Pro Tools computer, choose Windows > Workspace.



Pro Tools Workspace browser

13 Do one of the following:

- If you have not opened a session in Pro Tools, navigate to the AAF sequence in the Workspace browser, and double-click it to open it.
- or –
- If you are creating a new session into which to import the AAF, select the file format, sample rate and bit depth matching those properties in the original files referenced by the AAF sequence. Name the Session and save it to your dedicated audio storage.

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

- Under Audio Media Options, select Copy from Source media.
- and –
- Under Video Media Options, select Link to Source Media, (to import metadata only) or Copy from Source Media (to import the video data, SD only, Avid video peripheral required)

15 Under the Source Tracks section of the Import Session Data dialog, do one of the following:

- If you chose Link to Source Media in the Video Media Options section, select New Satellite Track. This will import the metadata (cuts and clip names) exported from a video satellite into a new video track. (The video itself will not be imported.)
- or –
- If you chose Copy from Source Media in the Video Media Options section, select New Video Track. This will import video into a new video track in Pro Tools.

16 For each audio track you want to import, select New Track.

17 Select any other options, and click OK. The AAF opens in Pro Tools.

Saving, Recalling, and Using Export Settings to Export AAF Sequences

To save Media Composer export settings:

- 1 In Media Composer, right-click a sequence in any bin and choose Export.
- 2 In the Export As dialog, click Options.



Export As dialog

- 3 In the Export Settings dialog, choose the desired export options.
- 4 Click Save As.
- 5 In the Save Export Setting dialog, type a name for your setting, and click OK.

To recall Media Composer export settings:

- 1 In Media Composer, right-click a sequence in any bin and choose Export.
- 2 In the Export As dialog, select your customized Export Setting from the Export Setting pop-up menu.

Opening an AAF Sequence for Playback on a Video Satellite System

You can open an AAF sequence for playback on a video satellite system from volumes that do or do not support direct playback.

Importing an AAF Sequence into Media Composer from a Volume Supporting Direct Playback

Volumes supporting direct playback can include local video storage or Avid shared storage.

To import an AAF sequence into Media Composer from a volume supporting direct playback:

1 If the AAF sequence you received contains linked media, copy the media as follows:

- Copy all OMF video files and OMF-wrapped WAV or AIFF files to the OMFI MediaFiles folder.

– and –

- Copy all MXF files to the Avid MediaFiles folder.

2 Refresh the media database by doing one of the following:

- Launch Media Composer.

– or –

- Choose File > Refresh Media Directories

3 In Media Composer, open the bin where you want to import the AAF sequence. (If the bin is already open, click inside it to make it the active window.)

4 Choose File > Import.

5 Locate the AAF sequence on the volume supporting direct playback.

One of the following occurs:

- If you imported an AAF sequence that refers to external (linked) media, the sequence appears in the bin.
- If you imported an AAF sequence with embedded media, Media Composer automatically copies the embedded media to the designated media file folders.

6 When the sequence appears in the bin, drag the sequence into the Record Monitor to place it in the Timeline.

Importing an AAF Sequence into Media Composer from Volumes Not Supporting Direct Playback

This section describes how to import an AAF sequence stored on a volume that is not suitable for playback in Media Composer or Symphony (such as a DVD or Ethernet-mounted network volume).

Importing an AAF Sequence with Linked Media in Media Composer

Before opening an AAF sequence that links to media which is not embedded in the sequence file, you must manually copy the media to the satellite video storage.

To copy an AAF sequence with linked media to the satellite video storage:

1 Copy all media files to the satellite video storage, as follows:

- Copy all OMF video files and OMF-wrapped WAV or AIFF files to the OMFI MediaFiles folder.

– and –

- Copy all MXF files to the Avid MediaFiles folder.

2 Refresh the media database by doing one of the following:

- Launch Media Composer.
- or –
- Choose File > Refresh Media Directories

3 Choose File > Import, and locate the AAF sequence on the video storage.

Importing an AAF Sequence with Embedded Media into Media Composer

To import an AAF sequence with embedded media from a volume that does not support direct playback:

1 In Media Composer, open the bin where you want to import the AAF sequence. (If the bin is already open, click inside it to make it the active window.)

2 Choose File > Import.

3 Locate the AAF sequence.

The media from the AAF is copied to the designated media files folder, and the sequence is ready to play back in Media Composer.

4 When the sequence appears in the bin, drag the sequence into the Record Monitor to place it in the Timeline.

Importing an AAF Sequence into Pro Tools from Volumes Supporting Direct Playback

This section describes how to use Pro Tools to import an AAF sequence from a volume suitable for direct playback (such as local audio storage or Avid shared storage).

To import an AAF sequence into Pro Tools from a volume supporting direct playback:

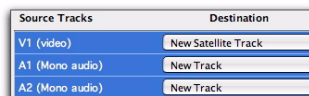
1 In Pro Tools, choose File > Open Session.

2 In the Open Session dialog, locate the AAF sequence you want to import.

3 Click Open.

4 Under the Source Tracks section of the Import Session Data dialog, do the following:

- To import the metadata (cuts and clip names) exported from a video satellite into a new video track, select New Satellite Track. (The video itself will not be imported.)
- To import video into a new video track in Pro Tools, select New Video Track (SD video only, Avid video peripheral required.)
- For each audio track you want to import, select New Track.



Source Tracks	Destination
V1 (video)	New Satellite Track
A1 (Mono audio)	New Track
A2 (Mono audio)	New Track

Source Tracks browser

The AAF sequence is ready to play back in Pro Tools.

Importing an AAF Sequence from a Volume that Cannot Be Mounted on Pro Tools

This section describes how to import an AAF sequence into Pro Tools from a volume that cannot be mounted on the Pro Tools computer.

To import an AAF sequence into Pro Tools from a volume that cannot be mounted on Pro Tools:

- 1 Mount the Pro Tools audio storage on the video satellite computer, as described in “Cross-Mounting Media Storage on Remote Systems” on page 25.
- 2 Export the AAF sequence from Media Composer or Symphony to the Pro Tools audio storage, as described in “Exporting an Avid Sequence as an AAF Sequence with Audio Storage Mounted on the Satellite” on page 35.

Using a Video Satellite in an Avid Interplay Environment

Video Satellite users may find Avid’s Interplay system useful for networked file management. For additional information on Pro Tools support for Interplay, see the *Pro Tools Avid Interplay Guide*.

Connecting Pro Tools and a Video Satellite

In order for Pro Tools and the video satellite to synchronize their transports, they must be *linked*. Before linking can occur, however, you must establish basic communication channels between them. When the Pro Tools and the video satellite systems have established this communication, they are *connected*.

To connect the Pro Tools and video satellite systems, they must first be connected using Ethernet (as described in “Making Ethernet Connections with Video Satellite Systems” on page 21).

In addition, the Video Satellite option must be enabled on the Media Composer system, and the systems must be connected (as described in “Connecting Media Composer to Pro Tools” on page 22).

A *Running other applications simultaneously with Media Composer can cause unpredictable behavior, including AV sync problems, frame dropping and audio stuttering. It is suggested that you not launch other applications when Media Composer is running. This can occur with or without the use of Satellite mode.*

Caveats for Connecting Pro Tools and a Video Satellite

The following caveats apply to connections between Pro Tools and video satellites:

- Quitting a Pro Tools application that is acting as administrator to a video satellite releases the video satellite so that it can be linked to other Pro Tools systems.
- If you quit Pro Tools while a satellite is connected, Pro Tools attempts to re-connect to the same satellite on relaunch.
- When linked to a Video Satellite, Pro Tools does not chase MIDI Timecode (MTC).

Troubleshooting the Satellite Connection


If the satellite does not appear in the Administrator pop-up menu, verify the following:

- 1 Ensure that Media Composer or Symphony is fully launched.

2 In Media Composer, go to the Project window and choose Settings > Video Satellite. Ensure that Video Satellite Mode is enabled.

3 In the Satellite page of the Pro Tools Peripherals dialog, select a different Ethernet port from the Interface menu. Many computers have more than one Ethernet port or “interface”. The interface selected here must be the one connected to the same network as the satellite.

4 In the Project window in Media Composer or Symphony, click the Settings tab, then double-click Video Satellite Settings and check that the TCP/UDP Port is the same as the TCP/UDP Port shown in the Satellite pane in the Pro Tools Peripherals dialog. (Both ports default to 28282.)

 *For Video Satellite to operate properly, the TCP/UDP port you set must be between 1024 and 65534.*

5 If the TCP/UDP port settings are the same, verify with your network administrator that the port shown is not being blocked on the network.

6 Check that all Ethernet cables are completely plugged in and working. In most cases, there are LEDs that show activity at the Ethernet ports.

7 Video satellite playback will not function in the following conditions:

- Certain dialogs are open in either Pro Tools or Media Composer.
- Media Composer is not the active application.
- Pro Tools does not have an open session, or Media Composer does not have an open sequence.

Matching Media Composer and Pro Tools Settings in a Video Satellite System


In order to accurately synchronize playback between Pro Tools and Media Composer, the following parameters must be correctly matched:

- Media Composer Project Type and Pro Tools Timecode Rate, Clock Reference, and Video Format
- Pro Tools Audio Pull-Up setting and Media Composer Edit Play Rate
- Timecode Format (Drop Frame or Non-Drop Frame)

For Pro Tools to play in sync with Media Composer or Symphony as a video satellite, all of these settings are interdependent. A mis-match in any of these settings will cause Pro Tools to display an error message.

Media Composer Starting TC timecode setting and the Pro Tools session start do not have to match exactly, but should usually be close.

When working with 24p and 23.976 projects, Media Composer defaults to displaying frames mapped to 29.97 fps timecode. In order to keep the Pro Tools and Media Composer or Symphony timecode displays in sync when working in 24p or 23.976 projects, click the timecode display above the Record monitor and choose Sequence > Timecode > 24 > Mas.


 *To avoid sync problems during later stages of post production, it is strongly recommended in most cases to change the settings in Pro Tools to match those of the sequence open in Media Composer.*


Matching the Media Composer or Symphony Project Type to Pro Tools Timecode Rate, Clock Reference, and Video Ref Format

This section explains how to match the Media Composer Project Type to the Pro Tools Timecode Rate, Clock Reference, and Video Format (described in Table 1 on page 44).


To ensure that your video satellite system will play back or capture using the proper settings:

- 1 In Media Composer, click the Format tab in the Project window.
- 2 Select the desired setting from the Project Type pop-up menu.

 *In most cases, changing the Media Composer project type is not advisable and may not be possible. You should change the Pro Tools Timecode Rate unless you are creating an SD down-convert from an HD project. See the Pro Tools Reference Guide.*

 *The Project Type is also established when creating a new project in Media Composer.*

- 3 In Pro Tools, choose Setup > Session.
- 4 Select a timecode setting from the Timecode Rate pop-up menu that is compatible to the Media Composer Project Type setting.
- 5 Make sure that a compatible clock source is available and connected correctly.
- 6 Select the connected clock reference from the Clock Reference pop-up menu.
- 7 Select a compatible video format from the Video Ref Format pop-up menu.

 *Video Ref Format cannot be changed for most HD frame rates.*


Matching Audio Pull-Up and Edit Play Rate

By default, Media Composer plays back sequences at the frame rate specified in the name of the project type. For example, a 25i PAL project plays at 25 fps. The notable exception is 30i NTSC, which actually plays at 29.97 fps.

When working with 23.976, 24p NTSC, 24p PAL, and 25p PAL projects, you can change the playback rate (known as the *Edit Play Rate*) without affecting other properties in order to slow down or speed up playback slightly. This is the video equivalent of the audio pull-up/down setting in Pro Tools.

To change the Edit Play Rate:

- 1 In the Settings tab of the Project window, open the Film and 24P setting.
- 2 Select an Edit Play Rate matching your configuration according to Table 1 on page 44.

 *24p projects (PAL and NTSC) use a default Edit Play Rate that does not match the project rate. 24p PAL defaults to 25 fps and 24p NTSC defaults to 23.976 fps.*

To change audio pull up/down settings in Pro Tools:

- 1 In Pro Tools, choose Setup > Session.
- 2 From the Timecode Settings section of the Session Setup window, select a rate from the Audio Rate Pull Up/Down pop-up menu.
- 3 Click OK to apply the new pull up/down rate to the session.

Compatibility Table

The following table describes compatibility between Avid Project Format and Edit Play Rate, and Pro Tools Timecode Rates, Audio Pull Up/Down Rate, Clock Reference, and Video Format.

Table 1. Rate and Sync Ref Compatibility between Avid and Pro Tools

Media Composer or Symphony				Pro Tools			
Avid Project Format	Edit Play Rate	Mojo DX or Nitris DX Video Ref	Mojo or Mojo SDI Video Ref	PT Timecode Rate	PT Audio Rate Pull Up/Down	SYNC I/O Video Ref	SYNC HD Video Ref Format
23.976p NTSC	23.976	NTSC	NTSC	23.976	None	NTSC	NTSC
	24	NTSC	NTSC	24	0.1% Up	NTSC	NTSC
24p NTSC	24	NTSC	NTSC	24	None	NTSC	NTSC
	23.976	NTSC	NTSC	23.976	0.1% Down	NTSC	NTSC
30i NTSC	29.97	NTSC	NTSC	29.97	Variable	NTSC	NTSC
24p PAL	24	PAL	PAL	24	None	PAL	PAL
	25	PAL	PAL	25	4% Up	PAL	PAL
25p PAL	25	PAL	PAL	25	None	PAL	PAL
	24	PAL	PAL	24	4% Down	PAL	PAL
25i PAL	25	PAL	PAL	25	None	PAL	PAL
720p/23.976	23.976	720p/59.94*	n/a	23.976	None	NTSC	720p/59.94 (or NTSC)
720p/25	25	720p/50	n/a	25	None	PAL	720p/50 (or PAL)
720p/29.97	29.97	720p/59.94	n/a	29.97	None	NTSC	720p/59.94 (or NTSC)
720p/50	50	720p/50*	n/a	25	None	PAL	720p/50 (or PAL)
720p/59.94	59.94	720p/59.94*	n/a	29.97	None	NTSC	720p/59.94 (or NTSC)
1080p/23.976	23.976	1080p/23.98sF	n/a	23.976	None	NTSC	1080p/23.97 (or NTSC)
1080p/24	24	1080p/24sF	n/a	24	None	PAL or NTSC	1080p/24 (or PAL or NTSC)
1080p/25	25	1080p/25sF (or 1080i/50)*	n/a	25	None	PAL	1080p/25 (or 1080i/50 or PAL)

Media Composer or Symphony(continued)				Pro Tools (continued)			
Avid Project Format	Edit Play Rate	Mojo DX or Nitris DX Video Ref	Mojo SDI Video Ref	PT Timecode Rate	PT Audio Rate Pull Up/Down	SYNC I/O Video Ref	SYNC HD Video Ref Format
1080p/29.97	29.97	1080i/59.94	n/a	29.97	None	NTSC	1080i/59.94, 1080psf-29.97 (or NTSC)
1080i/50	50	1080i/50*	n/a	25	None	PAL	1080i/50, 1080psf-25 (or PAL)
1080i/59.94	59.94	1080i/59.94*	n/a	29.97	None	NTSC	1080i/59.94, 1080psf-29.97 (or NTSC)

**Although Media Composer standalone supports locking the video peripheral to black burst or tri-level sync at these HD rates, Video Satellite will only support locking the Media Composer video peripheral to tri-level sync when using these HD rates.*

⚠ *Symphony can only be used with an Avid Nitris DX peripheral.*

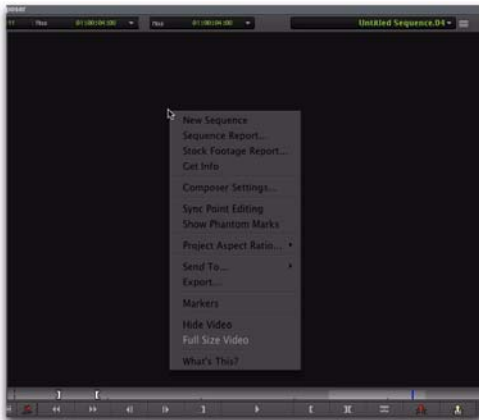
Matching Timecode Format (Drop Frame or Non-Drop Frame)

Pro Tools and Media Composer must be set to the same timecode format (either Drop Frame or Non-Drop Frame).


To ensure timecode format settings are compatible:

1 In Pro Tools, choose Setup > Session. If the Timecode rate pop-up menu displays “DF” after the frame rate, Pro Tools is set to Drop Frame.

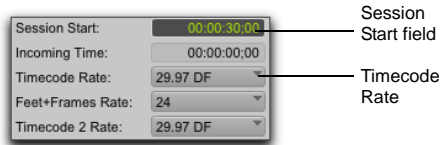
2 In Media Composer, right-click the Record monitor, and choose Sequence Report.



Right-clicking the Record monitor

 In some project formats, Media Composer can be configured for Drop Frame or Non-Drop Frame, while the corresponding Pro Tools timecode rate can only be set to Non-Drop Frame. In such cases, Media Composer sends Non-Drop timecode information to Pro Tools, even if it is set to Drop Frame. The following project formats in Media Composer exhibit this behavior: 23.976p NTSC, 24p NTSC, and 720p/23.976.

If the numbers in the TC fields are separated by semi-colons instead of colons, the project is set to Drop Frame.



Clip Info dialog (Media Composer, top) and a portion of the Session Setup window (Pro Tools, bottom)

3 If both timecode formats do not match, do one of the following:

- To force Pro Tools to match the timecode format of Media Composer, select the compatible timecode format from the Timecode Rate pop-up menu.
- or –
- To force Media Composer to match the timecode rate of Pro Tools, type semi-colons (Drop Frame) or colons (Non-Drop Frame) between the numbers in the Starting TC field, and press Enter.

Matching Media Composer Starting TC Timecode Setting and Pro Tools Session Start

In almost all cases, the first frame of video is located at the start of the Media Composer sequence. However, Pro Tools sessions often have silence at the head to create countoffs or silence.

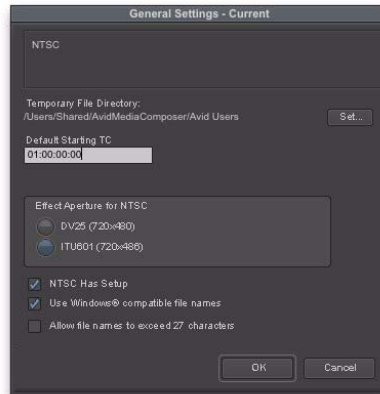
For example, a Media Composer sequence may start at 1:00:00 while the matching Pro Tools session starts at 00:55:00—allowing five seconds of silence before the audio starts. In this case, Media Composer parks on the first frame of video and waits for Pro Tools to reach 1:00:00 before it begins to play the video. Regardless of their respective start times, Pro Tools and Media Composer will always play at the same timecode values unless an offset has been entered in the Video Satellite Offset field in the Media Composer Video Satellite Settings window.

Therefore, it is not required that the Media Composer sequence and Pro Tools session start at the same time in order to play in sync.

⚠ *In some cases, starting playback from Media Composer at a point which is more than a minute earlier than the start of the Pro Tools session may fail. Change the Pro Tools session start time to be earlier.*

To set the default start time for new sequences in Media Composer:

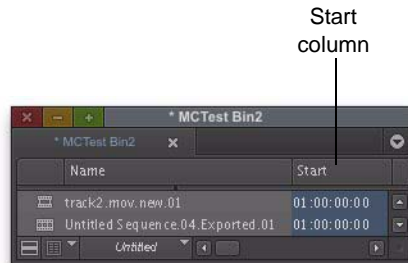
- 1 In the Project window, click the Settings tab and then double-click the General setting.
- 2 Type in the desired starting timecode in the Default Starting TC field.



General Settings dialog

To change the start time of an existing sequence in Media Composer:

- 1 In Media Composer, open the bin containing the existing sequence.
- 2 If needed, re-size the bin window so that you can see the Start column of the bin window.



Bin window (Name and Start columns shown)

- 3 In the Start column for the sequence for which you want to set a new start time, type the new start time using semi-colons (for Drop Frame) or colons (for Non-Drop Frame), and press Enter.
- 4 Click OK to confirm.

Compensating for Different Sequence Start Times in Pro Tools and a Video Satellite

You can compensate for any offsets that might occur if the start times of an Avid sequence differ between Media Composer and Pro Tools.

To compensate for different sequence start times:

- 1 In Pro Tools, go to **Setup > Session**. The Session Setup window will appear.
- 2 In the External Timecode Offset section, compensate for the offset between Pro Tools and Video Satellite as follows:
 - If the start time of the video satellite sequence falls before the start time of the Pro Tools sequence, type a positive timecode value into the Satellite Offset field.
 - If the start time of the video satellite sequence falls after the start time of the Pro Tools sequence, type a negative timecode value into the Satellite Offset field.

Compensating for Monitor-Induced Output Delay

Many monitors add a delay to the video output of one or more frames. You can compensate for this delay by advancing the video output by the necessary number of frames.

To set the number of frames to offset video output:

- 1 In Media Composer, choose **Settings > Video Satellite Settings**.
- 2 In the Video Satellite Offset field, type a positive value that matches the amount of delay in the monitors. You may need to try a few different settings.

Linking or Unlinking Pro Tools and a Video Satellite

After you have connected Pro Tools and a video satellite to each other and configured them, you can control their behavior with controls in the Pro Tools and Media Composer transports.



Standard Pro Tools MachineControl Option functionality is unaffected and independent from the video satellite transport operations. However, chasing MIDI Machine Control or MIDI timecode while linked to a video satellite is not supported.

When linked, Pro Tools and Media Composer support the following transport operations:

- With audio playback:
 - Play
 - Half-speed Play
 - Loop Play
 - Shuttle
 - Scrub
 - Record
 - Loop Record
 - FF/REW (with the Audio During FF/RW preference turned on in Pro Tools)
- Without audio playback:
 - Locate
 - Nudge
 - Selecting

When using the J, K and L keys to shuttle in Media Composer, Pro Tools will play audio at 1x forward, but not in reverse or any other possible playback speeds.

⚠ *Trim, Color Correction and Effects modes in Media Composer and Symphony are not supported with Video Satellite.*

Link Controls

When a Pro Tools system is configured as an administrator, the following controls can be shown in the Transport window:

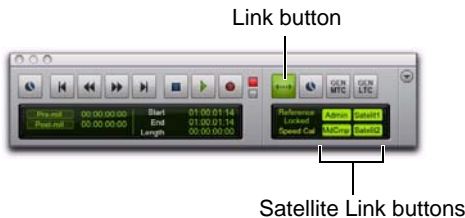
Link Button Controls the link status of the local system.

Satellite Link Buttons control the link status of the other satellite systems. On every system, one of these buttons corresponds to that system's main link button.

Link buttons highlight to indicate linked status.

To display linking controls in the Transport window:

- Choose View > Transport > Synchronization and View > Transport > Expanded.



Linking controls in the Pro Tools Transport window

To link or unlink the local Pro Tools system:

- Click the Link button in the Transport window.

To link or unlink other satellite systems:

- Click the corresponding Satellite Link button in the Transport window.

To link or unlink the video satellite system from within Media Composer, do one of the following:

- Click the Satellite Link button to change it to a linked (green) or unlinked (grey) state.

– or –

- Press Shift-Alt-L (Windows) to toggle the link state between linked and unlinked.

💡 *Link buttons flash briefly when establishing the network clock.*

💡 If Media Composer shows an error dialog, the Satellite Link button for the Video Satellite in Pro Tools will turn red. Hold the cursor over the link button to view the dialog. To dismiss the dialog, shift-click the video satellite system's Satellite Link button.

Controlling Linking with a Control Surface

To toggle the link button on the Pro Tools system (ICON and C|24):

- Press Control + the Online button (Mac) or Alt + Online (Windows) on the control surface.

To toggle the Satellite Link buttons (D-Control or D-Command only):

- 1 Press Command + the Modes button (Mac) or Control + Modes on the control surface to display all linked systems in the softkeys display.
- 2 The Modes button will light up. Pressing Modes again will exit the Satellite Link mode.
- 3 The softkeys corresponding with each machine can then be pressed to link or unlink that machine.

Video Satellite and EUCON Control and Work Surfaces

A selection of system linking controls have been EUCONized. For more information on controlling Video Satellite functions from EUCON devices, see the *Pro Tools EUCON Guide*.

Capturing Audio and Video with a Video Satellite System

You can use a video satellite system to capture audio to Pro Tools and video media to Media Composer in a single pass.

Before Capturing Audio and Video

Before capturing audio and video from tape, ensure that you have made the following connections.

For connections with an Avid video peripheral, do the following:

- 1 Connect the desired outputs of the video deck to the corresponding inputs on the video peripheral.
- 2 Connect the audio source to the inputs of your primary Pro Tools HD audio interface

For more information, see the *HD Setup Guide* as well as the guide for your Pro Tools HD audio interface.

For connections without an Avid video peripheral, do one of the following:

- For FireWire-based connections, connect the FireWire cable directly to the Firewire port on the Media Composer system.

Since video and audio are streamed in one signal over FireWire, it is not necessary to connect any audio inputs.

If you are capturing video using Firewire, you must capture both audio and video into Media Composer, because a single FireWire cable provides both video and audio. This audio can then be exported over to Pro Tools if desired.

Capturing Audio and Video Caveats

The following caveats apply to capturing audio and video with a video satellite system:

- Due to technical limitations, when capturing video from a device being controlled using a 1394 connection, audio sync will be up to 3/4 of a frame out of sync.
- If you want to capture a 29.97 telecine video tape to a 24 fps project, you must first capture both audio and video on Media Composer and then export the audio back to Pro Tools. See “Capturing Audio and Video” on page 55. For manually exporting an AAF Sequence, see the *Avid Media Composer Guide*.

Configuring Pro Tools and a Media Composer Video Satellite for Capturing

Before configuring Pro Tools and Media Composer for synchronized capturing, ensure that the two applications have matching settings. For detailed information, see “Matching Media Composer and Pro Tools Settings in a Video Satellite System” on page 42.

Configuring Pro Tools for Capturing within a Video Satellite System

To configure Pro Tools for capturing audio:

- 1 In Pro Tools, choose Setup > Session, and ensure the following:
 - Clock Source pop-up menu is set to SYNC.
- and –

- Clock Reference pop-up menu is set to Video Reference (SD) or Video Reference (HD).
- or –
- If Clock Reference pop-up menu is set to another source, like Word Clock, make sure that the Ref Present LED is lit, and that the clock reference that the SYNC is locked to matches that of the VTR.

- 2 Route the audio inputs to the desired tracks.
- 3 Record enable the audio tracks to which you want to capture audio.
- 4 Click the Record Enable button in the Transport.


You are now ready to configure Media Composer for capturing into a new or existing sequence.

Configuring Media Composer for Capturing into an Existing Sequence

To configure a Media Composer video satellite for capturing into an existing sequence:

- 1 In Media Composer, open the existing sequence into which you want to capture new media.
- 2 Drag the sequence to the record monitor to load it into the timeline.
- 3 Check that both Pro Tools and Media Composer are set to the same drop/non-drop frame setting.

4 Use the Mark In control to set an In point on the Timeline at which you want to begin capturing.

 *Media Composer places captured video at the In point in the timeline. However, that may not equal the video's timecode position on the tape, which is determined by the In point set in the Capture Tool. For example, if the In point on the Capture Tool is set to 1:00 and the In point in the timeline is set to 0:30, Media Composer starts capturing when the tape reaches 1:00—but places the captured video in the timeline beginning at 0:30—causing a 30-second offset.*

To keep the captured video in sync with the source tape, the In point in the timeline should be the same as the In point in the Capture Tool.

You are now ready to configure the Capture Tool. See “Configuring the Capture Tool” on page 53.


If you want to capture to a location in a sequence that falls in the Timeline after the last frame of media, you need to artificially extend the sequence.

To artificially extend the sequence in the Timeline:

- 1 In Media Composer, open the existing sequence into which you wish to capture new media.
- 2 Add at least one frame of media to the end of the current Timeline.
- 3 Place the cursor at the leading edge of that media.
- 4 Click above the Source monitor to display the pop-up menu, and select Load Filler to load 2 minutes of filler into the Source.

5 Mark In/Out points for the desired amount of filler, and use the Splice button to insert filler into the sequence.

6 Repeat as needed until the Timeline is long enough.

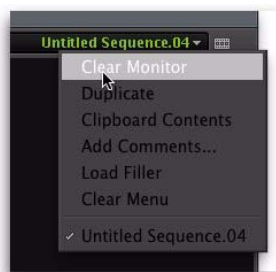
 *Once you have created this “filler” sequence, you can save it and use it for the same purpose on other projects.*

Configuring Media Composer for Capturing Directly into a New Empty Sequence

When you capture into an empty sequence, Media Composer uses the default start time set in the General setting of the Settings tab.

To configure a Media Composer video satellite for capturing directly into a new sequence:

1 If there is a sequence open, click above the Record Monitor to display a pop-up menu, and select Clear Monitor.



Pop-up menu above Record Monitor

- 2 Select Clip > New Sequence.
- 3 In the Project window, click the Settings tab and then double-click the General setting.

4 In the Default Starting TC field, do one of the following to set the default start time for a new sequence:

- If you want the sequence to begin capturing at the same timecode location as the beginning of the Pro Tools session, set the start time of the capture to be equal to the Session Start in Pro Tools (Setup > Session in Pro Tools).
- or –
- If you want sequence to begin capturing at a timecode location that falls after the Pro Tools session start, set the start time of the capture to be later than the Session Start in Pro Tools.

You are now ready to configure the Capture Tool. See “Configuring the Capture Tool” on page 53.

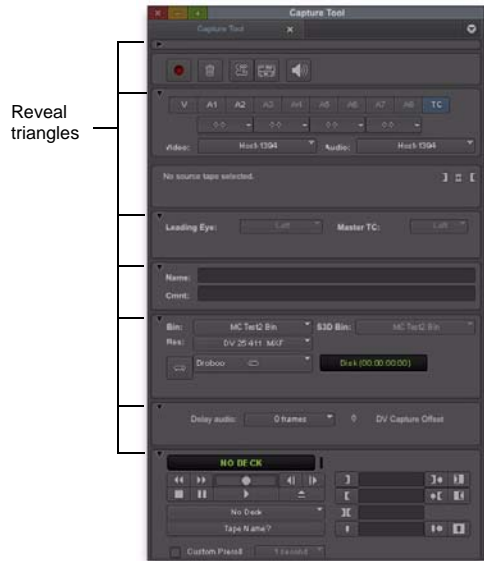
Configuring the Capture Tool

To configure the Capture Tool for manual capture:

1 If you are capturing using a firewire-based Avid video peripheral, ensure that the Device setting is set to DNA by doing one of the following.

- Click the DNA/1394 button in the Timeline.
- or –
- Select Special > Device > DNA.

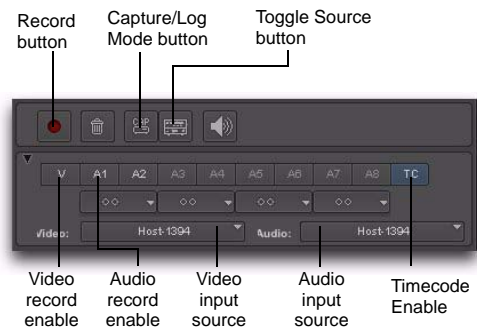
2 To open the Capture Tool, choose Tools > Capture.



Capture Tool

3 Ensure that all the reveal triangles on the left side of the Capture Tool window are pointing down so that all of the controls are visible.

If necessary, click the Capture/Log Mode button to select Capture mode (CAP).



Capture Tool (Record controls)

4 If necessary, enable control of the tape deck by clicking the Toggle Source button so that it does not display a circle with a slash.

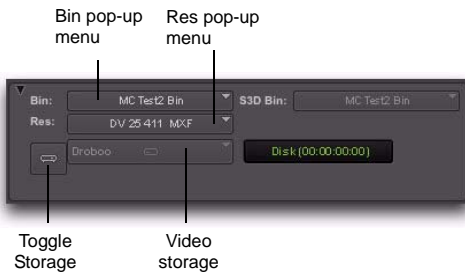
5 Below the Record button, click the record enable buttons for the video and timecode inputs. (V is for video and TC is the timecode channel).

⚠ The TC (timecode) button should always be enabled, even though no timecode is being recorded.

⚠ Do not record enable the audio inputs unless you want to use Media Composer instead of Pro Tools to capture audio.

6 To capture the clip directly into the Timeline without affecting the position of any existing material (analogous to Slip edit in Pro Tools), click Overwrite. This mode is selected by default when Satellite Mode is enabled in Media Composer.

7 Choose the video input source from the Video Input pop-up menu.



Capture Tool (Storage controls)

8 From the Bin pop-up menu, select the bin where you wish the captured clips to appear.

💡 This setting does not affect where the captured files are stored. All captured media files are stored in the OMF1 Media Files folder (for OMF media) or Avid MediaFiles folder (for MXF media) on the volumes selected in the storage pop-up menus. A bin in Media Composer is analogous to the Audio or MIDI clip lists in Pro Tools, except that a project in Media Composer may have an unlimited number of bins, and clips may be organized between the bins as best suits the user.

9 From the Res pop-up menu, choose the resolution of video you wish to capture.

10 Click the Toggle Storage button so that one volume is showing, and select the volume where the video media will be stored. The available recording time for each volume displays next to it.

11 If the VTR is not correctly identified in the Source pop-up menu, choose Auto-Configure from the source pop-up menu, then click Yes to auto-configure the VTR with the Capture Tool and display the name of the VTR.




Capture Tool (Transport controls)

12 Ensure that Delay Audio is set to 0 Frames.

13 Insert the tape into the VTR. Media Composer will present a list of tapes already associated with this project and ask you which tape you have inserted.


14 Do one of the following:

- Select one of the displayed tape names and click OK.
- or –
- Click New to add a new tape to the list.

 This will be helpful if you ever need to re-capture the same video.

15 To check your inputs and levels, do the following:

- Click Play on the transport controls. Video should appear in the Record Monitor and your client monitor.

 When digitizing DV25 video through the DV port, nothing will appear in the client monitor. However, the digitized clip will be captured correctly.

– and –

- Check audio input levels in Pro Tools.

You are now ready to capture.

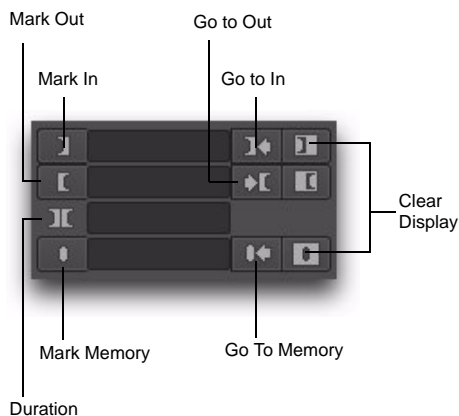
Capturing Audio and Video

To capture audio and video:


1 Ensure the Capture Tool has been configured for capturing. (See “Configuring the Capture Tool” on page 53.)


2 Ensure that Pro Tools has been properly connected and linked to the video satellite. (See “Connecting Pro Tools and a Video Satellite” on page 41.)

3 Use the Mark In and Mark Out controls to select a specific portion of video you want to capture from tape, and click Record. (See “Selecting a Portion of Video to Capture” on page 56.)



Mark In and Mark Out controls

 If Media Composer displays an error message regarding mis-matched frame rates, you may have mis-matched timecode formats or play rates. See “Matching Media Composer and Pro Tools Settings in a Video Satellite System” on page 42 for more information.

 You can capture without first entering an In point, but this is not advised because of unpredictable delays between clicking the Record button and actually capturing video.

After you click Record, Media Composer cues the VTR. Media Composer and Pro Tools drop into record mode at the appropriate moment.

The flashing red light indicates recording is in progress.

⚠ *During recording, video may appear out of synchronization with audio. However, audio and video will be synchronized during playback.*

4 Click the Record button again (or press the ESC key) to stop.

Selecting a Portion of Video to Capture

The Mark In and Mark Out controls in the Capture Tool let you select a portion of video to capture from the tape.

To select a portion of video to capture:

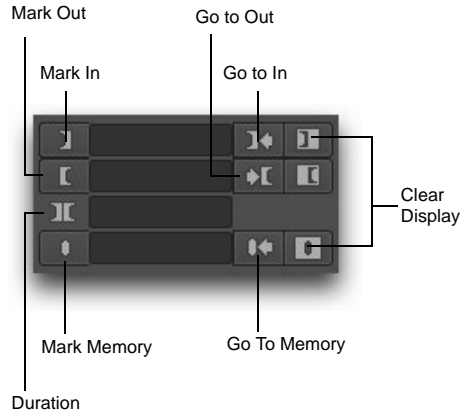
1 In the Capture Tool, use one of the following methods to mark the position where you want the capture to begin:

- Press the Spacebar (or click Play) to start playback on the VTR, and click Mark In at the desired position.
- Use the Transport controls to queue the tape to the position at which you wish to start capturing, and click Mark In.
- Type a timecode value in the Mark In field.

⚠ *You can capture without first entering an In point, but this is not advised because of unpredictable delays between clicking the Record button and actually capturing video.*

2 Use one of the following methods to mark the position where you want the capture to end:

- If the VTR is playing back, click Mark Out at the desired position.
- Use the Transport controls to queue the tape to the position at which you wish to end capturing, and click Mark Out.
- Type a timecode value in the Mark Out field.



Mark In and Mark Out controls

The exact length of the clip to be captured appears in the Duration display.

3 You can also do the following:

- To automatically queue the tape to the Mark In point, click Go to In.
- To automatically queue the tape to the Mark Out point, click Go to Out.
- To automatically mark a specific frame (not to be reflected in the capture), click Mark Memory.
- To clear any of the Mark In, Mark Out, or Mark Memory points, click Clear Display next to the appropriate button.
- To begin capturing at a specific point for a specific duration, type timecode values in the Mark In and Duration fields.
- To end capturing at a specific point for a specific duration, type timecode values in the Mark Out and Duration fields.
- To begin an open-ended capture with no definitive stopping point, type a timecode value in the Mark In field.

4 You are now ready to begin capturing, as described in “Capturing Audio and Video” on page 55. When you begin capturing, the VTR queues to the In point and begins capturing video, then stops automatically when it reaches the Out point.

Playing Back Captured Audio and Video with a Video Satellite System

Once you have finished capturing with a video satellite system, the captured clip appears in the Record Monitor and in the Timeline. Audio appears in the Pro Tools Timeline.

To view the captured clip, do the following:

- Click Play (or press the Spacebar) in Pro Tools or Media Composer.

Re-Digitizing an Existing Sequence

Media Composer can open sequences created on other Avid editing systems. However, you may first want to re-digitize some or all of the media files because they were the wrong resolution, or missing.

When using this procedure with a video satellite, you must capture the audio to Media Composer and then export an AAF sequence referencing or containing the embedded audio to Pro Tools.

Digitizing from an EDL

Media Composer includes Avid EDL Manager software, which lets you open an EDL from another editing application, create a Media Composer sequence from that EDL, then re-digitize the sequence.

When using this procedure with a video satellite, you must capture the audio to Media Composer and then export an AAF sequence referencing or containing the embedded audio to Pro Tools.

Laying Back Audio and Video to Tape

While outputting video from Pro Tools using an Avid video peripheral, the video is intended for monitoring purposes only, and is not suitable for professional layback or broadcast, video output from Media Composer is full broadcast quality. You can use Media Composer linked to Pro Tools when you need to output both audio and video to tape.



The Universal Mastering feature in Symphony is not supported with Video Satellite.




To minimize the chance of dropped frames, it is recommended that all effects be rendered before performing a layback.



When laying back to an SDI VTR or 1394 device that requires audio and video to be combined in a single stream, you must export the audio to Media Composer from Pro Tools or combine audio and video signals using a third-party summing device, and then lay back the final sequence to tape.

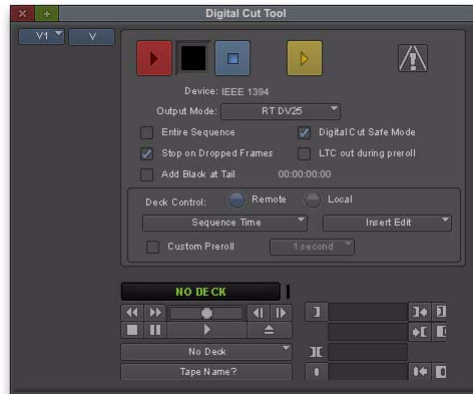
To record audio and video to tape from Media Composer and Pro Tools simultaneously:

- 1 Make sure that your system is set up as follows:
 - Pro Tools and the Media Composer video satellite computers are linked.
 - Audio outputs on the Pro Tools HD audio interface are connected to the appropriate audio inputs on the VTR.
 - Video outputs from Media Composer system are connected to the VTR.
 - If you are using deck control, the deck control cable from Media Composer is connected to the VTR, and the VTR is set to Remote mode.

 *When using Media Composer in Satellite mode for 24p and 23.976 projects, only the 24 and 23.976 Output Formats are supported. The 29.97 Output Format (+25% playback speed with no pulldown) is not supported in Satellite mode for 24p and 23.976p projects.*

- 2 Insert a video tape into your VTR.
- 3 To ensure that the tape deck is properly configured, refer to the following topic in Media Composer Help (Help > Avid Media Composer Help): *Configuring a Deck or Multiple Decks*.
- 4 Do one of the following:
 - Select one of the displayed tape names and click OK.
 - or –
 - Click New to add a new tape to the list.
- 5 If you are capturing using a FireWire-based Avid video peripheral, ensure that the Device setting is set to DNA. See “Configuring the Capture Tool” on page 53. for further information.
- 6 Drag the sequence you want to record to tape from the bin to the Record Monitor.

7 Select Output > Digital Cut. The Digital Cut Tool appears.



Digital Cut Tool

- 8 If you want to set In and Out points for a digital cut.
- 9 Do one of the following:
 - Select the Entire Sequence option to record the entire sequence.
 - or –
 - Deselect the Entire Sequence option and set the In and Out points in the Timeline.
- 10 If you are laying back over a FireWire (1394) connection (Special > Device > IEEE 1394), select the appropriate output mode from the Output Mode pop-up menu as follows:
 - If all of the media on your Timeline is DV25, or if it is all DV50, and all of your effects are rendered, you can achieve a slightly higher quality of output by selecting DV25 or DV50 as appropriate.
 - or –
 - Otherwise, you must select the RT DV25 or RT DV50 options to render and transcode all of your video to that format.

11 Select the Stop on Dropped Frames option if you want Media Composer to automatically stop the tape if the audio and video does not record correctly.

12 Select the Add Black At Tail option, and type the amount of black you want added to the end of the sequence.

13 Select one of the following from the Deck Control options:

Local mode You will initiate recording manually.

Remote mode Media Composer will start the VTR and drop into record at the specified time-code.

14 If you chose Remote mode, select one of the following options:

Sequence Time Starts recording based on sequence time. For example, if the sequence starts at 1:00:00 in the Timeline, Media Composer will start recording when the tape reaches 1:00:00.

Record Deck Time Starts recording wherever the VTR is currently parked.

Mark In Time Starts recording at the address entered in the top window to the right of the transport controls.


15 In the Source Track buttons, select the top video track. Only the selected video tracks and the video tracks below it will be recorded.


16 If you selected Remote mode, use the Record Track buttons on the right to select which audio and video tracks to enable for recording on the tape.

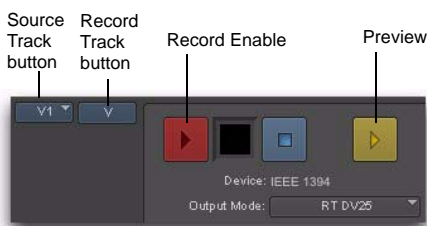
17 Click the yellow Preview button to check that all of the tracks you selected are playing and that the insert points on the tape are correct.

18 Do one of the following:

- To record using Local mode, press play and record on the VTR. When ready, click the Record button in the Digital Cut window.
- or –
- To record using Remote mode, press Record in the Digital Cut window. Media Composer will queue the tape, play, then drop in at the appropriate location.

 When doing a Digital Cut with an Avid Mojo DX or Nitris DX video peripheral, Output Mode should be set to “Real Time” when using non-firewire video outputs, for best A/V sync performance.

 Be sure to record at least a few seconds of black to the tape before performing a digital cut. This will guarantee that the video tape is correctly formatted when your digital cut starts.



Selected Source tracks

Exporting Audio and Video as a Digital Movie from a Video Satellite


If you have audio and video media with a video satellite system and you want to create a QuickTime or Windows Media digital movie, you must first get the audio from Pro Tools into Media Composer.

Exporting audio and video from a video satellite system to a digital movie involves the following steps:

- 1 Move the audio to the Media Composer machine and cut it into the video sequence.
- 2 Export the sequence as a digital movie.


To get the audio from Pro Tools to the Media Composer video satellite:

1 Ensure that the Pro Tools system can deliver files easily to the Media Composer video satellite computer through shared storage (such as Avid shared storage or Ethernet-mounted network volume), a mounted audio or video storage drive, or a DVD.

 See “Cross-Mounting Media Storage on Remote Systems” on page 25.

2 Export audio files from Pro Tools using one of the following methods:

- Bounce the audio tracks to disk.
- Mix back to internal tracks.
- Export the selected tracks as an AAF with audio embedded.


 See the Pro Tools Reference Guide for details on exporting audio from Pro Tools.

3 Import the Pro Tools audio into the Media Composer sequence, and integrate it into the track.

4 See the Media Composer guides for details on importing and synchronizing audio in Media Composer.

To export a sequence as a digital movie:

- 1 Select the sequence you want to export in the bin and drag it to the Record Monitor.
- 2 Render all effects in the Timeline as described in the *Avid Media Composer Guide*.
- 3 Select the Track Enable buttons for the video and audio tracks to export.
- 4 Choose File > Export.
- 5 Type a name and select the destination.
- 6 Choose the type of file you want to export from the Export Setting pop-up menu.
- 7 Click Options, and configure the settings as desired.
- 8 Click Save or Save As.
- 9 In the Export As dialog, click Save.

 On a Windows system, if you experience errors when exporting QuickTime movies, open QuickTime Player, go to Preferences > Advanced, and choose Safe mode (GDI only).

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Avid
2001 Junipero Serra Boulevard
Daly City, CA 94014-3886 USA

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