Avid® Media Composer®

User's Guide

Release 7.0

Avid

tools for storytellers ™

Contents

Chapter 3   **Working with the Project Window**

Chapter 5   **Logging**

Chapter 6   **Preparing to Digitize**

Chapter 7   **Digitizing**

Chapter 8 **Importing Files**

Chapter 9 **Organizing with Bins**

Chapter 10   **Managing Media Files**

Chapter 11   **Using Script Integration**

Chapter 13   **First Edits in Source/Record Mode**

Chapter 14   **Using the Timeline**

Chapter 15   Working in Trim Mode

Chapter 16   **Working with Audio**

Chapter 17   **Syncing Methods**

Chapter 18   **Multicamera Editing**

Chapter 20   **Exporting and Exchanging Material**

Appendix A   **Using AudioSuite Plug-Ins**

Index

CHAPTER 1

Desktop Basics

The Avid drive—the computer's internal hard drive—contains a number of files and utilities you can use to organize and optimize your work. The desktop elements directly related to the Media Composer system (also referred to at times as the Avid Composer system) are stored in the Composer Projects, Avid Users, Utilities, and Media Composer folders. The System Folder also contains essential extensions and control panels.

This chapter describes basic procedures involving the Composer Projects, Avid Users, and Media Composer folders in the following sections:

- **Managing Composer Project and User Folders**
- **Using the Media Conversion Tool**
- **About the Media Composer Folder**
- **Mounting and Ejecting Disk Drives**

Managing Composer Project and User Folders

Managing projects and user profiles involves moving, copying, or deleting files and folders, and changing project or user names.

About Composer Projects and Avid Users Folders

Composer Projects and Avid Users folders allow you to move whole projects or selected project and user settings between systems by copying and moving files on your desktop.

When you create a new project or user profile, the system creates the following files and folders:

- When you create a new user, the system creates three items: a user profile file, a user settings file, and a user folder containing the two. Each item is given the user name you provide. This new folder is stored in the Avid Users folder on the Avid drive.

- When you create a new project, the system creates three items: a project file, a project settings file, and a folder containing the two, each of which is given the project name you provide. This new folder is stored in the Composer Projects folder on the Avid drive.

Your settings are initially set to the default values. As you work, the files maintain current settings, while the project folder fills with bin files.

Changing Project and User Names

You cannot change project or user names from within the Media Composer application. You must change the name from your desktop before starting the application.

To change a project or user name:

1. Double-click the Avid drive to open it.

2. Double-click the Avid Users or the Composer Projects folder to open it.

3. Click the name of the folder you want to change.

   The name is highlighted for text entry, and the arrow changes to an I-beam. Change or retype the name.

4. Close the windows and restart the Media Composer application.

The new project or user name appears in the Project Selection dialog box. The system automatically changes the names of corresponding files in the folder.

Deleting Projects and User Profiles

Digitized media related to a deleted project is not eliminated with the project folder. For more information on deleting media files, see **"Deleting Clips and Sequences" on page 235** and **"Deleting Tracks with the Media Tool" on page 273**.

You cannot delete projects and user profiles from within the Media Composer application. You must make the change from your desktop before starting the application.

To delete a project or user profile:

1. Double-click the Avid drive to open it.

2. Double-click the Avid Users or the Composer Projects folder to open it.

3. Drag the project or user folder you want to delete to the Trash. Empty the Trash to remove the files from the system.

⚠ **Deleting a project also deletes any bins that are in that project.**

4. Close the windows and restart the Media Composer application.

The deleted project or user no longer appears in the Project Selection dialog box.

Moving Projects and User Profiles from Another System

Adding a project folder from another system does not transfer accompanying media files. For more information on moving media files between systems, see **"Transferring a Project to Another Media Composer Product" on page 664**.

To open projects and user profiles created on another system, you must move the files or folders from a diskette or available drive directly into your Composer Projects or Avid Users folders on the desktop before starting the application. In addition, if you are using earlier releases of Media Composer, you need to convert the files before you can open them on your system. See **"Using the Media Conversion Tool" on page 29**.

To add a project or user profile from another system:

1. Locate the new folders on the desktop:

   • If the folders were copied onto a diskette, insert the diskette into the diskette drive and open it.

   • If the folders were placed on a network to which you have access, locate them online.

2. Double-click the Avid drive to open it.

3. Double-click the Avid Users or the Composer Projects folder to open it.

4. Drag the project or user folder you want to add to the system to the appropriate folder.

⚠ **Do not open a project directly from a diskette. You must copy it to a folder on the Avid drive first.**

5. Close the windows and restart the Media Composer application.

   The added project or user appears in the Project Selection dialog box.

Using the Media Conversion Tool

You might need to convert projects and media to make them compatible between different releases of your Avid Composer system.

You can convert your 6.x media files from Media File Manager (MFM) to Media Stream Manager (MSM) by using the Media Conversion Tool, which is a standalone utility. Release 7.0 Avid Composer products only accept MSM format.

The video format is Joint Photographic Expert Group (JPEG), the audio formats include: Audio Interface File Format — Compressed (AIFC) or Sound Designer II™ (SD2).

To convert media files:

1. Locate the 6.x MediaFiles folder or the OMFI MediaFiles folder you want to convert on your media drive. This will be your Source Folder.

All the files must be in either MSM or MFM format. Do not mix files of different types in the Source Folder.

2. Choose the media drive where you want the converted files to be saved. The Media Conversion Tool will automatically create a Destination Folder.

The media drive where you choose the Destination Folder to be created must have at least as much available storage space as the size of your Source Folder.

3. Double-click the Media Conversion Tool icon located in the Utilities folder on the Avid disk.

   The utility launches.

Avid Media Conversion Tool

Source Folder: [Find] [_____]

Destination Folder: [Find] [_____]

Source Format
- ○ MFM Media (6.x MediaFiles)
- ○ MSM Media (OMFI MediaFiles)

Destination Format
- ○ MFM Media (6.x MediaFiles)
- ○ MSM Media (OMFI MediaFiles)

    Audio Format
- ○ AIFC
- ○ SD2

    Video Format
- ○ JPEG

[Quit]

[Convert]

4. Click the Source Folder Find button to navigate to the folder you want to convert.

5. Click the Destination Folder Find button to navigate to the media drive where you want the files to go.

📄 *If you select only the media drive, an OMFI MediaFiles folder will be created for you.*

6. Choose a Source Format and a Destination Format.

When you choose MFM Media as your Source Format, MSM Media becomes your default Destination Format.

7. Choose the Audio and Video format. When the Destination Format is MSM Media, the defaults are already selected.

8. Click Convert to convert the media files.

A progress box appears. When the conversion is completed, select another folder to convert or click Quit to exit the tool.

The Media Conversion Tool creates a log of the converted files that can be read by using any word processing or text editing package. Vantage™, a text editor program, is included with the Avid Composer system and is located in the Apple menu items in the Utilities folder.

After the media files have been converted to MSM format, your bins and projects will have lost their links to the original media files. When a clip becomes unlinked, it displays the message "Media Offline." For information on relinking media files, see ["Relinking Media Files" on page 282](#)*.*

About the Media Composer Folder

The Media Composer folder contains essential operational files and supporting files. You should not touch any of these files, except where noted in the following descriptions.

```
┌────────────────────────────────────┐
│ ▤▢▨▨▨▨▨  Avid  ▨▨▨▨▨▨▨ ▣ │
│ 10 items    1,002.8 MB in disk    26.9 MB a│
│              Name                  │
├────────────────────────────────────┤
│ ▷  ▢  Attic                     ⇧ │
│ ▷  ▢  Avid Users                  │
│ ▷  ▢  Composer Projects           │
│ ▽  ▢  Media Composer              │
│ ▷      ▢  Help                   │
│        ▣  Media Composer®         │
│ ▷      ▢  Settings               │
│ ▷      ▢  Supporting Files        │
│ ▷  ▣  System Folder               │
│ ▷  ▢  Utilities                 ⇩ │
│ ⇦ ▥                          ⇨ ▣ │
└────────────────────────────────────┘
```
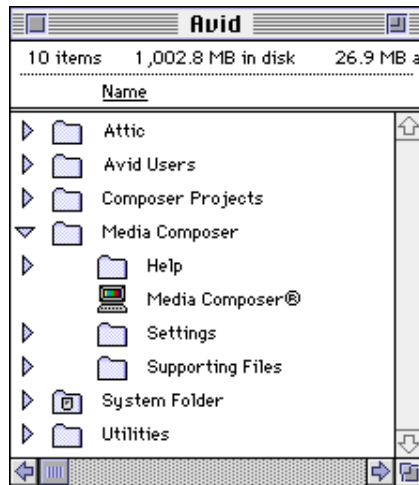
- **Attic Folder:** The system automatically places copies of all bins into the Attic folder at regular intervals for backup. The procedure

for recovering bin files from the Attic is described in .

- **Media Composer application**: The program application icon resides here. Procedures for launching the program are described in .

- **Settings**: In addition to Project and User settings, the system maintains two settings files in this folder that apply to all users and all projects on the system. You can copy or move the Site settings file to other systems on the desktop, using the same procedure described in .

- **Supporting Files**: These are a series of files that add functionality to the application. The system accesses most of these files from within the application. You can add third-party effects to the Third Party Plug-Ins folder from programs such as Adobe Photoshop™ for use in effects editing, as described in the *Avid Media Composer and Film Composer Effects Guide*.

Launching the Media Composer Application

The Media Composer application icon is located in the Media Composer folder on the Avid drive. For most users, the desktop or the Apple menu is a more convenient location for launching the application.

⚠ **The application will not launch properly if the icon is moved out of the Media Composer folder. To launch the application from a convenient location, Avid recommends that you create an alias and place it in a convenient location.**

For more information on making an alias and using the Apple menu, see your Macintosh documentation.

To launch the application, double-click the application icon or alias, or choose it from the Apple menu.

When you launch the Release 7.0 software, a dialog box appears.

Please select the type of Audio Interface Peripheral.

[Digidesign 442]   [Digidesign 888]
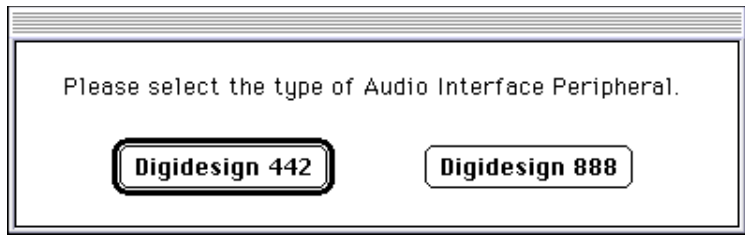
Choose the appropriate configuration.

After the application starts, the Project Selection dialog box appears, as described in **"Opening a Project" on page 35**.

Mounting and Ejecting Disk Drives

You can eject one or several drive volumes mounted on the desktop at any time from within the Media Composer application. You can also remount all the drives and return them to the desktop.

This is useful in several circumstances:

- If you work with optical drives for backup and retrieval of low-resolution material, you can eject these drives and mount them as needed to avoid cluttering the desktop during normal use.

- If you work with an extensive array of fixed-storage drives, which can involve many partitions divided among several projects, you can selectively mount and eject drives according to use.

- If you work with the MediaShare file-sharing program, you might have to eject and remount icons on the desktop. See the MediaShare documentation for more information.

Ejecting Disk Drives

To eject one or several drive icons from the desktop:

1. With the Media Composer application active, choose Eject from the File menu.

   A dialog box appears.

   Select a Disk to Eject:

   | AVIDstripe-1 |
   | AVIDstripe-2 |
   | **AVIDstripe-3** |

   [All]

   [None]

   [Eject]

   [Cancel]
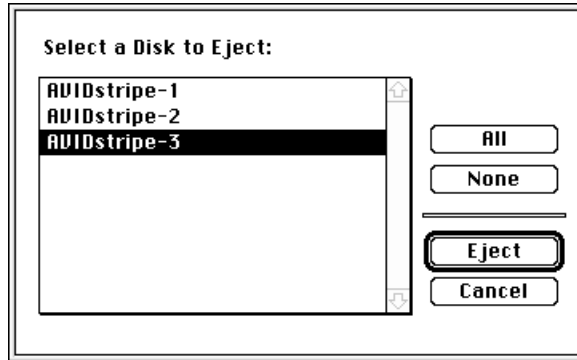
   The scroll list displays all drives and partitions currently mounted.

2. Select a drive to eject. Shift-select additional drives.

3. Click Eject. The system removes the drives from the desktop and can no longer access them.

Mounting All Drives

Because the system cannot interface with ejected drives individually, you cannot mount selected drives. But you can mount all drives connected to the system, including those previously ejected.

To mount all drives, choose Mount All from the File menu.

The system mounts all partitions and drives that are turned on and connected to the system.

CHAPTER 2

Starting a Project

For information on the Macintosh interface and terminology, see your Macintosh documentation. For information on turning on your system, see the *Avid Media Composer Getting Started Guide*.

Your work in Media Composer begins when you turn on the system, launch the application, and open an existing project or create a new project. This chapter describes these and other procedures for starting a project. There are also several techniques you can use to safeguard and restore your work if necessary. These topics are covered in the following sections:

- **Opening a Project**

- **Backing Up Your Work**

- **Ending the Edit Session**

- **Session Checklist**

Opening a Project

Each time you start the Media Composer application, the Project Selection dialog box appears.
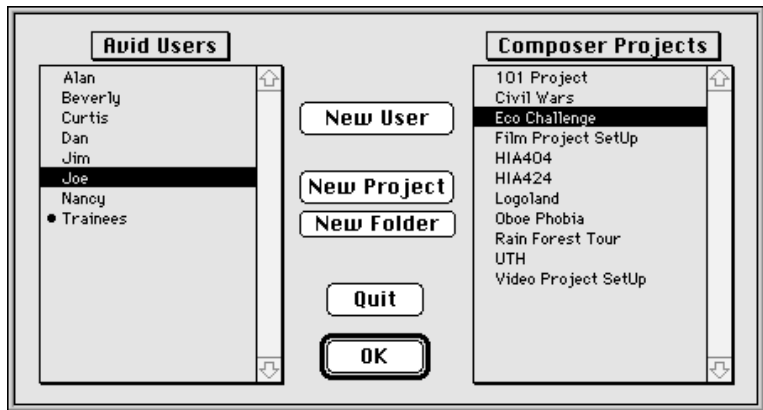
Use the options described in the following sections to establish your identity as a user with the system, and to select or create a project to open. You can also create additional folders within which to store projects, or you can quit the application from the Project Selection dialog box.

Identifying a User

To identify a user for the project, you can either create and identify a new user or select one from a list of existing users.

Setting Up a New User

To create a new user profile:

1. Click the New User button.

   The New User dialog box appears.
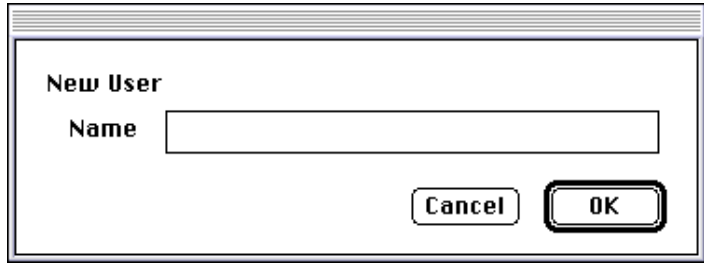
2. Type your name and press Return or click OK.

   The Project Selection dialog box reappears with your user name highlighted in the list of users.

3. Click OK in the Project Selection dialog box to continue.

Selecting an Existing User

To select from the list of existing users, click the user name to highlight it in the Avid Users list on the left side of the Project Selection dialog box. This user profile is used when you open a project.
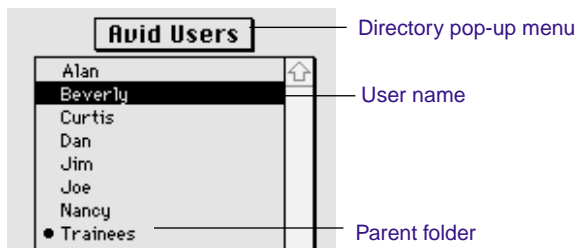
Parent folders containing collections of users appear with a dot. If the needed User folder is stored inside a parent folder within the Avid Users folder:

1. Double-click the folder to open it and display the user names.

2. Click a user name to select it.

If the user profile you want is stored on your system outside the Avid Users folder (in another folder or on a network, for example), you can locate it by using the Directory pop-up menu.

To search for another user profile folder:

1. Click the Directory pop-up menu to display a list of other locations on the system.
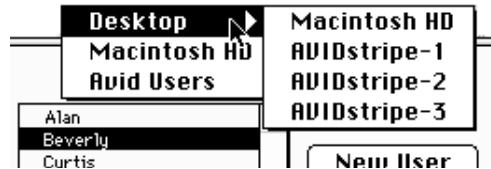
2. Select the Avid drive or an external drive from the Desktop submenu if necessary, and locate the folder.

3. Double-click the selected folder to open it. Continue to open any additional folders until the scroll list displays the appropriate user file name.

4. Click the user name to select it.

You are ready to open a project.

Selecting a Project

To open a project, you can either create and open a new project, or open an existing project.

Creating a New Project

To create a new project:

1. Click New Project in the Project Selection dialog box.

The New Project dialog box appears.

```
┌─────────────────────────────────────────────┐
│ New Project                                   │
│ ┌─Project Name ───────────────────────────┐  │
│ │ ┌─────────────────────────────────────┐ │  │
│ │ │New Project                          │ │  │
│ │ └─────────────────────────────────────┘ │  │
│ └─────────────────────────────────────────┘  │
│                                               │
│ Format [ NTSC ]                               │
│ ☐ Film Options        ☐ Matchback Options     │
│                                               │
│                                               │
│                                               │
│                                               │
│                          [ Cancel ]  [  OK  ] │
└─────────────────────────────────────────────┘
```
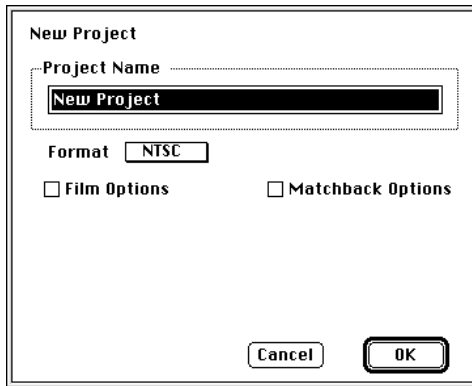
2. Type the name of your new project in the highlighted text entry field.

3. Select either NTSC or PAL from the Format pop-up menu.

```
Format  ✓NTSC
           PAL
☐ Film Options
```

4. Click OK.

The system creates the new project files and folder and returns you to the Project Selection dialog box where the project name is highlighted in the Composer Projects scroll list.

Nesting Projects in Folders

You can create folders in the Project Selection dialog box for storing related projects. To nest a folder, you must first create a folder.

To create a folder:

1. Click the New Folder button in the Project Selection dialog box.

   The New Folder dialog box appears.

```
New Folder

Untitled

        [ Cancel ]   [[  OK  ]]
```
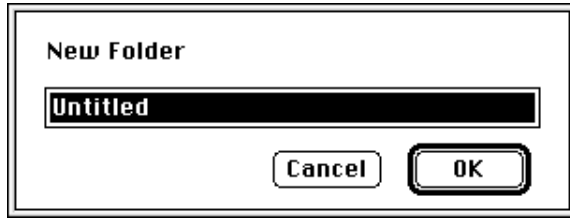
2. Type a name for the folder, and press Return or click OK.

   The folder appears with a dot next to it in the Composer Projects scroll list.

3. Double-click the folder name to open the folder.

   Any new projects you create now are displayed and stored in this folder. Any existing projects you move into this folder from your desktop are displayed in this folder.

Selecting an Existing Project

```
Composer Projects

101 Project          ⬆
Civil Wars
Eco Challenge
Film Project SetUp
HIA404
HIA424
Logoland
Oboe Phobia
Rain Forest Tour
UTH
Video Project SetUp

                     ⬇
```

Existing projects appear in the Composer Projects scroll list in the Project Selection dialog box.

To select an existing project, do one of the following:

- Click an existing project name to highlight it.

- Press the first letter of the project name on the keyboard to highlight it. (If there are multiple projects that begin with the same letter, the first project appearing with that letter in the list will be highlighted.)

If the project is nested in a folder:

1. Double-click the folder name to open it and display the contents in the scroll list.

2. Click the project name to select it.

If the project is stored outside of the Composer Projects folder (in another folder or on a network, for example) you can locate it by using the Directory pop-up menu.

To locate a project in another folder:

1. Click the Directory pop-up menu and choose the Avid drive or an external drive from the Desktop submenu.

   The Project Selection box displays all the stored folders.

2. Double-click a folder name to open it. Continue opening folders until the scroll list displays the project folder you want.

3. Click the project name to highlight it.

Opening the Project

After you select the appropriate user and project names in the scroll lists, you can open the project with the selected user settings in one of the following ways:

• Click OK.

• Double-click the highlighted project name in the project scroll list.

• Double-click the highlighted user name in the user scroll list.

Read more about the Project window in **Chapter 3**.

The Composer window opens on the Edit monitor, and the Project window opens on the Bin monitor with the selected user settings loaded.
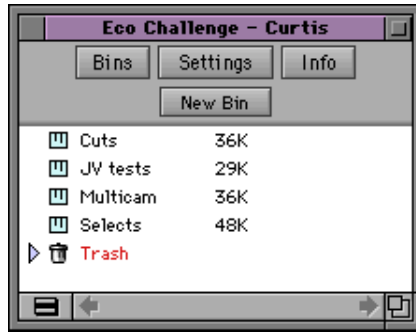
Closing a Project

To close the Project window and return to the Project Selection dialog box, do one of the following:

- Click the close box in the Project window.

- With the Project window active, choose Close from the File menu, or press ⌘ – W.

The Project window and all open bins close, and the Project Selection dialog box appears.

Backing Up Your Work

To back up the larger media files that are created when you digitize footage, you must use a mass-storage device such as an Avid digital linear tape (DLT) device. For more information, see the *Avid DLT 35/35R for Avid Systems Setup and User's Guide*.

Although the Avid Composer system automatically saves your bins, projects, and settings, you should back up these items frequently to avoid losing any of your work in case of a hard drive crash or corruption of the files. Because the storage requirements are minimal, you can back up these files easily to a variety of storage devices, such as:

- Diskette

- Network storage device, such as a file server

- Mass storage device

Saving Your Work on a Diskette or Drive

To save your work on a diskette or drive:

1. Mount or insert the drive or diskette as appropriate.

2. Double-click the icon for the targeted storage drive or diskette to open it. Double-click any additional folders to target the appropriate storage location.

3. Double-click the Avid drive to open it.

4. Drag a project folder, user folder, or settings file to the targeted storage location.

5. When the system finishes copying the files, eject the diskette or drive and store it when appropriate.

Restoring from a Backup

To restore a project, user profile, or settings from a backup storage device:

1. Mount or insert the drive or diskette as appropriate.

2. Open the drive or diskette, and the Avid drive.

If you are restoring an individual bin or bins, you must relink them to the project from within the Project window. For more information, see **Chapter 3**.

3. Drag the copies from the storage device to the appropriate folder on the Avid drive:

   • Project folders and settings files go in the Composer Projects folder.

   • User folders and settings files go in the Avid Users folder.

   • Site settings files go in the Media Composer folder.

4. Launch the Media Composer application. The restored project/ user profile appears in the Project Selection dialog box.

Ending the Edit Session

To end the session you must first quit the application, then turn off your equipment in the order described in this section.

Quitting the Media Composer Application

There are two ways to quit the Media Composer application, depending upon whether you have a project open, or you are between projects:

- If you are working on an open project and want to exit Media Composer quickly, choose Quit from the File menu.

  The project closes and the application quits.

- If you are between projects, at the Project Selection dialog box:

    a. Click the Quit button. The system asks if you want to leave the application.
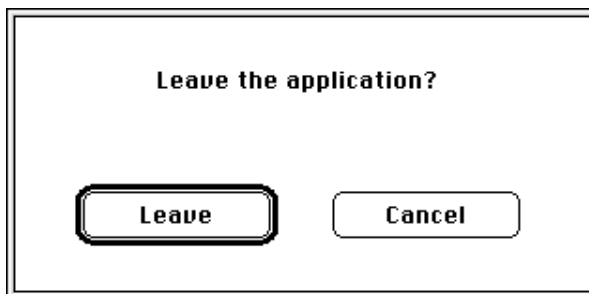
    b. Click Leave to quit Media Composer. Click Cancel to return to the Project Selection dialog box and select another project.

Turning Off Your Equipment

When you are through using your system and want to turn it off completely, follow these steps to avoid damaging your Macintosh or media storage disks.

1. Choose Shut Down from the Special menu. This turns off your Macintosh. The screens on the Bin and Edit monitors go dark.

2. Turn off your speakers and monitors.

3. Turn off each drive in the chassis, then turn off the chassis itself.

   Move your disks only when the Macintosh is completely off.

4. Turn off all other hardware.

⚠ **Never remove disks from your Avid Composer system when it is turned on.**

Session Checklist

☐ Turn on your equipment in the proper order: storage first, peripherals second, Macintosh last. For more information, see the *Avid Media Composer Getting Started Guide*.

☐ On your desktop, move any settings files, Project folders, or User folders from another system into the Avid folders on the Avid drive if necessary before launching the application.

☐ Launch the application.

☐ Create new projects or user profiles or select existing ones in the Project Selection dialog box.

☐ After finishing your work for the session, quit the application.

☐ Back up your work before shutting down the equipment.

☐ Turn off your equipment in the opposite order: Macintosh, peripherals, and finally storage.

CHAPTER 3

Working with the Project Window

The Project window provides controls in three different display modes for structuring and viewing important information about your current project. These include a display of bins and folders associated with the project, a list of all settings, and basic information about the format of the project and use of system memory. These topics are described in the following sections:

- **Opening and Closing the Project Window**
- **Using the Bins Display**
- **Using the Settings Display**
- **Using the Info Display**

Opening and Closing the Project Window

The Project window opens automatically when you select a project in the Project Selection dialog box.
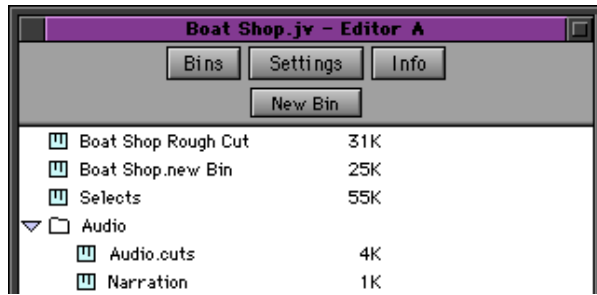
Boat Shop.jv – Editor A
Bins   Settings   Info
New Bin

▦ Boat Shop Rough Cut	31K	
▦ Boat Shop.new Bin	25K	
▦ Selects	55K	
▽ ☐ Audio		
▦ Audio.cuts	4K	
▦ Narration	1K	

To close the Project window and return to the Project Selection dialog box, do one of the following:

- Click the close box in the Project window.

- With the Project window active, choose Close from the File menu, or press ⌘ – W.

Because the Project window remains open the entire time you are working within a project, it might be hidden from view by several open bins or tools on the Bin monitor.

To locate and redisplay the Project window, do one of the following:

- Choose Project from the Tools menu.

- Click any unobstructed piece of the Project window to bring it forward.

Using the Bins Display

Bins contain the master clips that are created when you digitize source material. (The master clips are linked to the media files.) Bins also contain the sequences, subclips, group clips, and effect clips that you create during a project. From the Project window, you can view a list of bins associated with the project, and open, close, and create bins. You can also open bins created for another project.

To view a list of bins associated with the project, click the Bins button in the Project window.

Bins button

```
┌────────────────────────────────────────────┐
│ ■      Boat Shop.jv — Editor A          □   │
│         ┌─────┐ ┌────────┐ ┌──────┐          │
│         │ Bins│ │Settings│ │ Info │          │
│         └─────┘ └────────┘ └──────┘          │
│               ┌──────────┐                   │
│               │ New Bin  │                   │
│               └──────────┘                   │
│   ▥ Boat Shop Rough Cut         31K          │
│   ▥ Boat Shop.new Bin           25K          │
│   ▥ Selects                     55K          │
│  ▽ ▢ Audio                                   │
│      ▥ Audio.cuts                4K          │
│      ▥ Narration                 1K          │
│  ▷ ▢ Effects                                 │
└────────────────────────────────────────────┘
```

From the Bins list you can examine the number, names, size, and location of bins:

- Click the triangle next to a bin icon to display the bin's contents in the Project window. Click the triangle again to close up the display.

- Double-click a bin icon to open the bin in its own window. A colored icon next to the bin indicates that the bin is closed. A dimmed icon next to the bin indicates that the bin is open.

- To view a list of only the folder contents and not the folders, as in earlier versions of Media Composer, select Flat View from the Fast menu.

To open a bin from another project:

1. Select Open Bin from the File menu.

   The Select a Bin window opens.

2. Find and select the bin you want.

3. Click the Open button.

The bin appears in the Project window in a folder called Other Bins. The name Other Bins is in italics. You can rename this folder.

Displaying Bins

You can add folders to the Project window to help organize your project. You can drag and drop bins into folders, or folders into folders. See **"Managing Folders and Bins" on page 52**.

New folders

Trash icon

Bin Fast menu
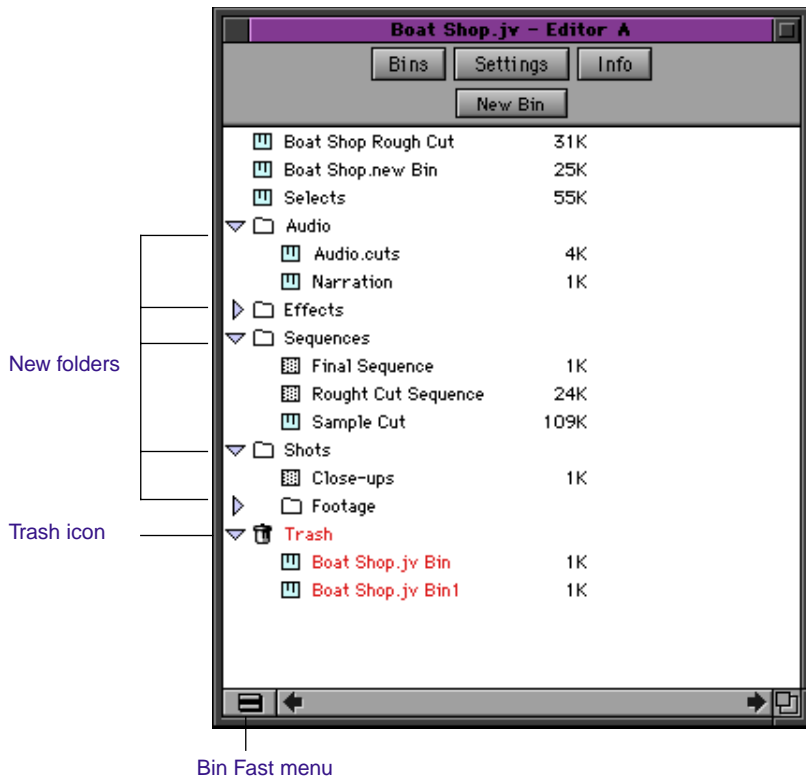
Creating a Folder in a Project

To create a folder in a project:

Open Selected Bins
New Bin
New Folder
Close Selected Bins
Delete Selected Bins
Empty Trash
Reveal File
Flat View

1. Click Bins in the Project window.

2. Choose New Folder from the Bin Fast menu.

   A new untitled folder appears.

3. Click the untitled folder and rename it.

Deleting a Bin or Folder

To delete a bin or folder:

1. Select the bin or the folder you want to delete.

2. Press the Delete key.

   A Trash icon appears in the bin folder. It contains the deleted item.

Clips, subclips, and effects that are in a bin appear in the Trash after you delete the bin. However, if you select a clip, subclip or effect directly and press the Delete key, the item does not appear in the Trash.

Emptying Trash

To empty the Trash:

1. Choose Empty Trash from the Bin Fast menu.

   An alert box appears.

```
┌─────────────────────────────────────────────┐
│ ═══════════════════════════════════════════ │
│                                               │
│   ⚠    Emptying the trash permanently deletes │
│  /!\   the bins therein from your disk.       │
│        Do you really want to do this?         │
│                                               │
│   ┌─────────────────┐      ┌───────────────┐ │
│   │  Empty Trash    │      ║  Don't Empty  ║ │
│   └─────────────────┘      └───────────────┘ │
└─────────────────────────────────────────────┘
```
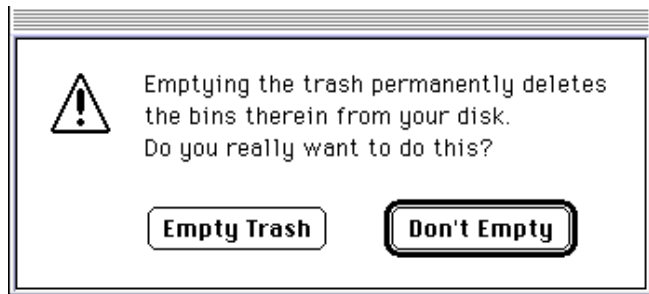
2. Click Empty Trash to delete the bins or folders from the Trash.

Viewing Contents in the Trash

If you need to view the contents in the Trash or decide you do not want to delete those items in the Trash, you must first move the bins and folders out of the Trash.

To view items in the Trash:

1. Double-click the Trash icon to open it.

2. Click the bins or folders you want to remove (or view) and drag them from the Trash to the Project window.

3. Double-click the bin or folder to view it.

Managing Folders and Bins

You can use the Project window to create hierarchies of folders and bins that reflect the specific workflow of the current project. This structure should provide both simplicity and backup security. Although the specifics can vary depending upon your production needs and habits, the following are a few basic principles that can help you get started:

• Limit the number of sequences you create in each project. For instance, consider creating one new project for each show, episode, spot, or scene.

- Limit the number and complexity of clips in each bin by creating and organizing bins in three groups, as follows:

  - Create a set of bins for the digitizing stage.

    For example, you can create one bin for each source tape to be digitized to avoid slowing the system with large bins and causing confusion between tapes.

  - Create a second set of bins for organizing your project.

    For example, you can create separate bins for each segment of a video project, depending upon the preferences of the editor.

  - Create a third set of bins for the editing stage, including:

    A current cut bin for storing each work in progress (sequence)

    An archive bin for keeping the original version of each cut (sequence)

    A selects or storyboard bin for screening selected clips or cuts gathered from the source bins

    A format cuts bin for storing the final cuts with added format elements such as segment breaks, bars and tone, slate, or countdown

For information on creating script windows using scripts for your projects, see <u>Chapter 11</u>.

- (Option) Create additional folders at the desktop level for better organization.

  For example, you can create one folder for each digitizing bin and show cut bin, or a folder to contain all shot logs to be imported.

- Save these files as a template for future productions of a similar nature.

A sample template of bins for a project might be as follows:

```
      ┌────────────────────────────┐
      │ ▤▤▤  Canyonlands  ▤▤▤  ▣│
      ├────────────────────────────┤
      │ 10 items  966.8 MB in disk   63 MB │
      │ ···························· │
      │        Name                │
      │ ▷ ▱ Attic              ⇧    │
      │ ▽ ▱ Bins                   │
      │     ▦ Canyonlands          │
      │     ▦ Closeups             │
      │     ▦ Flowers              │
      │     ▦ Imports              │
      │   ▣ Canyonlands            │
      │   ▤ Canyonlands Settings   │
      │ ▷ ▱ Statistics             │
      │ ▷ ▱ Trash             ⇩    │
      │ ⇦ ▥                  ⇨ ▣  │
      └────────────────────────────┘
```

Bin icons

Project file
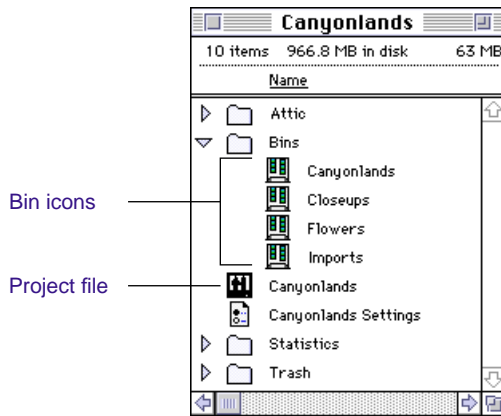
Specific structure and termi-
nology of the template can
vary, depending upon conven-
tions at your facility.

This hierarchy allows you to have one set of bins available in the
Project window during the digitizing and organizing phase, and
another set of bins available during editing to reduce clutter.

Creating a New Bin

To create a new bin from the Project window, do one of the following:

- Choose New Bin from the File menu.

New Bin

- Click the New Bin button in the Project window.

- Use the Open Bin dialog box, as follows:

  a. Choose Open Bin from the File menu.

     The Select a Bin dialog box appears.

54

Select a Bin

🗁 Canyonlands ▼   ⊂ Avid

■ Attic
▤ Canyonlands
▤ Closeups
▤ Flowers
▤ Imports
▢ Statistics
▢ Trash

Eject
Desktop

Cancel
New
Open
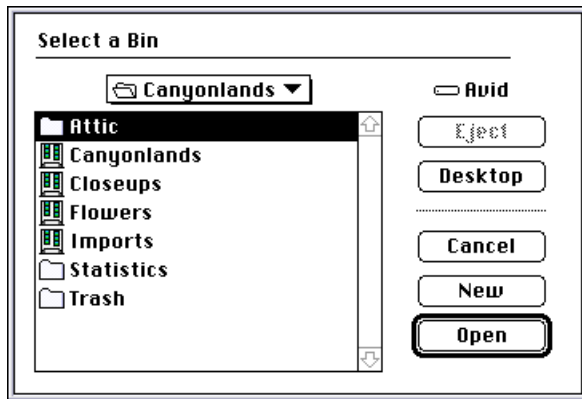
b. Click New.

A directory dialog box appears.

Directory name

Click and hold here
to display the pop-
up menu.

🗁 Canyonlands ▼   ⊂ Avid

▢ Attic
▤ Canyonlands
▤ Canyonlands Settings
▤ Closeups
▤ Flowers

New Bin Name

Eject
Desktop
New 🗁

Cancel
Save
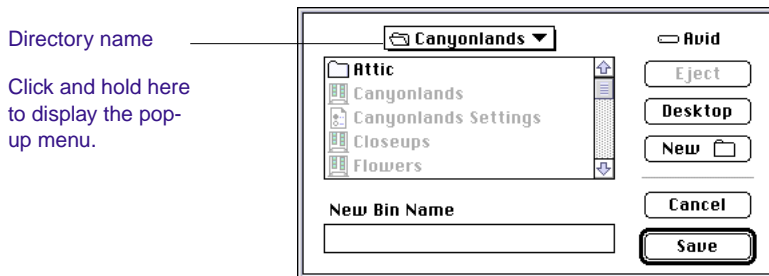
c. Type a bin name in the New Bin Name text entry field.

d. Save the bin as follows:

• To have the system save the new bin in the Project folder, click Save.

• To store the new bin in another location, click the Directory pop-up menu to select another drive or folder, then click Save.
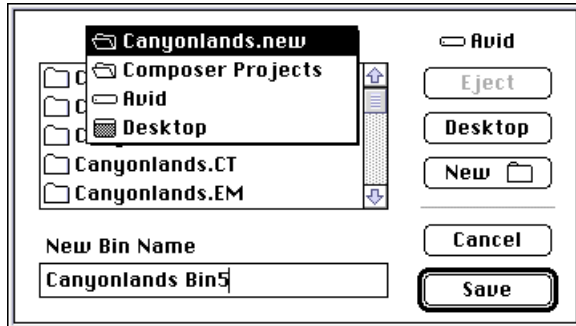
Performing either of these procedures displays a new (empty) bin that is given the name of the project as displayed in the title bar of the Project window (unless you name it in the Open Bin dialog box). A corresponding file is placed in the Project folder, and a backup copy is placed in the Attic folder.
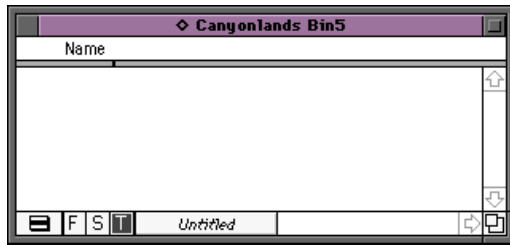
The default name of the bin appears at the top. You can keep the name, or rename the bin immediately.

Renaming a Bin

Each new bin that you create takes the name of the project that appears in the Project window, numbered incrementally.

To change the name of a bin, click the Bins list in the Project window and type a new name.

Boat Shop.jv – Editor A		
Bins	Settings	Info
	New Bin	

▥ Boat Shop Rough Cut	31K	
▥ Boat Shop.new Bin	25K	— Bins list
▥ Selects	55K	
▽ ▢ Audio		
▥ Audio.cuts	4K	
▥ Narration	1K	
▷ ▢ Effects		
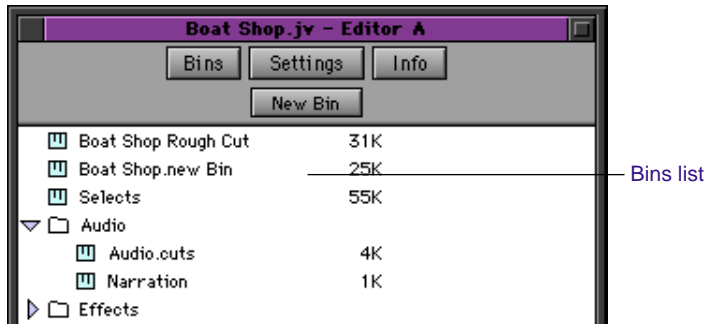
Opening and Closing a Bin

To open a bin with the Project window active:

1. Do one of the following:

- Double-click the bin handle (the icon) next to a bin.

- Choose Open Bin from the File menu.

The Select a Bin dialog box appears.

Select a Bin

▢ Canyonlands ▼	⊂⊃ Avid
▩ Attic	Eject
▦ Canyonlands	
▦ Closeups	Desktop
▦ Flowers	
▦ Imports	Cancel
▢ Statistics	New
▢ Trash	Open
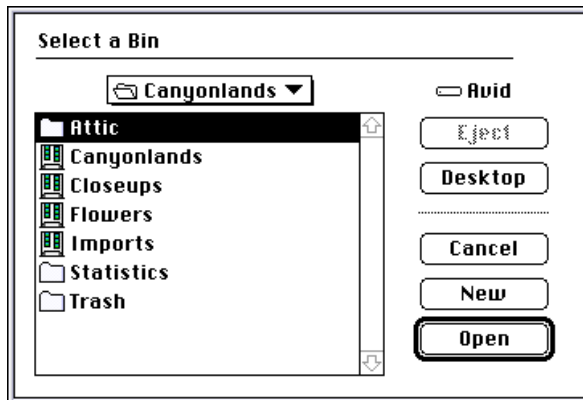
2. Using the Directory pop-up menu to find the correct folder if necessary, select a bin.

3. Click Open.

   The bin opens and the bin name is added to the current Bins list in the Project window for future access. This option is especially useful when you want to open a bin not currently displayed in the Project window.

⚠ **Never open a bin that's stored on a diskette; otherwise the system won't be able to save your work. Always copy the bin to your Avid drive before you open it.**

Opening Selected Bins

To open several bins at once:

1. Click the name of one of the bins in the Bins list.

2. Shift-click each additional bin you want to open.

3. Choose Open Selected Bins from the File menu.

Closing a Bin

To close a bin, do one of the following:

• Click the close box in the upper left corner of the bin.

• Choose Close Bin from the File menu to close the active bin.

Deleting Bin Names

To delete Bin names from the Project window:

1. Select a bin name for deletion. Shift-select additional bins.

2. Press the Delete key. The bin names are deleted from the Bins list.

📄 *Bin names deleted from the scroll list remain as files in the Projects folder and in the Attic folder. To delete bins completely, you must open the project folder on your desktop and drag the bin file to the Trash.*

Saving Bins Automatically

The Avid Composer system automatically saves changes to your work on a regular basis during each session. Two things happen when auto-save occurs:

- Any open bins are updated with changes made since the last auto-save.

- Copies of these bins are placed in the Attic folder as backup.

The system automatically places copies of all bins into the Attic folder at regular intervals for backup. The procedure for recovering bin files from the Attic folder is described in **"Retrieving Bin Files from the Attic Folder" on page 60**.

You can manually save bins for added security—for instance, immediately after an important edit. When your work is lost, or when you want to recover an earlier version of a bin or sequence, you can retrieve files from the Attic folder.

The Save Bin command is dimmed if there have been no changes since the last time the active bin was saved.

Saving Bins Manually

There are three ways to save bins manually:

- To save a specific bin:

    a. Click the bin to activate it.

    b. Choose Save Bin from the File menu.

- To save selected bins:

    a. Activate the Project window by choosing Project from the Tools menu or clicking anywhere on the window.

    b. Click a bin handle to select it. Shift-click any additional bins.

c. Choose Save Selected Bins from the File menu.

The system saves all the selected bins.

- To save all the active bins:

  a. Click an open bin to activate it, or click the Project window to activate it but don't select any individual bins listed in the window.

  b. Choose Save All from the File menu.

The system saves all the open bins for the project.

Retrieving Bin Files from the Attic Folder

You retrieve files from the Attic folder in the following circumstances:

- When you want to replace current changes to a sequence or clip with a previous version

- When the current bin file becomes corrupt

When a copy of a bin file is stored in the Attic folder, the system adds the extension ".bak" plus a version number to the bin name. When you view the Attic folder in the Name view, you can identify the most recent backup file based on the name and timestamp of creation displayed in the Last Modified column.

To retrieve a file from the Attic folder:

1. If you do not plan to overwrite existing files, create a new bin.

2. Open the Attic folder in the Project window.

   Click the triangle next to the Attic folder icon or double-click the Attic icon. (If you open the Attic window, select by Name from the View menu if the Folder window is not already in the Name view.)

3. Open the bin that you want to retrieve in the Attic folder.

4. Lasso or Shift-select the desired files.

5. Drag the files to the desired destination.

   If you want to maintain the Attic files in the Attic folder, duplicate the selected files and drag the duplicates as desired.

Once you have moved the objects, modify their creation dates so they are considered newest by the system.

To modify the creation date:

1. Click the F button at the lower left of the bin window to put the bin in Frame display mode.

2. Select the object (for an entire bin, choose Select All from the File menu).

3. Advance the frame displays by one frame by pressing the Step Forward button or key. Move back again by pressing the Step Backward button or key.

   The date stamp is updated to the present time and date.

Using the Settings Display

From the Settings display you can view, select, open, and alter various User, Project, and Site settings, as described in this section.

To view the Settings display, click the Settings button in the Project window.

Boat Shop Master Tutorial – Editor A

Bins | Settings | Info ——— Settings button

Editor A | All Settings

| ✓ Audio | User |
| ✓ Avid Controller | User |
| ✓ Bin | User | ——— Setting type
✓ BurnIn	User
✓ Change List	User
✓ Composer	User
✓ Cut List	User
✓ Deck Configuration	Site
✓ Deck Preferences	User
✓ Digital Cut	User
✓ Digitize	User
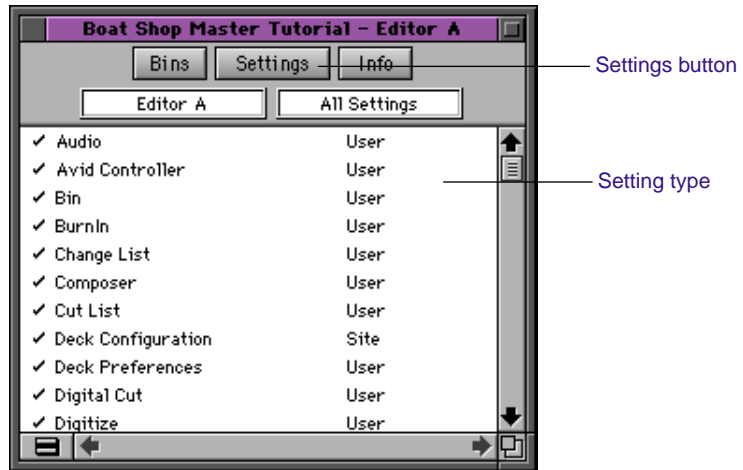
About Settings

Three types of settings are displayed in the Settings scroll list, as indicated in the third column of information: User, Project, and Site settings.

- **User settings** are specific to a particular editor. In general, User settings reflect individual preferences for adjusting the user interface in Media Composer. Individual User settings are stored in each user folder within the Avid Users folder on the Avid hard drive.

- **Project settings** are directly related to individual projects. When a Project setting is changed, it affects all editors working on the project. Specific Project settings are stored in each project folder within the Composer Projects folder on the Avid hard drive.

- **Site settings** establish default parameters for all new users and projects on a particular system. These can apply to particular configurations of equipment installed at the site (for example spec and node settings for an external switcher). They can also include other user or project settings that you copy into the Site Settings

window. Site settings are stored in a separate Settings folder in the Media Composer folder on the Avid hard drive.

Defining Settings

You can use the Settings display to establish a hierarchy of settings that address the specific needs of each production phase. For example, you can establish:

- User settings for the *assistant editor:* Facilitate logging, digitizing, and organizing projects.

- User settings for the *editor*: Include editing interface preferences.

- Project settings: Reflect the specific needs of the project.

- Bin View settings: Display useful columns of information for each of the bins described in **"Managing Folders and Bins" on page 52**.

By establishing these settings once, and selecting the appropriate setting or bin view in context, you can save time and effort that would be spent searching for information or adjusting bin headings on-the-fly. You can also save these settings along with your template (as described in **"Managing Folders and Bins" on page 52**) for use on similar projects.

Reviewing Basic Settings

For a complete description of all settings and their options, see the *Avid Media Composer Products Reference.*

The following list describes basic system settings to review at the start of your project:

- Bin settings

- General settings

- Interface settings

Double-click each setting in the Settings scroll list of the Project window to view the following dialog boxes:

- **Bin settings** define general system functions related to bins, including:

    - Parameters of the Auto-save function

    - Maximum number of bin backup files stored in the Attic folder

    - Whether double-clicking objects in the bin loads them into Source/Record monitors or pop-up monitors

- **General settings** define fundamental system defaults, including:

    - Starting timecode for sequences edited in Media Composer

    - Setup default for either American NTSC or NTSC/EIAJ video input (affects calibration)

    - Whether the system uses the drive-filtering function to automatically target only the fastest drives when digitizing high-resolution media

- **Interface settings** determine the level of basic information displayed in the interface, including:

    - Whether the system displays long (complete) menus or short (simplified) menus

    - Whether written labels are displayed beneath icons in the various command palettes

Displaying Project Settings

You can display the Project Settings window in different ways, depending on what you need to view. **Table 3-1** describes the Project Settings options.

Table 3-1   Project Settings Options

Option	Description
All Settings	Displays all settings available in the Avid Composer system.
Base Settings	Displays project settings only; no views are displayed.
Bin Views	Displays all the bin view settings you created.
Timeline Views	Displays all the Timeline view settings you created.
Title Styles	Displays all the templates you created for the Title Tool.
Video Tool Settings	Displays all the Video Tool settings.
Workspaces	Displays all the workspace settings you created.

To change a project setting display:

1. Click the Settings buttons in the Project window.

   The Project Settings window opens.

2. Choose a settings display from the Fast menu or from the Settings menu.

```
✓All Settings
 Base Settings

 Bin Views
 Timeline Views
 Title Styles
 Video Tool Settings
 Workspaces
```

Settings menu

Fast Menu button
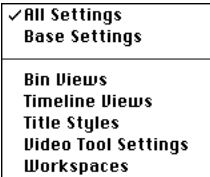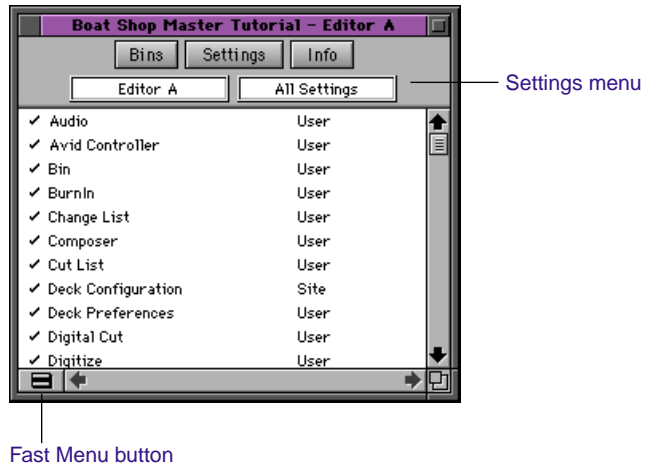
Working with Settings

You can view and modify most of your current settings by double-clicking them in the Project window and selecting new options. You can duplicate, rename, copy, and move settings among files or systems.

Selecting Another User

Because User settings are not project or site specific, you can display another set of user settings within the Project window.

To select another user, choose another name from the User pop-up menu.

User pop-up menu

The previous user's settings are saved, and the new user's settings are loaded into the Avid Composer system and the Project window.

Modifying Settings

You can alter the default options for various settings to reflect the specific needs of a project or to customize the system based on personal preferences.

There are three types of settings you cannot modify. These are:

• Settings that require the presence of standalone peripherals, such as the Avid Media Reader

• Settings that can be modified only from within the tools in which they are used, such as Bin and Timeline views

• Film settings when working in nonfilm projects

To modify available settings:

1. Double-click the name of a chosen setting in the Settings scroll list.

Double-click in these columns to open a
settings dialog box.

A dialog box or window opens.

2. Enter new values or select new options for the settings.

3. Click OK, Save, Cancel, or the close box when done.

The system saves changes in the appropriate User, Project, or Site
settings file.

Working with Multiple Settings

You can have multiple versions of settings in your Project window that
apply to several users at various stages of production. For example,
you can have:

- Two bin settings: one that automatically saves more often when
  you are editing intensively, and one that automatically saves less
  often when you are doing organizational work in the bins

- Multiple Digitize settings for digitizing various types of source
  material

- Multiple Keyboard and Composer settings to use for various activities such as digitizing, offline editing, film editing, or online effects editing

- Multiple Deck settings for various types of digitizing or for output

Duplicating Settings

To create a new version of a setting:

1. Click the Settings button in the Project window to display a list of your current settings.

2. Click the setting you want to copy. Shift-click any additional settings you want to copy.

3. Choose Duplicate from the Edit menu.

   A copy of each setting appears in the window, with each setting name followed by a period and a version number. Rename your settings to indicate their functions.

Renaming Settings

You can rename settings to differentiate among more than two copies or to indicate a specific use.

To rename settings:

1. Click the setting's name in the Settings scroll list.
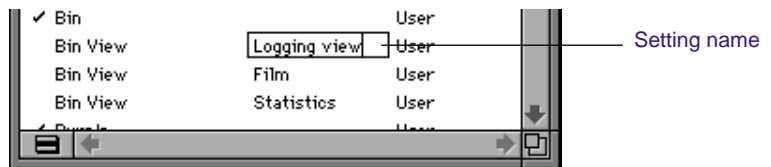
Setting name

2. Type a new name and press Return.

   The new name appears in the list and is saved in the settings file.

Selecting Among Multiple Settings

With multiple settings, only one setting at a time is active. Settings that are currently active have a checkmark to the left of the setting name.

To change the active setting, click in the space to the left of the setting you want to select as the active setting.

A checkmark indicates that it is now active.

Deleting Settings

You can delete settings from the Settings list in the Project window at any time. For example, you might choose to delete one or more among multiple versions of a particular setting. Or you might want to delete all but a few settings to transfer into another settings window.

To delete a setting:

1. Click a setting to highlight it. Shift-click each additional setting you want to delete.

2. Press the Delete key or choose Delete from the Edit menu.

   The selected settings are immediately removed.

   You cannot undo the deletion. You can, however, restore the default settings, or you can transfer settings from other files, as described in the following sections.

Restoring Default Settings

You can restore your settings to the default values at any time by doing the following:

1. Click a setting to highlight it. Shift-click each additional setting you want to select.

2. Choose Restore to Default from the Special menu.

   An alert box asks whether you want to save the settings.

> Do you want to make a copy of the current Digitize settings before restoring to the default?
>
> [Cancel]   [Copy & Restore]   [**Restore**]
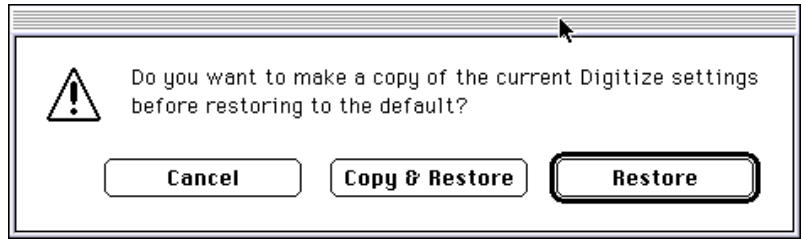
3. Click Copy & Restore to copy the current settings before restoring the default settings, or click Cancel to discard the current settings.

   The system restores the default values for the selected settings.

Copying Settings Between Settings Files

You can copy selected settings between existing settings files or into a new settings file for use in other projects, for transfer to other Avid Composer systems, to change one type of setting to another, or into the Site Settings folder to establish standard system settings for all new projects and users.

To copy settings between files:

1. With Settings display active, open the target settings file in one of the following ways:

   • Create and open a new settings file by choosing New Setting File from the File menu.

     An untitled settings window appears.

   • Open an existing settings file by choosing Open Setting File from the File menu.

A dialog box appears.
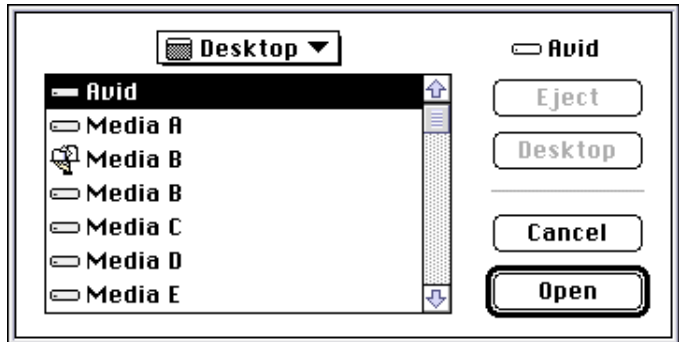
Locate and select a settings file in the Composer Projects or Avid Users folder and click Open. The settings file window opens.

- Choose Site Settings from the Special menu.

  The Site Settings window opens.

2. Click the setting you want to copy in the settings window scroll list of the current project. Shift-click any additional settings that you want to copy.

3. Drag the highlighted settings to the new settings window.

Boat Shop Master Tutorial – Editor A		
Bins	Settings	Info
Editor A		All Settings
✓ Audio	User	
✓ Avid Controller	User	
✓ Bin	User	
✓ BurnIn	User	
✓ Change List	User	
✓ Composer	User	
✓ Cut List	User	
✓ Deck Configuration	Site	
✓ Deck Preferences	User	
✓ Digital Cut	User	
✓ Digitize	User	

Untitled	
Deck Preferences	User
Digitize	User
Effects	User
Keyboard	User
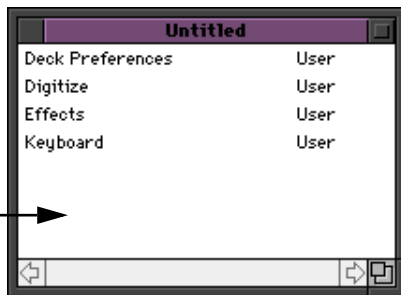
To copy, drag settings
between windows.

When you copy settings back into the settings window scroll list, a dialog box appears.

Add this setting to the current settings or use it to replace the active setting?

[Add]   [Replace]
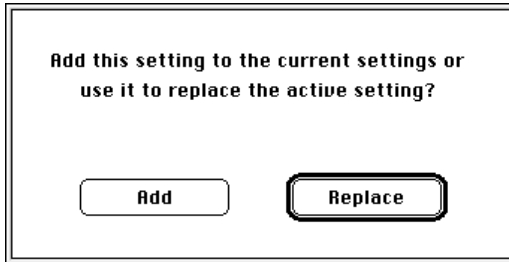
4. Click Add to add the new settings to the project without affecting the project's current settings. Or click Replace to replace the current version of each setting with the new settings. Additional versions of each setting are not affected.

The copied settings are saved when you close or save the file or project.

Moving Settings Between Systems

You can automatically transfer settings to another Avid Composer system without having to re-create them. You do this by copying your User folder, Project settings file, or Site settings file and moving it to the new location.

To move settings between systems:

1. Insert a diskette into the computer's diskette drive.

2. From your desktop, open the appropriate folder (Avid Users folder, a specific project folder, or the Settings folder) on your Avid hard drive.

3. Drag the settings file or User folder to the diskette icon.

   The Macintosh copies the file or folder to diskette.

4. Eject the diskette and bring it to another Avid Composer system.

5. Insert the diskette into the new Avid Composer system.

6. Double-click the diskette icon to open it.

7. Double-click the Avid hard disk icon and open the appropriate folder (Avid Users, a chosen project folder, or the Settings folder).

8. Drag your settings file or User folder to the folder on the Avid drive.

The next time you open a project at the new location, your settings will be available as follows:

• **User settings folder.** Your name appears in the list of editors.

• **Project settings file.** Your project settings are active in the chosen project.

• **Site settings file.** Your site settings are active for all projects at the new location.

When you choose your name and a project, your customized settings are loaded into the new system.

Using Site Settings

When the system opens a new project, it first searches the Site settings file (located in the Media Composer folder) and loads any settings placed here. The system then proceeds to load any Project and User settings not included in the Site settings.

This feature is useful if you need to establish global settings for all new users and projects, such as switcher settings, a specific start timecode for all sequences, or various customized features of the interface.

To load settings into the site settings folder:

1. Open a project with the settings you would like to establish as site settings. If a project does not already exist with the desired settings, create one and make adjustments to the default settings as needed.

2. Choose Site Settings from the Special menu.

   The Site Settings window opens.
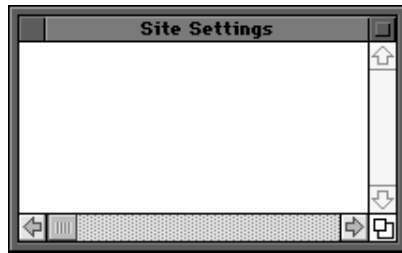
3. Click a setting in the Project window or Shift-select multiple settings and drag them into the Site Settings window.

   Copies appear in the Site Settings scroll list.

4. Close the Site Settings window.

All new users and projects opened from the Project Selection dialog box use these settings as the default settings.

Using the Info Display

The Info display in the Project window allows you to view basic project information, such as the video format (NTSC, for example) or frame rate (24 fps for film projects).

To activate Info display, click the Info button in the Project window.
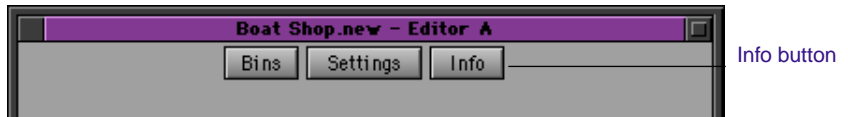
The items listed in this view are for information only and cannot be changed from the Info list.

The Fast Menu button at the bottom of the Info window displays four menu items: Profile, Memory, Usage, and Hardware.

Fast Menu button

Displaying a Project Profile

Profile displays basic project information, such as the video format (NTSC or PAL) or frame rate (24 fps for film projects).

To display the Profile information:

1. Click the Info button in the Project window.

2. Choose Profile from the Fast menu.

Basic project information is displayed.

Displaying Usage Information

The Avid Composer system includes a statistics feature that gathers and reports information on system usage. You can use this information to support business functions such as resource management.

All statistics are gathered and reported by project. The file that contains this information is formatted so that you can use it as input to software programs such as analysis applications, spreadsheets, or report generators.

⚠ **Do not rely on the statistics feature for billing or other financial purposes.**

To view statistics for an open project:

1. Click Info in the Project window.

2. Choose Usage from the Fast menu.

You see a display similar to the following:

```
                    Boat Shop.new - Editor A
                 Bins    Settings    Info


Statistics as of: Wed Sep 17 11:57:54 1997
Project created:  Thu Sep 11 13:29:33 1997
Session Started:  Wed Sep 17 11:57:24 1997

Elapsed Time (HHH:MM:SS)        Total      This Session
 Time Project open            03:26:31         00:00:30
 Digitize Tool digitizing     00:10:10         00:00:00
 Title Tool open              00:15:28         00:00:00
 Title Tool active            00:06:29         00:00:00

Disk Space Used:              # Files      M Bytes Used
 Digitized Media                    0              0.0
 Rendered Effects                   0              0.0
```


Fast Menu button

3. Click the Info button again to update the Usage window to reflect any changes you made to the project.

To print this file, choose Print from the File menu.

A new file is created each time you open the project. The files are stored in a Statistics folder inside each project folder.

The file name has the following format:

Statistics.*yymmdd.HHMMSS*

where:

yy indicates the last two digits of the year
mm indicates the month
dd indicates the date
*HH*indicates the hour
*MM*indicates the minute
*SS*indicates the seconds

File Structure and Layout

The statistics file is formatted as comma-separated ASCII text, so it can be accepted by a variety of software programs. Each line in the file is tagged with indicators for identifying content and data type to assist in programming custom applications. **Figure 3-1** shows a sample data file.

Figure 3-1   Sample Data File

```
01,01,Project Name: april5,,,Statistics as of:
Fri Apr 05 11:39:37 1997

02,01,Project created: Fri Apr 05 07:44:40
1997,,,Last Session Started: Fri Apr 05 11:36:22
1997

117,04,

03,04,

03,04,Elapsed Time:,---,Total,---,---,Last
Session,---

03,04,
,Hours,Minutes,Seconds,Hours,Minutes,Seconds

101,02,Time Project Open ,1,10,04,0,00,00

03,04,

102,02,Digitize Tool open ,0,45,08,0,00,00

104,02,Digitize Tool active ,0,14,16,0,00,00

116,02,Digitize Tool logging ,0,00,00,0,00,00

115,02,Digitize Tool digitizing ,0,25,04,0,00,00

03,04,

111,02,Title Tool open ,0,00,00,0,00,00

113,02,Title Tool active ,0,00,00,0,00,00

114,02,Title Tool rendering ,0,00,00,0,00,00

03,04,

110,02,Effects rendering ,0,00,00,0,00,00

03,04,
```

Description of Data File Values

The values in the first column indicate the content of the line. Values are:

01title1
02title2
03heading
100project info
101Time Project open
102Digitize Tool open
104Digitize Tool active
105Digitized Media bytes used
106Rendered Effects bytes used
110Effects rendering time
111Title Tool open
113Title Tool active
114Title Tool rendering
115Digitize Tool digitizing
116Digitize Tool logging
117user comments

The value in the second column indicates the type of data in the line. Values are:

01project info
02time used
03bytes used
04text string

Importing the Statistics File into a Spreadsheet

You can import the statistics file into spreadsheet or other programs as an ASCII file and use the application to set up the proper format. For example, to create a statistics file in Microsoft® Excel™ on a Macintosh:

1. From the Finder, locate the statistics file you want to copy.

2. Start Excel.

3. Open the file by choosing Open from the File menu and navigating to the directory the file is in.

   After you open the file, the Text Import Wizard starts.

To complete the steps for the Text Import Wizard:

1. Choose Delimited for the Original Data Type and click Next.

2. Choose Comma for Delimiters and click Next.

3. Choose General for Column Data Format.

4. Click Finish.

   The statistics file appears in spreadsheet format.

Spreadsheet Form of Statistics Data File

Figure 3-2 is the same sample file as it appears when you import into a spreadsheet.

Figure 3-2   Sample Spreadsheet Form

			Hours	Total Minutes	Seconds	Hours	Last Session Minutes	Seconds
1	1	Project Name: Boat Shop.jg			Statistics as of: Mon Sep 15 14:16:01 1997			
2	1	Project created: Thu Sep 11 13:29:33 1997			Last Session Started: Mon Sep 15 14:16:00 1997			
117	4							
3	4							
3	4	Elapsed Time: ---		Total	---	---	Last Session	---
3	4		Hours	Minutes	Seconds	Hours	Minutes	Seconds
101	2	Time Project O	1	49	59	0	0	1
3	4							
102	2	Digitize Tool op	0	0	0	0	0	0
104	2	Digitize Tool ac	0	0	0	0	0	0
116	2	Digitize Tool lo	0	0	0	0	0	0
115	2	Digitize Tool di	0	10	10	0	0	0
3	4							
111	2	Title Tool open	0	0	0	0	0	0
113	2	Title Tool activ	0	0	0	0	0	0
114	2	Title Tool rend	0	0	0	0	0	0
3	4							
110	2	Effects renderi	0	0	0	0	0	0
3	4							
107	2	Illusion open*	0	0	0	0	0	0
108	2	Illusion/Paint	0	0	0	0	0	0
109	2	Illusion/Morpl	0	0	0	0	0	0
3	4							
3	4	Disk Space Use # Files		m Bytes Used				
105	3	Digitized Media	0	0				
106	3	Rendered Effec	0	0				
3	4							
3	4							
3	4	* Items marked by asterisk may show less than actual usage						

About Projects and Memory

The way in which a project uses memory has a direct effect on performance. As a project develops, the number of media files in use (clips, effects, and other bin items) increases. Because the system keeps track of them in RAM, they can be played back faster, but the memory requirements can slow down the system in other ways.

The *Avid Media Composer and Film Composer Release Notes* provide information about system requirements for RAM. Occasionally you might need to adjust the way your Macintosh uses its RAM in order to work efficiently. There are two factors that can affect the performance of your system:

- If you opened and quit several applications during a session, or if you opened and closed various Avid Composer tools repeatedly, your computer's memory might become fragmented. As a result, your system might be sluggish. To solve this problem, close all applications and restart your Macintosh.

- If you need to open more or larger files within the Avid Composer system, you might want to increase the amount of memory allocated to the application from the desktop.

To check and adjust the allocation of system memory (RAM), see your Macintosh documentation.

Viewing Memory

Memory	
Objects	12229
Free Mem	16622788
Total Mem	23654964

To display system memory information:

1. Click the Info button in the Project window.

2. Choose Memory from the Fast menu.

   The Memory window opens.

The window displays the total number of objects (all clips, sequences, and other objects associated with a bin) in use for a particular project, the total free memory, and the total memory available.

If the memory in use is already near the limit of the total memory, you might want to consolidate finished elements and eliminate old material from the project, or break the project up into separate, segmented projects. For more information on consolidating, see **"Consolidating Media" on page 276**.

Accessing the Hardware Tool from the Info Window

You can display the Hardware Tool by choosing Hardware from the Tools menu. You can also choose it from the Fast menu in the Info window.

To activate the Hardware Tool:

1. Click the Info button in the Project window.

2. Choose Hardware from the Fast menu.

   The Hardware Tool appears.
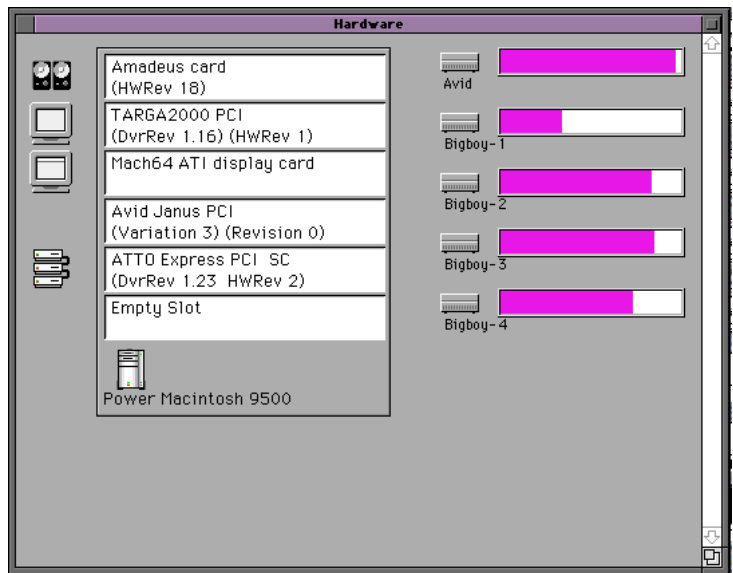
Customizing Your Workspace

A workspace is the arrangement and size of windows displayed on your Avid Composer system. If you are accustomed to working with a particular group of windows arranged and sized in a particular setup,

you can assign a workspace setting to remember that arrangement. For example, during digitizing you might want to have the Digitize Tool and Video Input Tool open. During editing, you want to have the Effect Palette, Effect Editor and the Keyboard window open and arranged in a particular order and size. You can have as many workspace settings as you want.

Eight buttons allow you to switch between user-customized workspaces. The buttons are assigned to the workspaces in the Settings window in the order that they appear. For example, W1 button is assigned to the first workspace that appears in the Settings window. W2 is assigned to the second workspace that appears in the Settings window.

Assigning a Workspace

To assign a workspace:

1. Click Settings in the Project window.

   The Settings window opens.

2. Scroll to the bottom of the Settings list and select Workspace.

   Workspace is highlighted.

3. Press ⌘–D to duplicate the workspace.

   Workspace appears twice.

4. Click a workspace you want to use. (Click to the left of the word "Workspace.")

   A checkmark appears next to the workspace.

5. In the second column (to the right of "Workspace"), move the cursor until the pointing hand becomes a text cursor.

6. Type a new workspace name; for example, digitizing.

Boat Shop Master Tutorial – Mary Mac		
Bins	Settings	Info

Mary Mac	All Settings

✓ Steenbeck		User
✓ Timeline		User
✓ Trim		User
✓ User Profile		User
✓ VTR Emulation		Site
✓ Video Input		Project
✓ Video Output		Site
✓ Video Tool		Project
✓ Workspace		User
Workspace	digitizing	User
Workspace	editing	User
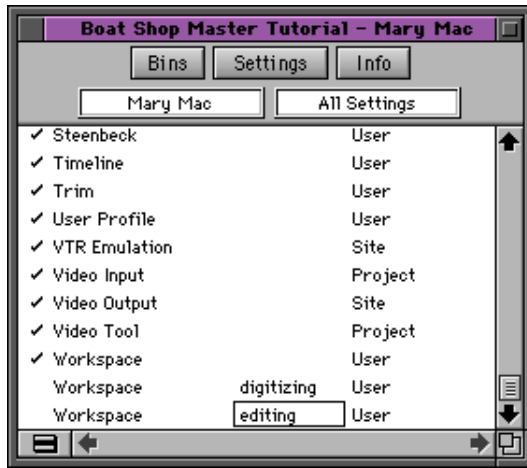
7. Open the windows that you want to associate with the workspace. Resize and position the windows the way you want them in the workspace.

The windows and placements are assigned to the new workspace.

Deleting a Workspace

To delete a workspace:

1. Select the workspace you want to delete from the Project Settings list.

   The selection is highlighted.

2. Press the Delete key.

   The selection is removed from the Settings list.

You cannot delete the active workspace.

Assigning a Workspace Button

To assign a workspace button:

1. Choose Command Palette from the Tools menu.

2. Click the More tab.

3. Select the Button to Button Reassignment box.

4. Click and drag the W1 (or W2–W8) button to a location on another palette (for example, under the Source/Record monitors or a user tear-off palette).

W1 button   More tab

Button-to-Button Reassignment
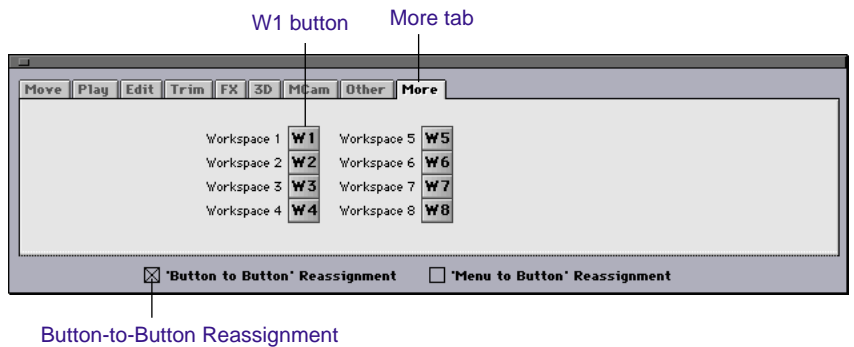
The W1 button appears in the new location.

5. Press the W1 button to display the first assigned workspace.

CHAPTER 4

Using Basic Tools

The Tools menu on the Media Composer menu bar provides quick access to a collection of essential tools for use in your projects. This chapter provides information about several basic tools that you can use at any time during your project.

- **Using the Tools Menu**
- **Using the Deck Controller**
- **Using the Command Palette**
- **Using the Avid Calculator**
- **Using the Console**
- **Using the Hardware Tool**
- **Using the Serial Ports Tool**

Using the Tools Menu

You can open any of the most frequently used system tools from the Tools menu located on the Bin monitor menu bar.

To open a tool, choose its name from the Tools menu.

```
┌─────────────────────────────────┐
│ Tools                           │
├─────────────────────────────────┤
│ New Deck Controller             │
│                                 │
│ Audio Mix                       │
│ Audio EQ                        │
│ Automation Gain                 │
│ AudioSuite                      │
│ Audio Tool              ⌘1      │
│ Audio Punch In                  │
│ Burn-In Tool                    │
├─────────────────────────────────┤
│ Calculator              ⌘2      │
│ Clipboard Monitor               │
│ Command Palette         ⌘3      │
│ Composer                ⌘4      │
│ Compression             ⌘5      │
│ Console                 ⌘6      │
├─────────────────────────────────┤
│ Digitize                ⌘7      │
│ Effect Palette          ⌘8      │
│ Effect Editor                   │
│ Hardware                        │
└─────────────────────────────────┘
```

The Tools menu also allows you to activate or open windows that have been closed or are covered by other windows. These include any open tools, plus the Composer, Timeline, and Project windows.

The following sections describe several basic tools that you can use at any time during a project. For a brief description of all the tools listed in the Tools menu, see the *Avid Media Composer and Film Composer Quick Reference*.

Using the Deck Controller

The Deck Controller provides direct serial or VLXi® (V-LAN®) control of an Avid-compatible tape deck at any time during editing. This allows you to cue and screen footage from source tapes in various edit

modes or when recording a digital cut, without entering Capture mode.

To open a Deck Controller, choose New Deck Controller from the Tools menu.

The Avid Deck Manager program is initialized, and a new Deck Controller window opens.
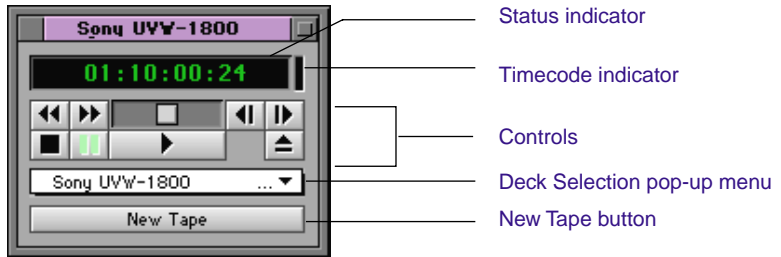
Status indicator

Timecode indicator

Controls

Deck Selection pop-up menu

New Tape button

Each Deck Controller includes the following elements:

- The Status indicator provides information about the control status of the tape deck, as follows:

  - If the deck is properly connected and power is on, the Deck Controller displays timecode when a tape is mounted.

  - If a deck is not properly connected to the system or power is off when you open the Controller, the indicator displays the message "No Driver."

  - If you turn the deck power off with the Deck Controller already open, the indicator displays the message "Power Off."

  - If you switch the deck control to Local on the VTR, the indicator displays the message "Local."

- The Timecode indicator flashes green during playback or digitizing to indicate that the system is receiving valid timecode from the source tape. If the indicator remains unlit, the system is not receiving timecode.

- The deck controls provide a standard range of playback capabilities, including fast forward and rewind, stop and play, step back and step forward, pause, and eject.

- The Deck Selection pop-up menu allows you to specify a deck with deck control parameters that you can customize in the Deck Configuration dialog box. For more information, see **"Deck Configuration Settings" on page 135**.

- The Deck Controller allows you to associate a tape name with the controller by clicking the New Tape button and selecting a tape in the Tape Selection dialog box. For more information, see **"Logging with an Avid-Controlled Deck" on page 121**.

You can also click the size box in the Deck Controller window to open a window of controls for logging IN and OUT marks while cueing your tape.
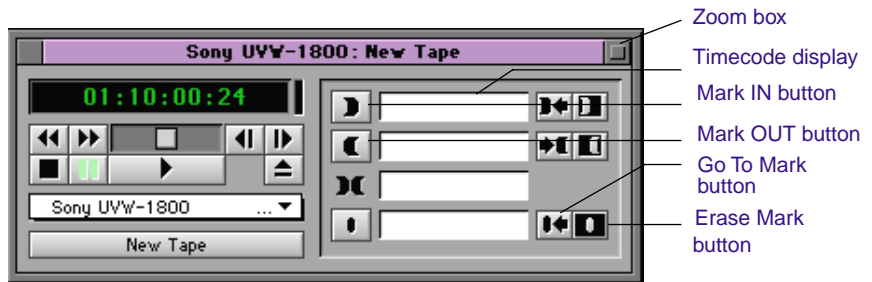
For more information on logging with the Digitize Tool, see **"Digitizing and Logging at the Same Time" on page 190**.

Marks you set with the Deck Controller are temporary, and allow you to return to timecode locations entered in the window while screening and cueing a tape. If the Digitize Tool is open, however, timecodes logged here also appear in the Digitize Tool, and can be entered into an open bin.

Using the Command Palette

The Command Palette provides a central location for all *user-selectable buttons (USBs)* that you can map to various locations for ease of use. User-selectable buttons allow you to perform a wide range of commands with a single click of the mouse. You can map buttons to any command palette in a pop-up, Source, or Record monitor and to reconfigure the keyboard, AvidDroid buttons, or the Manual User Interface (MUI) keys. You can also map menu commands to various buttons and keys.

The Command Palette groups buttons by editing function. Tabs are displayed for each function and the buttons that perform those functions are displayed within each tab. The functions are: Move, Play, Edit, Trim, FX, 3D, MCam, Other, and More.

Functions can also be performed directly from the Command Palette by deselecting the reassignment boxes at the bottom of the palette.

Figure 4-1 and **Figure 4-2** show the Command Palette tabs.

Move buttons

Move | Play | Edit | Trim | FX | 3D | MCam | Other | More

Step Forward ▶
Step Backward ◀
Step Forward 10 Frames ▶▶
Step Backward 10 Frames ◀◀

Go to IN ▶◀
Go to OUT ▶◀
Go to Start ▮◀
Go to End ◀▮

Go to Previous Edit ◀▮
Go to Next Edit ▮▶
Rewind ◀◀
Fast Forward ▶▶

☒ 'Button to Button' Reassignment   ☐ 'Menu to Button' Reassignment

---

Play buttons

Move | **Play** | Edit | Trim | FX | 3D | MCam | Other | More

Play Forward ▶
Play Reverse ◀
Play Loop ↓

Play ▶
Play to OUT ▶▮
Play IN to OUT ▮▶▮

Stop ■
Pause ▮▮
Play Length Toggle PL

Mouse Shuttle ⬚
Mouse Jog ○
Mute ◀))

☒ 'Button to Button' Reassignment   ☐ 'Menu to Button' Reassignment

---

Edit buttons

Move | Play | **Edit** | Trim | FX | 3D | MCam | Other | More

Mark IN)
Mark OUT (
Mark Clip)(

Audio Mark IN)

Clear IN mark ▯
Clear OUT mark ▮
Clear Both Marks ▯▮

Add Edit ▦
Copy to Clipboard ▯

Splice-in ⤭
Overwrite ⤓
Replace Edit ⤲

Lift ⊻
Extract ✂

Cycle Picture/Sound ✦
Segment Mode (Lift/Overwrite) ▶
Segment Mode (Extract/Splice-in) ▶▶

Make Subclip ▦

V1 V4 V7
V2 V5 V8
V3 V6 V9
A1 A4 A7
A2 A5 A8
A3 A6 A9

☒ 'Button to Button' Reassignment   ☐ 'Menu to Button' Reassignment

---

Trim buttons

Move | Play | Edit | **Trim** | FX | 3D | MCam | Other | More

Trim A side ⊥
Trim B side ⊤
Trim AB sides ⊕
Cycle Trim Sides ⊜

Trim Left One Frame ‹
Trim Right One Frame ›
Trim Left Ten Frames ‹‹
Trim Right Ten Frames ››

Slip Left ⟨⟨
Slip Right ⟩⟩
Slip Left One Perf ‹
Slip Right One Perf ›

Extend ⟩◀

☒ 'Button to Button' Reassignment   ☐ 'Menu to Button' Reassignment

---

Effect buttons

Move | Play | Edit | Trim | **FX** | 3D | MCam | Other | More

Motion Effect... ▱
Add Dissolve ▨
Render Effect ▶▦
Fade Effect ▧
Remove Effect ⊘

Add Keyframe ▲
Reduce ⊖
Enlarge ⊕

Rect Tool ▭
Oval Tool ○
Poly Tool ◁
Curve Tool ∂
Brush Tool ♨

Selection Tool ▶
Reshape Tool ↗
Grid ▣
Outline/Path ⊿

☒ 'Button to Button' Reassignment   ☐ 'Menu to Button' Reassignment

Figure 4-1   Command Palette Tabs 1-5

3D Effects buttons
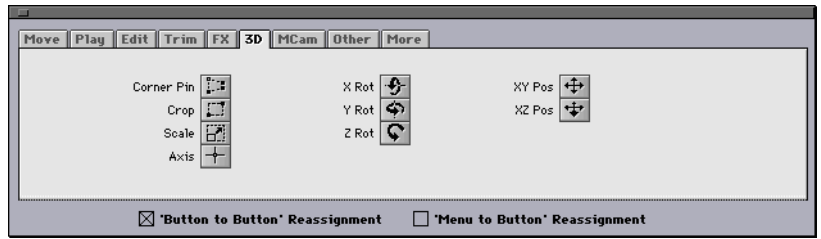
Multicamera buttons
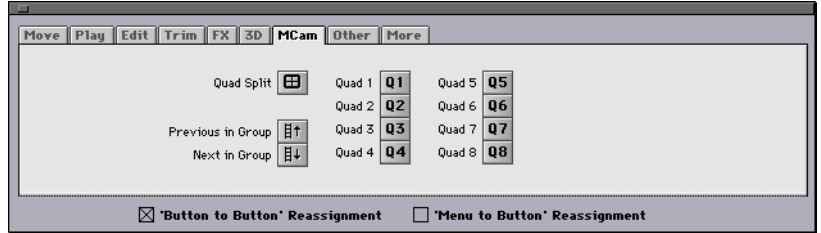
Miscellaneous buttons
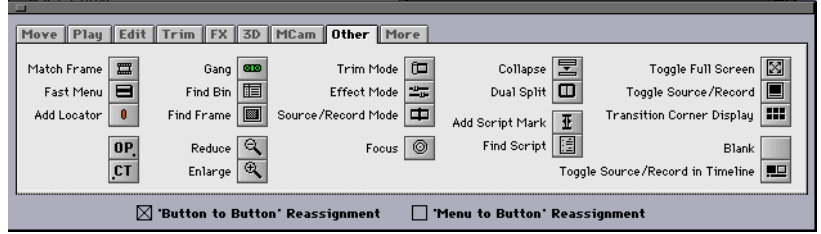
Workspace buttons
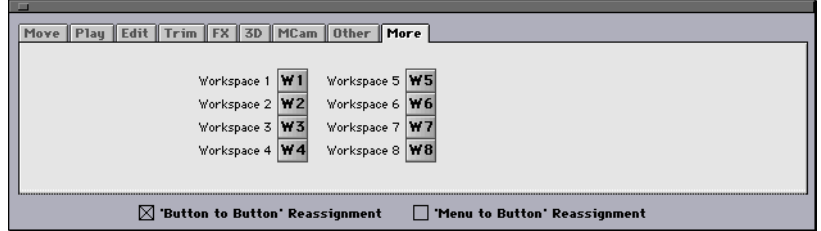
Figure 4-2   Command Palette Tabs 6-8

Using the Blank Button

The Blank button allows you to replace a defined button with an undefined button. If you don't need or use a specific button within the Source/Record monitor, a pop-up monitor, or a user command palette, you can replace these buttons with a blank button.

To map the blank button to a new location, see **"Mapping User-Selectable Buttons" on page 97**. For information on button mapping, see **"About Button Mapping" on page 96**.

About Button Mapping

You can also map USBs and menu commands to the Manual User Interface (MUI). For more information, see **Chapter 6**.

Mapping of user-selectable buttons allows you to reconfigure command palettes or the keyboard in various combinations to suit various editing needs. The following are a few examples:

•   **Subcataloguing clips:** You can map the Make Subclip button and other clip-management-oriented buttons.

•   **Complex layering and effects editing:** You can map buttons such as Motion Effect, Remove Effect, Render Effect, Transition Corner Display, Fade Effect, Add Dissolve, Grid (which displays Safe Title overlays), and Cycle/Picture Sound.
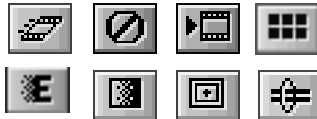
•   **Film projects:** You can map buttons and commands such as the Slip Left One Perf and Slip Right One Perf buttons, and the Auto-Sync and Cut List menu commands.

- **Multicamera editing:** You can map the MultiCamera Mode menu command, the Quad Split and Gang buttons.

When you remap buttons or commands, the system immediately saves your new configuration in one of the default settings that you can open from the Project window. You can also save, rename and recall multiple versions of any of these settings to serve various purposes. Media Composer saves button configurations as follows:

- Changes to the keyboard, the Steenbeck controller, or the MUI controller are saved with their respective settings.

- Changes to the pop-up monitor command palettes, monitor command palettes, and user tear-off palettes in the Composer window are saved with the Composer settings.

- Changes to command palettes in Trim mode are saved with Trim settings.

Mapping User-Selectable Buttons

To remap buttons or keys on the keyboard, using the Command Palette:

1. Open a window that has a user-selectable button palette by doing one of the following:

   - Activate the Source or Record monitor in the Composer window.

   - Click and drag one of the user command palettes to tear off a menu.

   - Open a clip in a pop-up monitor.

   - Enter Trim mode in the Composer window.

- Open the Keyboard or MUI or Steenbeck palette from the Project Settings scroll list.

2. Choose Command Palette from the Tools menu.

   The Command Palette appears.

Click a tab.

Click the Button to Button Reassignment box.

3. Select the Button to Button Reassignment box.

4. Select the tab from which you want to choose a user-selectable button.

5. Click and drag the button from the Command Palette to a location on the other palette.

📝 *If you want to perform a command function from the Command Palette, for example, click the Play button in the Command Palette to play the material in the Source window. You must have both the Button to Button and Menu to Button Reassignment boxes deselected. Then activate the Source window and click Play in the Command Palette.*

Mapping Menu Commands

You can map menu commands displayed in the pull-down menus on the Bin monitor directly onto buttons in any of the command palettes or onto the keyboard. This is especially useful if you make much use of

the keyboard or command palettes during editing. In some phases, you can avoid using the menus altogether.

To map menu commands:

1. Open a window that has user-selectable buttons by doing one of the following:

   • Activate the Source or Record monitor in the Composer window.

   • Tear off the user command menu that contains the item you want by clicking and dragging it.

   • Open a clip in a pop-up monitor.

   • Enter Trim mode in the Composer window.

   • Open the Keyboard or MUI or Steenbeck palette from the Project Settings scroll list.

2. Choose Command Palette from the Tools menu.

   The Command Palette appears.
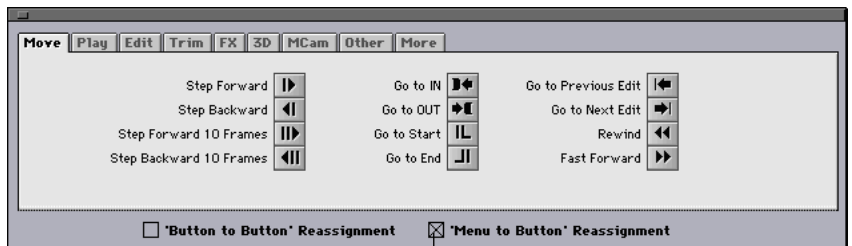
   Click the Menu to Button Reassignment box.

3. Select the Menu to Button Reassignment box.

4. Press a target button on the keyboard or palette (for example, the palette under the Source or Record monitor).

The pointer changes to a small white menu.

5. Choose the menu command you want to map to the target button.

The initials for the menu command appear on the target button.

Menu command mapped to button

Using the Avid Calculator

The Avid Calculator helps you calculate video and film durations and convert timecode and film key numbers to different formats. For example, you can:

- Convert drop-frame to non-drop-frame timecode values

- Convert timecode durations between 30-fps and 25-fps projects

- Convert a duration in video to the corresponding length in footage and frames for measuring 35mm film

To use the Avid Calculator:

1. Choose Calculator from the Tools menu to open the Avid Calculator window.
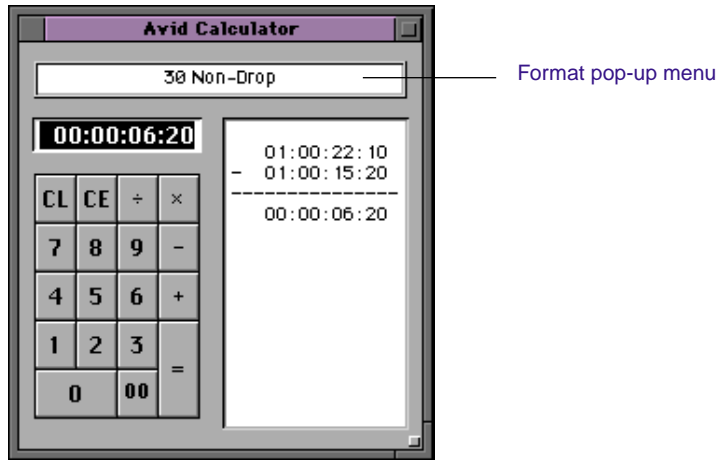
Format pop-up menu

2. Choose a format from the format pop-up menu.

3. Make calculations in the selected format. Click numbers and functions in the Avid Calculator, or enter numbers and functions with the numeric keypad or the top row of numbers on the keyboard.

   You don't need to enter leading zeroes, colons, or semicolons for timecode.

4. To convert your totals at any time to another format, choose a different frame code or key number format from the pop-up menu.

Using the Console

The Console window provides a number of features, including:

- Current system information, including your system ID number

- A log of error messages

- Detailed information about sequence segments in the Timeline or about objects in a bin

- Information after you digitize or import

⚠ **Do not use the programming features of the Console without guidance from Avid professionals. Contact Avid Customer Support with specific questions.**

Displaying System Information

To display current system information:

1. Choose Console from the Tools menu to open the Console window.
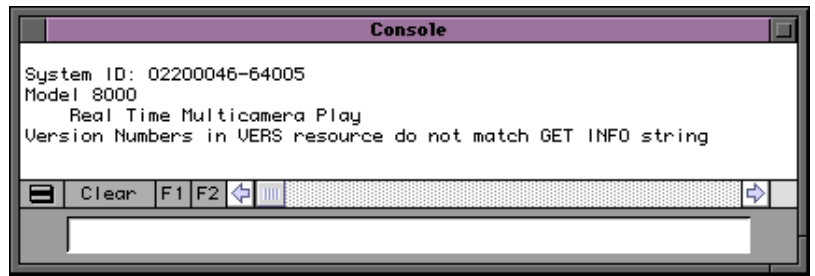
2. Scroll to the top of the Console window to view your system information and ID.

   This feature is especially useful for finding the system ID when contacting Avid Customer Support.

Reviewing a Log of Errors

To review errors logged to the console:

1. When an error occurs, exit the alert box and choose Console from the Tools menu.

2. Scroll through the Console window to find a log of the error to use when contacting Avid Customer Support.

Getting Information with the Console

This function provides quick access to bin information such as total duration of selected clips, or total items in a bin including hidden items. You can also use this procedure to display information about a shot, segment, or sequence in the Timeline.

To get information with the Console window:

1. Choose Console from the Tools menu, or press ⌘–6.

2. Select the item about which you want information:

   • In the Timeline, place the position indicator in the chosen shot or segment.

   • In the bin, select an object or Shift-select multiple objects.

3. Choose Get Bin Info from the File menu, or press ⌘–I.

   Information about the shot appears in the Console window.
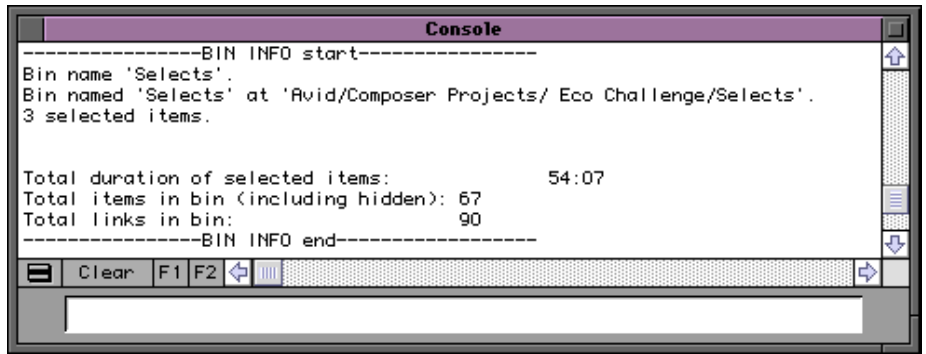
Using the Hardware Tool

The Hardware Tool provides information about the system's hardware configuration.

To check the configuration of your system, choose Hardware from the Tools menu to display the Hardware Tool.

Speakers indicate audio cards

Monitors indicate video cards

Board slots

Hardware
Amadeus card (HWRev 18)
TARGA2000 PCI (DvrRev 1.16) (HWRev 1)
Mach64 ATI display card
Avid Janus PCI (Variation 3) (Revision 0)
ATTO Express PCI SC (DvrRev 1.23 HWRev 2)
Empty Slot
Power Macintosh 9500

Avid
Bigboy-1
Bigboy-2
Bigboy-3
Bigboy-4
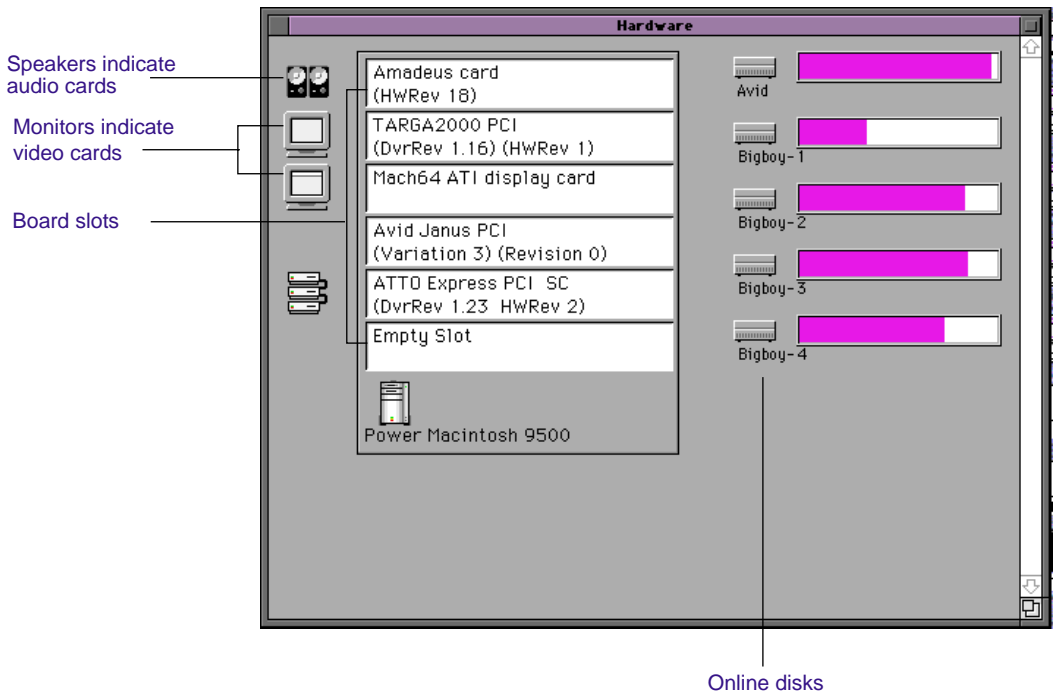
Online disks

- Each online disk is listed on the right side of the tool. The shaded portion of the bar graph next to each disk shows the amount of storage space currently filled.

- At the center of the window is a display box for each board slot in the computer. The names of the currently installed boards appear in the display boxes.

- To the left of the display boxes, two speakers identify audio boards and two monitors identify video boards.

- The name of the central processing unit (CPU) appears in a gray area beneath the list of boards. Any internal card, such as an internal 8-bit video board, is also listed in the same location.

Using the Serial Ports Tool

The Serial Ports Tool allows you to view the current configuration of the Macintosh serial interface at any time during editing. You can also use it to reconfigure the ports without closing the Media Composer application or shutting down the computer.

📋 *Although you can use the Serial Ports Tool to reassign ports, you still need to reconnect the appropriate cables to the newly assigned ports.*

To access the Serial Ports tool:

1. Choose Serial Ports from the Tools menu.

   The Serial Ports Tool appears.
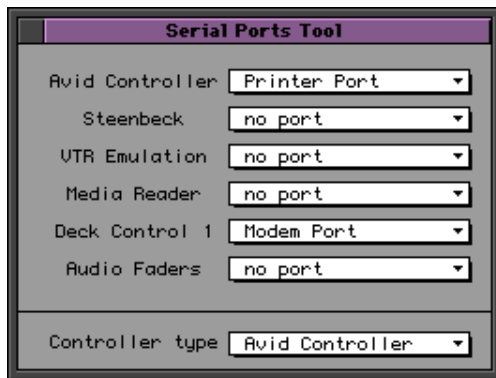
2. Assign ports for deck control, the Avid Controller, the Steenbeck, the Manual User Interface (MUI), VTR emulation, or the Media Reader as necessary by choosing Modem port, Printer port, or no port from any of the pop-up menus.

📋 *The Deck Control pop-up menu appears only if you have already selected a deck from the Deck Configuration window. The Audio Faders pop-up menu appears only if you choose the Automation Gain Tool from the Tools menu.*

Specifying the AvidDroid Controller

To specify the AvidDroid controller and its port:

1. Choose Serial Ports from the Tools menu.

   The Serial Ports Tool appears.
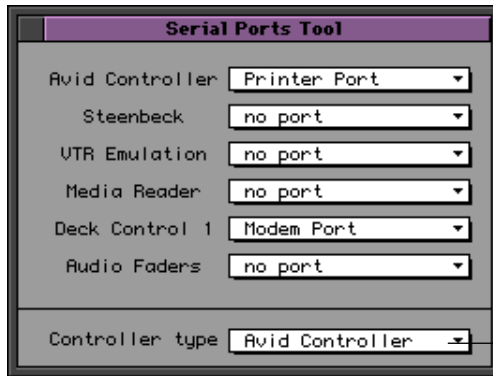
Choose Avid Controller

2. Choose Avid Controller from the Controller type pop-up menu.

3. From the Avid Controller pop-up menu, choose the port to which you connected the AvidDroid cable. See the *AvidDroid Setup and User's Guide* for more information about connecting cables.

4. Close the Serial Ports Tool.

5. Continue setting up the AvidDroid as described in the *AvidDroid Setup and User's Guide.*

Specifying the Steenbeck Controller

To specify the Steenbeck controller and its port:

1. Choose Serial Ports from the Tools menu.

   The Serial Ports Tool appears.

Serial Ports Tool

Avid Controller	no port ▼
Steenbeck	Printer Port ▼
VTR Emulation	no port ▼
Media Reader	no port ▼
Deck Control 1	Modem Port ▼
Audio Faders	no port ▼

Controller type	Steenbeck ▼
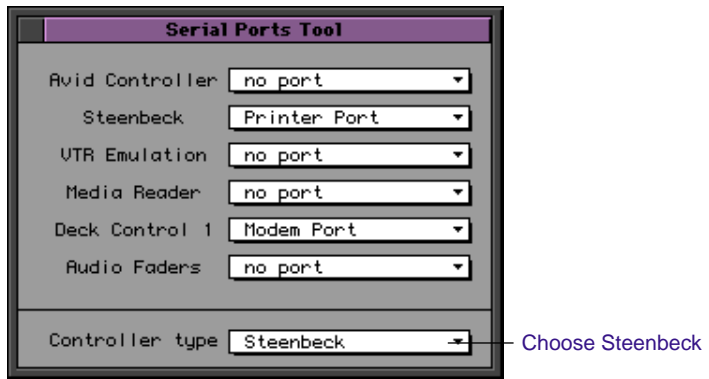
— Choose Steenbeck

2. Choose Steenbeck from the Controller type pop-up menu.

3. Check the back of your Avid system to see which port the Steenbeck cable is plugged into.

4. From the Steenbeck pop-up menu, choose the port to which you connected the Steenbeck cable.

5. Close the Serial Ports Tool.

Specifying the MUI Controller

To specify the MUI controller:

1. Choose Serial Ports from the Tools menu.

   The Serial Ports Tool appears.

Serial Ports Tool

Avid Controller	no port
Steenbeck	no port
VTR Emulation	no port
Media Reader	no port
Deck Control 1	Modem Port
Audio Faders	no port

Controller type	MUI
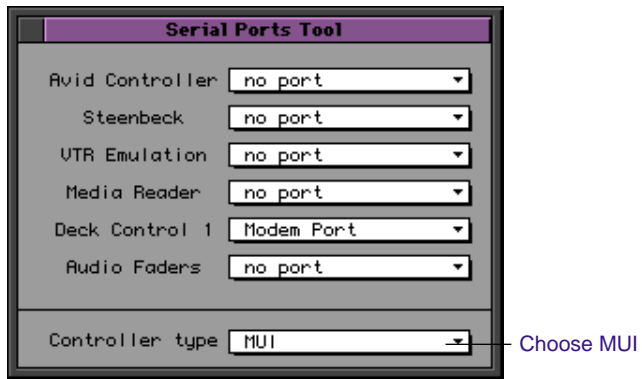
Choose MUI

2. Choose MUI from the Controller type pop-up menu.

3. You don't need to specify a port for the MUI.

4. Close the Serial Ports Tool.

CHAPTER 5

Logging

When you log with a deck or import shot log files, you provide the Avid Composer system with frame-accurate clip information used to digitize the source footage. The logs you create form the foundation for organizing, tracking, storing, retrieving, and generating lists of edit information throughout your project. Techniques for preparing log information prior to digitizing are covered in the following sections:

- **Logging Tips**
- **Preparing Logs for Import**
- **Importing Shot Log Files**
- **Logging Directly into a Bin**
- **Modifying Clip Information**
- **Exporting Shot Log Files**

Logging Tips

Observe the following important guidelines for preroll, timecode formats, and naming of tapes when logging prior to digitizing.

Logging Preroll

Be sure to leave adequate preroll with continuous timecode prior to IN points when logging your tapes. The recommended minimum preroll is 1 second for Betacam playback, and 5 seconds for 3/4-inch U-matic playback.

You set the default preroll for tape playback by using Deck Settings. For more information, see the <u>Avid Media Composer Products Reference</u>.

Logging Timecode

Within an NTSC project, check the timecode format of each tape (drop-frame versus non-drop-frame timecode) when you are logging without a tape in the deck. Log drop-frame timecode by using semicolons (;) between the hours, minutes, seconds, and frames. Log non-drop-frame timecode with colons (:).

*To change the logged timecode format, use the Modify command from the clip menu. For information, see <u>**"Modifying Clip Information" on page 126**</u>.*

Naming Tapes

When entering tape names in the Digitize Tool, consider the following:

- Tape names must be alphanumeric characters (A to Z, 0 to 9), with no spaces before the name. They can include uppercase and lowercase characters. The maximum length of a name is 32 characters.

- It is possible to have a single tape listed as several different tapes if you alter the case of the letters. For example, if you type a single name as *TAPE, Tape*, and *tape* on three different occasions, all three names will appear. This can cause significant problems in keeping track of clips when batch digitizing, redigitizing, and generating an EDL. Choose a case convention and maintain it throughout a project.

- It is important that you devise a naming scheme for your tapes. For example, tapes with similar names can be easily sorted and viewed together in a bin. However, it can be difficult to distinguish among numerous tapes with similar names when trying to locate a specific tape quickly. Name tapes based upon the amount and complexity of your source material.

- If you are planning to generate an EDL for import into an edit controller for online editing, double-check the controller's specifications beforehand. Some edit controllers will truncate source tape names to as few as six characters, while others will eliminate characters and truncate to three numbers. Alterations like these at the EDL stage might cause the system to identify different source tapes with similar names in the same way, causing you to lose track of source material.

Double-Checking the Logs

When importing shot logs for video, the Avid Composer system compares the video duration to the video out minus the video in. When importing film shot logs, the system compares the key number out minus the key number in.

If the system detects a discrepancy, it reports the error to the console and does not bring the clip into the bin. For more information on using the console, see **"Using the Console" on page 101**. The best way to ensure that clips are not discarded on import is to double-check the logs for discrepancies in duration and marks.

Preparing Logs for Import

Your Avid Composer system provides many useful tools to help you prepare frame-accurate log information for import into the bin from any number of sources. This process can involve one or more of the following methods, which are described in this section:

- To log the material on any Macintosh or PC, use the MediaLog application, and transfer the bins directly into the Avid Composer system with minimum effort, as described in **"Using MediaLog" on page 112**.

- To quickly convert logs (created by other sources), use the Avid Log Exchange program, as described in **"Converting Logs with Avid Log Exchange" on page 114**.

- Use a word processor or standard text editor to create and import logs, as described in **"Creating Avid Logs" on page 117**.

Using MediaLog

For information on specific MediaLog procedures, see the *Avid MediaLog for Macintosh User's Guide or the Avid MediaLog for PC User's Guide.*

MediaLog is a standalone application that speeds the process of creating and importing log information from any Macintosh or IBM®-compatible computer. MediaLog mirrors the Avid Composer interface for creating projects, bins, and clip information in the bin, and includes serial deck control for logging directly from tape.

If you purchased Film Composer or Media Composer 1000, 4000, or 8000, the MediaLog application is included with your application disks. If you have the Media Composer 900 or Offline models and would like to purchase MediaLog, contact your Avid sales representative for more information.

Transferring Bins from MediaLog for Macintosh

If you log your source footage by using MediaLog for Macintosh, you can transfer the bins directly to the Avid Composer system for batch digitizing by moving the bin files in the Finder.

To transfer bins from MediaLog for Macintosh:

1. Save the MediaLog bins to a 3.5-inch diskette.

2. Quit the Media Composer application.

3. In the Finder, open the project folder where you want to store the MediaLog bins. This folder is usually located inside the Composer Projects folder on the Avid drive.

4. Insert the disk from MediaLog into the diskette drive.

5. Double-click the diskette icon.

   If your MediaLog folders are available through a server or other networked source mounted on your desktop, then locate the MediaLog folder there instead.

6. Shift-select the bins in the Disk Directory window and drag them into the project folder.

7. Restart the application and open your project.

8. Associate the imported bins with your project by doing the following:

   a. Choose Open Bin from the File menu.

   b. Locate the new bin by using the Directory pop-up menu.

   c. Double-click the bin to open it within your project.

   d. The new bin appears in the Bins scroll list in the Project window.

The bins you have imported contain master clips only with no associated media files. Before you can view or manipulate these clips, you must create the associated media files by batch digitizing the source material.

Transferring Bins from MediaLog on the PC

If you log your source footage by using MediaLog on the PC, you can import the logs by using the same procedure as you would for other Avid-compatible log formats, as described in **"Importing Shot Log Files" on page 118**.

⚠ **To work with PC files such as MediaLog on the PC, you must have the Macintosh 7.5 or later operating system or the DOS Mounter application on your system.**

Converting Logs with Avid Log Exchange

You can use the Avid Log Exchange program included with your system to quickly convert shot logs that are created by other sources. You can then import the files directly into bins, as described in **"Importing Shot Log Files" on page 118**.

To convert a file:

AvidLogExchange

1. In the Finder, open the Utilities folder on the Avid drive and locate the Avid Log Exchange application inside the folder labeled ALE f.

2. Double-click the Avid Log Exchange icon to start the application.

   The Avid Log Exchange window opens.

Files you can convert ── INPUT, OUTPUT labels; Files you can generate; Clean option; Track selection; Convert button; Quit button

INPUT:
- ○ Automatic
- ○ ALE
- ○ ATL (Aaton)
- ● ATN (Aaton)
- ○ CMX EDL
- ○ FLX
- ○ FTL (Evertz)
- ○ Keyscope
- ○ Log Producer
- ○ OSC/R

OUTPUT:
- ● ALE
- ○ ATL (Aaton)
- ○ ATN (Aaton)
- ○ FLX

☒ clean
☒ Log V
☒ Log A1
☒ Log A2
☐ Log A3
☐ Log A4

CONVERT   ABOUT   HELP   QUIT
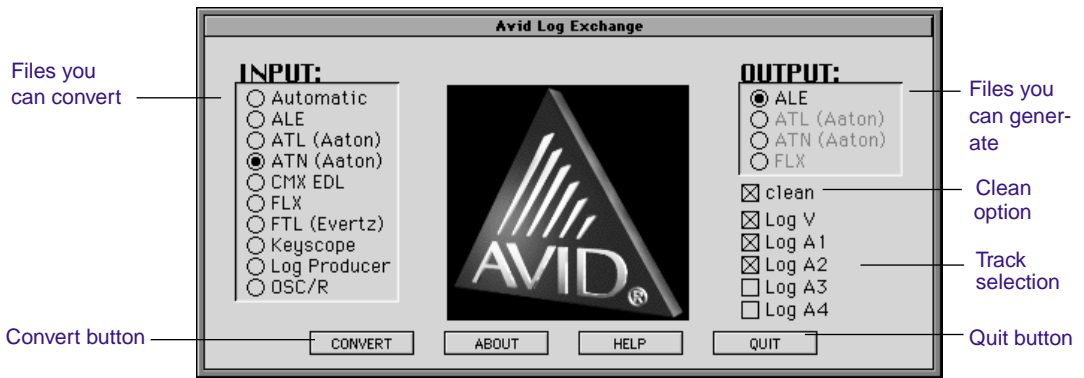
*For specific informa-
tion on the various file
types shown here, see
the Avid Media Composer
Products Reference.*

3. Make a selection for Input and Output.

   The default output selection is the Avid Log Exchange (.ALE) for-
   mat. This is the required format for import into an Avid Composer
   bin.

4. Select the tracks to include in the Tracks column of the log. After
   you import the log into an Avid Composer bin, the system digi-
   tizes all tracks shown in this column when batch digitizing.

5. Select the Clean option if you want Avid Log Exchange to clean
   the input file to eliminate overlapping timecodes for clips.

   When you select the Clean option, the utility removes the end
   timecode from any clip that overlaps the start of the next clip.

6. Click the Convert button to open the file selection dialog box.

7. Open the disk and folder that contain the files you want to con-
   vert.

Location of the files

File to be converted
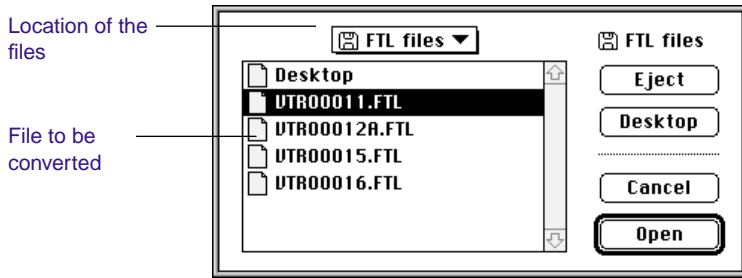
8. Double-click the input file name. Only one file is converted at a time.

   Avid Log Exchange stores the converted file in the same folder as the original input file.

Input file   Converted file
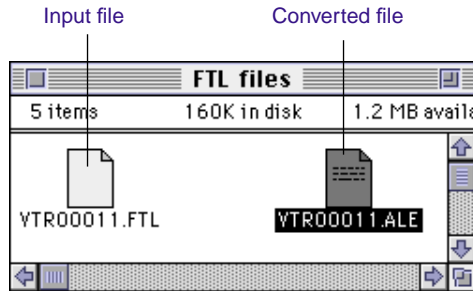
The original file name extension is replaced by the extension for the new format. The .ALE files can be imported only into Avid products.

Drag and Drop Conversion

Use this shortcut to convert any type of file into an .ALE file:

1. Insert the disk in the Macintosh disk drive if the files you want to convert are stored on a 3.5-inch diskette.

2. Open the folder that contains the Avid Log Exchange utility icon.

3. Open the folder that contains the files you want to convert, positioning the folder so the Avid Log Exchange icon is visible.

4. Select files for conversion.
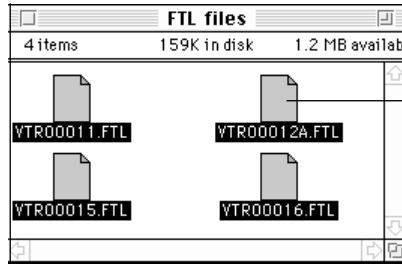
Select files, drag to the icon, and release.

5. Drag the selected files to the Avid Log Exchange icon and release.

The system converts the files to Avid format, adding the .ALE extension to the new file names.

Creating Avid Logs

You can prepare an Avid log on any type of Macintosh or IBM-compatible computer by using a word processing application or a text editor. In either case, to ensure accuracy, you must follow closely the specifications described in the *Avid Media Composer Products Reference*.

When logging manually, you should document the following information:

- Identify the source tape for each shot.
- Document each clip's name, start timecode, and end timecode.

This is the minimum information required to digitize successfully. You can also add other information such as comments, auxiliary time-codes, or key numbers for film projects. You can make a separate log file for each videotape, or log clips from several different videotapes in one log.

Using a Word Processor

If you use a rich-text formatted program like Microsoft Word or WordPerfect®, you must do the following:

1. Enter shot log information according to the specifications described in the *Avid Media Composer Products Reference*.

2. Save your file as an ASCII text file in the Save As dialog box.

⚠ **The Avid Composer system only accepts text files (ASCII format).**

Using Vantage

Another alternative is to use a text editor, such as the Vantage™ program provided with your system. Text editors like Vantage always maintain the log information in text file (ASCII) format. Vantage also provides useful tools for arranging and conforming text to various shot log, cut list, and EDL (edit decision list) specifications. The Vantage program is located in the Utilities folder.

Importing Shot Log Files

You can import any log created or converted to meet Avid log specifications. You can also combine or merge events while importing a log so that fewer master tapes require digitizing, as described in this section.

To import shot log files into a bin:

1. Open a bin, click anywhere in an open bin to select it, or create a new bin for the shot log import.

2. Choose Import from the File menu. The Select Files to Import dialog box appears.

Directory pop-up menu   Source file scroll list   Import file scroll list

Select files to import

⊂ Avid ▼   ⊂ Avid

☐ Clarisworks help folder
☐ Composer Projects
☐ EDL Manager f
▣ Exposure 001.PICT
▣ Exposure 002.PICT
▣ Exposure 003.PICT
☐ Extras
☐ EYE OF GOD ALE/FLX
☐ Film logs
☐ From Desktop
☐ GME98

Eject
Desktop
Add
Add All
Remove
Remove All
Options...

File Type | Graphic/Audio
☒ Show all files

Done   **Media Disk** | Bigboy-1
Cancel   **Resolution** | AVR70

File Type pop-up menu

3. Choose Shot Log from the File Type pop-up menu.

4. (Option) Select the option Show All Files in the lower left corner of the dialog box to display all files in a chosen folder, regardless of file type. Use this option if you want to batch-import from multiple file types.

*When you batch-import multiple files and file types, you should establish global import settings in advance. See **"Using Global Import Settings" on page 215**.*

5. Click the Options button to open a dialog box if you want to select options for combining events on import from the import settings.

6. After selecting the appropriate options, click OK to close the Import Settings dialog box and return to the Select Files to Import dialog box.

7. Use the Directory pop-up menu to locate the folder containing the source file.

8. Select the file name in the source file list and click the Add button, or double-click the file name to add it to the import file list on the right.

9. Click Done.

   When the system finishes importing the file, the clips appear in the selected bin.

Logging Directly into a Bin

You can log clip information in advance, allowing you to batch digitize the clips in one step. To log the clips in advance, do one of the following:

- Prepare shot logs using MediaLog, a word processor, or a standard text editor, and then import the logs directly into Avid Composer bins. For more information see **"Preparing Logs for Import" on page 112**.

- Log the clip information directly into the bin, as described in this section.

You can log clips directly into a bin by using the Digitize Tool in one of two ways described in this section:

For complete information on working with bin columns and clip information, see **"Using Text Mode" on page 242**.

- Log directly into a bin with an Avid-controlled deck for semiautomated data entry.

- Log manually during or after viewing of footage offline with a deck or other source that is not Avid-controlled.

Logging with an Avid-Controlled Deck

For information about connecting a compatible deck to your system, See the *Avid Media Composer Products Connecting Audio and Video Equipment*.

When you log with a compatible tape deck controlled from within your Avid Composer system, you can automate part of the logging process by using buttons to enter frame-accurate timecode information from the deck. This method is more accurate than manual entry because timecodes are transferred directly from tape to the bin.

To log clips to a bin by using the Digitize Tool:

1. Turn on power to the tape deck and make sure the deck is properly connected.

2. Open the bin where you want to store the clips.

3. Choose Digitize from the Tools menu. The Digitize Tool opens and the third, full-screen monitor displays playback from the deck.

Track Selection — Log button
Message bar — Mark IN
Timecode display — Erase Mark
Deck controls —
Deck Selection pop-up menu —
Mark OUT   Memo field (constant)
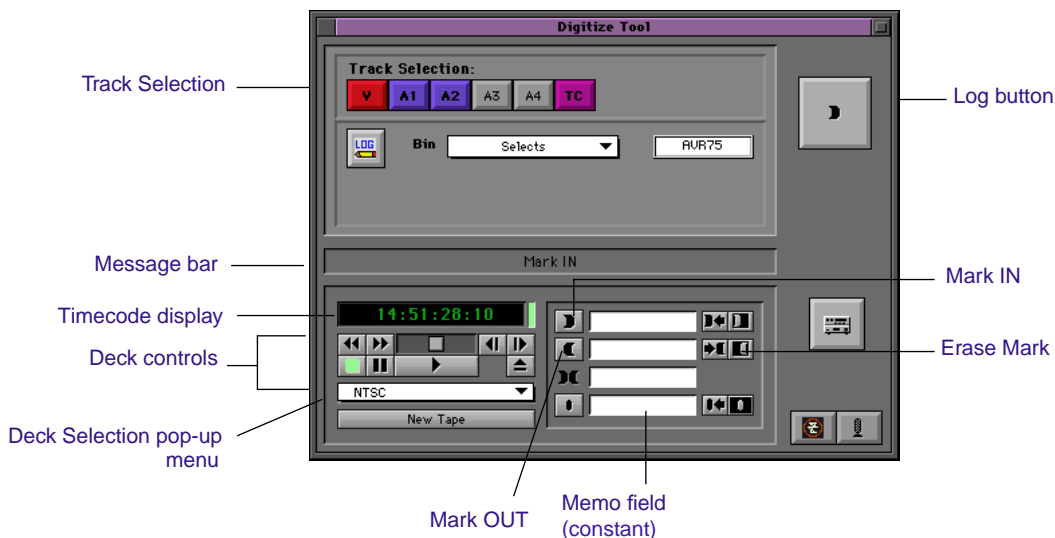
📄 *If you forgot to connect and/or turn on the power to the deck before opening the Digitize Tool, you can reinitialize deck control after turning it on by using the Check Decks command in the Deck Selection pop-up menu.*

4. If the Digitize Tool is not currently in Log mode, click the Digitize/Log Mode button to display the Log icon.

5. Load your tape into the deck. The system prompts you for a name.

   You can select the option "Show other project's tapes" to display the tape names and associated project names for all bins that have been opened in the current session.

Because the media file database no longer opens when you bring up your Avid Composer system, tape names of all online media files no longer appear automatically.

If the tape name you are searching for does not appear in the Select Tape dialog box, click the Scan for Tapes button. Tape and project names are listed.

New tape name

	Select Tape	
What tape is in the deck?		
Tape name	**Project name**	New
AES302FootageforEffects	302Effects	
Avid footage request	Bell South spot	
Avid graphics demo	Canyonlands	
Bell South elements	Canyonlands	
ARCHIVE.NDF	Jaguar	
Eco Challenge Archive	Jaguar	
ARCHIVE	NE User Group Demo	Cancel
Yosemite 1	Yosemite clips	
Yosemite 2	Yosemite clips	OK
☒ Show other project's tapes	Scan for tapes	

List of tapes

Show Tapes option

For guidelines in naming tapes, see **"Logging Tips" on page 109**.

6. Select a tape name from the scroll list. Tape names and associated projects are listed in two columns. Or, click the New button and enter a new tape name in the name entry field that appears at the bottom of the dialog box. You can cancel the process any time by clicking the Cancel button.

Select Tape

What tape is in "No Deck"?

Tape name	Project name	New
New Tape 1	Eco Challenge 96.CP	
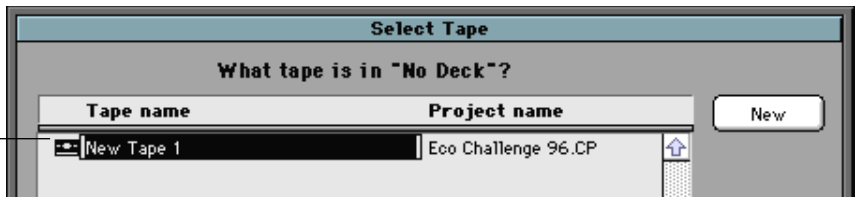
7. Press Return. The tape name is displayed in the Digitize Tool.

8. Click the Log Mode button in the Digitize Tool.

   The Capture Message bar displays a message that the system is waiting for you to mark an IN point. The Log button displays an IN mark.

9. Set either an IN mark or an OUT mark for the clip you want to log, using one of the following methods:

   — Mark IN
   — Mark OUT

   • Use the deck controls in the Digitize Tool to cue your source tape to the start or end point, and click the Mark IN or Mark OUT button.

   • Click the large Log button in the upper right corner of the Dig-itize Tool to enter the mark.

   — Go To IN
   — Go To OUT

   • If the footage starts at a known IN or ends at a known OUT, type the timecode in the display area next to the mark, press the Go To IN or Go To OUT button to scan the tape forward to the mark, or press Return to enter it.
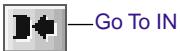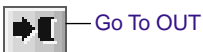
   After you set the mark, the icon in the Log button changes to the corresponding OUT or IN mark, and a pencil appears on the but-ton.

10. To finish logging the clip, do one of the following:

    • Set the remaining IN or OUT mark on-the-fly by using the buttons.

- Type a timecode for the clip's IN, OUT, or duration in the timecode entry field next to the corresponding icon and press Return.

The system automatically calculates the appropriate timecode for the remaining mark IN, mark OUT, or duration, and enters the clip into the bin. The clip name, which is chosen and automatically numbered by the system, is highlighted and ready to be changed.

⚠️ **You must enter at least two of the three timecode marks (IN mark, OUT mark, or duration) in order to complete the log entry.**

11. Name the clip by typing a new name before clicking any of the buttons in the Digitize Tool.

📋 *You should change the clip name immediately because it is very easy to forget the contents of each clip among the dozens that you log. You can, if necessary, accept the clip name and proceed with the logging process and change the clip names in the bin at a later time.*

12. Repeat these steps until you have logged all your clips.

While viewing the footage, you can continuously update your marks on-the-fly by clicking the Mark IN or Mark OUT button repeatedly before entering the second mark.

Logging with Non-Avid-Controlled Decks

You can use the Digitize Tool to log clips directly into a bin from a source that is not Avid-controlled. For example, you can log clips from a deck that is not connected to the system, or from handwritten or printed log information for a tape that was previously logged but is not currently available.

1. If there is a deck connected to the system, eject the tape from the deck.

2. Double-click Deck Preferences in the Settings scroll list of the Project window to open the Deck Preferences dialog box.

3. For NTSC projects, choose Non-Drop-Frame or Drop-Frame from the When No Tape in Deck Log pop-up menu.

4. Click OK to close the dialog box.

5. Open the bin where you want to store the clips.

6. Choose Digitize from the Tools menu. The tool opens.

125

LOG
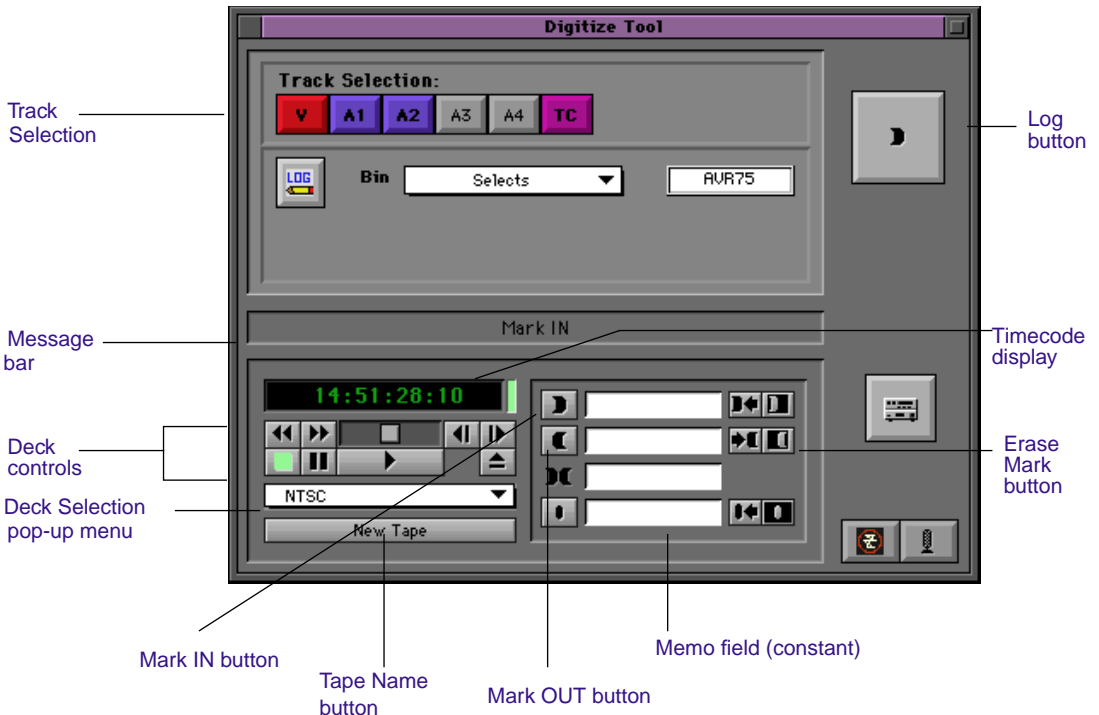
7. Click the Digitize/Log Mode button in the Digitize Tool to activate Log mode.

8. Click the Tape Name button. A dialog box appears.

> **The deck is offline or empty.**
> **Do you wish to associate a tape with**
> **the deck anyway?**
>
> Yes   No
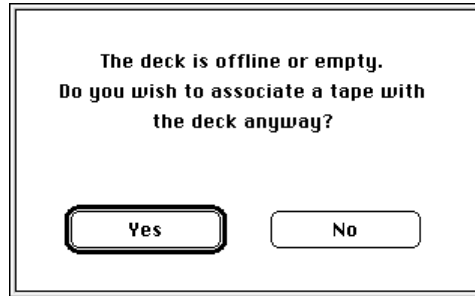
9. Click Yes to open the Tape Selection dialog box.

10. Double-click the name of the tape in the dialog box, or click New and enter the name of the tape.   Click OK.

11. Select the tracks you want to log in the Digitize Tool.

12. Type the start and end timecodes in the mark IN and mark OUT displays.

13. Click the Log button, or press the B key.

   The clip is logged into the bin.

Modifying Clip Information

For complete information on working with bin columns and clip information, see **"Using Text Mode" on page 242**.

You can change or modify the information logged in the bin. This is especially useful if you find that some of the data is incorrect, or if you need to update the information based on technical needs, such as varying timecode formats.

There are two ways to modify clip information prior to digitizing:

- You can modify the information directly by clicking in a column and entering the new information one field at a time.

- You can use the Modify command to change selected groups of clips all at once.
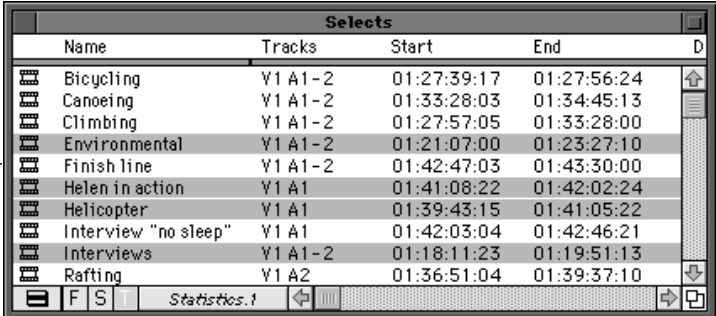
Using the Modify Command

The Modify command gives you specialized control over groups of clip information. For example, you can use the Modify command to change the name of source tapes for some or all of your clips, to change the timecode format from drop- to non-drop-frame, or to increment or decrement the start and end timecodes by a specified length of time for one or several clips at once.

To modify selected clips:

1. Open the bin.

2. Click a clip icon to select it. Shift-click each additional clip you want to modify.

Selected clips are highlighted.

	Name	Tracks	Start	End	D
	Bicycling	V1 A1-2	01:27:39:17	01:27:56:24	
	Canoeing	V1 A1-2	01:33:28:03	01:34:45:13	
	Climbing	V1 A1-2	01:27:57:05	01:33:28:00	
	Environmental	V1 A1-2	01:21:07:00	01:23:27:10	
	Finish line	V1 A1-2	01:42:47:03	01:43:30:00	
	Helen in action	V1 A1	01:41:08:22	01:42:02:24	
	Helicopter	V1 A1	01:39:43:15	01:41:05:22	
	Interview "no sleep"	V1 A1	01:42:03:04	01:42:46:21	
	Interviews	V1 A1-2	01:18:11:23	01:19:51:13	
	Rafting	V1 A2	01:36:51:04	01:39:37:10	

Selects — Statistics.1 — F S

3. Choose Modify from the Clip menu.

The Modify dialog box appears.

Modify...

Set Timecode By Field	Hour:

⦿ Start
○ End

Minutes:

Second:

Frame:

OK   **Cancel**
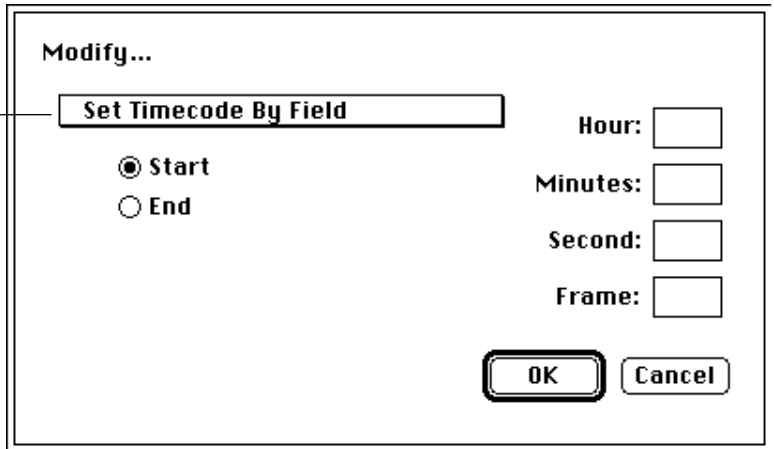
4. Choose an option, such as Set Timecode By Field, from the pop-up menu.

M **Set Timecode Drop/Nondrop**

✓**Set Timecode By Field**
Increment Timecode
Decrement Timecode

Set Key Number Generic (Prefix)
Set Pullin

Set Tracks
Set Source

Hour:

Minutes:

Second:

Frame:

OK   **Cancel**
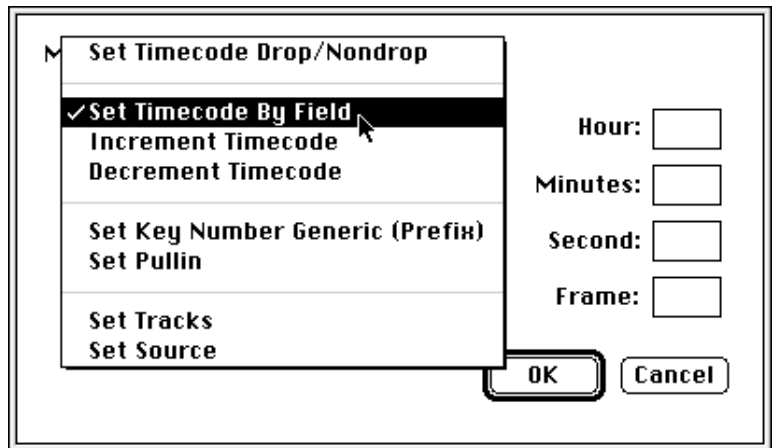
Depending on the modification you select, different options appear in the dialog box that allow you to establish the specific modification as shown in **Table 5-1**.

Table 5-1   Modify Dialog Box Options

Type of Modification	Options	Description
Set Timecode Drop/ Nondrop	Drop, Nondrop radio buttons	Changes the timecode format between drop- and non-drop-frame.
Set Timecode By Field	Start or End radio buttons	Changes either the start or end timecode.
	Fields for Hour, Minutes, Second, Frame	Allow you to enter custom timecode.
Increment Timecode	Start or End radio buttons	Changes either the start or end timecode.
	Timecode entry field	Allows you to enter custom incremental timecode.
Decrement Timecode	Start or End radio buttons	Changes either the start or end timecode.
	Field for timecode	Allows you to enter new incremental timecode.
Set Key Number Generic (Prefix)	Field for Key Number	Allows you to enter a custom generic key number.
Set Pullin	Punch frame timecode entry field	Sets the timecode location of the punch frame for pullin.
	A, B, C, or D radio buttons	Selects the pulldown frame to match to the timecode entry.
Set Tracks	V, A1, A2, A3, A4 track selector buttons	Changes the clips configuration of tracks.
Set Source	Opens the Tape Name dialog box	Selects another source tape name for the clips.

5. After choosing the type of modification, select an option or enter information into the entry fields (timecode values, for example) when they appear.

6. Click OK. The modification takes effect.

Exporting Shot Log Files

You can export a shot log file from the Avid Composer system in one of two formats for making adjustments in a text processor or for importing into another system.

To export a shot log based on clip information in a bin:

1. Open the bin containing the clips you want to export and change to Text mode.

2. Choose Export from the File menu. The Export File Type dialog box appears.

Export File Type:

○ Avid Log Exchange
○ Tab Delimited
◉ OMFI Composition   [Standard – AIFC ▼]
                       [Video and Audio ▼]
          Version   [OMFI 1.0 ▼]
                       ☐ With Media

○ QuickTime   [Video and Audio ▼]
○ Sound   [SD2 ▼]
○ Graphic   [PICT   ▼]

Using Entire Sequence
Using All Tracks

[Options...]   [OK] [Cancel]
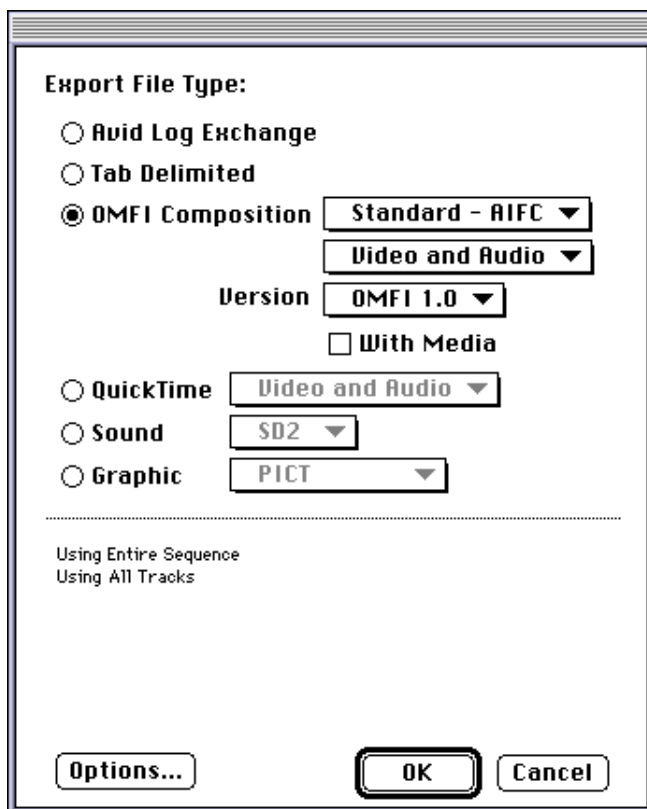
3. Select either Avid Log Exchange or Tab Delimited as the file type.

4. Click OK.

   A destination dialog box opens with a default file name in the Export As text box, based on the file type.

5. Change the file name, if you want (keep the file extension), and select the destination folder for the file and click Save.

   The file is exported and appears at the chosen destination.

CHAPTER 6

Preparing to Digitize

Digitizing is the process of converting source material from analog videotape to digital form. Before you begin this process—described in **Chapter 7**—you need to complete the following preparations:

- **Preparing the Hardware**
- **Selecting Settings**
- **Entering Capture Mode**
- **Setting Up the Compression Tool**
- **Setting Up the Digitize Tool**
- **Preparing for Audio Input and Output**
- **Preparing for Video Input**
- **Digitize Preparations Checklist**

Preparing the Hardware

Your source material can originate from a videotape, a digital audiotape (DAT), a compact disc (CD), an in-house router, a tuner, or straight off-the-air, with the proper hardware configuration.

The following are a few last-minute items to double-check prior to digitizing.

- **Video Slave Driver™ settings**. If your system is equipped with the Digidesign® hardware, make sure the pulldown switch on the front of the Video Slave Driver is set to the X 1.00 setting for normal use. For information on settings to use for film projects, see the *Avid Media Composer Products Reference*.

- **Third, full-screen monitor.** Before you begin digitizing and editing, set up your NTSC or PAL full-screen monitor by using a color bar generator (or house pattern) and lock in those settings, if you haven't done so already.

- **16 x 9 format.** You can edit with video in the 16 x 9 wide-screen format. To digitize footage shot in the 16 x 9 format, you must have a compatible playback deck.   To view the footage on a full screen, you must have a 16 x 9 compatible full-screen NTSC or PAL monitor.

- **Remote switch.** The deck control switch on the front of the source deck must be set to remote rather than local to control the deck with the Digitize Tool.

- **Striped drives.** If your footage contains complex images that you digitize at high resolution, you must use striped drives as described in the *AVIDdrive Utility User's Guide*. In addition, various models and AVRs have different striping requirements. For more information, see the *Avid Media Composer Products Reference*.

- **DAT (digital audiotape).** To digitize music or audio from a DAT machine, check the *Avid Media Composer Products Connecting Audio and Video Equipment* manual to determine whether your model requires VLXi for deck control. Also, when digitizing from DAT you must choose Digital from the Sync Source pop-up menu in the Audio Tool Setup display. For more information, see **"Preparing for Audio Input and Output" on page 157**.

The Avid Composer system does not support input and output of S-Video. Use the composite input/output to and from your S-Video equipment or a transcoder to digitize from S-Video format.

Selecting Settings

Several settings have a direct bearing on the digitizing process. Before digitizing, review the following options:

- **General Settings** include options for NTSC tape formats and drive filtering:

  - *Drive Filtering Based on Resolution* causes the system to dim all drives for which speed capabilities are unknown or untested in a particular Avid Video Resolution (AVR). This is the default setting in the General Settings dialog box.

The Avid Composer system will not prevent you from using non-Avid drives, but their reliability cannot be assured.

  - *NTSC Has Setup* applies to standard NTSC format. This is the default setting in the General Settings dialog box. If the source footage is in the NTSC/EIAJ format standard (used primarily in Japan), deselect NTSC Has Setup.

  - The *Audio File Format* pop-up menu allows you to choose either AIFF or SDII as the default audio media for the project. For more information, see **"Choosing the Audio File Format" on page 158**.

- **Digitize Settings** include essential options for digitizing, batch digitizing, autodigitizing, and digitizing to multiple media files.

  - *Digitize Video to Multiple Files* allows you to create longer clips whose media files would otherwise exceed the Macintosh operating system file size limitation of 2 GB. For more information, see **"Digitizing to Multiple Media Files" on page 152**.

- *Digitize across timecode breaks* causes the system to begin digitizing a new master clip at each timecode break. Select this option when you are performing unattended batch digitizing or autodigitizing. Deselect this option if you plan to digitize the entire tape as a single clip by digitizing to multiple media files. For more information, see **"Digitizing Across Timecode Breaks" on page 156**.

- The *with outpoint set* option allows you to mark an OUT point to stop digitizing when you are performing unattended batch digitizing or autodigitizing.

Deck Configuration Settings

Deck Configuration settings and global deck control preferences appear as separate items in the Settings scroll list of the Project window.

Deck control settings ──
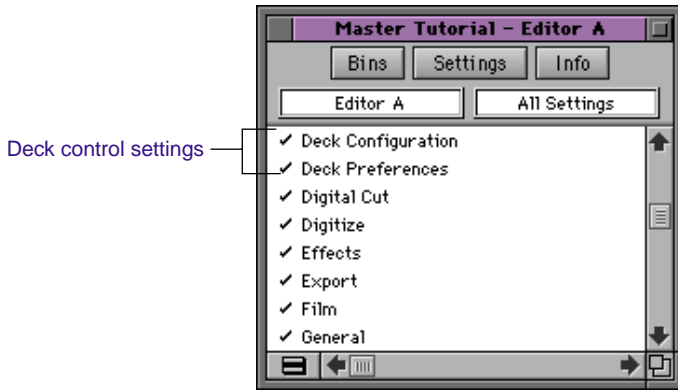
Deck configuration settings allow you to establish deck control parameters for a single deck or for multiple decks. As with all settings, you can create multiple versions, allowing you to select among them for frequent changes in hardware configurations.

⚠ **You must manually configure the appropriate hardware connections before deck configuration settings can take effect. For more information, see the** *Avid Media Composer Products Setup Guide* **or the** *Avid Media Composer Products Connecting Audio and Video Equipment* **manual.**

To configure a deck or multiple decks:

1. Double-click Deck Configuration in the Settings scroll list.

   The Deck Configuration dialog box appears.
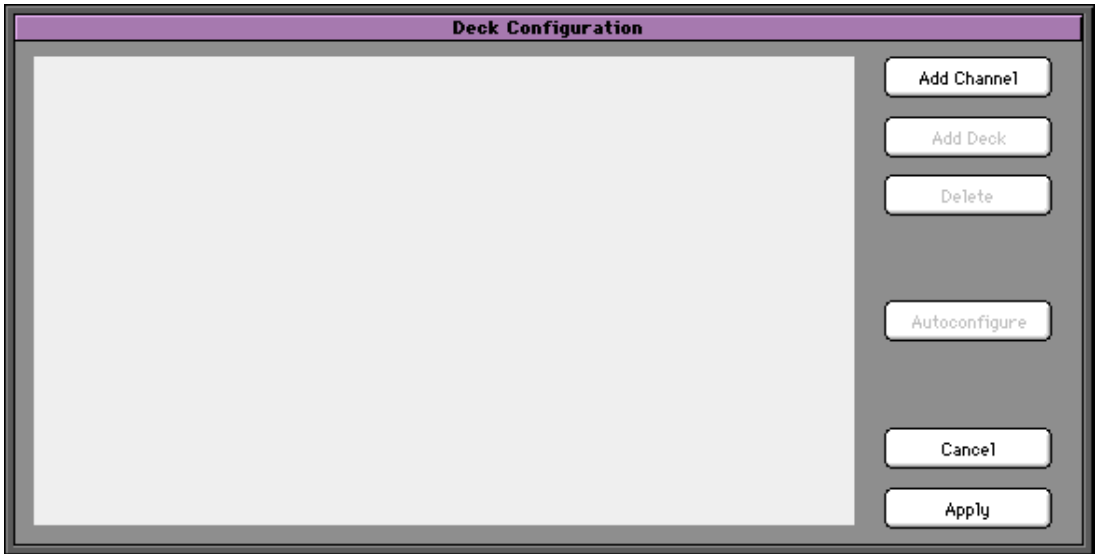
2. If you are configuring your system for the first time, click the Add Channel button to add a new channel box on the left side of the Deck Configuration dialog box and automatically open a Channel dialog box.

Channel
Channel Type: Direct ▼
Port: Printer Port ▼
Cancel   OK
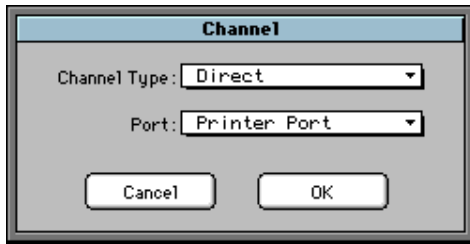
Channel refers to the signal path for deck control, whether through a serial port or a V-LAN VLXi system. Direct serial port connection provides two channels (modem port and printer port), while a V-LAN VLXi system provides multiple channels.

3. Choose either Direct (serial port) or V-LAN VLXi from the Channel Type pop-up menu, depending upon your system configuration.

4. If you chose Direct for the channel type, choose either Printer Port or Modem Port from the Port pop-up menu.

If you are not sure which port to choose, check the serial cable connection on the back of the Macintosh.

5. Click OK to close the Channel dialog box.

A new channel appears in the display area of the Deck Configuration dialog box.

137

Channel boxes appear on the left side

Deck Configuration

Direct on Modem Port

Add Channel

Add Deck

Delete

Autoconfigure

Cancel

Apply
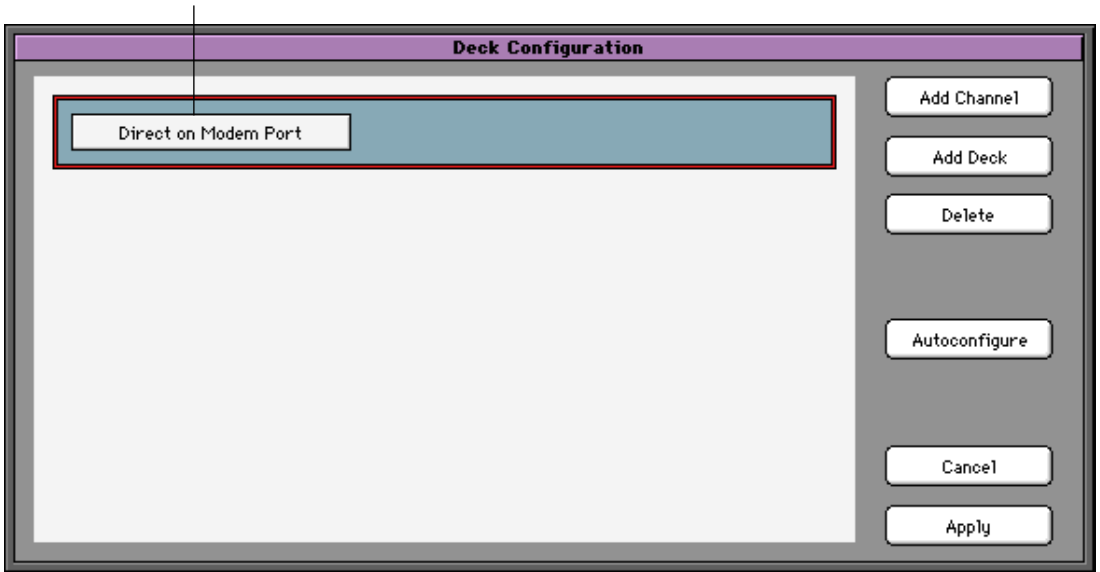
> *You can reopen the channel settings to change the options at any time by double-clicking the channel box.*

   6. Click the channel box to select it.

   7. Click Add Deck to add a new deck box on the right side of the Deck Configuration dialog box and automatically open a Deck Settings dialog box.

> *With a deck already connected to the system, you can also click the Autoconfigure button to bypass the Deck Settings dialog box and automatically configure a deck with the default settings.*

Deck Settings

Name: Sony UVW-1800

Description:

Deck Type: Sony ▾   Sony DVW-500 ▾

Address: 1 ▾

Preroll: 6 seconds ▾

☒ Fast Cue:

Switch to ff/rew (seconds): 60

Switch to search (seconds): 10

Cancel   OK
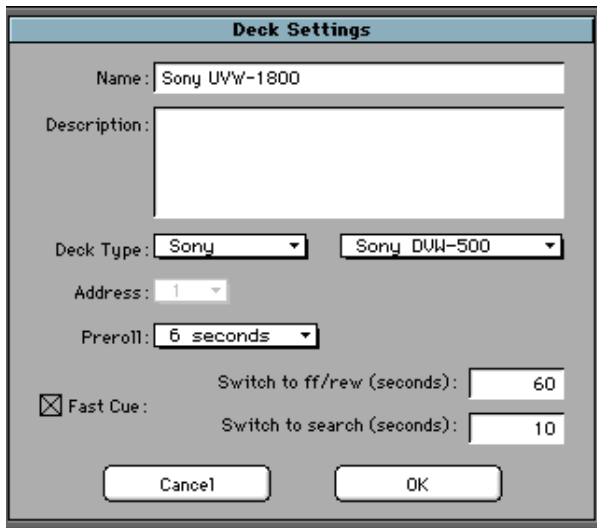
8. Configure deck settings.

For information on deck settings, see the Avid Media Composer Products Reference.

9. Click OK to close the Deck Settings dialog box and return to the Deck Configuration dialog box.

Decks appear on the right side
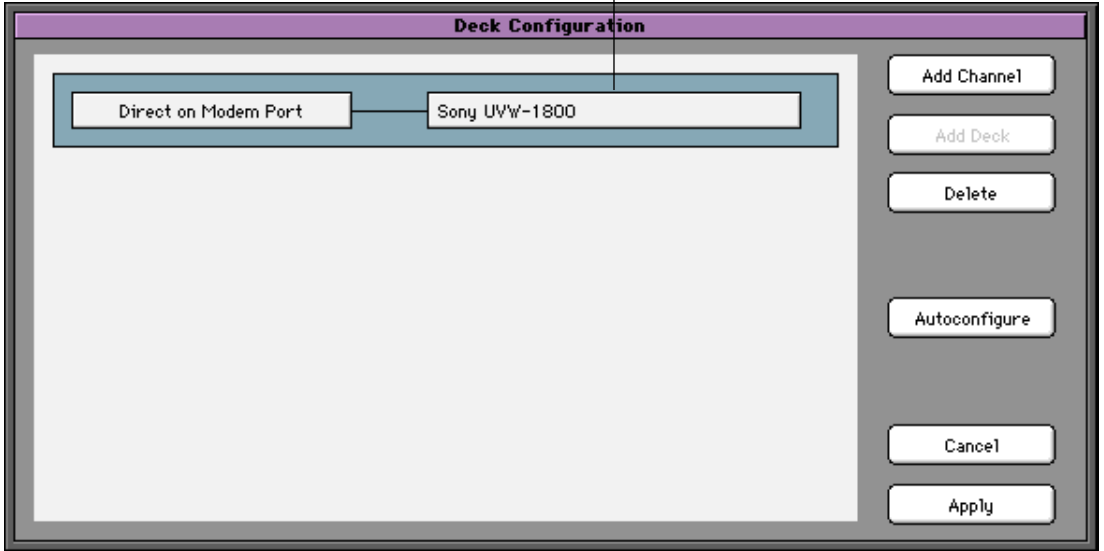
You can reopen the Deck Settings dialog box to change the options at any time by double-clicking the deck box.

10. Repeat steps 2 to 9 for each additional channel or deck you want to configure.

11. Click Apply to complete the configurations and close the Deck Configuration dialog box.

12. If necessary, double-click Deck Preferences in the Settings scroll list of the Project window to adjust global deck control options for default timecode format, insert or assemble editing, and stop key and shuttle operation.

Deleting Configurations

You can delete deck configuration elements to remove or replace them.

To delete deck configuration elements in the Avid Composer system:

1. Double-click Deck Configuration in the Settings scroll list of the Project window.

   The Deck Configuration dialog box appears.

2. Click a channel box, a deck box, or the entire configuration to select it.

3. Click the Delete button in the dialog box, or press the Delete key to delete the element.

Deck Preferences

Deck preferences are global settings for basic deck control. These settings apply to all decks connected to your system, regardless of your deck configuration. You can open the Deck Preferences dialog box from the Settings scroll list of the Project window (see **"Deck Configuration Settings" on page 135**). For information on deck preferences, see the *Avid Media Composer Products Reference*.

Entering Capture Mode

Capture mode provides all the tools and controls you need to capture your footage in digital form. When you enter Capture mode, the system initializes these tools and establishes an interface with the analog playback equipment attached to the system.

To enter Capture mode:

1. Make sure the playback deck is turned on and properly connected to the system.

2. Open your project and the bin in which you want to store your master clips.

3. With the bin active, choose Go To Capture Mode from the Bin menu. The Bin monitor displays the Digitize Tool, Compression Tool, and the active bin.
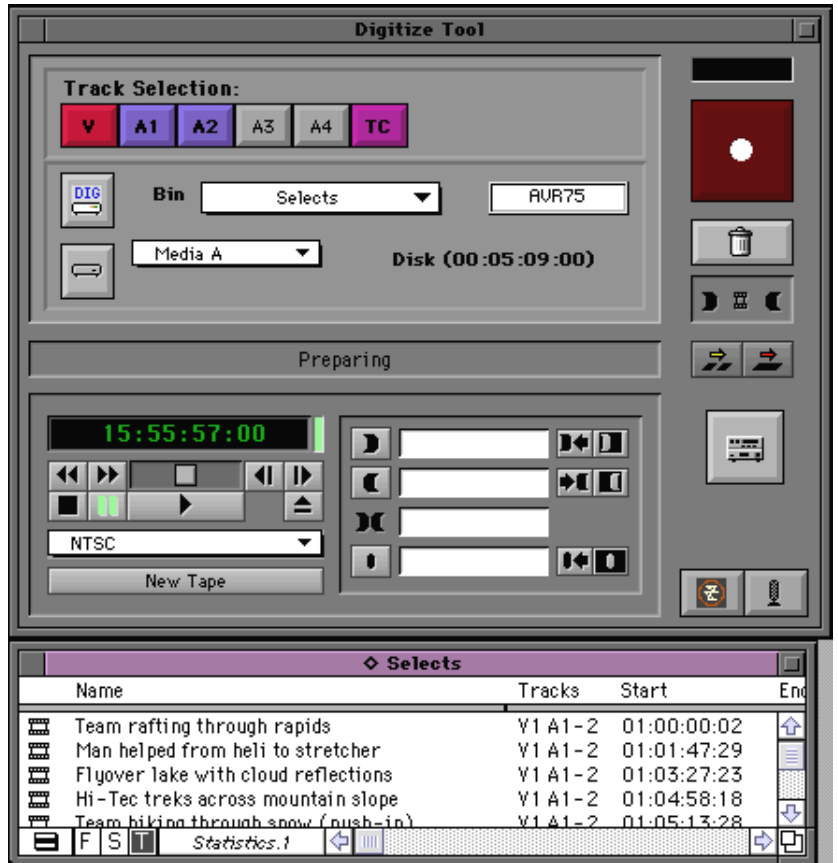
In Capture mode, the Client monitor displays the playback footage on a full screen at all times when the video track is selected in the Digitize Tool.

Setting Up the Compression Tool

You can choose various compression parameters in the Compression Tool. To choose compression settings:

1. Choose Compression from the Tools menu.

Audio settings

Video compression settings
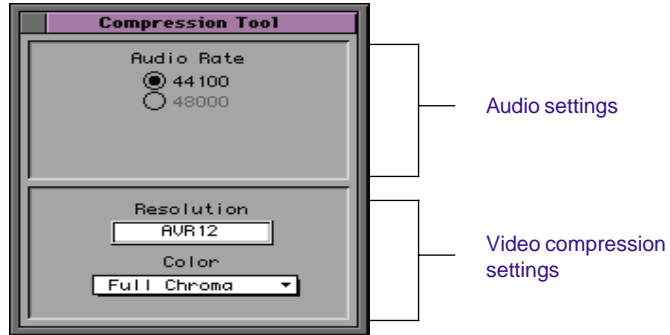
2. Make sure the proper audio sample rate is indicated under Audio Rate. The audio sample rate shown cannot be adjusted within the tool, but reflects hardware settings, as follows:

   • Systems using a two-channel audio board support 44100 Hz (44 kHz) only. This is the default setting in the Compression Tool.

   • If your system uses the Digidesign audio interface and a four-to eight-channel audio card, you can set the audio sample rate at either 44100 Hz or 48000 Hz by adjusting the sample rate switch on the front of the Video Slave Driver.

Settings in both the Compression Tool and the audio interface do not affect the sample rate of digital audio signals.

3. Choose an AVR and color rate from the pop-up menus.

About the Color Rate Option

In addition to the AVR, the Color pop-up menu allows you to choose to filter out color from each frame of video with the monochrome option.

If you are digitizing black-and-white images, storage space will not be affected by these settings.

⚠ **If you choose one of these settings and you intend to record professional-quality digital cuts, you will need to redigitize at Full Chroma before recording.**

Setting Up the Digitize Tool

The Digitize Tool provides controls for cueing, marking, and logging footage, and specifies digitizing parameters such as source and target locations. Deck control in the Digitize Tool operates in the same way as in the Deck Controller. Click anywhere in the Digitize Tool to activate it.

Track Selection —
Digitize/Log mode —
Message bar —
Deck control —
Deck Selection pop-up menu —

Digitize indicator
Record button
Trash/Abort
Subclip status

Tape Name display
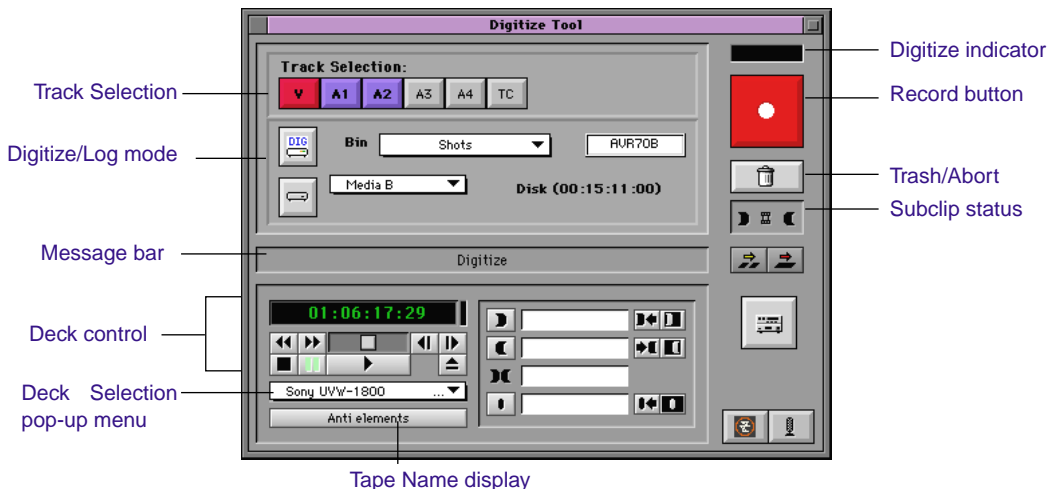
Using the Deck Selection Pop-Up Menu

The Deck Selection pop-up menu in the Digitize Tool contains a list of all decks that were connected to the system, powered up, and initialized when you entered Capture mode. Deck 1 is selected by default.

You must have V-LAN VLXi hardware to control more than one deck at a time. For more information on V-LAN equipment, contact your Avid sales representative.

To activate playback from another available deck, choose the deck from the Deck Selection pop-up menu.

The menu also contains the command Check Decks below the list of decks. The Check Decks command helps you reestablish deck control if the power on your decks was turned off or the decks were disconnected when you first entered Capture mode.
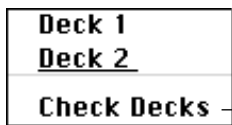
```
Deck 1
Deck 2

Check Decks
```
Check Decks appears at the bottom of the Deck Selection pop-up menu.

Once deck control has been properly initialized, it will remain active for all deck controllers throughout the session until you quit the application.

Selecting a Tape

To select a source tape:

1. Insert a tape into your deck. The Select Tape dialog box appears.

Select Tape		
What tape is in the deck?		

Tape name	Project name	New
AES302FootageforEffects	302Effects	
Avid footage request	Bell South spot	
Avid graphics demo	Canyonlands	
Bell South elements	Canyonlands	
ARCHIVE.NDF	Jaguar	
Eco Challenge Archive	Jaguar	
ARCHIVE	NE User Group Demo	Cancel
Yosemite 1	Yosemite clips	
Yosemite 2	Yosemite clips	OK

☒ Show other project's tapes   Scan for tapes

2. In an NTSC project, play the tape briefly so that the system can detect the timecode format of the tape (drop-frame or non-drop-frame). Otherwise, the system maintains the timecode format set in Deck Settings, regardless of the format on the tape, and you might receive a Wrong Tape message.

Drop-frame timecode appears in the Timecode indicator with semicolons between hours, minutes, and seconds, and frames. Non-drop-frame timecode appears with colons.

3. Provide the system with a tape name in one of the following ways:

   • Select the name of the tape from the list in the Select Tape dialog box and click OK.

   • Click New if the tape is not in the list. A new tape name line appears at the bottom of the dialog box. Type the new name and click OK.

Selecting Source Tracks

You can choose the tracks to digitize from the source tape. Click the video and audio track buttons in the Digitize Tool to select only those tracks that you want to digitize.

📄 *When using an Avid-controlled deck, the TC (timecode) track will be selected by default, and the system will digitize the timecode from the source tape. If you deselect the TC button, the system will digitize with timecode-of-day. For more information, see "Digitizing with Timecode-of-Day Timecode" on page 198.*
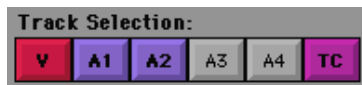
If you are not seeing the source video or hearing source audio in Capture mode, toggle these buttons to make sure they are not the cause.

📄 *You can select or deselect all tracks at once by pressing the Option key and clicking any track selector.*

⚠ **When batch digitizing, if the tracks are already logged into the bin, this selection will be made automatically, unless you deselect the option "Digitize the tracks logged for each clip" in the Digitize Settings. For more information on Digitize Settings, see the *Avid Media Composer Products Reference.***

Choosing a Resolution in the Digitize Tool

```
AVR2m
AVR3m
AVR4m
AVR6m
AVR2s
AVR3s
AVR4s
AVR6s
AVR8s
AVR12
AVR70
✓AVR75
```

If you did not already choose a resolution in the Compression Tool, or the Compression Tool is closed, you can use the AVR pop-up menu in the Digitize Tool.

To choose a resolution, click the pop-up menu above the deck controls in the Digitize Tool and make a selection.

Release 7.0 of the Media Composer products addresses AVR 70 and AVR 75 as follows:

• AVR 70 and AVR 75 in Release 7.0 of the Media Composer products correspond to AVR 70B and AVR 75B used to record media in the field with the Ikegami® Editcam™. As a result, users can now transfer media directly from the Ikegami Editcam to a Media Composer product for editing. For information on transferring media directly from the Ikegami Editcam, see **"Using Editcam Media" on page 210**.

• When you choose AVR 70 or AVR 75 during digitizing, the video column in the bin will display AVR 70B or AVR 75B for the new clips.

• If you transfer AVR 70 or AVR 75 media from an earlier release of the Media Composer products, the Video column in the bin displays AVR 70 and AVR 75 for the older media.

• You can play older AVR 70 and AVR 75 media within Release 7.0, but you cannot digitize in the older format.

For more information on AVRs, see the Avid Media Composer Products Reference.

Choosing the Target Bin

You select a target bin as the destination for the master clips created when you digitize on-the-fly. Or, you select a target bin containing the logged clips you will use to batch digitize your media.

To choose a target bin, do one of the following:

- Choose an existing bin from the pop-up menu.

- Activate a previously created bin by choosing Open Bin from the File menu, and then by locating and opening the bin in the Open Bin dialog box.

- Create a new bin by choosing New Bin from the File menu, and then naming and opening the new bin in the New Bin dialog box.

Targeting Drives

Targeting drives for the digitized media is a three-step process:
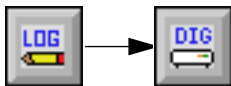
For tips on targeting media drives for effective storage and playback, see the *Avid Media Composer Products Reference Guide*.

1. Make sure you are in Digitize mode. If the tool is in Log mode, click the Digitize/Log button to return to Digitize mode.

2. Decide whether to digitize audio and video to a single drive, or separate drives, as described in the following sections.

3. Choose the specific target drives from the pop-up menus, as described in the following sections.

Targeting a Single Drive

By default, the Digitize Tool targets a single media drive volume for digitizing the audio and video for each clip. Use this option when you are digitizing in a single-field resolution, for instance, and play-back performance is generally not an issue.

To target a single drive:

1. Click the One/Two Disk Mode button to display a single drive icon.
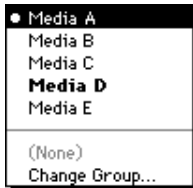
2. Choose a drive volume from the Target Drive pop-up menu.

   The name shown in bold in the menu has the most storage available. Time remaining on the selected drive, displayed above the menu, is calculated based on your AVR selection.

Targeting Separate Drives for Audio and Video

To achieve optimal performance, stripe two or more drives. AVRs 71 and 75 require drive striping. For more information, see the *AVID-drive Utility User's Guide*.

Optionally, you can target separate drives for video and audio tracks. This option improves performance because the system is not required to address all the information in separate locations on a single disk. You can also digitize for the longest continuous amount of time because the system is storing material on two disks rather than one.

To target separate drives for audio and video:

1. Click the One/Two Disk Mode button to display a two-drive icon.

● Media A
Media B
Media C
Media D
Media E

(None)
Change Group...
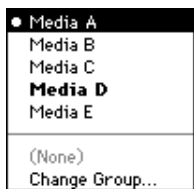
2. Choose separate drive volumes for audio and video from each Target Drive pop-up menu.

   Names shown in bold in the menus have the most storage available. Time remaining on each selected drive, displayed above each menu, is calculated based on your AVR selection.

Interpreting the Time Remaining Display

By default, the Digitize Tool displays a time remaining for each clip after you select an AVR and target drive or drives for the digitized media.

Time remaining

One/Two
Disk Mode
button
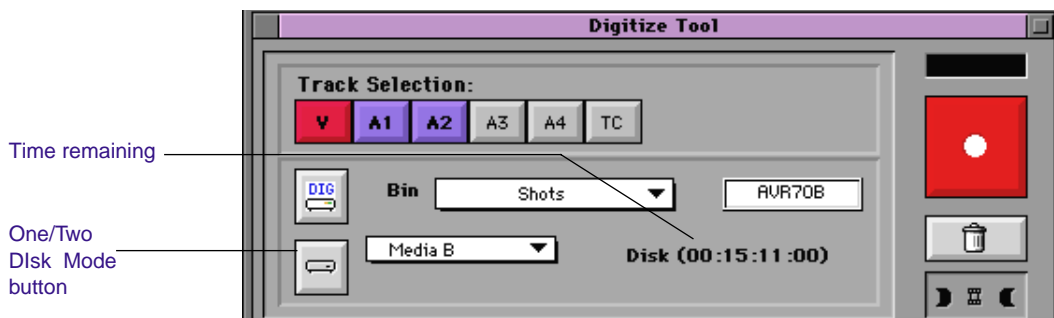
You can interpret this display based on the following factors:

- Each digitized clip is limited by the Macintosh operating system to a maximum file size of 2 GB (gigabytes).

- When adequate space exists on the chosen drive, the time remaining displayed in the Digitize Tool is based on 2 GB per clip at the chosen AVR. This number will reappear for each clip digitized, as long as there is adequate disk space.

- When you choose another AVR, the time remaining display adjusts accordingly.

- When the storage space on the chosen drive is less than 2 GB, the time remaining will begin to decrease for each clip digitized, until the drive is full.

151

You can also press the Option key and click the One/Two Disk Mode button to show the total time remaining on the chosen drive at the selected AVR.

Digitizing to Multiple Media Files

You can digitize video to multiple media files across multiple drive volumes, with the following advantages:

- You can create longer clips whose media files would otherwise exceed the Macintosh operating system file size limitation of 2 GB.

- You can group all drive volumes with the multiple files options, enabling the system to record continuously during digitizing of long video clips — such as satellite feeds or program airchecks.

- The system makes more efficient use of drive space, particularly when digitizing long clips.

This feature applies to video files only because audio media files rarely exceed 2 GB in size.

To digitize video to multiple media files:

1. Double-click Digitize in the Settings scroll list of the Project window.

   The Digitize Settings dialog box appears.

General Digitize Settings (Current)

☒ Digitize Video to Multiple Files.
  ☒ Prepare multiple files for (minutes): **30**
☐ Always display incoming video in the client monitor.
☒ Ask before discarding a canceled clip.
☐ Capture a single video frame only.
☒ Use control track instead of timecode for preroll.
☐ Digitize across timecode breaks ☐ with outpoint set.
☐ Switch to emptiest drive when [1 Minute Left. ▼]

Batch Digitize Settings
  ☐ Log errors to the console and continue digitizing.
  ☒ Digitize the tracks logged for each clip.
  ☐ Use the audio compression logged for each clip.
  ☐ Use the video compression logged for each clip.
  ☐ Switch to the emptiest drive if current drive is full.
  ◉ Stop deck when done.   ○ Pause deck when done.

[OK] [Cancel]

2. Select the option "Digitize Video to Multiple Files."

3. Select the option "Prepare multiple files for (minutes)." You can accept the default or enter a different time limit in the text field, based on the following explanation:

Prior to digitizing, the system goes through a process of preparing the drive volumes. This process is called *preallocation*. With the "Digitize Video to Multiple Files" option selected, the allocation process can take a long period of time in preparation for potentially unlimited video clip lengths. This option instructs the system to preallocate according to an estimated maximum video clip length. The default is 30 minutes.

⚠ **If you think that any of your digitized video clips might exceed 30 minutes, make sure you enter a higher estimate in this field; otherwise, the system will stop digitizing at 30 minutes.**

4. Click OK to close the dialog box and apply the options.

5. Enter Capture mode or open the Digitize Tool.

Target Drive pop-up menu
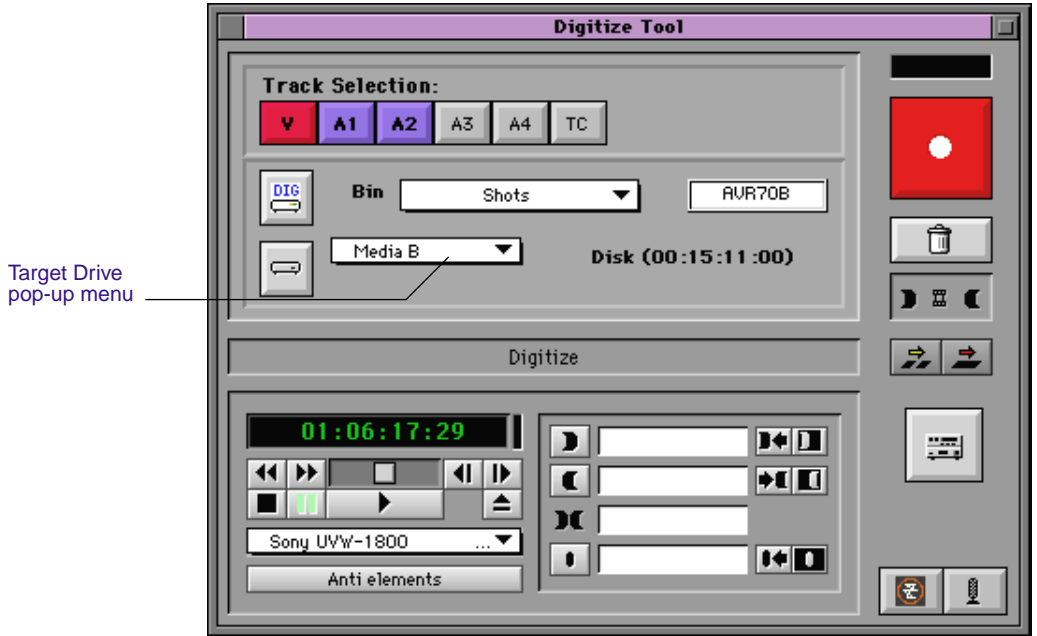
6. To digitize to multiple files across drive volumes, choose Change Group from the Target Drive pop-up menu in the Digitize Tool.
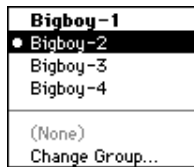
The Volumes dialog box appears.
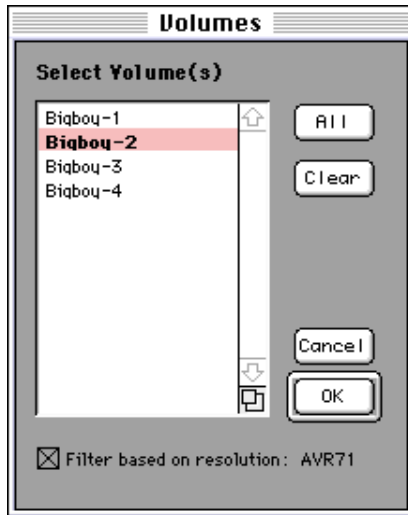
7. Shift-select multiple volumes to include in the digitizing session, or click the All button to select all volumes.

8. Click OK to close the dialog box and apply the changes.

When you digitize, any clip that exceeds the capacity of a volume (whether that volume is empty or already contains media files) will continue digitizing onto another volume in the group.

⚠ **For media file management purposes, any video clip whose media exceeds the 2-GB limit will have more than one media file associated with it. When you view the source Timeline for the clip loaded in the Source monitor, you will also notice edit breaks based on the separate media files (the breaks do not appear in the record-side Timeline).**

▤ *For more information on managing media files, see **Chapter 10**.*

Digitizing Across Timecode Breaks
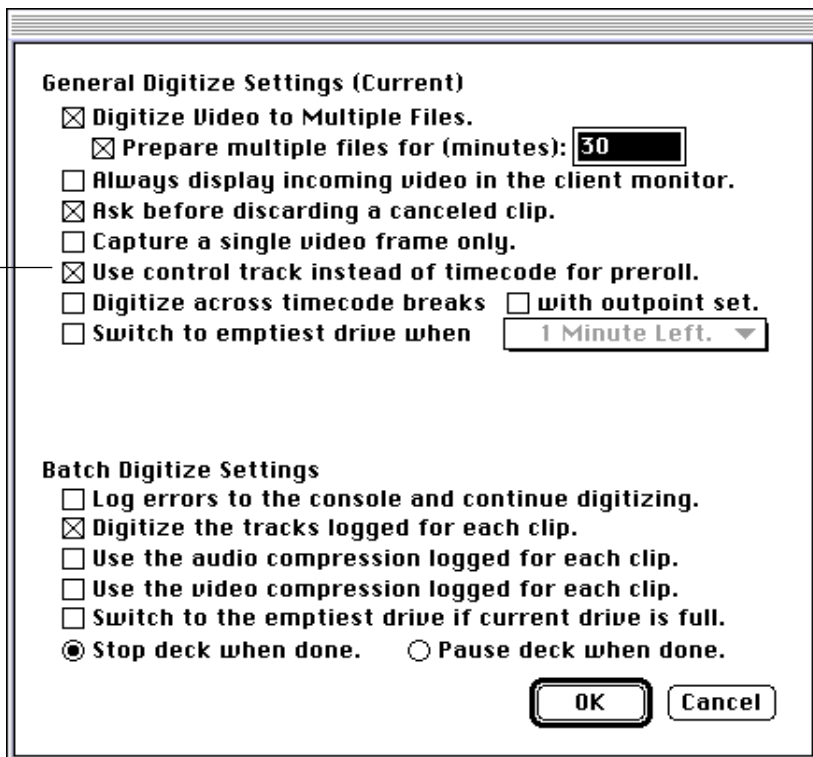
You can use control track instead of timecode for VTR preroll when digitizing across timecode breaks.

Control track preroll allows you to capture all the footage following a timecode break. Otherwise the system uses approximately 1 to 6 seconds of unbroken timecode following the break to perform the preroll before digitizing begins.

This is especially useful when you are batch digitizing across timecode breaks, but you can also select this option when you are manually digitizing one clip at a time.

General Digitize Settings (Current)
☒ Digitize Video to Multiple Files.
   ☒ Prepare multiple files for (minutes): 30
☐ Always display incoming video in the client monitor.
☒ Ask before discarding a canceled clip.
☐ Capture a single video frame only.
Preroll option ——— ☒ Use control track instead of timecode for preroll.
☐ Digitize across timecode breaks ☐ with outpoint set.
☐ Switch to emptiest drive when [1 Minute Left. ▼]

Batch Digitize Settings
☐ Log errors to the console and continue digitizing.
☒ Digitize the tracks logged for each clip.
☐ Use the audio compression logged for each clip.
☐ Use the video compression logged for each clip.
☐ Switch to the emptiest drive if current drive is full.
⦿ Stop deck when done.   ○ Pause deck when done.

[OK] [Cancel]

Preparing for Audio Input and Output

The Media Composer products support direct input and output of up to eight channels of audio, depending upon your model. Systems supporting eight-channel input and output provide the following features:

- For eight-channel audio input, source track assignments are mapped directly to audio tracks in the digitized clips. For example, when you digitize source footage with audio channels 1 to 5, the resulting master clip has matching audio tracks 1 to 5.

- For eight-channel audio output, you can reassign output channels from tracks in a sequence or clip to any of the eight optional output channels. For more information, see **"Adjusting Output on Four-Channel or Eight-Channel Audio Board Systems" on page 610**.

⚠ **Eight-channel audio input and output require the appropriate hardware configuration. For more information, see the *Avid Media Composer Products Connecting Audio and Video Equipment* manual.**

You can switch the hardware configuration to use either four-channel or eight-channel audio. If you change the configuration after launching the software, you can choose a new configuration in the Audio Settings dialog box without restarting the software.

To change the audio interface configuration after launching the software:

1. Reconfigure the hardware. For more information, see the *Avid Media Composer Products Connecting Audio and Video Equipment manual.*

2. Double-click Audio in the Settings scroll list of the Project window. The Audio Settings dialog box appears.

3. Choose the new audio interface configuration from the Peripheral pop-up menu.

```
✓ Digidesign 442
  Digidesign 888
```

Using Digital Sync with the Eight-Channel Audio Converter

The eight-channel audio converter is limited to acquiring digital sync signal from channels 1 and 2.

⚠️ **Channels 1 and 2 are often the first choice for input of a signal that provides digital sync. If you want to input audio from channels 3 through 8, however, you must have a valid digital signal coming in on either channel 1 or 2.**

Check for a valid digital sync signal as follows:

• If the green indicator light labeled DIGITAL on the audio converter shines steadily during input, the system is receiving a valid digital sync signal.

• If the green light blinks during input, the system is not receiving valid sync signal. Make sure you have a digital sync signal source properly connected to channel 1 or channel 2.

The effects of capturing audio without a valid digital sync source can include random noise, silence, or a jittering effect in the audio when played back.

Choosing the Audio File Format

The Media Composer products support the creation of audio media in the industry-standard Audio Interchange File Format (AIFF). The Media Composer products continue to support the Sound Designer II (SDII) format.

AIFF and Sound Designer II audio media files can be mixed within a project. The system default is 16-bit OMF (AIFF) audio.

📑 *Choose the SDII format for all audio media when you need to transfer audio media files directly to a Pro Tools® or AudioVision® system for audio sweetening.*

To toggle between AIFF and SDII:

1. Double-click General Settings scroll list of the Project window.

   The General Settings dialog box appears.

2. Choose either AIFF or SDII from the Audio File Format pop-up menu.

General Settings (Current)

☒ **Drive Filtering Based on Resolution**

Default Starting Timecode   `01:00:00:00`

☒ **NTSC Has Setup**

Project Format

These settings are a reflection of the current project. To ensure all new projects are similar, drag this setting to your 'Site' setting.

NTSC

Audio File Format pop-up menu →

Audio File Format: ✓OMF(AIFF)   OMF(SDII)

Cancel

OK
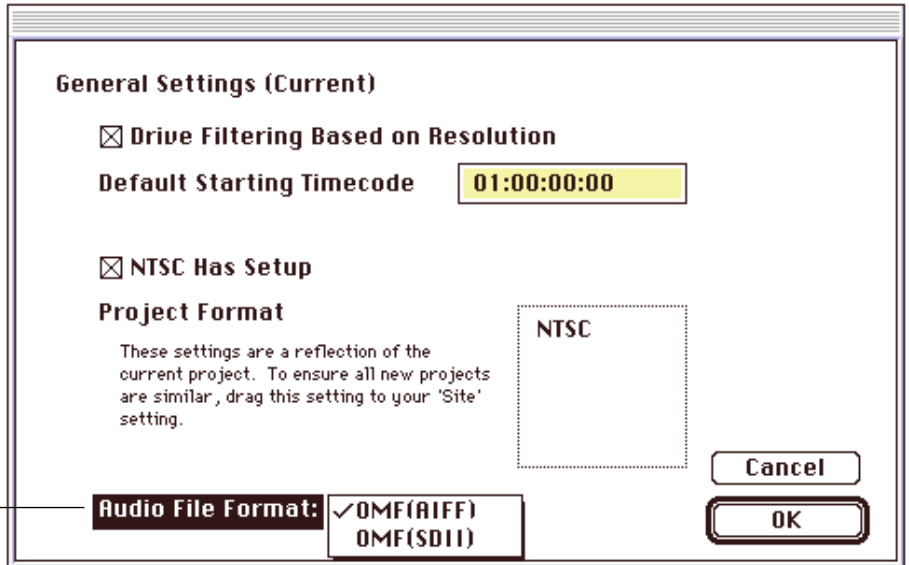
Audio is written in the chosen file format when you:

- Digitize audio tracks in Capture mode
- Create new clips by using the Audio Punch-In Tool
- Create tone media by using the Audio Tool
- Mix down audio tracks by using Audio Mixdown
- Import files by using the Import dialog box

• Apply a Digidesign audio plug-in that creates new source audio

If you switch the audio format in the middle of a project, all new audio media files will be written in the new format with the following exceptions:

• **Media files written when rendering audio effects:** The system uses the file type of the A-side (outgoing audio) media for a transition. For example, if the A-side of an audio dissolve is in OMF (AIFF) format and the B-side (incoming) is SDII, the rendered file will be OMF (AIFF).

• **Audio media files written when using the Consolidate feature:** Media files that are copied or created during a consolidate procedure retain their original file types.

Adjusting Audio Settings

You can use the Audio Settings dialog box to check the current configuration of audio hardware, and to choose various input options.

To open the Audio Settings dialog box, double-click Audio in the Settings scroll list of the Project window.

The dialog box appears.

Audio Settings	
Default Pan ⦿ Alternating Left – Right ◯ All Tracks Centered	Card: `Digi Amadeus card` Slot # : `0`
	Sample Rate: `44.1 KHz`
Source Mon Scrub Incoming `0`　Outgoing `1`	Peripheral: `Digidesign 442` Sync Mode: `Internal`
Record Mon Scrub Incoming `0`　Outgoing `1`	Input Source: `Analog` Digital Format: `AES/EBU`
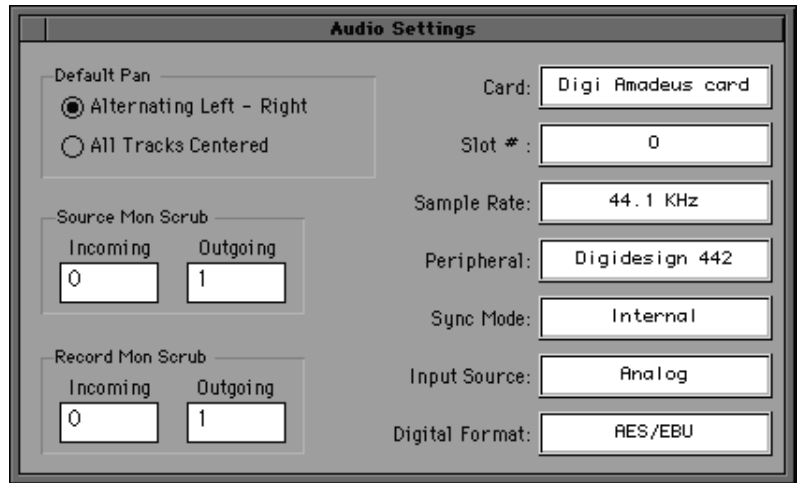
Two-channel audio boards now support both 44100-Hz (44.1 kHz) and 48000-Hz (48 kHz) audio rate settings. The broadcast standard of most high-end video postproduction houses is 48 kHz. The sound quality of the two rates is very similar; you should select the rate based on the requirements of your facility. For more information on settings, see the *Avid Media Composer Products Reference*.

On a two-channel board, select the rate by choosing a value from the Sample Rate menu in the Audio Settings dialog box. You access the dialog box from the Settings scroll list in the Project window. For four- to eight-channel systems, adjust the sample rate on the audio interface or audio converter.

The setup display for two-channel board systems includes the same setup information as the display for four- to eight-channel systems, with these exceptions:

- There is no peripheral display because there are no audio peripherals connected.

- The sample rate option is fixed at 44 kHz with two-channel board systems.

- There is no Digital Format display option because two-channel systems can only input S/PDIF (Sony/Phillips Digital Interface Format) digital audio.

The first four items in the display are informational, and cannot be changed from within the Audio Tool. These include:

- The type of audio card installed

- The slot number where the card is located

- The sample rate for audio input, determined by the position of the Sample Rate switch on the Digidesign audio interface (four- to eight-channel systems only)

- The type of peripheral audio device attached to the system (audio interface)

You can make adjustments to any of the final three options from within the Audio Tool by clicking the option and making a new selection from the pop-up menu. These selections include:

- The Sync Mode pop-up menu, which includes two optional sources for audio sync:

  - *Internal*—This sets the clock and timing for the sample rate internally. If your system is equipped with the Digidesign audio interface and black burst generator, set the Sync Mode to Internal.

  - *Digital*—If you are using a digital source that provides a digital word-clock signal, set the Sync Mode to Digital. Choose digital if you are digitizing from DAT (digital audiotape).

⚠ **You must plug a digital source device to the digital input port on the two-channel audio board directly or through the Digidesign audio interface if you have system with a four- to eight-channel audio board.**

- The Input Source pop-up menu, which includes two options for the type of input: analog or digital.

- The Digital Format pop-up menu (systems with four- to eight-channel audio boards only), which provides two options for the digital input format if you chose Digital as the input source:

    - AES/EBU (Audio Engineering Society/European Broadcast Union)—the industry format

    - S/PDIF (Sony/Phillips Digital Interface Format)—the consumer format

Using the Audio Tool

The Audio Tool, along with your hardware's audio parameters, allows you to do the following in preparation for input:

- Check and manage your audio hardware setup.

- Calibrate system input levels.

- Set audio levels before digitizing.

In addition, controls in the Audio Tool allow you to calibrate, set levels, and generate customized calibration tone for output to the speakers or a record device. For more information on output procedures involving the Audio Tool, see **"Preparing for Output" on page 601**.

Audio Tool button

To open the Audio Tool, choose Audio Tool from the Tools menu, or click the Audio Tool button in the Digitize Tool.

Tools
New Deck Controller
Audio Mix
Audio EQ
Automation Gain
Audio Tool   ⌘1
Audio Punch In
Burn-In Tool

— Audio Tool command

163
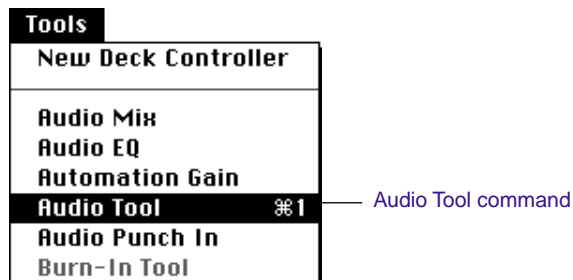
The Audio Tool appears. The tool displays meters for two to eight channels, depending on your Media Composer model.

Four-Channel Audio Board

Output options button

Two-Channel Audio Board

Output button

In/Out toggle

Input button (2-channel boards only)

Reset Peak button

Peak Hold button

Meter display

Analog VU scale (adjustable)

Digital scale (fixed)
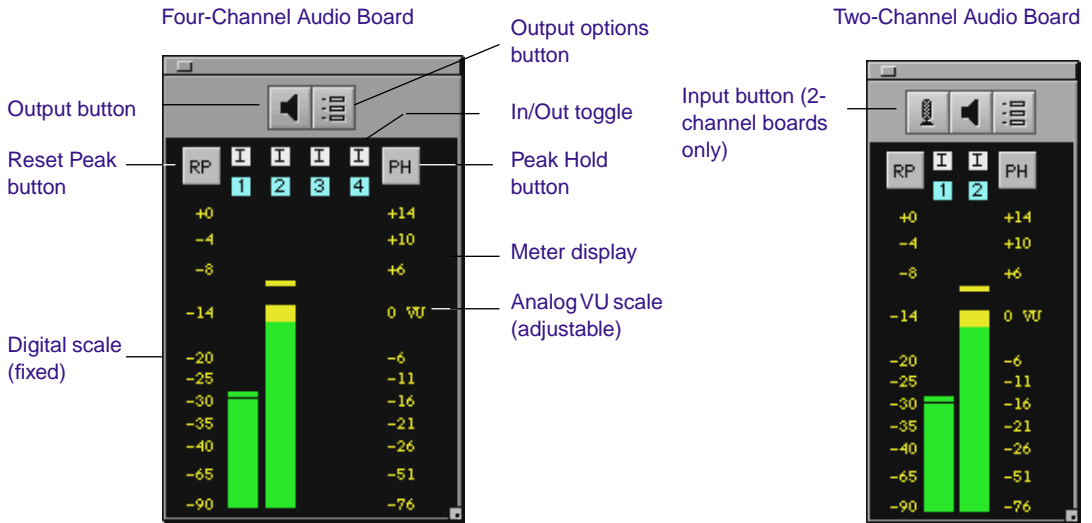
The Audio Tool has the following characteristics:

- The Output Level button displays a panel that contains a single slider control for raising or lowering global audio output.

- The Output Options button displays a panel that contains options for channel assignments, mixing tracks, and ignoring pan and volume settings.

- The Reset Peak button resets the current maximum peak measurements. It also stops the playback of the internal calibration tone.

- The In/Out buttons toggle the meter displays for each channel between input levels from a source device and output levels to the speakers and record devices. I indicates Input, and O indicates Output.

- The Peak Hold button displays a pop-up menu that allows you to choose options for customizing the meter displays, and setting and playing back the internal calibration tone.

- The digital scale to the left of the meters displays a fixed range of values from 0 to –90 dB (decibels), according to common digital peak meter standards.

- The analog VU (volume unit) scale to the right of the meters displays a range of values that you can conform to the headroom parameters of your source audio.

- The meters dynamically track audio levels for each channel as follows:

  - Meters show green below the target reference level (default reference level is –14 dB on the digital scale).

  - Meters show yellow for the normal headroom range, above the reference level to approximately –3 dB.

  - Meters show red for peaks approaching overload, between –3 dB and 0 (zero) dB.

  - Thin green lines at the bottom indicate signals below the display range.

Resizing the Audio Tool

You can resize the Audio Tool for greater visibility during input and output. For example, when batch digitizing in a busy facility, you can make the tool larger to watch levels from across a room.

To adjust the size of the Audio Tool, click the size box in the lower corner and drag to the preferred size.

Size box
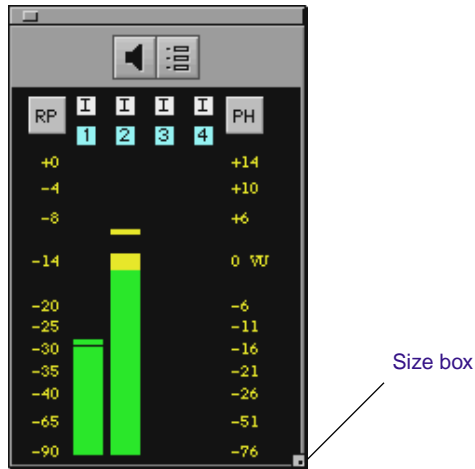
Adjusting the Reference Level

The VU (Volume Unit) scale to the right of the meters is a sliding scale relative to the fixed digital scale displayed on the left. You can adjust the VU scale up or down based upon the *headroom* parameters of your playback devices.

To customize the VU scale:

1. Choose Set Reference Level from the Peak Hold pop-up menu.
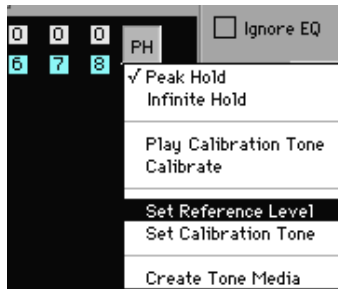
A dialog box appears.

2. Enter the new value for the reference level (-12, for example), and click OK.

   The VU meter scale slides to match the new reference level, which is displayed on the digital scale.

Digital scale displays corresponding reference value.

VU scale slides up to display less headroom.
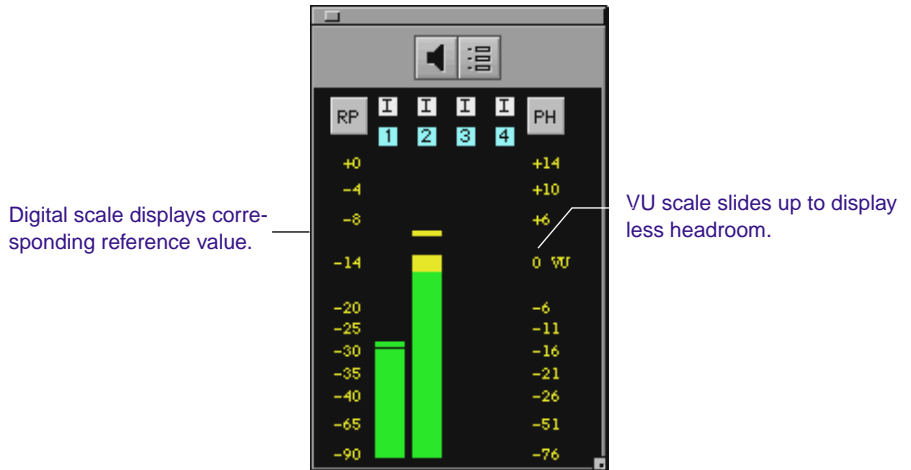
Choosing a Peak Hold Option

The Peak Hold pop-up menu provides two options for displaying peak levels in the meters, as follows:

- When you choose Peak Hold, the meters display a normal rising and falling volume trail in the meters. This is the default option.
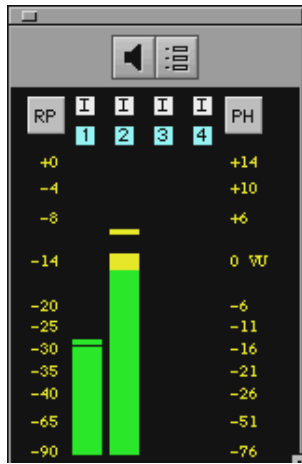
- When you choose the Infinite Hold option, each meter permanently retains a single bar at the peak volume level measured during playback. The effect is cumulative: the bar continues to rise and hold with each new peak, and serves as a record of the highest peak for each channel.
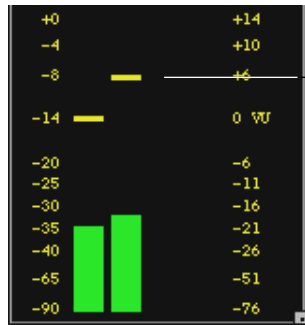
Infinite hold peaks remain during and after playback.

To delete the peaks and start over at any time, click the Reset Peak button.

To enable either Peak Hold or Infinite Hold, click the pop-up menu and choose an option.

Adjusting Input Levels

This section describes procedures for calibrating and adjusting audio input levels with the Audio Tool. The types of adjustments you can make—and the procedures you use—vary depending upon whether your system is equipped with a two-channel audio board or a four-to eight-channel audio board, as follows:

- You can use the calibration controls in the Audio Tool to calibrate the Digidesign audio interface input levels on systems equipped with four- to eight-channel audio boards.

- You can use input level controls in the Audio Tool on systems equipped with two-channel audio boards to calibrate and set levels during digitizing.

- You can use additional procedures described in this section to avoid digitizing over- or under-modulated audio due to variations in levels among the source material, playback devices, and the Media Composer system.

To adjust input levels:

1. Click the In/Out toggle buttons for the appropriate channels to display the I for Input.

2. Play back the source audio (from a videotape or DAT, for example). If the recording includes reference tone, cue to the tone and play it back.

Voice recording serves as a good backup reference. Upper peaks of inflection should reach the normal target range (around -14 dB on the digital scale or 0 dB on the VU scale with playback from videotape, for example).

3. Adjust the output on the playback device so that the device's volume meter shows the appropriate level for the reference signal (0 dB for videotape playback, for example).

4. Adjust the input levels using the following procedures for either two-channel or four- to eight-channel systems.

Adjustments for Four- to Eight-Channel Audio Board Systems

You can use the calibration features of the Audio Tool to fine-tune the Trim level settings of the Digidesign audio interface. These adjustments should be made when you first install the system, and repeated occasionally thereafter (once a month, for example).

To calibrate the audio interface:

1. Choose Calibrate from the Peak Hold pop-up menu.
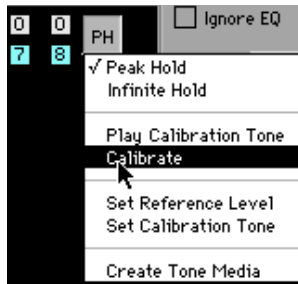
The Audio Tool changes to Calibrate mode: the scales display a range of approximately 2 dB, and the meters indicate levels within this range.

VU scale varies, displaying custom reference level setting, +1 dB above and -1 dB below.
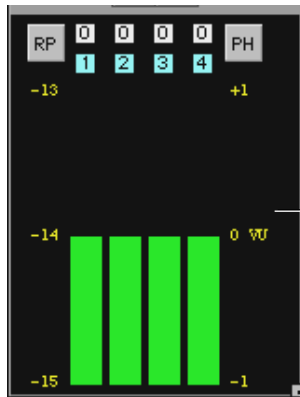
2. Use a jeweler's screwdriver to fine-tune the Input Level Trim pots on the Digidesign audio interface until the peaks rest at the appropriate value.

3. To return to the default display, choose Calibrate from the Peak Hold menu.

To set the input level during digitizing, adjust the level externally until the signals fall within the appropriate range on the meters:

• Adjust the output level on the playback device.

• Put an audio mixer in line, and use it to adjust track separately.

• Put an audio compressor in line. This allows other adjustments of the audio levels as well as overall volume.

⚠ **You cannot adjust the levels for four- to eight-channel audio board systems from within the Audio Tool.**

Adjustments for Two-Channel Audio Board Systems

To set the input level during digitizing for two-channel audio board systems:

1. Click the Input button (microphone icon) to display the input level slider.

Input slider
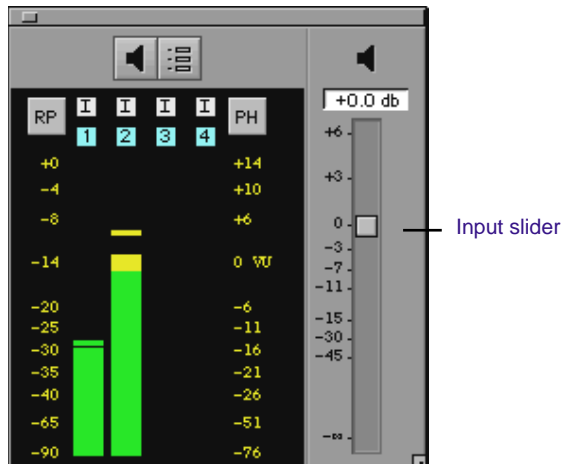
2. View the meters and adjust the slider to the appropriate level.

Creating Tone Media

Early releases of the Avid Composer products allowed you to set up your own custom calibration tone for output to tape. You can now create your own tone media and master clips for editing directly into sequences.

To create tone media:

1. Open a bin.

2. Choose Create Tone Media from the Peak Hold pop-up menu in the Audio Tool.

   A dialog box appears.

√ Peak Hold
Infinite Hold

Play Calibration Tone
Calibrate

Set Reference Level
Set Calibration Tone

Create Tone Media

Tone media level in dB:	-14.00
Tone media frequency in Hz:	1000
Tone media length in seconds:	1
Target Bin:	Boat Shop Rou...▼
Target Disk:	Bigboy-2 ▼

OK   Cancel
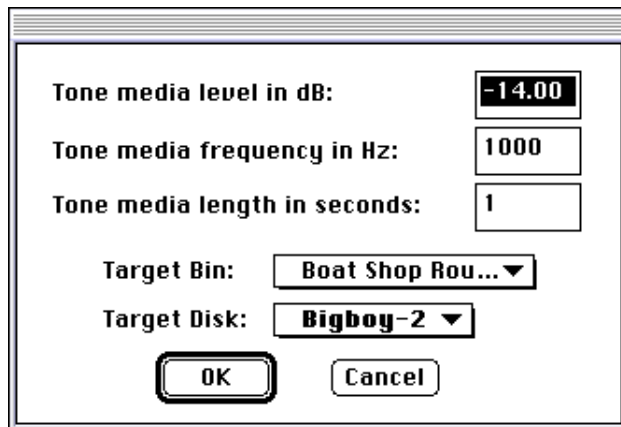
3. Set the appropriate calibration tone parameters for the project. You can also use the default output tone of –14 dB (digital scale) with a 1000-Hz signal.

If you set the tone media frequency to 0, the system generates random noise.

4. Choose a target bin for the tone master clip and a target disk for the tone media from the pop-up menus.

5. Click OK.

   After a few seconds, the media file is created and a master clip appears in the target bin. The default name reflects the options you selected. You can rename the clip by typing a new name.

Name	Duration
◇ Boat Shop Rough Cut	
TONE: 1000 Hz @ -14.0 dB.1	1:00
Untitled Sequence.01	1:09:10
Boat ShopCutBackupK	1:00:05
Boat Shop Sequence Backup	1:35:17
audio tail leader	35:14
audio tail leader	35:14
Boat Shop Sequence .Voice Over.3	35:08
video tail leader	1:59:26

F S T   Statistics.1
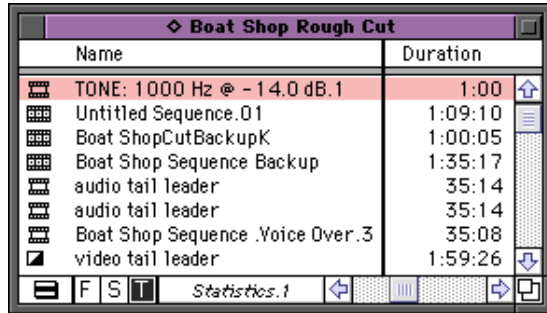
Using the Console to Check Audio Levels

Once you have played back audio through the Audio Tool, you can use the Console to view a list of precise information about the peak levels.

To check peak levels in the Console:

1. Click the Reset Peak button to clear the system's record of the most recent maximum peaks.

2. Open the Audio Tool and play a sequence or portion of the sequence.

3. After playing back the audio, open the Console by choosing Console from the Tools menu.

4. In the Console command line, type:

   DumpMaxPeaks

5. Press Enter.
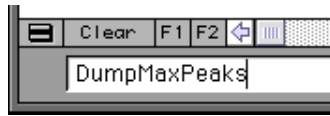
A list of peak values appears in the Console.
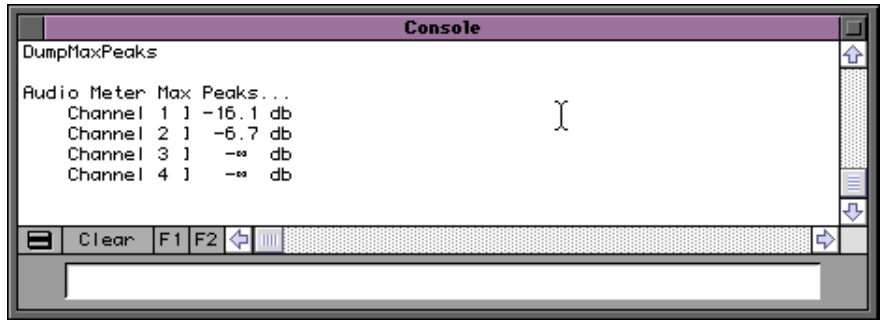
Preparing for Video Input

The Avid Composer system provides both a Video Output Tool and a Video Input Tool for calibrating either composite or component video.

If your system is equipped with the serial digital video I/O board (used in place of the Betacam card) you can digitize material directly from a D1 or digital Betacam VTR without the need of calibration — much like direct input of digital audio from DAT or CD.

To open either the Video Input or the Video Output Tool, choose one from the Tools menu.
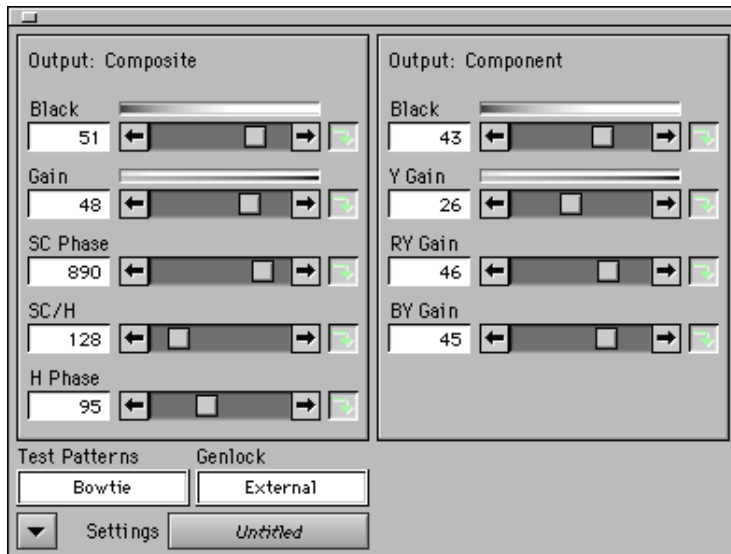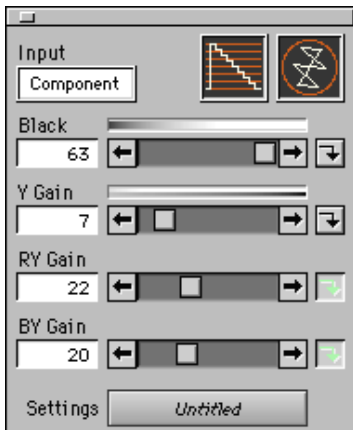
You can also open the Video Tools in Capture mode by clicking the Video Tools button at the lower right corner of the Digitize Tool.

Release 6.0 and later of Media Composer allow you to input and output NTSC or PAL video in both composite and Betacam component formats without additional hardware, such as a transcoder. Direct input and output of Betacam component video allows you to maintain better image quality for online editing with Media Composer.

Media Composer supports the SMPTE/EBU component standard, but does not support the MII component video standard.

This section provides essential information for input calibration. You should proceed as follows:

• Make sure your monitor is properly calibrated for displaying footage accurately. See your monitor's hardware documentation for more information.

- If your system's output settings have not already been calibrated according to house standards, use the procedures described in **"Calibrating for Video Output" on page 602**. If you are in a facility where this is not necessary, leave the output settings at their preset values.

- If you are using footage in the NTSC/EIAJ format standard, deselect the option NTSC Has Setup in the General Settings dialog box. This will enable the appropriate display for the setup portion of the signal in the Waveform monitor.

- Proceed to calibrate the input levels for each videotape when you digitize in order to ensure continuity of picture quality between tapes, as described in **"Calibrating for Video Input" on page 177**.

*If your system is equipped with the serial digital video I/O board for input from a D1 or digital Betacam VTR, you do not need to calibrate input signals. Proceed to **Chapter 7**.*

Using the Factory Presets

The preset buttons on both the Video Input Tool and the Video Output Tool show the status of each calibration setting as follows:

- When you first open the tools, all preset buttons are lit (green), with the factory presets loaded for each slider.
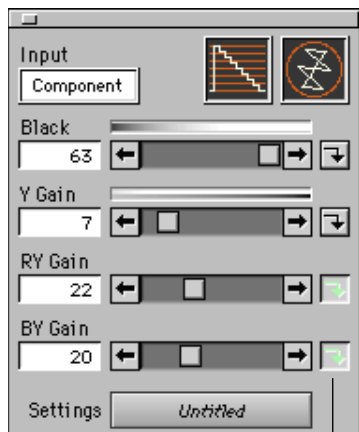
Preset buttons
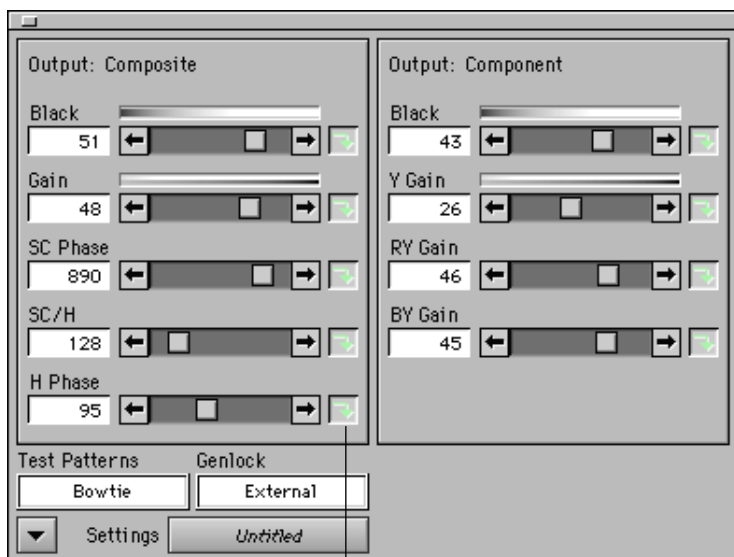
Preset buttons

- When you click a lit preset button, the button becomes unlit (gray), and the slider returns to the most recent manual level setting.

- When you click an unlit preset button, it becomes lit (green), and the slider moves to the factory preset level for that parameter.

As you adjust levels in the tools, you can toggle the preset buttons between the levels you set manually and the factory preset levels.

Calibrating for Video Input

To calibrate for videotape input:

1. Choose Video Input Tool from the Tools menu. The Video Input Tool opens.

177

2. Choose the appropriate input channel from the Input menu: Composite or Component.
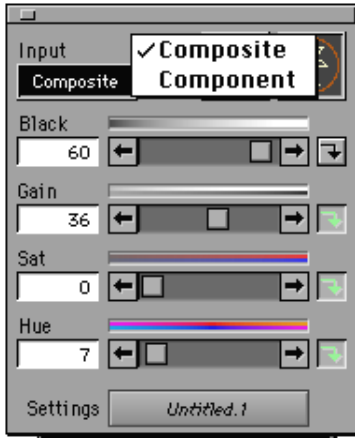
Choose either Composite or Component to display the correct controls and select the proper input channel.
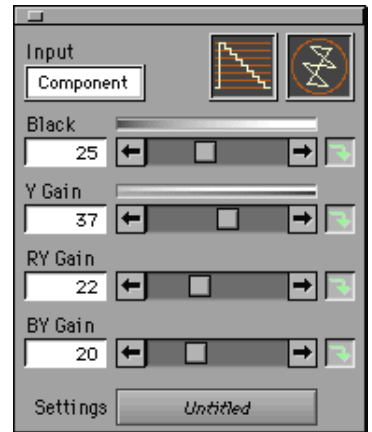
3. Cue the tape to the section containing bars and tone (usually the beginning) and play the tape.

Always play the tape when calibrating. Signal display is unstable when the tape is paused.

The third, full-screen monitor displays either of the following types of bars:

Full-field color bars

Full-field bars
(NTSC or PAL)

Full-field bars can
be either 75% (max-
imum signal ampli-
tude as percentage
of peak white) or
100%.
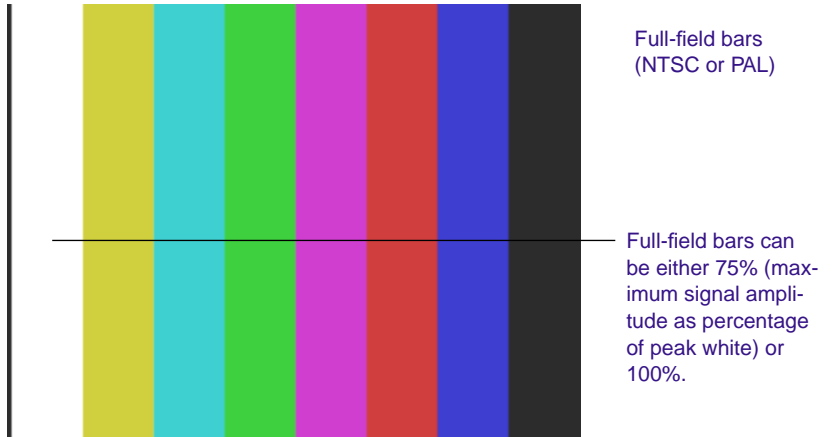
SMPTE standard split bars

SMPTE bars
(NTSC only)

Color bars
(lines 16 to 182)

7.5 black level
(lines 183 to 202)

100% white
(lines 203 to 263)
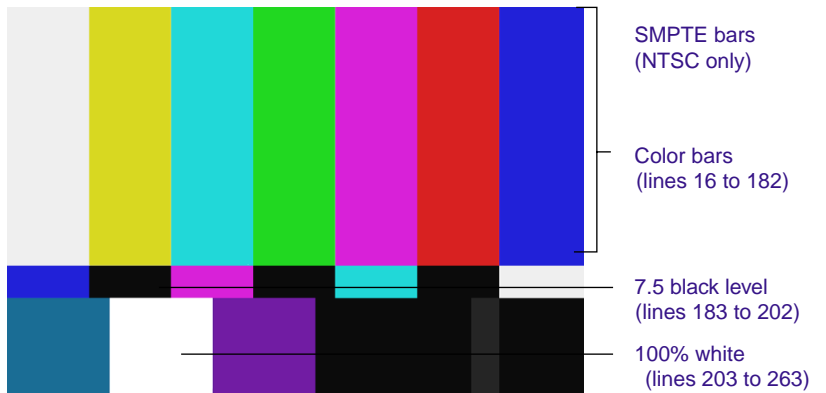
4. Open the internal Waveform monitor by clicking the icon located at the lower right of the tool.

NTSC waveform values (IRE)

White level at 100 IRE (100% bars)

(White level at 77 IRE (75% bars)

Black level at 7.5 IRE (Setup level falls at 0 IRE for NTSC/EIAJ)

Line Selector

PAL waveform values (volts)

White level at 1 volt (100% bars)

Black level at 0.3 volt
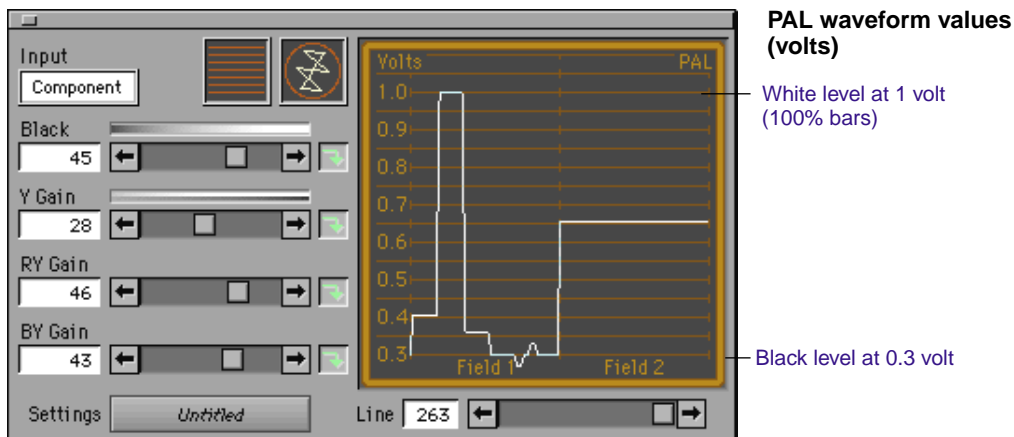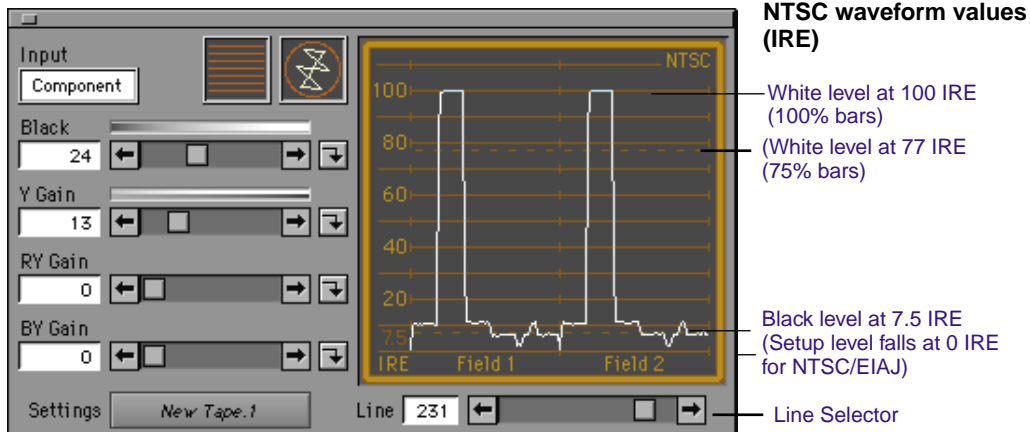
5. Adjust the Line Selector slider located below the Waveform monitor to display the appropriate line of the test pattern, then adjust the luminance values based on **Table 6-1**.

Table 6-1   Luminance Settings

Parameter	SMPTE bars	Full-field bars at 75% signal level	Full-field bars at 100% level	NTSC/EIAJ
Black level (setup)	Adjust Line Selector to approximately 183	Adjust Line Selector to approximately 150	Any line	Any line
	Adjust Black slider to 7.5 IRE (NTSC)	Adjust Black slider to 7.5 IRE (NTSC), 0.3 volt (PAL)	Adjust Black slider to 7.5 IRE (NTSC), 0.3 volt (PAL)	Adjust Black slider to 0.0 IRE
White level (gain)	Adjust Line Selector to 203	Adjust Line Selector to 150	Adjust Line Selector to 150	Adjust Line Selector to 203
	Adjust Gain/Y Gain slider to 100 IRE (NTSC)	Adjust Gain/Y Gain slider to 77 IRE (NTSC), 0.825 volt (PAL)	Adjust Gain/Y Gain slider to 100 IRE (NTSC), 1.0 volt (PAL)	Adjust Gain/Y Gain slider to 92.5 IRE (NuVista card systems) or 100 IRE (ABVB card systems)

6. Close the Waveform monitor, and open the Vectorscope monitor by clicking the Vectorscope button.
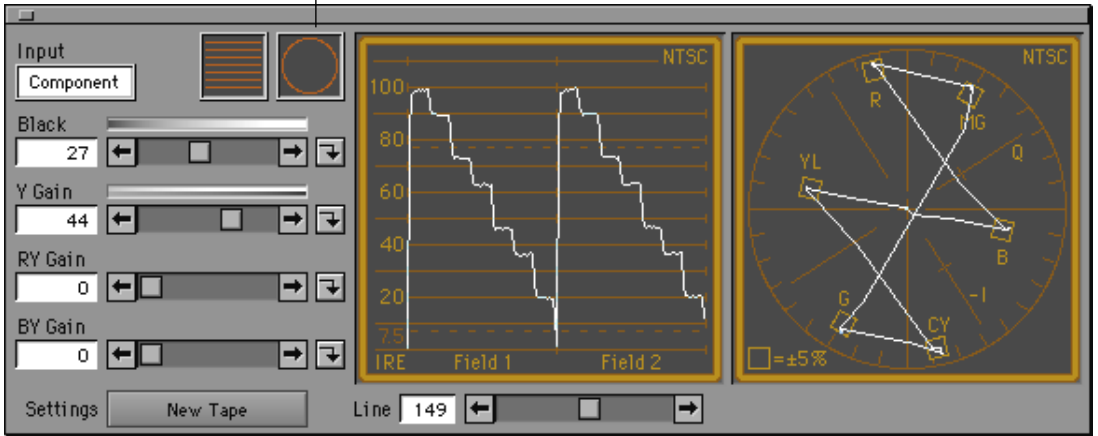
7. Adjust the Line Selector to display the signal for color bars at around line 150 (this applies to all formats and all types of bars).

8. Adjust the Sat and Hue sliders (composite) or the RY Gain and BY Gain sliders (component) until the angle and amplitude of the six color vectors fall within the target boxes on the vectorscope.

There is no hue adjustment for PAL video.

Saving Settings

You can also color correct shots by applying the Color effect to segments in the Timeline and making adjustments in Effect mode. For more information, see the *Avid Media Composer and Film Composer Effects Guide.*

You can save the settings for an individual tape each time you calibrate bars. For example, you can have one or a series of shots that require color correction (the shots are dark, too bright, or were not shot with the proper color balance or filtering). You can make corrections by using the Video Input Tool now, or at any time during or after editing in order to match shots in the sequence.

To save the calibration settings for an entire tape:

1. After calibrating as described in **"Calibrating for Video Input" on page 177**, choose Save As from the Settings pop-up menu. The Save As dialog box appears.

2. Type a name for the settings.

3. Click OK.

   📰 *If you give the settings the same name as the tape name, Media Composer will apply the settings automatically when that tape is loaded into the deck in the future (for example, when redigitizing).*

Whenever you batch digitize or redigitize, the system recalls the saved settings as follows:

• The system looks for a tape setting. If the setting exists, the system recalls it.

• If no tape setting exists, the system uses the default Video Input Tool settings.

Saving a Default Video Input Setting

Each time you insert a new tape into the VTR, the Video Input Tool reverts to its default settings for composite input, and the Settings pop-up menu displays the name "Untitled."

Use the following procedure to save your own custom default setting for the current project — for example, if you want the Video Input Tool to display a set of calibrations for component video each time you put in a new tape.

   📰 *The default setting for the Video Input Tool is a project setting. You must create a new default setting for each project.*

To save a new Video Input setting default:

1. (Option) Insert a tape into the VTR and cue up the bars.

2. Choose Video Input Tool from the Tools menu.

   The Video Input Tool opens.

3. Calibrate the default settings that you want to save.

4. Choose Save As from the Settings pop-up menu.

5. Type the name "Default," and click OK.

⬚ *You must use the name "Default" for the setting, otherwise it will not function as the default. Capitalization does not affect it.*

The system uses the default setting in the current project whenever you load a new tape that does not have its own setting.

Adjusting Video Levels by Eye

Color bars are the best way to set the video levels consistently. However, if you have a tape or series of tapes with no color bars, you might need to adjust levels by eye. To do this, use the following criteria:

• Blacks should not seem flat and lacking detail. Find the blackest region of an image (shadows work better than black objects) and adjust the setup.

• Whites should not be washed out or lacking detail. Find the whitest region of an image (bright, well-lit regions work better than white objects) and adjust the gain.

• Skin colors should be realistic. Find a skin color and adjust both hue and saturation as necessary.

• Pure yellows should be a rich gold and not reddish or greenish in tone. Find a pure yellow and adjust both hue and saturation as necessary.

Digitize Preparations Checklist

☐   Make sure you have the options selected in the General Settings, Deck Settings, and Digitize Settings dialog boxes.

☐   Check your hardware configurations: power on switches, cable connections, pulldown switch on the Video Slave Driver, and remote switch on the source deck for deck control.

☐   Consider striping your drives in advance according to the *AVIDdrive Utility User's Guide* if you are working on a complex project with multiple streams of video and high-resolution images.

☐   Insert a tape into the deck and set up the Digitize Tool for track selection, target bin, target drives, source tape, and source deck.

☐   Set up the Compression Tool for audio sample rate, AVR, detail and color compression, and frame rate.

☐   Use the Audio Tool to set the audio input levels.

☐   Use the Video Tool to set the video input levels for setup, gain, saturation, and hue; save your video settings for future use.

CHAPTER 7

Digitizing

When you digitize, you convert source material from videotape into master clips that contain reference information. You also create associated media files that contain the digital audio and video. Once you prepare the capture tools, as described in **Chapter 6**, you can digitize the source material in one of several ways, as described in the following sections:

- **Before You Begin**
- **Special Digitizing Procedures**
- **Digitizing and Logging at the Same Time**
- **Digitizing to the Timeline**
- **Batch Digitizing**
- **Redigitizing Your Material**
- **Using Editcam Media**

Before You Begin

Depending upon your immediate needs, use the following guidelines for working through this chapter based on a chosen digitizing method:

- If you want to use the Avid Media Reader, add locators, create subclips, or log errors to the console during digitizing, read **"Special Digitizing Procedures" on page 187**.

- If you have no logs and would like to begin digitizing right away, see **"Digitizing and Logging at the Same Time" on page 190**.

- If you want to digitize video to multiple media files across multiple drives, see **"Digitizing to the Timeline" on page 199**.

- If you have logs already entered in a bin and would like to automate the digitizing process with playback from an Avid-controlled deck, see **"Batch Digitizing" on page 200**.

- If you are redigitizing deleted media or have imported a sequence that lacks the associated media files, see **"Redigitizing Your Material" on page 205**.

Preparing Digitize Bins

If you have not already prepared a structure of bins for your project, as described in **"Managing Folders and Bins" on page 52**, consider the following tips before digitizing:

- You can create one bin for each source tape. This helps to avoid slowing the system with large bins, associates each bin with a source tape for better organization, and simplifies redigitizing.

- You can name the bin after the tape, so that when you autodigitize or digitize on-the-fly without noting a tape name, the system will automatically name each clip or take after the bin (tape) and number them sequentially for easy reference.

Special Digitizing Procedures

This section describes several optional procedures that you can use during the digitizing process.

Using the Avid Media Reader

The Avid Media Reader is a powerful and flexible external standalone LTC/VITC timecode reader and encoder. It enables the Avid Composer system to decode up to three lines of VITC (vertical interval timecode) or one line of VITC and one line of LTC (longitudinal timecode) while digitizing. It automatically adds the information to the bin while creating subclips based on timecode breaks in any or all of the VITC lines.

Logging Errors to the Console

The Console is useful during the digitizing process for logging digitize errors, as described in **"Using the Console" on page 101**.

To open the Console, choose Console from the Tools menu:

- If the option "Log errors to the console and continue digitizing" is selected in the Digitize Settings dialog box, when you batch digitize and the system encounters an error, it will abort the clip, enter error comments into the console, and continue digitizing the next clip.

- If the option "Log errors to the console and continue digitizing" is not selected in the Digitize Settings dialog box, an alert message will appear and the system will pause if an error occurs while digitizing. If this happens, do the following:

  a. Click Try Again to retry the operation. The clip might digitize successfully.

  b. If the clip does not digitize the second time you try, the error message appears again. Click Next Clip to skip the clip that caused the error, and continue batch digitizing any remaining clips, or click Abort to cancel the entire batch digitize process.

c. Make note of all errors, messages, and steps that you've taken and decide whether to troubleshoot the problem on your own or contact Avid Customer Support.

Creating Subclips On-the-Fly

Subclips are marked sections of a longer master clip that you can view and edit like any other object in a bin. This section describes a shortcut method for creating subclips on-the-fly during digitizing. The maximum number of subclips you can generate while digitizing a clip is 50.

To create a subclip on-the-fly:

1. Start digitizing as usual.

Subclip status

2. At the point where you want to begin the subclip, press the F1 key.

   This highlights the subclip IN mark in the Digitize Tool.

3. While the system is digitizing, you can enter a name for the subclip by typing the name. Press the Tab key to enter comments about the clip.

4. When you want the subclip to end, press the F2 key. This highlights the subclip OUT mark in the Digitize Tool.

You can press the F2 key repeatedly as you search for the end point of the subclip. The system accepts the last occurrence as the end point. You can also press the F1 key at anytime before pressing F2 again to remove the previous subclip marks and start a new subclip IN point.

The subclip appears in the target bin when you press the F1 key again to mark another subclip, or when you stop digitizing.

As you continue to mark subclips while digitizing, a number appears between the subclip indicators to show the number of subclips created so far.

Adding Locators On-the-Fly

Locators mark a single frame within a clip or sequence so that you can attach a note or find the frame at a later time. This section describes a shortcut method of adding locators on-the-fly while digitizing.

To add a locator to a frame while digitizing, watch the playback of the footage in the Edit monitor and press the F3 key when you see the appropriate shot or frame.

Adding Comments On-the-Fly

The Avid Composer system's annotate feature allows you to type comments during the digitizing of a clip. These comments are saved in the clip Comments column in the bin. You can add comments about such things as color correction or directions for editing.

To carry your comments over to the sequence so that they will appear in the Timeline, in EDLs, or in cut lists, you must add the comments again when creating the sequence by using the Add Comments command in the Monitor menu.

To add comments on-the-fly, start typing at any time during the digitizing of a clip. The annotate window opens on screen, allowing you to see the text as you type. You cannot edit the text until after the digitizing is complete, but you can backspace and retype the information.

Digitizing and Logging at the Same Time

When you digitize without entering log information in a bin ahead of time, the system creates clips and associated media files while you digitize. Digitizing in this manner involves manually cueing source footage with an Avid-controlled deck, using the deck controls in the Digitize Tool.

There are several ways to digitize and log at the same time:

- **Digitizing from a mark IN to a mark OUT.** This method lets you specify the exact timecode location to begin and end digitizing. You can also specify only a mark IN or mark OUT, and enter the other mark on-the-fly. These procedures are described in **"Digitizing from a Mark IN to a Mark OUT" on page 191**.

- **Digitizing on-the-fly.** This method is easier than setting marks, but it is more imprecise. It involves using the deck controls in the lower left corner of the Digitize Tool to cue, play, and stop the source footage manually while digitizing. These procedures are described in **"Digitizing On-the-Fly" on page 193**.

- **Autodigitizing.** This method requires the least amount of supervision and effort, but usually calls for more digitizing time and disk storage space. It involves playing each source tape from a cue point near the beginning and letting the system digitize the entire tape, automatically naming and entering each cut into the bin. These procedures are described in **"Autodigitizing" on page 196**.

Two additional techniques you can use when digitizing and logging at the same time are described in **"Digitizing from a Non-Avid-Controlled Deck" on page 197** and **"Digitizing with Timecode-of-Day Timecode" on page 198**.

Digitizing from a Mark IN to a Mark OUT

Digitizing from a mark IN to a mark OUT lets you specify exactly where to begin and end digitizing. You can specify only a mark IN or mark OUT, and the system enters the other mark on-the-fly. Use this method in the following circumstances:

- If logs exist in written or printout form but not in the proper format for quick import into the system

- If the IN and OUT marks are rough and need to be double-checked for accuracy

- If you are familiar enough with the source material to estimate the timecode for the mark IN, the mark OUT, or both, quickly and accurately

Setting Both Marks

To digitize by specifying a mark IN and a mark OUT:

Mark IN

Mark OUT

1. Set either an IN mark or an OUT mark for the clip you want to digitize, using either of the following methods:

   - Use the deck controls in the Digitize Tool (or on the MUI or Steenbeck controller). Cue your source tape to where you want to start or end the clip, and click the Mark IN or Mark OUT button.

   - If the material starts at a known IN or ends at a known OUT, you can type the timecode in the display area next to the mark. Press Return to enter the mark.

   To double-check the accuracy of the IN or OUT mark, click the Go to IN button. The system cues the tape and pauses the deck at the mark. You can play the tape and reset the mark, if necessary.

2. To finish logging the clip, use either of the following methods:

   - Set the corresponding IN or OUT mark.

   - Type a timecode for the clip's duration in the display area next to the Duration mark (below the OUT mark).

   The system automatically calculates the appropriate timecode for the corresponding mark IN, mark OUT, or duration.

3. Click the Record button in the Digitize Tool, or press the B key on the keyboard.

   The Digitize Tool automatically rewinds the tape to the preroll point before the IN point of the clip, and the tape begins to play. The Record button becomes bright red, and the message bar displays the message that the Avid Composer system is digitizing.

4. While the system is digitizing, you can type a clip name. To enter comments about the clip, press the Tab key after typing a clip name. The information that you type does not appear on the screen until you have completed digitizing. (After you log clips, you can modify information to correct input errors or to add information.)

When the tape reaches the clip's OUT point, digitizing stops and the system creates a new clip in the bin.

Setting Only One Mark

To set only one mark and enter the other mark on-the-fly:

• Set an IN point and click the Record button to begin digitizing. Then, click the Record button again to stop digitizing on-the-fly and set a mark OUT.

This method is useful if you don't need a precise mark OUT. You save time because you don't have to shuttle to locate the mark OUT before digitizing.

• Set a mark OUT only, then move to the position on the tape where you want to start digitizing. Click the Record button to begin digitizing on-the-fly. When the tape reaches the clip's OUT point, digitizing stops.

This method is useful if you don't need a precise mark IN, but do need to stop at a precise OUT point, for example, just before a timecode break.

Digitizing On-the-Fly

Use the digitizing on-the-fly method in any of the following circumstances:

• If you are eager to begin editing immediately and no adequate logs exist for importing into the system or setting marks

- If you are digitizing from a source deck that cannot be controlled by the Digitize Tool or a V-LAN VLXi unit

- If your source tape does not have timecode

- If you are digitizing from a digital source such as a CD or DAT player

- If you are digitizing from a live source, such as a studio feed, or an in-house router

There is a slight delay of several frames after you manually select a spot both to start and to stop digitizing. Therefore, use this method when you do not need precise beginning and end points in your clip.

To digitize on-the-fly:

1. Make sure you have selected the proper Digitize Settings and set up the capture tools, as described in **Chapter 6**.

2. Click the Digitize/Log Mode button on the left side of the Digitize Tool until the DIG icon appears.

3. Use the deck controls in the bottom left corner of the Digitize Tool to locate the position on the tape where you want to start digitizing.
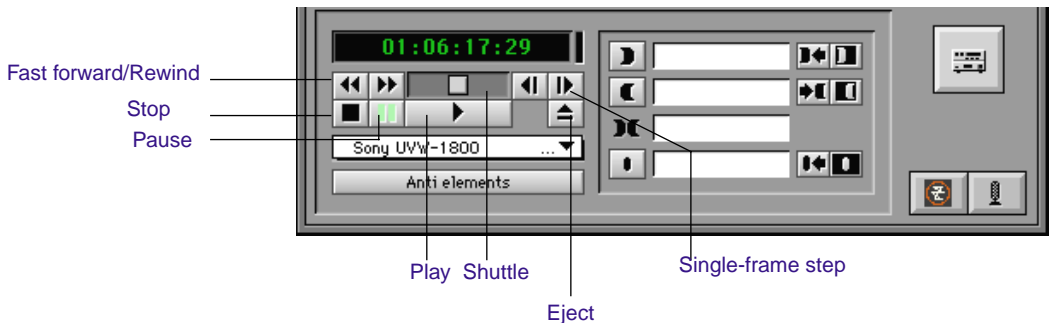
4. To begin digitizing, play the deck and when it gets up to speed, click the red Record button.

Make sure you have cleared any previous marks so that the deck does not begin cueing to the previous location.

Digitizing begins within a few frames, and the timecode for the clip's IN point appears. The horizontal LED above the Record button flashes on and off. The title bar displays a message that your Avid Composer system is digitizing.

5. While the system is digitizing, you can type a clip name. The Annotate window appears with the new clip name typed into the Name field.

If you want comments to appear in EDLs or cut lists, add them during editing by using the Add Comments command from the Monitor menu. For more information, see **"Adding Comments to Sequence Clips" on page 392**.

6. Press the Tab key after typing a clip name to enter comments about the clip. You cannot edit the text during digitizing, but you can backspace to retype the comments.

7. Click the Pause button at any time to pause play. You can also abort the digitize procedure by clicking the Trash button. The clip will be discarded.

8. To stop digitizing and enter the OUT point of the clip, click the Record button, or press the Escape key on the keyboard.

   The system creates a new clip in the bin. It also enters basic log information for each clip, consisting of the mark IN, the mark OUT, the duration, and any other information typed in during the digitize procedure.

9. If you did not enter a clip name while digitizing, type it now while the clip name is highlighted in the bin. If you return to the Digitize Tool and begin another clip, the default clip name remains in the bin until you change it.

In some circumstances, the digitized material might exceed the logical file size of the Avid Composer application. For example, the maximum size of a media file cannot exceed the size of a 2-GB partition. A 2-GB file at a high resolution, such as AVR 71, consists of approximately 10 to 18 minutes of footage. In such a case, consider digitizing the shot in shorter overlapping pieces, breaking it at points that are likely to be cut out during editing.

Autodigitizing

Autodigitizing can save you time by allowing you to bypass both the logging process and the time it takes to cue each shot. However, this process requires the most storage space, and more time is spent while the system is actually digitizing entire reels.

This process is for tapes shot with starting and stopping timecode and no control track breaks (where snow appears between shots).

When you autodigitize, you mount and cue your tape to a starting point and launch the digitizing process through the Digitize Tool. If you follow the tips and techniques described in this section, you can allow the system to complete the digitizing process unattended.

The following tips apply to autodigitizing entire reels:

- Select the "Digitize across timecode breaks" option in the Digitize Settings dialog box prior to digitizing. For more information, see the *Avid Media Composer Products Reference.*

- Select the "Log errors to the console and continue digitizing" option in the Digitize Settings dialog box. For more information, see the *Avid Media Composer Products Reference.*

- Under Deck Settings, turn off the Fast Cue option and set the pre-roll to approximately 4 seconds. For more information, see the *Avid Media Composer Products Reference.*

- You should have accurate notes on *the number and content* of takes on each reel to identify the content of each clip when necessary.

To autodigitize:

1. Create one bin for each reel. This keeps bins to a manageable size and automatically names all clips from each reel after the name of their respective bins.

2. Name each bin after the source reel number: by default all clips are named after the reel and numbered incrementally beginning with the suffix *.01*.

3. Enter Capture mode from the Bin menu and open the bin for the first reel.

4. Load the source tape and cue past any false starts.

5. Play the tape, and wait 4 seconds before clicking the Record button.

When you have long continuous shots (for example, footage from a live event), the digitized material for a single clip might exceed the logical file size of the Avid Composer application. For example, the maximum size of a media file cannot exceed the size of a 2-GB partition. In such cases, consider digitizing the shot in shorter overlapping pieces, broken at points that are likely to be cut out during editing. For more information, see **"Digitizing to Multiple Media Files" on page 152**.

⚠ **The Avid Composer system can digitize across timecode breaks and control track breaks, but it cannot digitize across breaks in the recording (that is, if the recorded footage breaks up into noise between shots). If such breaks in recording exist on your tape, consider using the methods described in "Digitizing On-the-Fly" on page 193.**

Digitizing from a Non-Avid-Controlled Deck

If you have a deck that cannot be controlled directly by the system, you can digitize with manual deck control as follows:

1. Enter Capture mode and set up the tools.

2. Click the Deck Offline button in the Digitize Tool to disable the deck controls and leave only the Source Tape Name display.

📑 *The TC button also disappears. The footage will be digitized with timecode-of-day generated by the system.*
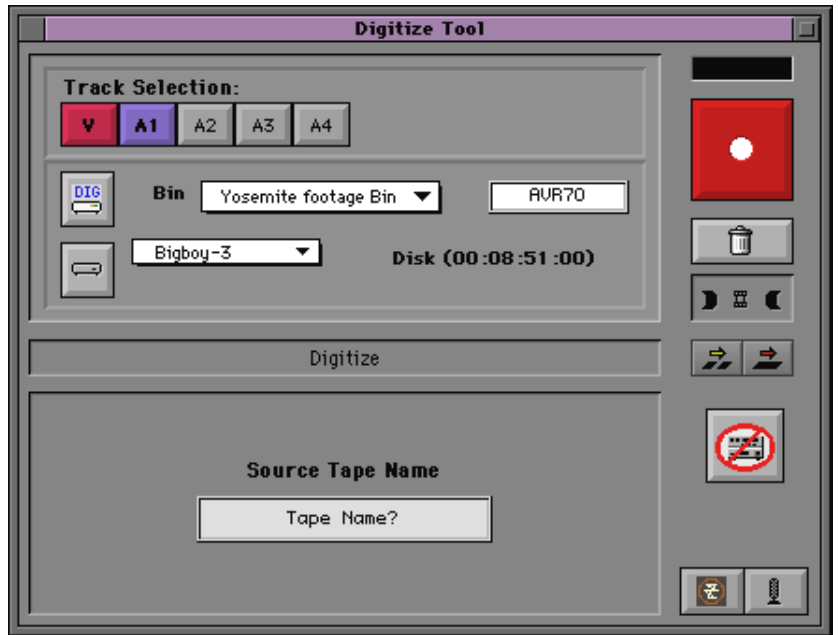
3. Click the Source Tape Name display to open the Tape Name dialog box and identify the source tape.

4. Play the tape manually and click the Record button to stop and start the digitizing of each clip.

Digitizing with Timecode-of-Day Timecode

When you digitize with an Avid-controlled deck, you can digitize your footage with timecode-of-day rather than source timecode.

To digitize with timecode-of-day timecode:

1. Enter Capture mode and set up the tools.

2. When selecting tracks, deselect the TC button.

3. Digitize by using any of the techniques described in **"Digitizing On-the-Fly" on page 193**.

Digitizing to the Timeline

You can digitize footage directly from tape into a sequence loaded in the Timeline in one step, bypassing several steps such as organizing and reviewing clips, marking edit points, and performing edits.

To digitize to the Timeline:

1. Prepare for digitizing by using standard procedures. For more information, see **Chapter 6**.

2. Load a sequence into the Record monitor.

3. Mark an IN point in the sequence or place the blue position indicator where you want the edit to take place.

4. Mark the source material that you want to digitize by using the Digitize Tool logging controls. For information on setting marks in the Digitize Tool, see **"Digitizing and Logging at the Same Time" on page 190**.

5. (Option) You can mark an OUT point based on the following:

   • If you are digitizing to the middle of a sequence in the Timeline, mark both IN and OUT points for frame accuracy.

   • If you are digitizing onto the end of a sequence, you can mark just an IN point and then mark the OUT point later on-the-fly.

6. Click the Splice-in button or the Overwrite button in the Digitize Tool to choose the type of edit.

Click the Splice-in button or the Overwrite button.

Logging controls
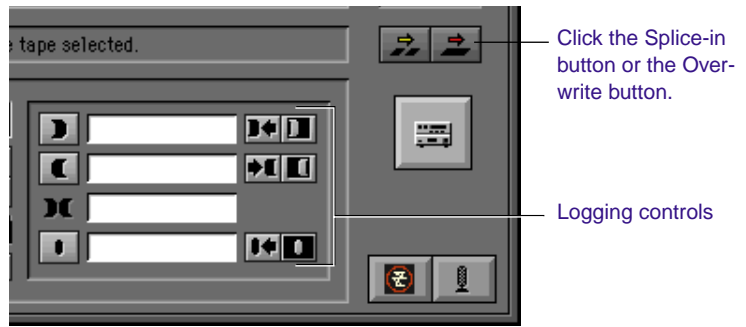
7. Click the red Record button to begin digitizing.

8. If you did not mark the OUT point in advance, click the Record button again when the footage reaches the appropriate frame.

If you already marked an OUT point, digitizing will stop automatically.

When digitizing ends, the clip appears in place in the sequence, and a master clip appears in the bin.

Batch Digitizing

You can also use the batch digitize process to redigitize existing clips. The redigitizing process is described in **"Redigitizing Your Material" on page 205**.

Once you have imported a log or manually logged a group of clips into a bin, you can automate the digitize process by using the Avid Composer system's batch digitizing capabilities. To batch digitize, source tapes must have timecode.
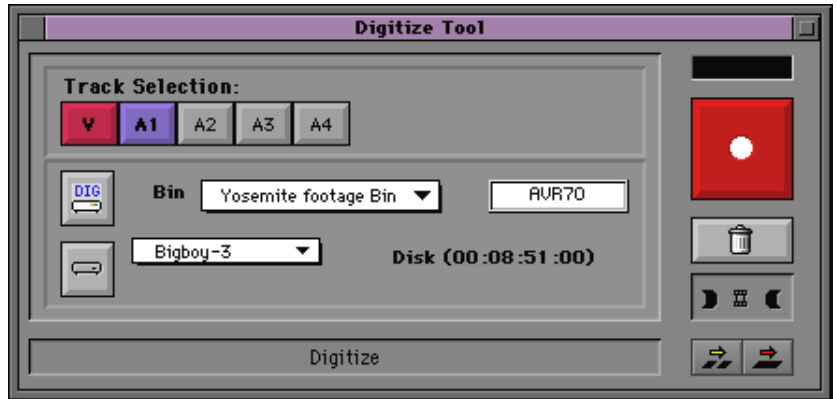
Preparing to Batch Digitize

Preparing for batch digitizing involves optional procedures for resizing the Digitize Tool, and establishing settings that allow you to batch digitize with a minimum of supervision.

Resizing the Digitize Tool

Because your clips are already logged in the bin, you can simplify the interface during batch digitizing by hiding the deck controller and logging window in the Digitize Tool.

To resize the Digitize Tool during batch digitizing, click the zoom box in the upper right corner of the tool.

Preparing Settings for Unattended Batch Digitizing

Unattended batch digitizing allows you to digitize a large number of clips with a minimum of supervision by selecting Digitize Settings that avoid a pause in the digitize process.

For more information on all Digitize Settings, see the *Avid Media Composer Products Reference.*

To prepare for unattended batch digitizing, select the following options in the Digitize Settings dialog box:

- Log errors to the console and continue digitizing
- Switch to the emptiest drive if current drive is full
- Digitize across timecode breaks

⚠️ **You cannot batch digitize clips that contain timecode breaks between the logged IN and OUT marks. Also, you cannot digitize across breaks in the recording (that is, if the recorded footage breaks up into noise between shots). If such breaks in recording exist on your tape, consider using the methods described in "Digitizing On-the-Fly" on page 193.**

Starting the Batch Digitize Process

To batch digitize clips:

1. Make sure you have selected the proper Digitize Settings and set up the capture tools, as described in **Chapter 6**.

2. Open the bin that stores the logged clips.

3. Select the clips to batch digitize:

   • Choose Select All from the Edit menu, or press ⌘–A to select all the clips.

   • Shift-click to select specific clips.

4. Choose Batch Digitize from the Clip menu. A dialog box appears.

```
Batch Digitize...

    ⊠ Digitize only those items for which media
       is currently unavailable.

    0 clip(s) selected.

    1 sequence(s) selected.
       Handle Length:  60   frames        OK

    ☐ Digitize all clips in a group edit.    Cancel
```

Handle length options appear only when a sequence is selected.

⌁ *If the logged clips that you want to batch digitize are not highlighted in the active bin, Batch Digitize is dimmed in the Clip menu.*

5. Select options in the dialog box:

   • If the bin contains some clips that are already digitized and you do not want to redigitize those clips, select the option "Digitize only those items for which media is currently unavailable." If this option isn't selected and some of the selected clips have media files, the system deletes the media files and redigitizes new media files.

For more information on handle lengths when redigitizing, see **"Redigitizing Sequences" on page 206**.

   • If your selections include a sequence for batch digitizing, the dialog box prompts you for handle length information, because the system will create new master clips based on the length of edited clips in the sequence.

⌁ *If you are batch digitizing the original source master clips used in the sequence, the sequence will automatically be updated. Therefore, you might want to deselect the sequence during this procedure.*

6. Click OK.

   If you haven't loaded a tape, the system prompts you to insert the first tape.

Please mount the tape:
"Indy23"

| Mounted | Skip this clip | Skip this tape | Abort |

---

7. Insert the tape into the tape deck and click Mounted.

   A confirmation dialog box appears.

8. Click OK to confirm the tape and deck entries and begin the digitizing process. The system digitizes each clip from the tape, in start timecode order.

9. If the system needs another source tape, the system prompts you for the tape. At this point you have several options:

   • Insert the new tape and click Mounted to continue the digitizing process.

   • Click Skip this clip to skip just the first clip from the tape and continue digitizing the remaining clips.

   • Click Skip this tape to skip all the clips from the mounted tape. The system then prompts you for the next tape.

   • Click Abort to end the batch-digitizing process. You can also stop digitizing at any time by clicking the Trash button in the Digitize Tool.

To skip specific clips in the process of batch digitizing a particular tape, you must abort each clip manually by clicking the Trash button, then click next clip in the Abort window to continue.

10. When the system has finished batch digitizing, a dialog box notifies you that the process is complete.

Redigitizing Your Material

Redigitizing is the process of capturing previously digitized source footage based on existing clips and sequences. Redigitizing uses the batch digitize process and does not require extra logging time because the clip information for such things as source tracks, timecodes, and compression settings already exists in the bin.

There are several situations in which you might want to redigitize:

• You can quickly redigitize selected clips if you make an error while digitizing the first time (for example, if you forget to check audio levels or set the correct AVR).

• You can redigitize clips if you accidentally delete media files.

• You can redigitize a sequence after you transfer it to another system.

• You can redigitize low-AVR clips at a higher AVR setting after they have been edited into a sequence.

⚠ **Redigitizing requires your original source footage. Do not delete the media files if the source footage is no longer available, unless you will not need the material again.**

For information on loading the media database to relink clips, see **"Loading the Media Database" on page 279**.

Redigitizing Master Clips and Subclips

The procedure for redigitizing master clips and subclips is identical to the process for batch digitizing logged clips. See **"Batch Digitizing" on page 200**.

Although the procedure is the same, the result is slightly different, as follows:

• Master clips are linked to entire media files and serve as sources for subclips and sequences. Therefore, when you redigitize a master clip, changes in compression settings and levels affect all subclips and sequences created from the master clip.

• Subclips are smaller sections of master clips. When you redigitize a subclip, the system creates a new, smaller master clip that is linked to new media files and reflects the shortened length of material. Therefore, redigitizing subclips streamlines the digitize process.

Also, redigitizing breaks the link from the subclip to the original master clip.   But if you edit the subclip into a sequence, the sequence will reflect any changes in the newly digitized subclip.

Redigitizing Sequences

Redigitizing a sequence creates new master clips and associated media files based on the length of each shot edited into the sequence. It breaks any links to the original source clips, and only the sequence and its new master clips are linked to the newly digitized media files. Redigitizing a sequence can involve any of the procedures described in the following sections.

Saving Two Versions of a Sequence When Redigitizing

To save the original version of your sequence before redigitizing, you can create a duplicate. For example, use this method if you create a sequence at a low AVR to save storage space and want to redigitize the sequence at a higher AVR while retaining the first version.   This is recommended if you intend to use the Decompose feature.

To make a duplicate of the sequence:

1. Select the sequence in the bin and choose Duplicate from the Edit menu.

2. Create a new bin by choosing New Bin from the File menu and move the duplicate sequence into the bin. This step is optional, but saves you the confusion of mingling new sequences and master clips with existing ones, especially when using Decompose.
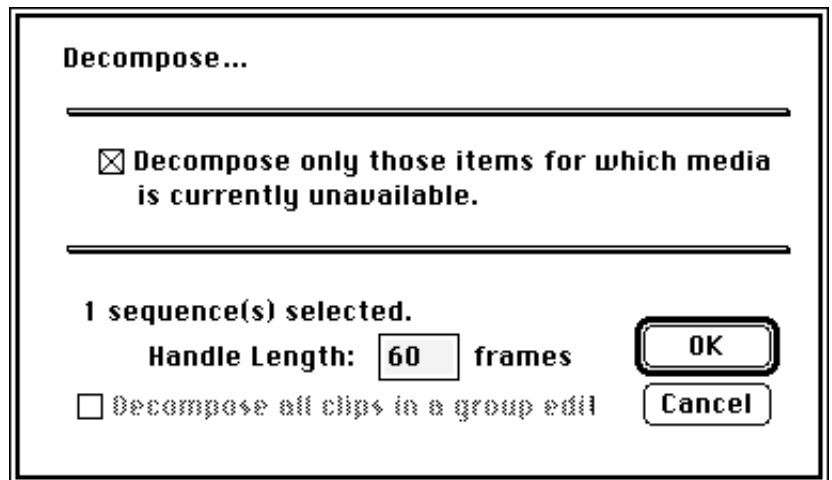
Using Decompose When Redigitizing

Decompose creates new master clips in the bin for each shot in the sequence prior to redigitizing. Decompose allows you to create new, shorter master clips based only on the material you have edited and included in your sequence, which saves system memory. Using Decompose gives you greater control during the redigitizing process. You can use this procedure to sort clips in the bin, modify them, and then redigitize selected clips in the sequence.

To use Decompose:

1. Activate the bin that stores the sequence.

2. Choose Decompose from the Clip menu.

   The Decompose dialog box appears.

   Decompose...

   ☒ Decompose only those items for which media is currently unavailable.

   1 sequence(s) selected.

   Handle Length: 60 frames

   ☐ Decompose all clips in a group edit

   OK

   Cancel

3. If you want to preserve clips that already have existing media files, select the option "Decompose only those items for which media is currently unavailable." Deselect this option if you plan to decompose and redigitize the entire sequence.

4. Click the Handle Length box and type the number of additional frames you want to digitize at the heads and tails of the new master clips. This provides enough overlap for trimming and adding transition effects.

⚠️ **If you attempt to trim or add effects with no handles, you will get an error message notifying you that there is "insufficient media."**

5. Click OK. The new master clips appear in the bin. You can now sort and select these clips like all other objects in the bin.

6. Proceed with the redigitizing procedures described in **"Redigitizing the Sequence."**

Redigitizing the Sequence

When you redigitize the sequence without using Decompose, the digitize process creates media files for each shot in the sequence during the digitizing process. Skipping the Decompose procedure saves only a small amount of time, and you cannot make changes after the media files are created without repeating the entire procedure. Therefore, review **"Using Decompose When Redigitizing" on page 207** before proceeding.

To redigitize a sequence:

1. Choose Go To Capture Mode from the Bin menu.

2. Open or activate the bin that stores the sequence or decomposed clips.

3. Select one or more sequences, or the decomposed clips you want:

   • Choose Select All from the Edit menu to select all the clips in the bin.

- Shift-select specific clips.

4. Choose Batch Digitize from the Clip menu. The Batch Digitize dialog box appears.

```
Batch Digitize...
_____

    ☒ Digitize only those items for which media
         is currently unavailable.
_____

  0 clip(s) selected.

  1 sequence(s) selected.
     Handle Length:  60   frames          OK

  ☐ Digitize all clips in a group edit.     Cancel
```
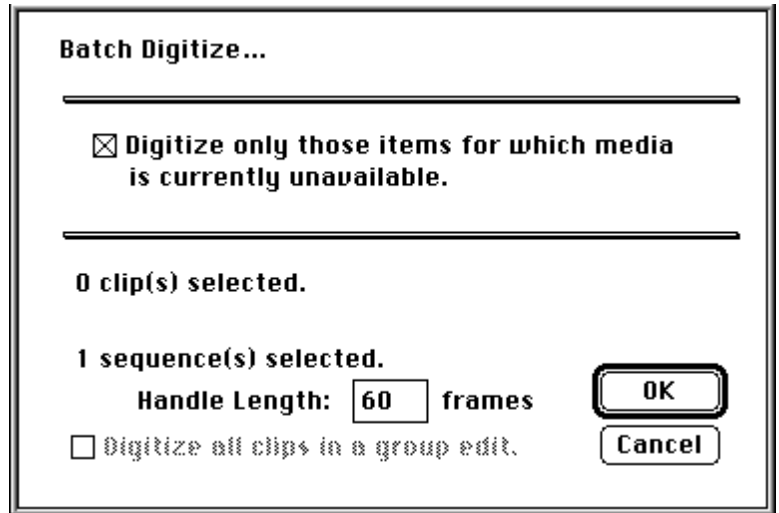
5. To preserve clips that already have existing media, select the option "Digitize only those items for which media is currently unavailable." Deselect this option if you plan to redigitize the entire sequence.

6. Click the Handle Length box and type the number of additional frames you want to digitize at the heads and tails of the new master clips. This provides enough overlap to allow for trimming and transition effects.

⚠ **If you attempt to trim or add effects with no handles, you will get an error message notifying you that there is "insufficient media."**

7. Click OK. The system prompts you to insert the first tape.

8. Insert the tape into the tape deck if you have not already done so.

9. Click Mounted to indicate to the system that the correct tape is loaded and ready for digitizing.

A confirmation dialog box appears.

10. Click OK to confirm the tape and deck entries. The system digitizes each clip from the tape, in start timecode order. If another source tape is needed, the system prompts for the tape.

11. You can stop the Batch Digitize process at any time by clicking the Trash icon in the Digitize Tool.

When batch digitizing is finished, an alert box notifies you that the process is complete. The new master clips appear in the bin, and associated media files exist on the targeted drive or drives.

Using Editcam Media

For more information about setting up and using the Avid Desktop FieldPak Adapter, see the *Avid Desktop Field-Pak Adapter Setup and User's Guide.*

The Media Composer products support media captured in AVR 70 and AVR 75 with an Ikegami Editcam. The Editcam is a Digital News Gathering (DNG) camera. You access Editcam media from an Avid FieldPak® loaded into an Avid Desktop FieldPak Adapter connected to the Avid Composer system.

Acquiring Editcam Clips

There are two ways to acquire Editcam clips from an Avid FieldPak that is loaded into an Avid Desktop FieldPak Adapter:

- Use the import procedure to import master clips or sequence playlists into a bin, as described in **Chapter 8**.

📄 *To read about import specifications for Editcam media, see the Avid Media Composer Products Reference.*

- Use the Media Tool to copy Editcam master clips from the FieldPak into a bin, as described in **"Using the Media Tool to Copy Editcam Master Clips" on page 211**.

Using the Media Tool to Copy Editcam Master Clips

You can use the Media Tool to copy Editcam master clips from the FieldPak to the Avid Composer system.

To copy Editcam master clips from a FieldPak by using the Media Tool:

1. Insert the FieldPak into the Desktop FieldPak Adapter.

2. Launch the system and open your project.

3. Open the bin in which you want to store the Editcam clips.

4. Choose Media Tool from the Tools menu.

   The Display Media Selector dialog box appears.

5. Select Other Projects and Digitized Master Clips.

6. Click OK. The Media Tool window opens.

7. Choose Custom Sift from the Media Tool Fast menu.

   The sift dialog box appears.

8. Enter a search criteria to list just the clips on the FieldPak:

   a. Type the name of the FieldPak in the box next to "contain."

The FieldPak icon on the desktop is named AV with a 6-digit number (AVnnnnnn).

   b. Choose Disk from the adjacent pop-up menu.

   c. Click OK.

      Only the clips on the FieldPak are displayed in the Media Tool window.

9. Select clips in the Media Tool window and drag them into the open bin.

The bin now contains master clips from the FieldPak media files that you can edit with the Avid Composer system.

CHAPTER 8

Importing Files

The Media Composer products support numerous file types. For a complete list, see the *Avid Media Composer Products Reference*. The following sections describe how to import files:

- **Preparing to Import Files**
- **Importing Mixed-Resolution Projects**
- **Using Global Import Settings**
- **Importing Files**

Preparing to Import Files

Before you begin the import process, make sure the system and the files are ready for import as follows:

- To read about issues and tips for mixed-resolution projects, see **"Importing Mixed-Resolution Projects" on page 214**.

- Before importing complex graphics and animation, check Render settings to determine the correct softening parameters that can affect import of large files. For more information, see the *Avid Media Composer and Film Composer Effects Guide*.

- For graphics file import, prepare the files in advance according to specifications described in the *Avid Media Composer Products Reference*.

- For QuickTime® import, prepare the files in advance according to specifications described in the *Avid Media Composer Products Reference*.

- For OMF® file import, prepare the files in advance according to specifications described in the *Avid Media Composer Products Reference*.

- For a complete description of all options in the Import Settings dialog box, see the "File Format Specifications" chapter of the *Avid Media Composer Products Reference*.

Importing Mixed-Resolution Projects

For more information on resolutions, see the *Avid Media Composer Products Reference.*

Beginning with Release 6.0 of the Media Composer products, you can work with mixed resolutions in the same sequence. This feature allows you to import graphics that will accompany video at the highest resolution you will be using.

For example, assume that you want to use a low resolution such as AVR 12 for your initial work and then redigitize your media at AVR 77 for the final version. In this case, you should import the graphics at AVR 77. Then when you redigitize your material, you will not have to reimport the graphics.

If you plan to redigitize your media at a higher AVR, the lower AVR must be from the same family (single-field or two-field). For example, if you plan to finish at AVR 77, you could start the project at AVR 12, but not 6s.

Using Global Import Settings

You can establish a set of global import parameters in the Import Settings dialog box prior to beginning the import process. These parameters remain the default settings for all imported files, unless you change them during import. This is especially useful when you batch import a number of files in one procedure.

To adjust options in the Import Settings dialog box, double-click Import in the Settings scroll list of the Project window.

Import Settings (Current)

Maintain Aspect Ratio ▼

File has   RGB Graphics levels ▼

☐ Import Sequential Files
☐ Ignore Existing Alpha
☐ Invert Existing Alpha

Single Frame Import

Format   Media File ▼

Duration 10   seconds

Shot Log

☐ Combine events based on scene and automatically create subclips.

☐ Combine events based on camera roll and automatically create subclips.

☐ Merge events with known sources and automatically create subclips.

☐ Merge events with known master clips.

OMFI Resolution

◉ Ask Me
○ Use Current
○ Use Source

OK

Cancel

Importing Files

When you import source shot logs, graphics, animation, audio, QuickTime, or OMFI (Open Media Framework® Interchange) files, the system converts them into objects in a bin. You can manipulate and edit these objects as you would any other clip or sequence. Any corresponding media files are stored on a target drive that you specify.

You can access files for import from any folder or drive source mounted on the desktop, such as a 3.5-inch diskette, fixed drive, removable magnetic (RMAG) drive, or network server. You can import more than one file at a time, including files of multiple types.

To import files:

1. Open the bin in which you want to store the imported files. Click anywhere in the bin to select it.

2. Choose Import from the File menu.

The Select Files to Import dialog box appears.

Directory pop-up menu   Source file list   Import file list

Select files to import

⊡ Avid ▼   ⊂ Avid

☐ Clarisworks help folder   Eject
☐ Composer Projects   Desktop
☐ EDL Manager f
▨ Exposure 001.PICT   Add
▨ Exposure 002.PICT   Add All
▨ Exposure 003.PICT
☐ Extras   Remove
☐ EYE OF GOD ALE/FLX   Remove All
☐ Film logs
☐ From Desktop
☐ GME98   Options...

File Type   Graphic/Audio   Done   Media Disk   Bigboy-1

☒ Show all files   Cancel   Resolution   AVR70

File Type pop-up menu   Options button   Resolution pop-up menu   Media Disk pop-up menu

3. Choose an import file type from the File Type pop-up menu:

| Shot Log |
| Graphic/Audio |
| OMFI |
| Editcam™ |

- Choose Shot Log to import ASCII text or Avid Log Exchange (ALE) files containing clip information into a bin. For more information about Avid Log Exchange specifications, see the *Avid Media Composer Products Reference*.

- Choose Graphic/Audio to import one of more than 30 supported graphics and audio file types. For more information on the various file types and their import specifications, see the *Avid Media Composer Products Reference*.

- Choose OMFI to import files that have been saved in the OMFI file format, such as sequences transferred from an effects or digital audio workstation.

- Choose Editcam to import master clips captured with an Ikegami Editcam. You can also import a sequence playlist. For more information, see **"Digitize Preparations Checklist" on page 185**.

By default, the system displays file types that belong to the chosen category only in the source file list on the left side of the dialog box.

4. (Option) Select the option Show All Files in the lower left corner of the Select Files to Import dialog box to display all files in a chosen folder, regardless of file type. Use this option if you want to batch import from multiple file types.

When you batch import multiple files and file types, you should establish global import settings in advance. See **"Using Global Import Settings" on page 215***.*

5. Click the Options button to open a dialog box for adjusting the import settings.

```
Import Settings (Current)

  Force to Fit Screen      ▼

File has   RGB Graphics levels ▼

☐ Import Sequential Files
☐ Ignore Existing Alpha
☐ Invert Existing Alpha

┌─ Single Frame Import ───────────┐
  Format   Media File ▼        ┌──────────┐
                               │    OK    │
  Duration 10    seconds       └──────────┘
                               ┌──────────┐
                               │  Cancel  │
                               └──────────┘
```
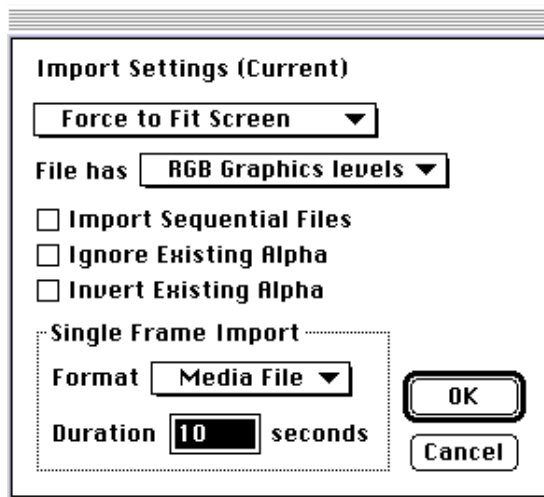
The Import Settings dialog box contents depend on the file type selected.

6. Select the appropriate options. Click OK to close the Import Settings dialog box and return to the Select Files to Import dialog box.

7. Choose a destination disk for the imported file from the Media Disk pop-up menu.

8. For graphics and video files, choose a resolution for the imported media from the Resolution pop-up menu.

For optimum speed when importing an OMF file, set the resolution to match the resolution of the OMF File you are importing. If you are using mixed resolutions, choose the highest AVR that you will be using for the final version of the sequence. See **"Importing Mixed-Resolution Projects" on page 214**.

9. Use the Directory pop-up menu to locate the folder containing the source files.

10. Add files to or remove files from the import file list on the right, using the following methods:

- To add a single file, select a file name in the source file list and click the Add button, or double-click the file name.

- To add all the files in the source file list, click the Add All button.

- To remove a single file from the import file list, select a file name and click the Remove button.

- To remove all the files from the import file list, click the Remove All button.

If you are importing a sequential series of image files, you need to add only the first file in the series to the import file list.

11. Click Done.

   If you are batch importing OMF files at multiple resolutions with the OMFI Resolution: Ask Me option selected in the Import Settings dialog box, a warning appears whenever the AVR of the source file does not match the current AVR setting in the Select Files to Import dialog box.

The video resolution of the file(AVR75),
is different from the current setting(AVR70B).
Please choose an import resolution.

AVR75   AVR70B
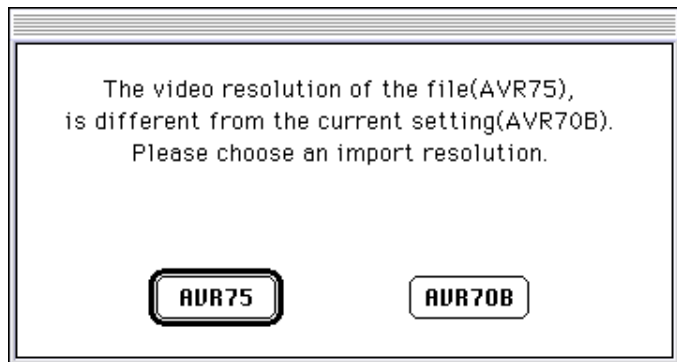
   Choose either the AVR of the source file or the current AVR setting to continue.

   When the system finishes importing the files, the clips appear in the selected bin.

If you import an OMF file with a stereo sound track, the Avid Composer system creates a new master clip that contains the right channel of the sound track. The original master clip contains the left channel. Both clips appear in the bin you select.

CHAPTER 9

Organizing with Bins

The Avid Composer system provides powerful database tools for organizing and managing your digitized material. You can view bins in three different display modes. You can rename, sort, sift, duplicate, and delete clips and sequences. You can also print out single clip frames or whole bins. A worksheet at the end of this chapter provides guidelines for using these techniques to create and print storyboards for your project. These topics are covered in the following sections:

- **Before You Begin**
- **About Bin Display Modes**
- **Basic Bin Procedures**
- **Using Text Mode**
- **Using Frame Mode**
- **Using Script Mode**
- **Printing Bins**
- **Gathering Format Elements**
- **Storyboard Worksheet**

Before You Begin

There are several procedures you might want to perform before you begin organizing your project, because they affect the display of information in bins or the way the clips play back during screening:

- If you digitized clips by using LTC (longitudinal timecode) recorded on an audio track, and would like to instruct the system to address this timecode during editing, see **"Using Audio Timecode" on page 222**.

- If you would like to center the pan between left and right speakers for some or all of the clips in a bin, see **"Using the Center Pan Command" on page 225**.

- If you would like to customize the types of objects (clips, subclips, and so on) displayed in a bin, see **"Setting the Bin Display" on page 226**.

- If you digitized some of your video and audio clips separately, and need to synchronize them for editing, see **"Autosyncing Clips" on page 555**.

- If you need to group or multigroup material, see **"Grouping and Multigrouping" on page 582**.

Using Audio Timecode

The Avid Composer system can read audio timecode (LTC or longitudinal timecode recorded on an audio track). If you captured the LTC as an audio track during the digitizing process, use the Read Audio Timecode command. This instructs the system to address this track for timecode information to be displayed in the bins and used in editing.

To use timecode on an audio track:

1. In the bin, select the appropriate clips, then choose Read Audio Timecode from the Special menu.

   The Read Audio Timecode dialog box appears.

```
┌──────────────────────────────────────────┐
│  ┌────────────────────────────────────┐  │
│  │                                    │  │
│  │  Read Audio Timecode               │  │
│  │                                    │  │
│  │  ☐ User Bit Timecode               │  │
│  │                                    │  │
│  │  Audio Timecode Source  │  A1  │   │  │
│  │                                    │  │
│  │      Destination Track  │ Aux1 TC │ │  │
│  │                                    │  │
│  │  ☒ Fill Undecodeable Frames        │  │
│  │                                    │  │
│  │       ┌─────────┐  ┌────────┐      │  │
│  │       │   OK    │  │ Cancel │      │  │
│  │       └─────────┘  └────────┘      │  │
│  │                                    │  │
│  └────────────────────────────────────┘  │
└──────────────────────────────────────────┘
```
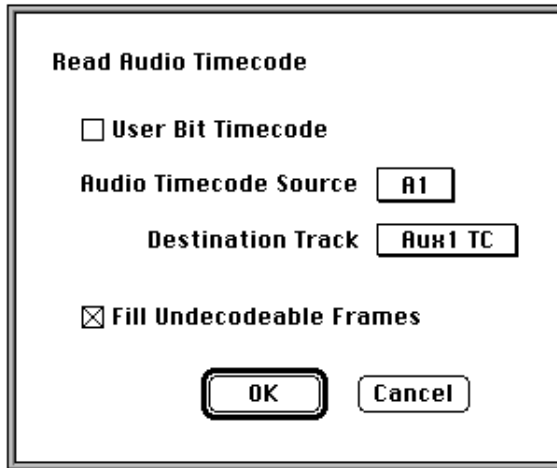
2. To read timecode stored in the User Bits of the LTC, select User Bit Timecode. If this option is not selected, the system reads the LTC timecode.

⚠ **Information contained in the user bits of the LTC must be timecode only. Other data stored in the user bits will not appear in Media Composer unless you use the Avid Media Reader. For more information about the Avid Media Reader, contact your Avid sales representative.**

3. Choose the audio track containing the timecode from the Audio Timecode Source pop-up menu. A1 is the default.

4. Choose the target auxiliary timecode bin column for recording the audio timecode from the Destination Track pop-up menu. Aux 1 is the default selection.

5. Select Fill Undecodeable Frames to instruct the system to fill in any timecode breaks with continuing timecode. This is the default.

   For example, in a 3-minute master clip, the audio timecode starts at 1:00:20:20. At 1:00:22:10, the timecode ends. With the Fill Undecodable Frames option selected, the system assigns 1:00:22:11 to the next frame and continues assigning timecode.

Deselect this option if you do not want to fill timecode breaks.

6. Click OK to complete the procedure. The timecode appears in the bin in the auxiliary timecode column that you chose.

Adjusting Pan Defaults

The way your footage was recorded in the field, and digitized in Media Composer, will affect the way sound pans between the speakers. By default, the system pans audio tracks 1 and 3 to the left speaker output and pans tracks 2 and 4 to the right speaker output.

You can set global pan settings before or during editing by using the Audio Settings dialog box and the Center Pan command, as described in this section.

Adjusting Default Pan Settings

The Audio Settings dialog box provides options for adjusting the default audio pan when editing with new clips, and digital audio scrub parameters for monitoring and analyzing audio tracks and transitions.

Audio Settings

Default Pan
- ● Alternating Left – Right
- ○ All Tracks Centered

Source Mon Scrub

Incoming	Outgoing
0	1

Record Mon Scrub

Incoming	Outgoing
0	1

Card: Digi Amadeus card

Slot # : 0

Sample Rate: 44.1 KHz

Peripheral: Digidesign 442

Sync Mode: Internal

Input Source: Analog

Digital Format: AES/EBU
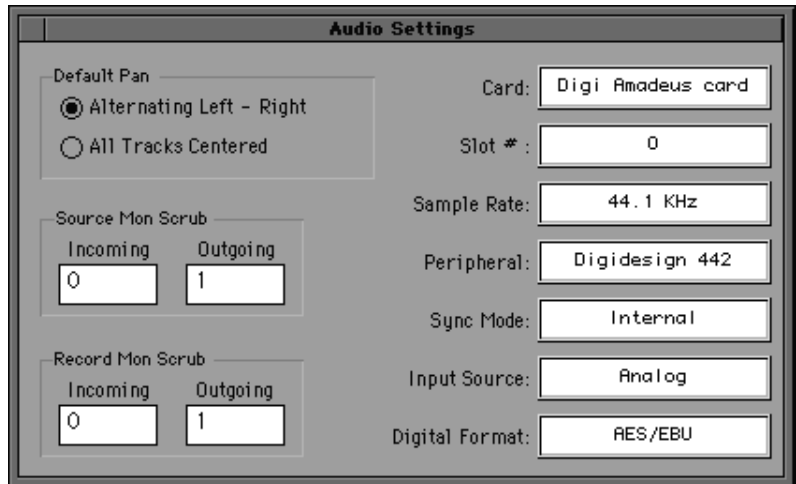
By default, the audio tracks for clips alternate with track 1 on the left and track 2 on the right speaker for monitoring and output. The All Tracks Centered option instructs the system to center the pan of all tracks between the two speakers for monitoring and output.

Using the Center Pan Command

You can use the Center Pan command on source material in bins. Use it prior to editing or at any time during the editing process.

As opposed to adjusting pan on individual clips by using the Audio Mix Tool, Center Pan allows you to create a standard distribution of audio between left and right speakers. You can adjust the pan on selected clips or all clips with a single command. This is especially useful when you have clips with field audio recorded (and subsequently digitized) variably between A1 and A2. Panning all of the audio to center eliminates the distraction of having to listen to left and right speakers in turn. It also smooths the playback of the edited sequence, with all shots panned to center.

To adjust the pan on clips:

1. In a bin, select the clips you want to pan to the center.

2. Choose Center Pan from the Clip menu.

   A dialog box appears and asks you to confirm the pan.

   Are you sure you want to center the pan
   for the selected clips?

   OK   Cancel

3. Click OK. The system pans all of the selected clips to the center.

Setting the Bin Display

By default, your bins display all existing media objects except source clips and rendered effects. To reduce crowding in the bin and to display only those objects that you need to organize your project, you can display selected media objects.

To set the bin display:

1. Choose Set Bin Display from the Bin menu.

    The Display Bin Selector dialog box appears.

Display Bin Selector

- ☒ Master Clips
- ☒ Sub Clips
- ☒ Sequences
- ☐ Sources
- ☒ Effects
- ☒ Motion Effects
- ☐ Rendered Effects
- ☒ Groups

☒ Show clips created by user
☐ Show reference clips

Select reference clips to see all the source material related to sequences you add to the bin.

[OK] [Cancel]
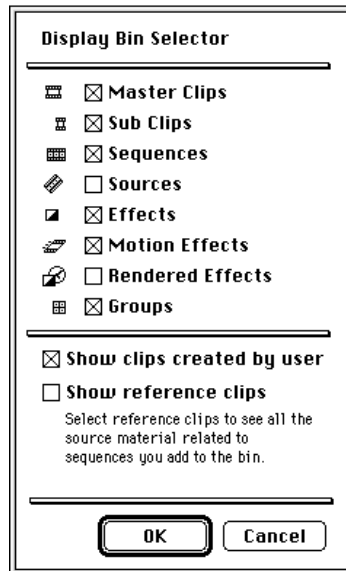
Table 9-1 briefly describes the icons listed in the Display Bin Selector dialog box.

Table 9-1   Object Icon Descriptions

Object Icon	Object Description
Master Clip	A clip that references audio and video media files formed from digitized footage or imported files.
Subclip	A clip that references a selected portion of a master clip.
Sequence	A clip that represents an edited program, partial or complete, that you create from other clips.
Source Clip	A clip that references the original videotape source footage for master clips.
Effect	A clip that references an unrendered effect that you create.
Motion effect	A file in the bin that references effect media files generated when you create motion effects.
Rendered effect	A clip that references an effect media file generated when you render an effect.
Multigroup clip	(For multicamera editing) A clip containing two or more grouped clips, strung together sequentially according to common timecodes.

2. Select the object types that you want to see: master clips, subclips, sequences, and so on.

3. The option "Show clips created by user" is selected by default. Deselect this option only if you want to hide all objects except those created by the system.

4. Select the option "Show reference clips" to automatically display objects that are referenced by sequences in the bin, whether those clips were previously in the bin or not.

5. Click OK. The bin displays objects according to your specifications.

About Bin Display Modes

There are three display modes for viewing and working with clips in a bin: Text mode, Frame mode, and Script mode, as follows.

- In *Text mode*, clips are displayed in a database text format, using columns and rows, with icons representing the various objects. You can save various arrangements of columns, text, and objects as customized *views*.

Column headings

Object icons

Bin View menu

Text Mode button

Bin Fast menu

		Selects	Tracks	Start
	Name		Tracks	Start
	Team rafting through rapids		V1 A1-2	01:00:00:02
	Man helped from heli to stretcher		V1 A1-2	01:01:47:29
	Flyover lake with cloud reflections		V1 A1-2	01:03:27:23
	Hi-Tec treks across mountain slope		V1 A1-2	01:04:58:18
	Team hiking through snow (push-in)		V1 A1-2	01:05:13:28
	John on beauty of race.Copy.01		V1 A1-2	01:06:24:27
	Red moon/mountain.Copy.01		V1 A1-2	01:07:33:17
	Panoramic views from Longspur.Copy.01		V1 A1-2	01:08:50:11
	Hikers on snowy ridge at sunrise.Copy.01		V1 A1-2	01:18:55:06
	Flyby table mountain.Copy.01		V1 A1-2	01:22:15:18
	Biking down switchbacks (wescam).Copy.01		V1 A1-2	01:25:40:06
	Ice fall flyover.Copy.01		V1	01:27:36:27
	Rain and hail on rocks.Copy.01		V1 A1-2	01:39:02:09

F S **T**   Statistics

To enter Text mode, click the Text Mode button (labeled T) in the lower left portion of the bin.

- In *Frame mode*, each clip is represented by a single picture frame, with the name of the clip. You can play back the footage in each frame, and change the size of frames. You can also rearrange the frames in any order within the bin.

Clip frame

Clip name

To enter Frame mode, click the Frame Mode button (labeled F) in the lower left portion of the bin.

• In *Script mode*, the system combines the features of Text mode with Frame mode, and adds space for typing notes or script. The frames are displayed vertically on the left side of your screen with a text box to the right of each clip. Clip data is displayed above the text box.

229

Storyboard

Name	Lock

☐ Team rafting through rapids

OPENING SEQUENCE : rafting

☐ Man helped from heli to stretcher

250 ATHLETES FROM AROUND THE WORLD ARE IN
SOUTHERN UTAH THIS WEEK TO COMPETE IN THE
ECO CHALLENGE ADVENTURE RACE.

☐ Flyover lake with cloud reflections

50 TEAMS ARE PARTICIPATING IN THE 370 MILE
SEVEN DAY RACE. IT IS BILLED AS THE
TOUGHEST ENDURANCE COMPETITION IN THE WORLD.

☐ Hi-Tec treks across mountain slope

IN TEAMS OF FIVE, ATHLETES SET OUT TO TACKLE
A VARIETY OF CHALLENGES.

☐ F S T

For information on spe-
cific Script mode fea-
tures, see **"Using
Script Mode" on
page 261**.

To enter Script mode, click the Script Mode button (labeled S) in
the lower left portion of the bin.

Bin Fast Menu

All Bin menu commands are also available in the Bin Fast menu
located in the lower left corner of every bin.

To open the Bin Fast menu, click the Fast Menu button in any of the
three display modes.

▦	Flyby table mountain.Copy.01	V1 A1-2	01:22:15:18
▦	Biking down switchbacks (wescam).Copy.01	V1 A1-2	01:25:40:06
▦	Ice fall flyover.Copy.01	V1	01:27:36:27
▦	Rain and hail on rocks.Copy.01	V1 A1-2	01:39:02:09

Fast Menu button — `☰ F S T    Statistics   ◁ ▥`
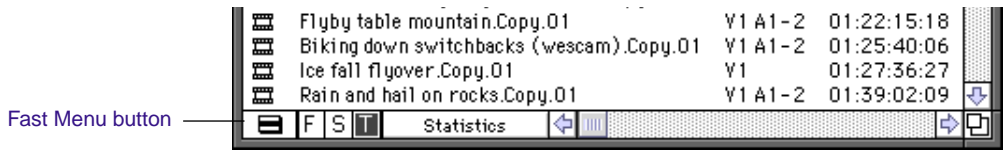
The Bin Fast menu is especially convenient when you are working with several open bins and need to access Bin menu commands quickly.

Basic Bin Procedures

There are some basic procedures that you can use in any of the three bin display modes for manipulating clips in the bin. These include selecting, deleting, duplicating, moving, copying, and sifting clips and sequences.

Setting the Bin Font

To change the bin font:

1. Choose Set Font from the Edit menu.

    A dialog box appears.

    Font: Geneva ▼

    Size: 10

    [Cancel]   [OK]
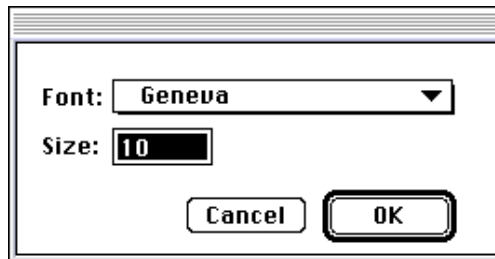
2. Choose a font from the Font pop-up menu.

3. Enter another point size for the font in the Size entry field.

4. Click OK. The new font appears in all bin display modes.

Using the Clip Information Window

The Clip Information window displays statistical information about a clip. You can open the Clip Information window from a bin, Source and Record monitors, a pop-up monitor, or a script window. This window updates information automatically.

```
Name      dories to models
Bin       Lesson 5, Ch 7
Tape      04
FPS       29.97
Tracks    V1 A1-2
Video     AVR71
Audio     44100.0
Disk      Bigboy-2
Start     04:25:13:08
End       04:25:31:16
Duration  18:08
Mark IN   04:25:23:05
Mark OUT  04:25:26:29
IN-OUT        3:24
Project   MCX
```

To open the Clip Information window from a bin, press the Command (⌘) key and click the clip for which you want to display information.

For information on displaying clip information from the Script window, see **"Displaying Clip Information in a Script Window" on page 295**. For information on displaying clip information from the Source, Record, or pop-up monitors, see **"Changing the Sequence Clip Info" on page 375**.

Moving the Clip Information Window

To leave the Clip Information window open:

1. While holding the mouse button down to display the Clip Information window, move the cursor over the window.

2. Drag the window to a new location or another monitor.

   An outline of the window appears. When you release the mouse button, the Clip Information window opens.

Copying Text from the Clip Information Window

You can cut, copy, and paste information from the Clip Information window anytime, but you cannot edit or change any information within the window.

To copy text from the Clip Information window:

1. Click and drag your cursor over the information you want to copy.

2. Press ⌘–C to copy the information.

3. To paste the information, place and click your cursor at the location you want to paste it and press ⌘–V.

Selecting Clips and Sequences

Use one of the following procedures to select clips in a bin:

- Click the clip or sequence icon (Text mode), or click the picture area of the clip or sequence (Frame mode).

- Select multiple clips or sequences by Shift-clicking additional items, or lassoing several clips.

To reverse your selection, choose Reverse Selection from the Bin menu. The clips that you previously selected are deselected and those clips that were previously deselected are selected.

Duplicating Clips and Sequences

When you duplicate a clip or sequence, the system creates a separate clip linked to the same media files. You can move, rename, and manipulate this clip without affecting the original clip.

To duplicate a clip or sequence:

1. Select the clip or sequence that you want to duplicate, or Shift-select multiple clips.

2. Choose Duplicate from the Edit menu.

   A copy of the clip or sequence appears in the bin, with the original clip or sequence name followed by the extension .Copy*n*, where *n* is the number of duplicates created from the original clip or sequence.

Moving Clips and Sequences

You can move clips and sequences to other bins in order to group and organize various types of material based on project needs.

To move clips or sequences from one bin into another:

1. Create or open another bin. Give the bin a name that represents its purpose or contents.

2. Position the bins so that you can see both of them at the same time. You might need to resize the bins to do this.

3. Select the clip or sequence that you want to move, or Shift-select multiple clips.

4. Drag the clips to the new bin.

If the destination bin's display has been set to show reference clips, the referenced object types do not appear until you save the bin. For more information on setting the bin display, see **"Setting the Bin Display" on page 226**.

Copying Clips and Sequences

When you copy clips or sequences, you are essentially cloning the same clip or sequence in another bin. Any change you make to the copy will affect the original as well. The system does not add the .Copy extension to the clip or sequence as it does when duplicating. You cannot copy clips to the same bin, and you cannot return a clip copy to the same bin where the original resides.

To copy clips or sequences from one bin into another bin:

1. Position the bins so that you can see both of them at the same time. You might need to resize the bins to do this.

2. In the original bin, click the clip or sequence that you want to copy, or Shift-select multiple clips or sequences.

3. Press the Option key and drag the clips to the destination bin and release.

The clips appear in the new bin, displayed in the destination bin's current display mode (Script, Frame, or Text), and the originals remain in the first bin. If the destination bin's display has been set to show reference clips, the referenced object types do not appear until you have saved the bin.

When you copy clips from one bin to another, the custom columns that you created in the first bin are also copied to the second bin. The custom columns appear in the order in which you created them.

Deleting Clips and Sequences

To delete clips or sequences from a bin:

1. Select the clips and sequences that you want to delete.

2. Choose Clear from the Edit menu or press the Delete key on the keyboard.

   A dialog box displays information about the selected items.

```
Delete

☒ Delete 2 subclip(s).
☐ Delete 0 sequence(s).
☐ Delete 0 effect clip(s).
☐ Delete 0 motion effect clip(s).
☐ Delete 0 rendered effects clip(s).
   ☐ Delete 0 associated media file(s).
☐ Delete 2 master clip(s).
   ☐ Delete 2 associated media file(s).
☐ Delete 0 source(s).
☐ Delete 0 group(s).


                        [  OK  ]   [ Cancel ]
```
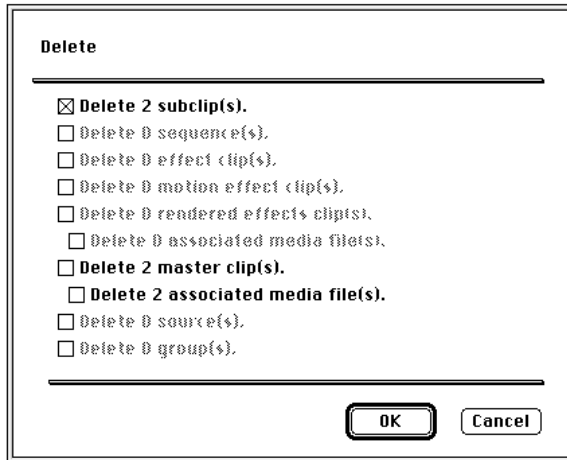
In this example, two subclips and two master clips (along with their media files) are highlighted for deletion.

3. Select the items highlighted for deletion. Do not select items you do not want to delete.

4. (Option) Delete the associated media files for master clips and effect clips. You can select clips and media files for deletion, or you can select only the media files if you want to retain the clips for later redigitizing.

5. Click OK.

   A dialog box asks you to confirm the deletion.

6. Click Delete.

Sifting Clips and Sequences

When you sift clips, the bin displays only those clips that meet a specific set of criteria. For example, you can do a custom sift to display only those clips containing the word "close-up" in the heading column. The custom sift dialog box provides you with six different levels of criteria.

To sift clips and sequences:

1. Choose Custom Sift from the Bin menu.

   The custom sift dialog box appears.

Operator menu   Sift criteria field   Column specification box

Show clips that:

contain		in the		column,
contain		in the		column,
contain		in the		column.
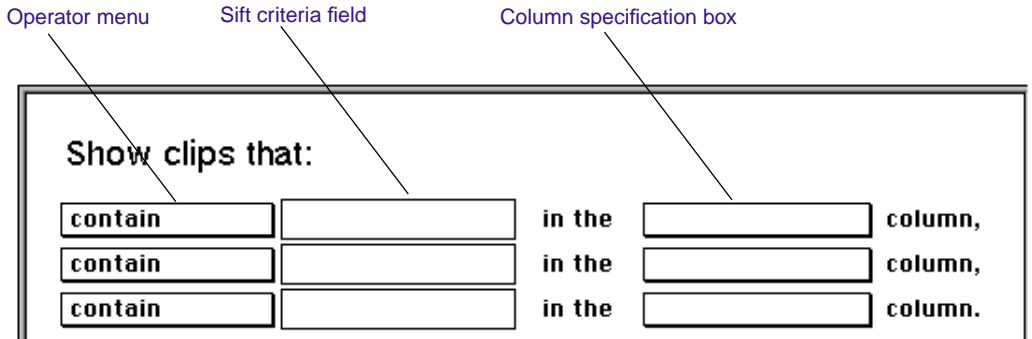
2. Move the cursor to the box containing the word "contain." This is called the Operator menu box. Click and hold to display a pop-up menu.

Pop-up menu

Show clips that:

contain		in the
contain		in the
begin with		in the
match exactly		
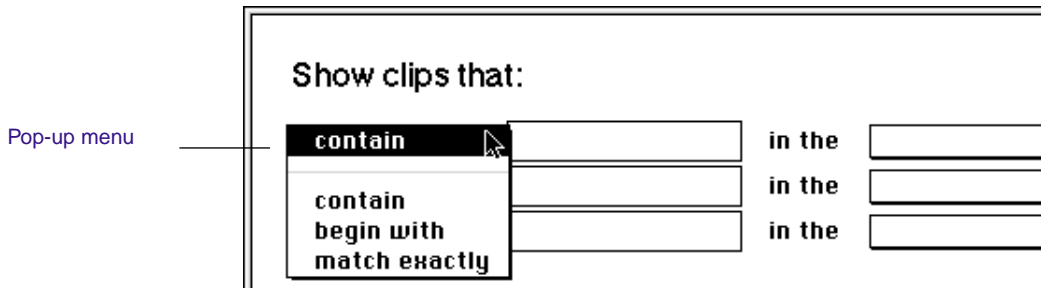
3. Select one of the sifting options.

4. Click the first Sift criteria field and enter the text that you want to use as a sift criterion.

```
✓
─────────
Name
Tracks
Duration
Start
End
Mark IN
Audio
Video
─────────
Any
```

5. Click the column pop-up menu and select a column heading to which you want to apply the criterion.

6. Enter additional sift criteria, and make additional column selections, as necessary.

    Only the clips that meet your criteria remain in the bin, with the word "partial" added to the bin name.

After you have sifted the clips in a bin, you can display the bin in a sifted or an unsifted state.

•   To view the entire bin, choose Show Unsifted from the Bin menu.

•   To view the sifted bin, choose Show Sifted from the Bin menu.

The word "partial" after the bin name appears or disappears to indicate the current state of the bin you are viewing.

Locking Items in the Bin

You can lock any item in the bin—including source clips, master clips, subclips, and sequences—to prevent deletion. When you lock clips in the bin, you lock their associated media files on your desktop as well.

To lock items:

1. Click a clip, subclip, or sequence to select it. Shift-select additional clips if necessary.

2. Choose Lock Bin Selection from the bottom of the Clip menu.

```
Modify...
─────────────────────────────
Add Filler at Start
Remove Match Frame Edits
─────────────────────────────
Lock Bin Selection        ▶
Unlock Bin Selection
```

A lock icon appears for each locked clip in the Lock column of the default Statistics Bin view.

	Selects			
	Name	Lock	Tracks	S
▦	Team rafting through rapids	🔒	V1 A1-2
▦	Man helped from heli to stretcher		V1 A1-2
▦	Flyover lake with cloud reflections		V1 A1-2
▦	Hi-Tec treks across mountain slope		V1 A1-2
▦	Team hiking through snow (push-in)		V1 A1-2
▦	John on beauty of race.Copy.01		V1 A1-2
▦	Red moon/mountain.Copy.01		V1 A1-2
▦	Panoramic views from Longspur.Copy.01	🔒	V1 A1-2
▦	Hikers on snowy ridge at sunrise.Copy.01	🔒	V1 A1-2
▦	Flyby table mountain.Copy.01		V1 A1-2

F S T   Statistics.1

Lock icon

To unlock previously locked items:

1. Select the items in the bin.

2. Choose Unlock Bin Selection from the Clip menu.

You can use the clip-locking feature along with archiving software such as Cheyenne to automatically archive all locked media files. For more information on archiving locked files, see your archiving software's documentation.

Selecting Offline Items in a Bin

Offline items are clips, subclips, or sequences that are missing some or all of their original media files.

To identify offline items, choose Select Offline Items from the Bin menu.

The bin highlights all items that are missing media files.

Selecting Media Relatives for an Object

When you identify the *media relatives* of a selected clip or sequence, the system highlights all other clips linked to the selected clip, such as subclips or other sequences.

To identify media relatives:

1. Open the bin that contains the chosen clip or sequence.

2. Open any other bins that might contain the media relatives that you want to find.

3. Resize and position the bins so that you can see their contents. Text mode is best for viewing as many objects as possible.

4. Select the chosen clip or sequence, and choose Select Media Relatives from the Bin menu.

   The system highlights all related objects in all open bins.

Sequences				
Name				
▦ Eco challenge Cut 1	⇧			
☐ F S T Untitled	⬇ ⬚			

Selects			
Name		Tracks	Start
Team rafting through rapids		V1 A1-2	01:00:00:02
Man helped from heli to stretcher		V1 A1-2	01:01:47:29
Flyover lake with cloud reflections		V1 A1-2	01:03:27:23
Hi-Tec treks across mountain slope		V1 A1-2	01:04:58:18
Team hiking through snow (push-in)		V1 A1-2	01:05:13:28
John on beauty of race.Copy.01		V1 A1-2	01:06:24:27
Red moon/mountain.Copy.01		V1 A1-2	01:07:33:17
Panoramic views from Longspur.Copy.01		V1 A1-2	01:08:50:11
Hikers on snowy ridge at sunrise.Copy.01		V1 A1-2	01:18:55:06
Flyby table mountain.Copy.01		V1 A1-2	01:22:15:18
Biking down switchbacks (wescam).Copy.01		V1 A1-2	01:25:40:06
Ice fall flyover.Copy.01		V1	01:27:36:27
Rain and hail on rocks.Copy.01		V1 A1-2	01:39:02:09
☐ F S T Statistics.1			

Selecting Sources Used by an Object

Use the Select Sources command to identify all of the sources used by a particular object. For example, if you select a sequence as the object,

you use the Select Sources command to identify every master clip, subclip, tape, and media file that is a source for that sequence.

To identify sources for a clip or sequence:

1. Select one or more objects in a bin.

2. Choose Select Sources from the Bin menu.

   All sources for the selected objects in all open bins are highlighted.

Selecting Unreferenced Clips

When you select Unreferenced Clips, the system highlights all clips that are not currently referenced by clips or sequences that are present in the open bins. Any master clips, subclips, or effect clips you have edited into a sequence in the bin are not highlighted. This command is effectively the reverse of the Select Media Relatives command.

The Unreferenced Clips command is useful for finding unused footage or media.

Identify unreferenced clips as follows:

1. Open the bin containing the sequence or clip that is referenced.

2. Open all other bins containing clips that were used during editing.

3. Choose Select Unreferenced Clips from the Bin menu.

   An alert box warns you that unreferenced clips will be highlighted in open bins only (items in closed bins will not be shown).

4. Click OK.

   All unreferenced clips are highlighted in the open bins.

Sequences	
Name	
▦ Eco challenge Cut 1	⇧
	⇩
⊟ F S T *Untitled*	〇

Selects		
Name	Tracks	Start
▣ Team rafting through rapids	V1 A1-2	01:00:00:02
▣ Man helped from heli to stretcher	V1 A1-2	01:01:47:29
▣ Flyover lake with cloud reflections	V1 A1-2	01:03:27:23
▣ Hi-Tec treks across mountain slope	V1 A1-2	01:04:58:18
▣ Team hiking through snow (push-in)	V1 A1-2	01:05:13:28
▣ John on beauty of race.Copy.01	V1 A1-2	01:06:24:27
▣ Red moon/mountain.Copy.01	V1 A1-2	01:07:33:17
▣ Panoramic views from Longspur.Copy.01	V1 A1-2	01:08:50:11
▣ Hikers on snowy ridge at sunrise.Copy.01	V1 A1-2	01:18:55:06
▣ Flyby table mountain.Copy.01	V1 A1-2	01:22:15:18
▣ Biking down switchbacks (wescam).Copy.01	V1 A1-2	01:25:40:06
▣ Ice fall flyover.Copy.01	V1	01:27:36:27
▣ Rain and hail on rocks.Copy.01	V1 A1-2	01:39:02:09
⊟ F S T *Statistics.1* ⇦▥		⇨

Using Text Mode

Text mode provides the most complete view of clip information. It uses database columns that you can rearrange and customize to suit your needs.

To enter Text mode, click the Text Mode button (labeled T) in the lower left corner of the bin.

	Name	Tracks	Start	
🎞	Team rafting through rapids	V1 A1-2	01:00:00:02	
🎞	Man helped from heli to stretcher	V1 A1-2	01:01:47:29	
🎞	Flyover lake with cloud reflections	V1 A1-2	01:03:27:23	
🎞	Hi-Tec treks across mountain slope	V1 A1-2	01:04:58:18	
🎞	Team hiking through snow (push-in)	V1 A1-2	01:05:13:28	
🎞	John on beauty of race.Copy.01	V1 A1-2	01:06:24:27	
🎞	Red moon/mountain.Copy.01	V1 A1-2	01:07:33:17	
🎞	Panoramic views from Longspur.Copy.01	V1 A1-2	01:08:50:11	
🎞	Hikers on snowy ridge at sunrise.Copy.01	V1 A1-2	01:18:55:06	
🎞	Flyby table mountain.Copy.01	V1 A1-2	01:22:15:18	
🎞	Biking down switchbacks (wescam).Copy.01	V1 A1-2	01:25:40:06	
🎞	Ice fall flyover.Copy.01	V1	01:27:36:27	
🎞	Rain and hail on rocks.Copy.01	V1 A1-2	01:39:02:09	

Selects window with **F S T** display mode buttons and **Statistics** pop-up menu.

About Bin Views

To the right of the Display Mode buttons is a pop-up menu of titles for different bin views. This option is available only in Text mode. Bins have three default views that are automatically loaded:

• **Statistics view**: Uses the standard statistical column headings derived from information established during capture, such as start and end timecodes, duration, resolution, and so on.

• **Film view:** Has film-related column headings, including key number, ink number, pullin, and so on. If you are working on a non-film-related project, and select the Film view, a dialog box informs you that only the non-film-related columns will be displayed.

• **Custom view:** Allows you to create and save customized views. The only required heading is the clip name, displayed by default. You can customize the view by adding, hiding, or rearranging column headings.

Customizing Bin Views

There are several ways to customize views of the bin:

- Alter the arrangement of existing columns in the standard Statistics view or Film view to suit your needs, without adding or hiding columns. These arrangements will be recalled each time you choose Statistics view or Film view.

- Add or hide columns of information to create customized Statistics or Film views. These will be saved as additional view settings in numerical order, for example *Statistics.1*, *Statistics.2*, unless you choose another name.

- Add, hide, copy, or rearrange standard or customized columns in any combination to create your own custom views. You can name and save these to suit your needs.

When you create a new bin view, the system saves the settings for this view so that you can later access and alter, copy, or delete these settings.

Moving and Rearranging Columns

To move a text column in a bin:

1. Click the heading of the column that you want to move.

   The entire column is highlighted.

2. Drag the column to the desired position and release the mouse button.

   The column appears in the new position, and columns to the right are moved over to make room.

Tidying Up Bin Columns

When you tidy up bin columns, the system maintains the same order of columns from left to right, but spaces them according to the length of contents. This is especially useful for removing spaces left after moving or rearranging columns.

To tidy up bin columns, choose Tidy Up Columns from the Bin menu, or press ⌘–T.

Showing and Hiding Columns

You can select individual or multiple headings to display or hide in the bin.

To choose column headings by using the headings dialog box:

1. With a bin in Text mode, choose Headings from the Bin menu. You can also double-click a bin view setting in the Settings list of the Project window.

   A dialog box appears.
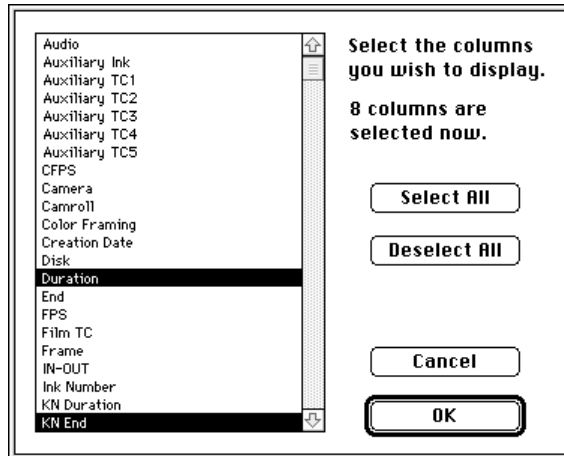
You can also display a frame for each clip along with statistical information in Text display mode by displaying the Frame column. For information, see **"Adding Customized Columns to a Bin" on page 247**.

2. Select the headings you want to add to the bin:

   • Click the name of a heading to select it.

   • Click a highlighted heading to deselect it.

   • Click Select All to highlight all the headings in the bin.

   • Click Deselect All to deselect all the headings.

3. Click OK. Only the headings highlighted in the headings dialog box appear in the bin or bin view.

Deleting a Column

Deleting a statistical column is the same as hiding the column; you can restore the column at any time by using the headings dialog box, as described in **"Showing and Hiding Columns" on page 245**. When you delete a Custom column, however, you must re-create the column.

To delete a column:

1. Click the column heading.

2. Choose Clear from the Edit menu or press the Delete key.

   The column disappears from the view and surrounding columns close to fill the space.

Duplicating a Column

You can duplicate existing columns containing timecode information in other compatible columns that you target in a dialog box.

To duplicate a timecode column:

1. Select the column you want to duplicate by clicking its header.

2. Choose Duplicate from the Edit menu.

   A dialog box appears.

```
┌──────────────────────────────────────┐
│  Copy Duration to:                   │
│  ┌────────────────────────────────┐  │
│  │ Auxiliary TC1              ⇧   │  │
│  │ Auxiliary TC2              ▤   │  │
│  │ Auxiliary TC3                  │  │
│  │ Auxiliary TC4                  │  │
│  │ Auxiliary TC5                  │  │
│  │ Film TC                        │  │
│  │ Mark IN                        │  │
│  │ Mark OUT                       │  │
│  │ Slip                       ⇩   │  │
│  └────────────────────────────────┘  │
│           ┌────────┐  ┌────────┐      │
│           │ Cancel │  │   OK   │      │
│           └────────┘  └────────┘      │
└──────────────────────────────────────┘
```
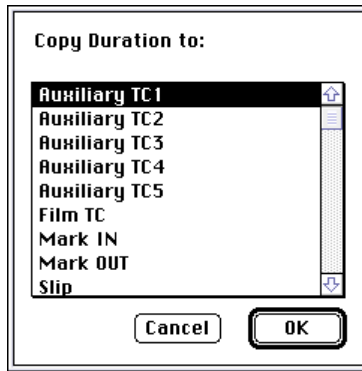
In the example, the user has selected the Duration column to dupli-
cate; thus "Copy Duration to:" appears at the top of the dialog box.
Select a column name from the list. The column must be of the same
type of data for the copy to occur. For example, you can copy start
timecodes to the Aux TC column, but you cannot copy timecodes to
the Pullin column.

The column of information appears in the column you designated.

Adding Customized Columns to a Bin

In addition to the standard statistical or film headings, you can add
your own column headings to describe information about clips and
sequences. For example, you might want to add a column heading to
describe what kind of shot (close-up, wide shot, master shot, extreme
close-up, and so on) is used in a clip.

To add a new column:

1. Click an empty area to the right of the current headings in the
   headings box.

2. Move any existing column to the right or left in order to create an
   empty area.

3. Type the column heading you want and press Return. Column
   headings must contain fewer than 30 characters, including spaces.

This puts the cursor in the data box, beside the first clip in the bin.

4. Use the Tidy Up Columns command after you have entered the new column heading.

5. Type the information and press Return to move to the next line.

Changing a Custom Column Heading

You can change the heading name of custom columns. You cannot change any of the standard statistical or film column headings.

To change the name of a custom column:

1. Hold down the Option key and click the heading to highlight it.

2. Type the new text for the heading and press Return.

Saving a Custom View

Any time you add, hide, or delete a column, the bin view name changes to an italicized name to indicate that it no longer matches the original view. If you try to select a new bin view setting while the current setting is untitled or italicized, a dialog box asks if you want to discard the current setting.

If you don't save the view after adding or deleting headings, it is discarded.

To save a bin view:

1. Add or hide columns according to preference. The bin view name becomes italicized.

2. Choose Save As from the Bin View pop-up menu.
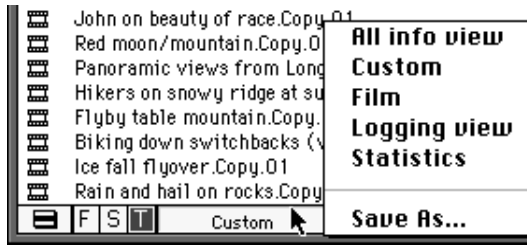
The view name dialog box appears.
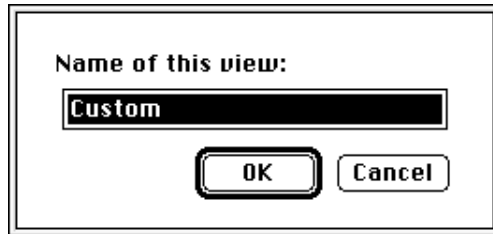
3. Name the custom view:

    • To keep the default view name, click OK or press Return.

    • To create a new name for the custom view, type the name and click OK or press Return.

Managing Clip Information in Text Mode

For additional bin shortcuts, see the "Shortcuts" section of the *Avid Media Composer and Film Composer Quick Reference*.

There are several ways to manage clip information in Text mode columns. These methods include copying information between cells, moving information between whole columns, sorting clip information, and modifying clip data, as described in this section.

Moving Within Column Cells

Use the keyboard shortcuts to move from cell to cell in bin columns:

- **Tab:** Moves the cursor to the parallel cell in the next column. You can continue to press the Tab key to scroll through the cells to the right until the cell in the last column is highlighted. The next time you press the Tab key, the cell in the first column is highlighted.

- **Shift-Tab:** Moves the cursor to the left to the cell in the previous column. You can continue to press the Shift-Tab keys to scroll through cells to the left until the cell in the first column is highlighted. The next time you press Shift-Tab, the cell in the last column is highlighted.

- **Return:** Enters any new information typed into the cell and moves the cursor down to the cell in the next row. You can continue to press the Return key to scroll down the column until the last cell in the column is highlighted. The next time you press the Return key, the first cell in the column is highlighted.

- **Shift-Return:** Moves the cursor up to the cell in the previous row. You can continue to press the Shift-Return keys until the cell in the top row is highlighted. The next time you press the Shift-Return keys, the cell in the last row is highlighted.

Modifying Clip Information

You can change or modify the information in certain columns for your master clips, subclips, tapes, and other objects stored in the bin. This is especially useful if some of the data is incorrect, or if you need to conform information for organizational purposes.

The following conditions apply to modifying clip information:

- When you modify a clip's information, related objects are automatically updated to reflect the new data. For example, if you change the name of a clip, the updated name appears in the sequences that use the clip.

- Some data cannot be modified after digitizing because changes would prevent you from playing back and editing the material successfully.

- Sequence data cannot be changed, even though it appears in your bin. The only way to modify sequence data is to edit the sequence itself. You can, however, change the name and start time for the master timecode track, as described in **"Changing the Sequence Clip Info" on page 375**.

There are two ways to modify data:

- You can modify some data directly for master clips, subclips, and other objects stored in a bin.

- You can use the Modify command to change specific information for clips only.

Modifying Data Directly

When you modify information directly, you click a cell and type the new information. For example, you can type a new name for a clip, or correct the start and end timecodes.

You can directly modify any data in the bin prior to digitizing. After the footage is digitized, however, you can directly modify only selected headings, with restrictions as shown in **Table 9-2**.

Table 9-2   Direct Modification Headings

Heading	Restrictions
(Clip) Name	No restrictions.
Mark IN	Altering the mark IN also alters the IN to OUT duration. This replaces any previous mark.
Mark OUT	Altering the mark OUT will also alter the IN to OUT duration. This replaces any previous mark.
Color Framing	Must be according to tape specifications. See **"Tracking Color Frame Shifts" on page 451**.
Auxiliary timecodes, 1–5	No restrictions.

Table 9-2   Direct Modification Headings (Continued)

Heading	Restrictions
KN (key number) Start	Only for film projects; altering the starting key number will also alter the ending key number to maintain the duration. This can also cause discrepancies with any auxiliary timecode information that you entered manually.
KN (Key Number) End	Only for film projects. Altering the KN end also alters the KN Start to maintain the duration. This can also cause discrepancies with any auxiliary timecode information that you entered manually.
Pullin	Pullin data imported from a telecine-generated list can only be altered by using the Modify command. See **"Using the Modify Command" on page 253**. *(NTSC only.)*
Pullout	Pullout data imported from a telecine-generated list can only be altered by using the Modify command. See **"Using the Modify Command" on page 253**. *(NTSC only.)*

To modify the clip data directly:

1. Enter Text mode.

2. Click the cell that you want to modify. Select only one item at a time. In this example, the timecode data is highlighted.
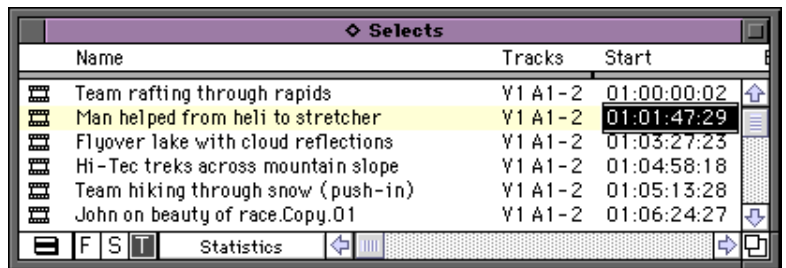
3. Click the cell again to enter text.

   If the cursor does not change to an I-beam, you might be attempting to modify a column that cannot be directly modified.

4. Type the new information and press Return.

Using the Modify Command

The Modify command gives you specialized control over information in specific headings. For example, you can use the Modify command to change the name of source tapes, or to increment or decrement the start and end timecodes by a specified length of time for one or several master clips at once.

You can apply changes with the Modify command to master clips only; subclips and sequences cannot be altered in this way. In addition, you can only perform modifications that alter the end timecodes or the tracks before digitizing, as described in **Table 9-3**.

Table 9-3   Modify Command Options

Option	Restrictions
Set Timecode Drop/Non-drop	Setting must match the timecode format of the tape
Set Timecode By Field	Only start timecode can be altered after digitizing
Increment Timecode	Only start timecode can be incremented after digitizing
Decrement Timecode	Only start timecode can be decremented after digitizing
Set Key Number Generic (Prefix)	Only for film projects
Set Pullin	Only for film projects
Set Tracks	Only for film projects
Set Source	Should match the original source tape name

Table 9-3   Modify Command Options (Continued)

Option	Restrictions
Pullin	Only for adjusting Pullin information from an imported telecine list for a film project
Pullout	Only for adjusting Pullout information from an imported telecine list for a film project

To modify selected data:

1. Open the bin.

2. Click the small film clip icon to the left of the clip, sequence, or other object you want to modify. Shift-click each additional object you want to modify.

3. Select objects in the bin: master clips, subclips, sequences, tapes, audiotapes, film reels, effects, group clips, or rendered effects.

4. Choose Modify from the Clip menu.

   The Modify dialog box appears.

Modify Options pop-up menu

Modify...

Set Timecode By Field	Hour:
⦿ Start ○ End	Minutes:
	Second:
	Frame:

OK   Cancel
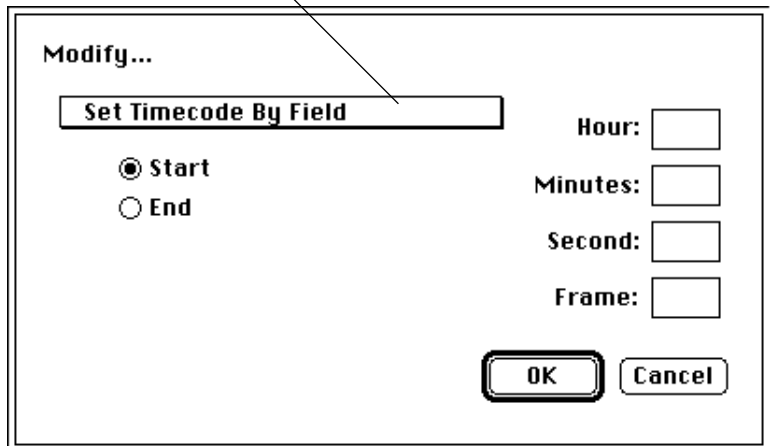
5. Choose an option, such as Set Timecode By Field, from the Modify options pop-up menu.
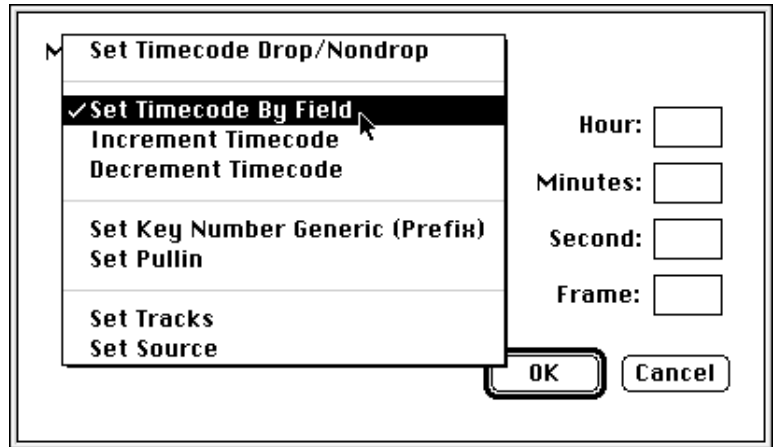
6. Select an option or enter information into the entry fields (time-code values, for example) when they appear.

7. Click OK. The modification takes effect.

Copying Information Between Columns

The following steps describe how to copy all the information in one column to another. To demonstrate these steps, you will copy time-code information in one column to a new column.

1. Select the timecode column that you want to copy.

2. Choose Duplicate from the Edit menu or press ⌘–D.

   A dialog box prompts you to target a timecode column for the data.

3. Select the target column for the data and click OK.

Copying Information from Another Cell in a Custom Column

To copy information from another cell in a custom column:

1. Hold down the Option key while you click in the destination cell to reveal a pop-up menu of all items entered in that column.

2. Select the text from the menu. The text appears in the cell.

You can also use the following two shortcuts to move information between cells in a custom column:

• Press Option-Tab to load the text from the cell below into the current cell, then select the cell to the right of the current cell.

• Press Option-Shift-Tab to load the text from the cell below into the current cell, then select the cell to the left of the current cell.

Sorting Clips

Sorting clips arranges them in either numerical or alphabetical order, based on the data in the column you select as the sorting criteria. You can sort clips in several different ways, using an ascending sort, a descending sort, and a multilevel sort.

You can sort clips and sequences in Text mode only. If you need to view sorted clips in Script or Frame mode, sort them in Text mode first and then return to Script or Frame mode.

Sorting Clips in Ascending Order

To sort clips in ascending order:

1. Click the heading of the column that you want to use as the criterion.

   The column is highlighted.

2. Choose Sort from the Bin menu or press ⌘–E.

   The objects in the bin are sorted.

If the Sort command is dimmed in the menu, you have not selected a column.

To reapply the last sort, choose Sort Again from the Bin menu with no column selected. This step is especially useful after you have added new clips to a sorted bin.

Sorting Clips in Descending Order

To sort clips in descending order:

1. Click the heading of the column that you want to use as the criterion.

   The column is highlighted.

2. Hold down the Option key while you choose Sort Reversed from the Bin menu, or while you press ⌘–E.

   Sort Reversed displays the column in descending order.

Multilevel Sorting with Columns

You can select multiple columns in a bin and perform a multilevel sort by using the information in the columns.

To do this, rearrange the columns in the bin to establish the primary column. The column that appears farthest to the left in Text mode becomes the primary criterion for the sorting operation.

Using Frame Mode

In Frame mode, each clip is represented by a single frame, with the name of the clip displayed below the frame. The system uses the head frame as the default, but you can play back the footage within any clip and select any frame to represent the footage. You can make the pictures larger to see more detail, or smaller to see more clips in the window. You can also rearrange the frames in any order.

To enter Frame mode, click the Frame Mode button (labeled F) in the lower left portion of your screen.

Each frame appears on your screen with its assigned name directly below it.

Changing the Bin Background Color

You can customize the background color of the bin behind the frames. Changes affect one bin at a time. However, changes you make in Frame mode appear in Script mode as well.

To change the bin background color:

1. Activate the bin you want to change and make sure you are in Frame mode (or Script mode).

2. Choose Set Color from the Edit menu, and select a color from the pop-up palette.

Set Font...
Set Bin Background ▶
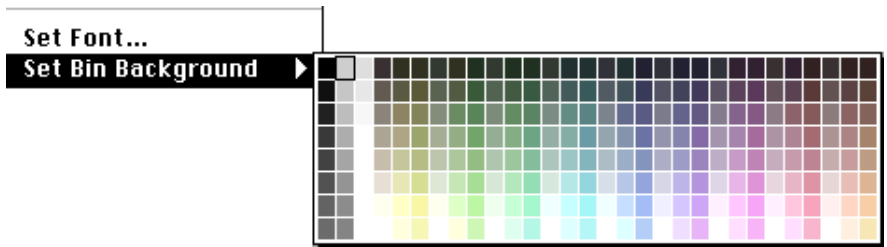
The bin color changes based on your selection.

Enlarging or Reducing Frame Size

You can enlarge and reduce the size of the frames appearing on the screen to five available sizes. You must enlarge or reduce all frames together. You cannot change the size of individual frames.

- To enlarge the frame size, choose Enlarge Frame from the Edit menu. The display size increases each time you choose this option, up to five times.

- To reduce the frame size, choose Reduce Frame from the Edit menu. The display size decreases each time you choose this option, up to five times.

Rearranging Frames

Frame mode allows you to rearrange the display of the frames in the bin by moving them.

To rearrange frames:

1. Click and drag a single frame to its new position.

   To rearrange more than one frame at a time, Shift-select or lasso multiple frames and drag them to a new position in the bin.

2. Click the background area of the bin to deselect the clips.

Changing the Frame Identifying the Clip

If you have Group or MultiGroup clips in the bin and want to change the displayed frame, you must use controls in Source/Record mode. For more information, see **"Multi-Camera Editing Techniques" on page 591**.

By default, Frame mode displays the first frame of each clip in the bin. However, you can choose a different frame.

To change the frame identifying the clip:

1. Select the clip that you want to change.

   Hold the K key on the keyboard (Pause) and press the L key (Play) to roll the footage within the frame forward at slow speed. To move backward through the footage, hold the K key and press the J key (Reverse Play).

2. When you see the frame that you want use, release the keys.

When you find the frame you want to use, Media Composer saves your choice as part of the bin configuration.

Tidying Up Frames in a Bin

To realign or tidy up the frames in a bin after you have changed their display, use one of the following procedures:

- To align all frames to an invisible grid, choose Tidy Up Columns from the Bin menu.

- To align only selected frames, choose Align Selected to Grid from the Bin menu.

- To spread out the frames evenly to fill available space in the bin window, choose Fill Window from the Bin menu.

- To arrange frames in the order in which they are sorted in Text mode, choose Fill Sorted from the Bin menu.

Using Script Mode

Script mode combines the features of Text mode with Frame mode, with an added script box next to each frame. The frames are displayed vertically on the left side of your screen with the script box next to each. Clip data matching the column headings in Text mode appears above each text box.

To enter Script mode, click the Script Mode button (labeled S) in the lower left portion of the bin.
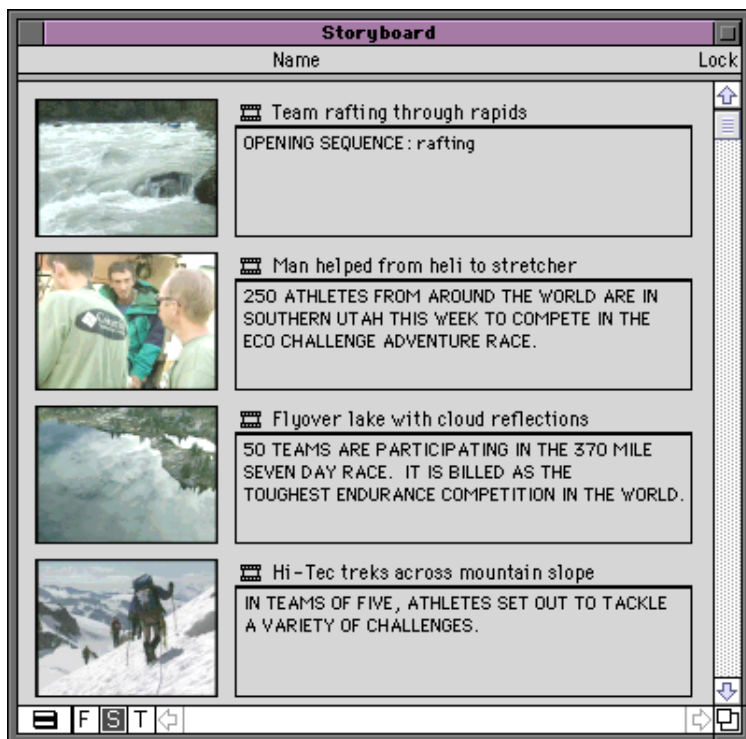
Adding Text in Script Mode

To type text into the script box, click the box and begin typing. This text does not appear in sequences edited from the clips, only in printouts of the bin in Script mode.

You can use basic word processing procedures to highlight, delete, cut, copy, and paste text between script boxes.

If the notes or script you type extend beyond the size of the text box, you can use the Page Up or Page Down keys on the keyboard to scroll through the text.

Rearranging Clips in Script Mode

You can rearrange the order of clips in Script mode in two ways:

- You can drag each clip up or down to a new location in the bin.

- You can sort and sift clips in Text mode, then return to Script mode to display selected clips in the desired sort order.

When you return to Text mode, the order of the clips is changed there as well.

Printing Bins

Media Composer allows you to print entire bins or individual frames in hardcopy form.

To print entire bins in Text, Script, or Frame mode:

1. Install the correct printer driver in the System Folder on the Avid disk.

Directions for installing the printer driver are included in the manual for your printer and in the Macintosh system documentation.

2. Select the printer by using the Chooser.

   Directions for selecting the printer are included in the Macintosh system documentation.

3. Click the T (Text mode), S (Script mode), or F (Frame mode) button in the lower left corner of the bin to select the view you want to print.

📄 *To print a frame in Script or Frame mode, you must use a printer capable of rendering graphics or PICT files.*

4. Choose Page Setup from the File menu. A Page Setup dialog box appears, reflecting specific options for the type of printer you have.

5. Select the appropriate options from the Page Setup dialog box, then click OK.

6. Choose Print Bin from the File menu. The print dialog box appears, reflecting specific options for your type of printer.

7. Set the print options in the print dialog box, then click Print.

   The system prints the frame currently displayed in the active monitor.

To print a single frame of a clip or sequence:

1. Load a clip or sequence into the Source or Record monitor.

2. Select the frame you want to print.

3. Choose Print Frame from the File menu, or press ⌘–P.

4. Make any needed adjustments to the print setup and click Print.

   The system prints the frame currently displayed in the active monitor.

Gathering Format Elements

While organizing your project, you can gather various format elements into a single bin that you can open and use later during editing. Some useful format elements might be:

- Bars and tone

- Head and tail leader

- Repeated titles

- Countdowns

- Graphic elements (repeated animations, and so forth)

This section describes techniques for creating digital bars and tone, as well as leader clips for use in sequences. For information on creating or importing graphic elements and titles, see the *Avid Media Composer and Film Composer Effects Guide.*

Preparing Digital Bars and Tone

If you expect to output your final sequence as a digital cut that requires calibration before playback (a digital cut that will be broadcast, for example), then in most cases you need a clip of color bars. You can add the clip to the front of the sequence in Media Composer, or you can output the clip separately as an assemble or insert edit onto tape during recording of a digital cut.

There are several ways to acquire a clip of bars, each with different advantages:

- **Digitize bars and tone from a house generator.** This method requires the least effort with good results, because you capture high-quality bars and tone simultaneously, with a minimum of calibration. Not all facilities, however, have a house generator.

- **Digitize bars and tone from a videotape.** This method allows you to capture bars and tone simultaneously, but you must calibrate

carefully to ensure accuracy. In addition, the final clip reflects the quality of the source tape recording.

- **Digitize bars from an external color bar generator.** This method provides good results, but you must have a color bar generator available, and you must rearrange your system inputs to attach the generator. In addition, you must acquire tone separately and sync it with bars within Media Composer.

- **Import a PICT file of bars.** This method provides the highest quality results, because the source image is already digital. If the PICT file is accurate, the quality of the clip is ensured. You must, however, acquire tone separately, and sync it with bars within Media Composer.

Importing a PICT File of Bars

The following procedure describes the method for importing a PICT file. This method is available to all users because your Media Composer system includes a SMPTE bars PICT file.

To import bars:

1. Open an existing bin, or create a new one for the test pattern.

2. Choose Import from the File menu to open the Select Files to Import dialog box.

3. Using the directory pop-up menu on the left side of the dialog box, locate the Color Bars for Import PICT file in the Avid Goodies folder. The Avid Goodies folder is located on the Avid (internal) drive.

4. Import the file by using options described in **"Preparing to Import Files" on page 213**.

5. Create a clip of tone media by using the Audio Tool. For more information, see **"Creating Tone Media" on page 172**.

6. Load the new color bars clip into the Source monitor, and create a subclip of appropriate length for use in sequences (1 minute is a common standard).

7. Select the new subclip and the audio clip containing the tone, and choose AutoSync from the Bin menu.

   A new subclip containing bars and tone appears in the bin.

8. Rename the clip as necessary.

Creating Leader

Film editors traditionally use standard head and tail leaders for cueing and syncing material. You can use digital leader in Media Composer to mark the beginning and ending of tracks, and to help you maintain sync, as described in **"Managing Sync with Multiple Tracks" on page 562**. You can create your own leader for video or film, as described in this section. Whatever your choice for specification, be sure to make all your leader clips the same length, with common sync points.

Creating Video Leader

To create leader for picture tracks:

1. Create a black screen in the Title Tool for tail leader, or a white screen for head leader. See the *Avid Media Composer and Film Composer Effects Guide* for information on using the Title Tool.

   Optionally, you can type a title onto the screen that says "Tail Leader" or "Head Leader."

2. Name this clip Head Leader or Tail Leader when you save the title.

3. Subclip an appropriate length of the clip, according to your chosen specifications.

4. (Option) Mark a sync frame in the subclip as follows:

a. Load the clip into the Source monitor.

b. Find an appropriate sync point and add a locator.

c. (Option) Double-click the locator in the Source monitor to add a sync point notation that appears on the monitor.

d. (Option) To make the sync point visible within the Timeline, step one frame backward and place an add edit before the sync frame, then step two frames forward and place an add edit after the sync frame.

Once the leader is prepared, you can splice the leader during editing onto the tracks that you want to keep in sync. You can use the sync points for visually aligning tracks.

Creating Audio Leader

To create tail leader for audio tracks:

1. Load a clip that includes a section of digitized tone into the Source monitor.

2. Subclip an appropriate section of the clip, according to your chosen specifications.

3. Name this new subclip Head Leader or Tail Leader.

4. Load this subclip into the Source monitor.

5. Prepare the sound levels by using one of the following options:

   • For leader without a sync point (no audio pop), open the Audio Mix Tool and bring the audio level all the way down for the entire clip.

   • For leader that includes a sync point (audio pop), do the following:

   a. Find the appropriate sync point.

b. Step one frame backward and place an add edit before the sync frame, then step two frames forward and place an add edit after the sync frame.

c. Place the position indicator before the first add edit, and open the Audio Mix Tool.

d. Bring the audio level all the way down.

e. Place the position indicator after the second add edit, and use the Audio Mix Tool to bring the level all the way down.

Once the leader is prepared, you can splice the leader during editing onto the audio tracks that you want to keep in sync. You can use the sync points for visually aligning tracks.

Storyboard Worksheet

☐ Make preliminary preparations such as synchronizing picture and sound, converting audio timecode, and modifying clip data.

☐ Set the bin display to show only the media objects you will use for your storyboard.

☐ Narrow down the clip selection by deleting, moving, copying, sorting and sifting clips.

☐ Select either Script mode or Frame mode to display your storyboard in the bin with or without a text box. Enter information into the script box if necessary.

☐ Rename clips to include additional information such as numbered ordering, or enter this information into the Script box in Script mode.

☐ Use the keyboard to jog through each clip and display the reference frame you want to use for each clip.

☐ Rearrange the clips in sequential order by selecting and dragging one or several clips at a time to a new location.

☐ Enlarge or reduce the size of the frames as necessary.

☐ Tidy up the rearranged frames along invisible grid lines when using Frame mode.

☐ (Option) Change the font and background color for the storyboard.

☐ Choose Save Bin from the File menu when the storyboard is complete.

☐ Choose Print from the File menu to print the storyboard in its final form.

CHAPTER 10

Managing Media Files

When you digitize footage, the system creates digital media files for the video and audio tracks on the media drives attached to your system. In addition to the bin tools that allow you to organize the clips that reference these media files, your Avid Composer system provides useful tools and features for directly managing media files for storage and playback efficiency, for backup, and for transfer between systems. These procedures are described in the following sections:

- **Using the Media Tool**
- **Freeing Storage Space**
- **Consolidating Media**
- **Backing Up Media Files**
- **Finding a Related Media File**
- **Relinking Media Files**
- **Unlinking Media Files**

Using the Media Tool

The Media Tool is your window onto the digitized video and audio data files stored on your media drives. As an important counterpart to the bins, the Media Tool provides similar database tools for manipulat-

ing digital media files in tandem with your organization of clips and sequences. Unlike bins, however, the Media Tool gives you access to separate video and audio portions of each clip.

Basic Media Tool Features

The Media Tool provides many of the same controls for viewing and managing information that you use with bins, including the following:

• Three display modes in the Media Tool function like those in bins: Text mode, Script mode, and Frame mode.

• The Media Tool Fast menu gives you quick access to all the same commands available in the Bin Fast menu.

• You can highlight, move, copy, duplicate, delete, and sift clips. You can also select media relatives, sources, and unreferenced clips, as described in **"Basic Bin Procedures" on page 231**.

• You can use Text mode headings and display options for columns of clip and media file data. You can also use procedures such as customizing the display of columns, moving within columns, and sorting information, as described in **"Using Text Mode" on page 242**.

• You can use the same Frame mode display options described in **"Using Frame Mode" on page 257**.

• You can use the same Script mode display options described in **"Using Script Mode" on page 261**.

• You can print Media Tool data by using the same procedures for printing bins, described in **"Printing Bins" on page 262**.

In addition to the procedures described, the Media Tool has a number of unique functions, described in this section. These include the following:

• Unlike bins, the Media Tool displays all the tracks digitized for each clip as separate media files. Therefore, when you view, delete,

and manipulate files, you have the added option of specifying individual video and audio tracks.

- The Media Tool does not display sequences and subclips. Only master clips, precompute (rendered effect) master clips, and associated media files are displayed.

- The following Bin and Clip menu commands do not apply to the Media Tool: Modify, Select Offline Items, Reveal File and Relink. You must perform these functions from the bin.

- The Media Tool database and display options are not saved as they are with bins. Instead they must be re-created each time you open the tool. Likewise, when you close the Media Tool, any customization of columns or other views elements is deleted.

Opening the Media Tool

To open the Media Tool:

1. Choose Media Tool from the Tools menu. The Display Media Selector dialog box appears.
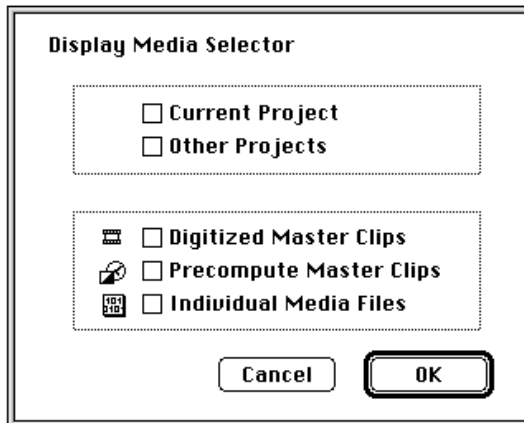
2. Select display options:

- You can display files for just the current project, or all other projects.

- You can display digitized master clips, precompute (rendered effect) master clips, individual media files, or all three.

3. Click OK. The Media Tool window opens.

	Name	Tracks	Start	End
	b00e13e1	V1	01:00:00:00	01:01:59:26
	b00e13e1	V1	01:00:00:00	01:01:59:26
	b00df640	V1	01:00:00:00	01:01:59:26
	b00df640	V1	01:00:00:00	01:01:59:26
	b00df478	V1	01:00:00:00	01:01:59:26
	b00df478	V1	01:00:00:00	01:01:59:26
	b00b5cab	V1	01:00:00:00	01:01:59:26
	b00b5cab	V1	01:00:00:00	01:01:59:26
	Lesson 6 Sequence,Picture-In-Picture,8	V1		
	Lesson 6 Sequence,Audio Dissolve,7	A1		
	Lesson 6 Sequence,Audio Dissolve,6	A1		
	Lesson 6 Sequence,Audio Dissolve,5	A1		
	Lesson 6 Sequence,Audio Dissolve,4	A1		
	Lesson 6 Sequence,Audio Dissolve,3	A1		
	Lesson 6 Sequence,Audio Dissolve,2	A1		
	Lesson 6 Sequence,Audio Dissolve,1	A1		
	b0039c51	V1	01:00:00:00	01:01:59:26
	b0039c51	V1	01:00:00:00	01:01:59:26

F S T

Deleting Tracks with the Media Tool

You can use the Media Tool to delete selected media files without harming the related master clips, subclips, and sequences.

If you use the Media Tool to delete selected media files, you will no longer have access to visuals of the deleted material. If you load a clip for which a media file has been deleted, a black screen appears with the words "Media Offline." If you need to use those clips again, you must redigitize from tape.

Depending on your needs, you can do one of the following:

- Delete selected audio or video tracks and retain other tracks from a clip.

- Delete entire sets of media files and related clips from within the Media Tool.

- Delete all unrelated media upon completion of a project, and retain only the media required for playback of a finished sequence as described in **"Consolidating Media" on page 276**.

To delete selected media files:

1. Open the Media Tool. In the Display Media Selector dialog box, be sure to select the types of files you want to delete.

2. Select one or more media files (audio, video, or both) or master clips whose media files you want to delete.

3. Choose Clear from the Edit menu, or press the Delete key to open the Delete Media Files dialog box.

Delete Media Files

Selected 1 digitized clip(s).

⊠ V   Delete 1 video file(s).

☐ A1   Delete 0 audio file(s).

☐ A2   Delete 0 audio file(s).

☐ A3   Delete 0 audio file(s).

☐ A4   Delete 0 audio file(s).

Selected 0 precompute file(s).

☐ V   Delete 0 video file(s).

☐ A   Delete 0 audio file(s).

OK   Cancel
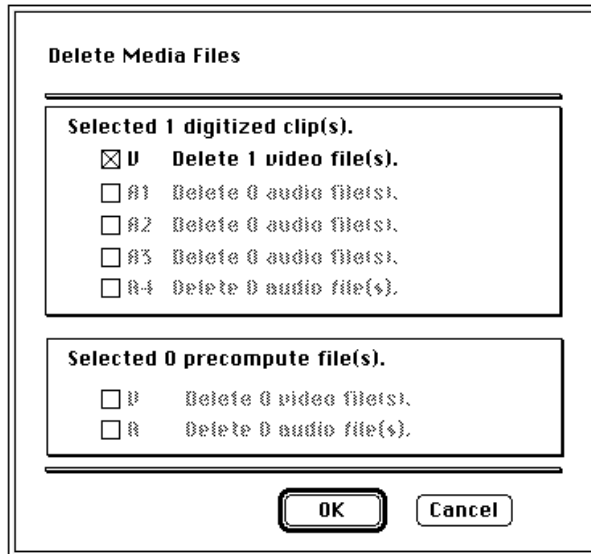
4. Select the media objects that you want to delete:

- **Audio media file (A1, A2, A3, A4).** The master clip linked to that file will be silent. Subclips and sequences created from the master clip are affected in the same way.

- **Video media file (V1).** The master clip linked to that file will be black, with the message "Media Offline" displayed. Related subclips and sequences are affected in the same way.

- **Precompute media file (V, A).** The section of the sequence with the effect becomes black with the message "Media Offline" displayed.

- **Audio Mixdown File (A).** The section of the sequence with the mixdown becomes silent.

5. Click OK.

   A confirmation dialog box appears.

6. Click Delete.

Freeing Storage Space

Unlike the bin files stored in project folders on the Avid drive, media files require considerable storage space. When you finish either a rough cut or a final version of a sequence, you can quickly free storage space by deleting the media and clips that are not referenced by the sequence. This procedure is performed on clips selected in bins only.

To delete all unreferenced clips and media files:

1. Choose Select Sources from the Bin menu. All source clips for the sequence are highlighted in the bin.

2. Click the bin containing the highlighted clips to activate it.

3. Choose Reverse Selection from the Bin menu. All the clips in the bin that are not source clips for the sequence are now highlighted.

4. Press the Delete key, then click the check boxes in the Delete dialog box to delete the clips or the media files.

Consolidating Media

When you consolidate media files, the system finds the media files or portions of media files associated with selected clips, subclips, or sequences. It then makes copies of them, and saves the copies on a target disk that you specify. Because the Media Tool displays only master clips, you cannot consolidate subclips or sequences with the Media Tool. You can consolidate master clips, subclips, and sequences in the bin.

About the Consolidate Feature

For illustrations of the different types of consolidation, see the *Avid Media Composer and Film Composer Quick Reference*.

The Consolidate feature operates differently depending upon whether you are consolidating master clips, subclips, or sequences. There are also different advantages in each case, as follows:

- **Master clips:** When you consolidate a master clip, the system creates exact copies of the media files. If you link the original master clip to the new files, the system creates a master clip with the extension *.old* that remains linked to the old files. If you maintain the link between the original master clip and the old media files, the system creates a new master clip with the extension *.new* that is linked to the new files. The new clips are also numbered incrementally beginning with *.01*. Consolidating master clips does not save storage space because the system copies the same amount of media for each clip.

- **Subclips:** When you consolidate a subclip or group of subclips, the system copies only the portion of the media files represented in the subclip, and creates a copy of the master clips and the subclips. The suffix *.new* is attached, along with incremental numbering beginning with *.01*.

- **Sequences:** When you consolidate a sequence, the system copies only the portions of media files edited into the sequence, and creates new master clips for each shot in the sequence. The suffix *.new* is attached to the master clips, along with incremental

numbering beginning with *.01*. The sequence is not renamed, but is automatically relinked to the new media files.

> *Because a consolidated sequence is linked to the new files by default, consider duplicating the sequence each time you consolidate if you need to maintain links to the original files.*

Using the Consolidate Command

To consolidate master clips, subclips, or sequences:

For more information on rendering effects, see the *Avid Media Composer and Film Composer Effects Guide.*

1. If you are consolidating a sequence, duplicate the sequence to maintain links to the original files, if necessary, and render any unrendered effects.

2. With the bin open, select the clips or sequence to consolidate.

3. Choose Consolidate from the Clip menu. The Consolidate dialog box appears.

Consolidate dialog box showing Target Volume(s) list with Bigboy-1, Bigboy-2, Bigboy-3, Bigboy-4; 0 clip(s) selected; 1 sequence(s) selected; Handle length: 60 frames; checkboxes for Delete original media files when done, Skip media files already on the target disk (checked), Relink selected clips to target disk before skipping (checked), Consolidate all clips in a group edit; Cancel and OK buttons.</ima

4. Select one of the following:

- "Delete original media files when done" to delete original media files automatically.

- "Skip media files already on the target disk" if some related media files are already located on the target disk.

- "Relink selected clips to target disk before skipping" to ensure that all selected clips are linked to media on the target drive. This option appears when you select "Skip media files already on target disk."

5. Select a target disk from the pop-up menu.

   Make sure that you choose a target disk with enough storage space for all the consolidated media files.

6. Enter a handle length for the new clips in the entry field, or leave it at 60 frames to accept the default.

7. If you are consolidating a group clip or a sequence that contains group clips, select the option "Consolidate all clips in a group edit" to copy media for all the clips in the group. This option is dimmed if there are no group clips in your selection.

8. Click OK. If you did not choose to delete the original media files, a second dialog box appears and offers you a choice.

Copying Media Files

○ **Master clips remain linked to media on original volume.**

◉ **Master clips are relinked to media on target volume.**

Selected master clip(s) will be relinked to the new media on the specified volume. Master clip(s) with a '.old' extension will be created and linked to the original media.

[Cancel] [OK]

---
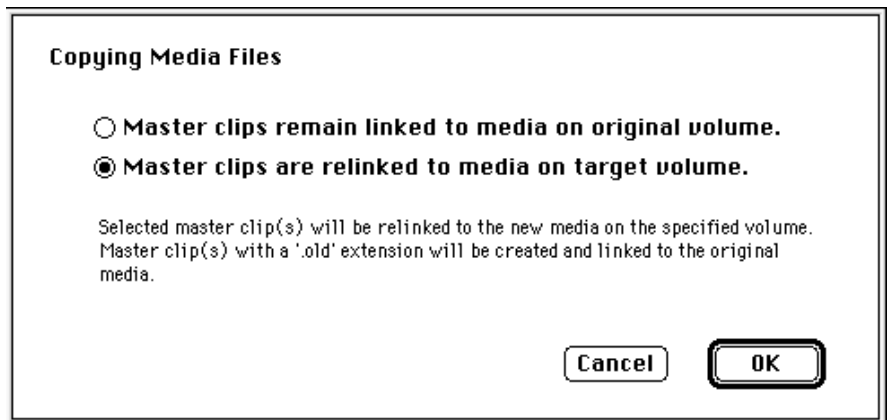
9. Link the original master clips to the new or old media files, according to preference.

10. Click OK.

Another way to back up media files is to copy them directly onto another hard drive in the Finder. You cannot, however, take advantage of the storage-saving features of the Consolidate command, and it is more difficult to identify particular media files when searching directly through folders.

⚠ **Do not make copies of media files in the Finder while the Avid Composer system is running. Also, do not keep duplicate copies of media files online; either delete the originals, take the backups offline, or store the backups in a folder with a different name.**

Loading the Media Database

The media database is a catalog of master clips and precomputes stored on the external media drives. One use of the media database by the Avid Composer system is to display master clips and precomputes in the Media Tool.

Bins also contain references to some of the media files based on the contents of the bin. The Avid Composer system does not maintain the entire database in memory at all times but instead builds up a partial database for the bins that have been opened in the current session in order to preserve as much memory as possible for editing.

If you store the master clips and the edited sequences for a project in separate bins, there are two cases in which you need to load the entire database in order to relink clips to their media files:

• **Redigitizing:** When you redigitize the master clips while the sequences bin is closed; quit the Avid Composer application; relaunch the application and open the sequences bin only — the sequences might appear to be offline.

- **Consolidating:** When you consolidate the master clips and relink them to the consolidated media while the sequences bin is closed; quit the Avid Composer application; relaunch the application and open the sequences bin only — the sequences might appear to be offline.

To update the offline sequences with the new media files, choose Load Media Database from the File menu to load all online master clips and precomputes.

You need not load the media database more than once during a single editing session because the database remains in memory until you quit the application or restart the Avid Composer system.

If a bin continues to display Media Offline after loading the media database, either the media files are missing or the links have been broken. For more information, see <u>"Relinking Media Files" on page 282</u>.

Backing Up Media Files

The MediaFiles folders on your external media drives contain the individual media files created when you digitize source material. Unlike the smaller Composer Project and Avid User folders, these folders are too large to back up onto diskettes.

The following are the options for backing up media files:

- You can use the Consolidate feature, described in the previous section, to make copies of selected media files on a target hard drive connected to the system.

- You can back up smaller projects digitized at low AVRs (AVR 1s–3s, for example) to optical drive cartridges.

- You can archive larger media files and folders to a dedicated mass-storage system, such as AVIDdrive DLT (digital linear tape).

- You can consolidate or make copies of media files for transfer to another system. For more information, see **"Transferring a Project to Another Media Composer Product" on page 664**.

Finding a Related Media File

The Reveal File command allows you to select a clip in a bin and automatically open up its related media file. This is useful if you want to delete, move, or label the media file.

To find a related media file:

1. Select the clip for which you want to find the media file.

   The clip is highlighted.

2. Choose Reveal File from the File menu.

   The system searches on all available drives and opens the folder and highlights the related media files.

	OMFI MediaFiles		
92 items	1.4 GB in disk	553.3 MB available	

	Name	Size	Ki
	Shape Wipe.seq,AniMatte,3.omf	1 MB	
	4. Swimmers Stretch (anima.o...	2.6 MB	
	ARCHIVEV01.B05172B7_AF33...	68 MB	
	ARCHIVEV01.B05172A0_AF33...	26.5 MB	
	ARCHIVEV01.B051728D_AF33...	24.1 MB	
	ARCHIVEV01.B051727A_AF33...	16.7 MB	
	ARCHIVEV01.B0517268_AF33...	13.8 MB	
	ARCHIVEV01.B0517251_AF33...	35.4 MB	
	ARCHIVEV01.B0517241_AF33...	7.9 MB	
	ARCHIVEV01.B0517229_AF33...	15.1 MB	

Related media files

Relinking Media Files

Sometimes after you consolidate or move material between systems, the clips or sequences lose their link to the original media files. When a clip becomes unlinked, it displays the message "Media Offline." If appropriate media exists online, you can use the Relink command to reestablish the link.

◇ Selects

Media Offline message indicates a clip with no link to media files.

MEDIA OFFLINE   MEDIA OFFLINE   MEDIA OFFLINE

draw knife cu   drilling   ducks

282
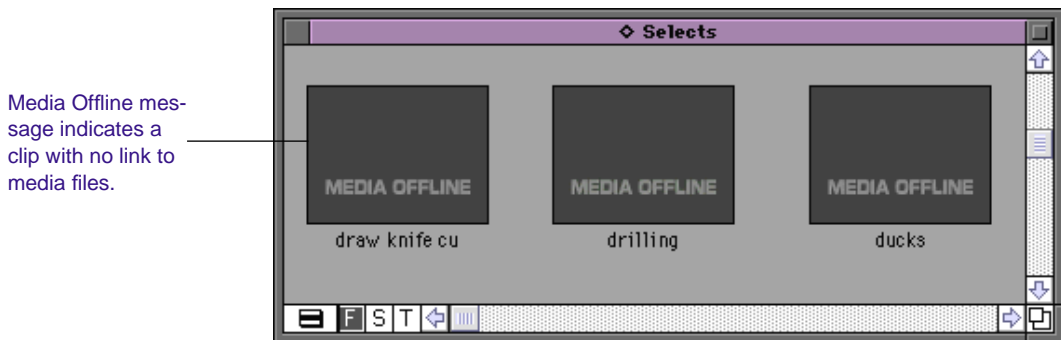
When you select subclips or sequences and choose the Relink command, the system searches for master clips that contain the same material included in the selection.

You can also relink master clips to appropriate media files. The system compares information such as source tape name, timecode information, and channels digitized. If the search is successful, the system establishes new links to the available media files. You can instruct the system to search specific drives, or all available drives.

To relink clips, subclips, or sequences:

1. Select the unlinked object or objects.

2. Choose Relink from the Clip menu.

   The Relink dialog box appears.

```
┌─────────────────────────────────────────┐
│  ┌───────────────────────────────────┐  │
│  │                                   │  │
│  │  Relink                           │  │
│  │                                   │  │
│  │    Volume  ┌──────────────────┐   │  │
│  │            │ All Available Disks│  │  │
│  │            └──────────────────┘   │  │
│  │   ┌·····························┐   │  │
│  │   ┆ ⊠ Relink To Selected      ┆   │  │
│  │   ┆ ☐ Relink Master Clip(s)   ┆   │  │
│  │   └·····························┘   │  │
│  │                                   │  │
│  │     ┌─────────┐   ┌─────────┐     │  │
│  │     │   OK    │   │ Cancel  │     │  │
│  │     └─────────┘   └─────────┘     │  │
│  └───────────────────────────────────┘  │
└─────────────────────────────────────────┘
```
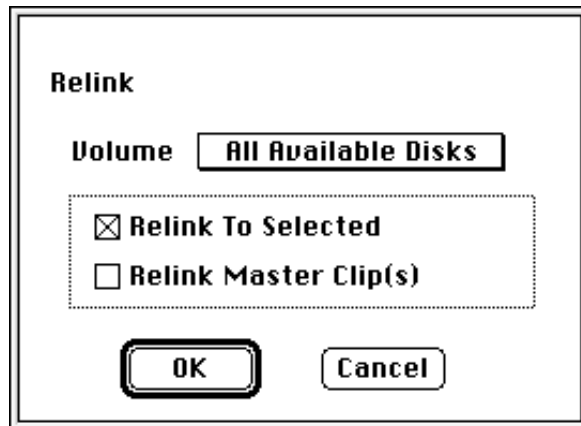
3. Choose an option from the Volume pop-up menu:

   • Choose All Available Disks to search across all drives that are online.

   • Choose a specific drive volume if you know the location of the media, or want to relink to media on a specific drive.

4. Select the option:

- Select Relink To Selected to direct a relinking of related sub-clips or sequences to the highlighted clip in the bin.

- Select the option Relink Master Clips to relink master clips to media files that share similar database information.

5. Click OK. The system searches the selected drives and relinks if possible.

The system disregards capture rate and audio resolution when matching media files.

If you want to be sure to maintain the original capture settings for a subclip or sequence, use the Batch Digitize command; do not use the Relink command.

Relinking to Selected Clips

You can also use the Option key to modify the Relink command for connecting subclips or sequences to selected master clips and subclips.

To relink to selected master clips and subclips:

1. Place the subclips or sequences that you want to relink into the bin containing the clips.

2. Select the clips targeted for relinking.

3. Press the Option key and choose Relink from the Clip menu.

4. The subclips or sequences are linked to the selected clips or sub-clips.

Relinking Consolidated Clips

If the appropriate media exists online, you can reconnect consolidated clips, subclips, or sequences to the new or old media files by choice.

For example, if you consolidated a sequence and forgot to create a duplicate, and later find that you want to use the original media files instead of the consolidated media files, you can break the new link and reestablish the old link to the original files.

> ▤ *Because subclips and sequences do not point directly to the media files, you can only perform this procedure by using the source master clips.*

To relink consolidated subclips or sequences:

1. Select the new master clips for a consolidated subclip or sequence (the clips will have the suffix *.new* attached), and unlink them.

2. Choose Relink from the Clip menu.

3. Target the volume containing the original media files in the Relink dialog box.

   The clips are relinked to the original media.

Relinking Moved Projects

If you move projects between systems with similar media existing at each site, but digitized separately, your clips and sequences will display the message "Media Offline." You can use Unlink and Relink commands to reconnect the files at either site.

For example, if you have a project that requires sharing work repeatedly between two different sites, you can digitize the source material once at each site, and exchange only the project folder at each stage, rather than moving large media drives back and forth. The project folder can be exchanged on 3.5-inch diskette, or instantly across a network. Because the media files maintain slightly different parameters at each site, you must relink the material each time.

To relink a moved project:

1. Select the sequences and unlink them.

2. Select existing clips in the bin.

3. Press the Option key and choose Relink from the Clip menu.

The sequences are relinked to the local media.

Unlinking Media Files

You can use the Control and Shift keys to modify the Relink command for unlinking clips from their media files.

To unlink master clips from their current links:

1. Select master clips to unlink.

2. Press Control-Shift and choose Unlink from the Clip menu.

The clips are unlinked and display the message "Media Offline."

Because subclips and sequences do not point directly to the media files, you can only perform this procedure by using the source master clips.

If you have similar material from different sources, you can duplicate a set of clips, unlink the duplicates, and then modify the sources of the duplicates before digitizing the new source material.

For more information on working with multi-camera material, see **Chapter 18**.

For example, if you are working with multicamera material, you can digitize one reel, unlink the clips, duplicate them several times, and rename their source tapes to batch digitize the remaining reels.

CHAPTER 11

Using Script Integration

The lined script is traditionally used as a tool for managing scene and take information during postproduction on a dramatic feature film or television production.   In Media Composer and Film Composer, script integration allows you to adapt the lined script to the digital realm for use in any type of production, from drama to documentary to spot advertising. The following sections describe these methods:

- **Line Script Basics**
- **Script Window Basics**
- **Manipulating Script Text**
- **Searching Through Script**
- **Linking Clips to the Script**
- **Manipulating Slates**
- **Manipulating Takes**
- **Using Script Marks**
- **Finding Clips and Script**
- **Editing with the Script Window**

Line Script Basics

The conventional lined script — which evolved during decades of trial and error in Hollywood — provides assistant editors and chief editors with a road map that helps them find the coverage they need to edit scenes in a film or television show.

Traditionally, the continuity person creates the lined script on the set at the time of shooting. All notes are handwritten. The following is an example of a scene from a lined script:

88. INT. COUNTRY HOUSE KITCHEN - THAT EVENING:

Elaine bustles nervously in the kitchen, her movements unusually brittle and officious, even for her. Amanda sits at the table and observes Elaine with great intensity, but only when Elaine is not looking.

Laurel comes in from the bedroom with sleep-tossed hair. She yawns as she sits down at the table.

Elaine puts a plate of grey, speckled hot dish in front of Amanda. Laurel eyes it with pleasure.

> LAUREL
> Mm, cream of mushroom.

Elaine lowers a similar plate of hot dish in front of Laurel, but somehow releases her grip a second too soon. The plate hits the edge of the table with a jarring crash.

> LAUREL
> Are you alright, Elaine?

> ELAINE
> I'm fine.

The three eat in silence. Elaine puts down her fork, contemplates Laurel, shrugs, then picks up her fork again and resumes eating.

Explanation of Symbols

Each vertical line drawn through the scene represents a single take from the moment the director says "Action" to the moment the director says "Cut." Each scene might require several camera angles and positions, with one or more takes, all of which are lined and identified alphanumerically.

The following is a brief summary of the lining techniques and numbering system shown in the previous example:

- **Master shot:** The long line drawn through the middle of the scene labeled 88/1 is the master shot that usually covers all the action in a wide shot. The first number in the label indicates the scene number as written on the script (scene 88). The number following the slash indicates that this is the first take captured on film for the master shot. A second take of the master shot, for example, would be labeled 88/2.

- **Additional setups:** The lines for each subsequent camera setup within the scene are labeled with the scene number (88 in our example) followed by a letter for each setup (A, B, C, and so forth), followed by a slash and the number of the take within that setup. These lines can be any length, depending upon what portion of the script is covered by the particular shot.

- **Off-screen dialog**: The jagged lines in the script represent the parts of dialog where the actor is off screen. For example, the character Amanda is off camera during the action described in the second paragraph (when the character Laurel enters), so a jagged line is drawn through the shots that cover Amanda (88A/1 and 2).

When the scene is recorded on videotape — in a sitcom shoot, for example — the line script can also include timecode notes written next to specific lines of dialog that represent a sync point between the dialog on the page and the recorded dialog on tape. These sync points provide assistant editors or chief editors with a quick path to specific points in the source material.

Lining in the Digital Realm

Script integration in Media Composer and Film Composer provides a number of enhancements to this traditional system. These enhancements allow you to shorten dramatically the distance between the concepts captured on the page and the source materials used to assemble a finished program.

Unlike the traditional lining of a script, digital script integration is usually performed after the shoot — by the assistant editor, for example — using the notes of the continuity person. The following is an example of the script shown in the previous section, prepared and lined using script integration:

In addition to the standard lining conventions, script integration includes the following enhancements:

- **Slates**: Takes are organized into slates that display a representative frame and clip name for the take that is currently selected.

- **Takes**: The nodes and lines extending from the bottom of each slate indicate the number of takes for that scene. Click on a node to select the take.

- **Indicators:** You can apply off-screen dialog indicators or colors to indicate such things as preferred takes, takes used in the current active sequence, or line changes in dialog.

- **Script marks**: The double arrows marking the takes at various points represent marked lines of dialog in the script that have been synchronized to matching dialog in the source clip. Script marks are especially effective during editing, allowing the editor to quickly locate dialog and piece together parts of a scene.

The script window provides additional controls for matching back to clips in the source bins, loading and playing back takes, and searching for takes and script text.

Script Integration Workflow

The basic workflow for script integration is as follows:

1. The continuity person or an assistant creates the lined script in hardcopy form on the set during shooting.

2. Source footage from the shoot is prepared and digitized by using methods described in **Chapter 6** and **Chapter 7**.

3. The assistant editor uses the lined script from the shoot, a text file of the script itself, and methods described throughout this chapter to import and line the script, link clips to the script, place script marks, and customize the display of takes prior to editing.

4. The editor uses the fully prepared script window to edit the program.

Using Script Integration in Video Projects

Script integration can be an effective tool for editing any type of production, not just feature films and television drama. For example:

- You can adapt many of the procedures described in this chapter for use in audio/visual scripts for documentaries, corporate spots, news magazine segments, and spot advertisements.

- You can turn script integration into a quick storyboarding tool by positioning selected slates in the script window and printing out storyboard bins that include your script.

The following is an example of an audio/visual script for a news magazine piece, imported into the script window, with most of the basic features of script integration applied.

Narration track is synced to the script.

All possible B-roll shots are ready to be loaded and cued. Color indicates preferred shots.

Music cuts are linked to appropriate sections of the script.

Within the script window:

Eco Challenge Script

FADE UP: WIDE SHOT, START OF RACE
SOT: People screaming at the start of the race.

CUT TO:
MONTAGE OF CANOERS, RAFTERS, ETC. (SOUND UNDER)

VOICE-OVER:
250 ATHLETES FROM AROUND THE WORLD ARE IN SOUTHERN UTAH THIS WEEK TO COMPETE IN THE ECO
CHALLENGE ADVENTURE RACE.

DISSOLVE TO: TEAM INTERVIEW SHOTS (SOUND UNDER)

VOICE-OVER:
50 TEAMS ARE PARTICIPATING IN THE 370 MILE SEVEN DAY RACE.   IT IS BILLED AS THE TOUGHEST
ENDURANCE COMPETITION IN THE WORLD.

OVERLAP CUT TO: MOUNTAIN CLIMBER
MOUNTAIN CLIMBER SOT:
You got to love this. Why can't you get paid
to do this stuff?

PAGE WIPE TO: MONTAGE OF ATHLETES

VOICE-OVER:
IN TEAMS OF FIVE, ATHLETES SET OUT ON HORSEBACK, CANOE, BICYCLE AND FOOT.

Script Window Basics

This section describes basic procedures for creating and manipulating script windows, including importing script text; navigating through the script; displaying clip information; opening, closing and saving windows; and adjusting margins.

Before you begin creating script windows, make sure you have established the proper defaults in Script Settings for font, margin, and display of frames and takes, as described in the Avid Media Composer Products Reference. These parameters can also be changed manually, as described throughout this chapter.

293

Importing a Script

The first step in script integration is to import a script in the correct format.

⚠ **The imported script must be in ASCII text format. However, to maintain the original formatting, export the script from your word processor by using the "text with layout" option. If you export the script as "text" only, the formatting will be lost.**

To import a new script:

1. Place the file in a directory that is available to your system in one of the following ways:

   • Transport the file on a diskette and copy it to your internal hard drive.

   • Place the file in a network location that you can access from your system.

2. From within the Media Composer application, choose New Script from the File menu.

   A directory dialog box appears.
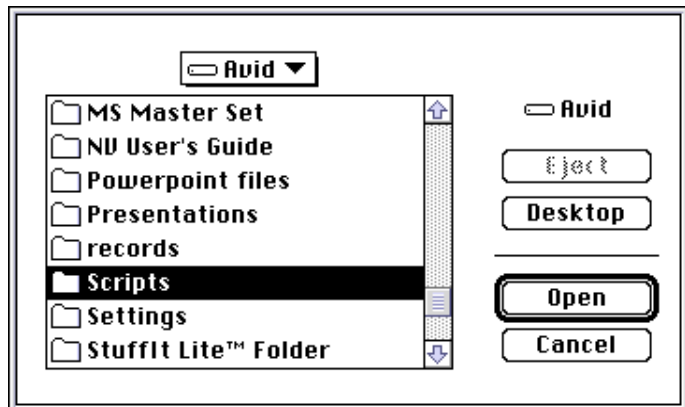
3. Locate the file and double-click it, or select the file and click Open.

The system creates a new bin named after the project by default. The script, with its original layout, appears in the bin.

4. Change the name of the script bin by clicking the title in the Project window and typing a new name.

Opening, Closing, and Saving the Script Window

The script window behaves in many respects like a bin:

- When you make changes in the script window, a small diamond icon appears in the title bar to indicate that the changes have not yet been saved.

- You perform a save by choosing Save Script from the File menu.

- Auto-save functionality also applies to the script window, based on parameters established in the Bin settings.

- Script window files are saved in the folder for the project along with bins, and backup copies are automatically stored in the Attic folder.

- You can use the Open and Close commands in the File menu to open additional script windows and add them to the Project window, or to close script windows.

Displaying Clip Information in a Script Window

To open the Clip Information window from a script window:

1. Press the Option key and click the take tab.

2. Drag the window to a new location to leave the window open.

For information on the Clip Information window, see **"Using the Clip Information Window" on page 232**.

Navigating in the Script Window
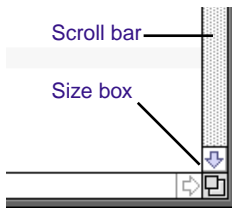
Scroll bar

Size box

After importing a script, you can navigate to any point in the text by using basic techniques available in most word processors:

- Use the scroll bar on the right to scroll up or down.

- Resize the window by dragging the size box in the lower right corner.

- Press the Page Down or Page Up key to move a screen at a time.

- Press the Home or End key to move to the beginning or end of the script.

- Press the Up Arrow or Down Arrow key to move your line selection up or down by one line.

You can also use several search features, as described in "Searching Through Script" on page 302.

Adjusting the Script Margins

Script	4:21 AM
Delete Take	
Color	▶
Goto Scene...	
Add Scene...	
Goto Page...	
Add Page...	
✓Show Frames	
✓Show All Takes	
Left Margin...	
Interpolate Position	

You can resize a script window at any time to show more script or to enlarge the right margin by dragging the size box in the lower right corner.

The default size of the left margin is established on import, based on the current Script settings. You can also override the margin setting and adjust the left margin after importing the script.

To adjust the left margin of an imported script:

1. Choose Left Margin from the Script menu.

   The margin dialog box appears.

```
┌─────────────────────────────────────────┐
│  Left Margin (pixels):  [0        ]      │
│                                          │
│         ( Cancel )  (   OK   )           │
└─────────────────────────────────────────┘
```

2. Type a new margin size, in pixels, into the text entry box and click OK.

The script window reflects the new setting.

Manipulating Script Text

After importing a script, you can customize its appearance by changing the font and font size. You can also cut, copy, paste, or remove lines of script to reflect changes that might occur in the course of a project.

Changing the Font of the Script

The default font and font size used in the script are established on import, based on the current Script settings. You can also override the settings and change the font and size after importing the script.

To change the font and size of imported script:

1. Choose Set Font from the Edit menu.

The font dialog box appears.

| Font: | Courier ▼ |
| Size: | 12 |

Cancel   OK
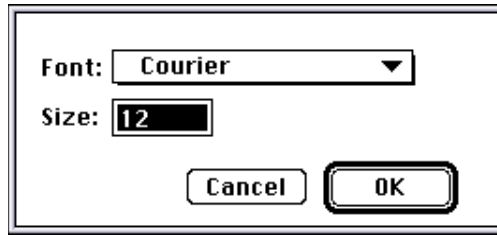
2. Choose a new font from the pop-up menu. The menu includes all fonts currently installed in the Fonts folder of the Macintosh System Folder.

3. Type a new font size into the entry box and click OK.

The script window reflects the new settings.

As you enlarge font size, the available sizes for the slate frames also increase. This can be useful for presentation or screening purposes, when you need to display extra-large text and slate frames for a large audience or across a room. For information on enlarging slate frames, see "Resizing a Slate" on page 308.

Selecting Text

Selecting text in the script window is similar to making selections in a word processor, except that the smallest unit you can select is an entire line of text.

To select a single line of script, click anywhere in the line to highlight it.

Selected lines are highlighted.
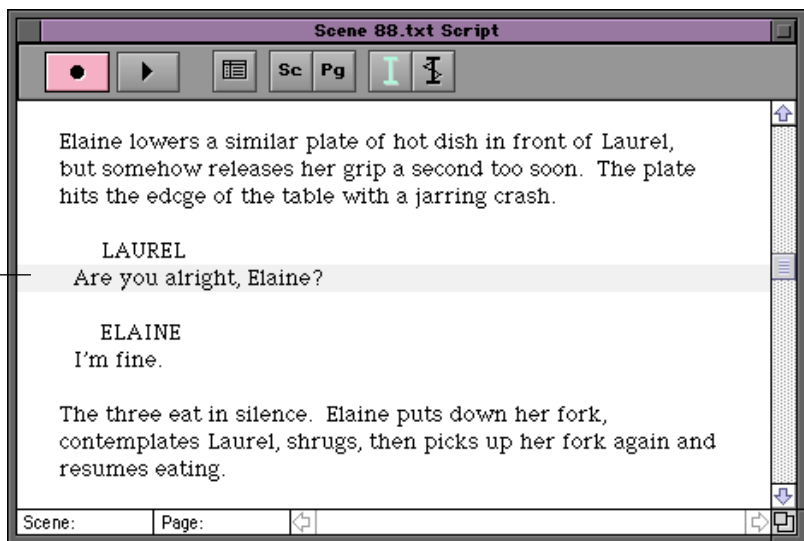
To select several lines of script, use one of the following methods:

• Lasso the first line of the selection and drag through the text. As you drag, a box appears to outline your selection.

Lasso a portion of script to select it.
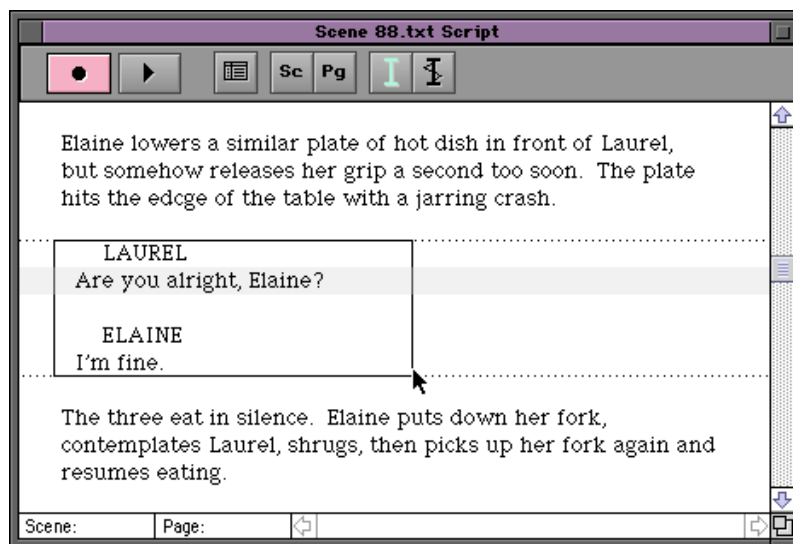
Release the mouse button when you finish lassoing the chosen lines. The text is highlighted.

• Click the first line of the selection, then press the Shift key and click the last line. The entire block of text is highlighted.

You can also extend a selection by pressing the Shift key and clicking a line of text preceding or following the current selection.

Cutting, Copying, and Pasting Script

You can cut, copy, and paste text in the script just as you would in a normal word processor. However, because you cannot select individual words or characters, you can only move lines or paragraphs.

You cannot undo cut, copy, or paste procedures in the script window.

To cut or copy and paste lines of script:

1. Select the lines.

2. Press ⌘–C to copy, or ⌘–X to cut.

3. Select the line below the location where you want to insert the text.

4. Press ⌘–V to paste the text.

   If only one line is selected at the insertion point, an alert message asks if you want to replace the selected line.

Do you wish to replace the selected line

| Replace | Insert Before | Insert After | Cancel |
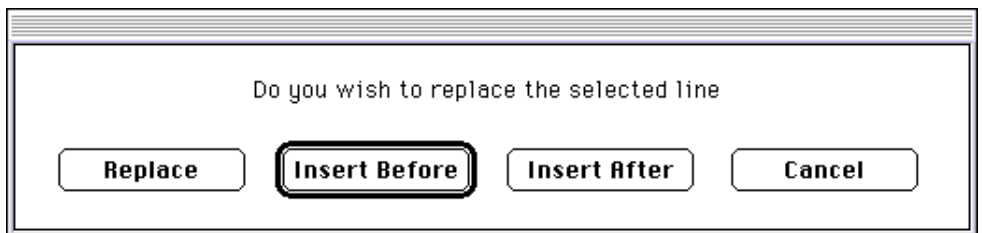
5. Select one of the following:

- Click Yes if you selected lines at the insertion point that you want to overwrite.

- Click No if you want to insert the text above the selected line.

The text is pasted into the script.

To rearrange or rewrite individual words or characters in the script, you should make the changes in a word processor before importing them into a separate script window. You can then use the procedures in this section to copy and paste the new lines into the existing script window, overwriting the incorrect lines.

Removing Script Text

You cannot delete lines of text from the script window by using the Delete key as you would in a normal word processor. Use the Cut command to remove the text instead.

To remove lines of script:

1. Select the lines of script you want to delete.

2. Press ⌘–X to cut the text from the script.

Unlike a normal deletion, the text remains in the Macintosh Clipboard until the next time you copy or cut a selection.

Searching Through Script

Script integration provides a number of search tools you can use during the preparation phase, during editing, or during screenings. You can apply and search for page or scene numbers, or you can conduct a full-text search.

Using Page and Scene Numbers

When you add page and scene numbers to the script window, you gain the ability to search for them during preparation of the script and during editing. You can customize page and scene numbering by adding, changing, and moving the numbers as necessary.

Adding a Page or Scene Number

To add a page or scene number:

1. Select the line of the script at the beginning of the scene or page.

2. Click the Add Scene or the Add Page button in the script window tool bar, or choose Add Scene or Add Page from the Script menu.

   The Add Scene or Add Page dialog box appears.

   Add Scene:

   [Cancel]   [OK]
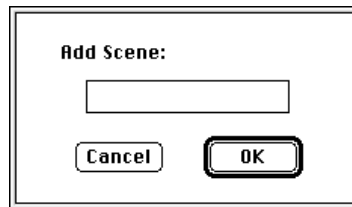
3. Type the number for the scene or page, and click OK.

In the case of a scene, the number appears in the left margin next to the first line of the selected region.

New scene number

Scene/page status bar
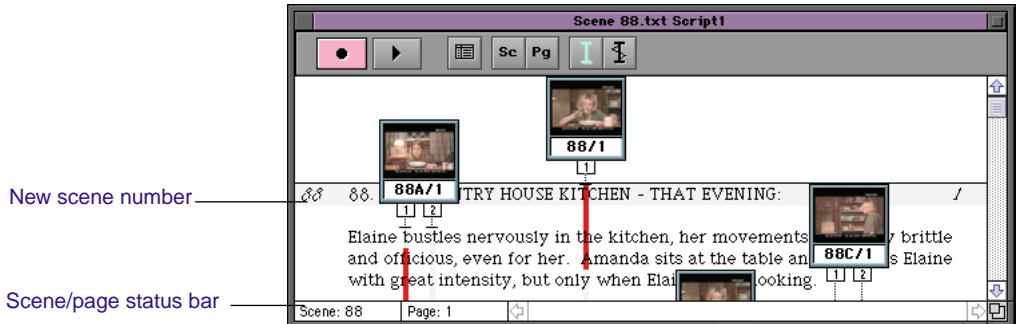
Scene and page numbers both appear in the status bar at the bottom of the script window, and reflect your current position within the script. Each scene or page number will continue throughout the script until you mark another line as the beginning of a new scene or page.

Changing a Page or Scene Number

You can change a scene or page number both to correct any errors that occur when adding numbers, and to reposition scene and page numbering to match script changes during postproduction.

To change a page or scene number:

1. Select the beginning line of the previous scene or page.

2. Click the Add Scene or Add Page button in the script window tool bar, or choose Add Scene or Add Page from the Script menu.

   The Change Scene or Change Page dialog box appears.

Change Scene:

```
1
```

[Cancel] [OK]
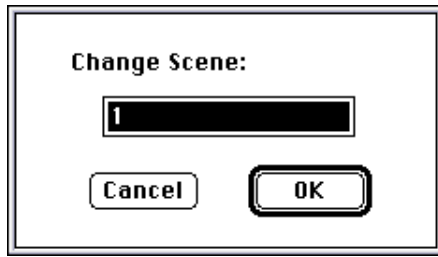
3. Type a new number for the scene or page and click OK.

4. If the renumbering affects page or scene numbers that precede or follow the current change, then repeat these steps as necessary.

Deleting a Page or Scene Number

To delete a page or scene number:

1. Select the first line of the scene or page.

You can also delete all page or scene numbering throughout a range of the script by selecting the range of lines, or the entire script.

2. Press the Delete key.

The Delete dialog box appears.

Delete

☐ Delete 0 take(s).
   ☐ Delete 0 mark(s).
☐ Delete 1 scene(s).
☐ Delete 1 page break(s).

[OK] [Cancel]
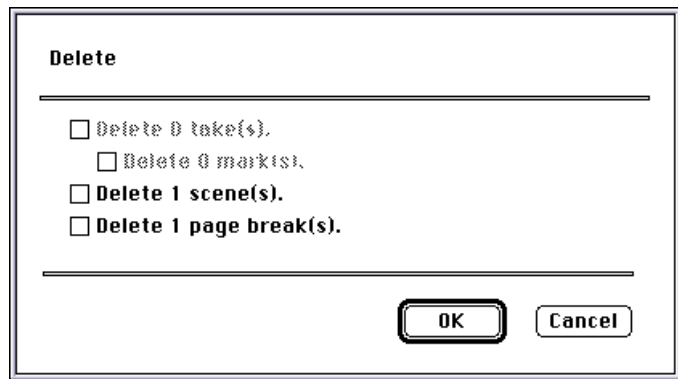
3. Select the options for Delete scene or Delete page break(s), as appropriate, then click OK.

The numbering is deleted from the script window.

Searching for a Page and Scene Number

Once you have added scene and page numbers, you can search for them quickly during editing.

To search for a page or scene number:

1. Choose Goto Page or Goto Scene from the Script menu.

You can also click on the page or scene display in the status bar at the bottom of the script window.

A dialog box appears.

2. Type the number of the scene or page and click OK.

The script window scrolls to the page or scene, and the first line of script is highlighted.

Conducting a Text Search

To search for text in the script:

1. With the script window active, choose Find from the Edit menu.

The Find dialog box appears.

2. Type the text you are looking for.

3. Select one of the optional search parameters, when appropriate:

- Choose Ignore case if you do not want the search to be case sensitive.

- Choose Whole word if you do not want the search to highlight instances where your text is one part of another word.

4. Click OK.

The first occurrence of the text is highlighted in the script window.

5. Choose Find Again from the Edit menu to search for the next occurrence of the text.

Linking Clips to the Script

To link clips to the script:

1. Open the script bin.

2. Open the source bin for the clips that you want to link to the script.

3. (Option) Sort the source clips to make the job easier:

   • You can sort the Scene/Take column for an alphanumeric list of clips that matches their relative order in the script.

   • If you are not working with scene and take information (for example, in a video documentary project), you can provide your own numbering for the clips in a custom column, or you can sort the clips manually in Frame mode according to their order in the script. For more information on adding a custom column, see **"Adding Customized Columns to a Bin" on page 247**.

4. Select the portion of the script that is covered by the first clip or clips.

5. Select the clip or clips in the source bin and drag them to the high-lighted text.

New selects

Name	Take	Duration
88/1	1	10:20
88A/1	1	2:36:24
88A/2	2	2:36:24
88B/1	1	10:20
88B/2	2	15:04
88B/3	3	15:04
88C/1	1	15:17
88C/2	2	15:17
88D/1	1	10:20
88D/2	2	10:20

F S T   Statistics.1

Scene 88.txt Script

Elaine lowers a similar plate of hot dish in front
but somehow releases her grip a second too soo
hits the edge of the table with a jarring crash.

    LAUREL
Are you alright, Elaine?

    ELAINE
I'm fine.

The three eat in silence. Elaine puts down her f
contemplates Laurel, shrugs, then picks up her
resumes eating.

    LAUREL

Scene: Page:

Drag a clip or several clips to
the highlighted text.

A slate frame appears above the text, with one or more of the takes
covering the scene as lines.

The slate appears.

◇ **Scene 88.txt Script**

    LAUREL
Mr   of mushroom.

Elai   a similar plate of hot dis
but 88C/1 releases her grip a seco
hits the edge of the table with a jarri

    LAUREL
Are you alright, Elaine?

    ELAINE
I'm fine.

Scene: Page:
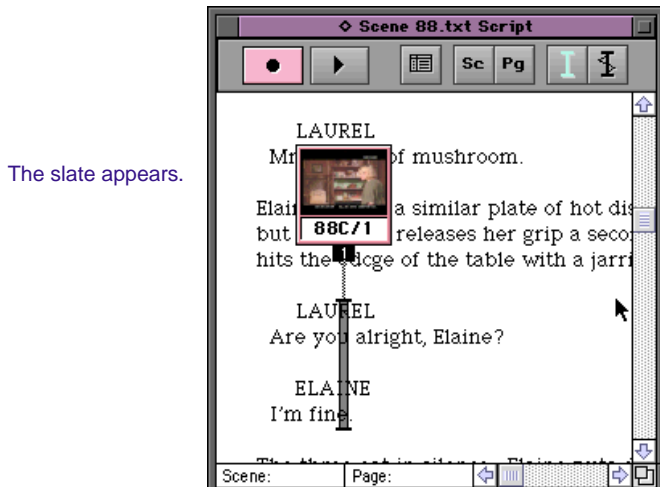
6. Continue to apply clips to additional portions of the script until
you have finished creating all your slates.

Alternatively, you can create slates one at a time, place script
marks, and fine-tune the lining of each scene before proceeding to
the next portion of the script.

307

Manipulating Slates

Once you create a slate by dragging a clip into the script window, you can manipulate the slate's appearance and position.

Selecting Slates

There are several ways to select slates:

- Click a slate to select it.

- Shift-click additional slates to select all the active takes.

- Drag a lasso through a region of the script containing slates. All slates and takes within the lasso are selected.

Selecting multiple slates is especially useful when you are adding or deleting color or off-screen dialog indicators across takes, as described in "Manipulating Takes" on page 311.

Resizing a Slate

You can resize a slate the same way you resize frames in the bin in Frame mode:

- To enlarge a slate, select it and press ⌘–L or choose Enlarge Frame from the Edit menu.

- To reduce a slate, select it and press ⌘–K or choose Reduce Frame from the Edit menu.

You can enlarge the font size of the script to increase the size of the slate frames. This can be useful for presentation or screening purposes, when you need a large display for an audience. For information on resizing the font, see "Changing the Font of the Script" on page 297.

Hiding Slate Frames

By default, the system displays a representative frame for each take in the slates. You can hide this frame display and show only the clip name to simplify the interface or speed up scrolling and movement in a complex script window.

To hide the slate frames, choose Show Frames from the Script menu. The script window shows only the clip names for the takes.
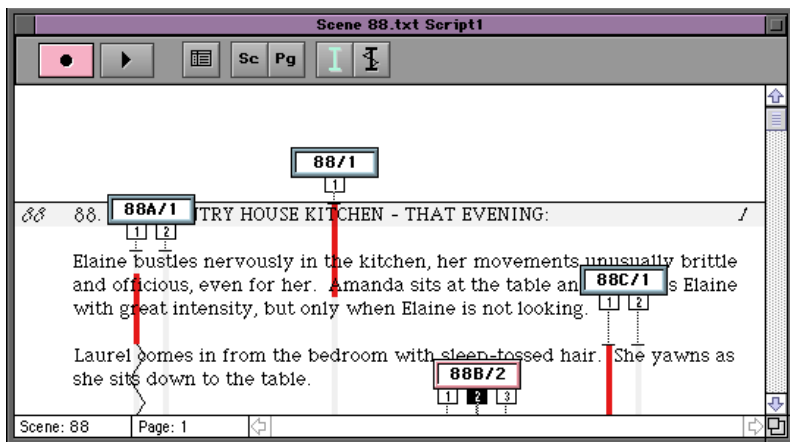
To restore the frames, choose Show Frames again.

Showing One Take Per Slate

You can display only one representative take per slate to minimize clutter on the screen.

To show one take per slate, choose Show All Takes from the Script menu. The script window shows only the first take in each slate.

A single take is shown.

To display all the takes, choose Show All Takes again.

Moving a Slate

You can adjust the position of slates to make room for more slates, to avoid blocking words, or to display takes over specific lines.

To move a slate, use one of the following methods:

- To move a slate horizontally, click the slate and drag it to the left or the right. (If necessary, resize the script window by dragging the size box.)

- To move a slate vertically without moving the position of the take lines in the script, click the slate and drag it up or down. The take lines remain fixed over the text to which they have been previously linked.

- To move the slate and all its take lines vertically to a new location in the script, press the Command key, then drag the slate to the new location.

As you move the slate, the takes continue to cover the same number of lines in the script. To lengthen or shorten the number of lines covered in the takes at the new location, see "Adjusting Take Lines" on page 314.

Deleting a Slate

Occasionally you might need to delete a slate — for example, when you find that the takes in the slate are no longer needed.

When you delete slates and takes from the script window, the digitized source clips remain in the source bins.

To delete a slate:

1. Select all the takes in the slate by pressing the Shift key and clicking the tab for each take.

2. Press the Delete key.

   The Delete dialog box appears, indicating the number of takes to be deleted.

3. Click OK to delete the takes.

   The slate and all its takes are deleted from the script.

Manipulating Takes

Script integration provides a number of tools and techniques for manipulating the relationship between lined takes in the script window and their source clips, as described in this section.

Selecting Takes

To select takes, use one of the following methods:

- Click any take tab to select it. The outline of the take becomes bold to indicate that the take is active.

- Shift-click additional takes in the same slate or across slates to select them.

- Drag a lasso through an entire region of the script. All takes within the lasso are selected.

Selecting multiple takes is especially useful when adding or deleting color or off-screen dialog indicators, as described in "Indicating Off-Screen Dialog" on page 315, and "Using Color Indicators" on page 316.

Adding Takes

To add another take to an existing slate:

1. Select the region of the script that the take covers.

2. Open the bin where the clip for the take is located.

3. Drag the clip to the slate.

   The new take appears in the slate and is applied to the selected region of the script.

Deleting Takes

As you screen clips, you might find that a take has been applied to the wrong scene and should be deleted from the slate. Or, you might decide to delete a bad take to simplify the script interface for the editor.

To delete one or more takes:

1. Select the takes.

2. Press the Delete key.

   The Delete dialog box appears.

3. Click the Delete Takes checkbox, then click OK.

The takes are deleted.

Displaying Take Numbers

To display take numbers within the tab of each take, enter the numbers in the Take column of the source bin for the clips.

Numbers in the Take column appear in the tabs for each take.

Changing the Representative Frame for a Take

To change the representative frame that appears in the slate for a take:

1. Select the take.

2. Press the appropriate J-K-L (step) keys on the keyboard to advance the footage displayed in the slate forward or backward to the frame you want.

You can also select multiple takes and advance them all at once.

Loading Takes

You can load individual takes into the Source monitor one at a time, or you can load multiple takes, as follows:

- Double-click any take tab.

- Select multiple takes, then double-click any take in the selection.

Playing Takes

There are two ways to play back a take:

- Double-click a take to load it into the Source monitor, then click the Play button or press the Play key.

  The clip plays back and stops when it reaches the end.

- Select a take in the script, then click the Play button at the top of the script window.

  The clip loads and plays back in a continuous loop until you press the space bar. If you selected more than one take, each take will play in sequence.

Adjusting Take Lines

As you screen clips in the script, you might find that a take or group of take lines should begin earlier or end later in the script. You can adjust the take lines by moving the beginning mark, the end mark, or both.

To change the length of a take line:

1. Press the Command key (⌘).

   Notice the movement icon that appears when you point the cursor at either end of the take.

2. Click the end mark or beginning mark of a take and drag it until you reach the correct line in the script.

3. Press the Command key and drag the opposite end of the take to a new location if necessary.

4. Repeat the procedure for other takes in the slate as necessary.

Indicating Off-Screen Dialog

In the traditional lined script, you indicate off-screen dialog by drawing a jagged line next to the dialog. You can apply a similar effect to lines in the script window.

To indicate off-screen dialog:

1. Select the range of script containing the off-screen dialog.

2. Select one or more takes that you want to mark with the off-screen indicators.

3. Click the Off-Screen button in the script window tool bar.

   The indicators appear, superimposed on the selected takes. You can toggle the indicators on or off by clicking the button repeatedly.

To remove one or more off-screen indicators:

1. Select the range of script containing the off-screen indicators.

2. Select only those takes that display the indicators.

3. Click the Off-Screen button.

Using Color Indicators
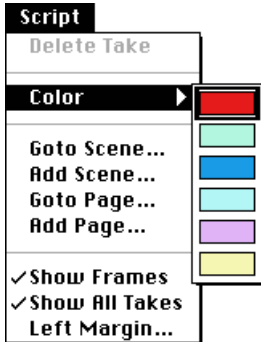
You can use color to indicate several pieces of information, including:

- Preferred takes or takes used in the current active sequence

- Picture versus audio track used in the current active sequence

- Line changes in dialog

- Use of multiple cameras

To apply color to takes:

1. Choose a color from the Color submenu of the Script menu.

2. Select the region of the script that covers the range within the take or takes that you want to highlight with color.

3. Select one or more takes.

4. Click the Color button in the script window tool bar.

   The color appears only in the highlighted script region of the selected takes. You can toggle the indicators on or off by clicking the button repeatedly.

To remove one or more color indicators:

1. Select the range of script containing the color indicators.

   The first take in the selected region determines the color indicator status displayed in the Color button.

2. Select only those takes that display the indicators.

3. Click the Color button.

Using Script Marks

Script marks allow you to synchronize individual lines of script with matching points in digitized clips. When you place a mark in the

script, an IN mark also appears in the clip when you load it into a monitor for editing. This provides line-by-line control over alternative takes that the editor can instantly load and edit into the sequence.

You can place script marks one take at a time, or you can automate the process of screening and marking selected takes in a playback loop.

Placing Script Marks Manually

To place script marks manually:

1. Map the Add Script Mark button from the Command Palette to a user-customizable palette or to the keyboard.

2. Double-click in the script window at the intersection of a take and the line of dialog that you want to mark.

Intersection of take and line of dialog
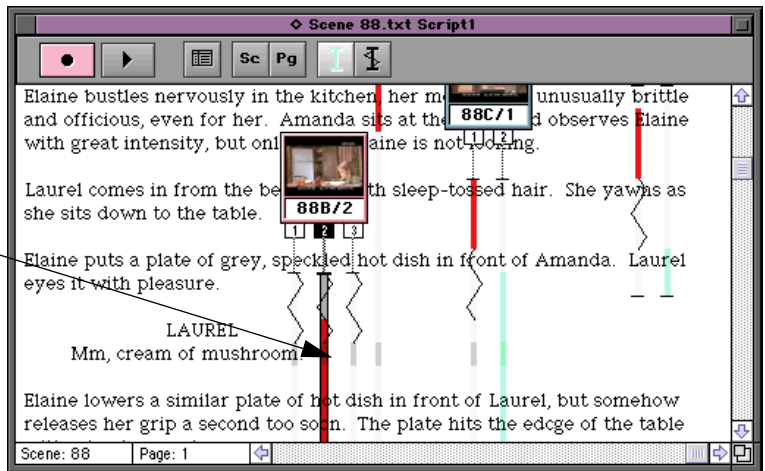
The take is selected in the slate, the chosen line of the dialog is highlighted, and the clip loads into the Source monitor.

3. Click or press Play. The take plays in the monitor.

Alternatively, you can step (jog) or shuttle through the footage, place the position indicator on the exact frame, or scrub the audio

to find the exact line of dialog. The clip does not have to be playing.

4. When the playback reaches the chosen line of dialog, click the Add Script Mark button or key.

   The line is marked in the script window with a small horizontal bar, and play stops.

The script mark appears

5. Repeat these steps to add additional script marks.

Automating Screening and Marking

The script window provides controls for automating the process of screening and placing script marks for a single take or across multiple takes.

To use automated screening and marking:

1. Select one or more takes.

2. Click the Record Marks button in the script window tool bar.

   The first selected take turns green in the script window, the system automatically loads the clip into the Source monitor, and the clip begins to play.

Several takes are selected for automated playback.

Current playback is highlighted in green.
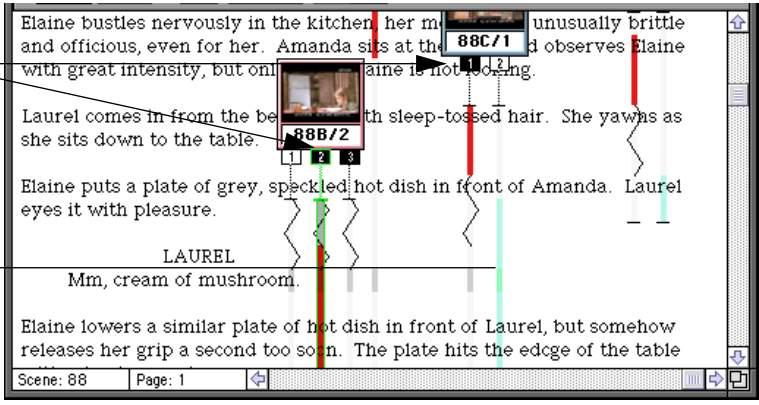
3. As you hear a line of dialog (or see a particular shot) that you want to mark, click the matching line in the script window.

   A script mark appears at that location in the take, and the clip continues to play.

4. Continue to mark additional sync points by using one of the following methods:

   You can scroll through the script window without affecting playback.

   • Click a line that already contains a mark to replace the previous mark and update the sync point in the clip.

   • Click a line in the script before or after the range of the existing take line, and the mark will be added while the take line is extended to include the new line.

   • Use variable-speed play controls (J-K-L keys on the keyboard) to shuttle, step, or pause during playback.

   • Press the Tab or Shift-Tab keys on the keyboard to begin playback of the next or the previous take.

   As each take reaches its end, the system automatically loads and plays the next take.

5. Continue to place marks until all takes have been screened.

6. To stop the playback loop, press the space bar.

Loading and Playing Marked Segments

Once you have placed marks syncing lines in your script to points in the source clips, you can quickly load and cue takes for selected lines of dialog. You can load a single take, or you can load all the coverage for any given range of lines.

To load the marked segment of a take, click the script mark at the line of dialog that you want to cue.

The take is loaded into the Source monitor and cued to the synced line of dialog. An IN mark is placed at the sync location.

To load all the coverage for a range of lines:

1. Select the lines in the script window, dragging through all intersecting takes.

   The script lines and takes are highlighted.

2. Click the Play button in the script window if you want to screen the takes for those lines, or click the Record Marks button if you want to add script marks.

   The takes load and play back one after another. You can use the Tab key or J-K-L keys to jump between takes and control playback.

Moving a Script Mark

When you move a script mark up or down, the mark in the source clip remains at the same frame, but is resynced to a new line in the script.

To move a script mark:

1. Press the Command key.

   Notice the movement indicator that appears when you point the cursor at a mark in the script.

2. Click the mark and drag it to the new position.

Deleting a Script Mark

When you remove a script mark, you do not delete the marked portion of the take, only the sync point between the script and the source clip.

To delete a script mark:

1. Click once on the mark. (If you double-click, you will load the clip and make the Source/Record window active.)

2. Press the Delete key.

   The Delete dialog box appears.

3. Click OK. The mark is deleted.

Finding Clips and Script

After you have placed script marks, synchronizing lines in the script window to frames in the source clips, you can use the Find Bin or Find Script buttons to search back and forth between the two.

Finding Script

The Find Script button allows you to quickly match back from currently loaded clips to portions of script in the script window to which the clip has been linked.

To find the script linked to a loaded clip:

1. Place the position indicator in the clip at the line of dialog (or within a range of dialog) that you want to find.

2. Click the Find Script button.

   The script window instantly scrolls to and highlights the portion of script that most closely matches the clip location.

Finding Clips and Bins from the Script

Script integration allows you to search instantly through bins and find the source clips for takes that have been linked to the script. You can search on a single take, or on multiple takes across several slates.

To find source clips and bins:

1. Select the takes that you want to find.

2. Click the Find Bin button in the script window tool bar.

   The system searches through bins linked to the project, opens the bin containing the linked clips, and highlights them in the bin.

	Name	Duration	Take
	88/1	10:20	1
	88A/1	2:36:24	1
	88A/2	2:36:24	2
	88B/1	10:20	1
	88B/2	15:04	2
	88B/3	15:04	3
	88C/1	15:17	1
	88C/2	15:17	2
	88D/1	10:20	1
	88D/2	10:20	2

New selects — F S T — Statistics.1

Editing with the Script Window

Using the script window in combination with the Single Mark Editing feature, an editor can conduct a highly streamlined form of editing. To use the script window most effectively during a session, make sure:

•   The script window is fully prepared, including preferred takes, alternative takes (indicated with colors), and script marks for matching lines of text to sync points in the clips.

- The Single Mark Editing option is enabled in Composer settings. This option allows you to skip several steps by performing edits on-the-fly while playing back clips (without marking OUT points). For more information, see **"Using Single Mark Editing" on page 386**.

Script Editing Workflow

To quickly assemble a rough cut from the script window:

1. Open the script window for the current cut.

2. Double-click the first preferred take and load it into the Source monitor. The IN point is already marked and cued.

3. Play the take until the appropriate OUT point is reached, and click the Splice-in or Overwrite button to make the first edit.

4. Prepare the sequence for the next edit:

    a. Create new tracks if necessary.

    b. Enable the appropriate source and record tracks.

    c. Patch the tracks if necessary.

    d. Mark an IN point in the sequence for the next edit.

5. Double-click the next preferred take to load it.

6. Play the clip until you reach the appropriate OUT point, and perform the edit on-the-fly.

7. Repeat steps 4 through 6 until you have walked through the entire scene or segment.

8. Fine-tune the edits by using normal trimming and editing procedures. Continue to use the script window to quickly load and cue alternative takes as necessary.

Splicing a Script Range

During editing, you can use the Control key to instantly splice clips linked to ranges of script directly from the script window into the sequence. To use this feature with accuracy, you should carefully mark the ranges of script during the screening and marking phase.

To splice a range:

1. Mark an IN point or place the position indicator at the location in the sequence where you want to splice in the segment.

2. Press the Control key. Notice that the Splice-insert arrow appears when you point to a take.

3. Double-click the preferred take within the range of dialog that has been marked.

   The marked section of the clip is spliced into the sequence.

Revising the Script

During or after each session, or when a scene or segment is completed, the editor or assistant editor can update the script window to reflect the final edit decisions made during the day.   In this way you can maintain a complete record of the elements used to construct the scene or segment, as well as all existing alternatives. When further changes or repackaging are required, you can quickly retrieve all the source material in one window.

Interactive Screenings

The script window can be an invaluable tool during screenings of work in progress, allowing you to:

• Quickly search for scenes and pages with clips attached for instant retrieval.

- Match back and cue source material to compare alternative takes.

- Quickly find and open bins for retrieval of additional material not included in the script window.

- Enlarge the script font and slate frames for better viewing by your audience.

The script window provides a visual, interactive look at the content of the original script versus the elements in the final piece.

All alternative takes are available for viewing and comparing.

Matching colors indicate takes used in the preferred cut as well as alternative cuts.

You can mix down alternative cuts to form master clips and place them alongside the script.

CHAPTER 12

Viewing and Marking Footage

Before making your first edit, you can review your footage, add locators to clips, mark IN and OUT points, or create subclips. By viewing and marking your material in advance, you can concentrate on editing and refining your sequence at a later time without having to pause and set marks each time you load a new clip. Complete techniques for playback, viewing, and subcataloging clips are described in the following sections:

- **Customizing the Composer Window**
- **Viewing Methods**
- **Using the Window Zoom Box**
- **Loading and Clearing Footage**
- **Controlling Playback**
- **Marking and Subcataloging Footage**
- **Finding Frames, Clips, and Bins**
- **Using the Manual User Interface (MUI)**

Customizing the Composer Window

The Composer window is central to the editing process, providing all the essential controls for viewing, tracking, marking, and editing source and record footage.

The Composer window consists of all the elements displayed by default in the Edit monitor. The upper region of the screen constitutes Source/Record mode. The lower region constitutes the Timeline window.

Composer window

Source/Record window

Timeline window
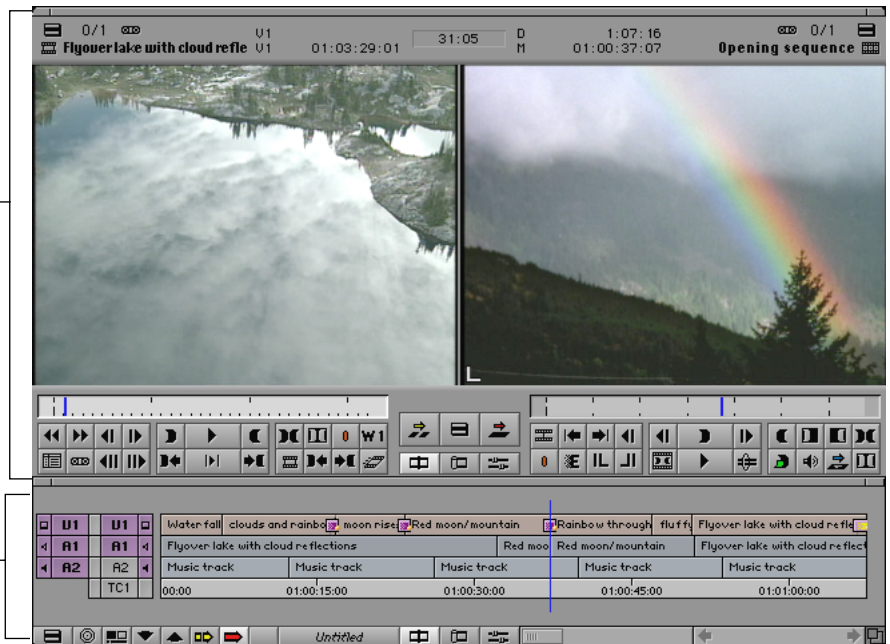
Use the Composer Settings dialog box and various pull-down menus within the Composer window to configure displays and functions.

You can learn about Composer settings as follows:

- For an overview of all Composer settings, see the *Avid Media Composer Products Reference.*

- For more information on the following settings, see the applicable sections in this guide:

    - Digital audio scrub parameters (see **"Using Digital Audio Scrub" on page 484**)

    - Play Multicamera Singularly option (see **Chapter 18**)

    - Sync Point Editing (see **"Using Sync Point Editing" on page 567**)

    - Phantom Marks option (see **"Using Phantom Marks" on page 386**)

    - Options for creating tracks in the Timeline (see **"Adding a Track" on page 443**)

In addition, you can:

- Map various buttons onto command palettes or the keyboard, as described in **"About Button Mapping" on page 96**.

- Display or hide labels on buttons by using Interface settings, as described in **"Reviewing Basic Settings" on page 63**.

- Configure the appearance of the Timeline as described in **"Customizing Timeline Views" on page 399**.

Changing the Source/Record Window Background Color

To change the background color of the Source/Record window:

1. Click in the Source/Record window to make it active.

2. Choose Set Composer Background from the Edit menu.

3. Choose a shade of gray for the background from the pop-up palette.

Using the 16 x 9 Display Format

Releases 6.0 and later of the Avid Composer system support the 16 x 9 display format for standard NTSC and PAL signals. This option allows you to display the full aspect ratio of wide-screen video in the Source and Record monitors during editing.

📄 *The 16 x 9 preference does not enable the use of 16 x 9 HDTV (High Definition Television) video with the Avid Composer system. You can, however, transfer HDTV to NTSC or PAL videotape formats that you can digitize for offline editing.*

To enable the 16 x 9 display:

1. Click the Settings button in the Project window.

2. Double-click Composer in the Settings scroll list. The Composer Window Settings dialog box appears.

16 x 9 option

Composer Window Settings (Current)

☒ First (lower) Row of Info
☐ Second Row of Info
  ☐ Digital Scrub Parameters
☐ Center Duration

☐ Play Multicamera Linecut
☒ Big Source/Record Monitors
☐ 16 x 9

Color Framing   Off ▼

☐ Sync Point Editing (Overwrites)
☐ Single Mark Editing
☐ Phantom Marks
☒ Auto-create New Tracks
☒ Auto-enable Source Tracks
☒ Copy Source Locators
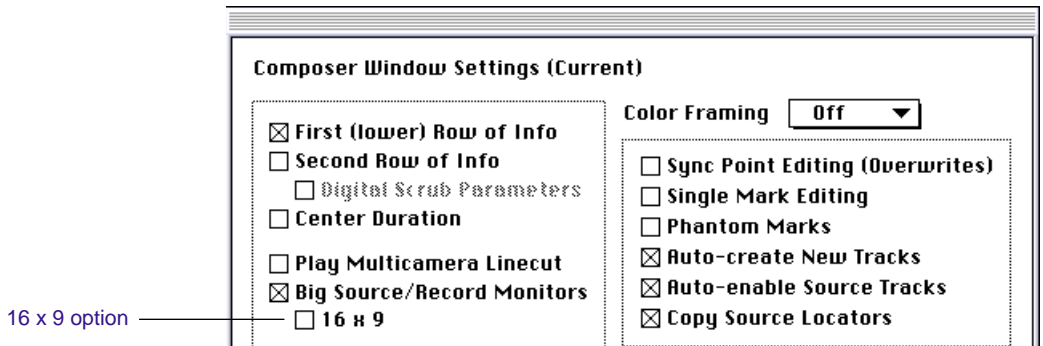
3. Select Big Source/Record Monitors.

4. Select the option for 16 x 9.

Displaying Tracking Information

Tracking information consists of any type of format used to identify clips, audio and video tracks, individual frames, or footage durations

while you work. The Media Composer interface displays this information above the monitors in the Source/Record window. This information is updated continuously to reflect your current position in the footage. You can choose various alternative tracking formats from pull-down menus.

Click on display area to access Tracking Information Display menu

Second row of information (the top row)

First row of information (the bottom row)

Pull-down menus for the selected source-side row
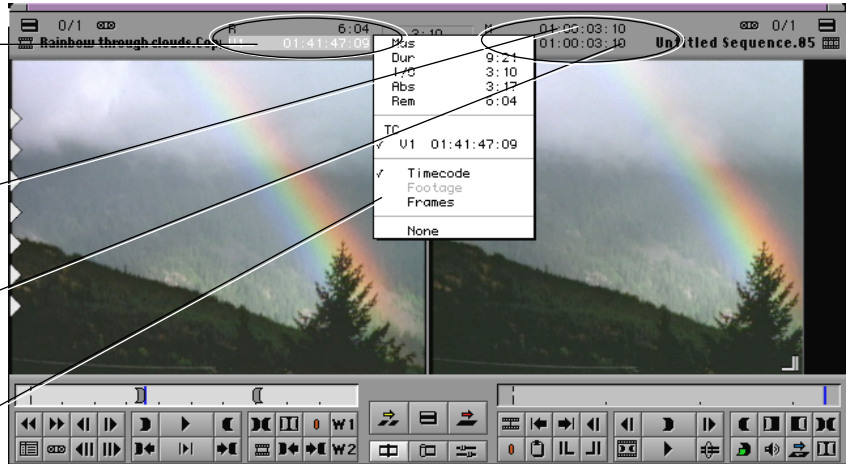
By default, the tracking information area displays no information until you select a tracking format. In addition, there is no display of tracking data when there is no material loaded in the monitor. If you load a clip and no information is currently displayed, you can still open the pull-down menu by clicking in the area above a monitor.

To choose a tracking information format:

1. Load a clip or sequence into the monitor.

2. Click in the information display area in either the first or second row of information above the monitor and choose a format.

If you select the option for two information rows above the monitors in the Composer settings, you can display two different types of tracking information for the footage in each monitor. For example, you can display both running timecode and IN to OUT durations for clips loaded in the Source monitor. You can display similar information for the sequence shown in the Record monitor.

Tracking Format Options

The Tracking Information Display menu contains a number of options for information to display above the monitors. The following is a summary of the contents of the menu.

- The upper portion of the menu lists options for summary information, such as master timecode (Mas), duration of the entire clip (Dur), IN to OUT duration (I/O), absolute timecode (Abs), and time remaining (Rem).

Upper portion of the menu

- The second portion of the menu lists options for displaying the timecode for a specific track (V1, A1, A2, and so forth). This list contains options only for the tracks existing in the currently loaded clip or sequence. For example, a clip with only one audio track does not show an option for A2.

Second portion of the menu

- The menu for the Record monitor contains an added third portion for displaying Clip Name. Choose this option to display clip names in the sequence for a particular track that you choose from a submenu. The name displayed is continuously updated based on the location of the position indicator.

Third portion (Record monitor menu only)

```
      A2   03:16:03:24

Clip Name              V1   WashWindowCU
                       A1   BeachMusic
 ✓    Timecode         A2   BeachMusic
```
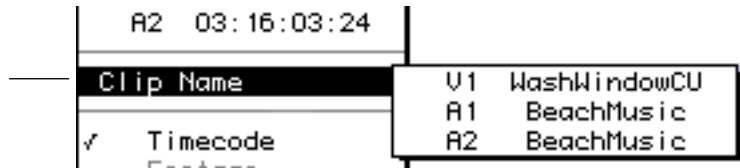
- The lower portion of the menu lists tracking formats, such as time-code in hours, minutes, seconds, and frames (Timecode), feet and frames for film projects (Footage), a sum total of frames for either film or video (Frames), or none, to leave the display area blank.

```
      Timecode
      Footage
 ✓    Frames
 ✓    None
```

Lower portion of the menu

Displaying the Clip Information Window

The Clip Information window displays statistical information about a clip. You can open the Clip Information window from the Source and Record monitors or a pop-up monitor. The window updates the information automatically.

With the Timeline active, click in the gray area just above the Splice-in or Overwrite buttons.

- To display information about the clip or sequence in the Source monitor, click above the yellow Splice-in button.

- To display information about the sequence in the Record monitor, click above the red Overwrite button.

Only fields with data will be displayed.

```
Name      dories to models
 Bin      Lesson 5, Ch 7
 Tape     04
 FPS      29.97
Tracks    V1 A1-2
Video     AVR71
Audio      44100.0
 Disk     Bigboy-2
Start     04:25:13:08
  End     04:25:31:16
Duration  18:08
Mark IN   04:25:23:05
Mark OUT  04:25:26:29
 IN-OUT        3:24
Project   MCX
```

As you move the position indicator through the clip in the Source or Record monitor, the information in the window is updated.

Around the Source and Record monitors, you can click almost anywhere within the gray area to open the Clip Information window.

If no clip is loaded in the Source or Record monitor, the Clip Information window does not open.

To open the Clip Information window from a pop-up monitor:

1. With a pop-up monitor open, click in the gray area at the top of the pop-up monitor.

2. Drag the window to a new location to leave the window open.

For more information, see **"Using the Clip Information Window" on page 232**.

Setting Timecode Displays

Each pop-up monitor has two lines available to display timecode. The Timeline also displays two lines of timecode. The Timecode window allows you to display up to eight lines of timecode in a separate window.

To set a timecode display:

1. Choose Timecode from the Tools menu.

   The Timecode window opens.

Close box
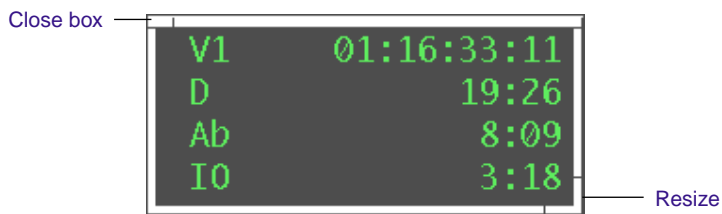
Resize

If you resize the Timecode window, the text adjusts to fit the window.

2. Click anywhere in the Timecode window. The Timecode pop-up menu appears.

3. Choose an option from the Timecode pop-up menu. See **Table 12-1** for a description of these options.

   The window displays the timecode you have chosen.

Table 12-1   Timecode Display Options

Option	Description
Mas	Displays master timecode at present location.
Dur	Displays total duration of the sequence.

Table 12-1   Timecode Display Options (Continued)

Option	Description
I/O	Displays duration between IN and OUT marks.
Abs	Displays absolute time duration at present position.
Rem	Displays time remaining at present position.
V1	Displays the source track of the video on track 1.
A1	Displays the source track of the audio on track 1.
A2	Displays the source track of the audio on track 2.
Timecode	Displays tracking information as timecode.
Footage	Displays tracking information as feet and frames.
Frames	Displays tracking information as total frames.
None	Hides the display of information.
Add Display	Allows you to set multiple timecode displays.

Setting Multiple Timecode Displays

To set multiple timecode displays:

1. Place the cursor anywhere in the Timecode window, and press the mouse button.

2. Select Add Display from the pop-up menu. The maximum number of lines to display is eight.

You might need to resize the timecode display to see all the options. To do so, click and drag the lower right corner of the window.

3. Click the close box to close the Timecode window.

Viewing Methods

You can work with clips and sequences in several different ways, depending upon your needs and preferences. Each method has its own uses and advantages, as follows:

- **Viewing in bins:** You see pictorial images of the clips in your bins by using Frame view. You can also list the clips by name by using Text view.

- **Viewing in the Source monitor:** You can load clips and sequences into the Source monitor to view and mark or subcatalog shots for use in a sequence that you build in the Record monitor.

- **Viewing in the Record monitor:** You can load a sequence into the Record monitor to view, mark, or modify an existing sequence. You cannot load clips directly into the Record monitor unless you option-drag a series of clips to create an "instant sequence (rough cut)." For more information, see **"Creating an Instant Rough Cut" on page 381**.

Source monitor with clip loaded   Record monitor with sequence loaded

- **Viewing in pop-up monitors:** You can load clips into pop-up monitors to view and mark one or several clips simultaneously in smaller, movable windows.

Two pop-up monitors with clips loaded
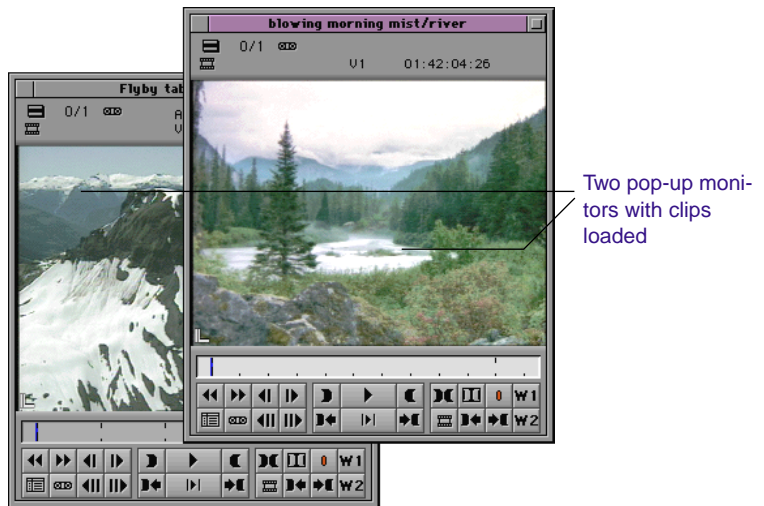
- **Viewing in the Timeline:** Use the Timeline to view individual tracks for either a sequence or a source clip.

- **Viewing in NTSC mode:** You can use the third, full-screen monitor to view your footage in a broadcast format.

Using the Window Zoom Box

The zoom box allows you to shrink the Source and Record monitors and any pop-up monitor, displaying only the position bars for each window, the editing buttons, and the Timeline. No video is displayed (except on the third, full-screen monitor).

To shrink the monitors to display only the position bars, the editing buttons, and the Timeline:

1. With the Record monitor active, click the zoom box located in the upper right corner of the Record monitor.

Zoom box

Untitled Sequence.04
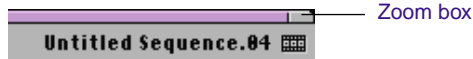
The video disappears. Only the Source and Record monitors, position bars, buttons, and Timeline are displayed.

2. With the Record monitor active, click the zoom box again to redisplay the video.

Loading and Clearing Footage

You can load individual or multiple clips or sequences into the Source and Record monitors, into pop-up monitors, or into Full-Screen mode by using different methods. You can also use the Monitor menus to display or clear clips and sequences from the screen, as described in this section.

Loading into Source, Record, and Pop-Up Monitors

To load a single clip or sequence:

1. Open a bin and locate the clip or sequence.

2. Double-click the clip or sequence with one of the following results:

   • If you have set the "Loads clip into source or record monitor" option in the Bin Settings dialog box (the default setting), a clip loads into the Source monitor or a sequence loads into the Record monitor.

   • If you have set the "Opens new monitor for clip" option in the Bin Settings dialog box, the clips load into multiple pop-up monitors.

Press and hold the Option key, then double-click to reverse the outcome.

You can also load a sequence into the Source monitor (for editing into another sequence, for instance) by clicking and dragging from the bin to the monitor.

Loading Multiple Clips or Sequences

You can quickly load several clips and sequences into the Source and Record monitors, or into multiple pop-up monitors.

To load multiple clips:

1. Open a bin and Shift-select clips, or lasso multiple clips.

2. Drag the selected clips to a monitor, or double-click one of the selected clips, with one of the following results:

   • If you have set the "Loads clip into source or record monitor" option in the Bin Settings dialog box (the default), the clips load into the Source monitor.

Press and hold the Option key, then double-click to reverse the outcome.

   • If you have set the "Opens new monitor for clip" option in the Bin Settings dialog box, the clips load into multiple pop-up monitors.

Using the Monitor Menus

When you have clips loaded into a monitor, you use the Monitor pull-down menu located above each monitor to switch between various loaded clips, or to clear clips from monitors.

Switching Between Loaded Clips

When you have loaded multiple clips into the Source or the Record monitor, you will see only one clip displayed at a time. You can view an alphabetical list of the loaded clips and choose an alternate clip for viewing.

To switch between clips:

1. Click the name of the current clip displayed above the monitor to reveal the Monitor menu. The list in the lower portion of the menu contains a list of all the clips or sequences currently loaded in the monitor.

The lower portion of the Monitor menu contains a list of loaded clips.
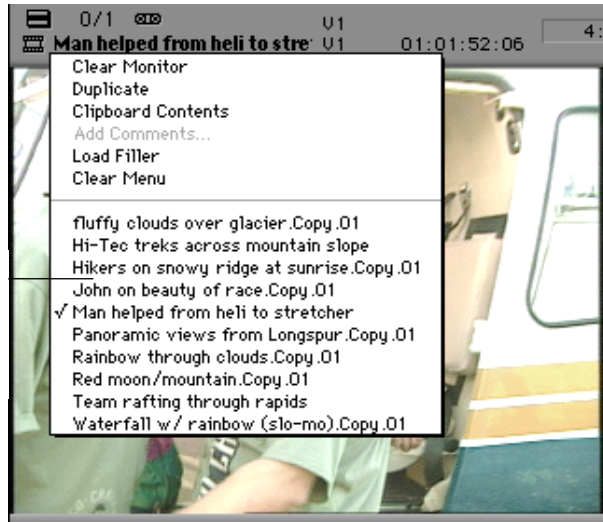
2. Choose a different clip name from the menu. The selected clip will replace the current clip in the monitor display.

To see the list of clips or sequences sorted in the order in which they were loaded into the monitor, press the Option key while opening the pop-up menu.

Clearing Clips from Monitors

There are two options for clearing clips:

- Remove the clip display and leave the monitor black but keep the clip loaded.

- Remove all the clip names from the Monitor menu and leave only the displayed clip loaded.

To clear the monitor or the clip names from the menu:

1. Click the Source monitor or the Record monitor to select.

2. Click the name of the clip currently displayed above the monitor to reveal the Monitor menu.

3. Choose one of the following commands:

- Clear Monitor removes the displayed clip from the screen, leaving black. The clips are still loaded.

- Clear Menu deletes the list of all loaded clip names and leaves only the clip currently displayed.

Loading Footage into Full-Screen Mode

Release 7.0 and later of the Avid Composer system supports the use of a full-screen monitor. The Full-Screen Monitor window appears on the Edit monitor (you do not need a special editor monitor) whether or not you have a third (client) monitor. This is helpful when you want to:

- Get a better feel for how your footage will play in a large format.

- Examine details in the picture.

- Screen clips or sequences for production personnel or an audience seated some distance away from the monitors.

To load footage into a full-screen monitor:

1. Load the sequence into the Record monitor.

2. Choose Command Palette from the Tools menu.

3. Click the Toggle Full Screen icon.

   The system creates a Full Screen mode workspace, reflected in the Settings scroll list. The full screen appears on the Edit monitor.

   The first time you use Full Screen mode, you must drag the Source/Record Monitors window and the Timeline window to the Bin monitor. Subsequently, these windows will appear in the Bin monitor whenever you go to Full Screen mode.

4. To return to regular mode, click the Toggle Full Screen icon.

   The Full Screen Mode icon can be mapped the same way as other command icons.

Controlling Playback

There are several ways to play, view, and cue clips:

- Instantly access frames or move through footage by using the *position indicator* within the position bar under the Source, Record, or pop-up monitors.

- Play, step (jog), or shuttle through footage by using user-selectable buttons.

- Play, step, or shuttle by using keyboard equivalents.

- Step or shuttle by using the mouse.

Using Position Bars and Position Indicators

You can quickly access frames within a clip that's been loaded into a monitor or move through the footage by using the position indicators that appear in both the position bars under Source, Record, or pop-up monitors, and in the Timeline when you are viewing a sequence.

- You can move the position indicator within the position bar under the Source, Record, or pop-up monitors by clicking anywhere in the position bar, or by dragging the position indicator to the left or right. The speed with which you drag the position indicator determines the speed at which you move through the footage.

Position indicator   Position bar
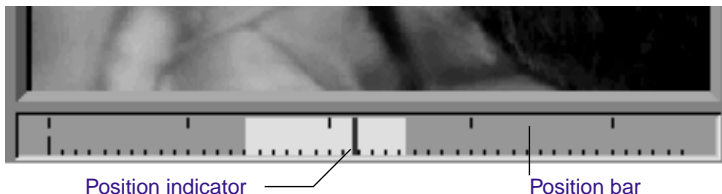
- In the Timeline, the position indicator shows your position within the sequence. It is always in the same position as the position indicator in the Record monitor's position bar, and works in the same way: you can click anywhere in the Timeline to relocate the posi-

tion indicator, or you can drag the position indicator through footage at varying speeds.
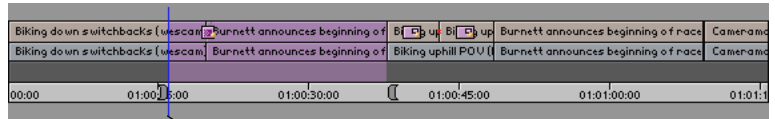
Position indicator in Timeline

• You can go directly to the beginning or end of a clip or sequence by clicking at the far left or far right of the position bar or the Timeline.

Using Buttons

You can use the user-selectable buttons that appear below the Source and Record monitors and in the pop-up monitors to play and step through your footage. You can also use the keyboard to manipulate footage.

Aside from the default configurations, these buttons can be remapped from the Command Palette in any configuration onto any of the user palettes and the keyboard.

Play Reverse, Play Forward, Pause, Stop, Rewind, and Fast Forward Buttons
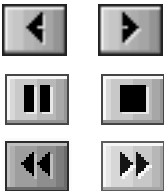
The Play Reverse, Play Forward, Pause, Stop, Rewind, and Fast Forward buttons work much like the buttons on any conventional VCR. With a clip loaded in a monitor, the Play Forward button plays your footage at a normal rate. The Play Reverse button plays backward at a normal rate. The Fast Forward and Rewind buttons instantly cue the footage to the next transition between clips.

The Play Forward, Fast Forward, and Rewind buttons appear by default in the first row of buttons below the Source and Record moni-

tors and the pop-up monitors. Map the Play Reverse, Stop, and Pause buttons onto your button rows from the Command Palette.

During playback, the Play Forward button also acts as a Stop button.

When viewing sequences in the Record monitor, you can play only video and audio tracks that are currently monitored in the Track Selector panel. For more information, see **"Using the Track Selector Panel" on page 435**.

Play a clip by using the following procedure:

1. Load a clip or sequence into a monitor.

2. For sequences in the Record monitor, click the Video or Audio Monitor buttons in the Track Selector panel.

3. Go to the start of the clip or sequence by clicking the start of the position bar under the monitor, or pressing the Home key.

4. To play the clip or sequence, click the Play button under the chosen monitor.

5. To stop playback, press the space bar or click the Play button again.

Step Buttons
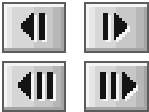
You can also use the Step buttons under the monitors to play the clip backward or forward in 1- to 10-frame increments.

When you have a single row of buttons displayed under your monitors, the Step Forward and Step Backward buttons appear. If you press and hold the Option key while clicking either button, you can advance 10 frames forward and 10 frames backward.

To display all four Step buttons, you must display two rows of buttons under the monitors when configuring the Source/Record window in the Composer Window Settings dialog box. For more information, see the Avid Media Composer Products Reference.

To step through footage:

1. Load a clip or sequence into a monitor.

2. Press the appropriate key to step 1 or 10 frames forward or backward.

Using the Keyboard

The default keyboard contains all of the buttons mentioned thus far.
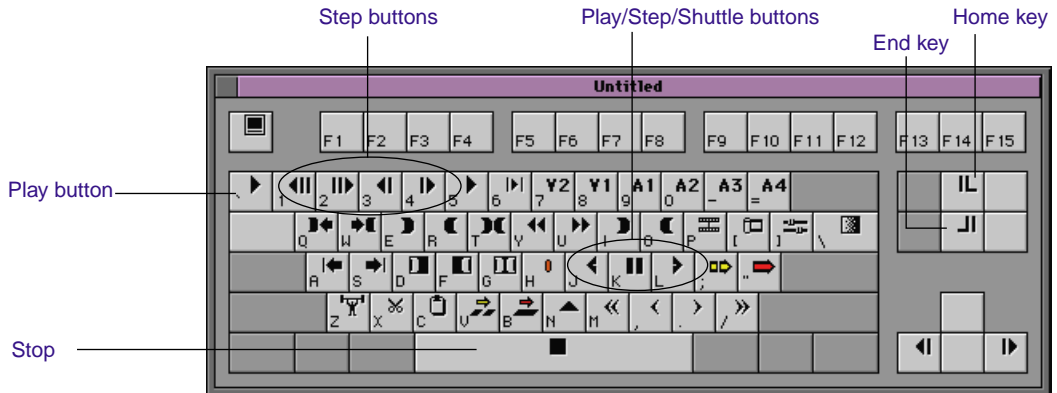
You can move and replace buttons on the keyboard by using the Command Palette, as described in **"About Button Mapping" on page 96**.

J-K-L Keys (Three-Button Play)

The J-K-L keys on the keyboard allow you to play, step, and shuttle through footage at varying speeds. This feature, also referred to as *three-button* or *variable-speed* play, allows you to use three fingers to manipulate the speed of playback for greater control.

To shuttle through the footage by using the J-K-L keys on the keyboard:

1. Do one of the following:

- Load a clip or sequence into the Source or Record monitor.

- Open a pop-up monitor.

- Select a clip in a bin in Frame mode.

2. Use the following keys to shuttle at varying speeds:

- Press the L key to move forward through the footage at normal speed. Press once to increase the forward speed 2 times, twice to increase it 4 times, and 3 times to increase it 8 times normal speed.

- Press the J key to move backward at the same shuttle speed increments.

- Press the K and L keys together for slow forward.

- Press the K and J keys together for slow backward.

- Press the K key and tap the L key or the J key to step through footage one frame at a time.

3. To pause the shuttling, press the K key.

4. To stop shuttling, press the space bar.

Home, End, and Arrow Keys

You can also use the Home, End, and arrow keys (located to the left of the numeric keypad) to move through footage when a clip is loaded in a monitor.

- The Home key takes you to the beginning of a clip or sequence.

- The End key takes you to the end of a sequence.

- The Left Arrow key moves the footage one frame forward.

- The Right Arrow key moves the footage one frame backward.

Using Single-Field Step

Your Avid Composer system enables you to locate defects on individual fields of a frame with the single-field step feature. By default, Media Composer displays the first field of every frame when you step through material frame by frame.

With single-field step, you can view both fields of each frame sequentially to locate a dropout from the source videotape, or dust and scratches from the original film footage.

To use single-field step:
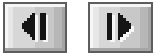
1. Hold down the Control key and click the Step Forward button or the Step Backward button.

2. Continue to hold down the Control key while you click the Step Forward button (or the Step Backward button) to view each consecutive field.

3. To return to viewing one field from each frame, release the Control key and click the Step Forward button (or the Step Backward button).

   Media Composer references the field you were parked on (either field 1 or field 2) when you released the Control key. Subsequent single-*frame* steps will be based on this field.

Any edits you make using the paint tools affect both field 1 and field 2 of each frame.

Using the Mouse

You can use the mouse for one-handed control of playback. You can either step or shuttle by using the mouse.

Stepping with the Mouse

To step by using the mouse:

1. Do one of the following:

    • Load a clip or sequence into the Source or Record monitor.

    • Open a pop-up monitor.

    • Select a clip in a bin in Frame mode.

2. Do one of the following:

    • Press the N key to activate mouse control for stepping.

    • Click the Mouse Jog button, which is available on the Command Palette and can be mapped to any button under the Record monitor.

3. Move the mouse to the right to step forward, or to the left to step backward.

4. To quit stepping with the mouse, press the space bar.

Shuttling with the Mouse

To shuttle by using the mouse:

1. Do one of the following:

    • Load a clip or sequence into the Source or Record monitor.

    • Open a pop-up monitor.

    • Select a clip in a bin in Frame mode.

2. Do one of the following:

    • Press the semicolon (;) key to activate mouse control for shuttling.

    • Click the Mouse Shuttle button, which appears on the Command Palette and can be mapped to an editing button under the Record monitor.

3. Move the mouse to the right to increase the shuttle speed, or to the left to decrease the shuttle speed.

4. To quit shuttling with the mouse, press the space bar or double-click the mouse button.

You can also use the keyboard in conjunction with the mouse to control shuttling. For example, if you're shuttling with the mouse and you press the L key, the playback speeds up to the next normal play rate (30, 60, 120, or 240 fps for NTSC; 25, 50, 100, or 200 fps for PAL; 24, 48, 96, or 192 fps for film projects). You can continue to change the shuttle speed and direction with the mouse.

Marking and Subcataloging Footage

You can speed the editing process by marking clips with IN and OUT points, and/or by subcataloging by using locators and creating subclips, explained in this section. When subcataloging, you might want to create or open additional bins for storing and isolating specific subclips, marked clips, or sequences, as described in **"Using the Bins Display" on page 48**.

Marking IN and OUT Points

You can mark IN and OUT points for your clips in advance, which provides several advantages:

- You can quickly build a sequence by splicing the marked clips into place one after another.

- You can use the process of rough-cut or *storyboard* editing, which allows you to instantly splice several prepared clips into a sequence, as described in **"Creating an Instant Rough Cut" on page 381**.

- You can play back and mark clips in the bin before loading a single clip, saving several steps.

Even if your marks are not accurate now, Media Composer allows you to trim the edit points and fine-tune the sequence later without reediting the material.

To mark INs and OUTs in advance:

1. Load a clip or sequence from a bin into a monitor, or select a clip in the bin.

2. Play, step, or shuttle through the material. Use the J-K-L keys when playing a clip in a bin.

3. Click the Mark IN button under the monitor to mark an IN point and stop playback. Use the Mark IN key on the keyboard when marking a clip in a bin (Mark IN on the keyboard does not stop playback).

The sawtooth icon appears on the left side of the monitor to indicate the IN mark frame.
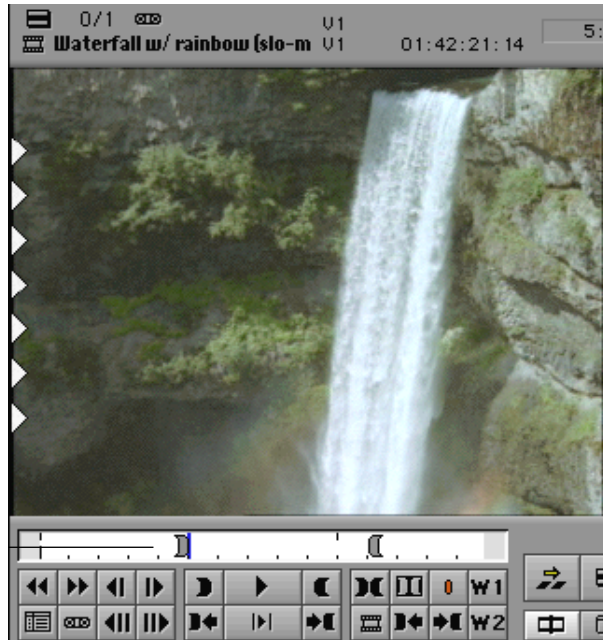
Marked IN point

4. Continue playing, stepping, or shuttling through the material.

5. Click the Mark OUT button under the monitor to mark an OUT point and stop playback. Use the Mark OUT key on the keyboard when marking a clip in a bin.

   The sawtooth icon appears on the right side of the monitor to indicate the OUT mark frame.

6. To clear a mark and set a new one, do one of the following:

   • To set a new IN point, click the Mark IN button or key when you reach a different frame. Or, click the Clear IN button or key to remove the IN point and then mark a new one.

   • To set a new OUT point, click the Mark OUT button or key when you reach a different frame. Or, click the Clear OUT button to remove the OUT point and then mark a new one.

   • To clear both the IN and OUT points, click the Clear Marks button or press the G key on the keyboard.

Marking an Entire Clip or Segment

Use the Mark Clip button to select an entire clip or an entire segment from a sequence. (A *segment* in a sequence consists of the material between any two edit points.)

1. Load a clip or sequence into a monitor.

2. In the case of a sequence, place the position indicator on the segment that you want to mark.

3. In the Source or Record monitors, select the tracks corresponding to the cuts you want to mark.

4. Click the Mark Clip button under the monitor, or press the T key.

To ignore the current track selection and mark the smallest clip at the current position in the sequence, press and hold the Option key while you click the Mark Clip button.

Creating Subclips

When you mark footage with IN and OUT points, you can either save the entire clip along with the new marks, or you can create subclips based on the marks you set to break up longer master clips into smaller segments of selected footage.

This is similar to creating outtakes of all of your best footage before editing. Unlike outtakes, however, subclips do not directly reference the original media. Subclips remain linked to the master clips from which they are created, and the master clips in turn reference the digitized media files located on your storage drives. As a result, none of the original footage is lost.

You can create subclips directly from the marked section of material in the monitors by using one of the following methods:

• **Use the Option key:** Press and hold the Option key, then drag the picture from the monitor to the bin in which you want to store the subclip.

• **Use the Subclip handle:** Click the subclip handle located above and to the side of the monitor; then drag the subclip handle to the bin in which you want to store the subclip.

Subclip handle →

353
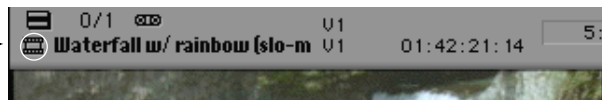
The subclip handle changes to an icon of a frame during the drag, then becomes a subclip icon when you release the frame in the intended bin.

• **Use the Subclip button:** Click the Subclip button located in one of the command palettes to create the subclip and place it into the active bin by default. If you press the Option key while you click the Subclip button, a dialog box allows you to select the destination bin for the subclip.

The new subclip will be listed in the bin, preceded by a subclip icon and identified with a numbered *.Sub* suffix, as shown in the following illustration.

A new subclip as referenced in Text Display mode

	Name	Frame	Tracks	Start	End
	Team rafting through rapids.Sub.01		V1 A1-2	01:00:05:13	
	Team rafting through rapids		V1 A1-2	01:00:00:02	
	Man helped from heli to stretcher		V1 A1-2	01:01:47:29	
	Flyover lake with cloud reflections		V1 A1-2	01:03:27:23	

Statistics.1
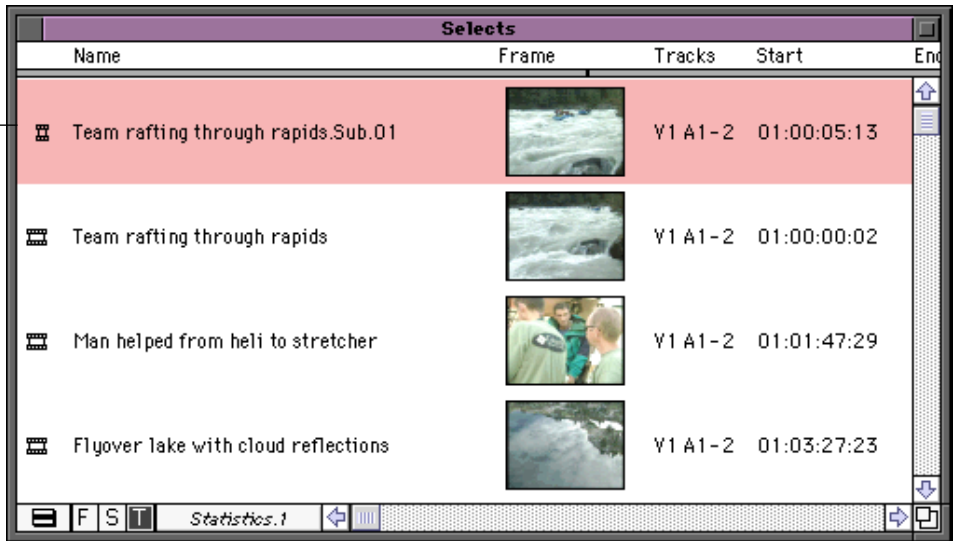
Subclips do not limit your access to the original, digitized master clip material when trimming. Therefore, if you must trim beyond the marked IN to OUT boundaries of the subclip to make it longer or shorter, your system does accommodate the boundary adjustments during the trim.

Using Locators

Locators are a type of electronic bookmark. They allow you to find and identify specific frames during editing. Key words you enter into the comments attached to a locator allow you to use standard Find procedures to call up the clips quickly.

Ways to Use Locators

By default the Add Locator button appears only on the user tear-off palettes in the Composer window. You can map the Locator button elsewhere, as described in **"About Button Mapping" on page 96**.

There are many possible uses for locators. A few basic examples are:

- **Color correction notations:** Use locators to mark clips or specify frames that require color correction, with notes on the specific correction to perform if someone else does the job.

- **Visual track alignments:** Use locators at matching points in synchronized audio and video tracks, so that if the tracks lose sync you can visually realign the locators in the Timeline to restore sync (for more information on sync, see **Chapter 17**).

- **Music cues:** Use locators to mark the IN and OUT points for music.

- **Trim markers:** Use locators in the Timeline to return directly to an edit you've designated for further trimming at a later time.

- **Cutaway markers:** Use locators to identify cutaway shots with comments, so that when you return to cover jump-frame edits with cutaway footage, you can quickly call up the shots using basic Find procedures.

When you insert a locator, it appears as an orange oval in the Timeline, the position bar, and at the bottom of the frame in the monitor.

Locator displayed in the monitor, the position bar, and the Timeline
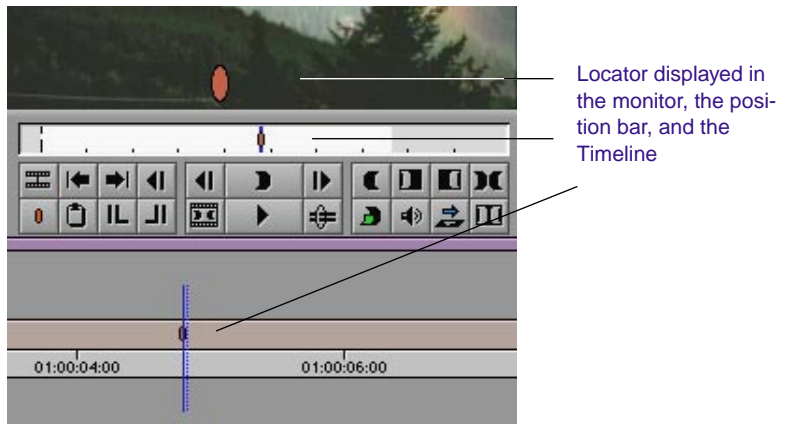
You can add locators to your source material while you are in an editing session, as described in the following section. You can also add locators while digitizing, as described in **"Adding Locators On-the-Fly" on page 190**.

Adding Locators While Editing

To add locators while in an editing session:

1. Load a sequence or clip.

2. Cue to the frame and click the Add Locator button.

   The locator oval appears in the Timeline, in the position bar, and at the bottom of the frame in the monitor.

3. Double-click the locator in the position bar under the monitor or click the large oval on the frame.

   A dialog box appears.

```
Locator Info
┌─────────────────────────────────┐
│                                 │
│                                 │
│                                 │
│                                 │
│                                 │
└─────────────────────────────────┘
                     [ Cancel ]  [  OK  ]
```
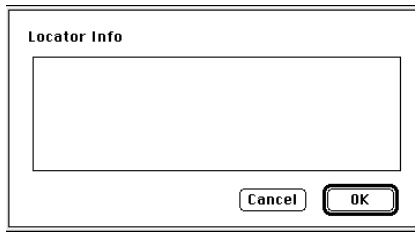
4. Type the locator information and click OK. The amount of information you can enter is limited to 255 characters.

   The information is stored with the marked frame, and the first line of the information appears at the bottom of the clip in the monitor.

5. To go quickly to a frame with a locator while editing, use the Find command in the Edit menu to search for a particular comment. This command works only when the sequence containing the locators is in the Record monitor.

Locators are copied from the Source monitor to the Record monitor when you edit group clips, motion effects, and sequences. They are not copied when you edit master clips and subclips, in which case you must reenter the information in the Record monitor.

Using the Locators Window

The Locators window allows you to quickly add, delete, go to, and print out a list of locators in the currently loaded clip or sequence.

The following illustration shows a Locators window with four locators.

To view locators in the window:

1. Load the sequence containing the locators.

2. Choose Locators from the Tools menu.

Features of the Locators Window

Many features of the Locators window are similar to those of the bin window:

- The window displays information in text columns.

- A Fast menu allows you to modify and sort the display.

- You can print out the Locators window. This is especially useful for identifying and listing specific frames—to be color corrected or used in an effect, for example. You can also make a list of marked IN and OUT points for adding music.

The Locators window also provides specific controls for manipulating locators in the sequence:

- You can double-click any locator to go to that locator in the sequence.

- You can select a single locator or Shift-select specific locators and press the Delete key to delete them in one step.

Locators Window Fast Menu
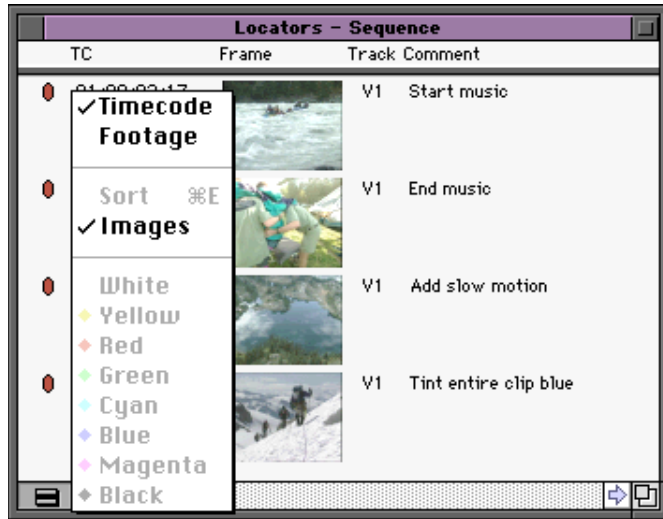
The Fast menu allows you to do the following:

- Display a timecode or footage column.

- Sort or reverse-sort the display by timecode/footage, track, comment, or locator color. Choose the text at the top of a column to specify which column to sort.

- Display the frame associated with each locator.

- Change the color of the locator icon. The Avid Composer system uses the same color in the Timeline, position bar, and Record monitor display.

Finding Frames, Clips, and Bins

Once you have digitized, viewed, marked, and subcataloged numerous shots for a project, you might have difficulty relocating specific clips or frames among several bins. The Avid Composer system provides a number of features for quickly locating and cueing footage, including conventional timecode and frame-offset techniques, text searches, and Match Frame and Find Bin commands.

Using Timecode to Find a Frame

At any time during editing, you can type timecode values into the numeric keypad on the right side of the keyboard to cue a loaded clip or sequence to a specific frame. In addition, you can cue backward or forward from the current location in the clip or sequence by a specified number of minutes and seconds plus frames using positive or negative frame-offset values.

For more information on selecting the display of tracking information, see **"Displaying Tracking Information" on page 329** and the *Avid Media Composer Products Reference*.

The system interprets the numbers you type into the numeric keypad according to the type of tracking format you have chosen in the row of information displayed above the monitor. If you have two rows of information, the system looks to the top row.

To cue to a frame based on a known timecode, enter the timecode for the frame by using the numeric keypad on the right side of the keyboard, then press Enter.

In this example, the interface displays master timecode. Use one of the formats described in the next two paragraphs.

Master track

1:00:10:02

Type a master timecode to find a frame in the sequence.
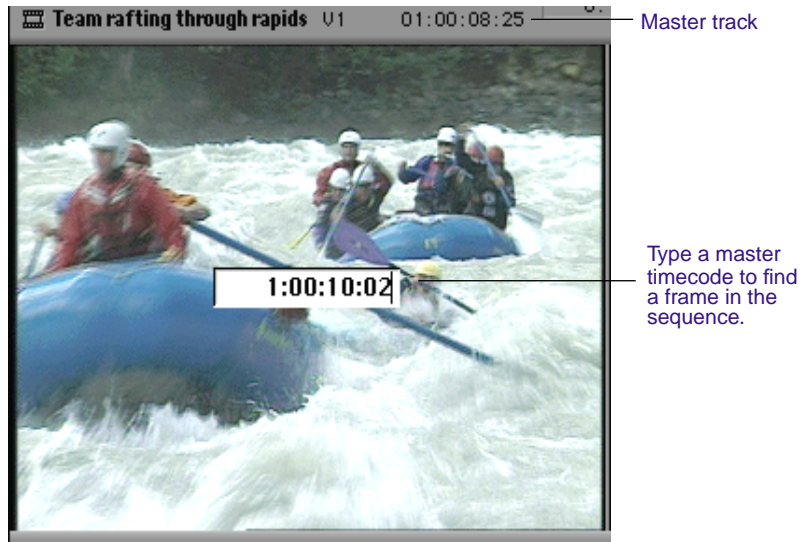
- *SMPTE timecode* —Use two digits each for the hours, minutes, seconds, and frames with no leading zeros. For example, type 01230200 to enter 01:23:02:00.

- *Current timecode*—If you are finding a timecode that starts at the same time as the current timecode, just type the last digits. For example, if the current timecode is 1:05:12:13 and you type 4:25, the system finds the frame at 1:05:04:25.

To cue a frame by using frame offset:

1. Using the numeric keypad, type a plus (+) sign to move forward or a minus (–) sign to move backward from the current position.

2. Enter a number for the frame offset and press Enter. Use the following formats:

   - *One or two digits* — Enter 1 through 99 to specify a number of frames forward or backward. For example, enter –42 to move backward 42 frames.

   - *Three digits* —Enter 100 or a greater number to move forward or backward a specified number of seconds and frames. For example, if you enter +100 and the master timecode is selected

361

on the top line of the Timecode display, you move forward one second and zero frames.

Searching a Clip

You can use the Find feature to search a clip loaded in the Source monitor or the sequence in the Record monitor for:

- Locator text

- Text displayed in the Timeline

- Clip names

To do a text search of a loaded clip or sequence by using the Find feature:

1. Load the clip or sequence into the monitor.

2. Choose Find from the Edit menu.

   The Find dialog box appears.

   ```
   ┌──────────────────────────────────────────────┐
   │  Find:                                         │
   │                                                │
   │  ┌──────────────────────────────────────┐      │
   │  │                                      │      │
   │  └──────────────────────────────────────┘      │
   │  ┌─Search ─────────────┐                       │
   │  │ ☐ Clip Names        │                       │
   │  │ ☐ Locators          │    ┌──── OK ────┐     │
   │  │ ☐ Timeline Text     │    └────────────┘     │
   │  └─────────────────────┘    ┌─ Cancel ─┐       │
   │                             └──────────┘       │
   └──────────────────────────────────────────────┘
   ```
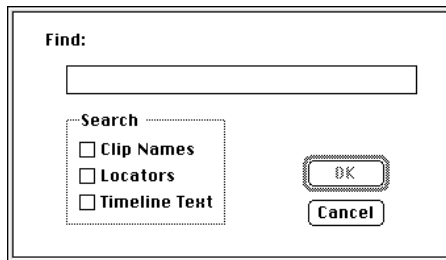
3. Enter part or all of the text you are searching for. If the exact text is unknown, enter only a known word or portion of a word.

4. Select one or more options:

   - *Clip Names* to search for matching text in Clip names only.

   - *Locators* to search for matching text entered into locator comments only.

- *Timeline Text* to search for matching text in any clip text displayed in the Timeline.

5. Click OK.

   If the system finds matching text, it cues to the head of the clip in the case of Clip Name or Timeline text, or it cues to the Locator frame in the case of Locators.

6. If the cue point is not the one you want, choose Find Again from the Edit menu to search for another incidence of matching text.

Using Match Frame

The Match Frame function locates the source footage for the frame currently displayed in either the Source or Record monitor, loads it into the Source monitor, cues to the matching frame, and marks an IN point. It removes the source clip's original IN and OUT marks.

In addition to helping you relocate and reedit master clips during a session, the Match Frame command can be used to locate clips quickly based on media relatives when you have forgotten their location.

To use Match Frame:

1. Load a sequence into the Record monitor.

2. Move to the frame that you want to match.

3. Make sure you select the correct track for the frame that you want to match in the Track Selector panel.

4. Click the Match Frame button in the Record monitor command palettes or the Command Palette.

This loads and marks the source clip in the Source monitor.

If you do not want to mark the source clip and remove the original marks, hold the Option key when you click the Match Frame button.

Finding a Bin

With a clip or sequence loaded into a monitor, you can quickly find the original bin in which it is stored by using the Find Bin button. This command finds the bin, opens it, and highlights the clip within the bin. This works for sequences, subclips or clips within sequences, or clips in the Source monitor.

To locate a bin:

1. Click the Source or Record monitor to activate it.

   Be sure the clip or sequence is displayed.

2. Click the Find Bin button on one of the command palettes. The system opens the bin and highlights the clip or sequence.

To find the bin in which a specific clip is located:

1. Place the position indicator on the clip within the sequence.

2. Press and hold the Option key and click the Find Bin button. The system opens the bin and highlights the clip.

Locating a Master Clip from a Subclip in a Sequence

To find the original clip in the bin for a subclip that's been edited into a sequence, you can use the Match Frame and Find Bin buttons together.

For this operation, you must have the Match Frame button mapped below both the Source and Record monitors.

To locate a master clip from a subclip:

1. Cue to the subclip in the sequence.

2. Click the Match Frame button to load the subclip into the Source monitor.

3. Click the Match Frame button in the Source monitor to load the original master clip into the Source monitor.

4. Click the Find Bin button in the Source monitor to open the bin and highlight the master clip.

Finding a Frame

The Find Frame button allows you to trace a digitized frame of footage displayed in a sequence or source clip back to its analog source on tape. This is useful for finding frames for color correction, or for redigitizing specific clips to lengthen them or make alterations in digitize parameters.

To find a frame:

1. Make sure the source deck is properly connected to the system and load the clip or sequence.

2. In the Timeline or position bar, place the position indicator on the frame you want to find.

3. Click the Find Frame button. If the tape is not in the deck (for example, if you do not know which tape the footage is on), a dialog box prompts you to insert the appropriate tape.

> **Please mount the tape**
> **"AES302FootageforEffects"**
>
> **Done**   **Cancel**

4. Insert the tape. The system cues to the requested frame and displays it. You can redigitize as necessary.

Using the Manual User Interface (MUI)

Media Composer 8000 systems include the Manual User Interface (or MUI, pronounced "Moo-ee"), an alternative playback device you can use to mark, play, step, and shuttle through footage. If you have another model and are interested in using a MUI, contact Avid for details.

The Manual User Interface allows you to perform a collection of functions normally controlled by the keyboard and mouse with one hand. Several movable parts allow you to arrange the controls in a variety of positions to suit your personal preference.

MUI keyboard

MUI shuttle

Reverse shuttle   Pause   Forward shuttle
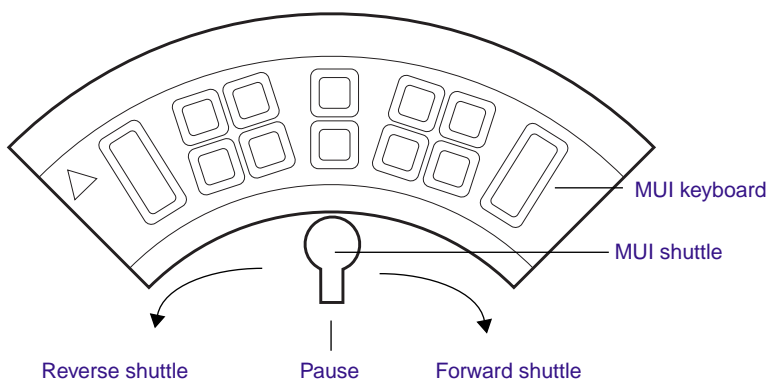
For information on how to install the MUI controller at your site, refer to the *Avid Media Composer Products Setup Guide.*

The MUI consists of two functional parts:

- The *MUI shuttle* consists of a weighted foot with a thumb-control for shuttling through a clip or sequence loaded into a Source, Record, or pop-up monitor, or the Timeline. The control knob glides easily from pause into the forward, fast-forward, reverse, or

fast-reverse positions. You can also nudge the control knob right or left for one-frame advance or reverse.

• The *MUI keyboard* consists of an arc of keys that fit onto the foot of the shuttle, and can be placed in the middle of the foot or slid to the left or right to accommodate the left or right hand, as shown in the illustration. An additional foot is provided to support the keyboard on either side.

Choosing the MUI

You must specify in the Deck settings which controller you want to use.

For information on using the Serial Ports Tool to specify the MUI controller, see "Specifying the MUI Controller" on page 107.

To choose the MUI controller:

1. In the bin window, click Settings.

2. In the Settings list, double-click Deck.

   The Deck Setting dialog box appears.

Editing Controller pop-up menu
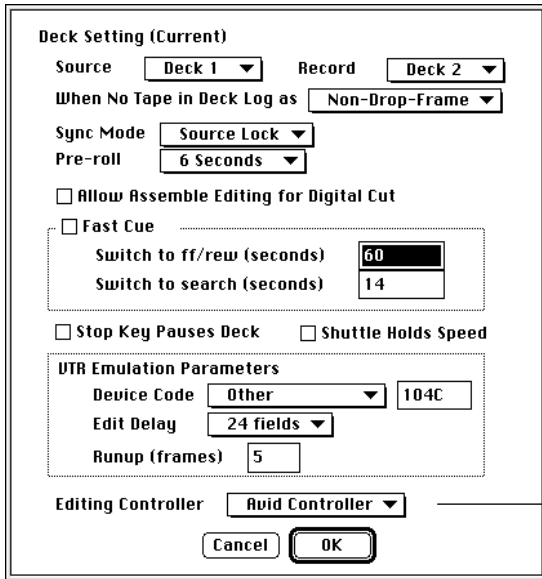
3. Choose MUI from the Editing Controller pop-up menu.

MUI Default Editing Buttons

Each MUI editing button matches a button or control within the Media Composer application, as shown.

Shuttle Forward

Shuttle Reverse

Splice-in

Pause

Play

Mark IN

Mark OUT

Overwrite

Go to Previous Edit

Go to Next Edit

Press one of these buttons to enter Trim mode.

368
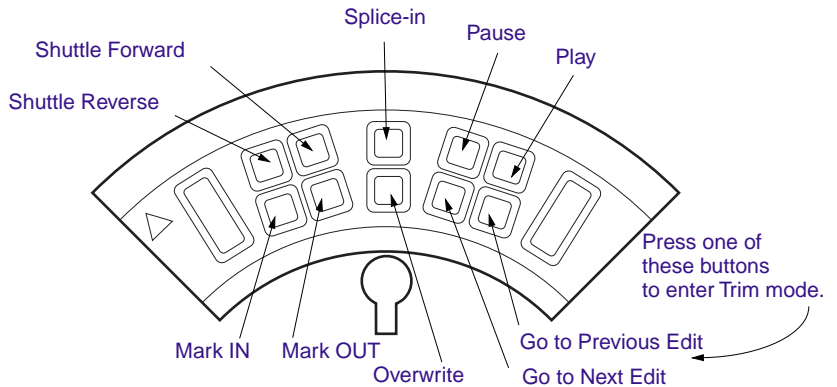
For access to the additional functions, press and hold the Shift key while pressing an editing button.
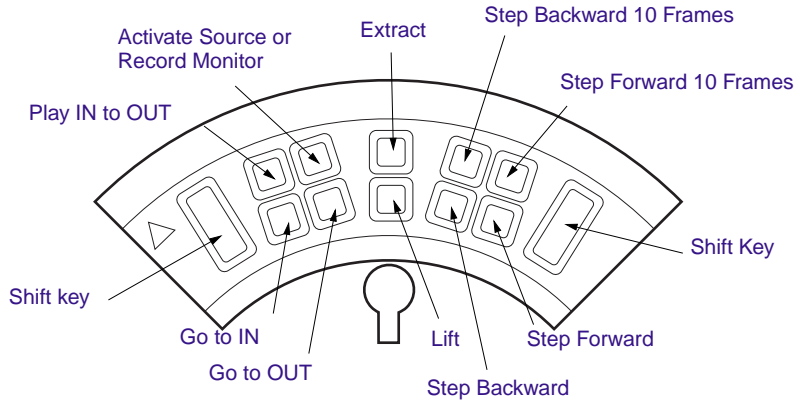
Customizing the MUI

Once you install a MUI, the system automatically adds a MUI settings option to the Settings scroll list in the Project window. You can customize the MUI keys and shuttle speed by using the MUI settings dialog box.

To customize the shuttle speed:

1. Double-click MUI in the Settings scroll list of the Project window to display the Default MUI Settings dialog box.

Key settings

Shuttle speed

Position Counter
and Play Rate

Graphical
representation
of the shuttle
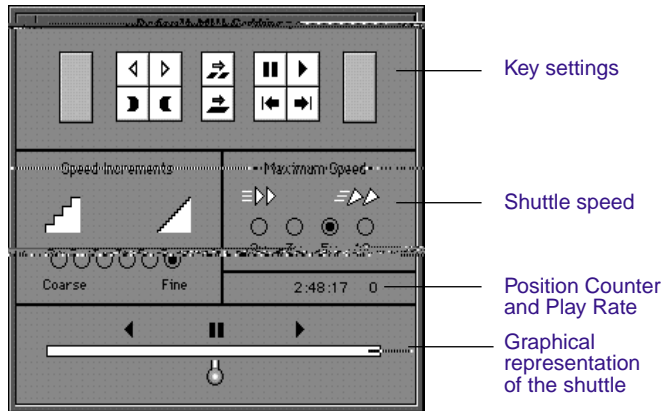
2. Select a Speed Increment from Coarse to Fine.

Coarse moves quickly from 0 fps to the maximum play rate. Fine moves through 0 to 30 fps, and then to the maximum play rate. Move the shuttle to see what speed you want. Notice the Position Play Rate change.

3. Select 2x, 3x, 5x, or 10x (2, 3, 5, or 10 times the normal rate) for the Maximum Shuttle Speed for fast forward and reverse.

The graphical representation of the shuttle moves on your interface as the MUI shuttle moves.

To customize MUI keys:

1. Open the Command Palette and position it in proximity to the MUI Settings dialog box.

2. Press and hold the Command key while you drag the command icon you want from the Command Palette to a key displayed in the MUI dialog box.

The system saves the new MUI key layout immediately after you remap a key.

To customize Shift-level commands:

1. Press the Shift and Command keys.

2. Drag the appropriate command icon from the Command Palette to the MUI button.

Using the MUI

Follow this procedure each time you use the MUI:

1. Set the shuttle control knob to the center (pause) position.

2. Turn on the system and start the Media Composer application.

3. To calibrate the system, wait several seconds. Do not move the shuttle control knob.

   The Media Composer system needs to know where the pause (zero detent) position is to calibrate the shuttle control.

   If you forget to calibrate the shuttle when you start the system, you can always calibrate it later by setting the shuttle control knob to the center detent and waiting several seconds.

⚠ **If you don't calibrate the shuttle control, it will not operate.**

4. Within Media Composer:

   a. Load clips and sequences into the Source, Record, or pop-up monitor. Click the monitor you want to use.

   b. Open a bin and select Go To Capture Mode from the Bin menu to access the deck controls.

5. Use the MUI to control the activated deck or monitor.

⚠ **Activating the mouse to step and shuttle disables the MUI control. MUI control returns when you deactivate the mouse by pressing the space bar.**

CHAPTER 13

First Edits in Source/Record Mode

After you have viewed and marked your clips or created subclips, you are ready to create a sequence. This chapter introduces you to procedures you use in Source/Record mode to build a basic sequence, as described in the following sections:

- **Entering Source/Record Mode**

- **Setting Up a New Sequence**

- **Making the First Edit**

- **Undoing or Redoing Edits**

- **Editing Additional Shots into the Sequence**

- **Using Phantom Marks**

- **Lifting, Extracting, and Copying Material**

- **Adding Comments to Sequence Clips**

- **Playing the New Sequence**

- **How to Proceed**

*Illustrations of the Avid Composer window show two button rows, two information rows, and Center Duration. For information about changing the default display, see **"Using the Settings Display" on page 61**.*

Entering Source/Record Mode

Source/Record mode is the default editing mode, and is composed of the screens and controls shown in the Source/Record window within the main Composer window on the Edit monitor.

To enter Source/Record mode from within another mode, click the Source/Record Mode button displayed in both the Source/Record window and in the Timeline tool bar.

Source/
Record
Mode
button
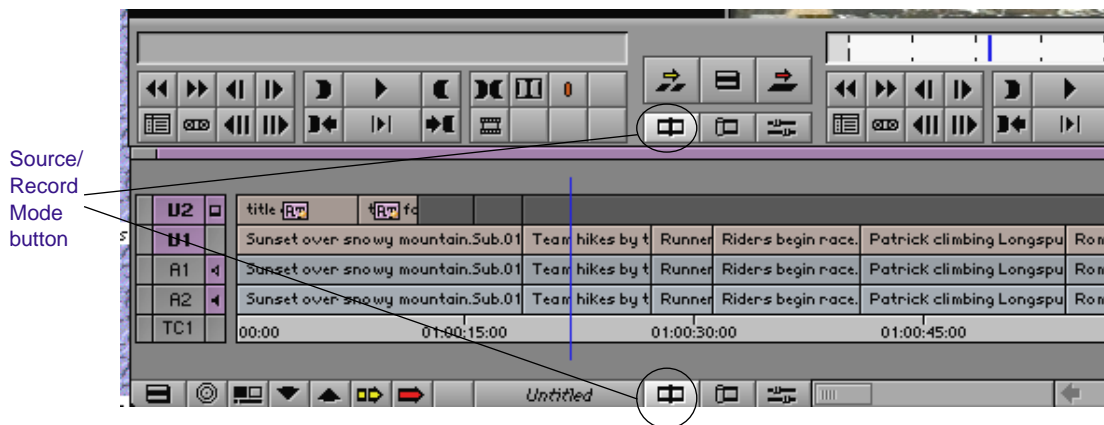
Setting Up a New Sequence

There are two ways to establish a new sequence:

- If you have specific parameters in mind for the project that you would like to establish first, you can create and name a sequence, set the start timecode, and determine the numbers and kinds of tracks to use before you make the first edit, as described in this section.

- If you would like to begin editing right away and build the sequence as you go without setting parameters ahead of time, skip to **"Making the First Edit" on page 379**.

To set up a sequence with the New Sequence command:

1. Choose New Sequence from the Clip menu. One of the following occurs:

    - If just one bin is open, or one of several bins is selected and you have clicked a specific bin to activate it, the new sequence appears in that bin. It also appears in the Record monitor and in the Timeline, with the generic title "Untitled Sequence *n*." Each new sequence is numbered incrementally until you rename it.

    - If several bins are open but none is activated, the Select a Bin dialog box appears.

    Select a Bin

    FieldsofGold
    music cuts
    Rain Forest Sequences

    [New Bin] [Cancel] [OK]
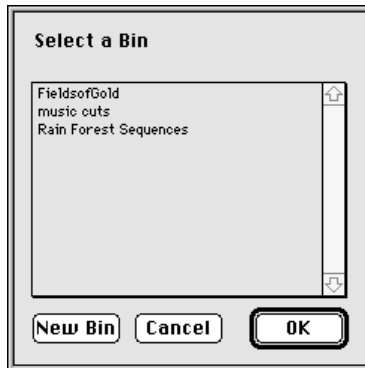
    Select the bin in which to store the new sequence, or click the New Bin button to create and open a new bin, and click OK.

    An untitled sequence appears in the bin, in the Record monitor, and in the Timeline.

New sequence —————— Untitled Sequence.01
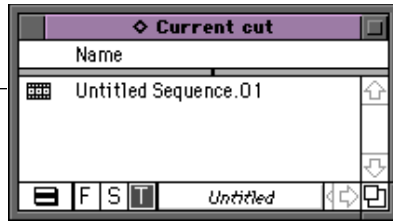
2. To rename the new sequence, immediately type a new name while the name field is active in the bin.

> *If you click anywhere in the interface after creating the new sequence, you deactivate the name field. Click the sequence name again to rename the sequence.*

Changing the Sequence Clip Info

You can also change the default start timecodes for all new sequences by using General Settings. For more information, see the *Avid Media Composer Products Reference.*

The following optional procedure allows you to rename the new sequence and set a customized start timecode by using the Clip Info command.

1. With your sequence loaded and the Record monitor active (click it to make it active), choose Get Clip Info from the File menu to open the Clip Info dialog box.

Clip Info

Bin: **Rain Forest Sequences**

Name: FIRST CUT

Start: 01:00:00:00

Cancel   OK
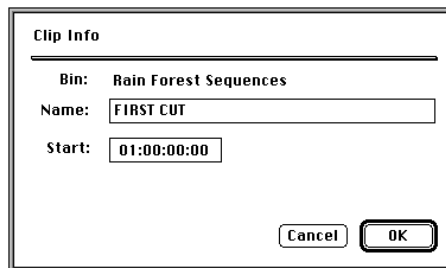
2. Drag a cursor across the sequence name in the Name field, then type a new name.

3. Drag a cursor across the start timecode, then type a new timecode.

4. Click OK.

Setting Up Tracks for the New Sequence

When you create a new sequence by using the New Sequence command, and no material is loaded into the Source monitor, the Timeline displays only the TC (master timecode) track.
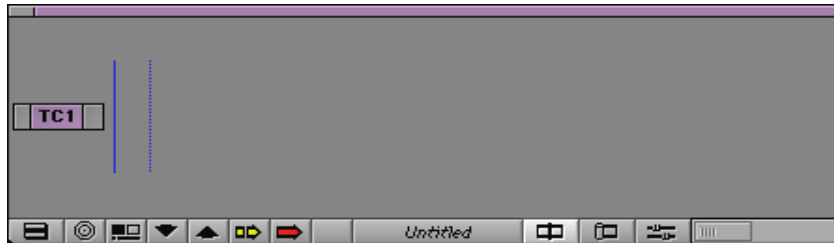
You can add any number of audio or video tracks to the sequence before making the first edit, as follows:

• Choose New Video Track from the Clip menu to add a video track.

• Choose New Audio Track from the Clip menu to add an audio track.

The following illustration shows the Timeline after one video and two audio tracks have been added, with no material loaded in the Source monitor.
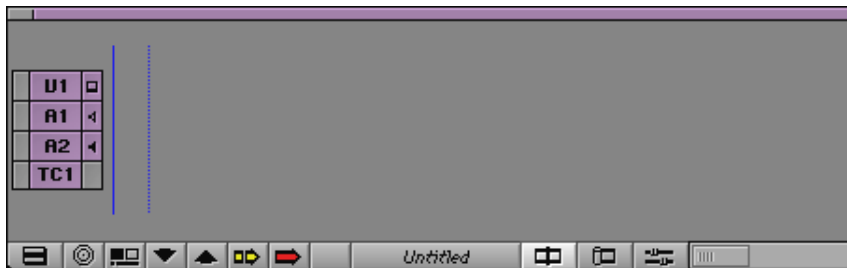
User Preferences for Creating Tracks

Your Avid Composer system provides two options in the Composer Settings dialog box that help automate the way tracks are created and enabled as you edit. You can adjust these settings in advance based on personal preference.

The default settings are:

- **Auto-create New Tracks:** Whenever you edit new source material from the Source monitor, the system automatically creates any new tracks in the sequence that match enabled tracks on the source side.

- **Auto-enable Source Tracks:** Whenever you load new source material into the Source monitor, the system automatically enables all existing source tracks.

Alternatively, you can do the following:

- Deselect the Auto-create New Tracks option to have the existing tracks in the sequence remain the same when you edit in new source material. This allows you to create new tracks selectively as you edit, which is often preferable at the more advanced stages of a project.

- Deselect the Auto-enable Source Tracks option to leave the tracks of newly loaded material in whatever state they were in when they were last loaded. This allows you to turn on the source tracks more selectively as you edit, which is often preferable at the more advanced stages of a project.

Adding Filler

You can add a small amount of black filler at the start of your sequence before making the first edit. A brief moment of black before the start of your sequence is sometimes useful during playback, or when recording a digital cut. You can also add filler at any time during editing to another part of the sequence.

To add filler:

1. Click on the clip name above the Source monitor and choose Load Filler from the monitor menu. The system loads a 2-minute clip of filler into the Source monitor.

2. Mark the desired length of filler, as needed.

3. Click the Splice-in or Overwrite button to edit the black into the sequence.

Copying Locators from Source Clips

You can copy all locators currently placed in source clips directly into the sequence as you edit. The locators and the locator text appear in all sequence segments that reference the source clips.

To automatically copy source locators as you edit:

1. Double-click Composer in the Settings scroll list of the Project window to open the Composer Settings dialog box.

Composer Window Settings (Current)

☒ First (lower) Row of Info
☐ Second Row of Info
  ☐ Digital Scrub Parameters
☐ Center Duration

☐ Play Multicamera Linecut
☒ Big Source/Record Monitors
  ☐ 16 x 9

☒ First Row of Buttons
☐ Second Row of Buttons

☒ Tick Marks in Position Bars

The commands assigned to the buttons in the Composer Window are also part of these settings.

Color Framing | Off ▼ |

☐ Sync Point Editing (Overwrites)
☐ Single Mark Editing
☐ Phantom Marks
☒ Auto-create New Tracks
☒ Auto-enable Source Tracks
☒ Copy Source Locators ————— Copy Source Locators option

Fast Forward(>>) and Rewind(<<)
☒ Stop at Head Frames
☐ Stop at Tail Frames
☐ Stop at Locators

☐ Ignore Track Lights

[Cancel]   [[OK]]

    2. Select the Copy Source Locators option.

Making the First Edit

Whether you establish a new sequence in advance, or do not prepare a sequence and want to begin editing right away, use the following procedure to begin editing:

1. Load the first clip into the Source monitor. If you have not already marked IN and OUT points for the clip in advance or created a subclip, view and mark the clip as necessary.

U1
A1
A2
TC1
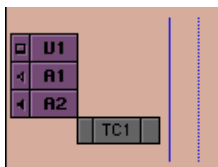
2. Click buttons in the source track selector panel to select the tracks you want to include in the edit. Only the tracks that have been digitized for the clip appear as source tracks in the Timeline. For more information on using the track selector panel, see **"Using the Track Selector Panel" on page 435**.

For example, with a talking head you might select tracks V1 (picture) and A2 (sound), if the voice was recorded on that track. You would deselect track A1, which might have unwanted wild sound picked up from a second microphone, or it might have no sound at all.

Or, as another example, if you are first laying down a music track, you would select track A1 or A2 depending upon where the music was digitized, and deselect V1.

3. Click the Splice-in button to add the edit to the sequence in the Record monitor.

The Record monitor displays the end of the last frame of the new edit. (You can scroll the position indicator in the Timeline or the position bar beneath the Record monitor to review the shot.) The edit also generates a graphical display of the cut in the Timeline.

Sequence

Screen display of the first edit in a sequence

Source clip

The end of the last frame of the first new edit

Splice-in button

Timeline generated by the edit
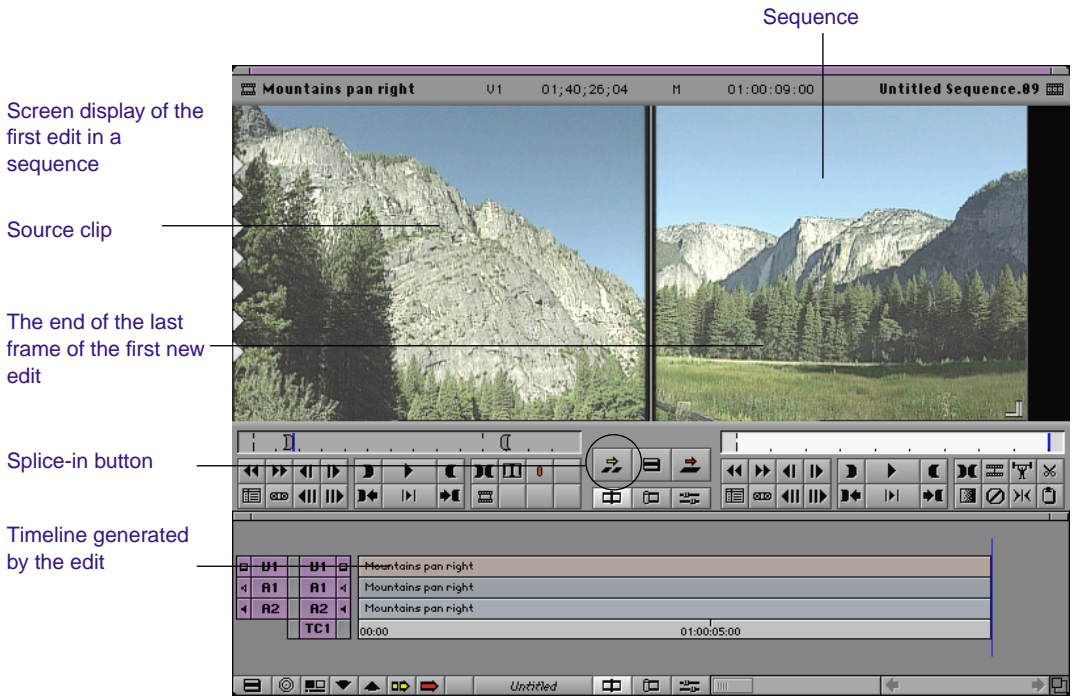
Creating an Instant Rough Cut

For additional information on editing directly from the bin into the Timeline, see **"Bin Editing into the Timeline" on page 425**.

As an alternative to creating a new sequence by editing shots one at a time, you can quickly create a rough cut by selecting and loading multiple clips directly from the bin into the Record monitor by using the Shift or Option keys. You can load clips that have been sorted in a bin in Text mode. Or, you can create a storyboard in Frame or Script mode and then load these clips directly.

To create a rough cut from a bin:

1. To create a more accurate rough cut, screen and mark clips in the bin in advance, as described in **"Marking IN and OUT Points" on page 350**.

2. In the bin, sort the clips in the order in which you want them to appear in the sequence:

- In Text mode, alphabetic or numeric sorting of clips might not provide you with the clip ordering that you want. You can create a new bin column for numbering the clips in the order in which you want them to appear, then sort the column numerically.

- In Frame or Script mode, rearrange frames and prepare a storyboard as described in **"Storyboard Worksheet" on page 268**.

3. Select the source and record tracks for the edit.

4. Shift-select or lasso the clips. Choose Select All from the Edit menu if there are no other clips in the bin.

5. Press and hold the Option key and drag the highlighted clips to the Record monitor to splice the clips into place. Alternatively, press and hold the Shift key and drag the clips to overwrite them into an existing sequence.

The clips are spliced together to form a new sequence based on the order in which they are listed in the bin. If there is a sequence already loaded into the Record monitor, the new clips are spliced or overwritten in the sequence beginning at the location of the position indicator or an IN point marked in the sequence.

Undoing or Redoing Edits

You can undo or redo up to 32 previous actions listed in the Edit menu. You can quickly undo or redo a just completed command, or you can search through a submenu to undo or redo all commands leading back to a particular command.

Undo/Redo commands for previous edit

Prior Redo commands appear in the upper portion of the Undo/Redo List sub-

Prior Undo commands appear in the lower portion of the submenu

| e | Edit | Bin | Clip | Output | Special | Tools | Windows | S |

Undo Mark Out ⌘Z
Redo Mark Clip ⌘R
Undo/Redo List ▶

Cut ⌘X
Copy ⌘C
Paste ⌘U
Clear

Select All Tracks ⌘A

Redo Clear In Out
Redo Mark Clip

Undo Mark Out
Undo Mark In
Undo Trim Tail 1
Undo Mark Out
Undo Mark In
Undo Splice-in

- To undo only the previous edit or function, choose Undo from the Edit menu.

- To redo only the previous edit or function, choose Redo from the Edit menu.

- To undo or redo everything back to a particular command, choose a command from the Undo/Redo list in the Edit menu. All of the previous commands, back to and including the command chosen from the submenu, are undone or redone as appropriate.

Editing Additional Shots into the Sequence

You can use two or sometimes one mark to complete an edit by using phantom marks. For more information, see **"Using Phantom Marks" on page 386**.

The three primary edit functions for adding material to your sequence are the *splice-in, overwrite*, and *replace* commands. In most cases you perform three-point edits in which you set three marks — two in the source material and one in the sequence, or the reverse. The fourth mark is determined automatically. The way you set marks depends upon the type of edit you perform, as described in this section.

Performing a Splice-In Edit

A splice-in edit inserts the material marked in the Source monitor into the sequence without replacing material already in the sequence.

Existing material moves down beyond the spliced material, lengthening the overall duration of the sequence.

To perform a splice-in edit:

1. Load a clip into the Source monitor.

2. Mark an IN and OUT point.

3. Mark an IN point in the sequence as follows:

   a. Move the position indicator in either the Timeline or the position bar of the Record monitor to the point where you want to splice the shot into the sequence.

   b. Click the Mark IN button or press the Mark IN key on the keyboard.

If you don't mark an IN, the system splices the new shot into the sequence at the current location of the position indicator.

4. Click the Splice-in button (yellow) to complete the edit.

Performing an Overwrite Edit

An overwrite edit replaces a section of the sequence with the material you select in the Source monitor. Unlike a splice-in edit, an overwrite edit replaces existing material and therefore does not lengthen the overall duration of the sequence.

To perform an overwrite edit:

1. In the Source monitor, mark an IN or OUT, but not both, to show the start or end of the shot you want to use.

2. In the Record monitor, mark both an IN and OUT to select the material in the sequence you want to overwrite. Or you can mark an OUT and move the position indicator in the Timeline or position bar to the IN point.

3. Click the Overwrite button (red) to complete the edit.

Performing a Replace Edit

You use the Replace button (blue) to replace a clip in the sequence (video, audio, or both) with new material from the Source monitor, while maintaining the original IN and OUT points of the previous edit. The Replace button must be mapped to a button under the Record monitor before you begin to edit.

To perform a replace edit:

1. Choose a sync frame in the source clip by moving the position indicator to display that frame in the Source monitor.

   The sync frame can be an IN point, an OUT point, or any frame in-between that you want to sync to a frame in the existing shot in the sequence based on the location of the position indicator.

2. Choose the sync frame in the sequence for the edited shot that you want to replace by moving the position indicator in either the Record monitor position bar or in the Timeline to that frame.

3. Click the Replace button (blue).

   The system calculates IN and OUT points for the source material by using the sync frames and the existing IN and OUT points in the sequence for the previously edited shot that you are replacing.

*If you are replacing a clip in an overwrite edit, and the position indicator falls within the overlap, you might end up replacing the wrong material unless you select the entire segment you want to replace. See **"Selecting and Deselecting Segments" on page 417**.*

Like replace editing, Sync Point Editing allows you to overwrite material in the sequence based on alignment of the position indicators in the source material and in the Timeline. The difference is that Sync

Point edits end at the nearest marks in either the source or record material, while replace edits always fill the IN to OUT of the clip in the sequence.

Using Single Mark Editing

Single mark editing (also called mark and park editing) allows you to establish a single mark, then use the location of the position indicator to determine the second mark when making the edit. You can use this procedure in several ways to save steps:

- You can mark an IN point in the Source monitor and then perform a splice-in, overwrite, or replace edit without adding an OUT mark.

- You can mark an OUT point, then locate a frame for the IN mark, and perform the edit without marking the IN point.

- You can mark the IN or OUT, play, step (jog), or shuttle through the clip forward or backward, then press the Splice-in, Overwrite, or Replace button to perform the edit on-the-fly without adding the second mark.

To enable single mark editing, open the Composer Settings dialog box from the Project window and select the Single Mark Editing option.

Using Phantom Marks

Phantom marks provide visual guidance when editing according to the three-mark rules described in **"Editing Additional Shots into the Sequence" on page 383**. When you enable phantom marks, the system displays gray IN or OUT mark icons in the position bars below both the Source monitor and the Record monitor. These phantom marks can indicate one, two, or sometimes three edit points calculated by the system to complete an edit. The following are a few sample scenarios.

Setting One Mark

In this example, you set only the IN mark on the source side. By default, the system uses the location of the position indicator as the IN mark for the sequence, and calculates both OUT points based on the length of the source clip.

One IN mark   Three phantom marks

You can see the system calculations instantly and can make the edit after setting just one mark, when appropriate.

Adding a Second Mark

If you decide that an OUT mark is required — to shorten the source clip, for example — then the system recalculates and displays new phantom marks.

Additional OUT mark   New phantom marks

Phantom marks can help you see the results of marks you set before you complete the edit, and is especially useful when doing sync-point editing or other complicated replace edits in which two or more marks are calculated automatically.

Lifting, Extracting, and Copying Material

Lifting, extracting, and *copying* allow you to remove or reposition material quickly in your sequence. For example, you can move a clip from the end of your sequence to the beginning; or you can remove the material from the sequence altogether. Lifting, extracting, and copying place the removed material into the Clipboard. You can then paste the material elsewhere in the sequence, or in another sequence altogether. These procedures are described in this section.

Lifting Material

The Lift function removes selected material from a track in the sequence and leaves black filler or silence to fill the gap. You can later move or fill this gap with other footage. When you lift material, the overall duration of the track (or sequence) remains the same.

To lift material:

1. Mark IN and OUT points at the start and end of the material in the sequence that you want to lift.

2. Select the tracks containing the material. The system will perform the function on selected tracks only.

3. Click the Lift button to complete the edit.

Extracting Material

The Extract function removes selected material from a track in the sequence and closes the gap left by its removal. As a result, when you extract material you shrink the duration of the track or sequence.

To extract material:

1. Mark IN and OUT points at the start and end of the material in the sequence that you want to extract.

2. Select the tracks containing the material. The system will perform the function on selected tracks only.

3. Click the Extract button to complete the edit.

Copying Material

For more information on using the Clipboard, see **"Using the Clipboard" on page 389**.

The Copy to Clipboard function makes a duplicate of selected material in the sequence and leaves the material intact. When you copy material, the sequence remains unaffected. The material can then be inserted into the sequence elsewhere or into another sequence.

To copy material to the Clipboard:

1. Mark IN and OUT points at the start and end of the material in the sequence that you want to copy.

2. Select the tracks containing the material. The system will perform the function on selected tracks only.

3. Click the Copy to Clipboard button.

   The system copies the selected material to the Clipboard, and leaves the sequence untouched.

Using the Clipboard

The Avid Composer system's Clipboard is a cut, copy, and paste tool adapted to the special needs of the editing environment. You can place a marked section of the sequence into the Clipboard at any time by clicking the Lift, Extract, or Copy to Clipboard buttons.

The Copy to Clipboard function is useful for moving or repeating material in a sequence without moving multiple segments in Segment mode, or rebuilding the section at another location. For example, you can:

- Copy a portion of a sequence for pasting into another sequence.

- Isolate and copy a portion of an audio track for looping music or repeating a sound effect.

- Copy graphic elements for repeating at other locations in a format cut.

Preserving Clipboard Contents

The Clipboard stores only one clip at a time; each time you copy, lift, or extract additional material, you delete and replace the previous contents.

To keep the Clipboard contents throughout a session, do one of the following:

Clear Monitor
Duplicate
Clipboard Contents
Add Comments...
Load Filler
Clear Menu

- Choose Clipboard Contents from the Source Monitor menu.

  The contents appear as a clip in the Source monitor, and the name "Clipboard Contents.*n*" appears above the monitor and in the Monitor menu. The *n* is an incremental numbering of clips placed in the Clipboard during the session.

- Press the Option key when you copy, lift, or extract the material. The contents appear as a clip in the Source monitor, and the name "*Sequence name*. Sub" appears above the monitor and in the Monitor menu.

Repeat these procedures each time you want to preserve copied, lifted, or extracted material during a session. All the clips remain available in the Monitor menu until you choose Clear Menu or close the project.

Recovering Material from the Clipboard

The Clipboard allows you to restore lifted or extracted segments quickly. This is especially useful if you've performed one or more edits since removing the material. In contrast, if you restore the material by using the Undo function, the system also undoes all edits performed in the meantime. The Clipboard provides the benefit of restoring the material while maintaining subsequent edits.

To restore material from the Clipboard:

1. Load the Clipboard contents in one of two ways:

   • Choose Clipboard Contents from the Source Monitor menu to place the contents into the Source monitor and the Monitor menu list of clips.

   • Open the Clipboard as a pop-up monitor by choosing Clipboard Monitor from the Tools menu.
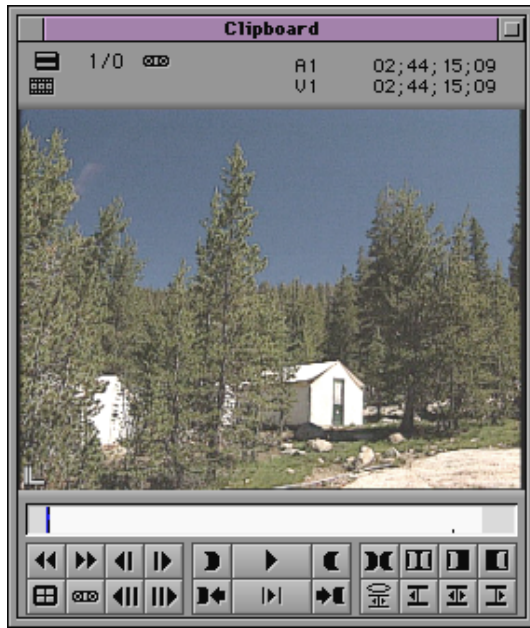
2. Click the Mark Clip button to mark the entire segment.

Optionally, view the sequence segment as a source Timeline by clicking the Toggle Source/Record button in the Timeline tool bar to mark and select specific tracks.

3. Locate the IN point in the sequence from which the segment was removed. Place the position indicator here, or mark an IN.

4. Splice or overwrite the material back into the sequence.

Adding Comments to Sequence Clips

You can add comments to sequence clips to appear in the Timeline or in lists that you create, such as an EDL or a cut list. Comments can

include such things as instructions for color correction, or for adjusting an effect.

To add comments to the sequence:

1. Click one of the Segment Mode buttons (located below the Timeline) and highlight the clip in the Timeline to which you want to add a comment.

2. Choose Add Comments from the Monitor menu. The Comments dialog box appears.

3. Type your comments in the text box and click OK.

You can display the comments in the Timeline by using the Clip Text option in the Timeline Fast menu.

4. Click one of the Segment Mode buttons again to leave Segment mode.

Playing the New Sequence

After completing a rough cut, you can play the new sequence to see the results of your editing. You can view the sequence in the Record monitor or in the third, full-screen monitor.

If you need to prepare a screening of the sequence away from the system, see Chapter 19.

To review your work thus far:

If you have several tracks of audio, you might need to mix them down and adjust levels before playback. For more information, see **Chapter 16**.

1. Make sure that the video track monitor icon is located on the uppermost video track in order to display all video tracks and effects during playback.

2. Make sure the audio track monitor icon on the uppermost audio track is enabled to ensure proper playback of all audio tracks.

3. Go to the start of the sequence in the Record monitor by clicking the left side of the position bar to reposition the position indicator at the beginning, or press the Home key on the keyboard.

4. Use the position indicator, buttons, mouse, or keyboard to play, step, or shuttle through footage. View the sequence in the Record monitor or in the full-screen monitor.

Starting a Playback Loop

You can play back your sequence in a continuous loop by augmenting the Play IN to OUT command with the Control key. You must set marks in the sequence to determine the range of the playback loop.

You can also use this technique to isolate and continuously play back a small portion of the sequence during a difficult edit.

To start a playback loop:

1. Place IN and OUT marks in the sequence. To play back the entire sequence, place the IN mark at the beginning and the OUT mark at the end.

2. Press the Control key and the Play IN to OUT key or button.

   control

   The playback loop begins and continues until you press the Stop key or click anywhere with the mouse.

You can also press the Control key and the Play to OUT button. The location of the position indicator acts as the IN point for a continuous loop.

Playback Performance Tips

As you continue to edit, you might find the playback performance of the system diminishing as the sequence grows in length and layers. This can happen when you are using a great deal of RAM for playback

of large and complex sequences. The following are a few tips for improving playback performance:

- Check the number of media objects in use for your project in the Memory window, as described in **"Viewing Memory" on page 84**. If this number is large (more than 50,000 objects on a system with 32 MB of RAM, for example), reduce the number of media objects by doing one of the following:

    - Close bins that are not in use.

    - Reduce the number of clips in the open bins.

    - Unmount drives that are currently not in use by dragging them to the Trash. You can remount the drives at any time by choosing Mount All from the File menu.

- Restart the computer every few hours to refresh the system memory. Frequent opening and closing of files, tools, and applications can diminish the functional capacity of RAM.

- Split the sequence into two or more segments, if possible.

Using the Play Length Toggle Feature

Long sequences with many effects can be time consuming to work with in the Timeline. Working with a smaller sequence can save time. The Play Length toggle feature allows you to toggle between playing the entire sequence and playing a limited duration of the sequence.

When you use the Play Length feature, first map the Play Length toggle button from the Command Palette to the Record monitor command palette, then set the value for the Play Length toggle button. You can then use the toggle button to switch between playing the entire sequence and playing a limited duration centered around the current position.

Mapping the Play Length Toggle Button to the Record Monitor Palette

To map the Play Length toggle button to the Record monitor palette:

1. From the Tools menu choose Command Palette.

2. Select the Play tab at the top of the Command Palette.

PL

3. Click and drag the Play Length toggle button to the Record monitor command palette.

Changing the Value for the Play Length Toggle Button from the Default

To change the value for the Play Length toggle button from the default:

1. From the Tools menu choose Console Window.

2. In the Console window text box, enter

   ```
   playlength n
   ```

   Where *n* is the duration (in minutes) you want mapped to the Play Length toggle button.

The n variable must be a whole number set to 1 or higher.

3. Press return.

   The Console window displays the value for Playlength. For example, if you set playlength to 1, the console window will display playlength = 1 (half forward / half backward).

Selecting the Play Length Toggle Button to Map to the Play Button

To select the Play Length toggle button to map to the Play button:

PL

1. Press the Play Length toggle button. It toggles between play entire sequence and play length 1 minute.

2. Set the toggle button to play length 1.

   With the Play Length toggle button activated, press the L key or the Play button. The sequence will play from the position indicator forward 30 seconds (half forwards). If you press the J key or

Play Reverse button, the sequence will play from the position indicator backward for 30 seconds (half backward).

3. To set the Play Length back to play entire sequence, press the Play Length toggle button again.

How to Proceed

If you have finished a rough cut and are ready to fine-tune the sequence, you can return to Source/Record mode, or you can proceed with the following:

- To learn about the Timeline and Segment mode editing techniques, see **Chapter 14**.

- To make frame-accurate adjustments to your edits by using Trim mode, see **Chapter 15**.

- To edit with audio or mix audio tracks in preparation for playback or output, see **Chapter 16**.

- To edit with synced tracks, see **Chapter 17**.

- To edit with multicamera material, see **Chapter 18**.

- To add effects to your sequence, see the *Avid Media Composer and Film Composer Effects Guide*.

CHAPTER 14

Using the Timeline

The Avid Composer system represents each edit and effect in a graphical timeline structure to help you track and manipulate the elements of your sequence. The Timeline continuously updates as you work, displaying an extensive array of icons and information that you can customize in various ways.

In addition, the Timeline has its own set of editing tools that you can use to create and revise edits and transitions across multiple tracks. These features are described in the following sections:

- **Customizing Timeline Views**
- **Restoring the Default Timeline View**
- **Navigating in the Timeline**
- **Using Segment Mode**
- **Using Advanced Timeline Techniques**
- **Working with Multiple Tracks**
- **Additional Offline Aids**
- **Printing the Timeline**

Illustrations of the Composer window in this chapter show the full set of two button rows, two information rows, and Center Duration display, as selected in Composer Settings. For more information, see the Avid Media Composer Products Reference.

Customizing Timeline Views

There are also a number of on-the-fly procedures for changing your view of the Timeline (such as the Zoom and Focus functions) that are not saved as part of a Timeline view.

You can customize your view of the Timeline to display a variety of information about your sequence as well as the clips and transitions it contains. You use the Timeline Fast menu to change the display. You can also save different custom views that you can call up instantly in various circumstances.

The following are a few examples:

- **Effects editing:** If you are editing complex visuals with multiple tracks and effects, you can display Effect contents, Effect and Dissolve icons, Clip Frames, and Clip Transition Durations within enlarged video tracks in the Timeline.
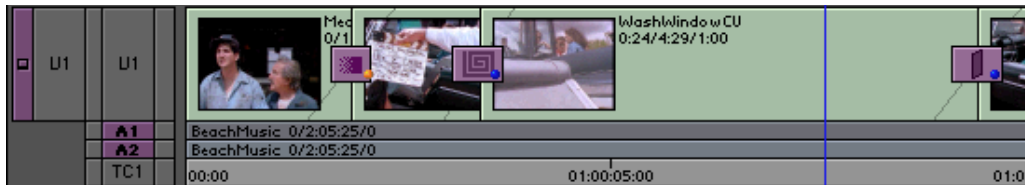
- **Complex audio work:** If you are doing advanced audio work with multiple tracks, or fine-tuning difficult audio edits, you can hide video tracks and enlarge audio tracks while displaying waveform plots.
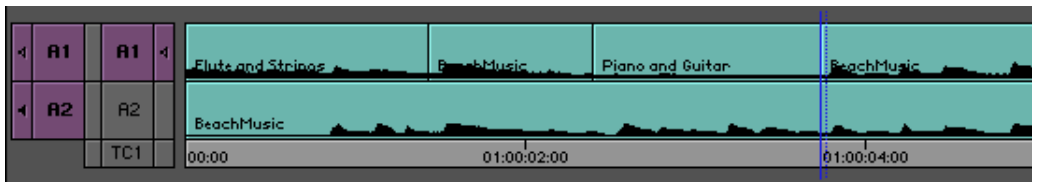
- **Film and Animation editing:** If you are working on a film or animation project, you can display the film track, show every frame in the sequence, and/or display sync breaks where they occur.

- **Editing for online:** If you are editing offline with plans to generate an EDL and finish the sequence in an online videotape suite, you can track detailed clip and dupe-reel information by displaying clip text and enabling Dupe Detection.
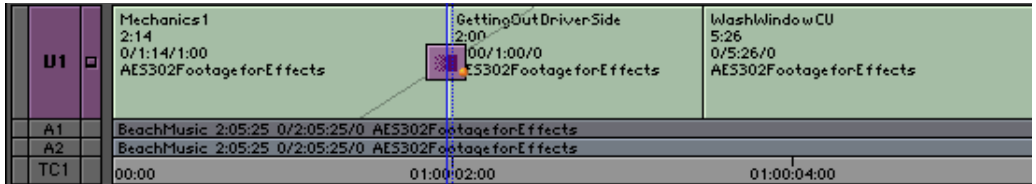
- **Basic trimming:** If you are fine-tuning and trimming simple edits at the early stages of a project, you can view the sequence in Heads and Tails view to see a display of the first and last frame of every shot.
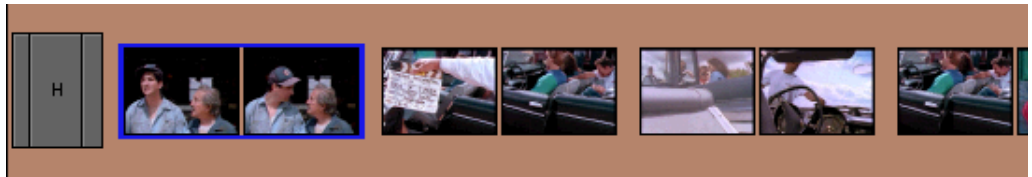
Using the Timeline Fast Menu

To create a custom Timeline view, you choose various options from the Timeline Fast menu. The Timeline Fast Menu button appears in the bottom left corner of the Timeline tool bar.

To select an item from the Timeline Fast menu, click the Fast Menu button and scroll through the menu to select or deselect an option. Selected options have check marks (√) next to them. You must select some options from a submenu.

Timeline Fast menu ——

√ **Track Panel**
√ **Effect Icons**
√ **Dissolve Icons**
Clip Frames
Clip Text ▶
Sync Breaks ▶
Dupe Detection
Audio Data ▶
Track Color ▶

Show Track ▶	**Show All**
More Detail ⌘]	**Hide Selected** ⌘H

Show Track submenu
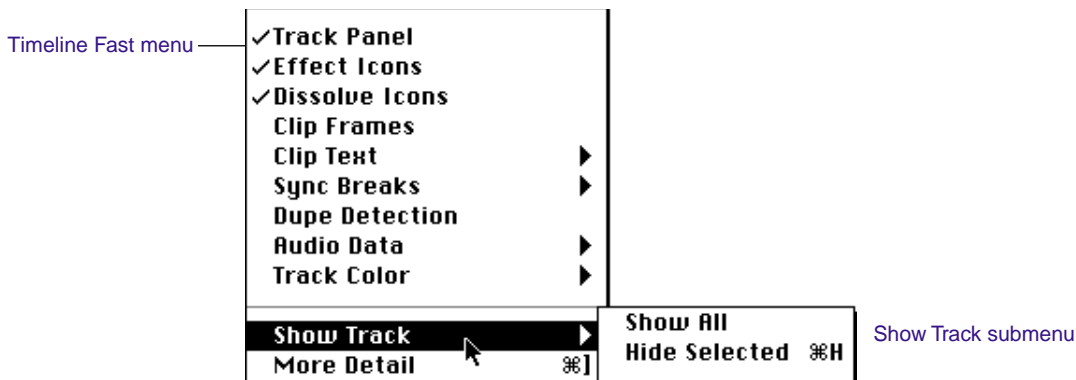
You can learn about the various Timeline view options as follows:

- For an overview of all Timeline Fast menu options, see the *Avid Media Composer and Film Composer Quick Reference*.

- For more information on Effect icons and displays, see the *Avid Media Composer and Film Composer Effects Guide*.

- For information on different view types, see **"Customizing Time-line Views" on page 399**.

- For information on Dupe Detection in the Timeline, see **"Detect-ing Duplicate Frames" on page 449**.

- For information on displaying the film track, see **"Editing with the Film Track" on page 429**.

- For more information on the display of sync breaks in the Timeline, see **Chapter 17**.

- For more information on displaying energy and waveform plots in audio tracks, see **Chapter 16**.

- For more information on manipulating the height of tracks or moving tracks as part of a view, see **"Additional Procedures for Customizing the Timeline" on page 402**.

Additional Procedures for Customizing the Timeline

In addition to the options provided in the Timeline Fast menu, you can customize a Timeline view by enlarging or reducing the size of tracks, or by moving tracks up or down in the Timeline hierarchy.

Enlarging and Reducing Tracks

You can enlarge or reduce the height of one or more tracks to improve visibility and display more information within the tracks. You can save these changes with a Timeline view.

To enlarge or reduce the height of tracks:

1. Select the tracks that you want to resize.

2. Do one of the following:

   - Choose Enlarge or Reduce Track from the Edit menu.

   - Press and hold the Option key and move the cursor to the bottom edge of the track selector until it appears as a bar with a vertical up and down arrow. Drag the edge up or down to make the track narrower or wider. This method applies to only one track selection at a time.

You can use the Control key along with the Enlarge Track (⌘–L) or Reduce Track (⌘–K) shortcut key combinations to change the height of all tracks quickly in the Timeline regardless of track selection. You can use this enhancement to:

- Reduce and view all the tracks in a multilayer sequence, and enlarge them when finished

- Enlarge all tracks to view waveform plots or other displays in multiple tracks

Do one of the following to enlarge or reduce all highlighted tracks at once:

- Press the Control, Command (⌘), and L keys to enlarge all tracks.

- Press the Control, Command (⌘), and K keys to reduce all tracks.

Moving a Track

You can move a track to reposition it vertically relative to the Timeline. Surrounding tracks are repositioned above or below the track. You can save these changes with a Timeline view. Moving tracks is especially useful when you are working with multiple-layer effects and discover that the tracks are built in the wrong hierarchy to apply the effect correctly.

To move a track, press and hold the Option key, click the track selector for the track that you want to move, and drag the track to its new position.

Do not move a track when patching to another track would be more appropriate. Moving whole tracks can throw effects and track monitoring out of place.

Changing the Timeline Background Color

To change the background color of the Timeline, you also have to change the background color of the Source and Record monitors. To change the color:

1. Click in the Source or Record monitor to activate them.

2. Choose Set Composer Background from the Edit menu.

3. Choose a shade of gray for the background from the pop-up palette.

Changing the Timeline Track Color

To change the color of the tracks in the Timeline:

1. Click in the Timeline to activate it.

2. Choose Track Color from the Timeline Fast menu.

3. Choose a color for the tracks from the pop-up palette.

Saving a Customized View

You can save a customized Timeline view. Timeline views appear in the Settings scroll list in the Project window. You can save, rename, and copy several views.

The system saves the following Timeline information with each view: displayed tracks, track sizes, and track positions; clip names and frames; audio waveforms; and type of view (Time, Heads, or Heads and Tails).

Once you have created and saved several Timeline views, you can choose alternate views at any time from the Timeline View pop-up menu located near the middle of the Timeline tool bar at the bottom of the screen. The Timeline view is labeled *Untitled* until you name and save a customized Timeline view.

To name a Timeline view or to change a view's name:

1. Choose Save As from the Timeline View pop-up menu.

Timeline View pop-up menu
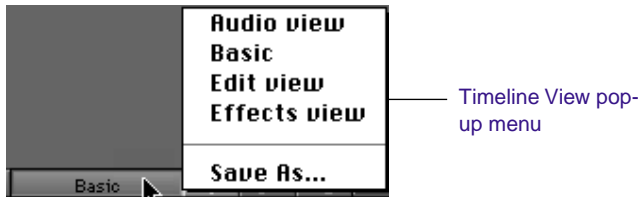
A dialog box appears.

2. Type a name for the view and press Return.

The following is an alternative procedure:

1. Press and hold the ⌘ key, then click the name displayed in the Timeline View pop-up menu and drag it to the Project window.

   The system adds the Timeline view to the project.

2. Click the Settings button in the Project window to display the Settings scroll list. The Timeline view appears in the scroll list.

3. Click the User Name column of the Timeline view, type a new name, and press Return.

Replacing a Timeline View

If your saved views become extensive and there are views you no longer use and would like to replace, use the following procedure:

1. Press and hold the Option key while you click the View button to display the list of saved view names, each appended with the Replace command, as shown:

```
                    Replace "Audio view"
                    Replace "Basic"
                    Replace "Edit view"
                    Replace "Effects view"

          Basic     Save As...
```

2. Select a saved view name from the list.

The current Timeline view is applied to the selected name, and that name is displayed in the Settings scroll list in the Project window. You can change the User Name in the Project window if you want.

Setting the Scroll Option for the Timeline

You can have the Timeline scroll over the position indicator while you play a sequence.

To set the scroll option:

1. Click Settings in the Project window to display a list of your current settings.

2. Double-click Timeline to display a list of your current Timeline settings. For more information on Timeline settings, see the *Avid Media Composer Products Reference*.

3. Select the Scroll While Playing option.

To turn off scrolling while you play, deselect it in the Timeline Settings window.

4. Click OK.

When you play a sequence in the Timeline, the sequence scrolls over the position indicator. When the Timeline has passed the playhead and the end of the Timeline is revealed, the Timeline stops moving and the blue position bar travels the remaining distance.

> *For the Timeline to scroll, you might need to display more detail in the Timeline to expand the sequence. Click the scale bar and drag it to the right to expand the Timeline.*
>
> *All effect icons are hidden as you scroll.*

Restoring the Default Timeline View

To restore the default view in the Timeline, choose Default Setup from the Timeline Fast menu.

Navigating in the Timeline

The Timeline window provides various controls for quickly moving through a sequence and adjusting your view of details displayed in the tracks while editing. You can use the position indicator, the Timeline scroll bar/position bar, the scale bar, Zoom In and Zoom Back commands, or the Focus button. In addition, marked sections of the sequence can be highlighted for visual reference.
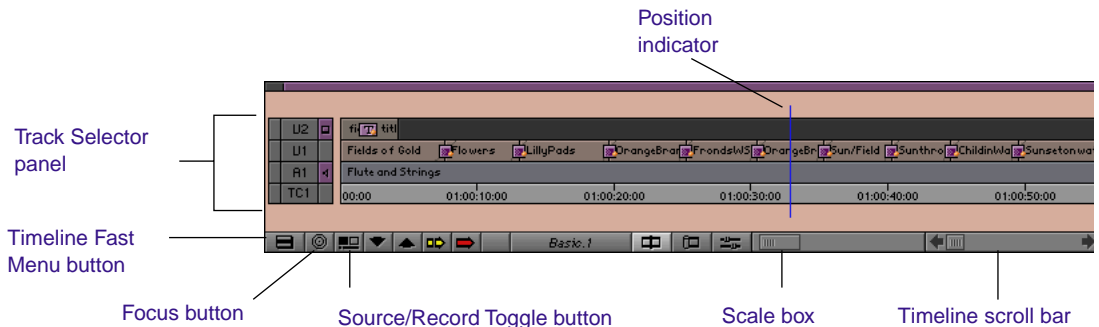
Figure 14-1 Timeline Window

Using the Position Indicator

The position indicator in the Timeline marks your place in the sequence. It also determines how some of your commands are interpreted. For example, when you perform an edit, the system takes the location of the position indicator as the Mark IN in the absence of established marks.

When you move the position indicator in the Timeline, the smaller position indicator within the Record monitor's position bar also moves.

Using the Timeline Scroll Bar/Position Bar

By default the Timeline scroll bar appears along the bottom of the Timeline window, on the right side of the Timeline tool bar, as shown in **Figure 14-1**.

The Timeline scroll bar functions like any standard Macintosh scroll bar. You can drag the scroll box to reposition yourself within the Timeline, or click the arrows to scroll left or right.

You can change the Timeline scroll bar to a position bar that acts like the position bar in the Record monitor, except that you can manipulate it without deactivating the Timeline window.

To use the Timeline position bar, select Show Position Bar in the Timeline Settings window.

To access the Timeline Settings window:

1. From a Project window, click Settings.

   The Settings scroll list appears.

2. Scroll down to find Timeline and double-click on it.

   The Timeline Settings (Current) window opens.

Timeline Settings (Current)

Dupe Detection Handles [0 Frames ▼]

☒ Show Position Bar
☐ Show Effect Contents
☒ Show Marked Region
☐ Show Marked Waveforms
☒ Show Segment Drag Quads
☐ Scroll While Playing   [Cancel]
☒ Double Click Shows Nesting
☐ Auto Patching   [OK   ]
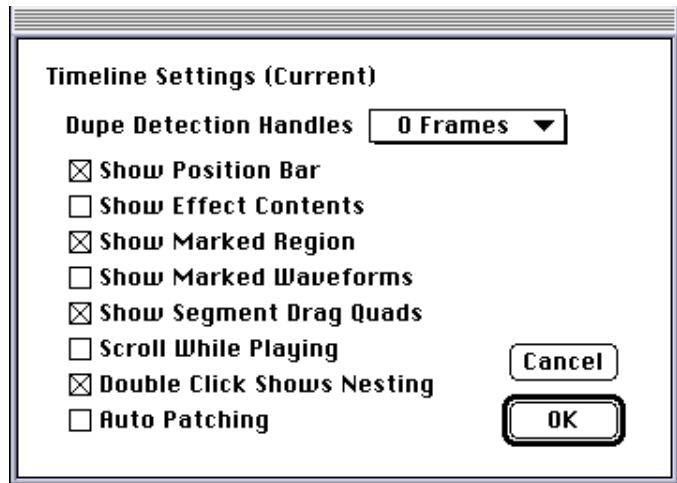
3. Click the appropriate options.

   An X appears in the box. To deselect an option, click it again.

   For more information on the Timeline settings, see the *Avid Media Composer Products Reference*.

4. Click OK.

   The scroll bar changes to a position bar.

An advantage of the position bar is that when you focus on just a por-
tion of the sequence, both the Timeline and Record monitor position
bars show a highlighted region around the position indicator. This rep-
resents the range of material displayed in the window.

Position indicator and highlighted
region
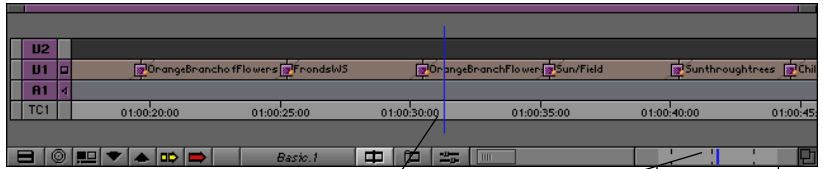
Position indicators   Highlighted region

Displaying Detail in the Timeline

The scale bar stretches and contracts the Timeline area centered
around the blue position bar. This allows you either to zoom in to
focus on a specific area of your sequence, or to zoom out to display
your whole sequence. This feature is especially useful when you have
a lengthy sequence with many edits.

The scale bar replaces three buttons formerly in the Timeline tool bar:
Show More Detail, Show Less Detail, and Show Entire Sequence.
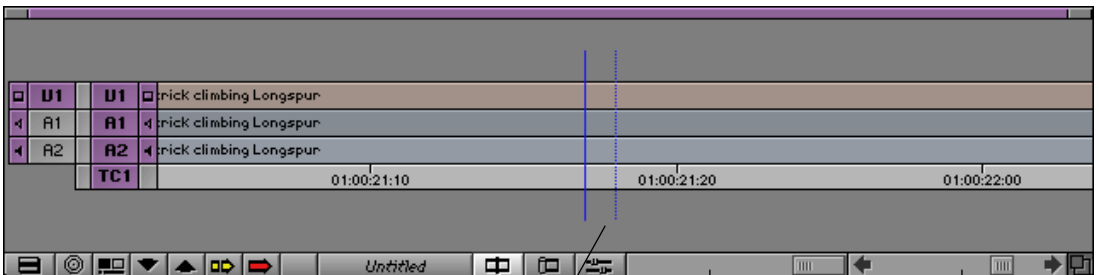
Dotted blue line   Scale bar   Scroll bar

To zoom in on a section of the Timeline at the position indicator and then zoom back to your original display:

1. Click the scale box and drag it to the right.

   The following happens:

   - The Timeline expands horizontally.

   - The Timeline track shows more detail.

01:00:12:00

   - The position indicator splits into a solid blue line and a dotted blue line (or "shadow"), marking the beginning and end of the current frame. You can click either the line or the shadow to move exactly one frame forward or back.
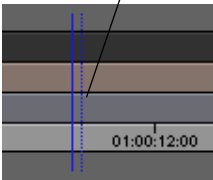
2. Move the scale box back to the left.

   The Timeline shrinks to its original size.

Zooming In and Out

The Zoom In/Back commands in the Timeline Fast menu stretch out the Timeline like an accordion to allow you to focus on detail, but with the following differences:

- The Zoom In command does not expand the Timeline incrementally, but allows you to select a portion of the Timeline of any size to instantly expand to fill the window.

- The Zoom Back command does not shrink the Timeline incrementally, but instantly restores it to its former size.

- The Zoom In and Zoom Back commands are not dependent on the position bar. You can select any portion of the Timeline to expand and contract.

To zoom in on a section of the Timeline and then zoom back to your original display:

1. Choose Zoom In from the Timeline Fast menu. The cursor arrow changes to a selection bar.

2. Position the cursor at either the start or end of the place you want to zoom in on, and drag to select the chosen section.
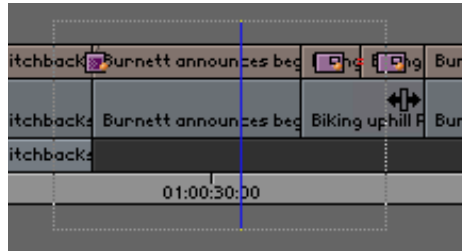
When you release the mouse button, the material inside the Zoom In box expands to fill the Timeline window.

3. To return to the previous Timeline display, choose Zoom Back from the Timeline Fast menu.

Focusing the Timeline

The Focus button also allows you to zoom in on a section of the Timeline. It is located in the Timeline tool bar next to the Fast Menu button.
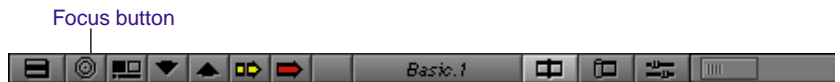
Focus button

The Focus button allows you to center the position indicator quickly and expand the Timeline. The Focus button always expands the Timeline to a scale of 90 pixels per 1 second. The position indicator is centered in the window. When you click the Focus button a second time, it always returns the Timeline to its previous size.

To focus the Timeline:

1. Place the position indicator at frame or transition you want to expand.

2. Click the Focus button.

   This centers and enlarges the region of the Timeline immediately surrounding the position indicator.

3. Click the Focus button again to return to the previous view.

Displaying Source Material in the Timeline

The Source/Record toggle button allows you to view multitrack source material quickly in the Timeline for selecting and marking specific tracks.

By default the Timeline displays only the available tracks for source material.

Source Tracks

Source/Record
toggle button

When you click the button to display the source material, both the button and the position indicator turn green to indicate that you are viewing source material.

Button and position indicator turn green.

This feature is particularly useful when you are editing with a sequence or subclip created from a sequence; you can also use it to look at the contents of any source clip in a Timeline display.

Heads or Tails views are disabled when you are displaying material from the Source monitor.

Controlling Movement in the Timeline

While working in the Timeline window, you can use Control, Option, and Command keys to control the movement of both the position indicator and any segments that you move in Segment mode.

The Timeline provides a small icon window called the motion mode indicator in the Timeline tool bar.

Motion mode indicator

This small window displays a specific icon, depending on the key you press to augment your movement within the Timeline. The keys and movements are as follows:

• To snap to the head of transitions as you move through the Timeline sequence, press and hold the Command (⌘) key as you drag

either the position indicator or any segments selected in Segment mode.

- To snap to the tail of transitions, press and hold the Command (⌘) and Option keys as you drag either the position indicator or any segments selected in Segment mode.

- To move frame-by-frame, hold the Option key and drag either the position indicator or any segments selected in Segment mode.

- The Control key affects the movement of segments only. To snap the selected segments to an edit point in the track above or below the current track, click a segment mode button, then press and hold the Control key and drag the segments.

IN to OUT Highlighting in the Timeline

When you mark a sequence with IN to OUT points, the system indicates the selection by highlighting the marked region in the Timeline. Only selected tracks are highlighted.

All tracks selected   Highlighted region
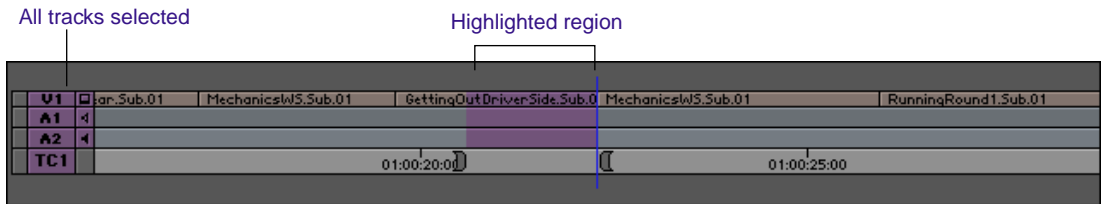
This visual guide helps you monitor track and segment selection more carefully when mixing or applying effects across multiple tracks and segments.

To turn the highlighting feature on and off, select Show Marked Region from the Timeline Settings window.

Using Segment Mode

Segment mode provides editing controls for moving, deleting, marking, and editing entire segments in the Timeline. A segment is a portion of the sequence that includes two or more transitions. There are two modes for editing segments or adding shots: Extract/Splice-in, indicated by a yellow arrow, and Lift/Overwrite, indicated by a red arrow.

Unlike traditional tape editing, Segment mode allows you to instantly reposition entire segments by using visual controls as though you were physically "dragging" portions of your sequence around on a tape. You can move shots separately or together, on one track or across tracks.

Observe the following guidelines when editing in Segment mode:

- Transition effects on either side of a moved selection are deleted. Transition effects inside the selection are preserved.

- You can track the audio while moving segments by pressing the Caps Lock key to enable audio scrub. For more information, see **"Using Audio Scrub" on page 482**.

- When you are finished, Segment mode continues to affect your editing in Source/Record mode or Trim mode unless you click the active Segment Mode button to deactivate it.

Segment Mode Workflow

The following is the basic workflow for editing segments in Segment mode:

- Select the segments by clicking with the Segment Mode pointer, or by lassoing segments with the mouse, as described in **"Selecting and Deselecting Segments" on page 417**.

- Move, mark, or delete the segments in either Extract/Splice-in mode or Lift/Overwrite mode, as described in **"Performing Segment Mode Edits" on page 419**.

- Use Segment mode, if desired, to edit directly from a bin as described in **"Bin Editing into the Timeline" on page 425**.

Selecting and Deselecting Segments

There are two basic methods for selecting segments for moving or editing:

- Click a Segment Mode button, and select segments with the pointer.

- Lasso one or more segments on one or more tracks by using the mouse.

Once you enter Segment mode by using either of these methods, you can continue to select or deselect additional segments. The selected segment or group of segments becomes highlighted, and remains in its original position during the move until you select its new position.

Observe the following guidelines when selecting tracks:

- You cannot simultaneously move segments that are separated along a track. You can, however, move segments separated on different tracks.

- You cannot overlap the source and destination tracks. For example, you can move audio segments from A3 and A4 to A1 and A2, but you cannot move them from A3 and A4 to A2 and A3 (A3 overlaps).

- With a group, you can click any selected segment to drag the entire group to a new position.

- You can select black filler as a segment.

Selecting with the Segment Mode Pointer

When you enter Segment mode, the cursor becomes an enlarged pointer that is yellow to indicate Extract/Splice-in mode, and red to indicate Lift/Overwrite mode. Outside of the Timeline, the cursor changes back to the standard arrow or I-beam, allowing you to perform other functions while in Segment mode.

To select segments with the pointer:

1. Click one of the Segment Mode buttons located in the Timeline tool bar next to the scale bar. The arrow changes to an enlarged pointer.

2. Click a segment in any track to select it. Shift-click additional segments to select a group.

Lassoing One or More Segments

You can use the mouse to lasso a single segment or a group of segments across one or more tracks.

To lasso segments, draw a lasso beginning in the area above the tracks in the Timeline. Drag left to right and down to select more than one transition.

To select, drag a lasso from left to right and down.
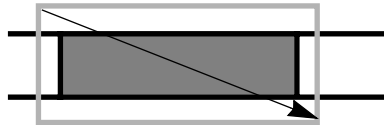
Extract/Splice-in Segment mode is enabled by default when you draw a lasso. To switch to Lift/Overwrite mode, click the Overwrite button after drawing the lasso.

Observe the following guidelines when lassoing segments:

- Position the cursor above the tracks before dragging. If you click within the tracks, you simply relocate the position indicator to that position. To lasso segments in the middle of the Timeline between multiple tracks, hold the Control key while you click and drag.

- Lasso at least two transitions, or all transitions included in multiple segments. If your lasso surrounds only one transition, you enter Trim mode.

- Drag from left to right. If you drag from right to left, you enter Trim mode with slip rollers selected.

Deselecting Segments

To deselect one or more selected segments, do one of the following:

- To deselect an entire track, click the track selector. For example, if you lasso segments on V1, V2, and A1, you can click the V2 and A1 track selectors to leave only the segment on the middle track, V1, selected, as shown.

Tracks V2, A1 deselected

Only the segment on V1 remains highlighted.
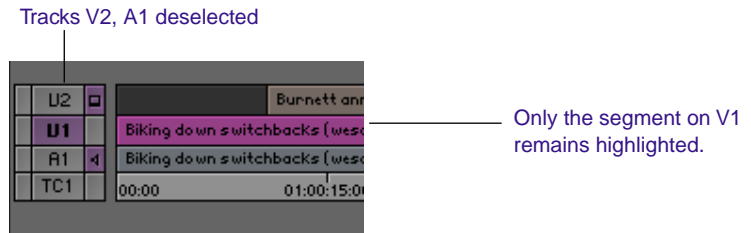
- Use the Shift key and the Segment Mode pointer to deselect specific segments on any track, leaving the remaining tracks selected.

Performing Segment Mode Edits

Once you've selected one or more segments and entered Segment mode, you can reposition the segments by clicking and dragging with the Segment Mode pointer. You can also delete or mark the segments in one step.

419

You cannot overlap the source and destination tracks. For example, you can move audio segments from A3 and A4 to A1 and A2, but you cannot move them from A3 and A4 to A2 and A3 (A3 overlaps).

About Four-Frame Display

When you begin to drag the segments, the interface changes to the Segment mode four-frame display:

- The Source/Record monitors change to a four-frame monitor display. The two outer frames are updated while you drag the segment forward and/or backward in the Timeline, indicating the frames you pass as you drag the segment. The outer two frames in the four-frame display make it easy to view and analyze the frames between which you might want to drop the selected segment.

- A centered numeric offset counter appears directly below the frame monitors. The counter tracks the number of frames you move while you drag the selected segment from its starting point.

Four-Frame Display

The two outer frames indicate ending and beginning frames of shots before and after the segment.

The two inner frames represent the start and end frame of the segment.

When you drag the segments, the original highlighted segment remains in place, while a "ghost" segment enclosed in a dotted white

box moves along with the pointer until you release it at a new edit point.

Selected segment is dragged to new position.
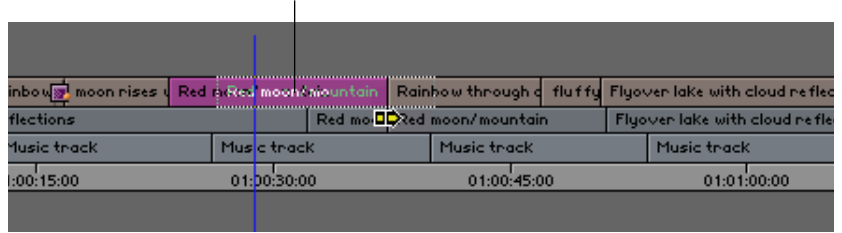
When you release the segment into its new position, the actual lift (Overwrite) or extract (Splice-in) occurs. The preservation of the segment position in the Timeline until then allows you to maintain your perspective of the sequence while selecting the new edit point.

Suppressing Four-Frame Display

The four-frame display of incoming/outgoing frames can occasionally slow the movement of segments as you drag them through the sequence. You can improve the speed of segment editing by using the Shift key to suppress the four-frame display.

To suppress the four-frame display:

1. Click either the Extract/Splice-in button (yellow) or Lift/Overwrite button (red) to enter Segment mode.

2. Choose Show Segment Drag Quads from the Timeline settings.

3. Press the Shift key, then drag the segments you want to move.

   As you begin to drag, notice that the monitors maintain their Source/Record configuration, rather than shifting to the four-frame display.

Extracting/Splicing Segments

Use Extract/Splice-in to move the selected segments in the Timeline without affecting any of the adjacent material. The total duration of the sequence is unaffected.

Like the standard Splice-in function, the Extract/Splice-in edit inserts the segment into the new position. However, as an additional function, it also "extracts" or removes the segment from its previous position and closes the gap.

To perform an Extract/Splice-in:

1. Click the Extract/Splice-in button (yellow) in the Timeline tool bar.

2. Select the segments you want to move.

3. Click and drag the segment to its new position. Use the four-frame monitor display, the offset counter, and the segment image in the Timeline to carefully determine the new position.

4. Release the mouse button. The system extracts the selected segment from its old position, closes the gap left by its removal, then splices the material back into the sequence at the newly selected location.

5. Click the Segment Mode button again if you want to leave Segment mode, or continue to extract and splice-in segments.

To cancel a segment edit in progress, drag the edit out of the Timeline window and release the mouse button. Alternatively, choose Undo from the Edit menu.

Lifting/Overwriting Segments

Use Lift/Overwrite to replace existing material at the new position, while leaving blank space in the previous position. The total duration of the sequence is unaffected.

Like the standard Overwrite function, the Lift/Overwrite edit deletes and replaces underlying material at the new position, effectively creating new edits. It also "lifts" the segments from the previous position, leaving black or silence of the same duration.

To perform a Lift/Overwrite:

1. Click the Lift/Overwrite button (red) in the Timeline tool bar.

2. Select the segments you want to move.

3. Click and drag the segment to its new position. Use the four-frame monitor display, the offset counter, and the segment image in the Timeline to determine the new position carefully.

4. Release the mouse button.

   The system lifts the selected segment from its old position, leaving black, then overwrites the material onto the sequence at the newly selected location.

5. Click the Segment Mode button again if you want to leave Segment mode, or continue to lift and overwrite segments.

To cancel a segment move, drag the edit out of the Timeline window and release the mouse button. Alternatively, choose Undo from the Edit menu.

Deleting Segments with Segment Mode

Segment mode allows you to delete whole segments in the Timeline quickly without having to mark IN and OUT points first. In addition, you can select multiple segments in separate tracks anywhere along the Timeline to delete at once.

To delete segments quickly:

1. Click one of the Segment Mode buttons:

   • Extract/Splice-in (yellow) deletes the segments and closes the remaining gaps. The total duration of the sequence is shortened, and any synchronized tracks lose sync.

- Lift/Overwrite (red) deletes the segments but leaves blank space or silence in their place. The total duration of the sequence remains the same, and sync is maintained.

2. Select one or multiple segments.

3. Press the Delete key. The segments are deleted.

If the segment has an effect, the effect is deleted first.

Marking Clips and Sequences with Segment Mode

As an alternative procedure to marking sections of the Timeline in Source/Record mode for deleting, copying, subclipping, rendering, or creating an EDL or digital cut, you can use Segment mode to mark segments quickly, as follows:

1. Click one of the Segment Mode buttons. In this case, it does not matter which Segment Mode button you click.

2. Click one or more segments to highlight a section of the sequence.

3. Click the Mark Clip button.

The system marks an IN point at the start and an OUT point at the end of the selected segments. If you have more than one track selected, the IN and OUT points mark where the edit points across tracks line up.
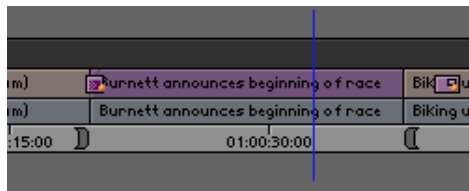
IN point   OUT point

Using Advanced Timeline Techniques

There are several advanced techniques for displaying and editing in the Timeline that you can use in any combination, including:

- Editing directly from a bin

- Cutting, copying, and pasting

- Full-screen editing

- Editing with the Film track

- Editing in Heads and Tails view

Bin Editing into the Timeline

You can use Segment mode to edit clips directly from a bin into the sequence in the Timeline. Bin editing allows you to bypass the process of loading clips into the Source monitor, setting marks, and clicking the Splice-in or Overwrite buttons.

To perform a direct edit from a bin into your Timeline:

1. For a more accurate edit, mark IN and OUT points for each clip or create subclips, as described in **"Marking and Subcataloging Footage" on page 350**. Otherwise, the entire clip is edited into the sequence.

2. Click one of the Segment Mode buttons:

   - Lift/Overwrite (red arrow) acts as an overwrite edit, causing the clip to overwrite material of the same length in the sequence, while maintaining the same duration of the sequence.

   - Extract/Splice-in (yellow arrow) acts as a splice edit, inserting the clip into the sequence, moving existing material down, and lengthening the total duration.

3. Drag a clip from the bin into the Timeline. You only can edit one clip at a time.

   The cursor changes to the selected Segment mode icon, and the interface changes to the four-frame monitor display. In this case, the numeric offset frame counter displays zero because there is no offset. As you drag, a white outline of the clip indicates the segment position.

4. When you find the right placement for the clip, release the mouse button. The Timeline reflects the new edit.

Once the edit is completed, you remain in Segment mode until you click the active Segment Mode button again to deactivate it.

Cut, Copy, and Paste in the Timeline

You can use the traditional Macintosh shortcut keys for cutting, copying, and pasting segments selected in the Timeline.

To cut, or copy:

1. Select the segment by using one of the Segment mode pointers.

2. Press ⌘–C to copy, or ⌘–X to cut.

3. Place the position indicator at the new IN point, and press ⌘–V to paste the segment in.

The action of the cut and paste action depends on the Segment mode selected.

Using Full-Screen Timeline

As an alternative to constantly scrolling through the Timeline window or resizing tracks to get a view of the material, you can resize the Timeline window to full-screen display.

To resize the Timeline window, click the Zoom box at the upper right corner of the window.

Zoom box
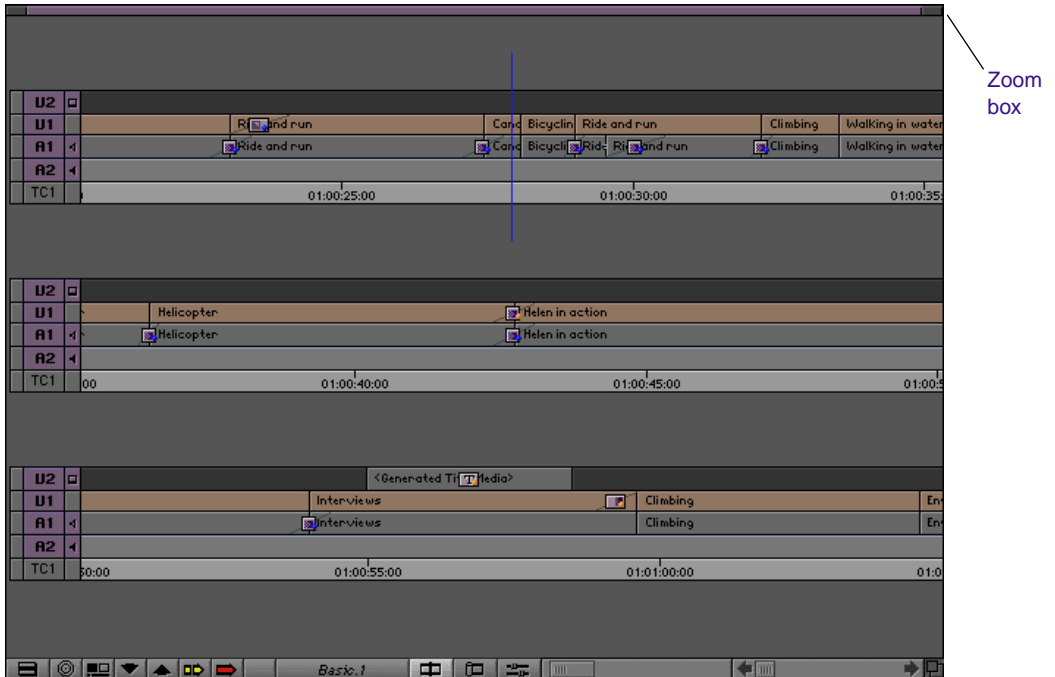
Notice that a Timeline with reduced tracks wraps around to show more of the sequence. As you reduce tracks in a full-screen Timeline, the sequence wraps around up to four times, allowing you to examine a long sequence in greater horizontal detail.
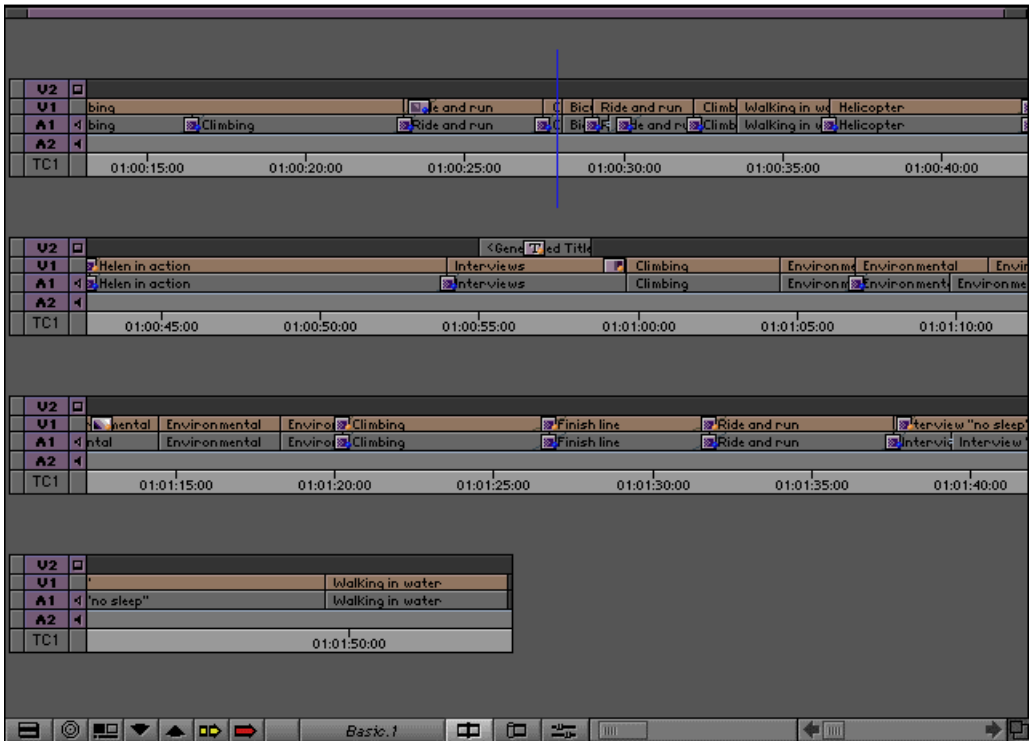
You can also enlarge the tracks to view complex audio or video layers in greater vertical detail. To enlarge tracks, select them and press ⌘–L.
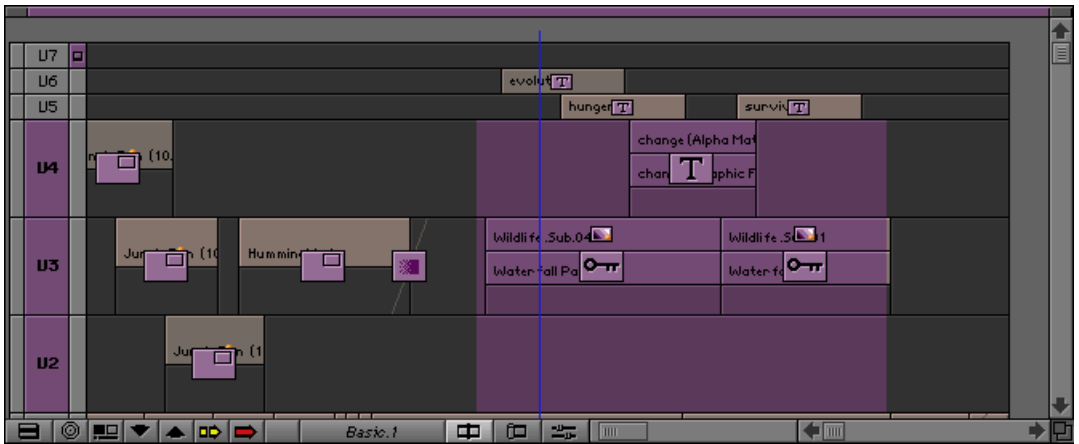
With the proper controls mapped to the keyboard and a full-screen monitor connected to your system, you can edit with a full-screen Timeline for long periods.

You can also continue to work in Source/Record mode by resizing the Timeline window so that the two windows overlap.

You can click in either window to activate it and bring it forward at any time. Or you can click in the title bar of the Timeline window and drag it to the Bin monitor to place each window in its own monitor.

To restore a resized Timeline to its default position, choose Home from the Windows menu.

Editing with the Film Track

You can use the film track to examine each frame of the sequence in a linear display, much as you would when looking at a strand of film on a flatbed or workbench. Unlike your view of the footage in the monitors, which display one frame at a time, the film track within the Timeline allows you to compare individual frames side by side within a range of frames.

To display the film track, choose Film from the Show Track submenu of the Timeline Fast menu.
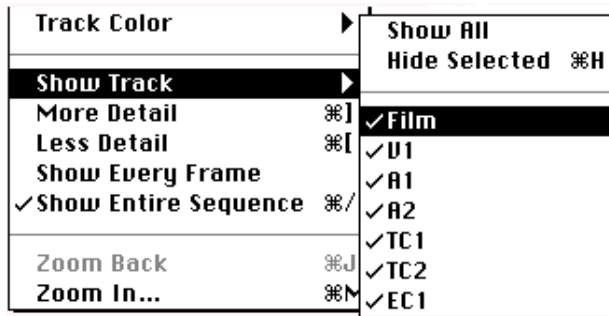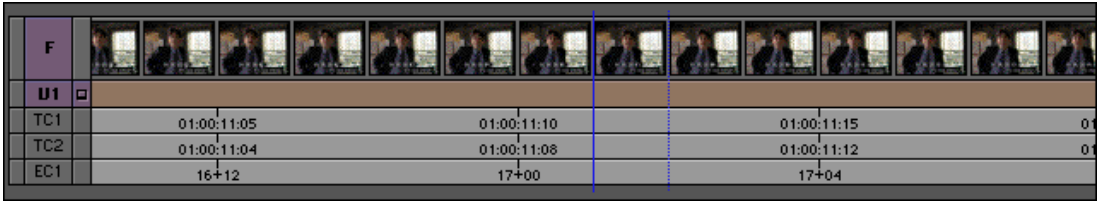
A row of film frames appears at the top of the Timeline.

The film track displays as many representative frames as possible within the window.
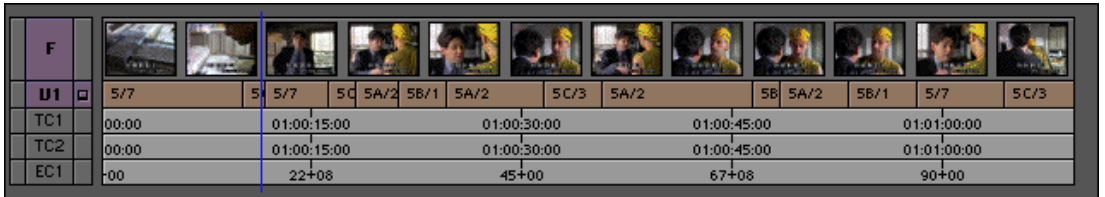
To adjust your view of the Timeline quickly for frame-by-frame viewing and editing, choose Show Every Frame from the Timeline Fast menu.

The position indicator splits to surround each
frame. The solid blue bar indicates the head, and
the shadow bar indicates the tail of each frame.

| F | | | | | | | | | | | |

U1	
TC1	01:00:11:05	01:00:11:10	01:00:11:15	01
TC2	01:00:11:04	01:00:11:08	01:00:11:12	01
EC1	16+12	17+00	17+04	

The film track displays frames for the topmost video track only. You cannot display more than one film track at a time.

To quickly view more frames as you scroll, click the zoom box in the upper right corner of the Timeline for a full-screen view. You can reduce the size of Timeline tracks to wrap the sequence around several times.

431
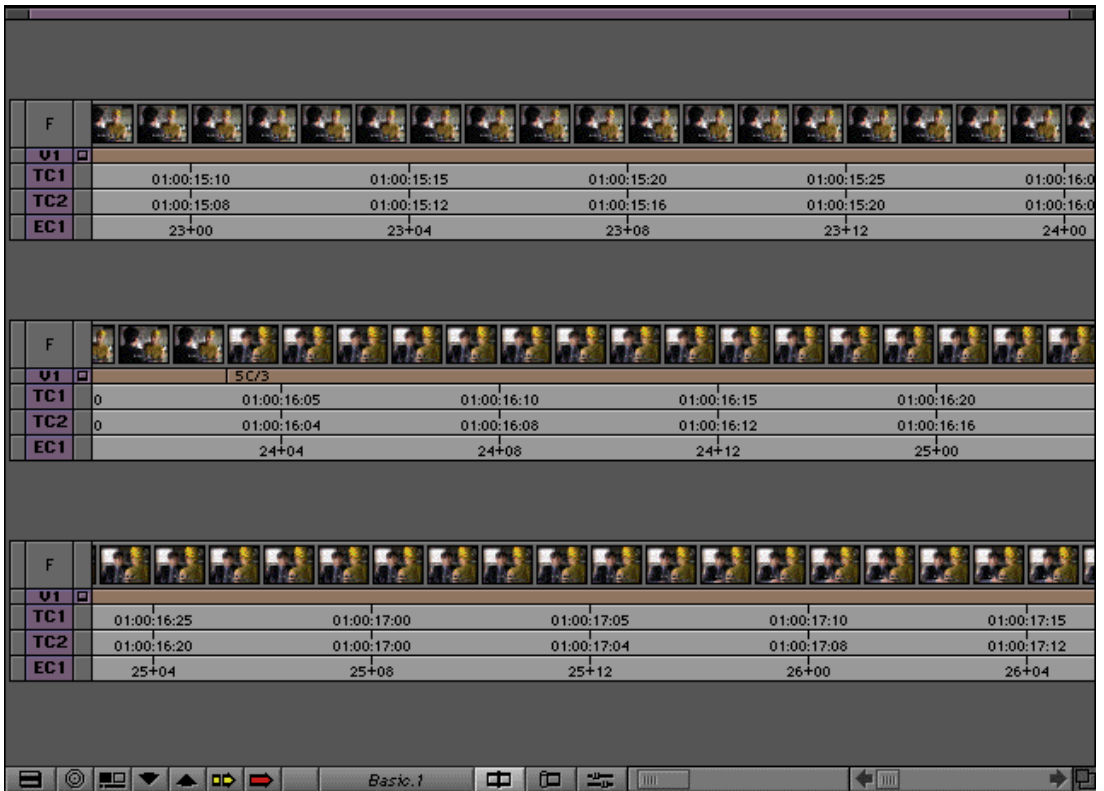
As you continue to scroll, each strand of the Timeline wraparound is updated.

Editing in Heads and Tails View

While in the early stages of editing a project, you can easily rearrange shots in the sequence visually by using Heads view or Heads and Tails view. These display formats are useful for quickly rearranging simple straight-cut edits.

⚠ **If you rearrange a split edit (in which the audio extends beyond the video, or the reverse) the system cuts all tracks to the same edit point. To rearrange split edits, edits on multiple video tracks, or to move audio and videopicture separately, use Segment mode editing techniques described in "Using Segment Mode" on page 416.**

To edit in Heads view or Heads and Tails view:

1. Choose View Type from the Timeline Fast menu, then choose Heads, or Heads and Tails, from the submenu.

   The Timeline changes to one of the following displays.

Head frame for each clip

Heads view

Head and tail frame for each clip
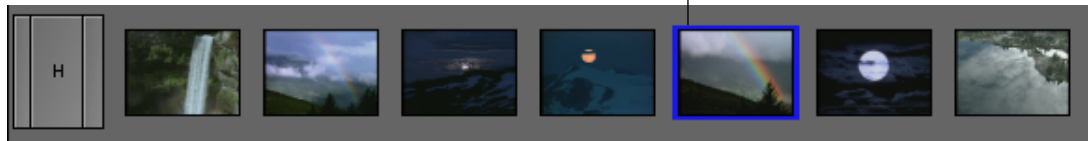
Heads and Tails view
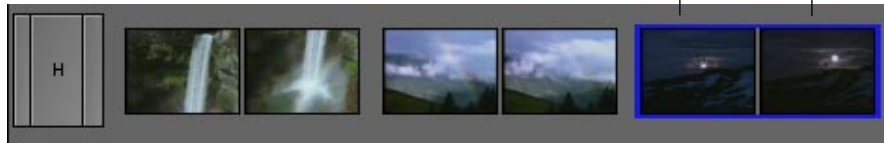
2. Click the track selector buttons to select the tracks to be edited.

3. Hold down the Option key, click the frames representing the shot you want to move, and drag the shot to its new position. The sequence is rearranged to match the changes you made.

Working with Multiple Tracks

As your project progresses, you might need to add and edit with additional audio or video tracks. The Avid Composer system allows you to edit up to 24 tracks of video and 24 tracks of audio. In addition, you can step into tracks to create additional tracks for *nested* effects.

While working with multiple tracks, you can use the Track Selector panel to select, manipulate, delete, lock, patch, and monitor your tracks. You can use multiple tracks to layer audio effects and sound, or to add video titles and other effects, as described in this section.

Multiple video tracks do not immediately play back at the same time until you apply an appropriate effect that composites the layers. Multiple audio layers, however, do play back immediately if correctly monitored.

About Effects Editing

Your primary use for multiple tracks of video is in the use of effects. Effects editing techniques in the Avid Composer system fall into the following basic categories:

- *Motion effects*, such as freeze-frame and slow- or fast-motion effects, involve applying frame-motion parameters to selected footage, usually on a single video track.

- *Transition effects*, such as dissolves and wipes, involve making the transition from one edited clip to another on the same video track.

- *Segment effects*, such as picture-in-picture, keys, or color effects, are applied to whole segments. These often require multiple layers of video.

For more information on all types of effects editing, see the <u>*Avid Media Composer and Film Composer Effects Guide.*</u>

About Nesting

Occasionally, effects editing involves a unique procedure known as nesting. This involves *stepping into* existing tracks to reveal added layers for combining multiple images and digital video effects. When the effect is applied, you can *step out* to view and render the effect as one segment on the track.

Media Composer allows you to nest up to 24 additional tracks within each track.

For more information on nesting techniques, see the <u>*Avid Media Composer and Film Composer Effects Guide.*</u>

Using the Track Selector Panel

The Track Selector panel provides numerous controls for working effectively with multiple tracks. With this one resource you can select, delete, monitor, enlarge, reduce, sync lock, patch, and move any video or audio track.

The Track Selector panel also provides a quick display of track information. You can see which tracks are available, active, patched, monitored, or locked on the source and/or record side at any time. The following configuration shows just one example. The Track Selector panel can look very different depending on the nature of the source material or the work underway in the sequence.

Source track monitors
Source tracks
Track lock indicators
Record tracks
Record track monitors

Timecode track
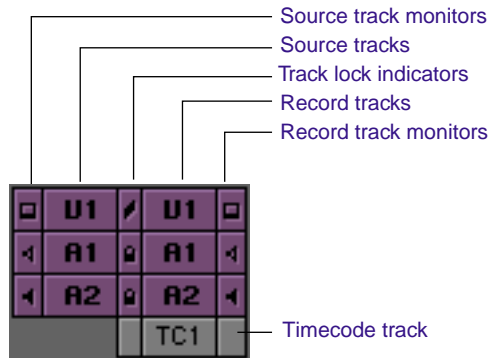
The source side of the panel displays only those tracks available for the clip currently loaded and displayed in the Source monitor. For instance, a clip that has audio digitized for track A1 only does not display an A2 track in the Track Selector panel.

The record side of the panel displays only those tracks currently in use for the sequence. However, if you edit source material with a track selected that does not yet exist on the record side (A3 or V2, in the previous example), by default the track appears on the record side after the edit takes place.

Selecting Tracks

You can select tracks on either the record side or the source side of the Track Selector panel as follows:

- You can edit selected tracks on the source side directly into the sequence, assuming you have selected parallel tracks on the record side.

- You cannot edit deselected tracks on the source side into the sequence, regardless of record track selections.

- You cannot edit deselected tracks on the record side, regardless of source track selections.

There are four methods for selecting tracks:

- Click any deactivated track to select it. Click any activated track to deselect it.

- Drag a lasso around multiple tracks to select them at once.

- With the Timeline window active, choose Select All Tracks from the Edit menu to select all tracks on the record and source side.

- Click the Cycle/Picture Sound button to cycle among selection of the video tracks, the audio tracks, and all tracks.

For example, you might select the source and record tracks for V1, A1, and A2 to edit picture and audio from the source clip into the sequence. Select only V1 source and record tracks to edit the picture without sound. Or, select only A1 and A2 to edit the sound without the picture.

There are also keyboard equivalents for selecting tracks. Check your keyboard or the Keyboard settings in the Settings scroll list in the Project window.

Monitoring Tracks

You determine the monitoring of tracks by clicking the monitor column of either the source- or record-side tracks to activate or deactivate the monitor icons. Video monitors and audio monitors behave differently in some circumstances, as described in this section.

Video track monitor
Audio track monitor

U1		Office	Mistywalk	Menhiking/panup water	Menhiki	MenH	Officershik	MenScc	MenScc	63493 30	OfficersReact 93	Birdwatch	Man fallsl
A1		VO1					VO2		VO2	OfficersReact		Birdwatch	Man fallsl
A2		VO1					VO2		VO2	OfficersReact		Birdwatch	Man fallsl
A3		AudioEffects					AudioEffects						
A4		AudioEffects					AudioEffects						
A5			AudioEffects							AudioEffects			
A6			AudioEffects					AudioEffects					
A7								AudioEffects					
A8								AudioEffects					
A9									AudioEffects				
A10													
TC1		00:00		01:00:15:00			01:00:30:00				01:00:45:00		01:01:00:00

Monitoring Video

The video track monitor determines whether you see video during playback. You can turn it off at any time to monitor only audio during editing. When there are multiple video tracks, all tracks below the monitored track are active during playback.

When you edit with multiple tracks, you can activate the monitor on a lower track to monitor only the video on that track. This is especially useful when you have multiple layers of video effects, and need to see one track without the additional layers.

If you reposition the video monitor, be sure to return it to the topmost track to view, render, or record all the tracks together. Unmonitored tracks are not included in playback.

Monitoring Audio

Your Avid Composer system allows you to monitor up to eight audio tracks at a time.

Starting at Release 7.0, you can monitor eight channels of audio on two-channel audio boards. Previously, you could only monitor four channels with a two-channel board.

The following characteristics apply to audio track monitoring:

• The system pans odd-numbered tracks to the left speaker, and even-numbered tracks to the right by default.

• If your sequence includes more than eight audio tracks, you can select any eight tracks to monitor at any one time by clicking in the monitor column of the Track Selector panel to display speaker icons in the chosen tracks.

• To hear more than eight tracks at once, you must mix some of them down to a maximum of eight. For more information, see **"Mixing Down Audio Tracks" on page 553**.

• A speaker icon (either solid or hollow) indicates that the tracks are monitored for playback and output. However, only the track with the hollow icon is monitored for audio scrubbing.

• The topmost audio track displays the hollow scrub icon by default until you select another track for scrubbing. To activate audio scrub for a particular track, Option-click in the monitor column. For more information, see **"Using Audio Scrub" on page 482**.

• When you choose Direct Out in the Audio Mix Tool, tracks 5 to 8 play back on channels 1 to 4. You can also customize the output of the tracks, as described in **"Using the Audio Mix Tool" on page 490**.

Monitoring a Solo Track

You can use the ⌘ key to quickly select an individual video or audio track for monitoring during editing.

• To select a track for solo monitoring, press the ⌘ key and click in the monitor column for the chosen track. The monitor icon is high-lighted in green to indicate solo monitoring.

Video track
selected for solo
monitoring

Audio track
selected for solo
monitoring
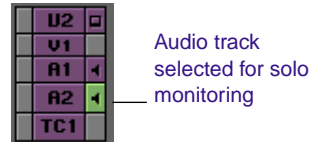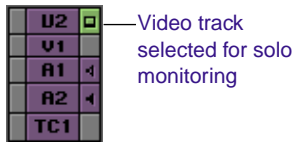
- To deselect solo monitoring, press the ⌘ key and click again in the monitor column. The monitor icons return to normal functionality.

Solo monitoring provides several advantages:

- You can overcome slowed playback and cueing when working with a complex sequence by isolating tracks for monitoring.

- You can quickly isolate an individual audio track without having to click several times in the monitor column to deselect all other tracks.

- You can monitor the upper layers of a composited effect apart from the lower layers.
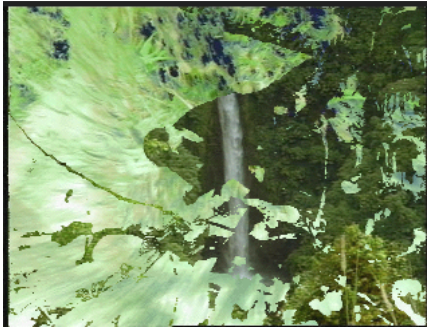
The screen on the left shows a multitrack matte key effect with the upper track selected for normal monitoring.

The screen on the right shows the same effect with the upper track selected for solo monitoring.

Patching Tracks

When working with multiple tracks, you occasionally encounter a circumstance where you must edit source audio or video onto a track other than the parallel track displayed in the Track Selector panel. To edit the source material onto another record track above or below it, you must patch the source track to the targeted record track.

You can perform only one patch per edit, but there is no limit on the number of times you can patch from the same source track. Audio can only patch to audio, and video to video.

• To perform a patch, drag from a source track (audio or video) to the targeted record track (a white arrow appears during the patch).
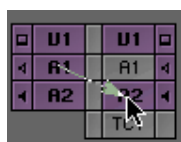
An audio patch from a source track to a record track

During Patch
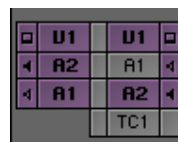
New source track order identifies the patch

After Patch

• To undo a patch, click in the Record monitor or Timeline. Choose the Restore Default Patch command from the Special menu, or manually repatch to the previous track.

The selected source track moves beside the record track to which it is patched as soon as you draw the arrow and release the mouse. The patched track remains highlighted in preparation for your edit. You can proceed to select any other tracks required for the edit.

After you make the edit, you can continue to work on the same track or patch to a different track as necessary.

⚠️ **When patching from one video track to another, the video track monitor icon moves to the track you patch to. Be sure to return the icon to the topmost track when necessary to play back and output all video tracks.**

Locking and Sync Locking Tracks

The system provides two ways of locking tracks:

- You can lock selected tracks to prevent further editing from being performed on them.

- You can sync lock selected tracks, so that when you trim one track, the other track follows.

The middle row of the Track Selector panel displays a slash mark icon for sync-locked tracks, and a padlock icon for locked tracks. The procedure for applying the locks is different in each case.

Slash icon

Padlock icon
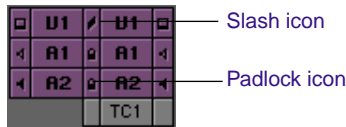
Locking Tracks

Locking tracks to prevent further editing is especially useful in circumstances like the following:

- For video editing, you can lock tracks when you have completed a set of complex, multilayer edits and want to avoid making accidental changes while you work on other adjacent tracks.

- For audio editing, you can lock audio tracks that contain sync dialog that should be maintained while you edit on adjacent video tracks or audio tracks.

- For projects involving multiple editors, you can lock tracks to prevent unnecessary or accidental changes.

To lock tracks:
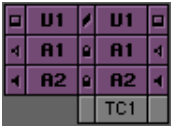
1. Select the tracks to be locked (Source and/or Record) by clicking to select each in turn.

2. Choose Lock Tracks from the Clip menu. The padlock icon indicates that the selected tracks are locked.

   No further editing can occur on locked tracks until you choose Unlock Tracks from the Clip menu.

Sync Locking Tracks

For more information on using the sync-lock feature in Trim mode, see **"Using Sync Lock" on page 562**.

Sync locking affects trimming and splice-in edits. This feature is especially useful when you are working with multiple tracks and want to maintain sync between two or more tracks.

To sync lock the tracks, click in the center column between track selectors to activate the slash mark icon for each synchronized track. When you need to resume editing on individual tracks, click again to remove the slash marks.

Adding a Track

To add a new track to a sequence, do one of the following:

• With a sequence loaded in the Record monitor, choose New Audio Track or New Video Track from the Clip menu.

  The new track appears in the Timeline.

• If you want to manage the numbering scheme of tracks rather than use the consecutive numbering default:

  a. Hold down the Option key and choose New Audio Track or New Video Track from the Clip menu. A dialog box appears.

Track type pop-up menu
Track number pop-up menu
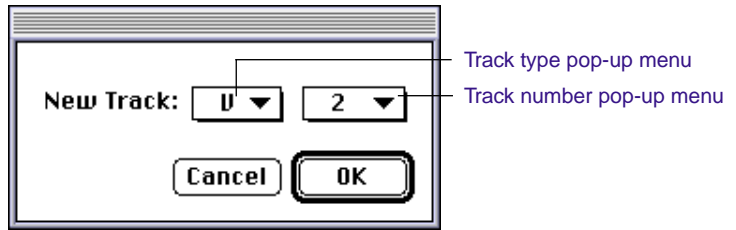
b. If you want to switch from the type of new track you chose (for example, from a new video to a new audio track), choose the other option from the track type pop-up menu.

c. If you want to select a track number other than the default consecutive numbering offered by the dialog box, choose another number from the track number pop-up menu. You cannot choose the number of an existing track.

d. Click OK. The new track appears in the Timeline and in the Track Selector panel.

Deleting Tracks

You can remove one or more tracks from a sequence if you no longer need the tracks.

To delete one or more tracks from the sequence:

1. Enable the tracks, and press the Delete key. A dialog box appears.
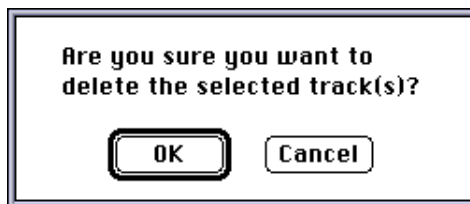
2. Click OK. The tracks are deleted.

When you delete a track, it is permanently removed. If you want to remove the track temporarily, hide the tracks as described in **"Customizing Timeline Views" on page 399**.

Adding an Edit (Match Framing)

The add edit function places an artificial edit point between frames of a clip. In other words, the edit appears in the Timeline as a transition between two clips, but when you play the clip, the footage appears unchanged because the frames are continuous.

Add edit placed between frames.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
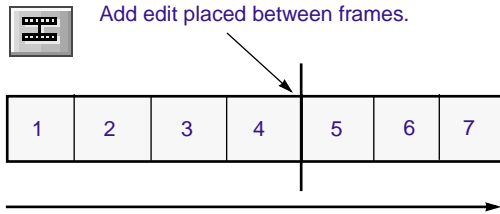
Footage continues to play back fluidly.

This form of edit is also known as a *match frame*. In traditional analog editing, match framing is used to accomplish specific tasks, such as creating a dissolve between two shots. In the Avid Composer system, however, add edits (or match frames) function differently. Use match frames primarily to divide and isolate portions of a clip or sequence in order to modify that portion without affecting the rest of the footage. Once you make the adjustment, playback of the clip is no longer seamless because the two portions of the clip are different.

You can add an edit to a single audio or video track, or you can place the add edit across several tracks at once.

To add a match-frame edit:

1. Place the position indicator at the chosen frame.

2. Select the tracks where you want to add the edit.

3. Click the Add Edit button. The edit appears in the sequence, with an equal sign to indicate a match frame.

U1	□		Mountains.Sub.01	Skiing.Sub.01
A1	◄	: spot music		
A2	◄	spot music		
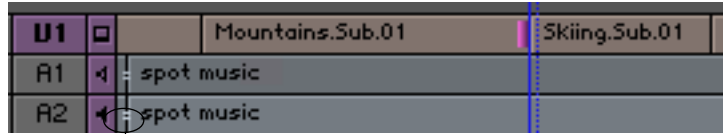
Equal sign indicates
a match frame.

By default, the match frame indicator appears white. If a change in level occurs the match frame indicator changes to red.

Removing Match-Frame Edits

If you make a mistake when adding an edit, or if you have finished performing edit functions with multiple add edits and want to remove them, you can remove all add edits in the entire sequence, or within a selected portion of the sequence.

To remove match-frame edits:

1. Select the entire sequence or a portion as follows:

   • Select a portion of the sequence by marking an IN point and an OUT point surrounding the match-frame edits (add edits) you want to remove.

   • Select the entire sequence by removing any IN and/or OUT points.

2. Select the tracks from which you want to remove the edits.

3. Choose Remove Match Frame Edits from the Clip menu.

   The Avid Composer system removes the edits.

⚠ **You cannot remove match-frame edits between segments in which audio pan or volume levels have been adjusted.**

Alternatively, you can select the match-frame edit in Trim mode and press Delete.

Backtiming Edits

Backtiming an edit is effectively the reverse of the process you normally use for marking footage: instead of marking from the IN points forward, you mark according to the OUT points.

For example, you might have a track of audio (music or voice) that ends at a specific point, and you want to synchronize a video clip to end on a particular shot. You can backtime the edit to match the end points of the tracks.

Here are a few concepts to keep in mind:

• The Avid Composer system needs only three marks to perform a backtimed edit when four edits of unequal duration exist in the sequence. The IN and OUT points set on the record side always take precedence.

• If you do not mark an IN point in the sequence, the Avid Composer system uses the position indicator as the IN point.

• If you do not mark an OUT point in the clip, the Avid Composer system uses the end of the clip as the OUT point.

• If you mark OUT points in both the Source monitor and in the Record monitor, the Avid Composer system uses the OUT point on the record side.

To backtime an edit:

1. Mark an OUT in the sequence where you want the edit to end. Also mark an IN where the edit is to start.

2. Select the appropriate tracks.

3. Load the clip into the Source monitor.

4. Mark an OUT point in the Source monitor to synchronize to the OUT point in the sequence.

5. Click the Overwrite button.

   The source material is added to the sequence, with the synchronized ending.

Creating One-Step Overlap Edits

For more information on creating overlap edits in Trim mode, see **"Creating Overlap Edits" on page 466**.

You can quickly create an overlap edit (also known as an L-cut or delay edit) at the end of a sequence by using the Option key while performing an overwrite edit.

To perform a one-step overlap edit:

1. Move the position indicator to the edit point before the end of the sequence.

2. Select record tracks for overlapping either the video or the audio:

   • To extend the video beyond the audio, select the audio record tracks.

Overlapping the video

Before edit   Track Selectors   After edit

Position indicator
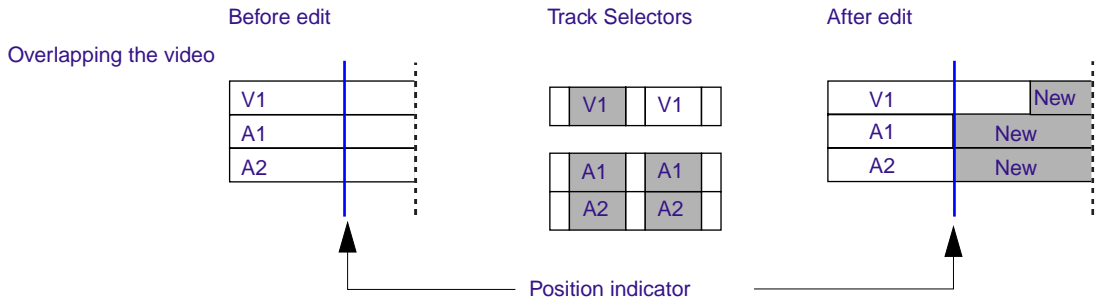
   • To extend the audio beyond the video, select the video record tracks.

Before edit	Track Selectors	After edit

Overlapping the audio

V1			V1	V1		V1	New
A1						A1	New
A2			A1	A1		A2	New
			A2	A2			

Position indicator
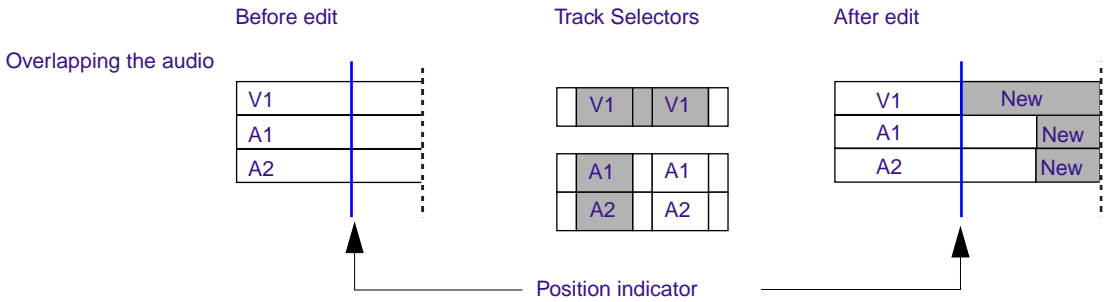
3. Press the Option key while you click the Overwrite (red) button.

The overlap edit is complete.

You can also use the Audio Mark In button to create an overlap edit.

Additional Offline Aids

Your Avid Composer system provides two features specifically designed to aid the offline editing process by helping you track and adjust edits to avoid extra work in the online suite. These features are Dupe Detection and Color Frame tracking.

Detecting Duplicate Frames

When editing offline with plans to generate an EDL, the Dupe Detection feature allows you to visually track duplicate frames of footage as you edit so that you can eliminate or manage the requirements of an online dupe reel.

When you activate Dupe Detection, each set of duplicate frames is tagged with a different color. (Up to 10 color sets can be distinguished during a single detection process.) Matching frames have matching

colors. If the duplicate frames are unnecessary, you can use any of the Trim mode options to remove the superfluous frames prior to generating an EDL.

The colored bars that distinguish duplicate frames in the sequence are automatically drawn above the frames in the Timeline, as shown.

Two duplicate frames marked above the clip by the automatic Dupe Detection option
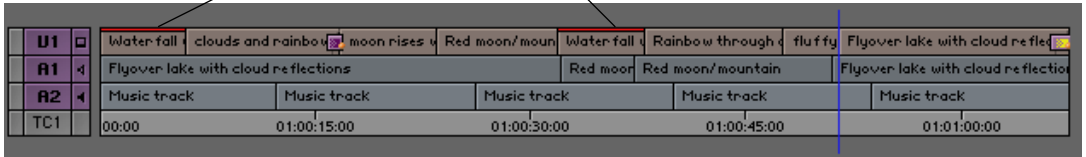
Red bars mark the first set of duplicate frames; green bars mark the second set, and so on. You can use Dupe Detection while you are editing to locate duplicate frames and remove them as the sequence evolves.

To activate Dupe Detection, choose Dupe Detection from the Timeline Fast menu.

Clip Text	▶
Sync Breaks	▶
Dupe Detection	
Audio Data	▶
Track Color	▶
Show Track	▶
More Detail	⌘]
Less Detail	⌘[
Show Every Frame	
✓Show Entire Sequence	⌘/
Zoom Back	⌘J
Zoom In...	⌘M
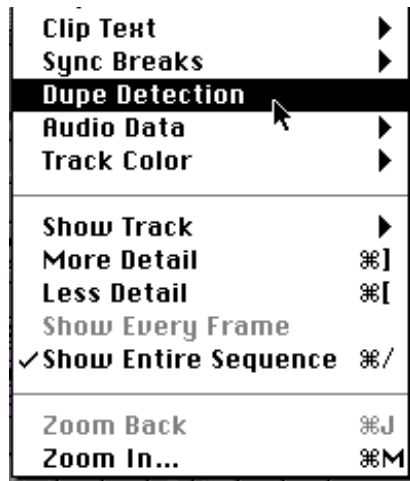
Dupe Detection is instantaneous and retroactive; if duplicate frames already exist in your sequence, the colored bars appear immediately. As you edit, the system shows duplicate frames as they occur.

▤   *The handle size used by Dupe Detection can be changed in the Timeline settings.*

Tracking Color Frame Shifts

If you are preparing for an online edit using 1-inch reel-to-reel sources, you can enable the Color Framing option to track and correct instances where an edit cuts between the four fields (two frames) required to lay down a complete NTSC color sync signal phase.

When Color Framing is enabled, green bars appear beneath the Overwrite and Splice-in buttons and blink whenever a color sync signal is interrupted by an edit. The blinking lights indicate that color framing is out of phase at the edit transition.

Green color frame phase bars blink during an interruption

Start Frame color phase indicator

End Frame color phase indicator
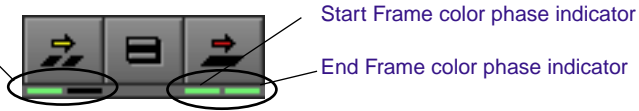
Use the following procedure to enable Color Framing while editing:

1. Click the Settings button in the Project window, then double-click Composer Settings in the project's settings list.

   The Composer Window Settings dialog box appears.

Composer Window Settings (Current)

☒ First (lower) Row of Info
☐ Second Row of Info
   ☐ Digital Scrub Parameters
☐ Center Duration

Color Framing   Off   ▼

☐ Sync Point Editing (Overwrites)
☐ Single Mark Editing
☐ Phantom Marks

Color Framing option
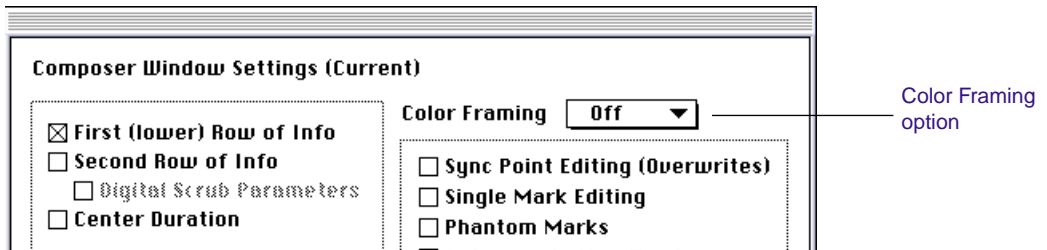
2. Click the Color Framing pop-up menu and choose the appropriate option:

   • For NTSC video, choose the 4-field option.

   • For PAL video, choose the 8-field option.

   The dialog box displays the setting you selected.

3. Click OK to complete the setting selection.

To correct color frame interruption as you edit:

1. Note any edits that cause the green lights to blink below the edit buttons. You can adjust the edits now, or place locators to return to these edits and correct them at a future time.

2. To adjust the edit, enter Trim mode.

   In Trim mode, the Avid Composer system displays small green boxes on the top-adjacent frame corners. When the color sync signals are in phase, the boxes are aligned horizontally.

Incoming frame | Outgoing frame — Color Framing Indicator Lights

Boxes are out of alignment when color sync signal is out of phase
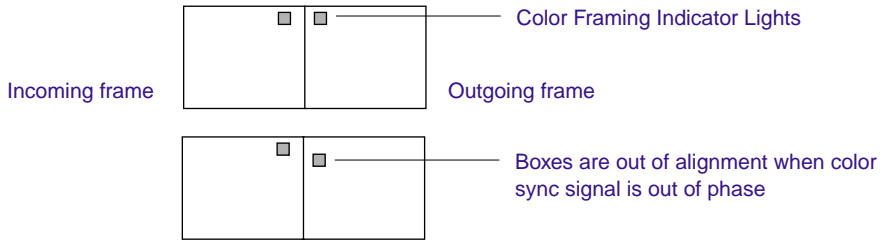
3. Trim one frame at a time on one side of the transition or the other until the indicator boxes are aligned, and the indicator lights below the Splice-in and Overwrite buttons stop blinking.

If you are careful about color framing while editing, you will not need to consider the subject again when assembling your master tape. If you ignore color framing during the edit session, you might have to make adjustments during online editing if your edits interrupted any color-frame fields in the sequence.

Printing the Timeline

To print the Timeline:

1. Choose Print Timeline from the File menu. The print dialog box appears.

The name of the printer and details of the dialog box will vary depending upon facilities.

2. Select printing options, then click Print.

The system prints the current view of the Timeline. You can also use the Print Timeline command to print the Timeline in Heads view or in Heads and Tails view.

CHAPTER 15

Working in Trim Mode

Basic editing in Source/Record mode and in the Timeline initially produces a rough cut, which can be loosely defined as a series of straight-cut edits with many rough edges and few effects. After creating a rough cut, you can enter Trim mode and fine-tune the transitions between each shot or between whole segments. You can also trim edits as you build a sequence, rather than creating a rough cut first. The following sections describe the Trim mode procedures:

- **Customizing Trim Mode**
- **Using Basic Trim Procedures**
- **Creating Overlap Edits**
- **Extending an Edit**
- **Slipping or Sliding Shots**
- **Maintaining Sync While Trimming**
- **Using the Transition Corner Display**

Customizing Trim Mode

Trim mode provides a unique set of controls within the Composer window for fine-tuning edits with various trim procedures. These controls appear in both the Source/Record window and in the Timeline.

Big Trim mode is the system's default configuration for trimming. Small Trim mode is an optional display mode. In either mode you can perform many of the same functions, such as removing or adding frames, or slipping or sliding shots.

In Big Trim mode, Source and Record monitors are replaced by displays of outgoing and incoming frames. Big Trim mode also shows transition play-back loop parameters.

Outgoing frames

Incoming frames

Playback loop parameters

Trim buttons

Frame offset counters

Play Loop button
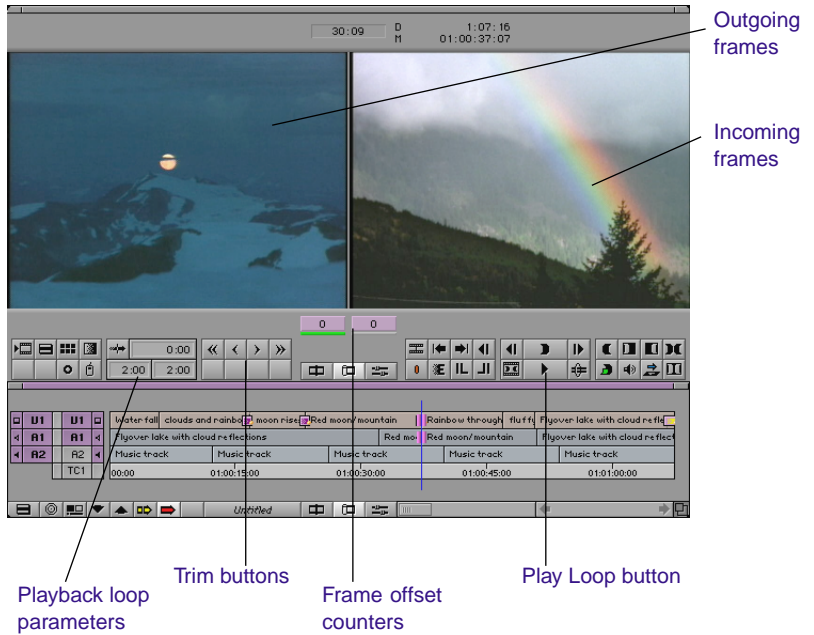
Small Trim mode leaves the Source monitor display intact, but has smaller displays for incoming and outgoing frames, and does not provide access to transition playback loop parameters.

Outgoing frames

Incoming Frames

Frame offset counters

Trim buttons

Play Loop button

Use the Trim Settings dialog box to configure basic displays and functions.

You can learn about Trim settings as follows:

• For an overview of all settings, see the *Avid Media Composer Products Reference.*

• For more information on transition playback loop parameters, see **"Trimming During a Playback Loop" on page 466**.

• For information on dual image playback during trims, see **"Dual-Image Playback During Trims" on page 464**.

In addition, you can:

• Map trim-related buttons onto palettes in Trim mode, as described in **"About Button Mapping" on page 96**.

• Configure a Trim-mode-specific Timeline view, as described in **"Using the Timeline Fast Menu" on page 401**.

Using Basic Trim Procedures

You can enter Trim mode in several different ways, depending on the type of trim you expect to perform. Once in Trim mode you can:

- Select additional tracks

- Toggle between Big and Small Trim mode

- Toggle between trim sides

- Perform and play back the trim

Entering Trim Mode

There are four alternative methods for entering Trim mode:

- **Click the Trim Mode button.** By default, the system enters Trim mode and selects the tracks nearest the position indicator for dual-roller trimming. This method is useful for selecting straight-cut transitions on one track or across video and audio tracks.

Default Trim mode selection
for a straight cut

	U1		U1		Gilbert 1f	Aikiba 3b	Mary standup 2
	A1		A1		Gilbert 1f	Aikiba 3b	Mary standup 2
	A2		A2		Gilbert 1f	Aikiba 3b	Mary standup 2
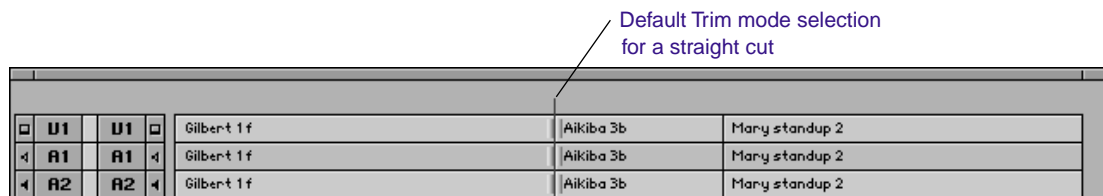
When you deselect one or more tracks in the Track Selector panel, by default only the transitions in the highlighted tracks are selected for trimming. If the transitions are not straight cuts (overlap cuts or L-edits), the system highlights the topmost track nearest the position indicator.

- **Lasso the transitions in the Timeline.** Draw the lasso by clicking at a point above the top track in the Timeline and dragging to surround the transitions. This method is useful when you need to

select multiple transitions staggered across parallel tracks (overlap cuts) for simultaneous trimming.

Lasso drawn across three tracks

Transitions are selected for dual-roller trim
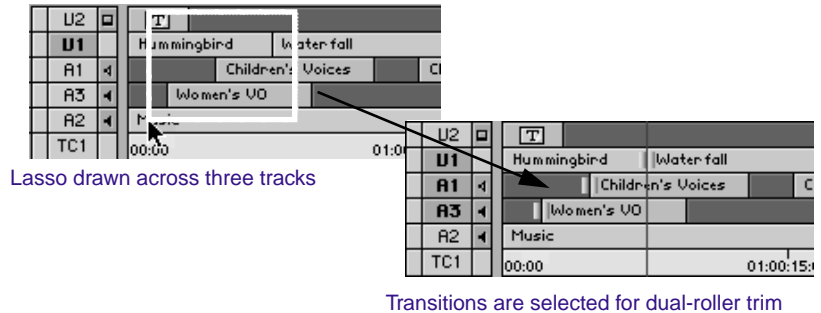
You can drag from right to left, or left to right, and you can lasso single transitions across several contiguous tracks. However, avoid lassoing more than one transition on a single track, because this activates Segment mode.

To select transitions located below several track layers, you can draw a lasso within the Timeline by pressing the Control key while you drag.

• **Click the Go to Previous Edit or Go to Next Edit buttons.** By default, the system selects the nearest transition in either direction of the selected track for dual-roller trimming.

If the transition is a straight cut, the system selects all edited tracks. If the transition is an overlap edit, with staggered transition points, the system selects the topmost track.

• **Click the Play Loop button on a palette or the keyboard.**

This is useful if you like to trim quickly as you edit, going back and forth between Trim mode and other edit modes. This method is described in **"Trimming During a Playback Loop" on page 466**.

The Play Loop button does not appear in Source/Record mode by default. You must map it to the keyboard or a palette in advance. For information on button mapping, see "About Button Mapping" on page 96.

Exiting Trim Mode

You can exit Trim mode at any time in one of several ways:

• Click the Source/Record Mode or the Effect Mode button.

esc

• Press the Escape key on the keyboard to enter Source/Record mode by default.

• Click a specific location in the Timecode (TC1) track at the bottom of the Timeline to exit Trim mode. The position indicator moves to that location.

Click in the TC track at a selected location.

The system exits to Source/Record mode, and relocates the position indicator.

Toggling Between Big and Small Trim Mode

When you click the Trim Mode button, by default the system enters Big Trim mode. If you click the Trim Mode button again, the interface toggles between Big and Small Trim mode.

If you prefer the larger monitors and controls of Big Trim mode, select this as the default in the Trim Settings in the Project window. When you need to use the Monitor menus to switch between sequences, or have occasion to edit source material into the sequence, you can click the Trim Mode button to enable Small Trim mode, which includes the Source monitor controls.

Selecting Between Trim Sides

There are three ways to select sides of a transition to trim:

A-side B-side A and B

- In Big or Small Trim mode display, click the outgoing (A-side) or incoming (B-side) monitor to define which side of the transition to trim. Notice that the pointer changes to a single-roller A-side, single-roller B-side, or double-roller icon depending on position.

A-side A and B B-side

- You can also use the Trim-side keys on the default keyboard (or map them onto one of the monitor palettes while in Trim mode) to select side A, side B, or both.

- You can use the Cycle Trim Sides button to cycle between selection of the A-side, B-side, or both.

A-side   B-side

| 0 | 0 |

Highlight indicates active side

The selected parts of the transition are highlighted, and the corresponding rollers appear in the Timeline. Also, one or both of the frame counter indicators below the monitors are highlighted to reflect the active trim sides: A-side, B-side, or both. The number indicates how many frames have been added or subtracted from the transition. Click to choose a side. Shift-click to choose both.

Selecting Additional Transitions

While you are in Trim mode, you can select additional transitions for trimming in different contexts in one of the following ways:

□	U1	✐	U1	□
◁	A1	◙	A1	◁
◁	A2	◙	A2	◁
			TC1	

• To quickly select additional transitions on contiguous tracks for trimming on the same side, click the corresponding record-side track selectors in the Track Selector panel. For example, if you select a single transition in track V1 for single-roller A-side trimming, and want to add A1 and A2 tracks at the same transition, click the corresponding track selectors.

Likewise, you can deselect tracks in the track panel to remove transitions on those tracks from the trim procedure.

• To select additional transitions for single-roller trimming in varying locations on different tracks, Shift-click the transitions in the Timeline. This method is useful when you are working with staggered transitions across multiple tracks; it also allows you to select both A- and B-side transitions for simultaneous trimming in opposite directions (asymmetrical trim). This is not possible with dual-roller trims.

U2		T	
U1	□	Hummingbird	Water fall
A1	◁	Children's Voices	
A3	◁	Women's VO	
A2	◁	Music	
TC1		00:00	

Two A-sides and one B-side selected for asymmetrical trimming

A-side   B-side

🎞️   🎞️

Notice as you move the cursor back and forth across a transition, the roller icon changes from an A-side roller (facing left) to a B-side roller (facing right) to indicate the type of selection.

You do not see the dual roller within the Timeline. To select both sides, you must first select one side, then Shift-click to select the other.

• To quickly add multiple transitions to the currently selected transitions, press the Shift key and lasso the additional transitions. Press Shift-Control while lassoing tracks that are below other tracks.

• You can select and trim two heads or tails simultaneously, in any combination, for each track in the sequence. All selected transitions are trimmed the same number of frames. This allows you to

save time, and in some cases, maintain sync by performing a single trim procedure across multiple tracks and transitions.

In this example, tail frames on both shots are trimmed simultaneously across an overlap edit.

Performing a Basic Trim

With your transitions and trim sides selected, you can perform a basic trim by using one of the following alternative procedures:
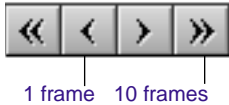
1 frame   10 frames

- Use the Trim buttons to trim forward or backward by 1- or 10-frame increments.

- Use the numeric keypad at the right side of the keyboard, as follows:

  - To move the transition a specific number of frames, type a plus sign (+) or minus sign (–) and the number of frames (from 1 to 99) you want to move forward or backward. Then press Enter. If the number of frames is larger than 99, type an F after the number to indicate frame count. For example, to enter 200 frames, type *200F* and press Enter.

  - To move the transition to an exact timecode, type a timecode number larger than 99, including frames. For example, type *102* to enter 1 second and 2 frames (1:02).

- Use controls in the Timeline by clicking a roller at the selected transition and dragging forward or backward in the sequence.

| SUN IN ROO | JUNGLE RU | L | B | M | SNA | SLO | FF | TREE PAN | WATE | | HUN | SUN | SU | RO | MOUN | MOUN |

| AUDIO | | AUDIO |
| AUDIO | | AUDIO |

| 00:00 | 01:00:09:20 | 01:00:19:10 | 01:00:29:00 |

Click and drag a transition in the Timeline.

- For greater control:

  - Press the Option key as you drag to move one frame at a time.

  - Press the Command key to snap to other transition points.

As you trim, all selected transitions in the Timeline move in unison. The Frame counter displays the frame count backward or forward for one or both trim sides, and the monitors display the new incoming or outgoing frames.

Reviewing the Trim Edit

To review the most recent trim edit, or to play the currently selected transition while in Trim mode:

1. To see the Timeline in a closer view while you review the trim, click the Focus button. (Click the button again to return to your original view of the Timeline.)

You can also choose an option in Trim Settings to focus the Timeline automatically when you enter Trim mode. For more information, see <u>"Focusing the Timeline" on page 412</u>.

2. To view the playback in Full-Screen mode, press the Full Screen (Single Quote) key on the keyboard.

3. Click the Play Loop button.

The system enters a playback loop. This repeatedly begins at a preroll point before the transition and ends at a postroll point, pausing briefly before beginning playback again.

4. You set and alter the length of the preroll, postroll, and intermission intervals by clicking in the appropriate timing field and typing a new value.

Intermission timing

Preroll timing   Postroll timing
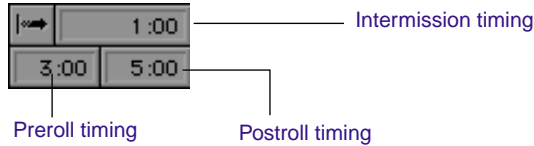
5. Stop the playback loop by clicking the Play Loop button.

6. To leave Trim mode, click the timecode track in the Timeline, or click the Source/Record Mode button.

Dual-Image Playback During Trims

Dual-image playback allows you to preview A-side and B-side frames in real time while performing a trim. You can play through the transition by using the J-K-L keys or the Play and Trim buttons.

⚠ **Dual-image playback works with single-field resolutions only. Only one side rolls when you attempt to use dual-image playback with material digitized at AVRs 12, 70, 75, and 77.**

To use dual-image playback during trims:

1. Double-click Trim in the Settings scroll list in the Project window to open the Trim Settings dialog box.

2. Select the Dual Image Play option and click OK.

3. Enter Trim mode and select a transition for trimming.

4. Press a playback button or key combination.

As the transition plays or loops, notice that both the A-side and B-side of the trim play back in the Trim monitors.

5. When you see or hear the point that you want to trim to, press the space bar to stop playback and update the transition in the sequence.

Trimming On-the-Fly

In both Big and Small Trim mode, you can use the J-K-L keys on the keyboard to play through outgoing or incoming material and mark trim points. This is similar to the procedure for marking footage on-the-fly, as described in **"Marking and Subcataloging Footage" on page 350**.

For convenience, this method isolates the trim controls to just three keys. However, when performing a dual-roller trim, you cannot view both sides at once; the monitors play only the A-side during the procedure, updating the B-side once the trim is completed.

To trim on-the-fly:

1. Select one or more transitions for single- or dual-roller trimming.

2. Use the J-K-L keys to step (jog), play, or shuttle through the footage at varying speeds:

   • Press and hold the K key while pressing J or L to step slowly backward or forward through the footage. When you find the frame where you want to relocate the transition, release the K key to complete the trim.

   • Press the J or L keys once to play at normal speed, or more than once to shuttle at higher speeds. When you see the frame where you want to relocate the transition, press the space bar or the K key to complete the trim.

The monitors and the Timeline are updated to reflect the trim.

Trimming During a Playback Loop

An alternative method for trimming is to view the transition continuously in a playback loop, and use the keyboard to adjust the transition in 1- or 10-frame increments until you achieve the trim you want. You can perform this procedure in Big or Small Trim mode, using either single-roller or dual-roller trims.

1. Enter Trim mode and select transitions for trimming.

2. Click the Play Loop button to repeatedly play the selected transitions.

To make adjustments to the playback loop for preroll, postroll, or intermission intervals, see "Reviewing the Trim Edit" on page 463.
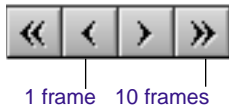
3. Press a keyboard equivalent to perform a Trim function. Also, if you are having difficulty determining which side of the transition to trim (for example, during a difficult audio edit), use the Go to IN and Go to OUT keys to review just one side.

   The system performs the trim before the next playback loop, so you can view the trimmed transition during playback, then make further changes until you are satisfied with the adjustment.

4. When you are finished, exit the playback loop by pressing the space bar or clicking the Play Loop button.

Creating Overlap Edits

You can use an overlap edit to smooth a transition by giving the viewer the subtle illusion that the audio, or video, is shared between two separate but adjacent shots.

To create an overlap edit:

1. Perform a straight-cut edit between two shots, including audio and video tracks: If the timing of the video edit is crucial, mark

edit points according to picture. If the timing of the audio transition is crucial, edit to audio.

2. Perform a dual-roller trim on either the video track or the audio tracks, but not both:

   • If the video transition occurs at the right place, but you want the audio from one shot to linger into the other (or the reverse), trim the audio tracks accordingly.

   • If the audio transition occurs at the right place, but you want the picture to transition either before or after the audio cut, trim the video track accordingly.

Extending an Edit

Use an extend edit to perform dual-sided (A- and B-side) trims on selected tracks from within Source/Record mode. Using an extend edit allows you to quickly create a split edit without entering Trim mode. It also allows you to establish the exact frame that you want to trim to by using the position indicator. (If you enter Trim mode, by default the position indicator moves to the nearest transition.)

You can extend edits backward or forward in the Timeline. In either case, like a dual-roller trim the extend edit function always maintains sync relationships.

To perform an extend edit:

1. Select the tracks you want to extend.

2. Find the point in the sequence to which you want to trim. If the trim point is before the edit, mark an IN. If it is after the edit, mark an OUT.

Audio tracks are selected for extending back.
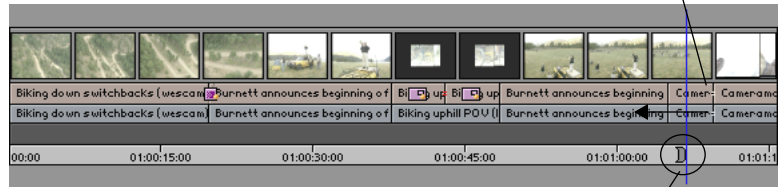
Mark IN

3. Click the Extend button. You can import the Extend button from the Command Palette. For information on the Command Palette and button mapping, see **"About Button Mapping" on page 96**.

The adjustment appears in the Timeline.
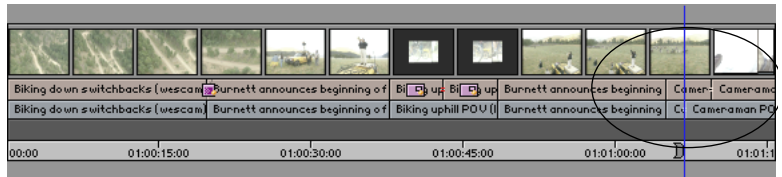
Slipping or Sliding Shots

Slip and slide procedures are two unique Trim mode techniques that allow you to make frame-accurate adjustments to a selected clip. These occur without affecting the overall duration of the sequence or the sync relationships between multiple tracks. Procedures for performing them are described in this section.

Selecting Segments for Slip or Slide Trimming

There are three ways to select segments for either slip or slide trimming:

- While in Source/Record mode, make a selection for slipping. Then enter Trim mode by dragging a lasso from right to left around a segment (two or more transitions). To select for slide trimming, press the Option key while you drag.
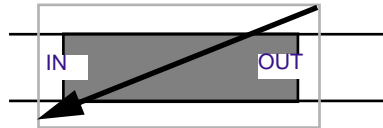
Drag right to left around at least two transitions.

You can also select two or more contiguous segments within a track for slipping or sliding as a whole by dragging the lasso around four or more transitions.

⚠ **Be sure to draw the lasso from right to left; if you draw from left to right, you enter Segment mode.**

- While in Trim mode, double-click a segment to select it for slip trimming. To select it for slide trimming, press the Option key while you click.

  You can also select two or more segments on different tracks for simultaneous slip or slide trimming. To do so, press the Shift key as you repeat this procedure. However, you cannot use the Shift key to select additional segments on the same track.

- While in Trim mode, press the Shift key and select both the head and tail of a clip for slipping. Alternatively, select the outgoing tail frame of the preceding shot and the incoming head frame of the following shot in the sequence to prepare the clip for sliding.

You can also use this method to select two or more contiguous segments on the same track, and/or additional segments on other tracks for slipping or sliding as a group.

You must select all multiple selections for either slipping or sliding. You cannot perform both functions simultaneously.

You can slip and/or slide the video and audio for a shot together. Alternatively, slip and/or slide a single segment of video or audio independently from the rest of the shot. You can also slip shots in Source/Record mode by using the Slip Left and Slip Right buttons.

The Slip/Slide Display

Once you select the clips for slipping or sliding, the Trim mode interface changes to a four-frame display. For more information on four-frame display, see **"About Four-Frame Display" on page 420**.

Outgoing and Incoming video (or A- and B-side)

Tail and head frames of the selected clip
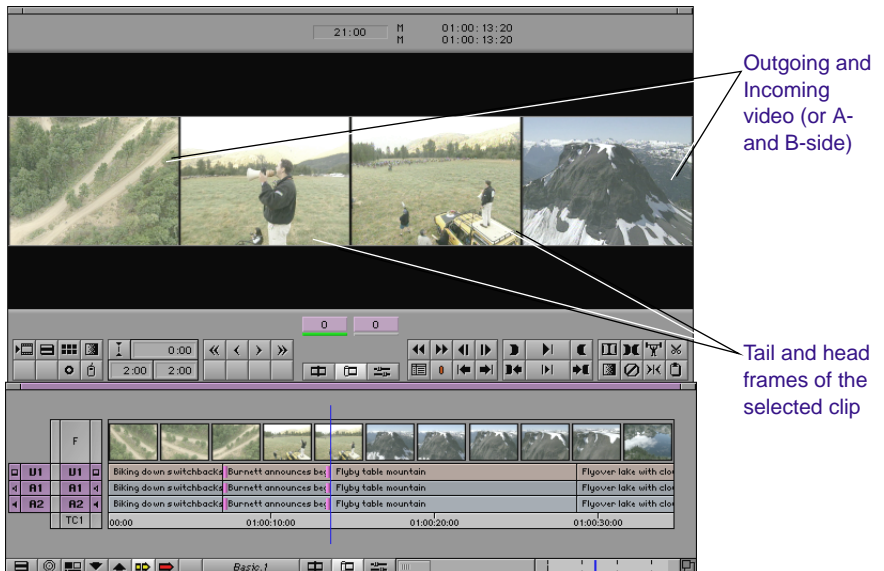
The type of trim you perform (slip or slide) determines which frames are updated, as follows:

- In slip trimming, the two inner monitors for the head and tail frames of the clip change, because only the contents of the clip are adjusted. The frames that precede and follow the clip are not affected.

- In slide trimming, the two outer monitors for the outgoing (A-side) and incoming (B-side) frames change, because the clip remains fixed while the footage before and after it is trimmed.

Performing the Slip or Slide Trim

To slip or slide a shot:

1. After selecting the segments, as described in **"Selecting Segments for Slip or Slide Trimming" on page 469**, do one of the following:

   - Click any roller in the Timeline, drag the selected material to the left or right, and release.

   - Use the numeric keypad to enter specific frame-count or time-code values, and press Enter.

   - Use the trim keys or buttons to shift the selection by 1- or 10-frame increments.

2. Monitor the progress of the trim by using the monitors, the frame counters, and the Timeline.

   When you reach the end of available material while slipping a shot, the trim stops. Similarly, when you reach the next transition while sliding a shot along a track, the trim stops. A bright white line at the transition indicates the limit. After completing the initial slide, you can perform another slide in the same direction.

3. When you are finished, exit slip or slide mode either by clicking another transition for trimming, or by clicking either the Source/Record Mode or Effect Mode button to exit Trim mode.

Slipping Shots in Source/Record Mode

You can use this alternative procedure to slip a shot in Source/Record mode by using the Slip Left and Slip Right buttons, as follows:

1. In Source/Record mode, select the tracks for the clips to be slipped.

2. Place the position indicator within the shot that you want to slip.

3. Slip the shot by doing one of the following:

   - Click the Slip Left button to slip the shot one frame left (revealing later material from the source clip).

   - Click the Slip Right button to slip one frame right (revealing earlier material from the source clip).

   - Hold the Option key while you click the Slip Left or Right button to trim 10 frames at a time.

   The Slip Left and Slip Right buttons do not appear on the interface or keyboard by default. You must map them from the Command Palette Trim tab to use this procedure.

Performing a Slide Trim

To perform a slide trim:

1. While in Big Trim mode, press the Option key and double-click a shot or a segment of video or audio to select the frames that precede and follow the shot or segment.

   Or hold the Option key, then press the mouse button and drag a lasso around the material you want to slip.

2. In the Timeline, press one of the selected heads or tails, then drag the shot to the left or right.

   If you slide the shot to the right, the edit before the shot is extended to the new IN point for the shot. The edit after the shot is trimmed forward to the new OUT point for the shot.

If you slide the shot to the left, the edit before the shot is trimmed back to the new IN point for the shot. The edit after the shot is extended back to the new OUT point for the shot.

Maintaining Sync While Trimming

For more information about sync relationships, as well as additional procedures for managing sync, see **Chapter 17**.

Trim mode has two features that you can use to ensure that you do not break sync unintentionally between two or more video and/or audio tracks when performing single-roller trims.

- You can add black to the track while trimming.
- You can sync-lock tracks that maintain a synchronized relationship.

Adding Black When Trimming

If you are trimming a video track and need to fill the black, you can perform a replace edit to add another piece of footage. For more information, see **"Performing a Replace Edit" on page 385**.

Because single-roller (A-side or B-side) trims shorten or lengthen the duration of the track being trimmed, any relationships that exist with other tracks downstream of the trim will be thrown out of sync. You can use the Control key while trimming to add black on either the A-side or the B-side to maintain the overall duration of the track and the sync relationships.

To add black while trimming, press and hold the Control key while performing any of the A-side or B-side trim procedures. The system adds a black segment to fill the duration of trimmed frames.

**Trimming without
adding black**

□	V1		V1	□			Note1		Audrey &Ely(WS)
◄	A1		A1	◄			Note1		Audrey &Ely(WS)
◄	A2		A2	◄			door effe:	Audrey &Ely(WS)	
			TC1		01:00:11:00		01:00 12:00		01:00:13:00

**Adding black while
trimming**

(Control key + trim)

□	V1		V1	□			Note1		Audrey &Ely(WS)
◄	A1		A1	◄			Note1		Audrey &Ely(WS)
◄	A2		A2	◄			door effe:		Audrey &Ely(WS)
			TC1		01:00:11:00		01:00 12:00		01:00:13:00

Black fills the trim duration, and
sync is maintained.

> *You can only add black while performing single-roller trims, because dual-roller trims do not cause sync breaks.*

Trimming with Sync-Locked Tracks

> *Sync-locked tracks aid only single-roller trim functions in Trim mode because dual-roller trims do not cause sync breaks.*

Trim with sync-locked tracks as follows:

□	U1	⚡	U1	
◄	A1	⚡	A1	◄
◄	A2	⚡	A2	◄
			TC1	

Sync-lock icon

1. Sync-lock the tracks as follows:

   • Click in the center column next to the tracks you want to keep in sync. The sync-lock icon appears.

   • Click in the narrow column to the left of the TC1 button to toggle sync-lock on and off for all tracks.

2. Perform single-roller trims as necessary, with the following results:

- When you trim the A-side of a transition forward, all other segments locked in sync move forward with the trim. If the transitions are staggered, this might split one or more of the segments at the sync point established by the position indicator, leaving fill.

U2		[T]	
U1	□	Hummingbird	Waterfall
A1	◄		Children's Voices
A3	◄	Women's VO	

Before trimming forward, three tracks are sync-locked.

U2	□	[T]	
U1		Hummingbird	Waterfall
A1	◄	C	Children's Voice:
A3	◄	Women'	Women's VO

After trimming forward, sync is maintained from position indicator forward.

If you trim the B-side of the transition in the same direction, the additional sync-locked segments slide back in the sequence to maintain sync until they encounter another segment in the same track. At this point, you can trim no further and the system emits a warning sound.

- When you trim back the A-side of a transition, additional segments locked in sync move back as well. If the segments are staggered and one of the additional sync-locked segments encounters another segment on the same track, you can trim no further and the system emits a warning sound.

Before the trim, three tracks are sync-locked.

Trim is stopped here.

After the trim, sync is maintained, but the trim stops at earlier segment.

If you trim the B-side of the transition in the same direction, all other segments locked in sync move forward to stay in sync. If the transitions are staggered, this action might split one or more of the sync-locked segments at the sync point established by the position indicator. Fill is added where the split occurs.

> *Slip and slide trims are not protected for sync. Be sure to select all synced tracks for simultaneous slipping or sliding to avoid sync breaks.*

Using the Transition Corner Display

The Transition Corner Display is a Trim Mode interface that shows six important frames you use as reference points when trimming a transition effect:

Transition Corner Display button   Frames on which the transition effect starts   The two frames between which a cut point defines the transition   Frames on which the transition effect ends

Use the Transition Corner Display to trim the transition effect's start frames, end frames, and duration. As you trim the transition effect, you will be able to see the corresponding frame adjustments in all six monitors simultaneously.

⚠ **The Transition Corner Display is only applicable to the trimming of transition effects (for example, dissolves, wipes, picture-in-picture, and so on). It is not designed for trimming key, image, or segment effects.**

To trim a transition by using the Transition Corner display:

1. Select a transition effect for trimming:

   • Lasso the effect in the Timeline from right to left.

   • Enter Trim mode and click on the transition in the Timeline.

   • Use the Go to Transition buttons to enter Trim mode and step through transitions until you highlight the desired transition.

2. Click the Transition Corner Display button.

   The button turns bright green, and the display is enabled.

3. Trim the transition effect by clicking the outgoing or incoming frame you want to trim, then use one of the following three trim methods:

   • Position your mouse on the rollers and drag the transition backward or forward. (Hold the Option key to roll forward or backward slowly one frame at a time.)

   • Click the appropriate trim button to trim backward 10 frames; trim backward 1 frame, trim forward 1 frame, or trim forward 10 frames.

   • Enter the number of frames you want to move forward on the numeric keypad, then press Enter. Or, type a minus sign (–) and enter the number of frames you want to move backward, then press Enter.

4. To review your edit, click the Play Loop button.

CHAPTER 16

Working with Audio

You edit audio by using many of the same techniques and tools you use to edit video, including Source/Record mode, Segment mode, and Trim mode functions. Your Avid Composer system also provides several unique features that facilitate audio editing, such as audio scrub, waveform displays, and tools for adjusting and mixing audio levels and pan between speakers. In addition, you can adjust the high, low, and midrange frequency ranges of segments by using the Audio Equalization (EQ) Tool. These procedures are described in the following sections:

- **About Audio Tools**

- **Accessing Audio Effect Tools**

- **Audio Editing Aids**

- **Using the Audio Mix Tool**

- **Using Audio Gain Automation**

- **Using the Audio EQ Tool**

- **Using Digidesign AudioSuite Plug-Ins**

- **Using Audio Punch-In**

- **Fine-Tuning Audio Transitions**

- **Mixing Down Audio Tracks**

About Audio Tools

The Avid Composer system provides a collection of tools for managing and fine-tuning audio volume, pan, equalization, and transitions. The general purpose of each tool is as follows:

- Use the Audio Tool primarily for adjusting and calibrating global input and output levels when digitizing from analog sources or outputting to tape. For more information, see **"Preparing for Audio Input and Output" on page 157** and **"Preparing for Output" on page 601**.

- Use the Audio Mix Tool primarily for adjusting pan and volume levels on clips or whole tracks within a sequence. For more information, see **"Using the Audio Mix Tool" on page 490**.

- Use the Audio Gain Automation feature in the Timeline for finer control over volume key frames and ramps within a sequence. For more information, see **"Using Audio Gain Automation" on page 500**.

- Use the Audio EQ Tool for adjusting the *sound characteristics* of audio clips in the sequence based on three-band control over high, low, and midrange frequencies. For more information, see **"Using the Audio EQ Tool" on page 518**.

- Use the Digidesign AudioSuite plug-ins to access third-party audio plug-ins. For more information, see **"Using Digidesign AudioSuite Plug-Ins" on page 534**.

- Use the Audio Punch In Tool to record up to two channels of audio directly into the Timeline for voice-over narration. For more information, see **"Using Audio Punch-In" on page 543**.

Accessing Audio Effect Tools

You can now access the following tools from the same window:

- Audio Mix (for adjusting pan and volume)

- Audio EQ
- Audio Gain Automation
- Digidesign AudioSuite Plug-Ins

To access one of the audio effect tools:

1. Choose one of the tools from the Tools menu.

2. To switch to another tool, choose the name from the Tool Name menu.
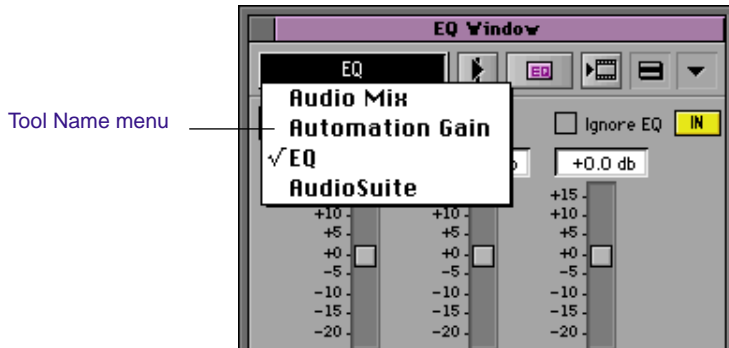
Tool Name menu

To keep more than one tool open at the same time, choose the tool from the Tools menu or hold the Option key while choosing a new tool from the Tool Name menu. To prevent confusion, the Avid Composer system allows only one copy of a given audio effect tool to be open at any given time.

The following section describes two features that help you locate transitions and monitor audio samples while editing or adjusting sound with the tools.

Audio Editing Aids

The Avid Composer system provides audio scrub features and waveform plots specifically designed for frame-accurate cueing, marking,

and editing of audio. You can use these features any time during editing or while making adjustments with the audio tools.

Using Audio Scrub

The term *audio scrub* originates in the film industry. It describes the process of "scrubbing" a magnetic audiotape across the playback heads to monitor a portion of sound. This process helps isolate portions of audio to accurately mark edit points, or to analyze transitions for careful trimming.

Smooth Scrub Versus Digital Scrub

You have two options for scrubbing audio in either the sequence or the source material:

- **Smooth audio scrub** mimics the variable pitch playback of traditional analog tape.

- **Digital audio scrub** takes advantage of the digital environment by sampling incoming and/or outgoing frames at normal pitch and playback rate.

Each type of scrub has its advantages:

- Smooth scrub makes it easier to examine sound at varying speeds.

- Digital scrub allows you to focus quickly on individual bits of incoming or outgoing audio for frame-accurate edits and adjustments.

Try both and see which works best in different situations.

Selecting Tracks for Scrubbing

By default, the system selects the topmost audio track unless you make a selection. Always check the position of the hollow speaker icon

and select the correct track, if necessary, to avoid marking or trimming the wrong track.
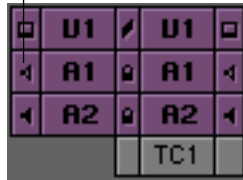
To select a track for scrubbing, hold down the Option key and click the speaker icon in the track panel beside the Timeline.

The speaker icon becomes hollow to indicate that it is selected for scrubbing.

Using Smooth Audio Scrub

You perform the smooth audio scrub procedure by using either the J-K-L keys or the mouse, as described in this section.

Using the J-K-L Keys to Perform Smooth Scrub

You can use three-button play with the J-K-L keys to perform smooth audio scrubbing of selected tracks of audio at variable speeds. You cannot activate digital audio scrub with three-button play. You can monitor while stepping (jogging) 1 frame at a time, 10 frames at a time, or while shuttling at fixed rates up to 8 times normal speed.

To monitor audio with three-button play:

1. Select the correct track and adjust playback volume as necessary.

2. Play the audio, using the three-button variable speed playback procedures described in **"J-K-L Keys (Three-Button Play)" on page 346**.

Using the Mouse to Perform Smooth Scrub

You can use the mouse to perform smooth audio scrubbing of selected tracks. (You cannot activate digital scrub by using the mouse.) Like the J-K-L keys, you can step and shuttle with the mouse. Unlike three-button play, however, playback rates with the mouse are not at fixed increments. They can vary all the way from 1 to 300 fps (NTSC), depending on manipulation of the mouse.

To monitor audio with the mouse:

1. Select the correct track and adjust playback volume as necessary.

2. Activate the mouse for stepping or shuttling by pressing the Mouse Jog button or the Mouse Shuttle button. Mouse Jog allows you to move the position indicator with the mouse. Mouse Shuttle allows you to control the speed of the position indicator by dragging the mouse at different speeds.

   To deactivate shuttle, press the space bar or the Escape key.

3. Play the footage with the mouse, as described in **"Using the Mouse" on page 348**.

When you use the MUI, smooth audio shuttling is invoked by default.

Using Digital Audio Scrub

Digital audio scrub enables you to sample selected frames of incoming or outgoing audio as you move through the footage, without a change in pitch or speed. The following are unique characteristics of digital scrub:

- The frames of audio you hear are always at your point of destination. For example, if you step forward 10 frames, you hear a selected number of audio frames from a point behind the position indicator (outgoing frames) to a point in front of the position indicator (incoming frames) as it reaches the new destination point.

- The audio is always sampled in a forward playback direction; whether you step back or forward through the material, you hear the same audio sampling at each destination frame.

Digital Scrub Example

This entire section is sampled.

Step 10 frames

Selected track

Outgoing frames
(behind position indicator)

Incoming frames
(ahead of position indicator)
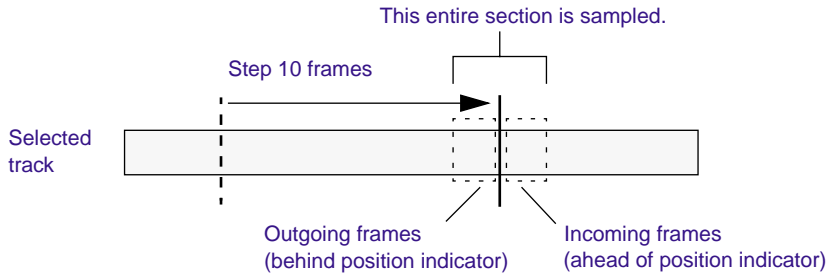
Adjusting Digital Scrub Parameters

The default parameters for the number of frames you hear as you scrub are zero frames of outgoing audio (behind the position indicator), and one frame of incoming audio (ahead of the position indicator). For the common purpose of isolating frames for marking or trimming, the default parameters are sufficient.

You can increase these settings to include more frames of audio on either side — for example, when you want to sample whole words or parts of words as you scrub to find edit points within a phrase. Or you can reverse the settings to sample frames behind the position indicator (outgoing frames) as you scrub. In general, you should avoid increasing the number of sampled frames on both sides at once because this can make it difficult to isolate an edit point or trim point based on the location of the position indicator.

To adjust the parameters for digital scrub:

1. Open the Audio Settings dialog box, using one of the following procedures:

   - Double-click Audio in the Settings scroll list of the Project window.

- If you have digital scrub parameters displayed in the second row of information above the Composer window monitors, you can Option-click the digital scrub parameters or open Audio Settings in the Project window.

Source-side digital scrub parameters

Record-side digital scrub parameters
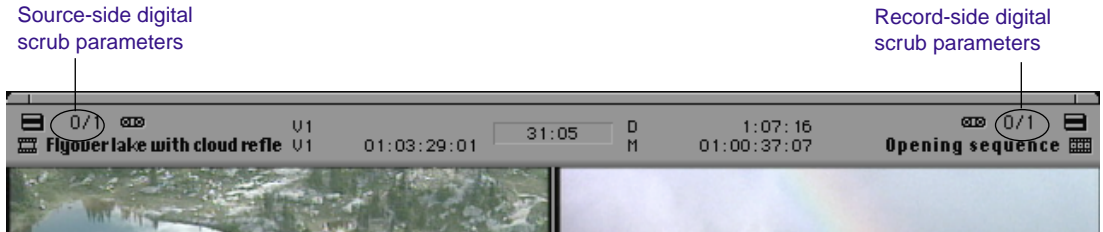
The Audio Settings dialog box appears.
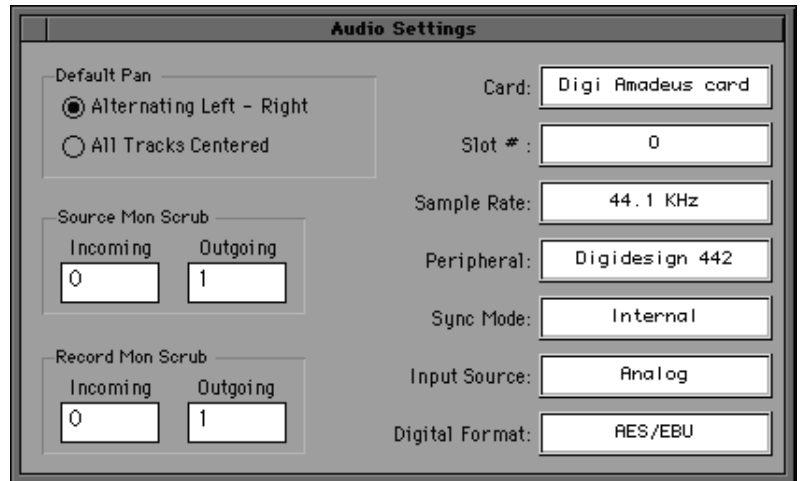
2. Click in an entry field and type a new number of outgoing or incoming frames on the source side, the record side, or both.

3. Press Return. The new parameters are now in effect.

Performing the Digital Scrub Procedure

To locate an audio edit point in either source-side or record-side audio by using digital scrub:

1. Select an audio track for scrubbing, and adjust the output volume, if necessary.

2. Press the Caps Lock key to activate digital audio scrub.

3. Move through the material in one of the following two ways to hear the scrub:

   • Drag the position indicator.
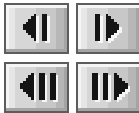
   • Click the step buttons to step through in fixed increments: 1 frame backward, 1 frame forward, 10 frames backward, 10 frames forward.

When you've found the right frame, mark the location, trim the transition, or perform any other function you choose.

If you are sampling incoming frames (with the default scrub parameters, for example), you see the position indicator is located at the *head* of the last sampled audio point. If you are sampling outgoing frames, you see the position indicator is located at the *tail* of the last sampled audio point.

Using Waveform Plots

You can use waveform plots to help you visually locate points in an audio track for editing or trimming. There are two types of waveform plots, *Energy* or *Sample*, that you choose from the Timeline Fast menu.
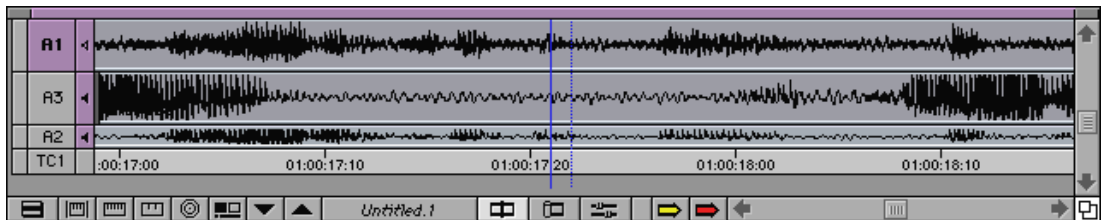
Displaying Audio Waveforms

To display audio waveforms:

1. If you are searching for a point in a known section of the tracks, zoom in and/or show more detail in the sequence to isolate a section of the audio. With less audio to display, the system draws the waveform plot faster.

2. Choose Audio Data from the Timeline Fast menu. A submenu appears containing two waveform plot options.

Audio Data	▶	✓None
Track Color	▶	**Energy Plot**
		Sample Plot
Show Track	▶	**Volume**

Choice of plot type is a matter of visual preference:

• The Energy Plot option displays only the peaks of the audio amplitude in the waveform from the baseline. It is a graphical representation of the mathematical Energy Function for audio waveforms.

Waveform
energy plot

• The Sample Plot option displays the entire amplitude of the audio waveform. This is the same as the sample voltage values you would see on an analog oscilloscope waveform.

Waveform
sample plot
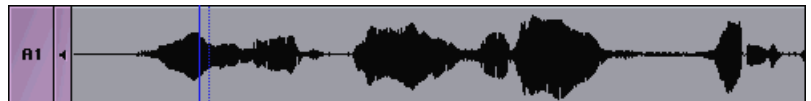
After you make a choice, the waveform appears in the selected tracks.

3. To maximize the visibility of your waveform display, use the following optional procedures:

- Continue to expand or shrink your view of the Timeline (by using the scale bar), effectively spreading out the waveform plots to show detailed variations in the audio levels.

- Enlarge or reduce the height of selected audio tracks, and subsequently the waveform displays, by pressing ⌘–L to enlarge or ⌘–K to reduce.

- You can also increase or reduce the size of the Sample plot image itself (this does not work with Energy plots), without enlarging its track, by pressing ⌘–Option–L to enlarge, or ⌘–Option–K to reduce.

4. Move through the audio shown in the waveform by using any of the playback methods. You hear sound as you track the audio visually. When you have the position indicator parked at the desired point in the waveform, you can mark, trim, or perform any other function.

Once you've created a customized waveform view, you can simply select it from the Timeline View pop-up menu when needed, and return to another view when done.

Muting the Audio

The Mute button, which is located in the Command Palette, allows you to quickly turn all sound tracks on and off during editing. This is especially convenient when fine-tuning complex audio and video edits, making it possible to shift quickly between the two. You can set your audio levels and speaker volumes and mute them whenever necessary without changing the settings.

Click the Mute button to mute all audio tracks. Click it again to turn them on.

Using the Audio Mix Tool

The default volume for master clips is set to zero (that is, with no attenuation) when you first digitize the media. Pan is based upon the tracks recorded in the field, and is subsequently digitized into the system.

The pan option in the Audio Settings dialog box determines how the system plays back the default pan. For more information, see the Avid Media Composer Products Reference.

The Audio Mix Tool allows you to:

- Adjust pan and volume for an individual clip, a whole track, several tracks at once, or a whole sequence.

- Adjust the volume and/or pan for one track at a time.

- Adjust volume and/or pan for multiple tracks simultaneously by ganging them together.

The system uses these adjustments for all playback, including output to a digital cut.

You can also adjust volume levels in the Timeline by using Audio Gain Automation. For information, see "Using Audio Gain Automation" on page 500.

Open the Audio Mix Tool by choosing Audio Mix from the Tools menu.

Audio Effect Mode Selector pop-up menu

Play Loop button

Fast menu

Audio Mix Window

Audio Mix

Ignore Volume

Stereo Mix

Mix To 1 & 2

Display/Hide Sliders Button
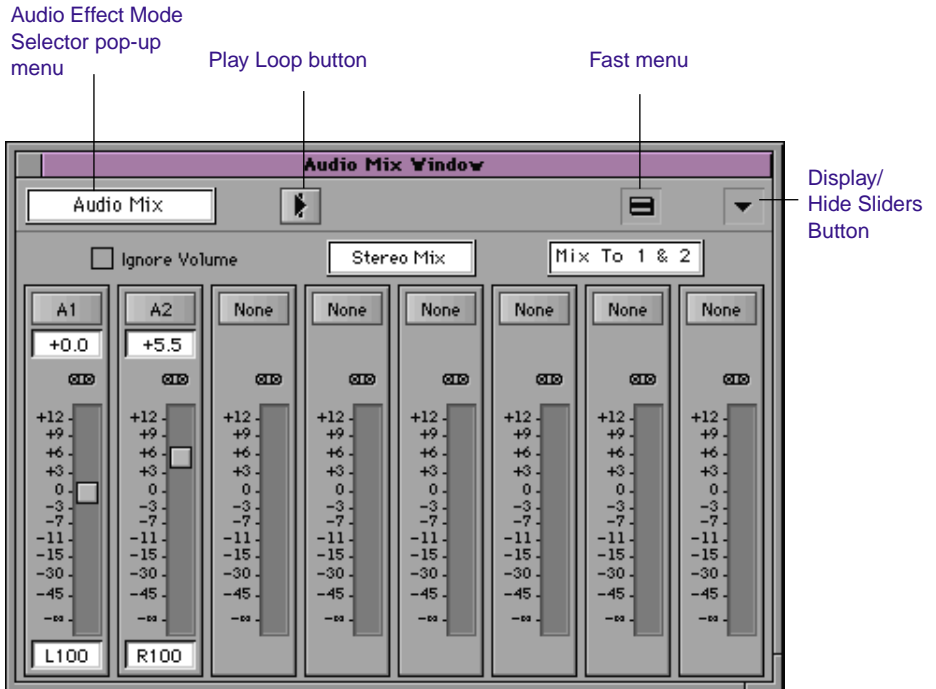
Resizing the Audio Mix Tool

You can simplify the Audio Mix Tool display by clicking the Display / Hide Sliders button to toggle between hiding and displaying the volume sliders.

491

Volume Level display

With the window collapsed, you can continue to adjust levels by selecting a track and typing values by using the numeric keypad on the keyboard, or by typing a value into the volume level display.

Adjusting One Audio Track at a Time

To adjust one audio track at a time in the Audio Mix Tool:

1. Load a clip or sequence, and activate the appropriate monitor:

   • To adjust a track in a source clip, make sure the Source monitor is active.

   • To adjust a track in a sequence, make sure the Record monitor is active.

2. Select the track or portion of a track to be adjusted:

   • To adjust the track in a single edited shot in a sequence, place the position indicator in the shot.

   • To adjust an isolated section of audio on a track, mark IN and OUT points. Adjusting a clip with mark IN and mark OUT adjusts the entire clip.

   • To adjust levels from an IN point through the end of the track, mark an IN point only. One mark also adjusts the entire track from the beginning of the clip that includes the mark.

   • To adjust levels globally throughout the track, make no marks.

3. Choose Audio Mix from the Tools menu to open the Audio Mix Tool.
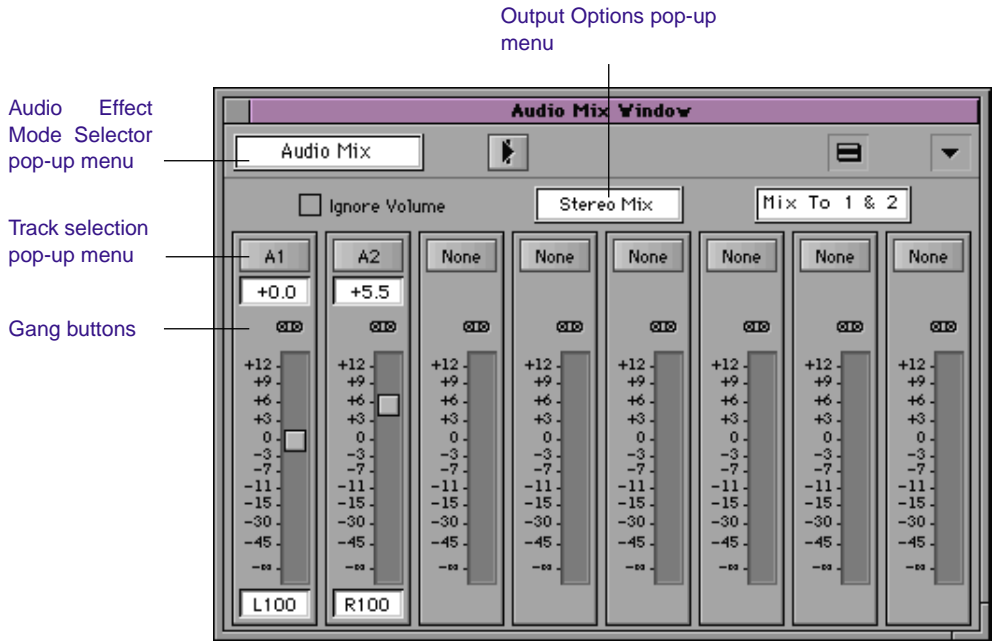
Output Options pop-up menu

Audio Effect Mode Selector pop-up menu

Track selection pop-up menu

Gang buttons

The Audio Mix Tool contains four to eight panels (depending upon your system model), one for each audio track you can monitor and adjust. The Audio Mix window can only display tracks that exist in the sequence, or tracks that were digitized with the source clip.

4. Choose the type of audio output from the Output Options pop-up menu:

• Choose Stereo Mix to make adjustments for output to left and right speakers.

• Choose Mono to make adjustments with all levels panned to center between speakers.

- Choose Direct Out when performing a digital cut for output of up to eight source tracks to a maximum of four output channels. For more information, see **"Adjusting Output on Four-Channel or Eight-Channel Audio Board Systems" on page 610**.

5. Select the audio track to be adjusted by choosing the track from the Track Selection pop-up menu in a panel.

A1

6. Choose the type of mix you want when applying stereo mix output from the Mix Tracks pop-up menu:

Mix To 1 & 2
Mix To 1 & 2
Mix To 3 & 4

- Mix To 1 & 2 sends the stereo mix to output channel one and the left speaker, and output channel two and the right speaker.

- Mix To 3 & 4 send the stereo mix to output channel three and the left speaker, and output channel four and the right speaker.

7. With the Audio Mix window active, use any playback method (such as the J-K-L keys on the keyboard) to play, shuttle, or step through the audio to check for necessary volume or pan adjustments.

   The keyboard can control either the Source or Record monitor, depending on which monitor was active when you opened the Audio Mix Tool. Switch your selection by clicking the appropriate monitor.

8. Decide whether to raise or lower the volume, or pan left or right.

Volume level display

Click gang buttons to select a track or
to gang multiple tracks.

Audio Level slider

Pan Value display
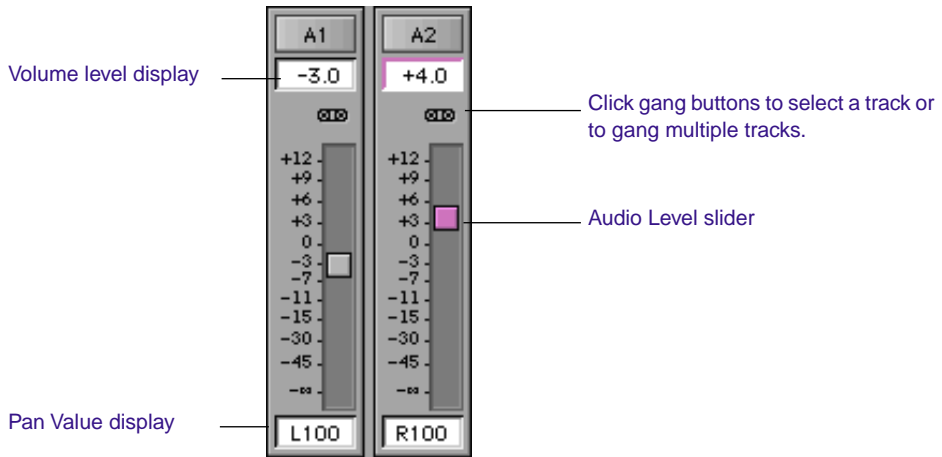
To change a value in the panel, use any of the following methods:

- Click a number along the vertical edge of the Audio Level slider.

- Click the slider and type a value.

- Values are cumulative until you press Return. For example, if you want to enter the value 12, simply type it. However, if you enter 1 and then want to change the value to 2, press Return before typing the 2.

- Click the slider and then drag it.

- Click the Volume level display box and type a value.

- Set a value of zero decibels by clicking the slider and entering 0, or by clicking 0 along the vertical edge of the volume slider.

Pop-up slider for pan

- Adjust pan by clicking the Pan Value display to reveal the pop-up slider, then drag the slider to a new position.

If the sequence is playing, notice that play stops when you make an adjustment (the Audio Mix window does not provide real-time audio control).

9. Apply the adjustments to a chosen region of the track by using the Audio Mix Fast menu located at the upper right of the tool.

Options in the Fast menu are dimmed until you select a track by clicking the gang button. The options vary depending upon the types of marks you set within the clip or sequence, as follows:

The Clip Gain values set by the Audio Mix Tool is the value for the entire segment that was set; for example, you cannot set a subsection of a segment without affecting the entire segment.

- **With IN and OUT marks:** Commands apply adjustments to selected tracks between the marks.

```
Set Pan In/Out
Set Level In/Out

Adjust Pan/Vols – In/Out
```
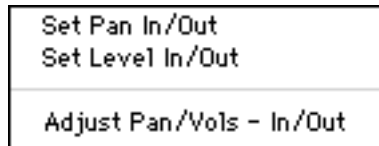
- **With an IN mark (no OUT mark):** Commands apply adjustments to full clips from the IN point to the end of selected tracks.

```
Set Pan from In
Set Level from In

Adjust Pan/Vols – from In
```
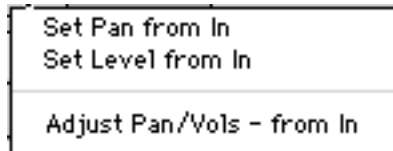
- **With no marks:** Commands apply globally (across entire tracks).

```
Set Pan Global
Set Level Global

Adjust Pan/Vols - Global
```

To apply the adjustments, do one of the following:

- The Set commands (Set Pan, Set Level) apply the same pan or volume levels currently set in the Audio Mix Tool to all segments in the marked region of the tracks.

- The Adjust Pan/Vols command opens a dialog box for adding incremental adjustments to all current settings across segments in the marked region of selected tracks.

```
Gain Adjustment in DBs [-6.0,6.0]   0.00

Pan Adjustment [-200,200]           0

            OK          Cancel
```

For example, when you enter –1 into the Gain Adjustment field, the various audio level settings across all segments of the marked region of selected tracks will be lowered by exactly one decibel when you click OK.

- The Remove Pan/Vols command deletes all audio mix adjustments that have been applied to segments in the marked region of selected tracks. Each audio clip is restored to its previous pan and volume settings.

10. Play through the audio again, using the J-K-L keys. Repeat steps 8 through 10 until you are satisfied with the pan and volume levels.

The system uses the new settings whenever you play back or record the sequence.

Ganging and Adjusting Multiple Tracks

You can gang multiple tracks in the Audio Mix Tool in order to maintain the same relative settings between tracks when you make adjustments. This is useful in a variety of circumstances. For example, you can gang tracks to raise the overall volume of a portion of a sequence while maintaining variations in level adjustment among tracks.

To gang and adjust multiple tracks:

1. Click the Gang button in the first track panel.

2. Click the Gang button of any additional panels. Click the button a second time to deselect it.

3. Adjust either volume or pan for one of the tracks by using any of the techniques described in the previous section, and the other tracks will maintain the same relative levels.

When you gang two or more panels, you gang both the volume and pan sliders.

To set all ganged sliders to the same value:

- For volume, click the number along the vertical edge of the volume slider or enter a value into one of the Volume Level displays.

- For pan, click the pan value display box and enter a value.

Ignoring Existing Volume and Pan Settings

You can have the system ignore the volume settings established with the Audio Mix Tool when playing back or recording a sequence. You can also deactivate the pan settings by choosing Mono or Direct Out from the Output Options pop-up menu.

To turn off current volume adjustments, click the Ignore Volume check box located next to the Output Options pop-up menu at the top of the Audio Mix Tool.

The volume controls disappear. Deselect the option to restore the current settings.

To turn off pan adjustments, choose one of the following from the Output Options menu:

- Direct Out plays back the tracks with their default pan settings.

- Mono pans all tracks to center during output.

When you choose one of these options, the pan controls disappear in the Audio Mix Tool. Choose Stereo Mix to restore the current settings.

Adjusting Volume While Playing an Audio Effect

You can use the Play Loop button to create or change the volume on an Audio Mix effect while you play the clip.

Play Loop button

To adjust volume while playing an effect:

1. Choose an existing Audio Mix effect or identify an area of the clip with IN and OUT marks.

2. Click the Play Loop button. The Avid Composer system repeatedly loops through the audio effect.

3. Adjust the volume as necessary.

4. Click the Play Loop button to stop. The Avid Composer system automatically saves your changes as part of an Audio Mix effect.

Limitations

If there is not an existing Audio Mix effect on the clip before you start, you will not hear any changes until you click the Play Loop button to stop and replay the effect.

As you adjust the volume values on an existing Audio Mix effect, you might not hear the results immediately. It takes a few moments for the Avid Composer system to apply the changes to the clip. The response time for this feature is considerably longer than for adding EQ effects while using Play Loop. You might need to click Play Loop to complete the edit and then play the effect to hear the result.

To improve the response time, you can do the following:

• Monitor as few audio tracks as possible.

• Deselect the video track if practical.

• Use IN and OUT marks to choose a narrow interval to adjust.

For additional ways to change the volume while playing an audio effect, see "Recording Audio Gain Information" on page 507.

Using Audio Gain Automation

Audio Gain Automation (also known as audio volume rubber-banding) allows you to change the volume of a segment by adding and manipulating gain key frames in the Timeline. The following illustration shows an expanded audio track containing gain key frame information.

Gain values in decibels   Graphic representation of key frames and gain
ramps in the Timeline
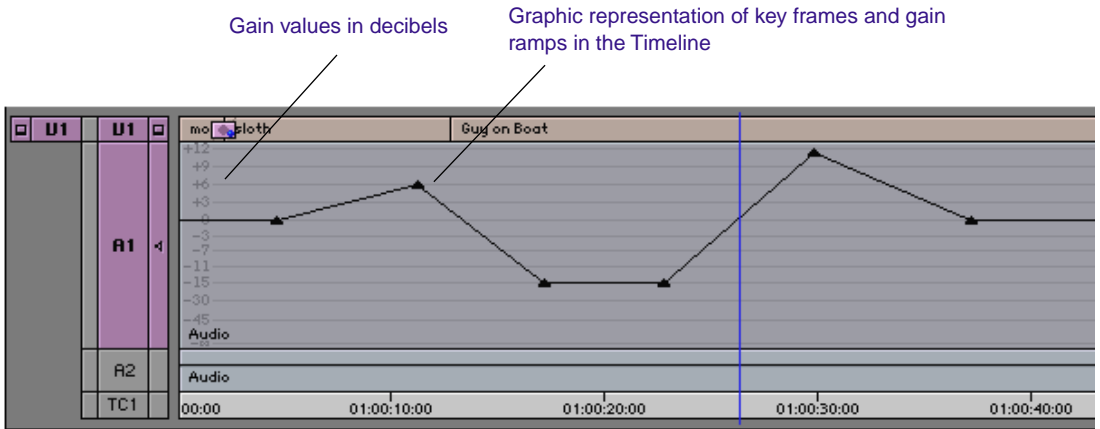
The Avid Composer system uses a linear ramp to change the volume
from one gain key frame to the next. The above illustration shows four
ramps.

System Clip Gain

When you add a key frame, the Avid Composer system adds the point
at the level currently set for that track in the Audio Mix Tool.

Current volume settings

Values set by the volume sliders in the Audio Mix window are referred to as system clip gain values. Audio gain key frames are not additive to the system clip gain values. When you move a gain key frame up or down, it cancels the system clip gain for that point in the sequence. Use of Automation Gain disables gain sliders in the Audio Mix Tool. For more information, see **"Using Audio Gain Automation and the Audio Mix Window" on page 516**.

If you move the volume slider for a clip in the Audio Mix window, all the key frames for that clip move relative to the new value.

Real-Time Response of Audio Gain Automation

In real time, the Avid Composer system reads the gain value every 2000 audio samples and linearly ramps between readings. For example, at 44.1 kHz (44,1000 samples per second), the Avid Composer system checks the gain value every 0.0416 second. This works well when you use gradual ramps.

Using Audio Gain Automation

To use Audio Gain Automation:

1. Select an audio track for adjusting volume.

2. Choose Volume from the Audio Data submenu of the Timeline Fast menu.
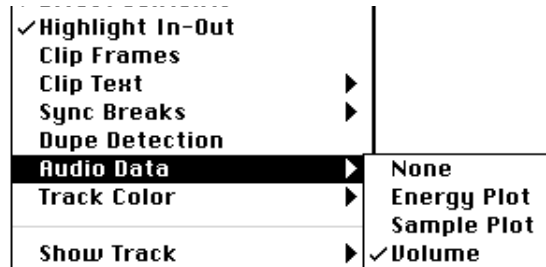
📝 *You can enable both Volume and Energy Plot or Sample Plot in the Audio Data submenu of the Timeline Fast menu to display audio gain meters and key frame information superimposed over waveform plots in the Timeline.*

A straight line appears in the selected audio track. The line shows the current gain level for that track in the Audio Mix Tool.

3. (Option) Expand the audio track by pressing ⌘–L, or pressing the Option key and dragging in the Track Selector panel.
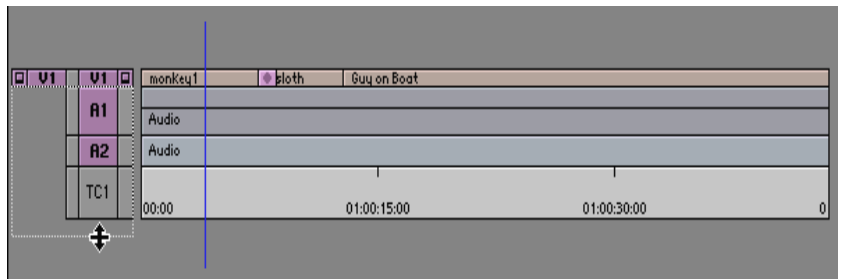
The following illustration shows the expanded audio track.
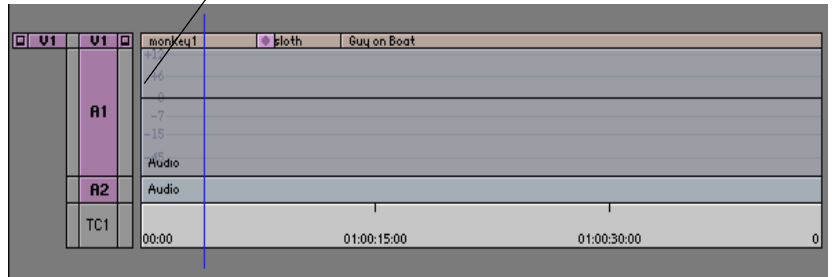
4. Click the Add Key Frame button in the FX section of the Command Palette to add key frames along the Timeline. The Avid Composer system adds a key frame to each enabled track.

You adjust gain in the Automation Gain window by dragging key frames in the Timeline or by placing the position indicator on a key frame and adjusting the slider.

By default the Add Key Frame button is mapped to the double quote key ("). You can map the button to another key or to existing button locations in the Source/Record monitor.

After you add one key frame to a segment, you can adjust the gain for the entire clip.When you move the point up or down, the corresponding volume slider in the Automation Gain window moves also.

Deleting Audio Gain Key Frames

To delete key frames, do one of the following:

- To delete a single key frame, move the cursor over the point. When the cursor turns into the pointing hand, press the Delete key. If there are identical key frames in other active tracks, the system deletes them also. (Do not press the mouse button.)

- To delete groups of key frames, mark an IN to OUT or mark the entire segment, then delete any key in the marked area.

Moving Audio Gain Key Frames on the Timeline

To move key frames, do one of the following:

- Click a key frame and drag it up or down to increase or decrease the gain at that point. If there is a point at the same position on another enabled track, it moves also.
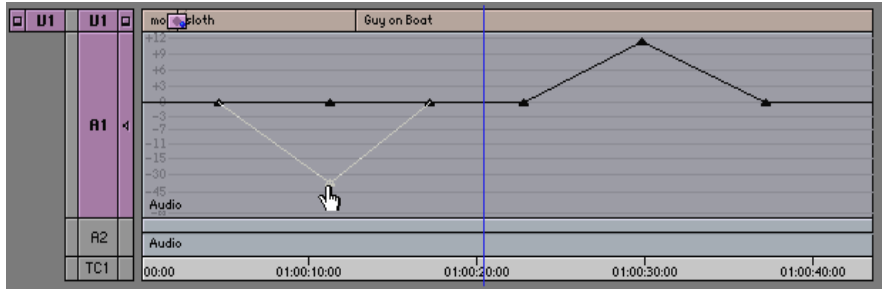
To snap to the decibel lines, hold the Command key (⌘) while you drag the point.

- Move a key frame horizontally to move the start or end of a ramp. Option-click the point and drag it. You cannot move one key frame on top of another.
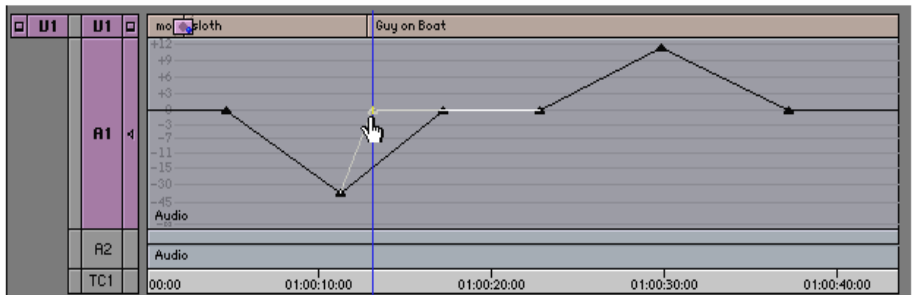
- Move several key frames on a track at the same time by placing IN and OUT marks to select the area you want. When you move one key frame within the marked area, all key frames within the

marked area move in relation to each other. This works for all enabled audio tracks.

This is similar to ganging sliders on an audio mixing board or in the Audio Mix Tool.

This example shows how to move key frames within IN to OUT marks on two tracks.
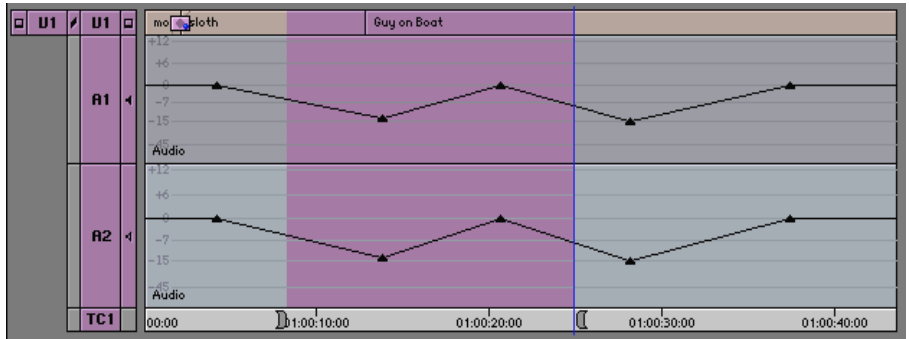
Notice that the key frames outside the IN to OUT marks do not move.
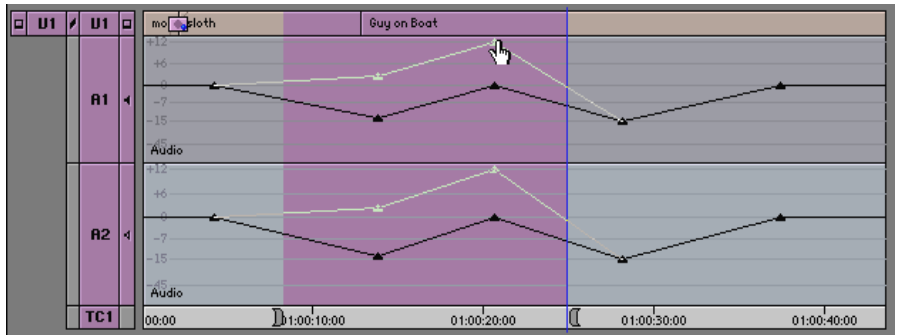
Recording Audio Gain Information

You can instruct the Avid Composer system to record your actions while playing the clip as you move sliders to adjust the volume. The system creates the corresponding key frames and saves them as part of a pan volume audio effect. After you finish the recording, you can move, add, and delete key frames to achieve the results you want.

The following illustration shows the Automation Gain window.
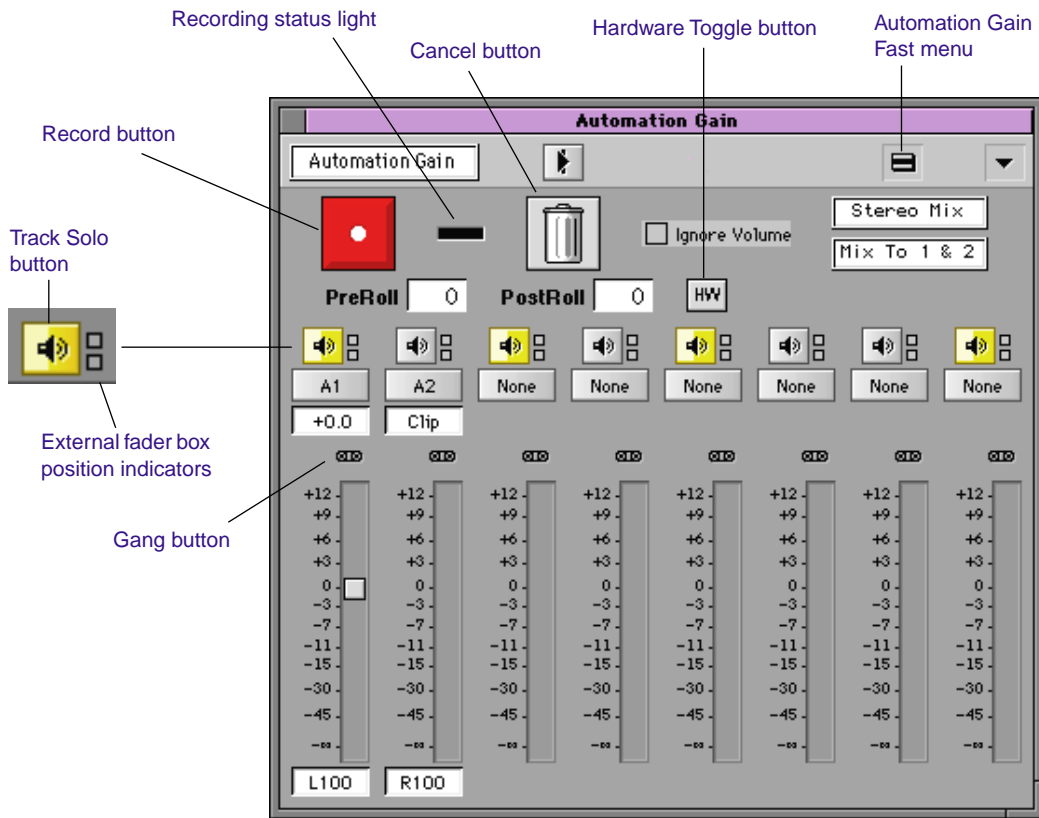
You can record audio gain information by using the Automation Gain window directly. You can also use an optional external fader box. For

information on connecting a fader to your Avid Composer system, see **"Connecting a Fader to Your Avid Composer System" on page 514**.

Some portions of the Automation Gain window are identical to the Audio Mix and Audio Punch In Tools. For example, the following record features are identical to the Audio Punch In Tool:

- The Record button starts and stops the recording.

- The Cancel button stops a recording without saving the recorded data.

- The Recording status light is black when there is no activity, green during a preroll, red during recording, and blue during a postroll.

- The PreRoll text box allows you to provide a visual cue before the recording begins. The Avid Composer system backs up the blue position indicator for the prescribed number of seconds. During the preroll, the Recording status light is green.

- The PostRoll text box gives the same kind of visual cue at the end of the recording. During the postroll, the Recording status light is blue.

The remainder of the features described in this section are specific to the Automation Gain window.

HW The Hardware Toggle button switches control between the external fader sliders and the sliders on the Automation Gain window.

Button Color	To Enter the Mode	Description
Gray (default)	Click the button.	The sliders in the Automation Gain window control volume when the position indicator is placed on a key frame. The system ignores the external fader.

Button Color	To Enter the Mode	Description
Pink	Click the button.	The fader sliders control volume. The sliders in the Automation Gain window do not allow user input.
Blue	Option-click the button.	The Automation Gain window slider positions reflect the hardware. This is for display purposes only. You cannot control volume in this mode.

When the HW button is blue, the external fader controls the volume sliders in the tool window. When you move the external fader sliders, the software sliders move also. This has the following benefits:

- You can view the decibel values as you move the slider for each track. (The FaderMaster does not have numbers along its sliders.)

- It is a good test of whether the fader is working correctly.
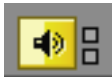
The Track Solo button (speaker icon) lets you mute and solo individual audio tracks during audio gain automation recording.

Button Color	Description
Gray	The audio track is muted.
Yellow	The track is soloed. You can solo more than one track at a time.
Green (default)	The audio track is on.

Click or press the number keys 1 to 8 to toggle between solo and on. The number keys (at the top of the keyboard) let you quickly select a track.

To toggle between on and mute, use Option-click or Option-number key.

When you turn off solo, the button returns to its previous state (mute or on). To change the previous state of a button, Option-click the button.

⚠ **While the Automation Gain window is active, the Avid Composer system overrides any other mappings of the number keys 1 to 8 at the top of the keyboard. Number keys on the right side of the keyboard are not affected.**

Position indicator lights

The position indicator lights provide information about the current location of the sliders on the external fader.

Colors	Description
Both lights blue	The fader slider matches the current Timeline volume.
Only top light blue	The slider is higher than the Timeline volume.
Only bottom light blue	The slider is lower than the Timeline volume.
Both lights gray	Either there is no fader attached to the system or the Avid Composer system does not recognize the fader. If the system does not recognize the fader, check the connection and restart the system as described in **"Connecting a Fader to Your Avid Composer System" on page 514**.

The position indicator lights are useful because it is important to position the fader sliders close to the track volume before you start record-

ing. Otherwise you might create an unwanted jump in the volume when you move the sliders during a recording.

Note that the Avid Composer system does not record values from a fader slider until you move the slider. Then it reads the current position of the slider and adjusts the volume accordingly.

Also note that in many cases it is not possible to exactly match the Timeline value.

Automation Gain Fast Menu

A1

+0.0
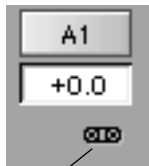
Gang button

To make the Automation Gain Fast menu active for a given track, click the Gang button for that track.

The following illustration shows the Fast menu when an In/Out area is marked. When no area is marked, the words In/Out are replaced by the words Global. This allows you to perform the operation on the entire clip rather than just the marked region.

Set Pan In/Out

Filter Automation Gain In/Out
Adjust Pan/Vols – In/Out

Remove Automation Gain In/Out

Remove Pan/Vols – In/Out

The Automation Gain Fast menu is similar to the Audio Mix Fast menu with the addition of the following items:

- *Filter Automation Gain In/Out* removes approximately 50 percent of the key frames in the marked region. If you hold down the Option key while selecting the menu item, the system removes all key frames in the selected area, except for the minimum and maximum peaks. The Avid Composer system tries to save major gestures while removing redundant points and points on a linear ramp. This is useful for deleting extra key frames after a recording. See the examples later in this section for more information.

When there are no In/Out marks on the track, the menu item is Filter Automation Gain Global. This option allows you to remove key frames from the entire track.

- *Remove Automation Gain In/Out* removes all of the audio key frames within the marked region.

  When there are no In/Out marks on the track, the menu item is Filter Automation Gain Global. This option allows you to remove all of the audio key frames on the track.

Using the Automation Gain Window Sliders

To record audio gain information by using the Automation Gain window sliders:

1. Select an audio track for adjusting volume by clicking the gang button.

2. Choose Volume from the Audio Data submenu of the Timeline Fast menu.

```
✓ Highlight In-Out
  Clip Frames
  Clip Text          ▶
  Sync Breaks        ▶
  Dupe Detection
  Audio Data         ▶    None
  Track Color        ▶    Energy Plot
                          Sample Plot
  Show Track         ▶  ✓ Volume
```
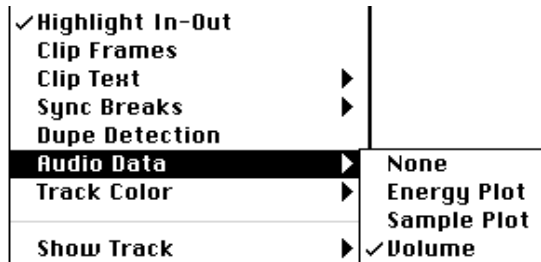
3. (Option) Expand the audio track by pressing ⌘–L, or by pressing the Option key and dragging the top or bottom of the Track Selector panel.

4. Move the blue position indicator to the section of audio that you want to adjust and mark IN and OUT points.

5. Click the Record button to start recording your actions.

6. Listen to the audio and adjust the volume sliders on the Automation Gain window as necessary.

The Avid Composer system adds volume key frames to the audio in the Timeline. Because it records every movement of the sliders, there are usually more key frames than you need.

7. To decrease the number of key frames:

   a. Click the Gang button for the track to enable the Fast menu.

   b. Choose Filter Automation Gain Control In/Out from the Automation Gain Fast menu.

8. Repeat step 7 until you have decreased the number of key frames to an acceptable level.

   You should remove as many excess key frames as possible while still maintaining the desired volume changes.

You can move, add, and delete key frames individually or as groups to further adjust the volume. For details on how to adjust the key frames, see **"Using Audio Gain Automation" on page 500**.

Using a Keyboard Shortcut

Click the Gang button on a track to turn it green. Then you can use the Fast Forward and Rewind buttons to jump to the next or previous audio key frame. You can map these keys to your keyboard to speed your editing of audio key frames.

Using the Fader to Record Audio Gain Information

To record audio gain information, using the fader box:

1. Attach the fader box to your system (see **"Connecting a Fader to Your Avid Composer System" on page 514**).

2. Move the blue position indicator to the section of audio that you want to adjust and mark IN and OUT points.

Position indicator lights

3. Note the color of the position indicator lights for the track you want to adjust. Move the fader box slider until both lights are blue.

If you can't adjust it to the exact position where both are blue, get it as close as you can.

4. Set PreRoll and PostRoll values if necessary.

5. Click the Record button to start recording your actions.

6. Listen to the audio and adjust the volume sliders on the fader box as necessary.

7. Play the clip to test your results.

8. To decrease the number of key frames, choose Filter Automation Gain Control In/Out from the Automation Gain Fast menu.

9. Repeat step 8 until you have decreased the number of key frames to an acceptable level.

   You should remove as many excess key frames as possible while still maintaining the desired volume changes.

Connecting a Fader to Your Avid Composer System

Your Avid Composer system supports the JL Cooper FaderMaster Professional fader. You connect the fader to your printer port or modem port by using a standard Macintosh serial cable. The FaderMaster sends and receives MIDI data, so you need to attach a MIDI translator to convert the MIDI signals to a format that can travel over a serial line.

To initialize the fader:

1. Attach the cables as described in the *Avid Media Composer Products Connecting Audio and Video Equipment* manual.

2. Turn on the fader.

3. In the Composer application, choose Serial Ports from the Tools menu. The Serial Ports Tool appears.

4. Choose Printer Port from the Audio Faders menu and close the tool.

If your printer port is already in use, attach the cable to the modem port and choose Modem port.

To test the fader:

1. Choose Automation Gain from the Tools menu. The Automation Gain window opens.

2. Option-click the HW button in the Automation Gain window. The box turns blue.

Position indicator lights

3. Check the color of the position indicator lights. If the external fader is not connected, the lights are off (gray). If the fader is connected, at least one of the lights is on (blue).

4. Move the sliders on the fader. The corresponding slider should move in the Automation Gain window.

The external fader position lights will be off (gray) if the box is not connected.

The fader is optional. It is not required to perform Audio Gain Automation recording.

Ganging Sliders on the FaderMaster Fader

You can use software features available on the FaderMaster Professional to gang sliders. When the sliders for two tracks are ganged, the fader sends identical volume messages for both tracks when you move one slider. This can be useful when you have stereo tracks.

Note that the ganged sliders do not move together physically. For information on ganging the sliders, see the FaderMaster user's manual. For example, if you have two stereo tracks and want to gang faders 1 and 2 to respond to movement on fader 1:

1. On the FaderMaster, press the PROG button to light the Fader LED.

2. Hold down the Group button and move fader 2 until "1" is displayed.

3. Press the PROG button to turn off the Fader LED.

Now when you move slider 1, the Avid Composer system will receive identical volume information for slider 2.

To turn off the group feature, repeat steps 1 to 3 but assign fader 2 to 0.

Using Audio Gain Automation and the Audio Mix Window

This section describes the interactions between the Audio Mix window and the Automation Gain window.

When you add the first audio key frame to a track, the Avid Composer system adds the point at the level currently set for that track in the Audio Mix Tool.

Values set by the volume sliders in the Audio Mix window are referred to as system clip gain values. Audio gain key frames are not additive to the system clip gain values. When you move a key frame point up or down, it cancels the system clip gain for that point in the sequence.

You can add key frames to some tracks and use the Audio Mix window to control the volume on other tracks. The Avid Composer system provides visual clues to let you keep track of which type of audio effect is on a given track.

The following illustration shows the Audio Mix window and the Automation Gain window with audio data on two tracks. In this example there is audio gain automation information on track A1 and a system clip gain setting on track A2.

Track A1 has audio gain automation.

Track A2 has system clip gain settings from the Audio Mix window.
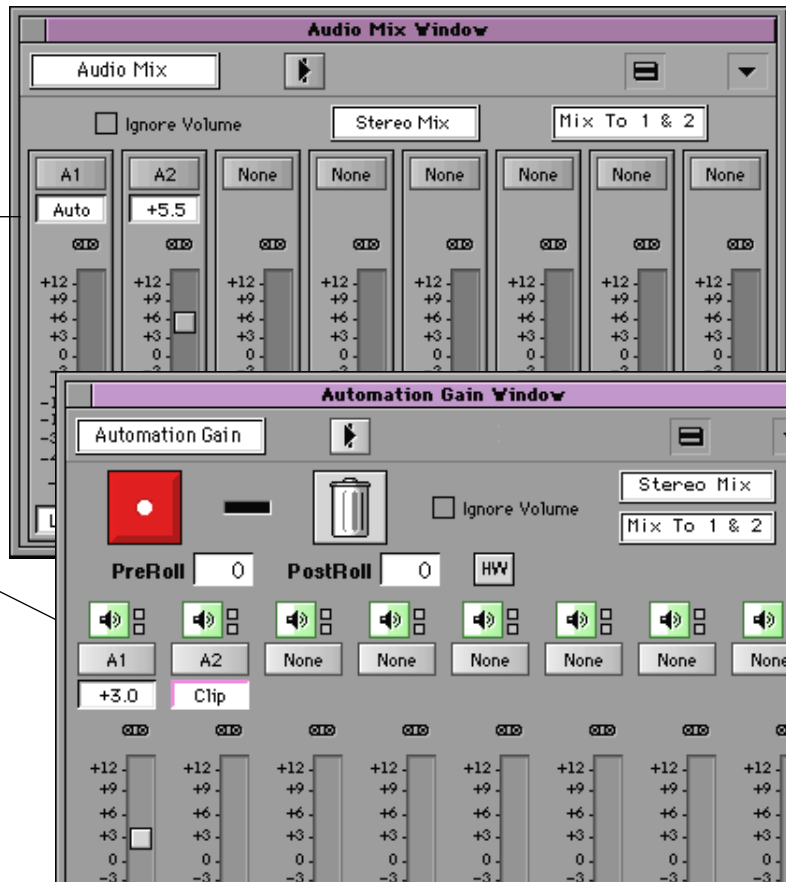
When you have audio gain automation on a track, the slider for the track does not appear in the Audio Mix window. The system displays the word Auto in the track volume text box to indicate that audio gain automation is associated with the track.

Likewise, when you use the Audio Mix window to change volume for a track, the slider for the track disappears from the Automation Gain window. The word Clip appears in the track volume text box.

To add audio gain automation to a track that contains system clip gain information, you simply need to add an audio key frame. To use the

Audio Mix sliders on a track containing audio gain automation, you must first remove all of the audio key frames from the track. Choose Remove Automation Gain Global from the Automation Gain Fast menu. You need to remove any IN and OUT points on the track before the menu item changes from In/Out to Global.

Using the Audio EQ Tool

The Audio Equalization (EQ) Tool supports real-time, segment-based frequency equalization on individual clips. This allows you to adjust the high, low, and midrange frequency ranges of an audio clip. You can also save a variety of audio EQ effects and apply them in different circumstances, as described in this section.

You can access the Audio EQ Tool in one of two ways:

• Choose Audio EQ from the Tools menu.

Tools	Windows	Script
New Deck Controller		
Audio Mix		
Audio EQ		
Automation Gain		
AudioSuite		
Audio Tool		⌘1
Audio Punch In		
Burn-In Tool		

• Choose EQ from the Audio Mix pop-up menu.

Audio Mix	
√ Audio Mix	
Automation Gain	
EQ	
AudioSuite	

The Audio EQ Tool appears.
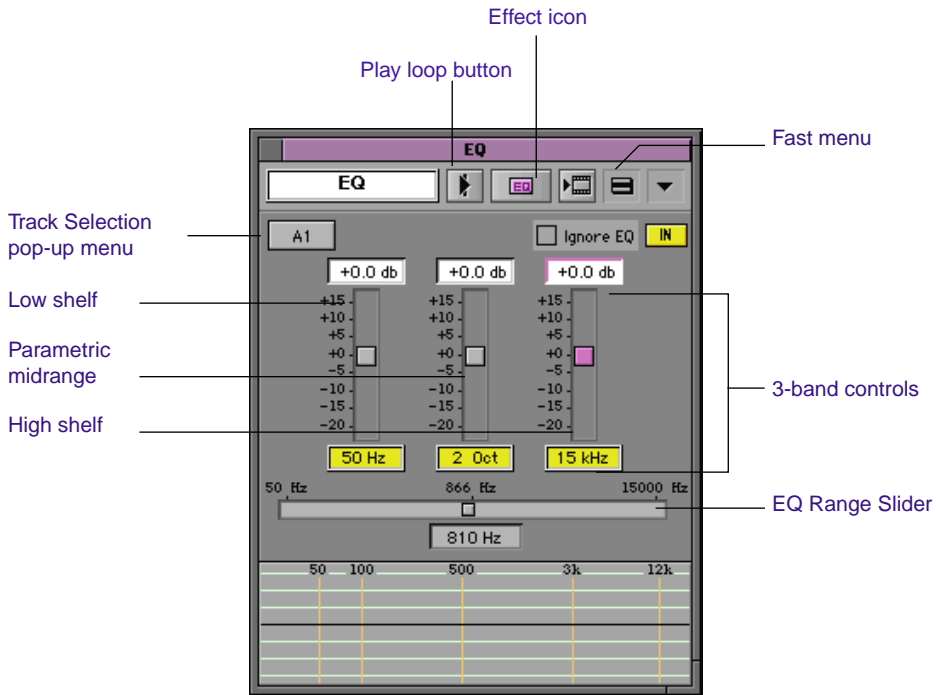
Audio EQ Tool Features

The Audio EQ Tool provides three bands of control:

- The first band, the low shelf, has four *turnover points* (50 Hz, 80 Hz, 120 Hz, and 240 Hz). A turnover point is the point at which the curve starts to return to 0.

  A *shelf* affects all frequency values within the range of the shelf. The low shelf affects all frequency values from 20 Hz to the low shelf turnover point.

- The second band is the parametric midrange. This band has two *bandwidth* values, 1/4 octave and 2 octaves. These control the width of the curve.

- The third band, the high shelf, has four turnover points (6 kHz, 8 kHz, 12 kHz, and 15 kHz). The high shelf affects all frequencies from the high shelf turnover point to 20 kHz.

The horizontal center line of the graph is 0. As you move the curve below the zero line, the corresponding frequencies are deemphasized. Above the zero line the corresponding frequencies are emphasized. The parametric midrange allows a smooth transition from deemphasized frequencies to emphasized frequencies.

The IN button allows you to turn off the EQ effect. The button is yellow when the effect is on (inline) and gray when the EQ effect is off.

You apply Audio EQ like effects:

- Audio EQ can only be applied to entire segments. You cannot isolate portions of a segment for an Audio EQ effect by using IN and OUT marks. You must use add edits (match frames) to mark off a smaller segment.

- You can use IN and OUT marks to select a range of complete segments for applying an Audio EQ effect. Segments that fall within the marks, either in part or in whole, will have the effect applied to them.

The following illustration shows the Audio EQ Tool with the frequency response curve displayed and identifies the related areas of the window. The graph displays from 20 Hz to 20 kHz.

The current value of the EQ parameters

Turnover point where low shelf curve starts moving back toward 0

Center point of the parametric midrange curve

Bandwidth around the center point of the parametric curve – 1/4 octave (narrow) or 2 octave (wider)

Turnover point where high shelf curve starts moving back toward 0

0 line

High shelf

Low shelf

Parametric midrange
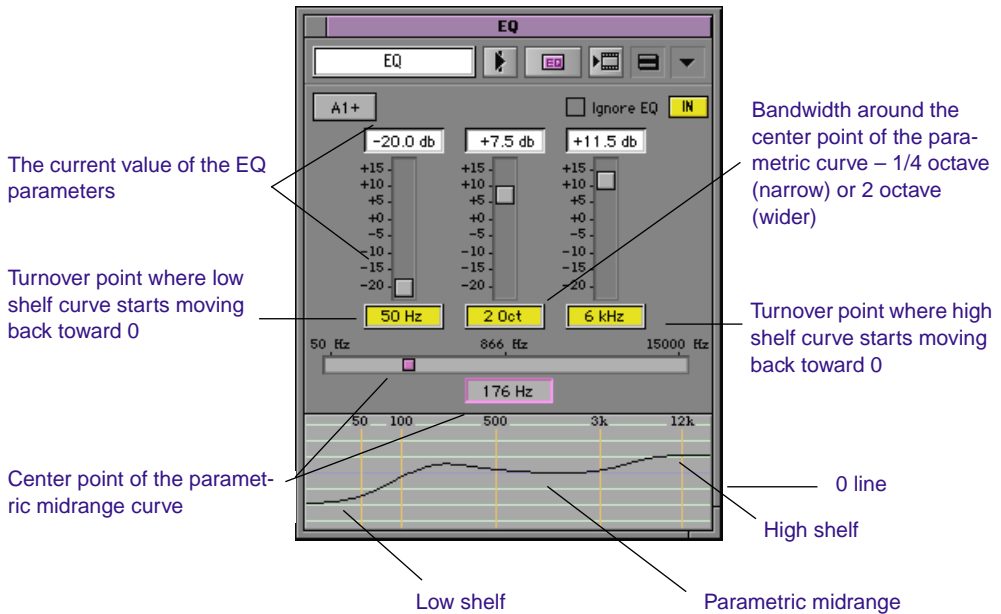
The Audio EQ Tool allows you to emphasize or deemphasize audio frequencies. The height of the curve shows the amount of emphasis or deemphasis (also called boost or cut) that is being applied. The range is from +15 dB to –20 dB.

Applying Audio EQ Effects

To adjust audio EQ for a track:

1. Load the sequence containing the audio track.

2. (Option) Isolate a portion of an audio segment by placing add edits.

3. (Option) Mark off a range of audio segments by adding IN and OUT marks in the track.

4. Open the Audio EQ Tool.

521

5. Select the audio track to be adjusted from the Track Selection pop-up menu in the Audio EQ Tool.

Notice that the Track Selector panel in the Timeline window is updated to reflect your selection.

6. Click the Play Loop button to play the currently selected audio clip within the current In/Out range. To stop playing the loop, click the button again or click anywhere in the Timeline.

7. Use any of the following methods to change a value in the Audio EQ Tool:

• Click a number along the vertical edge of the volume slider.

• Click the slider and type a value.

Values are cumulative until you press Return. For example, if you want to enter the value 12, simply type it. However, if you enter 1 and then want to change the value to 2, press Return before typing the 2.

• Click and drag the slider.

• Click the EQ Parameter display and type in a value.

• Set a value of 0 dB by clicking the slider and entering 0, or by clicking 0 along the vertical edge of the volume slider.

8. Apply the adjustments to a chosen region of the track by using the Audio EQ Fast menu located at the upper right of the tool.

EQ Fast menu button
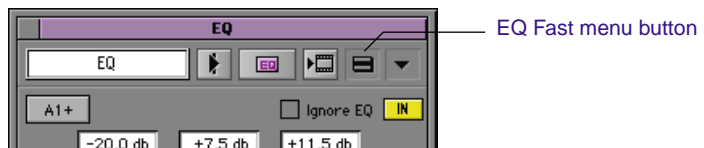
The Fast menu on the Audio EQ Tool allows you to remove or apply an EQ effect to clips included within the current IN to OUT range. For a description of a number of predefined audio templates, see **"Using Audio EQ Templates" on page 528**.

For example, the following illustration shows a segment with one EQ applied to the Audio Clip 2 in track A2. If you choose Set EQ In/Out, the current EQ effect is also applied to Audio Clip 1 and Audio Clip 3 on track A2.
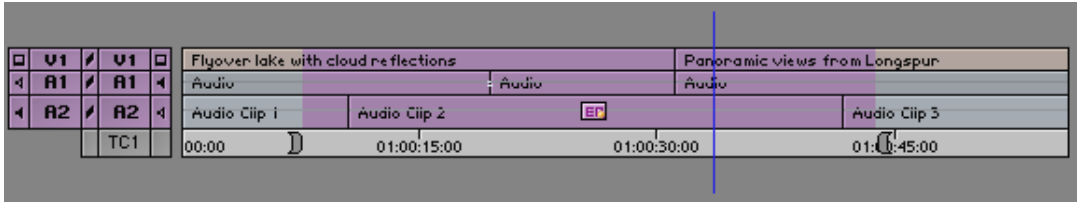
Before Set EQ In/Out
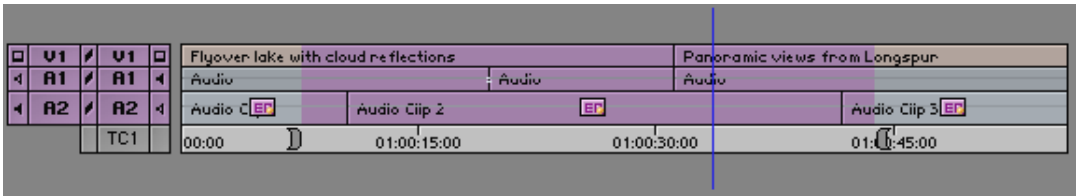
After Set EQ In/Out – EQ effect is added to Audio Clip 1 and Audio Clip 3.

If there is no EQ setting on the currently selected clip, choosing Set EQ In/Out deletes the EQ settings on all clips within the IN to OUT range. For example, because there is no EQ setting on Audio Clip 3 in the following example, Set EQ In/Out deletes the EQ effect from Audio Clip 1 and Audio Clip 2.
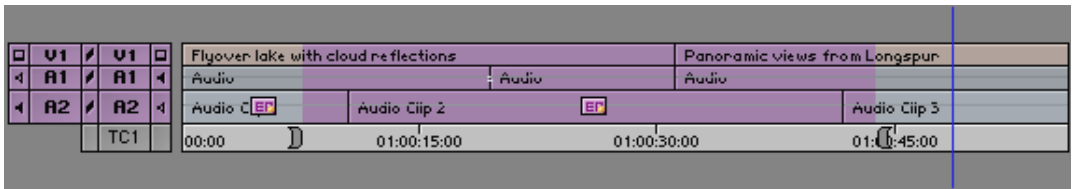
Before Set EQ In/Out
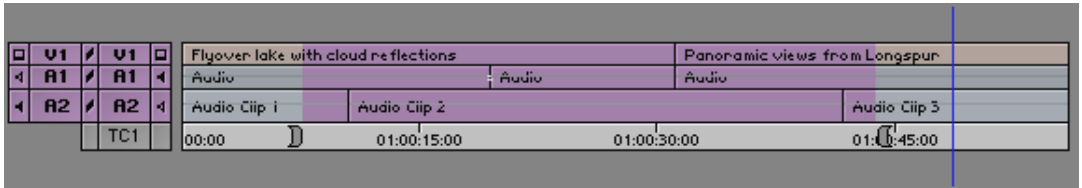
After Set EQ In/Out – EQ effect is deleted from Audio Clip 1 and Audio Clip 2.

Set EQ In/Out applies only to the audio track currently selected by the Audio EQ Tool. You can change your selected region by eliminating or adding marks in the Timeline, or by selecting a different track.

9. Play through the audio again, using the Play Loop button.

10. Repeat steps 8 through 10 until you are satisfied with the EQ adjustments.

Saving Audio EQ Effects

The Avid Composer system treats an EQ setting as an effect. You can save EQ settings in a bin just as you save any other effect template. This makes it easy to save EQ settings and apply them whenever you need them. The following illustration shows EQ Effect icons in a bin and in the Timeline.
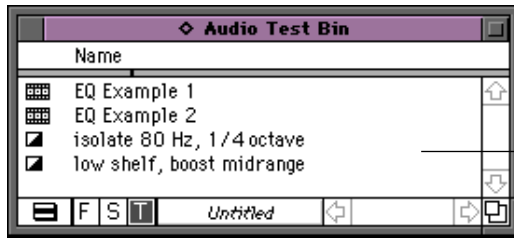
EQ effect templates in a bin

EQ effect in the Timeline
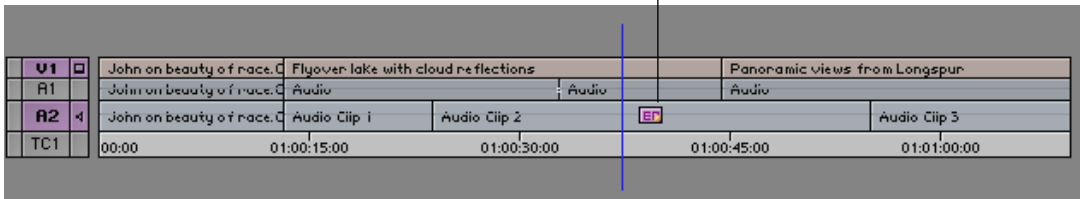
Use the Effect icon to save EQ settings in a bin or to copy the settings to another audio clip. Either drag the icon into a bin or drag the icon to another audio clip in the Timeline. For more information on using effect templates, see the *Avid Media Composer and Film Composer Effects Guide*.

Removing Audio EQ Effects

To remove an effect:

1. Place the position indicator on the effect.

2. From Source/Record mode, click the Remove Effect button.

   From Trim or Effects mode, press Delete.

Audio EQ Examples

The following examples show two different ways to use the Audio EQ Tool to remove excess bass from an audio track. These examples use the sound track from the Rain Forest sequence. The bass in the sound track is very pronounced, and we use the Audio EQ Tool to deemphasize it. The main challenge with this particular sound track is that there are voices on the same track as the music. The human voice covers a wide range of frequencies and the challenge is to preserve the bass frequencies of the voices while deemphasizing the bass drum sound.

Keep in mind that the goal of the adjustments is the final sound. In general, you should use small adjustments to preserve as much of the original sound track as possible. Don't be overly concerned about specific parameter values.

Low Shelf Example

This example adjusts the low shelf to deemphasize the bass. By dropping the low shelf down –20 dB, we are able to deemphasize it. However, there are voices on this track and simply dropping the low shelf also removes some bass from the voices. So we did the following to compensate for this:

1. Use the 2 octave midrange setting to create a wide midrange.

2. Move the midpoint of the parametric curve over to 90 Hz.

3. Boost the midrange of the parametric curve to +7.7 dB.
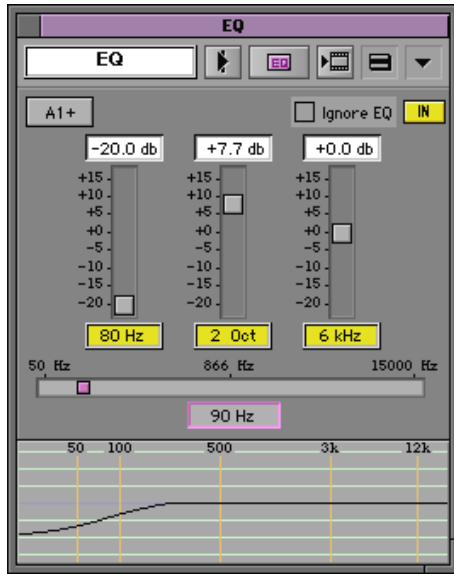
Small Octave Range Example

This example isolates the particular frequency that we want to deemphasize. In this example we don't use the low shelf, but instead use the parametric midrange to isolate the frequency.

1. Use the 1/4 octave influence range.

2. Set the midrange EQ parameter to –15 dB.

3. Use the slider to move the midpoint of the parametric curve until it isolates the bass frequency. In this case the bass frequency we want to deemphasize is approximately 80 Hz.
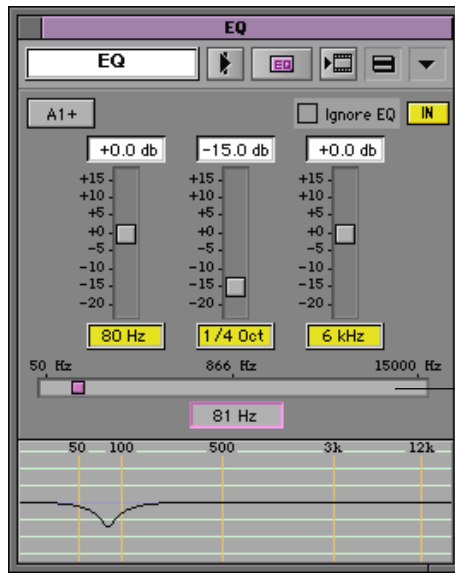
Use this slider to move the center point of the parametric curve and locate a specific frequency.

This technique allows you to locate a specific frequency and either emphasize or deemphasize it:

- Use the 1/4 octave influence range and a large negative decibel value.

- Keep both the high and low shelf set to zero.

- Use the slider to move the center point of the parametric curve along the frequency range while you play the audio track.

Once you locate the desired frequency, you can adjust it as needed.

Using Audio EQ Templates

Your Avid Composer system provides a set of predefined audio EQ templates. These templates address a number of common audio problems such as removing tape hiss or boosting the low frequency on a music track. The templates are accessible from the Fast menu on the Audio EQ Tool. You can also add your own custom EQ templates to the Fast menu list.

The Fast menu on the Audio EQ Tool provides access to a number of predefined EQ templates as shown in the following illustration.
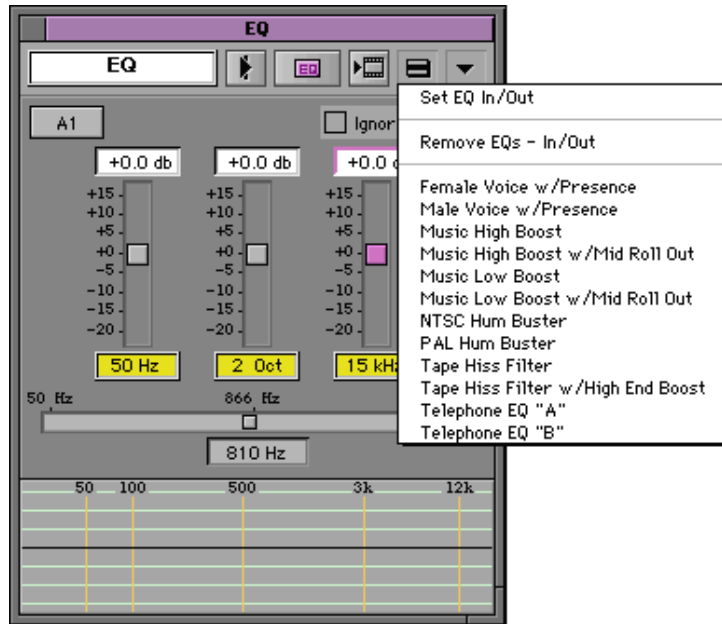
The EQ templates are designed to fix problems that are often encountered with audio clips. For example, Tape Hiss Filter rolls off frequencies above 4 kHz. NTSC Hum Buster cuts the bass on frequencies that often cause hum on NTSC systems.

Applying an EQ Template

To apply an EQ template from the Audio EQ Tool Fast menu:

1. Place the blue position indicator on the audio clip in the Timeline.

2. Choose the template from the Audio EQ Tool Fast menu.

   The Avid Composer system places the EQ effect on the audio clip.

The following illustration shows the contents of the EQ window when you select the Female Voice with Presence template in the Timeline. As

explained in the window, you cannot change the parameters of a pre-defined EQ template.
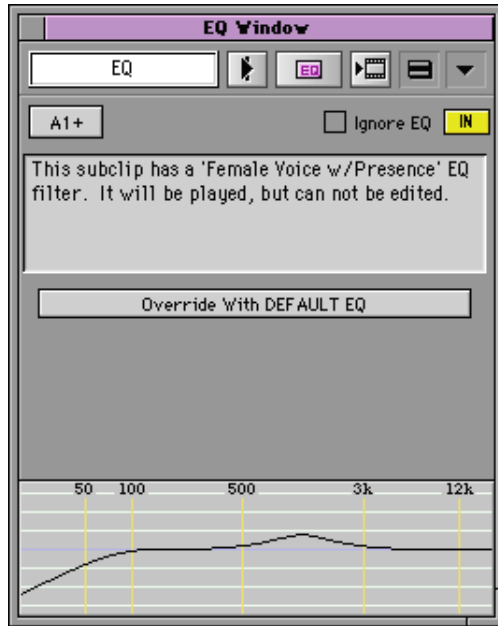
To see the parameter values of one of the EQ templates, view the Console window after you apply the effect. To open the Console window, choose Console from the Tools menu.

Creating Your Own Templates

If you create an EQ effect that you want to use again in another sequence or on another track, simply drag the Effect icon to a bin. The system creates an effect in the bin called EQ Effect. Rename the template by clicking the text and typing a new name.

Effect icon
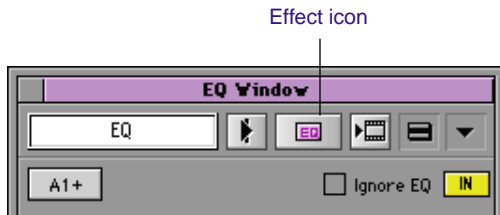
You can add your own EQ templates to the EQ Fast menu. You do this by storing your EQ template in the same bin as the predefined templates.

The Avid Composer system stores the predefined EQ templates in a special bin named Site_EQs_Bin. This bin resides in a new Site_Effects folder in the Supporting Files directory. The following illustration shows the bin's location.

The IN button in the EQ window allows you to turn off the particular EQ effect. The button is yellow when the effect is on (inline) and gray when the EQ effect is off. The Ignore EQ check box turns off all EQ effects for the sequence.
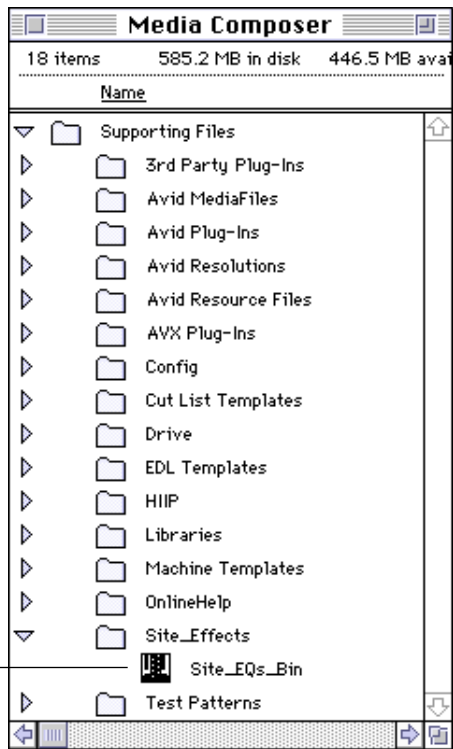
EQ templates bin

To add an EQ template to Site_EQs_Bin:

1. Choose Open Bin from the File menu.

   A dialog box appears.

2. Open the bin named Site_EQs_Bin as follows:

   a. Open the Media Composer folder.

   b. Open the Supporting Files folder.

   c. Open the Site_Effects folder.

   d. Double-click the Site_EQs_Bin file.

3. Drag one of your own templates to Site_EQs_Bin.

4. If you have not already done so, name the template by clicking the text and typing a name.

532

5. Close the bin.

The Avid Composer system does not save the effect to the bin until you close the bin.

6. Select the Audio EQ Tool Fast menu and look for your new template.

For more information on using the Audio EQ Tool, see **"Using the Audio EQ Tool" on page 518**.

Adjusting EQ While Playing an Audio Effect

You can use the Play Loop button to create or change an EQ effect while a clip is playing.
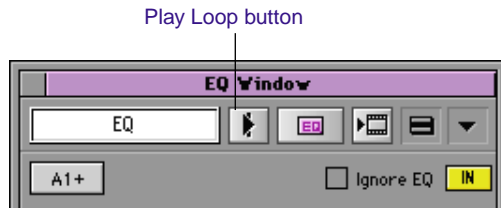
Play Loop button

To adjust EQ while playing an effect:

1. Choose an existing EQ effect or identify an area of the clip with IN and OUT marks.

2. Click the Play Loop button. The Avid Composer system repeatedly loops through the audio effect.

3. Adjust the EQ as necessary.

4. Click the Play Loop button to stop. The Avid Composer system automatically saves your changes as part of an EQ effect.

Limitations

If there is not an existing EQ effect on the clip before you start, you will not hear any changes until you click the Play Loop button to stop and replay the effect.

As you are adjusting the EQ values on an existing EQ effect, you might not hear the results immediately. It takes a few seconds for the changes to be applied to the clip. To improve the response time, you can do the following:

• Monitor as few audio tracks as possible.

• Deselect the video track if practical.

• Use IN and OUT marks to choose a narrow interval to adjust.

Using Digidesign AudioSuite Plug-Ins

Your Avid Composer system supports AudioSuite, Digidesign's new host-based, file-based Plug-In specification. Users now have access to audio processing plug-ins developed by Digidesign and by Digidesign's third-party developers, including Waves, Arboretum, DUY, S.A., Steinberg, and others. For example, plug-ins are available to perform pitch processing, artifact removal, reversing of audio, and many other processes. For more information on using the AudioSuite plug-ins, see **Appendix A**.

For information on Digidesign and third-party plug-ins, see the *AudioSuite Plug-In Catalog* available from Digidesign. Contact Digidesign at 800-333-2137.

For a list of plug-ins that are not supported by the Avid Composer system, see **"Plug-In Limitations" on page 540**.

Installing AudioSuite Plug-Ins

The Avid Composer system installation software automatically creates a folder in your System Folder named DAE Folder (DAE stands for Digidesign Audio Engine). The DAE application manages the Audio-Suite Plug-Ins.

DAE application icon

The Avid Composer system requires this file.
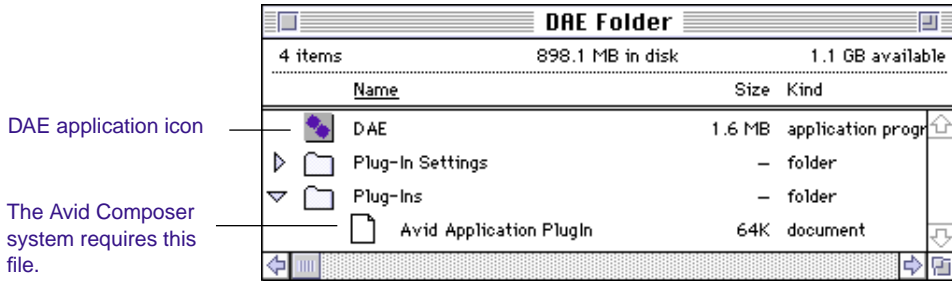
The DAE Folder contains the following files and folders:

- The DAE application program.

- A Plug-In Settings folder. The plug-in vendor might install settings in this folder.

- A Plug-Ins folder containing the following:

    - A set of basic plug-ins from Digidesign.

    - A file named Avid Application PlugIn. The Avid Composer system requires this file; do not delete it.

The following basic plug-ins are installed automatically:

- Invert—Inverts the polarity (phase of the audio file).

- Duplicate—This plug-in does not work on Avid Composer system audio files.

- Normalize—Finds the peak value in the source audio file and scales the entire file proportionally to that maximum value.

- Gain—Same as normalize, but allows positive or negative gain adjustment.

- Reverse—"Flips the tape over," making audio signals run backward.

- DC Offset Removal—Removes an audio artifact that is common in digital audio files. A DC offset is caused by poorly calibrated A/Ds (analog-to-digital converters), and can produce clicks and pops on clip edit transitions if not removed.

When you purchase additional plug-ins, the third-party vendor will provide instructions on how to load the plug-ins. Some might require you to drag the plug-in to the Plug-Ins folder. Others might perform the task automatically for you by using an installation program.

Starting and Quitting the DAE Application

When you open the Digidesign AudioSuite window (see **"Using the AudioSuite Plug-Ins" on page 537**), the Avid Composer system automatically launches the DAE application. The application continues running even after you close the window. To quit the DAE application while the window is open, ⌘–click the status display in the Audio-Suite window.

AudioSuite Window

AudioSuite

Normalize — Plug-In Selection menu

A1

Sources — Drive Selection menu

Connected To DAE. — Status display

The DAE application uses between 9 and 16 MB of memory, depending on how many plug-ins are loaded. If you plan to use other applications while the Avid Composer system is running, you might find it useful to quit the DAE application to free up memory for the other application.

Setting Playback Buffer Size

While the DAE application is running, you can choose Set Playback Buffer Size from the DAE application's File menu. However, this command has no effect on the Avid Composer system performance. For an example of how to use this command, see **"Addressing Memory Allocation Problems" on page 540**.

Using the AudioSuite Plug-Ins

The following illustration shows the AudioSuite window.
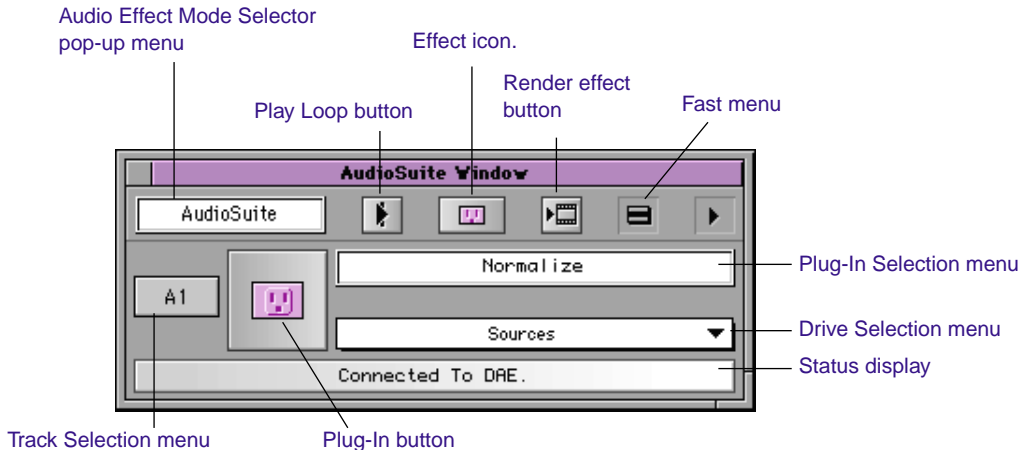
To apply an AudioSuite plug-in:

1. Open the AudioSuite window and do one of the following:

- Choose AudioSuite from the Tools menu.

- If an audio tool is already open, choose AudioSuite from the Tool Selection menu.

2. Select the track to modify in the AudioSuite window. You can only work on one track at a time.

3. Choose a plug-in from the Plug-In Selection menu.

   The Avid Composer system automatically applies the plug-in effect to the track in the Timeline.

4. Click the Plug-In button to open the dialog box associated with the plug-in.

5. Make any necessary adjustments and click the Play Loop button to preview the effect. For more information, see **"Using a Plug-In Dialog Box."**

6. To save the effect, click OK. To close the dialog box without saving the effect, click Cancel.

Using a Plug-In Dialog Box

The contents of the plug-in dialog boxes vary, but the top six buttons will always be visible. If a particular button is not available, it is dimmed. The following illustration shows the Digidesign Gain plug-in as an example.

These six buttons appear on all AudioSuite dialog boxes.
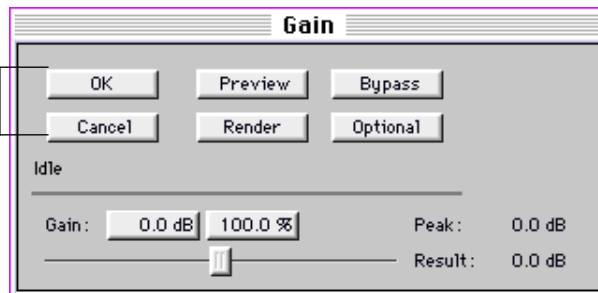
- *OK* saves the effect and closes the dialog box.

- *Cancel* closes the dialog box and does not save the effect.

- *Render* renders the effect and creates a new audio media file.

- *Preview* plays back a portion or all of the currently selected audio clip with processing.

  Some plug-ins can preview in real time and some cannot. If the plug-in cannot preview in real time, the Avid Composer system plays back the processed audio in 2-second intervals. The Avid Composer system processes 2 seconds of audio, plays it, processes the next 2 seconds, plays it, and so on.

- *Bypass* plays the selected audio without processing. This is useful for comparing the audio with and without processing applied.

- *Optional* performs an analysis pass on the audio data.

Some plug-ins require an analysis pass on the audio data before they can process the information. If so, they perform the first pass automatically. Other plug-ins do not require a first pass but can achieve more accurate results if you allow them to perform a first pass. If the plug-in supports the optional pass, this button will be available. Otherwise it will be dimmed.

Rendering Plug-In Effects

Some plug-ins can process a file in real time and some cannot, due to the complexity of the effect. Even if a plug-in can run in real time, you must render it before you can add it to the following:

- An audio mixdown
- An EQ effect

If you do not render the effect manually, the Avid Composer system automatically renders the effect before it creates an audio mixdown or audio dissolve containing the effect.

Plug-In Limitations

There are a few important exceptions to the list of compatible plug-ins. The following types of plug-ins do not work with the Avid Composer system:

- Third-party plug-ins that process audio in stereo pairs, such as stereo sound field expanders. These plug-ins only receive input on the first channel.

- Plug-ins that perform analysis passes, using playlist information to cache analysis data.

- Plug-in options that perform time compression/expansion. For example, some Pitch Shift plug-ins have an option for changing the length of the audio file. You can use the plug-in as long as you don't choose that option.

Also note that you can only work on one track at a time. This means that you should use the mono AudioSuite Plug-Ins where applicable.

Troubleshooting AudioSuite Plug-Ins

This section describes problems you might encounter when using the AudioSuite Plug-Ins.

Addressing Memory Allocation Problems

The DAE application requires between 9 and 16 MB of RAM, depending on how many plug-ins are loaded. When the application launches, it attempts to allocate enough memory for all the plug-ins in the Plug-Ins folder in the DAE Folder. If you have a lot of plug-ins (for example, more than 10), the application might not be able to allocate enough memory for all of them.

If you receive memory allocation errors or if the screen does not redraw correctly when you use the AudioSuite Plug-Ins for the first time, you should do the following:

1. Quit the Avid Composer application.

2. Locate the DAE Folder in your System Folder and click the DAE application icon within the DAE Folder.

3. Press ⌘–I to display the Get Info dialog box.

4. Change the Preferred Size value to a large number, such as 30000 (30 MB), to change the memory allocation.

5. Close the Get Info dialog box.

6. Start up the DAE application by double-clicking the DAE application icon.

   The DAE application automatically checks the available plug-ins and allocates enough memory to run all of the plug-ins.

7. Choose Set Playback Buffer Size and set the buffer size to 0.

The Set Playback Buffer Size setting has no effect on Avid Composer performance.

8. Quit the DAE application.

9. Use the Get Info dialog box again and change the Preferred memory size back to the Suggested Size.

10. Restart the Avid Composer system.

If you still receive memory errors when you use the AudioSuite Plug-Ins, you might have too many plug-ins in the Plug-Ins folder in the DAE Folder. Move some plug-ins out of the folder and try running the AudioSuite Plug-Ins again. For example, you could create a Plug-Ins Disabled folder for storing plug-ins that are not in use.

Starting and Stopping the DAE Application

By default, the DAE application is always running while the Audio-Suite window is open. You can stop the DAE application to free up memory for other applications.

To stop the DAE application while the AudioSuite window is open, ⌘–click the status display in the AudioSuite window.

To restart the DAE application, Option-click the status display.

Canceling a Render Operation

You can press ⌘–period to cancel a render operation. However, be careful not to press ⌘–period multiple times. If you press the command after the render operation has been stopped (from a previous ⌘–period), the Avid Composer system closes the window after it cancels the render operation.

Addressing Error Messages When Rendering a Plug-in Effect

If the DAE application is not running when you start to render a plug-in effect, the system displays an error message stating that the DAE connection does not exist. The dialog box gives you the following choices:

• *Cancel* stops the rendering process. This allows you to launch the DAE application and then start rendering again.

• *Bypass* continues rendering but doesn't render the plug-in effect.

In most cases, you should click Cancel and restart the DAE application. Either open the AudioSuite Plug-In window or, if the window is already open, Option-click the status display in the AudioSuite window.

If the plug-in is not installed when you go to render a plug-in effect, the system displays an error message and tells you which plug-in is

not installed. At that time you can cancel or bypass as previously described.

Using Digidesign Pro Tools

If you plan to use Digidesign Pro Tools on the same system with the Digidesign AudioSuite Plug-Ins, install Pro Tools Version 4.1.1 or greater. This version has the matching version of the DAE application.

Using Audio Punch-In

Audio punch-in allows you to record up to two channels of audio directly into the Timeline for voice-over narration. This saves the extra steps of recording the narration to tape first, digitizing, and then edit-ing the audio clip into the sequence.

You access the Audio Punch In Tool from the Tools menu.

```
Tools  Windows  Script
 New Deck Controller

 Audio Mix
 Audio EQ
 Automation Gain
 AudioSuite
 Audio Tool         ⌘1
 Audio Punch In
 Burn-In Tool
```

The following illustration identifies the various elements of the tool:
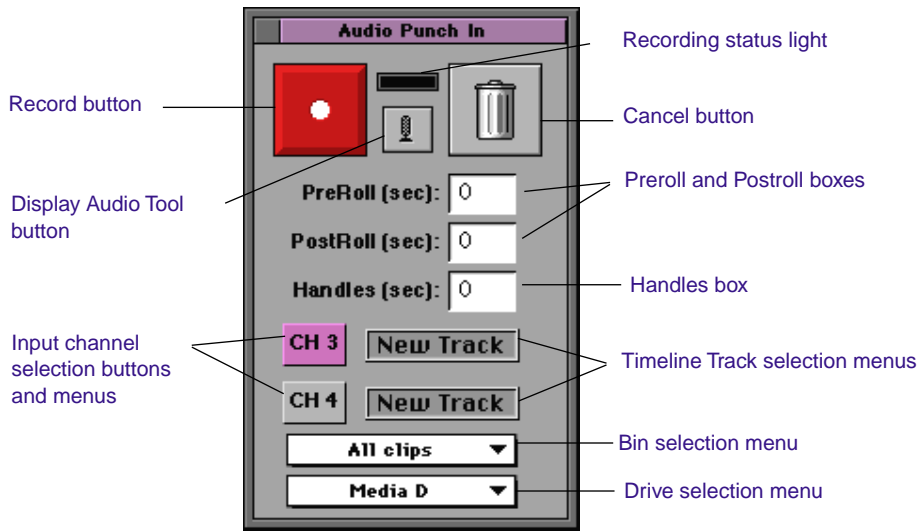
Features of the Audio Punch In Tool are as follows:

- The Record button starts and stops the recording.

- The Cancel button stops a recording without saving the recorded data.

- The Recording status light is black when there is no activity, green during a preroll, red during recording, and blue during a postroll.

- The Display Audio Tool button displays the Audio Tool so that you can monitor and adjust the audio levels during recording.

- The PreRoll text box allows you to provide a visual cue before the recording begins. The Avid Composer system backs up the blue position indicator for the prescribed number of seconds.

- The PostRoll text box gives the same kind of visual cue at the end of the recording.

- The Handles text box instructs the Avid Composer system to record audio at the beginning and end of the clip. This allows you to perform trim edits on the audio.

- The input channels identify the channels on the audio hardware that are used for recording. Click the button to select the channel. The button turns pink when it is selected. Option-click the button to display a menu and select another channel.

- The Track selection menus allow to specify where the Composer system places the audio in the Timeline. Either choose New Track or choose an existing track. When you choose an existing track, the Avid Composer system overwrites the audio on that track between the IN and OUT points.

Using the Audio Punch In Tool

This section provides an overview of how to set up and use your Avid Composer system for creating voice-overs in the Timeline.

Connecting the Hardware

Before you can use Audio Punch In, you need to connect a microphone or other input device to your system. The following are typical examples:

- Connect a microphone to a mixer and connect the mixer to the Audio board or to the Audio Interface on your Avid Composer system.

- Connect a microphone to a microphone preamp and connect the preamp to the Audio board or to the Audio Interface on your Avid Composer system.

For information on connecting the hardware, see the *Avid Media Composer Products Connecting Audio and Video Equipment manual.*

Creating the Voice-Over

You can replace part (or all) of an existing track or you can instruct the Avid Composer system to create a new track for the voice-over. The following procedure shows how to use the tool when you want to mark IN and OUT points and plan to create a new track for the voice-over.

1. Mark the IN and OUT points in the Timeline as shown in the following illustration.
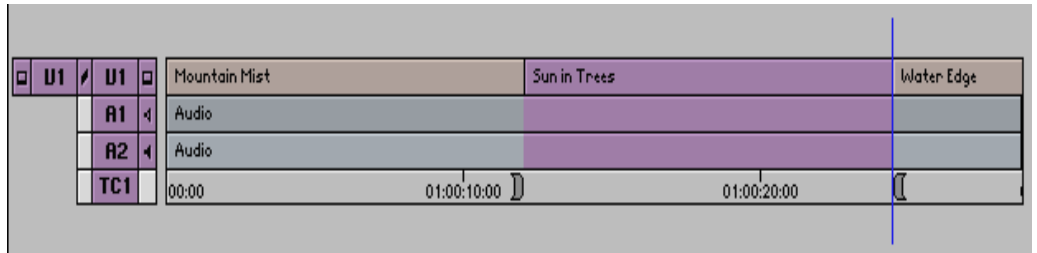
2. Choose Audio Punch In from the Tools menu.

The Audio Punch In Tool appears.

Record button — Audio Punch In

Recording status light

Cancel button

PreRoll (sec): 0

PostRoll (sec): 0

Handles (sec): 0

CH 3 New Track

CH 4 New Track

All clips ▼

Media D ▼
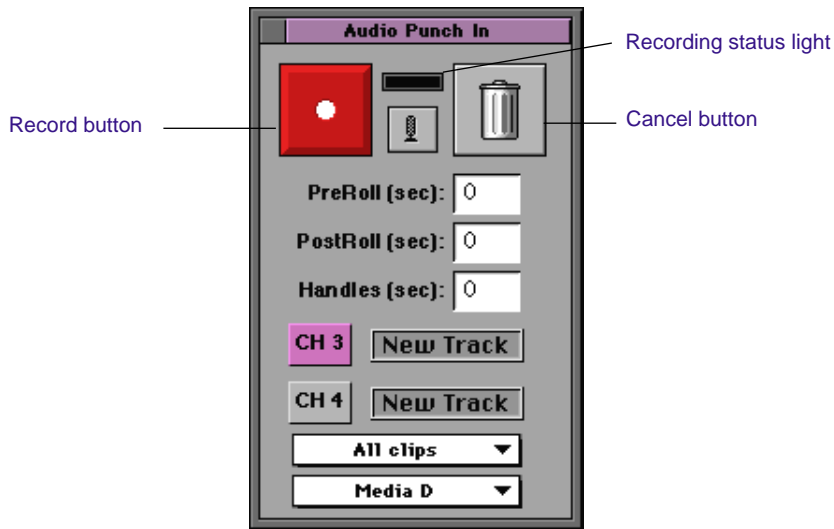
3. Choose the channels that correspond to your hardware setup and set other values in the dialog box as appropriate.

4. To start recording, click the Record button.

   If you started with both IN and OUT points in the Timeline, the Avid Composer system automatically stops recording when it reaches the OUT point (or after it adds the appropriate audio handle after the OUT point). If you only added an IN point, click the record button a second time to stop the recording.

The following illustrations show the results after adding a voice-over. The system automatically names the voice-over. You can change the name as you would any clip (for example, change the name in the bin).

Voice-over adding a new track
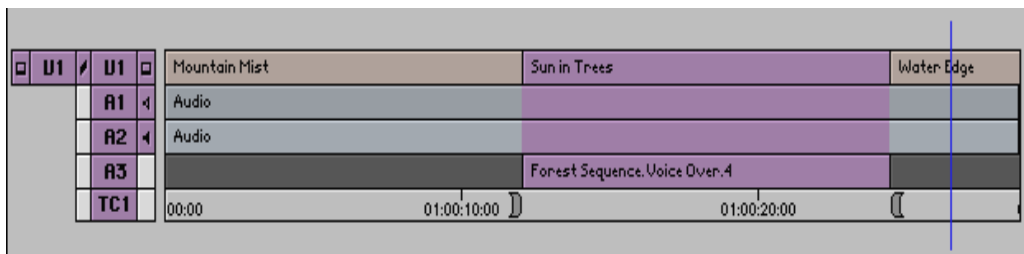
Voice-over replacing a portion of a track
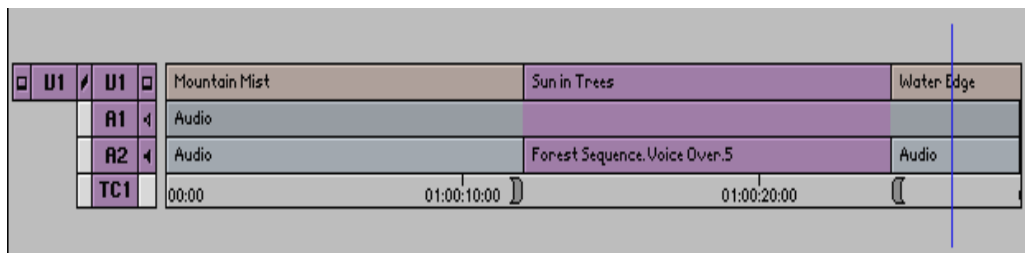
Voice-Over Media Files

The Avid Composer system automatically names the voice-over and stores it as an audio clip as shown in the following illustration.
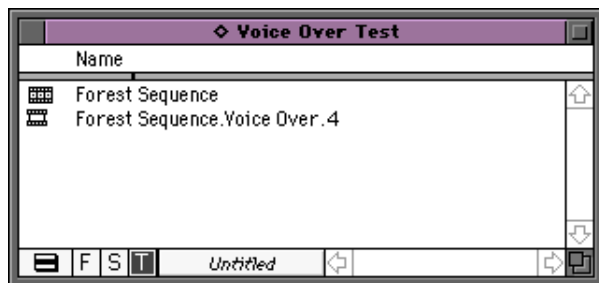
Fine-Tuning Audio Transitions

When making audio level and pan adjustments, the Avid Composer system looks at either an individual clip in the Source monitor, a segment in the sequence, or entire tracks. To change level or pan settings in an area not defined by a discrete clip or group of clips, use the Add Edit function to define your own custom area.

1. Find the start of the area where you would like to change the pan or level, leaving your position indicator on that frame as a marker.

2. Turn on the appropriate track in the track panel.

3. Click the Add Edit button.

   This places an edit where the position indicator is parked.

4. Find the end of the area where you want to change the pan or level, leaving your position indicator on that frame as a marker.

5. Turn on the appropriate track.

6. Click the Add Edit button.

7. Use the process described in **"Using the Audio Mix Tool" on page 490** to change the level or pan within this new segment.

Fading and Dipping Audio

In traditional analog editing, you manually change volume levels to smooth audio transitions between elements in an edited sequence by:

• Fading audio up or down

• Dipping to a lower level

• Crossfading between audio elements on two separate channels

With the Avid Composer system, these effects are more accurately termed *audio dissolves* because they occur instantly when you apply the same dissolve effect that you use for video tracks.

You can use the procedures described in **"Using Audio Gain Automation" on page 500** to achieve these effects. If your model does not include Audio Gain Automation (releases prior to Release 6.1), you must use the procedures described in this section.

This section describes three basic procedures for achieving *fades*, *dips*, and *crossfades* with the Avid Composer system. For complete information on applying and adjusting effects, see the *Avid Media Composer and Film Composer Effects Guide*.

Fading Audio

To fade or crossfade audio, you can use the procedures described in **"Using Audio Gain Automation" on page 500**. If your model does not include Audio Gain Automation (releases prior to Release 6.1), you must use the procedure described in this section.

Fading and crossfading audio are easy effects to achieve. The procedure that differs most from analog editing is crossfading. In the analog world, unless you are using a mixer, you must lay down audio on two separate channels and fade one down, then fade up the second on an overlapping section. With the Avid Composer system, you simply apply the aural equivalent of a visual dissolve.

To apply a fade or crossfade:

1. Place the position indicator on a transition.

2. Click the Add Dissolve button (it appears by default on the second row of buttons below the Record monitor).

   The add dissolve dialog box appears.
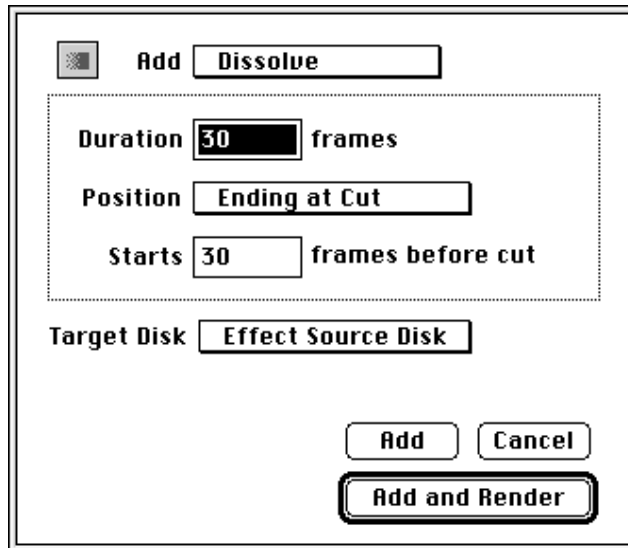
3. Do not choose another effect from the Add pop-up menu at the top; only dissolves work with audio tracks.

4. Select a duration for the dissolve, measured in frames (30 frames equals 1 second of NTSC footage; 25 frames for PAL).

5. Choose the location for the dissolve from the Position pop-up menu.
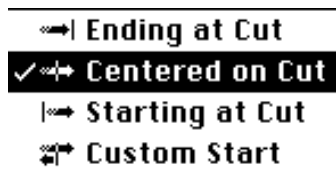
- *Ending at Cut* fades the audio to 0 from the A-side segment by the cut point.

- *Centered on Cut,* or *Custom Start* creates a crossfade. Custom Start allows you to begin the dissolve off-center — that is, closer to the transition and ending later into the B-side, or the reverse.

- *Starting at Cut* fades the audio up from the B-side starting at the cut point.

6. If you chose Custom Start, enter the number of frames before the transition to begin the effect in the "Starts *x* frames before cut" entry box. Otherwise, leave the default value in the entry box.

7. (Option) Choose a media drive other than the default Effect Source Disk from the Target Disk pop-up menu.

8. Click Add to place the effect at the transition point without rendering. Click Add and Render to do both at once.

In most cases you can choose the second option, Add and Render, to allow immediate real-time playback of the audio effect (rendering of audio dissolves is usually instantaneous).

The effect is completed.

Dipping Audio

To dip audio from a higher level to a lower one—for example, when bringing music down and under a voice-over track—you can use the procedures described in **"Using Audio Gain Automation" on page 500**. If your model does not include Audio Gain Automation (releases prior to Release 6.1), use the procedure described in this section.

To apply a dip in audio:

1. Play back the section of the sequence where the dip will take place to determine the start point for the dip, and apply an add edit to the audio track.

2. Do the same for the end point where the audio will dip back up.

3. Place the position indicator over the new segment of audio, and open the Audio Mix Tool.

4. Adjust the track to the desired volume level as described in the section **"Using the Audio Mix Tool" on page 490**.

5. Apply a Quick Dissolve to both Add Edit points, using the techniques described in the previous section. Be sure to choose "Centered on Cut" or "Custom Start" from the Position pop-up menu.

After rendering, the audio dips smoothly from the higher levels of the adjacent segments of the track to the lower level applied to the middle segment.

Mixing Down Audio Tracks

When you work with multiple audio tracks while editing your material, you might need to mix the final audio down to two tracks.

After you edit a number of tracks of audio, mix them down to one or two tracks of audio by following these steps:

1. Load a sequence into the Record monitor.

2. Click the track selectors to select the audio tracks you want to mix down.

3. Mark an IN and an OUT at the start and end of the material you want to mix down.

    If you do not mark the section of audio you want to mix down, the system mixes down all of the selected audio tracks.

4. Choose Audio Mixdown from the Special menu. The top of the box displays the source audio tracks and the start and end timecodes for the section of audio you've selected to mix down.

Track Mixdown – New sequence

⌐ Source Tracks ────────────

A1, A2, A3

⌐ Range ────────────

Start: 01:00:00:00

End: 01:01:07:16

⌐ Target Info ────────────

◉ Mono

○ Stereo

       Target Track   [A5 ▼]

NOTE: Audio Mixdowns are for playback and direct output auto assembly only. They cannot be recreated in batch digitize, or used to generate an EDL.

Target Bin: [Title selects ▼]

Target Disk: [Media D ▼]

[OK]   [Cancel]
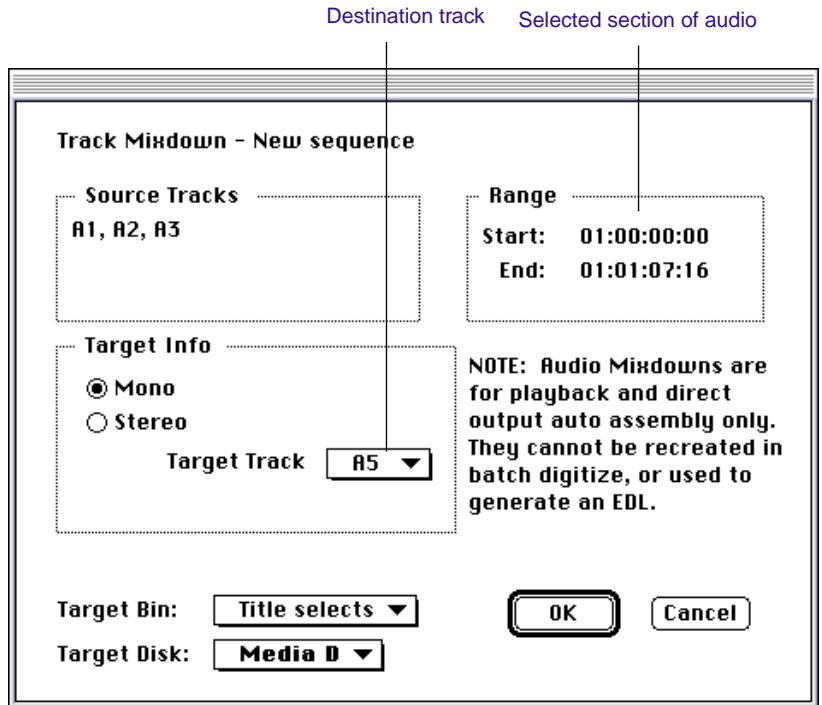
5. Click Mono and select the target track to which you want to mix down the audio.

   If you want stereo, click Stereo and select two target tracks for the mixed-down audio. The system mixes down all the odd audio tracks to the left track and all the even audio tracks to the right.

6. Choose a target disk.

   The target disk is the media disk where the system stores the media files for the mixed-down audio.

7. Click OK.

   The audio is mixed down and ready for two-channel playback.

CHAPTER 17

Syncing Methods

Your Avid Composer system provides special tools that help you establish and maintain sync relationships between various clips. This includes managing sync between unrelated clips or clips with the same timecode, ganging footage, match-framing footage, and using Sync Point Editing. These topics are discussed in the following sections:

- **Autosyncing Clips**

- **Managing Sync Breaks**

- **Managing Sync with Multiple Tracks**

- **Using Sync Point Editing**

- **Ganging Footage in Monitors**

- **Using Match Frame**

Autosyncing Clips

For more information on tracking sync breaks, see **"Displaying Sync Breaks" on page 559**.

When you digitize footage that includes both audio and video, the system automatically establishes sync when it creates clips in the bin. *Autosyncing* applies to audio and video clips that have been digitized separately, usually from two separate sources. Autosyncing creates a

new subclip that displays sync breaks in the Timeline as though the audio and video were digitized simultaneously.

Sync break displayed in the Timeline

Autosyncing is often used for film projects in which picture and sound are captured separately. These clips are often synced based on common film timecode, sound timecode, or auxiliary timecode. You can also autosync any audio and video clips based on an artificial IN point or OUT point relationship you establish with marks.

Use the following guidelines when autosyncing:

- You can autosync audio clips with video clips only. To link two or more video clips or audio clips, use the Grouping option described in **"Grouping and Multigrouping" on page 582**.

- You can create only one autosynced subclip at a time. You cannot autosync numerous pairs of audio and video clips simultaneously.

- If the audio and video clips do not have matching source or auxiliary timecode, you must establish common sync frames. To do this, mark IN points (or OUT points) on both clips before autosyncing.

- If you are autosyncing clips of different lengths, the longer clip is truncated to the length of the shorter clip.

- If you autosync according to common timecodes that are staggered (one clip starts later than the other), the later starting timecode becomes the start of the new subclip. The clip with the earlier starting timecode is trimmed accordingly.

To create an autosynced subclip:

1. Highlight the two clips in the bin. Choose AutoSync from the Bin menu.

   The AutoSync dialog box appears.

AutoSync™

Sync Clips Using:

- ○ Film TC/Sound TC
- ◉ Inpoints
- ○ Outpoints
- ○ Source Timecode
- ○ [Auxiliary T... ▼]

[**OK**] [Cancel]
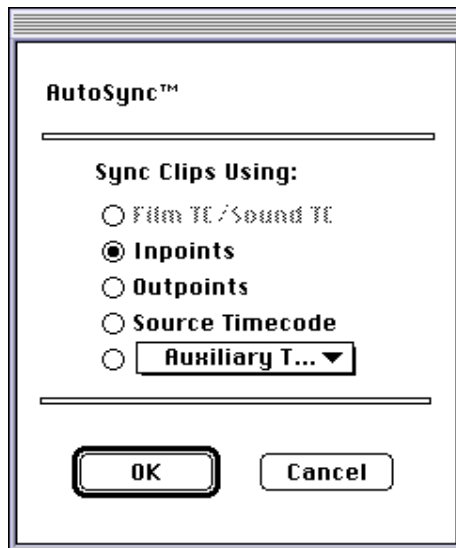
2. Select an option, based on the following:

- • *Film TC/Sound TC* if you are syncing clips with matching film and sound timecode recorded in the field; this option is dimmed if you are not working on a film project.

- • *Inpoints* if you are syncing according to IN points set in both clips.

- • *Outpoints* if you are syncing according to OUT points set in both clips.

- • *Source Timecode* if the two clips have matching timecode.

- • *Auxiliary TC1-TC5* if the two clips have matching timecode in the same auxiliary timecode column. Choose an Auxiliary TC, 1 through 5, from the pop-up menu.

3. Click OK. The subclip is created and named by default after the video clip with the suffix .sync.*n*, where *n* is the incremental number of subclips created with the same name.

You can change the name according to preference. You can load an autosynced subclip into the Source monitor and immediately edit it into a sequence.

Managing Sync Breaks

Sync breaks occur when a frame-accurate relationship between two clips or between the audio and video tracks within a single clip is off-set during editing. Often this happens unintentionally when you perform one of the following actions:

- Selecting only one track in a synced relationship (for example, audio only or video only) and performing edit functions that lengthen the duration, such as Splice-in, Extract/Splice-in, or adding frames in Trim mode.

- Selecting only one synced track and performing edit functions that shorten the duration, such as Extract, Extract/Splice-in, or removing frames in Trim mode.

Your Avid Composer system provides several features for avoiding, tracking, and removing sync breaks, as described in this section.

Editing to Avoid Sync Breaks

One way to avoid breaking sync is to maintain the duration of the track when adding or removing material, as follows:

- When adding material to a track, use the Replace or Overwrite functions instead of Splice-in, whenever possible.

- When removing material from a track, use Lift instead of Extract (the Lift function leaves filler of the same duration when removing footage).

- When performing Segment mode edits, use the Lift/Overwrite function instead of Extract/Splice-in whenever possible (Lift/

Overwrite leaves filler behind and overwrites material at the new destination, maintaining sync in both cases).

• In Trim mode, you can sync lock tracks to avoid breaking sync, or use the Control-key function for adding black during trims, as described in **"Maintaining Sync While Trimming" on page 473**. You can also perform dual-roller trims (that maintain duration) instead of single-roller trims.

There are many cases in which you cannot avoid splicing or extracting material, or performing single-roller trims that break sync. The following sections describe features for tracking and fixing sync breaks in those circumstances.

Displaying Sync Breaks

By default the Timeline displays sync breaks whenever they occur during editing. These appear at break points as white numbers indicating negative or positive offset values relative to zero. The Sync Breaks option also displays match-frame edits by displaying an equal sign (=) on the edits.

Match frames   Sync Breaks
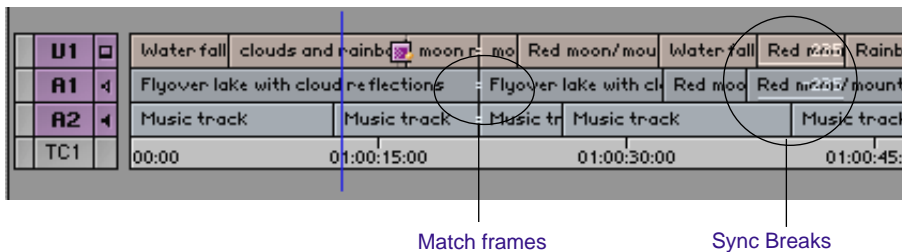
You encounter sync breaks and match frames in different circumstances:

• You can encounter sync breaks in one or several video tracks, audio tracks, or both. Sync-break offset numbers appear by default only in the affected tracks.

- You encounter match-frame cuts whenever you perform an add edit or whenever you move a segment up against footage from the same clip, and the timecode is continuous across the edit.

You can also customize the Timeline view to display sync breaks and match-frame edits in video tracks only, audio tracks only, or none.

To customize the sync break display, choose Sync Breaks from the Timeline Fast menu, and choose an option from the submenu.
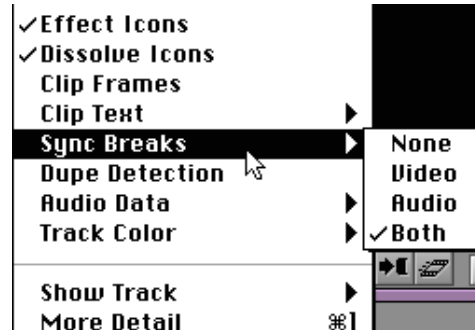
This feature applies only to master clips in which audio and video tracks were digitized simultaneously, to autosynced subclips, or to any other subclip with video and audio tracks.

Fixing Sync Breaks

In general, sync breaks are displayed only when the out-of-sync tracks overlap. In other words, if an overlapping portion of one of the tracks is deleted, replaced, moved, or trimmed, then the sync break disappears. You fix sync breaks in one of several ways, based upon the type of break and the needs of your sequence.

Fixing Sync in Trim Mode

In Trim mode, restore the frames to sync by performing one or more single-roller trims on the out-of-sync tracks. Trim the exact number of sync-break frames displayed in the Timeline to reverse the break. Keep in mind the following considerations:

- Sync lock any additional tracks that are synced to the track you are trimming. Otherwise, you might restore sync in one track and break it in the others.

- Do not perform a dual-roller trim — this does not remove the sync break.

- Do not perform the trim on the OUT point (A-side transition) of the out-of-sync segment. This does not remove the sync break. Always perform the trim on the IN point (B-side transition) of the segment.

Fixing Sync in Source/Record Mode

In Source/Record mode, restore sync by either adding new material or extracting material from the out-of-sync track. Add or extract the exact number of offset frames displayed in the Timeline, with the following considerations:

- Do not use the Overwrite or Lift functions. These do not remove the sync break. You can, however, overwrite or lift the out-of-sync material entirely to eliminate the break.

- You can splice in or extract selected frames of filler when necessary.

- You can use the add edit function to isolate just a portion of a clip or filler segment in the sequence for extracting or replacing.

Fixing Sync in Segment Mode

In Segment mode, you can restore sync in some circumstances by selecting and moving the entire out-of-sync segment. You can move the segment forward or backward in the opposite direction of the break to reverse it, but with the following considerations:

- Use Lift/Overwrite (the red arrow) to leave filler behind and maintain any other sync relationships that might be affected by the move.

- Use Lift/Overwrite to delete the entire segment and leave fill to eliminate the break.

- Use the add edit function to isolate a portion of the clip for moving or deleting.

- Move the out-of-sync track, if possible, beyond the overlapping range with the synced material to eliminate the sync break.

Managing Sync with Multiple Tracks

The Sync Breaks display in the Timeline makes it easy to manage sync between video and one or two audio tracks. There are a number of additional techniques you can use to manage sync when working with four or more tracks. These include the sync lock feature, tail leaders, and add edits.

Using Sync Lock

The *sync lock* feature allows you to maintain sync among several tracks while adding or removing frames in Trim mode. For example, if you insert an edit into one track that is sync locked to a second track, the system automatically inserts filler in the second track to maintain sync between the two.

Sync lock indicator
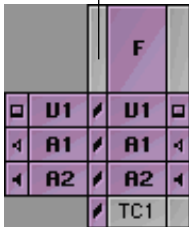
You activate sync locking by clicking the indicator box in the Track Selector panel to display the Sync Lock icon. You can also toggle all locks on or off by clicking in the TC indicator box.

There are several unique aspects to sync locking:

- Sync locking is a Trim mode feature only. Edits performed in Source/Record, Segment, or Effect mode will override sync-locked tracks.

- Sync locking applies to single-roller trims only, because dual-roller trims do not break sync.

- You can sync lock any number of tracks in any combination. In other words, the tracks do not require matching timecode or common sources, and can include multiple video tracks as well as audio tracks.

- Sync locking affects entire tracks. This means that parallel segments in other sync-locked tracks are affected when you trim anywhere in the sequence.

Syncing with Tail Leader

You can add tail leader to the audio or video material in your Avid Composer system to provide a useful visual reference in the Timeline for tracking and fixing sync breaks across any number of tracks.

Tail leaders lined up for multiple video (vid) and audio (aud) tracks
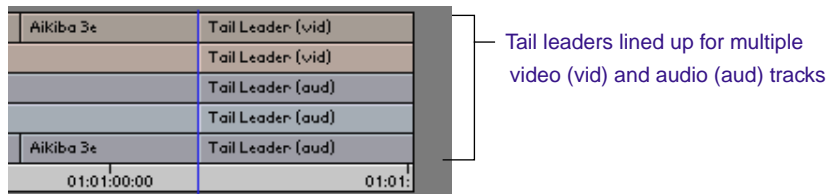
Film editors traditionally use standard head and tail leaders for this purpose. You can create your own leader according to any specification, as described in **"Creating Leader" on page 266**.

With tail leader added to synchronized tracks, you can go to the end of the sequence after making a complicated edit and see whether the leaders are lined up. If they are out of line, this indicates a sync break that you can measure and eliminate as follows:

1. Place the position indicator in the black segment that follows the out-of-sync leader.

2. Select the track, then click the Mark Clip button. You can measure the break by checking the IN to OUT duration of the marked segment.

Mark Clip allows you to measure the break.

3. To restore sync, find the point at which the sync was lost. Add or remove frames using the appropriate edit function, as described in **"Fixing Sync Breaks" on page 560**.

As a quick fix, you can enter Extract/Splice-in Segment mode by clicking the yellow arrow button. Drag the black segment at the end of the out-of-sync tail leader to the location where the sync was lost. This segment of black, created when the track went out of sync, is the exact length of the sync break.
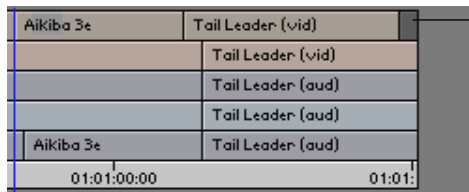
Move the black segment, using Extract/Splice-in.

Syncing with Locators

Like tail leaders, you can add locators to material in the Timeline to track and adjust breaks in sync between any number of tracks. You can place locators anywhere in the sequence and you can add specific notes.

To mark sync points with locators:

1. Place the position indicator at the point in the sequence where you want to maintain sync between two or more tracks.

2. Select the first track and click the Add Locator button.

   The system adds a red locator to the track in the Timeline and in the Record monitor.

3. To add a note that will appear in the Record monitor whenever you park on the locator frame — such as *Music sync* or *Sound Effect sync* — double-click the locator in the Timeline, type the text into the Locator text box, and click OK.

4. Repeat the procedure for subsequent synchronized tracks. Make sure you keep the position indicator in the same location in order to line up the locators in sync.
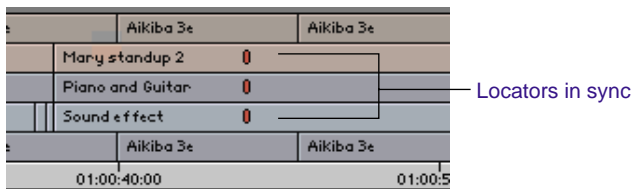
Locators in sync

5. After completing an edit that you think might have affected the sync, return to the segment that contains the locators and click the Focus button. If the locators are not lined up, the sync is broken.

To adjust the sync break:

565

1. Measure the sync break by first placing the position indicator on the leftmost locator and clicking the Mark IN button. Then place it on the other locators and click the Mark OUT button.

2. Check the IN to OUT duration of the marked section.

3. To restore sync, find the point at which the sync was lost. Add or remove frames by using the appropriate edit function, as described in **"Fixing Sync Breaks" on page 560**.

Using Add Edit When Trimming

When trimming with several audio tracks in sync, you can use the Add Edit button to create an edit in the silent or black areas of the synced tracks. These occur in line with the track you are trimming, and they trim all the tracks at once to maintain sync.

To use the Add Edit button while trimming:

1. Place the position indicator on the edit that you want to trim.

2. Select only the additional tracks that are in sync, and click the Add Edit button.

   The system adds a transition at the location of your position indicator in the Timeline.

Add Edits in black

3. Select the transition and trim (be sure to select all the synced tracks).

   As you trim, frames are added or removed from the additional tracks as well.

4. When you are finished trimming, remove the add edits from the sync tracks by choosing Remove Match Frame Edits from the Clip menu.

Using Sync Point Editing

Sync Point Editing (SPE) allows you to overwrite material onto your sequence in such a way that a particular point in the source material is in sync with a particular point in the sequence. For example, you can sync an action in the source video with an audio event, such as a musical beat in the Record monitor, then edit it so that the action occurs on the beat.

Like a replace edit, Sync Point Editing uses the relative location of the position indicator in both the source and record material as the sync point. However, Sync Point Editing determines the duration of the new edit according to marks that you set, as opposed to a replace edit, which uses the head-to-tail frame duration already established in the Timeline. You can apply these marks across multiple tracks when marking a sequence. This allows you to add overlap cuts.

SPE requires two pieces of information:

- **The sync points:** These are the points where the synchronized relationship between the source and record material is established.

- **The duration of the relationship:** This is determined by the positions of the head and tail frames (and sometimes by the position indicator). Both marks can be in one monitor, or one mark can be in one monitor and the other mark in the other monitor. The duration of the material being edited into the sequence must be sufficient for the size of the edit.

To perform a sync-point edit:

1. Load a clip or sequence into the Source monitor.

2. Load a sequence into the Record monitor.

3. Mark the material in one of the following ways:

  • Mark the IN and OUT points in either the Source or Record monitor, leaving the opposite monitor clear of marks.

  • Mark an IN or OUT point in the Source monitor, or an IN or OUT point in the Record monitor. For example, if you marked an IN point in the Source monitor, mark the OUT point in the Record monitor.

4. Move the source position indicator to the sync frame in the clip. This establishes the source sync point.

5. Move the record position indicator in the Source/Record window to the sync frame in the sequence.

6. Select Sync Point Editing in the Composer Settings dialog box, or choose Sync Point Editing from the Special menu.

   Notice the orange box on the Overwrite button that signals that Sync Point Editing is active.

Orange mark indicates Sync Point Editing.

7. Select the source and record tracks for this edit. Click the Overwrite button.

   The sync point edit is completed.

To turn off Sync Point Editing, deselect the option from the Composer Settings dialog box or from the Special menu.

Ganging Footage in Monitors

The Gang function does not combine tracks into a synced relationship, but rather locks monitors in sync so that you can move through footage in two or more monitors simultaneously. This is convenient for viewing and marking the sequence and source material simultaneously, based on syncing of the position indicators in each monitor.

You can gang the Source monitor and/or any number of pop-up monitors with the Record monitor. For instance, before editing them into a

sequence, you can gang a music track in a pop-up monitor, source footage in the Source monitor, and a sequence in the Record monitor. Then you can view the footage, adjust the sync points, and mark them before completing the edit.

To gang monitors:

1. Load a sequence into the Record monitor.

2. Load one or more clips into the Source monitor and/or pop-up monitors.

3. Click the Gang button for each monitor that you want to synchronize (the Record monitor is always ganged). The button turns green when enabled.

The Gang button appears by default in the second row of buttons below the Source monitor, and in the second row of information above the Source/ Record monitors.

4. View the footage in any of the monitors by using standard playback methods.

   Notice as you move through footage in one monitor, the footage in all other monitors freezes. The footage is updated when the play stops. Simultaneous full-motion playback is not possible, although sync is maintained at all times.

Using Match Frame

The Match Frame feature allows you call up and display matching footage in the Source monitor from the Record monitor. Reverse Match Frame lets you load a source clip and locate its sync frame in the sequence.

Like the Gang function, match framing does not create a permanent sync relationship between clips, but instead provides you with a convenient way of locating, marking, and editing matching material.

Track selection determines the match frame. If you select a video track, the system matches a frame from the video. If you enable several tracks, the system matches the frame from the highest selected track level, in descending order: V1, A1, A2, and so on.

The Match Frame button appears by default in the second row of buttons below the Source monitor. To match frame from footage in the Record monitor, you must map the button to the Record monitor palette.

Performing a Match Frame

To use Match Frame:

1. Load a sequence into the Record monitor.

2. Select a track for the footage you want to match, and place the position indicator on a selected frame.

3. Click the Match Frame button.

   The system loads the source clip into the Source monitor, parks on the match frame, and marks a new IN point to prepare for making an edit.

Any previous IN or OUT marks are removed when you use match frame. To override this, Option-click the Match Frame button.

Performing a Reverse Match Frame

To perform a reverse Match Frame:

1. Place the position indicator on the desired frame in the source footage.

2. Make sure the appropriate tracks are selected in the Timeline.

3. Press the Control key and click the Match Frame button under the Source monitor.

The system cues the sequence to the matching frame on the record side. If the shot exists in more than one place, the sequence cues to the first location of the match frame, and continues through the sequence to subsequent locations each time you click the Match Frame button.

Using the Match Frame to Find Sources

The Match Frame function also provides the ability to trace objects quickly through their hierarchy of links. For example, you can match frame a cut in the sequence to its original subclip, then from the subclip to the original master clip, and finally locate the bin in which the master clip is saved.

For more information on finding clips and frames with Match Frame, see *"Using Match Frame" on page 363.*

CHAPTER 18

Multicamera Editing

The Avid Composer multicamera editing tools allow you to incorporate multiple camera angles easily into the nonlinear editing process. Systems equipped with the Multicamera Play option can also play back, in real time, up to four camera angles in a Source monitor quad split, along with playback of the sequence in the Record monitor. Techniques for using these features are described in the following sections:

- **Developing a Postproduction Model**
- **Grouping and Multigrouping**
- **MultiCamera Edit Modes**
- **MultiCamera Editing Techniques**
- **Workflow Options**

Developing a Postproduction Model

As the name indicates, multicamera production *multiplies* the amount and complexity of source material you manage in a project. As a result, comprehensive postproduction planning is essential to avoid the hazards of mismatched shots, takes, and entire reels during digitizing and grouping.

This section presents a postproduction model that can help you organize your material. While the routines of a typical situation comedy are used to illustrate these organizing principles, you can easily adapt this model to suit the particular needs of other productions, such as sports, documentary, and music videos.

The guidelines of organizing for a large multicamera project are as follows:

- Choose a tape-numbering scheme and be consistent.

- Record the multicamera shoot logically according to offline and online editing needs.

- Manage the production path of both sound and picture for quality and efficiency.

Tape Classification Schemes

Because multicamera production involves both sequential and synchronous recording on numerous reels, a comprehensive classification scheme for reels, takes, and clips can help avoid confusion.

Many situation comedies that record on videotape classify their master record reels with two digits indicating both the sequential and synchronous identity of the tape, as follows:

- The first digit indicates the order in which the reel was recorded.

- The second digit indicates the source that feeds the reel.

For example, if there is a *line feed* or director's cut (a switched version of the show), this source is designated with a 0 (zero), so that reel 10 is the first reel of the line feed. Reel 11 is the first reel recorded on *iso (isolation) camera* one, and so forth.

Each set of reels, then, forms a decimal group, called a *tape load*. Each load is traditionally referred to by its prefix. In this example, reels 10 to 14 are called the *tens*, reels 20 to 24 the *twenties*, and so on.

Production Paths

In addition to a numbering scheme, you can organize the flow of recorded material throughout postproduction to make efficient use of resources and maintain the quality of video and audio.

For videotaped production, often two sets of reels are recorded during production: a set of online masters, and a set of offline work tapes. The online masters remain untouched until editing of the final show master begins. Clips from the offline work tapes are digitized, then used for editing and generating an EDL in Media Composer.
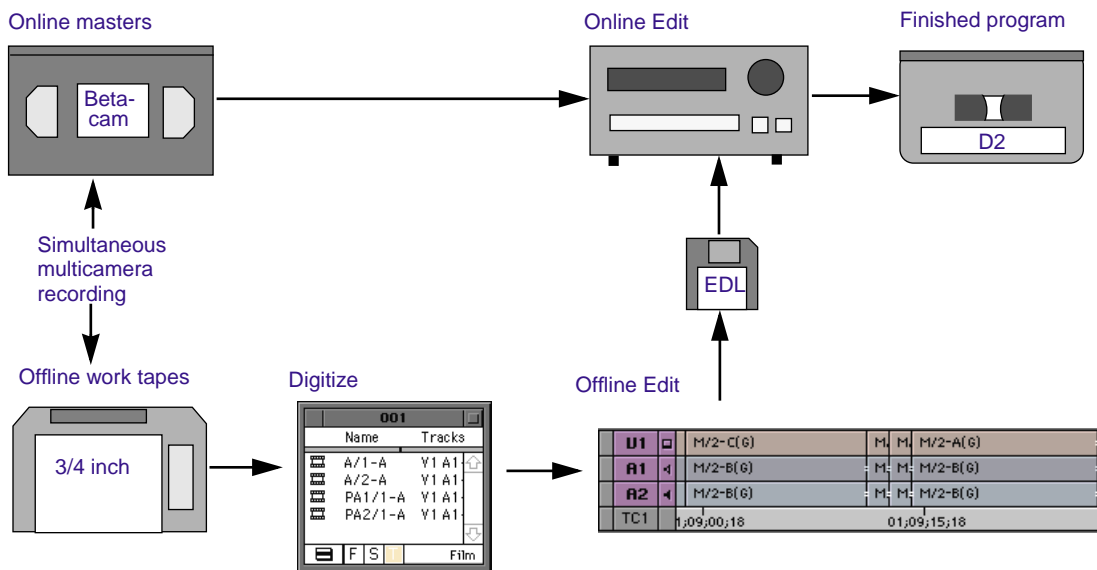
Facilities and tape formats might vary. The basic model can apply to any multicamera production in which a broadcast-quality program is the goal.

Managing Audio

The Media Composer MultiCamera features allow you to patch channels of audio from any source clip to any track during editing. You can strategically designate specific channels of audio to record on specific reels or tracks in preparation for editing and generating an effective EDL.

In this example, the goal is to create a finished master with production dialog on channel 1, music and sound effects on channel 2, audience left on channel 3, and audience right on channel 4. To achieve this, you record channels to offline work tapes with only two channels as follows:

- Line Feed: dialog on channel 1, mono audience on channel 2

- Camera 1: dialog on channel 1, music and effects on channel 2

- Cameras 2 and 3: dialog on channel 1, mono audience on 2

- Camera 4: audience left on channel 1, audience right on 2

If the online master tapes are capable of recording four channels of audio, these usually duplicate the configuration of channels on the final master.
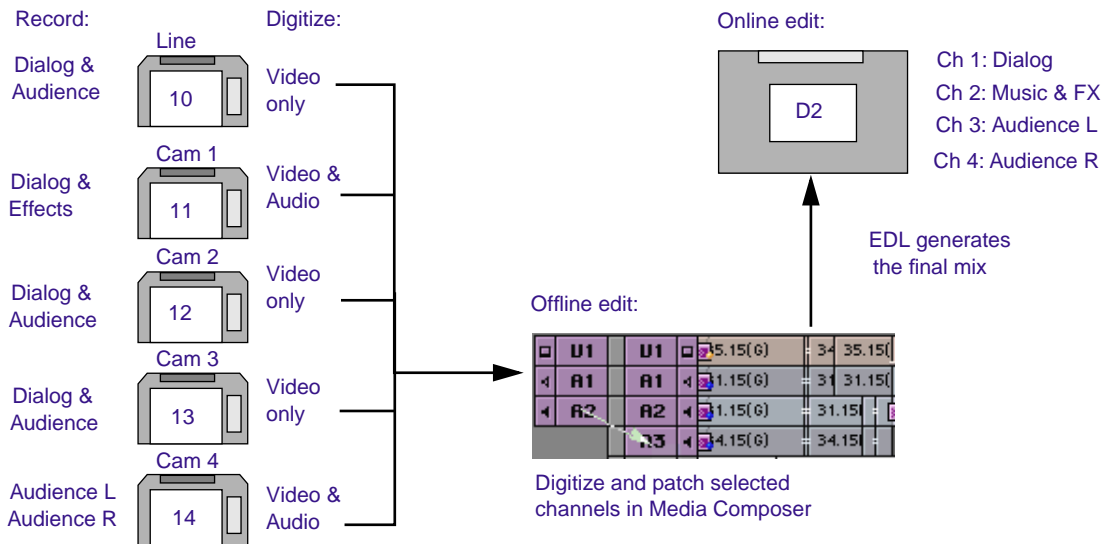
This is just one example. Choose the right path for your production.

Digitizing Workflow

The organization of the digitize bins helps to avoid slowing the system with large bins. It also keeps editing resources free of clutter. The basic procedure for using the digitize bins is as follows:

1. When you are ready to digitize, create one bin for each tape. This keeps bins to a manageable size, and when you autodigitize the system automatically names each clip (take) after the name of the bin (tape), and numbers them sequentially.

2. Gather the clips for each tape load into one bin. This helps avoid accidentally grouping clips with the same timecode from different days. Sort the clips by name so they group in the right order.

3. After creating groups or multigroups, move all the new clips into a separate bin. This helps simplify the contents of the bin for editing.

Using the numbering scheme and production plan described in the example, the path of video for the first tape load digitized in Media Composer might be as follows:
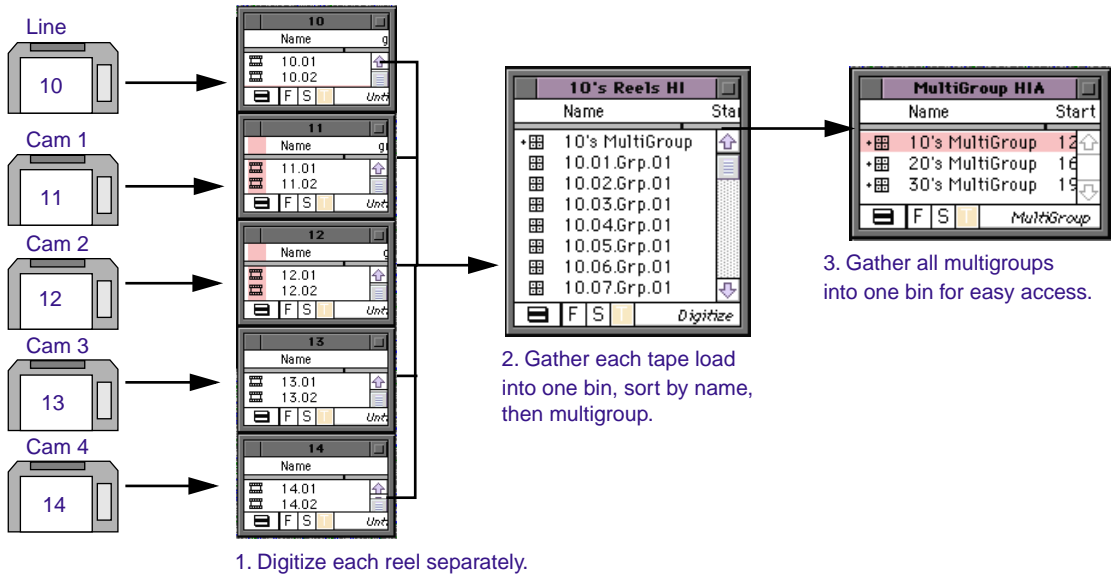
Line

Cam 1

Cam 2

Cam 3

Cam 4

1. Digitize each reel separately.

2. Gather each tape load into one bin, sort by name, then multigroup.

3. Gather all multigroups into one bin for easy access.

Digitizing Methods

There are three approaches to digitizing multicamera material:

- **Log in advance and digitize selected takes:** This method allows you to shorten the time required for digitizing and to lessen the amount of digitized material by logging timecodes noted on selected takes during the shoot and subsequent screenings.

- **Log and digitize all takes in advance:** This is similar to the previous method, except that you save less storage space by digitizing portions of all takes.

- **Autodigitize entire reels:** This method allows you to bypass the logging procedure, but requires the most storage space.

577

However you choose to digitize, you should have accurate notes on the number and content of takes on each reel in order to identify the content of each clip when necessary.

Logging Tips

The following tips apply to methods that involve logging in advance for digitizing multicamera material:

- Narrow the IN and OUT points to avoid false starts on one or more reels in a tape load.

- Save time by logging just one ISO reel in each tape load, exporting in the .ALE format, modifying reel and clip names in a text editor, then reimporting into bins for each of the other reels.

- When logging in advance, name each clip with the source tape name (same as the master tape to be used in online) and a cut number, for quick identification when clips get moved or copied.

Autodigitizing Tips

The following tips apply to autodigitizing entire reels:

- Select the "Digitize across timecode breaks" option in the Digitize Settings dialog box prior to digitizing.

- Select the "Log errors to the console and continue digitizing" option in the Digitize Settings dialog box.

- Under Deck Settings, turn off the Fast Cue option and set the pre-roll to approximately 4 seconds.

- When loading a tape and assigning a name to a source reel, give the reel the same name as the online master tape (same as the work tape).

- Name each bin after the source reel number. By default, all clips are named after the reel and numbered incrementally beginning with the suffix *.01*.

- To start digitizing, cue the source reel past any false starts, play the tape, and wait 4 seconds before clicking the Record button in the Digitize Tool.

Storage Tips

The following tips can help you make the best use of storage drives:

- To save storage space, digitize only the audio channels required for offline editing.

- For the most efficient playback of multicamera material, distribute the reels in each tape load between drives.

- To avoid switching drives while digitizing the same reel, target one volume per reel whenever possible.

With a large multicamera production, you can plan the use of drives in advance, based on the number of drives available, the chosen AVR, and the length of each reel.

Consider the following example:

- You have a four-camera production yielding two tape loads (approximately 50 minutes per tape).

- You want to autodigitize at AVR 3m.

- You need to digitize 2-channel audio at 44.1 kHz from cameras one and four.

- For storage, you have four 4-GB drives.

With this set of circumstances, you might distribute the media as shown in the following illustration. Storage requirements are based on information provided in the *Avid Media Composer Products Reference*.

Work tapes	Tracks digitized	Storage required		Targeted drive
001 X 2	V	2 GB	⟶	Media 1A
002 X 2	V A1 A2	3.5 GB	⟶	Media 1B
003 X 2	V	2 GB	⟶	Media 2A
004 X 2	V	2 GB	⟶	Media 2A
005 X 2	V A1 A2	3.5 GB	⟶	Media 2B
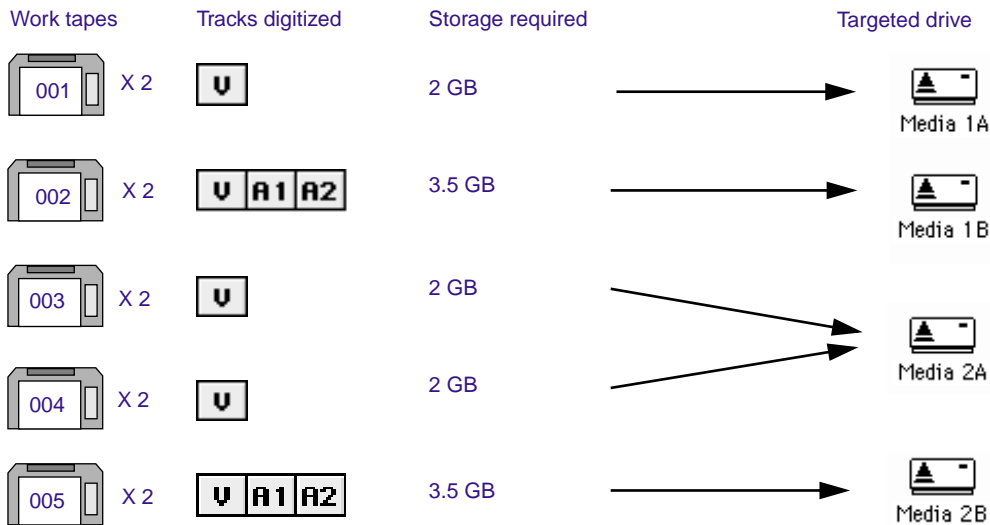
Checking the Bins

Before gathering the digitized clips into bins for grouping, you should open the bins in each tape load and compare the clips for inconsistencies. You can take steps to conform the bins now and avoid problems during grouping and editing, as described in the following sections.

Replacing Missing Clips

If one bin has fewer clips than the others in the tape load, the ISO reel might have been stopped during a particular take. If you group the take with the missing camera, the shots shift in the Quad Split to fill the missing angle, which can disorient the editor. Correct this problem by creating a *dummy clip.*

To create a dummy clip:

1. Log a new source clip into the bin.

2. Match the timecode from one of the clips from another camera, and use any name.

When the clips are grouped and loaded during editing, this dummy clip displays the message "Media Offline," and maintains the distribution of camera angles in the Quad Split.

Deleting Extra Clips

If a particular bin has more clips than the others in the load, one or more false starts might have been recorded during digitizing. If you create a multigroup, the extra clips form unusable sections with only one or two camera angles.

To eliminate the clips:

1. Compare timecodes among bins until you isolate the unique clips.

2. Load the clips into the Source monitor, and/or compare timecodes with a line script if available.

3. If the clips are useless, delete them and their media until you have the same takes in each bin.

Checking Audio and Image Quality

Check the Audio column to make sure the audio was recorded on the correct channels, from the correct source reels, at the correct kHz. You cannot play back audio compressed at different rates within the same group or multigroup.

You can also spot-check the picture quality by loading two or more clips from each bin into the Source monitor and viewing the clips. If you find a problem, you can redigitize before the edit session begins.

Additional Offline Editing Aids

If you are editing your multicamera material with the intention of generating an EDL and preparing a master tape in an online tape editing suite, Media Composer provides features specifically designed to aid the offline editing process, including:

- Color Frame tracking, for avoiding color frame shifts in online editing with 1-inch videotape

- Dupe Detection, for avoiding duplicate frames in online editing

Grouping and Multigrouping

The grouping and multigrouping procedures both gather selected clips into a single unique clip. Both allow you to use special Multi-Camera editing features, such as Quad Split and cutting on-the-fly in MultiCamera mode. The difference between the two can be summarized as follows:

- Grouping creates a separate group clip out of a single set of master clips, from the IN point to the OUT point of the longest clip. Multi-grouping takes the Group function one step further, literally stringing numerous sequential groups into a rough sequence. For this reason, multigroups are also known as *sequence clips*.

- The Group function allows you to sync clips based on common source timecode, auxiliary timecode, or marks placed in the footage. Because of the need for complete accuracy in sorting and grouping the clips, multigrouping is performed on the basis of common source timecode only.

- The MultiGroup function is designed primarily for situation comedies and similar productions that record multiple takes sequentially on the same source tapes. Multigrouping does not provide any benefit when you edit with clips that do not share common timecode or were not recorded sequentially, and might even cause the wrong clips to be grouped together.

Creating Group Clips

In addition to the multicamera context, grouped clips can be useful in other circumstances. Unlike multigrouping, which requires clips with matching source timecode, you can group clips that were shot at dif-

ferent times, on different days, and on completely different source tapes. This means that you can:

- Use group clips to create montage sequences quickly with fast-cutting between unrelated shots

- Use group clips to sync and edit an audio track (music for instance) with two or more video tracks (especially useful in music-video editing)

- Use group clips for multicamera editing when you want to isolate each take as a group, and edit selectively, rather than build a larger sequence clip

- Use carefully synchronized marks to group selected portions of multicamera clips

The last two options are generally for use in smaller multicamera projects. Sorting, marking, selecting, and grouping individual takes of a larger project can be very time consuming.

To create a group clip:

1. If you are using a sync point, load the clips and mark an IN at the sync point at the start of each clip, or mark an OUT at the sync point at the end of each clip.

For multicamera video or film shoots, you typically use a slate for marking IN and OUT points. But you can use any visual or aural event that is recorded by all cameras simultaneously.

2. In the bin, select all the clips you want to group.

3. Choose Group Clips from the Bin menu. The Group Clips dialog box appears.

Group Clips

Sync Clips Using:

○ Film TC/Sound TC
◉ Inpoints
○ Outpoints
○ Source Timecode
○ Auxiliary TC1

[OK]   [Cancel]

4. Select an option, based on the following:

    •   *Film TC/Sound TC:* If you are syncing clips with matching film
        and sound timecode recorded in the field. This option is
        dimmed if you are not working on a film project.

    •   *Inpoints:* If you are syncing according to IN points set in each
        clip.

    •   *Outpoints:* If you are syncing according to OUT points set in
        each clip.

    •   *Source Timecode:* Select if the clips have matching timecode.

    •   *Auxiliary TC1-TC5:* If the clips have matching timecode in the
        same auxiliary timecode column.

5. Click OK. A group clip appears in the bin, with the name of the
    first clip in the group, followed by the extension "grp.*n*."

    The *n* is an incremental numbering of group clips with the same
    name in the same bin. You might want to rename this to some-
    thing easier to read, such as *name*.Group.

Creating Multigroup Clips

Multigrouping is strictly for use in large multicamera productions, such as situation comedies, in which all synchronous camera shots are recorded with the same timecode. The MultiGroup function is a single Bin menu command that eliminates the time-consuming steps of collecting, sorting, grouping, and assembling large volumes of multicamera clips.

To multigroup your material:

1. Sort the clips by name in the bin.

2. Choose Select All from the Edit menu to select the master clips.

3. Choose MultiGroup from the Bin menu.

   The system creates several group clips for each take in the bin, then creates a multigroup from the groups. The multigroup has the same icon as the groups, but the icon is preceded by a plus sign.
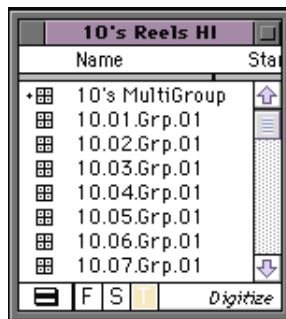
MultiCamera Edit Modes

The three edit modes you use during multicamera editing are Full-Monitor display, Quad Split, and MultiCamera mode. You can edit with either group clips or multigroup clips in all three modes.

Full-Monitor Display

When you first load a grouped or multigrouped clip, the Source monitor displays a single frame from one clip in the group in Source/Record mode. This is called Full-Monitor display when working with group clips, because you can view each angle in full-monitor size as you edit. Also, in Full-Monitor display, the full-screen monitor also remains full screen.

The basic features of Full-Monitor display are as follows:

- Provides *source-oriented* control of multicamera material. In other words, you can switch camera angles, cue, and mark material without affecting the sequence.

- Provides all the same Source monitor controls that are available when editing other clips in Source/Record mode.

- Provides all the same multicamera editing tools that are available in Quad Split and MultiCamera mode. These are described in **"MultiCamera Editing Techniques" on page 591**. The only distinction is that in Full-Monitor display you can view each angle full-size as you edit.

Quad Split

After loading a group clip into the Source monitor, you enter Quad Split by clicking the Quad Split button located in the Command Palette on the MCam command tab. The Source monitor splits into four quadrants. A Group Menu icon appears in the second row of information above the Source and Record monitors. The third monitor displays the Quad Split when the Source monitor is active, and full-screen when the Record monitor is active.

Group Menu icon   Quad Split display   Sequence or linecut
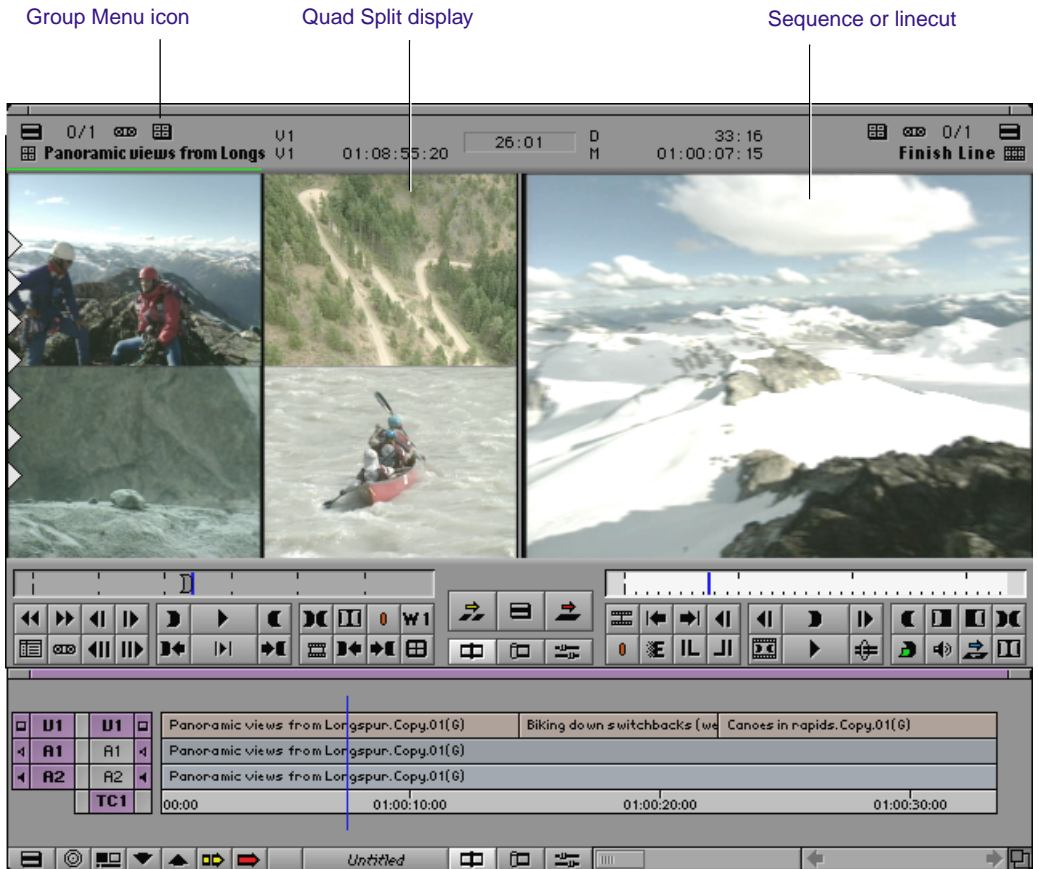
The basic features of Quad Split are as follows:

- Provides *source-oriented* control of multicamera material, like Full-Monitor display. In other words, you can switch camera angles, playback, cue, and mark material without affecting the sequence.

- Provides the same Source monitor controls that are available when editing other clips in Source/Record mode.

- Provides all the special multicamera editing features that are available in Full-Monitor and MultiCamera mode, as described in **"MultiCamera Editing Techniques" on page 591**.

- Provides a list of all group clip video and audio tracks in the Group menu for custom selection and patching.

- Allows you to toggle the Quad Split button to switch the Source monitor between Full-Monitor and Quad Split viewing and editing (editing functions are the same in both).

- Displays whichever monitor is active in the third monitor (you can toggle between Quad Split and full-screen as needed).

MultiCamera Mode

After loading a group clip into the Source monitor and editing it to create a new sequence, you choose MultiCamera Mode from the Special menu to activate the features. MultiCamera mode takes the Quad Split one step further: it gangs all shots in the group clip displayed in the Source monitor to the sequence footage displayed in the Record monitor. All shots are synchronized and continuously updated during playback and editing.

Group Menu icon

Source monitor controls are disabled

The Gang icon turns green.

The basic features of MultiCamera mode are as follows:

- Provides *sequence-oriented* control of multicamera material, in contrast to Full-Monitor and Quad Split. In other words, whenever you play back, cue, switch camera angles, or mark material, your changes take place in the sequence.

- Provides only Record monitor controls.

- Provides special MultiCamera editing features that are available in Full-Monitor display and Quad Split, as described in **"MultiCamera Editing Techniques" on page 591**.

- Provides the ability to cut between shots on-the-fly during full-motion playback, as you would during live switching of a show.

- Provides a list of all video and audio tracks in the group in the Quad Split menu, for custom selection and patching.

- Lets you deselect MultiCamera Mode in the Special menu at any time to switch between source-oriented and sequence-oriented multicamera editing.

- Lets you deselect MultiCamera Mode when you need to play back full-screen.

MultiCamera Editing Techniques

When you load a group or multigroup clip into the Source monitor and begin editing, the Timeline provides a unique display of the clip name to indicate the presence of a group.

(G) indicates a group clip.

The system uses the name of the clip within the group to identify the shot in each cut, but adds a G in parentheses to indicate the group.

Using various keys and functions, you can switch and edit the displayed group shot at any point in the sequence, as described in this section. These features apply to both group and multigroup clips.

Switching Shots with the Arrow Keys
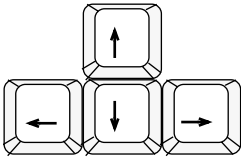
You can switch the display of camera angles by using the Up Arrow and Down Arrow keys. The angle selection switches in either the Source monitor (source material) or in the Record monitor (sequence material), whichever is active.

When the Record monitor is active, you can place the position indicator within any segment and use the arrow keys to switch the group shot selected for that segment.

Whenever you switch camera angles, you also switch the frame representing the group in the bin. You can use this method to change the representative frame for bin display and storyboarding.

Cutting On-the-Fly with Hot Keys

You can switch the display of up to eight camera angles by using hot keys on the keyboard. The default hot keys are F9 to F12 for cameras 1 to 4. You can map an additional four cameras from the Command Palette to the keyboard for the full eight.

Key equivalents for quadrants:
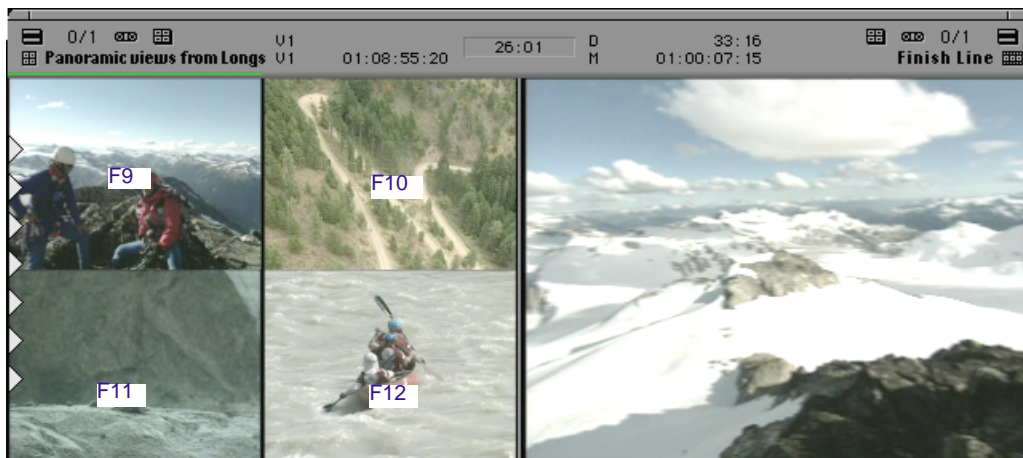
If you press a hot key when the footage is stopped, the system switches the camera angle and also creates an edit in the sequence. You can use this method to walk through one long group or multigroup sequence and edit camera angles as you go.

To switch without creating a cut, hold the Option key when you press a hot key.

You can also cut on-the-fly during playback by using the hot keys. Systems equipped with the Media Composer Release 6.0 or later can cut on-the-fly with live playback of all four quadrants, creating a virtual live-switching environment with the added ability to stop, trim, or adjust edits at any time

Using the MultiCamera Linecut Option

The Linecut option in the Composer Settings dialog box allows you to edit and playback a linecut (single stream playback of the edited sequence) while in MultiCamera mode. Primarily for systems that

include the Avid MultiCamera Play option, this preference allows you to switch between singular and quad-split playback without exiting MultiCamera mode. The Linecut option is not selected by default.

To select the Linecut option:

1. Double-click Composer in the Settings scroll list of the Project window. The Composer Settings dialog box appears.

2. Select Play MultiCamera Linecut.

Using the Add Edit Button

You can use the Add Edit button like a hot key to add edits while stepping through a sequence, or on-the-fly during playback. The only difference is that you are not switching camera angles until *after* you set the edit points.

This method is especially useful when editing to music because it allows you to concentrate on the beats and ignore camera angles until the edits are placed.

To use this method, you must first map the Add Edit button onto the keyboard. Consider mapping the Add Edit button to a function key next to the default hot keys. For more information on mapping keys, see **"About Button Mapping" on page 96**.

To add edits on-the-fly:

1. Load the group or multigroup into the Source monitor and splice it into a sequence.

2. Play the sequence. Each time you want to make an edit, press the Add Edit key. When you stop the sequence, the edits appear in the Timeline.

   Play the sequence repeatedly to add more edits, or remove edits in Trim mode by lassoing them in the Timeline and pressing the Delete key.

3. After adding the edits, place the position indicator within each segment and use the arrow keys to switch camera angles.

Using the Group Menu

The Group menu allows you to select video or audio channels from any of the clips in the group and patch to the tracks available in the sequence. This means that you can potentially have eight camera angles and eight or more audio tracks synchronized and available for patching at any time.

Click the Group Menu icon
to display the pop-up menu.
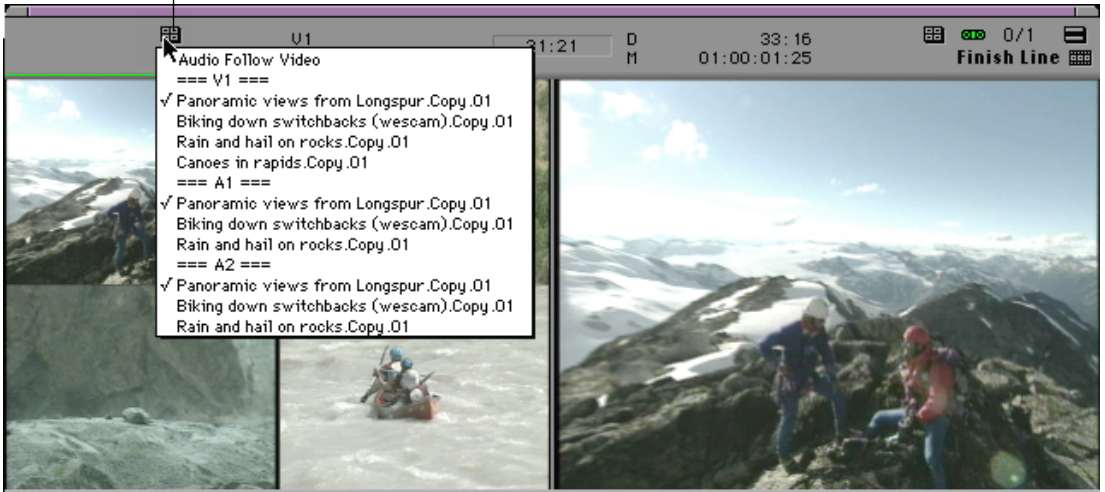
The Second Row of Info option must be selected in Composer Settings to display the Group Menu icon above the Source monitor.

In addition, you can choose the Audio-Follow-Video option from the Group menu to instruct the system to switch both audio and video for each camera angle together when you cut on-the-fly or single-camera style.

Audio-Follow-Video overrides the track selection beside the Timeline and switches audio in track A1 only. Audio-Follow-Video edits appear in the Timeline as match frames (that is, the transition contains an equal sign).

Using the Group Angle Menus

You can use the Group menus to group up to eight clips at a time, and select additional shots to display in any of the Source monitor quadrants.

To select an additional shot from the group to display in one of the quadrants:

1. Press the Control key to activate the display of shot names in the Source monitor quad split.

2. Click the name of the quadrant where you want to display the new shot. The Group menu of shots in the group appears.

Select additional angles from the Group menu
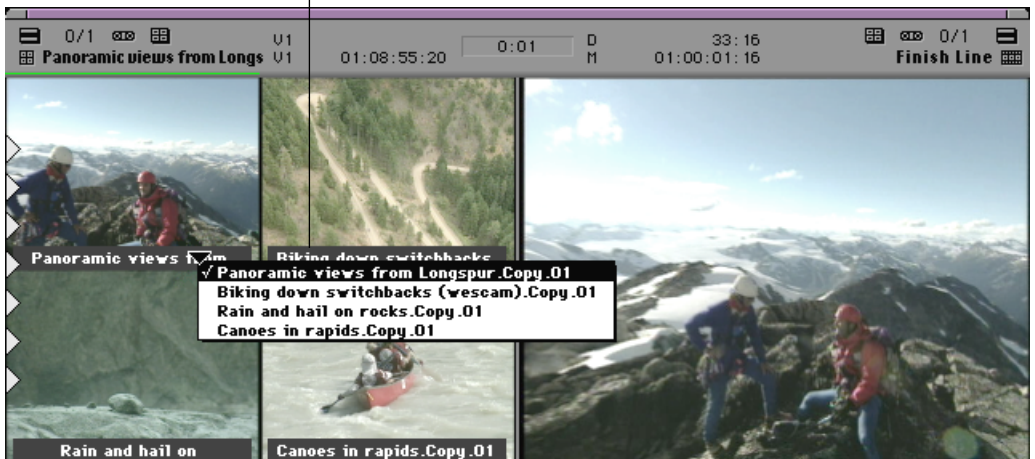
3. Choose the shot you want to display from the menu. The new shot appears in the quadrant.

Using Match Frame in Multicamera Editing

You can use the Match Frame button to call up the matching shot within the group when matching from the sequence. Or you can call up the original clip when match framing from the source group. For more information on using the Match Frame feature, see **"Using Match Frame" on page 569**.

Workflow Options

The Media Composer MultiCamera editing features make possible three basic workflow models for cutting multiple-angle shows: selective camera cutting, cutting on-the-fly, and combination cutting. Each workflow option has its own advantages. When and how to use them is a matter of preference.

Selective Camera Cutting

Selective camera cutting involves marking and editing source material into the sequence, much as you build a sequence by using nongrouped clips in a normal session. You can play, cue, and mark clips on the source side, then splice, overwrite, and trim shots in the sequence.

You can perform selective camera cutting in two ways:

• Lay down an entire group as a master sequence, then add edits, switch camera angles, and trim within the sequence or cut in new shots.

- Edit one clip at a time, without laying down a master sequence first, effectively building a sequence as you would with single-camera material.

The advantage of selective camera cutting with grouped clips is that all the clips are synchronized, for simplified selection of camera angles. Selective camera cutting generally requires use of a detailed line script, or detailed notes, that enable you to select shots and assemble the sequence one clip at a time.

To perform selective camera cutting:

1. Load the group or multigroup into the Source monitor.

2. Using timecode notes and the numeric keypad, type in the timecode for the first take to begin the sequence, and press Enter to cue the clip in the Source monitor to the take.

3. Mark IN and OUT points for the entire scene.

4. Select a camera angle for the first shot, then splice the entire scene into a sequence.

5. Use the arrow keys and/or the Add Edit button to select edit points and switch to different angles throughout the master scene in the sequence.

6. To replace a portion of the take with a better part from another take, use the timecode notes again to cue up the take, set marks, and perform a replace edit.

7. When you are finished with a scene, repeat the procedure for each additional scene in the sequence.

Cutting On-the-Fly

When cutting on-the-fly, you use MultiCamera mode in conjunction with the hot keys (function keys F9 to F15) to switch between Quad Split camera angles ganged to the record sequence. The capability of full-motion quad-split playback with the Avid video board set allows

you to virtually re-create the live event atmosphere, as though you were switching the shots live on location.

While you are cutting on-the-fly, the Source monitor controls are disabled. You cannot mark IN and OUT points as you do during selective camera cutting. Generally, you are editing from the quads according to the action in the Record monitor.

To cut on-the-fly:

1. Load the group or multigroup into the Source monitor.

2. Using timecode notes and the numeric keypad, type in the timecode for the first take to begin the sequence and press Enter to cue the clip in the Source monitor to the take.

3. Mark IN and OUT points for the entire scene.

4. Select a camera angle for the first shot, then splice the entire scene into a sequence.

5. Choose MultiCamera Mode from the Special menu to enter Multi-Camera mode.

6. Play the sequence from the beginning. Watch the shots in the Quad Split and the sequence footage in the Record monitor; then use the hot keys to switch to different angles on-the-fly.

7. Press the space bar to stop the sequence and update the Timeline to include all the edits you made while cutting. Repeat the procedure until you have the edits you want.

8. When you are finished with the scene, repeat the procedure for each additional scene in the sequence.

After cutting in various angles, you can adjust transitions and/or edit out the superfluous material from the sequence in Trim mode.

Combination Cutting

Combination cutting involves the use of both selective camera cutting and cutting on-the-fly interchangeably. Most productions use both methods at one time or another. Others use them in combination throughout postproduction. The following are two examples:

- If you are editing a situation comedy or similar production that requires a specific show length for the finished master, you can begin using selective camera cutting to edit the show for time. This often involves emphasizing the audio on the first editing pass (also known as a *radio edit*), and then cutting on-the-fly in subsequent passes to get the timing of shot transitions and cutaways.

- If you are editing a live-on-tape event, such as a concert or comedy club performance, you can begin by cutting on-the-fly to capture transitions spontaneously. However, you have the added benefit of stopping and returning to a transition if you make a mistake, and trimming or adjusting edits in a nonlinear fashion.

The difference in alternative editing styles is a matter of preference. Choose the approach that works best for your production.

CHAPTER 19

Output Options

The Avid Composer system provides tools for generating output for individual tracks or entire sequences to various videotape or audio-tape formats. In addition, you can generate an edit decision list (EDL) to be used by editors in a videotape suite for preparing a master tape. You can also use VTR emulation for direct playback of sequences by using an edit controller in an analog editing suite. These options are described in the following sections:

- **Preparing for Output**
- **Recording a Digital Cut**
- **Using EDL Manager**
- **VTR Play Emulation**

Preparing for Output

Preparing for video output involves the following procedures:

- Render all non-real-time effects, as described in the *Avid Media Composer and Film Composer Effects Guide.*

- Calibrate and adjust video output levels, as described in **"Cali-brating for Video Output" on page 602**.

- Calibrate and adjust audio output levels, as described in **"Preparing for Audio Output" on page 608**.

- Decide whether you want to generate stereo or mono audio.

- Mix down multiple audio tracks if necessary. Systems equipped with a two-channel audio board can generate a maximum of two channels. Systems equipped with the Digidesign audio interface can generate a maximum of four channels.

- Prepare the record tapes.

- (Optional) Record reference bars and tone to tape.

Calibrating for Video Output

Read the information in the following sections based on the following:

- **Calibrating for video output (optional):** All users can follow the steps for calibrating video output, as described in **"Basic Output Calibration" on page 602**.

- **Calibrating/syncing output signals in a production facility:** Advanced users and house engineers should follow the steps for adjusting and conforming output signals to house standards, as described in **"Advanced Output Calibration" on page 604**.

Basic Output Calibration

You can calibrate by using digital bars and tone that you create and edit into the sequence, as described in this section.

If you or your site engineers calibrate the system as a general maintenance procedure, or if you do not have an external Waveform monitor, leave the Video Output Tool set to the preset values.

To calibrate for video output:

1. Choose Video Output Tool from the Tools menu. The tool opens.
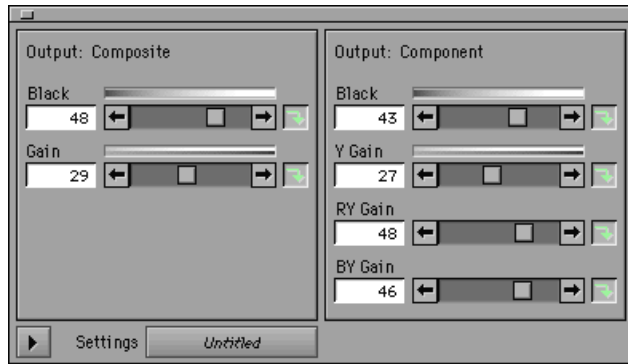
📄 *The Video Output Tool for systems equipped with the serial digital video I/O board for recording to a D1 or digital Betacam VTR displays a single slider control for H-Phase adjustment only. All other levels remain in digital form and cannot be adjusted from within Media Composer.*

2. Cue the sequence to bars and tone, and click or press Play (basic calibration requires digital bars and tone). Color bars are displayed on the third, full-screen monitor, and signal appears on the Waveform and Vectorscope monitors.
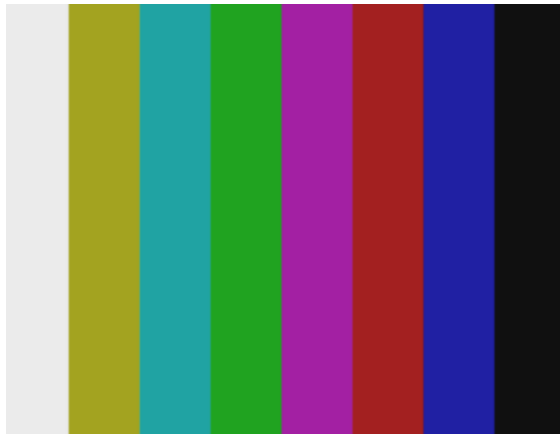
3. Adjust luminance values based on the video format and the type of bars in the sequence.

4. To save this setting, choose Save As from the Settings pop-up menu, type a name, and click OK.

Advanced Output Calibration

Advanced users and site engineers can fine-tune output calibrations by using test patterns, genlock options, and signal timing controls, as described in this section.

Displaying Advanced Calibration Controls

To display the advanced calibration controls in the Video Output Tool, click the arrow button at the lower left corner of the window.

The additional options appear and the arrow button points down. To return to the normal display, click the arrow again.

Composite output settings

Component output settings

Test Patterns pop-up menu

Genlock pop-up menu
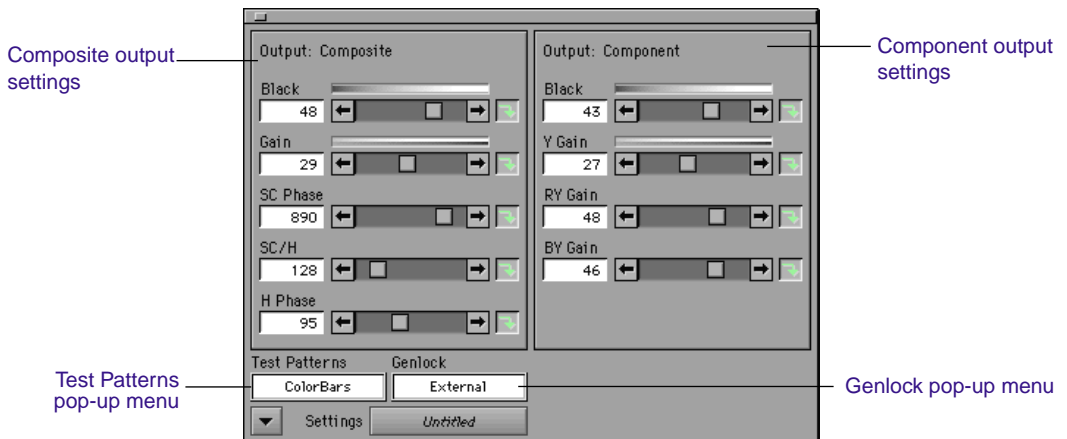
Using Test Patterns

The expanded Video Output Tool provides a pop-up menu of test patterns you can use to calibrate the system output. To display a test pattern, click the pop-up menu and choose a pattern.
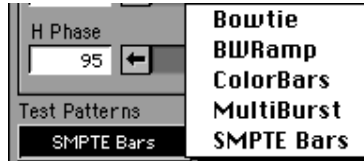
You can add test patterns to the list by doing the following:

1. Close the Media Composer application.

2. Find or create a PICT file for a chosen pattern.

You can create your own test pattern files by digitizing the pattern from videotape, and exporting it as a PICT file. You can improve the accuracy of the image by correcting colors and removing errors in a third-party application such as Adobe Photoshop™.

3. Place the file into the Test Patterns folder in the Supporting Files folder, which is located in the Media Composer folder on the Avid drive.

4. Start the Media Composer application. The new pattern appears in the Test Patterns pop-up menu on the Video Output Tool.

Calibrating Site Output Settings

If you have connected a Waveform monitor between the output of the Avid system and your video destination, you can use the Video Output Tool to adjust the video output levels and timing to reference video.

If you do not have external Vectorscope and Waveform monitors, leave the calibration settings at their preset values.

To calibrate the output signal:

1. Choose Video Output Tool from the Tools menu. The tool opens.

2. Click the arrow button at the lower left corner, if the left side (Output: Composite) display shows only two sliders.

   Additional options appear and the arrow button points down.

Composite output settings

Component output settings

Test Patterns pop-up menu

Genlock pop-up menu
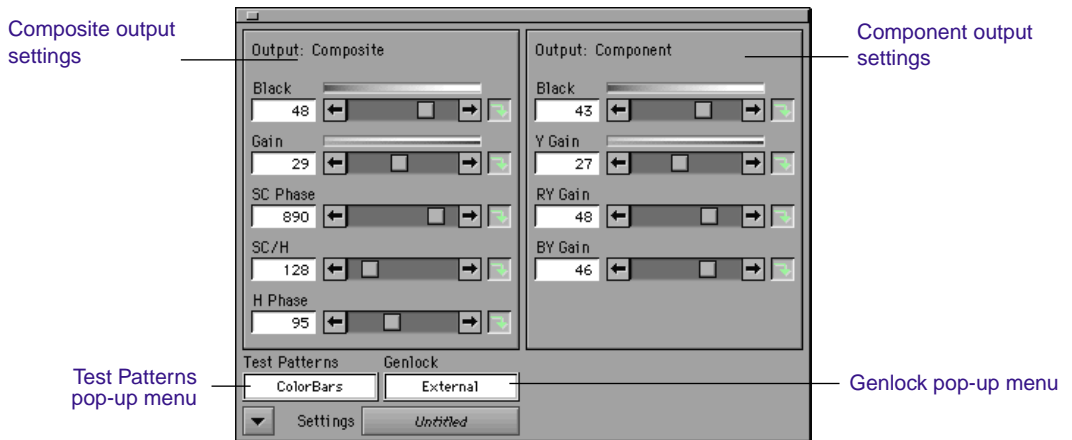
3. Choose the appropriate genlocking method from the Genlock menu:

   • Choose External to use a genlock source connected to the Avid video board's genlock input. Make sure a genlock source is attached.

   • If there is no external source, choose Internal to create an internal reference signal.

4. Choose ColorBars from the Test Patterns pop-up menu.

   Standard full-field, 75% color bars appear on the third, full-screen monitor, and on the Vectorscope and Waveform monitors.

5. Set luminance values based on the settings in **Table 19-1**.

Table 19-1   Luminance Settings

Parameter	SMPTE bars	Full-field bars at 75% signal level	Full-field bars at 100% level	NTSC/EIAJ
Black level (setup)	Adjust Line Selector slider to 183	Adjust Line Selector slider to 150	Any line	Any line
	Adjust Black slider to 7.5 IRE (NTSC)	Adjust Black slider to 7.5 IRE (NTSC), 0.3 volts (PAL)	Adjust Black slider to 7.5 IRE (NTSC), 0.3 volts (PAL)	Adjust Black slider to 0.0 IRE
White level (gain)	Adjust Line Selector slider to 203	Adjust Line Selector slider to 150	Adjust Line Selector slider to 150	Adjust Line Selector slider to 203
	Adjust Gain/Y Gain slider to 100 IRE (NTSC)	Adjust Gain/Y Gain slider to 77 IRE (NTSC), .825 volts (PAL)	Adjust Gain/Y Gain slider to 100 IRE (NTSC), 1.0 volts (PAL)	Adjust Gain/Y Gain slider to 92.5 IRE

6. Adjust chrominance levels as follows:

- For composite video, for NTSC users, set hue by adjusting the SC Phase slider until the six color vectors fall within the target boxes on the vectorscope.

📄 *If you do not have separate Vectorscope and Waveform monitors, you can use the full-screen monitor's "blue only" feature, if available, to adjust SC phase (hue) for composite output. To determine if you have this feature, see the documentation supplied with your monitor.*

- Set subcarrier to horizontal phase timing by adjusting the SC/H slider according to house standards.

📄 *SC/H phase becomes important only when video signals from two or more sources are combined or sequentially switched. If this is not the case, leave the SC/H slider at the preset value.*

- Set the horizontal phase by adjusting the H Phase slider according to house standards.

- For component video, use a three-channel Waveform monitor to calibrate R-Y gain. For NTSC users using 75% color bars, the R-Y value should have a peak-to-peak deviation of 700 millivolts. PAL users should have a peak-to-peak deviation of 525 millivolts.

- Calibrate B-Y gain by adjusting the slider. For NTSC users using 75% color bars, the B-Y value should have a peak-to-peak deviation of 700 millivolts. PAL users should have a peak-to-peak deviation of 525 millivolts.

Save this setting by choosing Save As from the Settings pop-up menu, typing a name, and clicking OK.

Preparing for Audio Output

The Audio Tool allows you to generate and customize calibration tone, and adjust global output levels. For information on additional audio mix procedures such as adjusting volume and pan, mixing down selected tracks, or ignoring mix levels, see **Chapter 16**.

Setting the Calibration Tone

The Audio Tool provides an internal calibration tone that you can customize and play as a reference signal on a digital cut. You can use the recorded reference signal for calibrating the digital cut audio at another site.

The default tone playback is –14 dB (digital scale) with a 1000-Hz signal. In some cases you might need to customize the signal. For example, a common reference signal convention for audio work involves recording 30-second segments of 1-kHz, 10-kHz, and 100-Hz tone back to back.

To change the parameters for the calibration tone:

1. Choose Set Calibration Tone from the Peak Hold pop-up menu.
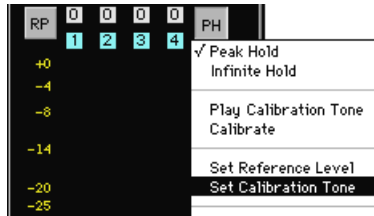
A dialog box appears.
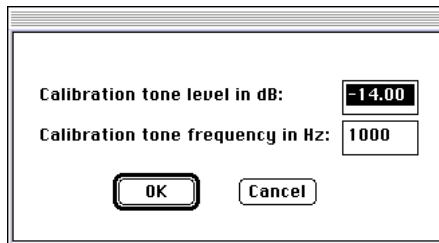
2. Enter new values for the tone level and frequency, and click OK.

To play back the tone, choose Play Calibration Tone from the Peak Hold pop-up menu. To check the adjusted tone level in the meters, make sure the In/Out toggle buttons are toggled to O for Output.

Calibrating Global Output Levels

You can use the meters and a master attenuator (output slider control) in the Audio Tool to make global level adjustments for output from the system. These adjustments affect levels for all output tracks to both the speakers and to record devices. The procedures differ slightly for systems equipped with a four-channel audio board and systems equipped with a two-channel audio board.

⚠ **Normally you should leave this setting at the factory preset of 0 dB. Adjust the level only when necessary to raise or lower the overall volume based on the headroom parameters of the record format, or consistently overmodulated or undermodulated source material.**

Adjusting Output on Four-Channel or Eight-Channel Audio Board Systems

To adjust global output from a four-channel or eight-channel audio board system:

1. Choose Audio Tool from the Tools menu.

2. Click the output level button (the speaker icon) to display the master attenuator (slider).

Output Options button   Master attenuator

Peak Hold pop-up

Output Level button

Output Type pop-up menu

In/Out toggle buttons

Reset Peak button

Output Options panel

Track number displays

Channel assignments   Mix Tracks pop-up menu
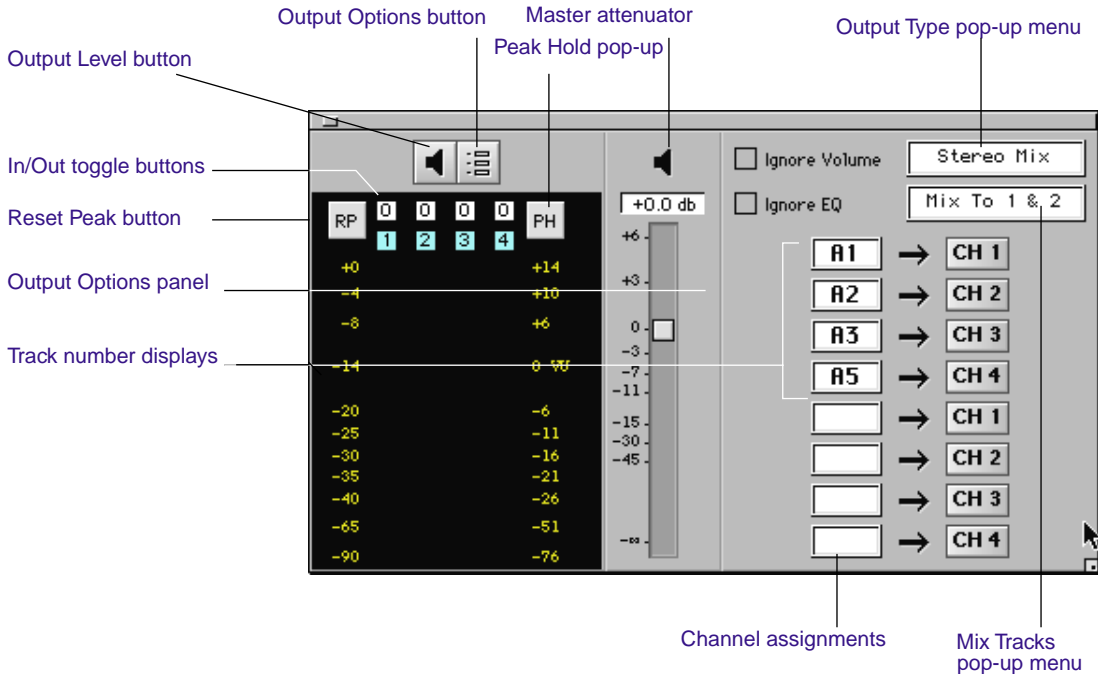
3. Click the Output Options button to open the options panel.

4. Choose a type of output from the Output Type pop-up menu.

- Choose Stereo Mix to mix the currently monitored audio tracks into a stereo pair.

- Choose Mono to pan all the currently monitored tracks to center.

- Choose Direct Out to map tracks directly to up to eight-channels of output (depending on your hardware configuration).

5. (Option) Depending on your type of output, you can make additional adjustments:

- By default, Stereo Mix directs the mixed tracks to output channels 1 and 2. Alternatively, you can choose Mix To 3 & 4 from the Mix Tracks pop-up menu.

- By default, Direct Out maps all audio tracks in numerical sequence to existing output channels. You can remap a track to any channel by clicking the channel assignment display and choosing another channel.

- You can select Ignore Volume or Ignore EQ to disable the customized pan, volume, or equalization effects you applied with the audio tools.

6. Click the In/Out toggle buttons above the meters to display O for Output.

7. Play back one of the following sources of reference audio:

- Choose Play Calibration Tone from the Peak Hold pop-up menu.

- Play back a representative sequence or clip containing audio.

8. Watch the levels in the meters, and adjust the master attenuator to the level that you want.

To adjust levels for individual tracks, you must use the Audio Mix Tool.

9. Close the tool.

Adjusting Output on Two-Channel Audio Board Systems

Systems equipped with two-channel audio boards (Avid Xpress™, Media Composer Offline, Media Composer 900, Media Composer 1000) can use the Pro Level option to take advantage of the professional audio output features of the board.

By default, the "pro" output levels option is not selected, and the volume scales for output sliders in the Audio Tool reflect levels for consumer-grade VCRs and recording devices.

To adjust the levels for recording to professional record decks:

1. Choose Audio Tool from the Tools menu.

2. Click the Output Level button (the speaker icon) to display the master attenuator (slider) and the Pro L. check box.

Output Options button

Output Level button

Master attenuator
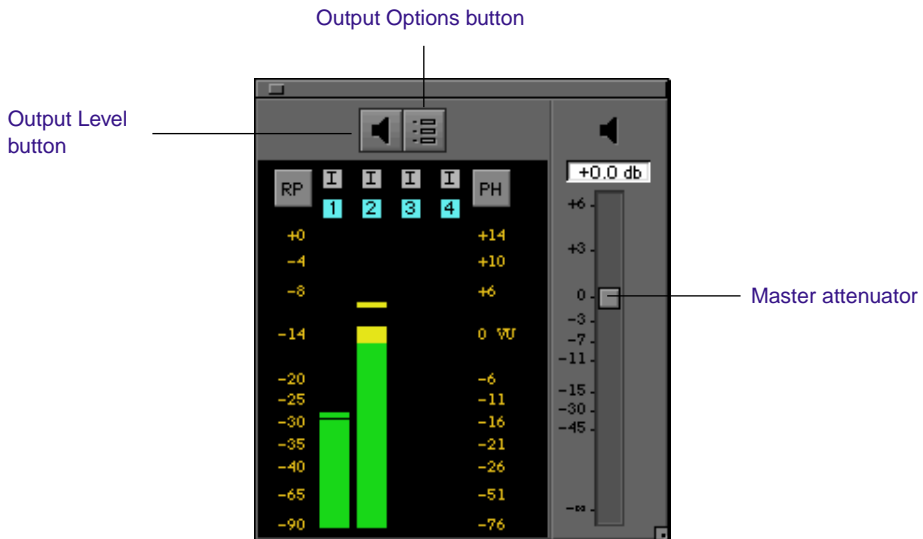
3. (Option) Select the Pro L. check box to enable professional output levels.

4. Click the Output Options button to open the options panel.

5. Choose a type of output from the Output Type pop-up menu:

- Choose Stereo Mix to mix the currently monitored audio tracks into a stereo pair.

- Choose Mono to pan all the currently monitored tracks to center.

- Choose Direct Out to map tracks directly to up to eight channels of output (depending on your hardware configuration).

6. (Option) Depending on your type of Output, you can make additional adjustments:

- By default, Stereo Mix directs the mixed tracks to output channels 1 and 2. Alternatively, you can choose Mix To 3 & 4 from the Mix Tracks pop-up menu.

- By default, Direct Out maps to all audio tracks in numerical sequence to existing output channels. You can remap a track to any channel by clicking the channel assignment display and choosing another channel.

- You can select Ignore Volume or Ignore EQ to disable the customized pan, volume, or equalization effects you applied with the audio tools.

7. Click the In/Out toggle buttons above the meters to display O for Output.

8. Play back one of the following sources of reference audio:

- Choose Play Calibration Tone from the Peak Hold pop-up menu.

- Play back a representative sequence for clip containing audio.

9. Watch the levels in the meters and adjust the master attenuator to the level that you want.

10. Close the tool.

Preparing Record Tapes

There are two basic methods of recording to tape: frame-accurate recording by using the Digital Cut Tool, and manual recording by using controls on the record deck. Each of these methods requires different treatment of the record tapes.

Frame-Accurate Recording

Frame-accurate recording involves using the Digital Cut Tool to record your sequence onto a *prestriped* tape (a tape with prerecorded control track and timecode), or a partially striped tape.

Before you can record a frame-accurate digital cut, you must prepare the record tapes in advance by using one of the following options:

- If you intend to perform *assemble edit* recording, you must record black with timecode onto the tape including the necessary preroll prior to the IN point plus at least 10 seconds.

- If you intend to perform *insert edit* recording, you must *stripe* the record tapes (record black and timecode for the entire duration of the tape) in advance.

Manual Recording

Manual recording (sometimes referred to as crash recording) involves bypassing deck control in Media Composer and using manual operation of the record deck. Because the timing of playback is based on manual procedures, the recording is not frame-accurate. However, you do not need to record timecode onto the tape in advance. You can also record onto non-Avid-controlled decks, such as consumer grade VHS or Hi8.

To record manually:

1. Set the serial control switch on the record deck to Local.

2. Use the controls on the deck to start the videotape recording.

3. Play the sequence in Media Composer.

Recording Bars and Tone

You can also record a portion of bars and tone onto the tape before recording a digital cut. There are two methods of recording bars and tone to tape:

- If your recording must be frame-accurate, then consider adding a segment of digital bars and tone to the front of your sequence, or prepare it as a separate sequence that you can record by using the Digital Cut Tool. For more information, see **"Preparing Digital Bars and Tone" on page 264**.

- If your recording does not need to be frame-accurate, you can manually record direct output of bars and tone from Media Composer.

To manually record bars and tone:

1. Open the Video Output Tool and the Audio Tool by choosing them from the Tools menu.

2. Choose a color bars pattern from the Test Patterns pop-up menu in the Video Output Tool.

3. Choose Play Calibration Tone from the Peak Hold pop-up menu in the Audio Tool.

4. Place the record deck on Local for manual recording.

5. Record the bars and tone as either an insert or assemble edit according to the operation of your record deck and chosen method.

Enabling Assemble-Edit Recording

Insert editing is the default setting for the Digital Cut Tool. You can also use assemble-edit settings in Media Composer, along with the

assemble-editing capabilities of your record deck, to quickly record frame-accurate digital cuts without striping entire tapes in advance.

⚠ **To avoid accidentally breaking timecode on prestriped tapes during Digital Cut recording, enable assemble editing only when in use, and disable it during normal insert edit recording.**

To enable assemble editing:

1. Double-click Deck Preferences in the Settings scroll list of the Project window to open the Deck Preferences dialog box.

Deck Preferences

When no tape in deck log as: [Non-drop Frame ▼]

Assemble-editing option ——— ☐ Allow assemble edit for digital cut

☐ Stop key pauses deck

☐ Shuttle holds speed

[Cancel]   [OK]
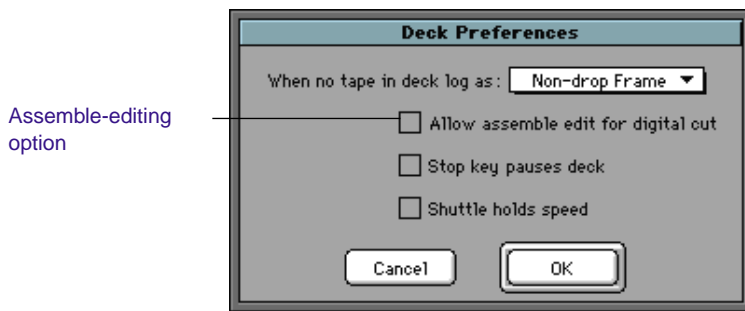
2. Select the option "Allow assemble edit for digital cut."

Once assemble editing is enabled, you select additional options in the Digital Cut Tool when you are ready to record, as described in the section, **"Recording a Digital Cut to Tape" on page 621**.

These switches are often located below the machine's playback control buttons. For more information, see your record device's manual.

In addition, make sure the record deck has the following settings:

• The free run/rec (record) run switch should be set to record run.

• The Ext (external)/Int (internal) sync switch should be set to internal.

• The switch for internal timecode should be set to Regen (regenerate) or Slave Lock, not Preset.

- After you record 15 to 30 seconds of timecode onto the record tape for jam syncing, return the Local/Remote switch to Remote for deck control from within Media Composer.

Recording a Digital Cut

The Digital Cut Tool provides frame-accurate control when recording a sequence to tape. You can also use the Digital Cut Tool to preview the sequence with a computer-generated countdown.

The Digital Cut Tool includes its own Deck Controller for cueing a record deck and marking points during recording of digital cuts. It also includes track selection buttons for the record deck.

Record track buttons

Deck controls

Logging controls for marking IN and OUT points.
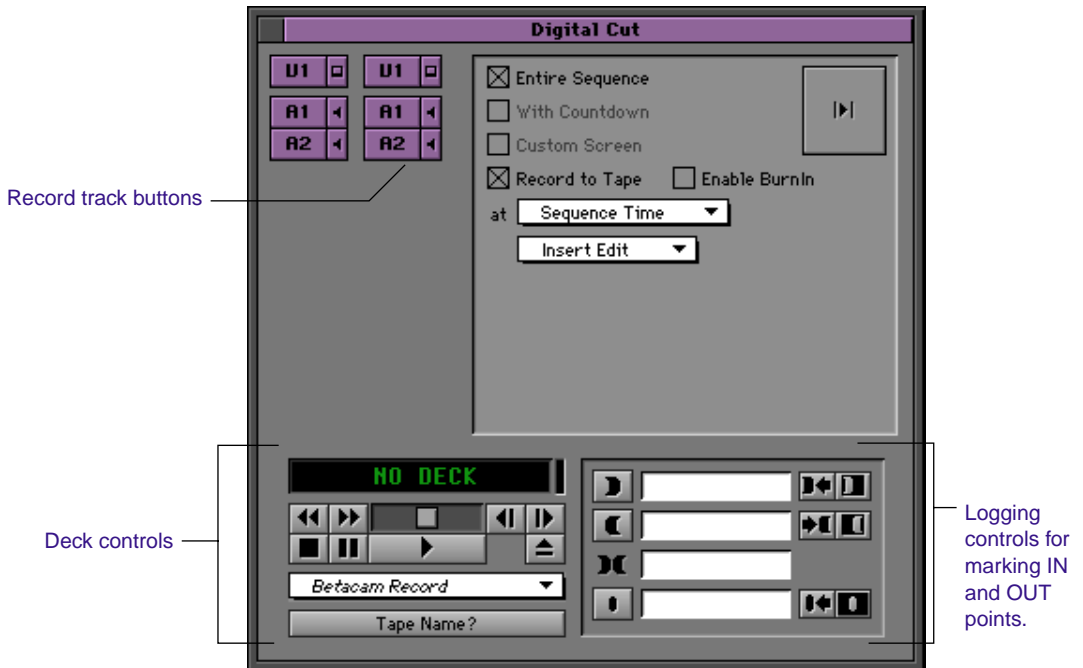
The Deck Controller and track selection buttons provide the following advantages:

• Deck control within the tool allows you to cue the tape from within the tool and log your own IN and OUT points for frame-accurate recording during a digital cut. This capability applies when you choose Mark In Time from the "at" pop-up menu.

*For more information on logging procedures, see **Chapter 5**.*

• The record track buttons allow you to specify which tracks on the record tape you want to record to from the selected source tracks.

Previewing a Digital Cut

You can manually record a digital cut including countdown, but the recording will not be frame-accurate. For information, see **"Preparing Record Tapes" on page 614**.

You can preview a digital cut before recording it to tape to make sure your preparations and output settings are correct, or for screening purposes.

To preview a digital cut:

1. Choose Digital Cut from the Output menu.

> **Output**
> **Digital Cut**
>
> **Change List**
> **Cut List**
> **EDL**
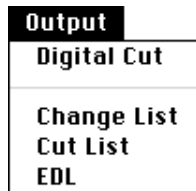
The Digital Cut Tool appears.

2. Deselect the Record to Tape option.

The With Countdown option is enabled.

3. Select the With Countdown option to preview the digital cut using a countdown. The default is a computer-generated countdown containing the Avid logo.

When you select With Countdown, the Custom Screen option is enabled.
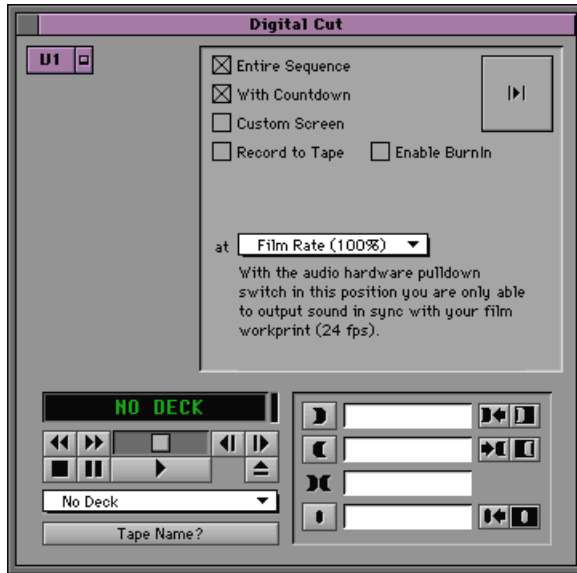
Select Custom Screen to count down using a customized count-down screen that you create, as described in **"Creating a Custom Countdown Display" on page 620**.

4. Select the audio and video tracks you want represented in the digital cut preview. The display of tracks in the Digital Cut window varies according to the tracks existing in the sequence.

   Only those tracks beside and beneath the speaker icon and the monitor icon are included in the digital cut.

5. Click Play.

   The system plays the digital cut in the Record monitor and the full-screen monitor.

6. To stop the playback at any time, press the space bar.

Creating a Custom Countdown Display

The Custom Screen option allows you to change the font (type style), size, and color of the countdown numbers. You can also import your own PICT graphic file as a background.

To create a custom countdown:

1. Select both the With Countdown and the Custom Screen options. The Custom Screen box appears in the Digital Cut Tool.
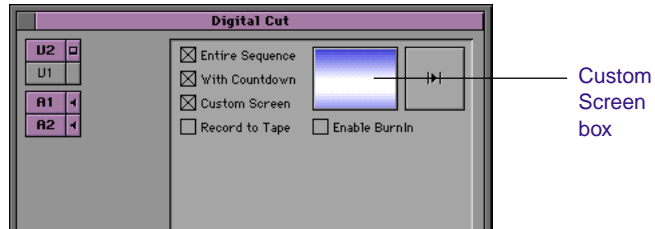
2. Click the Custom Screen box. The Digital Cut Countdown Screen dialog box appears.
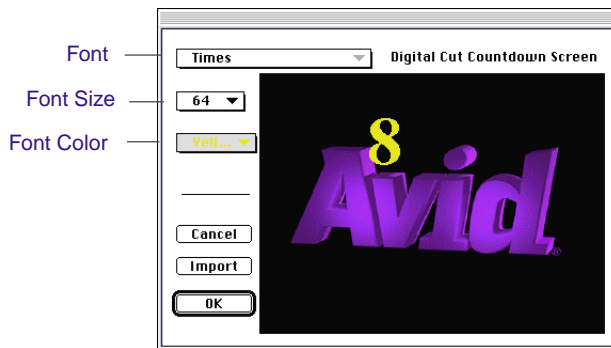
3. (Option) Choose another font, font size, or font color from the pop-up menus.

 The menus display all currently available fonts, as determined by the contents of the Fonts folder in the Macintosh System folder. For information on adding fonts to your system, see your Macintosh documentation.

4. Click the Import button if you want to import an available PICT file to use as a custom background. The Directory dialog box appears.
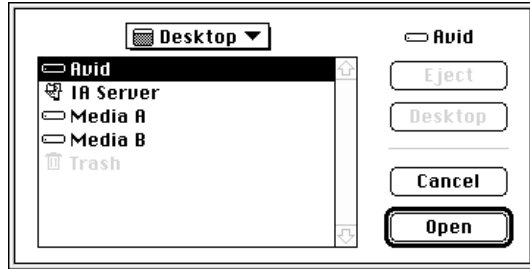
5. Locate a PICT file to serve as the new background image and select it.

6. Click OK. The custom countdown screen is ready for previews.

> *The best resolution for imported PICT files is 720 x 486 for NTSC and 720 x 576 for PAL. The resolution cannot be changed after import.*

Recording a Digital Cut to Tape

If you have a Media Reader connected to your system, you can create burn-in timecode on the digital cut. For more information, see the *Avid Media Reader Setup and User's Guide.*

The Digital Cut Tool provides several options for managing the recording of your sequence. For example, you can:

• Record by using either assemble or insert edits

• Record a selected portion of the sequence or selected tracks

• Record according to different timecode parameters

To record a digital cut:

1. Load a sequence into the Record monitor. (You cannot access digital cut options without a sequence loaded.)

Output
Digital Cut

Change List
Cut List
EDL

2. Choose Digital Cut from the Output menu.

The Digital Cut Tool appears.
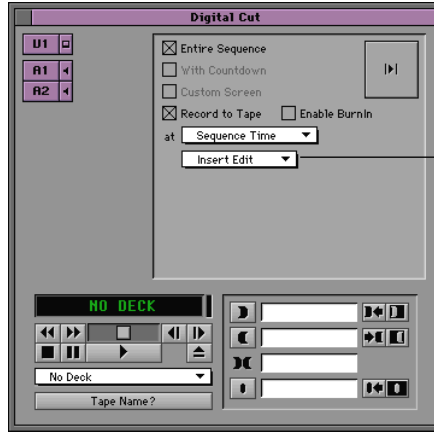
Menu appears only with assemble editing enabled.

• Insert Edit
Assemble Edit

3. (Option) Select the Record to Tape option and choose either Insert Edit or Assemble Edit from the pop-up menu. This menu only appears if you enabled assemble editing in the Deck Preferences dialog box.

4. Select or deselect the Entire Sequence option based upon the following:

   • Select the Entire Sequence option if you want the system to ignore any IN or OUT marks and play the entire sequence from start to finish.

   • Deselect this option if you have established IN and/or OUT marks for recording a portion of the sequence.

5. Choose an option from the Record to Tape pop-up menu as follows:

- Choose Sequence Time to start the recording at a timecode existing on tape that matches the start timecode of the sequence. If you intend to record several sequences to tape one after another, this option requires resetting the start timecode on each sequence to match appropriate IN points on the tape.

- Choose Record Deck Time to ignore the timecode of the sequence, and start the recording wherever the record deck is currently cued.

- Choose Mark In Time to ignore the sequence timecode. Establish a specific IN point on the record tape by cueing and marking with the deck controls.

Timecode entry field

```
    01:00:00:00
```

6. Select the audio and video tracks you want represented in the digital cut preview. The display of tracks in the Digital Cut window varies according to the tracks existing in the sequence.

   Only those tracks beside and beneath the speaker icon and the monitor icon are included in the digital cut.

7. Select the audio and video tracks you want represented in the digital cut. Only those tracks beside and beneath the speaker icon and the monitor icon are included in the digital cut.

   The display of tracks in the Digital Cut window varies according to the tracks existing in the sequence.

8. Click Play.

   The system cues the record deck, then plays and records the digital cut. The playback appears in the Record monitor and the full-screen monitor.

9. To stop the recording at any time, press the space bar.

After assemble-edit recording, a freeze frame is usually added after the OUT point for one or more seconds, depending upon the record deck model. This provides several frames of overlap for the next IN point, before control track and timecode break up.

Using EDL Manager

An EDL (edit decision list) is a detailed list of the edits contained in a sequence, including all the timecode and supported effects information required to re-create the sequence in an online videotape suite. The EDL is organized into a series of chronological instructions called *events*, which are interpreted by an edit controller that automates the assembly of the videotape master.

Your system includes the EDL Manager, an application with powerful features and sorting capabilities to help you prepare an EDL.

To launch EDL Manager, choose EDL from the Output menu.

For more information on specific features and capabilities of EDL Manager, see the *Avid EDL Manager User's Guide*.

VTR Play Emulation

VTR play emulation allows you to control a sequence loaded in the Record monitor from an edit controller for playback in the edit room along with other sources.

To use VTR play emulation, you must connect a supported controller (any controller that uses Sony® serial control protocol) to the Macintosh® by using a 9-pin to serial cable.

With a controller properly connected, enable VTR play emulation as follows:

1. Choose Serial Ports from the Tools menu to open the Serial Ports Tool.

Serial Ports Tool	
Avid Controller	Modem Port ▾
Steenbeck	no port ▾
VTR Emulation	no port ▾
Media Reader	no port ▾
Audio Faders	no port ▾
Controller type	no controller ▾
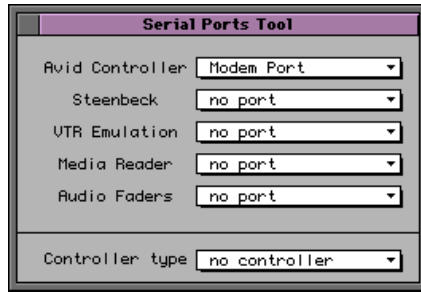
2. Select the appropriate port (printer or modem) from the VTR Emulation pop-up menu.

3. Close the Serial Ports Tool. The system saves the setting as a Site setting, effective for all projects.

4. Choose VTR Emulation from the Special menu when you are ready to use the system for playback.

   A check mark appears next to the command to indicate that the system is ready. A yellow outline appears around the Play button in the Record monitor to indicate that VTR emulation is active.

📑 *This command behaves like a Local/Remote switch on a playback device, with VTR play emulation disabled (in Local mode) by default when you launch the system.*

Once active, VTR play emulation allows you to control the sequence with an edit controller as follows:

• You can shuttle, step (jog), play, cue, and mark points based on master sequence timecode for editing onto another master. Mark points will appear in the Timeline only if the controller sends that information to the Avid Composer system.

• Your control of the Avid Composer system is for play only. For example, you cannot arm tracks or send record commands to the Avid Composer system itself.

- Smooth audio scrub is enabled by default, emulating analog audio scrub on a VTR.

CHAPTER 20

Exporting and Exchanging Material

At the advanced stages of a production, you might need to export or exchange material with another system, another application, or another platform. Your Avid Composer system provides tools for exporting clips and sequences in various formats, or for transferring projects and media between systems, as described in the following sections:

- **Using Global Export Settings**
- **Exporting Files**
- **Exchanging Files with Other Systems**

Using Global Export Settings

You can establish a set of global export parameters in the Export Settings dialog box prior to beginning the export process. These parameters remain the default settings for all exported files, unless you change them during export. This is especially useful when you batch export a number of files directly from a bin in one procedure.

To adjust the options in the Export Settings dialog box, double-click Export in the Settings scroll list of the Project window.

Exporting Files

You can export material directly from a Media Composer product to any one of more than 25 supported file types. You can export an individual frame, a selected region of footage, or an entire clip or sequence.

📖 *For information on a specific file format, see the Avid Media Composer Products Reference.*

There are several reasons why you might want to export video, audio, or both from the Avid Composer system:

• You can export audio files for audio sweetening in compatible applications.

• You can export picture files for touching up or creating special effects in third-party applications.

• You can export files compatible with CD-ROM for use in multimedia projects.

• You can use the export process to convert audio media files between the two supported formats: AIFC and Sound Designer II (SD2).

📖 *If you plan to transfer the exported files to another Avid Composer system or third-party application, see "Exchanging Files with Other Systems" on page 639 for recommended steps and advice.*

The following sections describe general procedures for preparing to export a sequence and for exporting frames, clips, and sequences.

Preparing to Export a Sequence

If you are exporting part or all of a sequence—to QuickTime, ERIMovie, Sequenced PICT, or OMFI file types, for example—you can speed the export process by preparing the sequence in advance, as follows:

- Make sure all media for the sequence is online. For more information, see **"Selecting Offline Items in a Bin" on page 239**.

- If you want to archive the source sequence before making any alterations, duplicate the sequence, place the duplicate in another bin, and prepare the duplicate for export. The original sequence will be unaffected.

- Consider rendering all effects in advance. Although any unrendered effects are rendered on export (except for an OMF export), rendering effects in advance saves you time during the export process.

- If your sequence contains numerous video tracks, consider mixing down the tracks in advance for faster export, unless you need to preserve the multiple track information. For more information, see **"Using Video Mixdown" on page 629**.

- If your sequence contains numerous audio tracks with various audio effects and level adjustments, consider mixing down the tracks for faster export, unless you need to preserve the information. For more information, see **"Mixing Down Audio Tracks" on page 553**.

Using Video Mixdown

Video mixdown allows you to combine several tracks into a single new master clip. This is convenient for building multilayered effects, for consolidating media, and for export and exchange.

⚠ **When you mix down video tracks, you cannot separate them again to work on the tracks individually. Use this function only during the last stages of editing when you no longer need to make changes, or to make a copy for previewing.**

To perform a video mixdown:

1. Choose Compression from the Tools menu.

   The Compression Tool opens.

2. Choose an AVR for the mixdown from the AVR pop-up menu in the Compression Tool.

3. Make sure the video track monitor is in the topmost track that you want to mix down.

   Video mixdown works from the monitored track down, regardless of track selection.

4. Mark an IN and OUT point around the area to mix down.

5. Choose Video Mixdown from the Special menu.

Special	
Site Settings	
Bin Settings...	⌘=
Restore To Default	
Audio Mixdown...	
Video Mixdown...	
Read Audio Timecode	
Restore Default Patch	
Sync Point Editing	
Show Phantom Marks	
✓ **Render On-The-Fly**	
MultiCamera Mode	⇧⌘M
UTR Emulation	
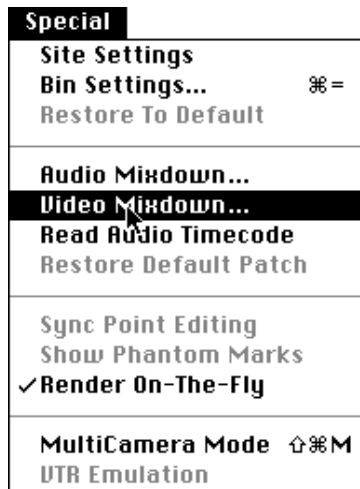
The Video Mixdown dialog box appears.

```
┌─────────────────────────────────────────────────┐
│  Video Mixdown                                  │
│  ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐  │
│  │  Target Disk  │ Media D │                   │  │
│  │                                             │  │
│  └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘  │
│  ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐  ┌─────────┐   │
│  │  AVR26 24bit                │  │ Cancel  │   │
│  │  About 16 MB required       │  ├─────────┤   │
│  └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘  │   OK    │   │
│                                    └─────────┘   │
└─────────────────────────────────────────────────┘
```
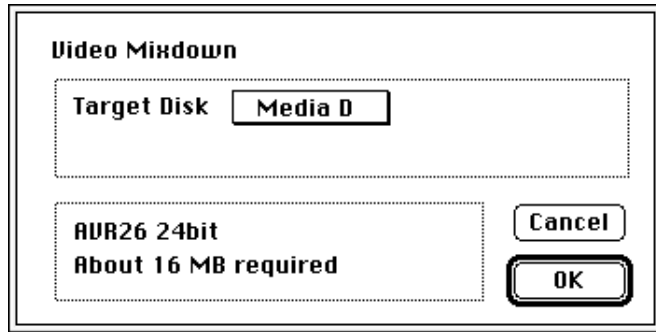
6. Choose a Target Disk for storing the new master clip and click OK.

A progress indicator appears, indicating the progress of the video mix-down. When the mixdown is completed, a new clip appears in the bin along with the sequence, and a new media file is created on the target disk.

Exporting Frames, Clips, or Sequences

To export frames, clips, or sequences:

1. Select the material you want to export in one of the following ways:

   • To export specific tracks in a clip or sequence, enable those tracks in the Track Selector panel, and disable all others.

   ⚠ **When you select specific tracks for export, you must select the option Use Enabled Tracks in the Export Settings dialog box. If no tracks are enabled and you want to export all the tracks in the clip or sequence, you must deselect Use Enabled Tracks.**

   • To export a single frame, mark an IN point to export the marked frame from a bin or a monitor, or put the position indicator on the frame you want to export from a clip in the monitor.

- To export part of a clip or sequence, mark IN and OUT points to export the marked range from a bin or a monitor. If you mark an IN point and no OUT point, the system exports from the IN mark to the end of the clip or sequence.

⚠️ **When you place IN or OUT marks to determine a frame or range for export, you must select Use Marks in the Export Settings dialog box.**

- To export the entire clip or sequence, deselect the options Use Enabled Tracks and Use Marks in the Export Settings dialog box, and make sure the topmost track is monitored.

When you export to an OMF file, you do not need to select both the sequence and its source clips. Select only the sequence to export all the necessary information, including reference clips.

2. Choose Export from the File menu.

   The Export File Type dialog box appears.

3. Select the appropriate file type and options based on the descriptions in **Table 20-1**.

Table 20-1   Export File Type Dialog Box Options

Option	Suboption	Description
Avid Log Exchange		Exports the selected bin as a shot log file that complies with Avid Log Exchange (ALE) specifications. For more information, see **"Converting Logs with Avid Log Exchange" on page 114**.
Tab Delimited		Exports the selected bin as a shot log file in the form of a tab-delimited ASCII text file.

Table 20-1   Export File Type Dialog Box Options (Continued)

Option	Suboption	Description
OMFI Composition	Standard—AIFC	Choose this option to export a standard OMFI composition for transfer to a third-party workstation that supports OMFI. The export is Composition only, unless you select the With Media option.
	AudioVision	Choose this option specifically for export to AudioVision. Appropriate options for OMFI 1.0 and With Media are automatically chosen for this type of export. If you choose Video and Audio from the second pop-up menu, the video media is embedded in the OMFI Composition file. Audio media is external to the OMF file. If necessary, the system translates AIFC audio into the SD2 format.
	SD2	Choose this option for export to Pro Tools or another product that supports the SD2 (Sound Designer II) audio format. The With Media option is automatically selected. Audio media is external to the OMF file. If necessary, the system translates AIFC into the SD2 format.
	TIFF Video	Choose this option to export video tracks to a third-party, OMFI-compatible application that does not support video media for Release 7.0 of the Media Composer products. If the third-party application is compatible with Release 7.0 video media, choose Standard—AIFC instead.
OMFI Composition (second pop-up menu)	Video and Audio	Choose this option if you are using both video and audio tracks of a clip or sequence in an OMFI-compatible editing or graphics enhancement system.
	Video Only	Choose this option if you do not need audio tracks; for example, when adding video or film effects in an OMFI-compatible application.
	Audio Only	Choose this option if you do not need video tracks and are using or enhancing audio in an OMFI-compatible application such as a digital audio workstation. You must choose this option if you are transferring to Pro Tools.

Table 20-1   Export File Type Dialog Box Options (Continued)

Option	Suboption	Description
OMFI Composition (third pop-up menu)	OMFI 1.0	Choose this option if the application to which you are exporting does not support OMF Version 2.0.
	OMFI 2.0	Choose this option if the application to which you are exporting supports OMF Version 2.0. If you are not sure, choose 1.0.
	With Media	Choose this option when you want to transfer the audio media files along with the OMF Composition for use in a third-party application that supports the type of media files used in the exported OMFI composition.
		Audio media is external to the OMF file.
QuickTime	Video and Audio	Choose this option if, for example, you are using an entire clip or sequence in a multimedia project.
	Video Only	Choose this option if, for example, you are adding effects in a third-party application or using only the video in a multimedia project.
	Audio Only	Select this option if, for example, you are using or enhancing audio in a third-party application or using only the audio in a multimedia project.
Sound	SD2	Exports audio tracks in the Sound Designer II format that is compatible with Pro Tools and other third-party applications.
		You can use this option to convert AIFC audio media to Sound Designer II media on export.
	AIFF	Exports audio tracks in the industry-standard Audio Interchange File Format (AIFF) that is compatible with many third-party sound editing and multimedia applications.
		You can use this option to convert Sound Designer II audio media to AIFF media on export.

Table 20-1   Export File Type Dialog Box Options (Continued)

Option	Suboption	Description
Graphic		Exports a single frame as a graphic file or series of frames as sequenced graphic files. Choose a file type from the pop-up menu.
Options button		Opens the Export Settings dialog box for refining export options. For information on all options, see the *Avid Media Composer Products Reference*.

After you select export file type options, additional current options for the clip or sequence are listed in the lower-third region of the dialog box. The following screen shows an example of a sequence selected for export as a QuickTime file.

Lower-third region of the Export File Type dialog box

```
Using Entire Sequence              Compressor : Media Composer
Using Enabled Tracks               Color Depth : 24 bits
Export Both Fields                 Spatial Quality : 0
Destination Size : 640 x 480       Temporal Quality : 0
Audio Output : Stereo              Frame Rate : 29.97 FPS
Audio Sample Rate : Native         Key frame every 30 frames
Audio Sample Size : 8 bits

[ Options... ]                     [[ OK ]]   [ Cancel ]
```

4. If the additional options listed need correction, click the Options button.

   An appropriate subset of export options appears based on the selected file type. The following screen shows an example of options for a graphics file export.

Export Settings (Current)

☐ Use Marks
☐ Use Enabled Tracks
☐ Use Both Fields

Destination Size (width x height)

[720] x [486] [▼]

File has [CCIR Video levels ▼]

☐ Sequential Files

Audio Output [Stereo ▼]
Audio Sample Rate [Native Rate ▼]
Audio Sample Size [8 bits ▼]

☐ Create Movie Preview
☐ Cross-Platform Movie
☒ Use Source Compression

[OK]
[Cancel]
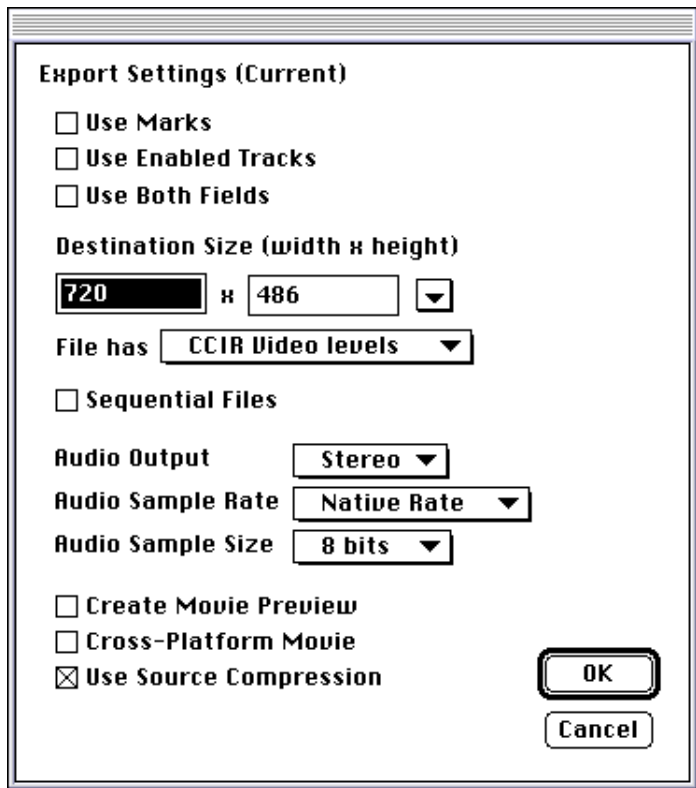
5. Adjust the additional export settings, and click OK to return to the Export File Type dialog box.

For a complete description of all options in the Export Settings dialog box, see the Avid Media Composer Products Reference.

6. When all options are listed correctly, click OK.

A destination dialog box appears with a default file name in the Export As text box, based on the file type.
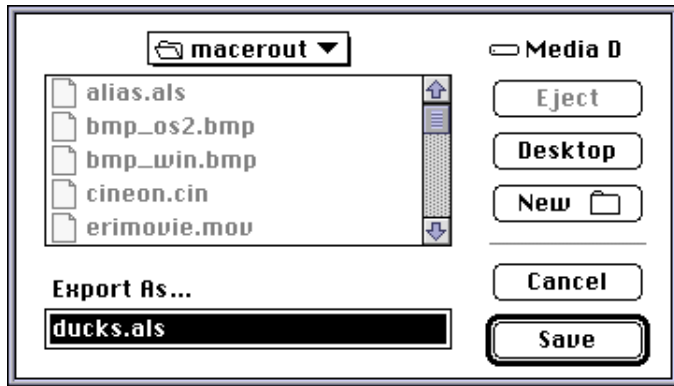
7. (Option) Change the file name.

📄 *If you are transferring the files for use in a third-party application, keep the default extension to avoid conflicts. Also, avoid names that include spaces or special characters.*

8. Select the destination folder for the file and click Save.

   For most file types, the file is exported and appears at the chosen destination.

📄 *For OMFI export, if the sequence contains effects that are not supported by OMFI 2.0, a dialog box appears. You can choose to cancel or continue exporting a composition that will not include the unsupported effects.*

   With the following file types, an additional dialog box appears before the files are exported:

   - BMP

   - Cineon

   - ERIMovie

   - JPEG

   - Photoshop

   - PNG

- SGI

- Targa

- TIFF

- Wavefront

- YUV

9. If you are exporting one of the file types shown in the previous list, see the *Avid Media Composer Products Reference* to select additional export parameters.

10. Click OK to complete the export.

⚠ **Macintosh systems prior to Release 8.1 allow a maximum file size of approximately 2 GB. If you exceed this limit, the file is unusable and the system displays an error message.**

⚠ **If a power failure or mishap occurs during the export process, the entire file is unusable. You need to repeat the export process. The only exception is a PICT sequence, where all frames up to the point of failure are usable.**

Exchanging Files with Other Systems

This section provides specific steps and recommendations for exchanging files and media in the following circumstances:

- **Audio sweetening in AudioVision:** To export a sequence with audio tracks for audio sweetening in the AudioVision application, see **"Transferring OMF Files from Media Composer Products to AudioVision" on page 643**.

- **Audio sweetening in Pro Tools:** To export a sequence with audio tracks for audio sweetening in the Pro Tools application, see **"Transferring OMF Files to Pro Tools" on page 649**.

- **Audio sweetening in other compatible applications:** To transfer files to other OMF-compatible third-party digital audio applica-

tions, see **"Transferring OMF Files to Pro Tools" on page 649**. Also see the digital audio workstation's documentation.

- **Visual effects in OMFI-compatible applications:** To export video tracks for touching up or creating special effects in OMFI-compatible effects applications, see **"Exporting Frames, Clips, or Sequences" on page 631**. Also see the effects workstation's documentation.

- **Visual effects in QuickTime applications:** To export video tracks for touching up or creating special effects in QuickTime-compatible applications, see **"Using the Media Composer QuickTime Codec" on page 655**.

- **Exchange of audio media files between systems:** To transfer audio media files directly from the OMFI MediaFiles folder for use in any third-party application that supports the AIFF or Sound Designer II formats, see **"Exchanging Audio Media Files Between Systems" on page 663**.

- **Transfer of projects to other Media Composer products:** To transfer whole projects between Media Composer products (for example, if your facility uses different system models at different stages of postproduction), see **"Transferring a Project to Another Media Composer Product" on page 664**.

About OMF Interchange

OMF Interchange is a platform-independent file format that stores both the digital media (video, audio, graphics, animation) and the recipe describing how the media ingredients are edited together to form a final sequence. This editing information, called a composition, is the OMF representation of the sequence created in the Avid Composer system. The OMF Interchange format is the result of cooperative efforts of many industry and standards partners and Avid Technology, Inc.

Any other program that supports OMF can read OMF files, even if the program resides on a different computer platform. As a result, with OMF you can transfer among different applications on different platforms, without worrying about cross-platform translations. This can be very effective for importing animation or audio files created on proprietary platforms.

⚠️ **To avoid errors and incompatibilities when importing and exporting OMF files, observe the recommendations described in the *Avid Media Composer Products Reference.***

See the *Avid Media Composer Products Reference* for an appendix that lists applications that currently support OMF Interchange. For the latest information, see the Avid OMFI web site:

http://www.omfi.org

Choosing an OMF Transfer Method

OMF Interchange, as implemented in the Avid Composer system, provides two basic methods for exporting files:

• **Method 1: OMF compositions only without media files**

The Avid Composer system can export an OMF file that contains only the editing information about a selected master clip or sequence. You then need to transfer both the OMF file and the media files, or redigitize the media on the other system. After you have transferred the media once, you can transfer revised composition-only files (unless you consolidated the media, in which case, you must transport the media files as well. For more information, see **"Consolidating Media" on page 276**.

• **Method 2: OMF compositions with media files**

The Avid Composer system exports an OMF file that contains all the editing information for the selected master clip or sequence along with references to the audio media files for that master clip or sequence. In the case of AudioVision or SD2 export, audio media is converted if necessary to the SD2 format.

http://www.omfi.org

Preparing Sequences for OMF Export

If you are exporting part or all of a sequence to an OMF file, you can
speed the export process by preparing the sequence in advance:

- Make sure all media for the sequence is online. For more informa-
  tion, see **"Selecting Offline Items in a Bin" on page 239**.

- Duplicate the sequence and place the copy in a new bin. (This pre-
  serves the links from your original sequence to the original media
  disk or disks.)

- If your sequence contains numerous video tracks, consider mixing
  down the tracks in advance for faster export, unless you need to
  preserve the multiple track information. For more information, see
  "Using Video Mixdown" on page 629.

- Check and adjust all pan and audio levels in advance. All current
  pan and level settings in the sequence are carried through to the
  exported media. For more information on performing an audio
  mixdown, see **"Mixing Down Audio Tracks" on page 553**.

- Consider rendering all effects in advance to shorten the time
  required for export. For more information, see the *Avid
  Media Composer and Film Composer Effects Guide*.

- Consider consolidating the sequence to create smaller source clips,
  thereby saving time and disk space. For more information, see
  "Consolidating Media" on page 276. For information on appro-
  priate storage devices for consolidating, see **"Recommended Stor-
  age Devices" on page 666**.

- OMF files with very complex sequences can fail during import into some applications, due to memory limitations. Try one of the following solutions:

    - Break the sequence into smaller sequences and export the new sequences.

    - Allocate more memory to the application.

    - Add more physical memory.

- To export multiple clips in a single OMF file, create a sequence from them. For example, you can select all the clips and Option-drag them into the Record monitor to create an instant sequence, then export it.

Transferring OMF Files from Media Composer Products to AudioVision

After editing in Media Composer, you can export and transfer your sequence and media to AudioVision for audio sweetening, using OMF Interchange.

Compatibility Issues for AudioVision Transfer

Observe the following compatibility issues between AudioVision and the Media Composer products when transferring files:

- Video media is not directly compatible between Release 7.0 of the Media Composer products and AudioVision. You cannot move video media files directly to the AudioVision system. However, you can use the AudioVision option in the Export procedure to transfer video. The Avid Composer system converts the video media to the TIFF video format, which is reconverted to AudioVision compatible media when you import the files into AudioVision.

- AudioVision Release 4.0 and Releases 6.0, 6.1, and 6.5 of the Media Composer products are compatible in terms of both video

media and audio media. You can include both video and audio tracks in the export, and you can transfer media files directly between systems.

- Video media in Release 3.6 or earlier of AudioVision is not compatible with Release 6.0 or later of the Media Composer products.

- Video media in Release 3.6 or earlier of AudioVision is compatible with Release 5.51 or earlier of the Media Composer products. If you want to include video tracks in the transfer, see the documentation that came with the earlier release.

- In cases where video media is not compatible, you can add video to the transfer as follows:

  - Record a digital cut to tape of the video track only. You don't have to record the audio tracks to the videotape unless you need a scratch track reference.

  - Be sure to match the timecode on the tape to the sequence timecode. You can do this by striping the videotape with appropriate timecode before the transfer. The digital cut will place the video onto the tape at the proper timecode location.

Before You Begin

To avoid problems, follow these guidelines when exporting from Media Composer:

- Prepare the sequence as described in **"Preparing Sequences for OMF Export" on page 642**.

- The audio sampling rate of the sequence must be 44.1 kHz or 48 kHz. All audio clips in the sequence must be the same rate.

- Do not modify the start or end timecodes of master clips, and do not convert the frame rates.

- Make sure that the sequence contains video digitized at a single AVR level. AudioVision does not display video for sequences that contain mixed AVR levels.

- Occasionally, AudioVision stops importing and an "Out-of-memory" error message appears. This occurs because the OMF Interchange composition is too large. To correct the problem, export from Media Composer in smaller sections as follows:

  - Divide the sequence into smaller segments by duplicating the sequence (perhaps several times) and deleting different portions of each copy.

  - Export and import each segment individually.

  - After the segments are imported, you can edit them together easily and accurately.

The size of the OMF Interchange composition is determined not by the length of the sequence but by its complexity. For example, a short sequence with many edits and tracks might be larger when exported as an OMF Interchange composition than a long sequence with only a few edits and only a few tracks of audio and video.

Transferring a Video Sequence to AudioVision

To transfer a video sequence to AudioVision:

1. Select the material you want to export in one of the following ways:

   - To export specific tracks in a clip or sequence, enable those tracks in the Track Selector panel, and disable all others.

⚠ **When you select specific tracks for export, you must select the option Use Enabled Tracks in the Export Settings dialog box. If no tracks are enabled and you want to export all tracks in the clip or sequence, you must deselect Use Enabled Tracks.**

   - To export a single frame, mark an IN point to export the marked frame from a bin or a monitor, or put the position indicator on the frame you want to export from a clip in the monitor.

- To export part of a clip or sequence, mark IN and OUT points to export the marked range from a bin or a monitor. If you mark an IN point and no OUT point, the system exports from the IN mark to the end of the clip or sequence.

⚠ **When you place IN or OUT marks to determine a frame or range for export, you must select Use Marks in the Export Settings dialog box.**

- To export the entire clip or sequence, deselect the options Use Enabled Tracks and Use Marks in the Export Settings dialog box, and make sure the topmost track is monitored.

▤ *When you export to an OMF file, you do not need to select both the sequence and its source clips. Select only the sequence to export all the necessary information, including reference clips.*

2. Choose Export from the File menu.

   The Export File Type dialog box appears.

Export File Type:

- ○ Avid Log Exchange
- ○ Tab Delimited
- ● OMFI Composition | AudioVision ▼ |
  | Video and Audio ▼ |

  Version | OMFI 1.0 ▼ |
  ☒ With Media

- ○ QuickTime | Video and Audio ▼ |
- ○ Sound | SD2 ▼ |
- ○ Graphic | PICT ▼ |

Using Entire Sequence
Using All Tracks

Audio media will be external to the OMF file,
and if required will be translated into SD2 format.

| Options... | | OK | | Cancel |

3. Select OMFI Composition, and choose AudioVision from the first pop-up menu.

   The system automatically chooses the correct options for OMFI Version 1.0 With Media.

4. Choose an appropriate option from the second pop-up menu:

   • If you want to include the video tracks with the audio, choose Video and Audio.

   • If you do not want to include the video tracks, choose Audio Only.

5. Depending upon how you marked the source material for export, click the Options button and adjust the export settings for Use Marks and Use Enabled Tracks if necessary.

- **Use Marks:** Instructs the system to use IN and OUT marks currently set in the selected media to determine the starting and ending frames for the export. Deselect this option to export the entire clip or sequence.

- **Use Enabled Tracks:** Instructs the system to export only the currently enabled tracks for a selected sequence during the export. Deselect this option if you want to export all tracks in the sequence.

6. Click OK to close Export Settings and return to the Export File Type dialog box.

7. When all the options are listed correctly, click OK.

   A directory dialog box appears with a default file name in the Export As text box.
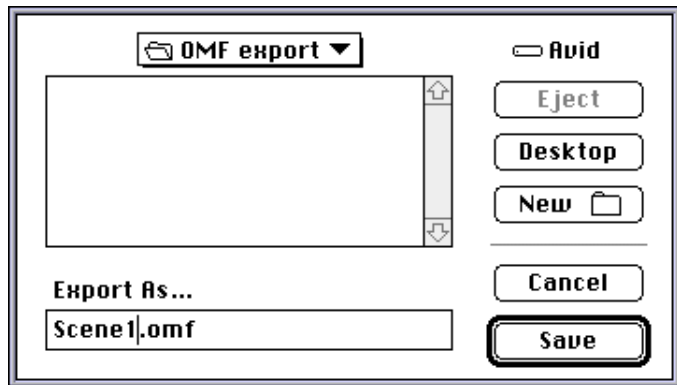
8. (Option) Change the file name if you want (keep the default extension), select the destination folder for the file, and click Save.

   The sequence is exported.

⚠ **Macintosh systems prior to Release 8.1 allow a maximum file size of approximately 2 GB. If you exceed this limit, the file is unusable and the system displays an error message.**

9. Close the application and shut down your system.

10. Remove the drive or diskette containing the OMFI composition and the drive containing the media files, and transport them to the AudioVision system.

📑 *For more information on the correct procedures for connecting and disconnecting drives, see the appropriate hardware guide.*

11. With the AudioVision system turned off, insert or connect the drives and boot the system.

12. Start the AudioVision application and import the composition. For more information, see the *Avid AudioVision User's Guide.*

13. (Option) If you made a digital cut of the video track for the transfer, digitize the tape in AudioVision.

Transferring OMF Files to Pro Tools

You can use OMF Interchange to transfer audio tracks from Media Composer products to Pro Tools for audio sweetening. Procedures and special considerations are described in the following sections:

- To decide whether to consolidate the source sequence prior to export, see **"Choosing Whether to Consolidate Your Media Files" on page 649**.

- To prepare the sequence for more effective export, see **"Preparing Sequences for OMF Export" on page 642**.

- To perform the transfer, see **"Transferring a Project to Pro Tools" on page 651**.

Choosing Whether to Consolidate Your Media Files

Before you export the sequence, you need to decide whether or not to consolidate your media files based on the following scenarios.

Pro Tools and the Avid Composer System on the Same Computer

If you are running Pro Tools and the Avid Composer system on the same computer, you do not need to consolidate your files. You can simply:

1. Shut down and reconnect the hard drive (with the audio files) from the Avid SCSI bus to the Macintosh SCSI bus.

2. Start up and open the Pro Tools session. Pro Tools looks for the associated audio files in the Avid Composer system OMFI MediaFiles folder.

Pro Tools will be able to play back audio files only from drives connected to the Macintosh computer's SCSI bus.

The advantage of this method is that you do not need to consolidate, convert, or copy media files, thereby saving time and effort. The disadvantage of this method is that you must move the hard drive from one bus to another.

Pro Tools and the Avid Composer System on Different Computers

If you are running Pro Tools and the Avid Composer system on different computers, you have two options for handling the media that is referenced in the sequence that you are converting.

• **Consolidate the media files:** Consolidating saves time and disk space by copying only the required media to a designated hard drive. In the process, the system creates smaller media files based on portions of clips used in the sequence.

For more information on consolidating media files, see <u>"Consolidating Media" on page 276</u>.

• **Copy or transport the media files manually from one system to another:** Copying media files to another drive or transporting the drives themselves to another system lets you avoid managing duplicate media files in different locations. If you simply move the files, however, either the OMF Tool or Pro Tools might display a

Where Is dialog box to locate the media (by file name) after it has been copied. You are responsible for knowing the names of the specific media files.

📑 *For more information on transporting media files between systems, see "Methods for Transferring Media Files" on page 666.*

Transferring a Project to Pro Tools

To transfer a project to Pro Tools:

1. Select the material you want to export in one of the following ways:

   • To export specific tracks in a clip or sequence, enable those tracks in the Track Selector panel, and disable all others.

📑 *Pro Tools does not support playback of video transferred from Media Composer products.*

⚠ **When you select specific tracks for export, you must select the option Use Enabled Tracks in the Export Settings dialog box. If no tracks are enabled and you want to export all tracks in the clip or sequence, you must deselect Use Enabled Tracks.**

   • To export a single frame, mark an IN point to export the marked frame from a bin or a monitor, or put the position indicator on the frame you want to export from a clip in the monitor.

   • To export part of a clip or sequence, mark IN and OUT points to export the marked range from a bin or a monitor. If you mark an IN point but not an OUT point, the system exports from the IN mark to the end of the clip or sequence.

⚠ **When you place IN or OUT marks to determine a frame or range for export, you must select Use Marks in the Export Settings dialog box.**

- To export the entire clip or sequence, deselect the options Use Enabled Tracks and Use Marks in the Export Settings dialog box, and make sure the topmost track is monitored.

📄 *When you export to an OMF file, you do not need to select both the sequence and its source clips. Select only the sequence to export all the necessary information, including reference clips.*

2. Choose Export from the File menu to open the Export File Type dialog box.
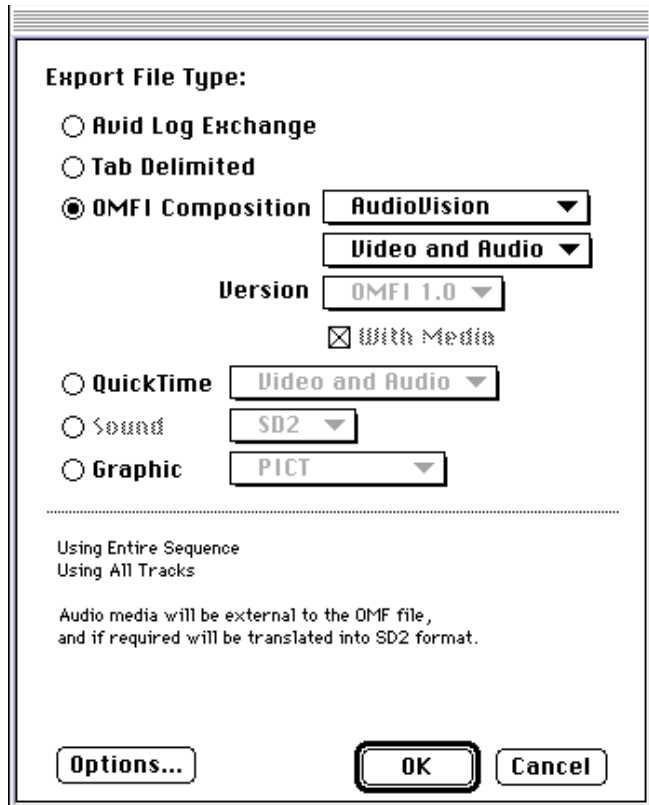
3. Select OMFI Composition and choose SD2 from the first pop-up menu.

The system automatically chooses the With Media option.

4. Choose Audio Only from the second pop-up menu.

📖 *Pro Tools does not support video media exported from the Avid Composer system.*

5. Choose an option from the OMFI Version pop-up menu:

   • If you are transferring to a newer Pro Tools system, choose OMFI 2.0.

   • If you are transferring to an older Pro Tools system that does not support OMFI 2.0, choose OMFI 1.0.

   • If you are not sure which version your system supports, choose OMFI 1.0.

6. Depending upon how you marked the source material for export, click the Options button and adjust the export settings for Use Marks and Use Enabled Tracks if necessary:

   • **Use Marks:** Instructs the system to use IN and OUT marks currently set in the selected media to determine starting and ending frames for the export. To export the entire clip or sequence, deselect this option.

   • **Use Enabled Tracks:** Instructs the system to export only the currently enabled tracks for a selected sequence during the export. To export all tracks in the sequence, deselect this option.

7. Click OK to close the Export Settings dialog box and return to the Export File Type dialog box.

8. When all the options are listed correctly, click OK.

   A directory dialog box opens with a default file name in the Export As text box.
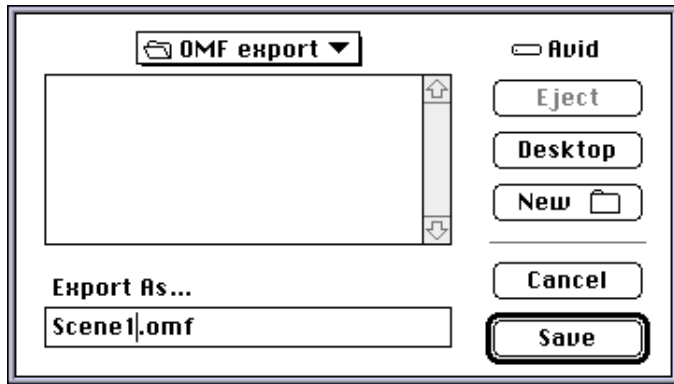
9. (Option) Change the file name if you want (keep the default extension), select the destination folder for the file, and click Save.

The file is exported and appears at the chosen destination.

⚠️ **Macintosh systems prior to Release 8.1 allow a maximum file size of approximately 2 GB. If you exceed this limit, the file is unusable and the system displays an error message.**

10. Copy the OMF file from the Avid Composer system to the Pro Tools system and transfer the media files. For more information, see **"Methods for Transferring Media Files" on page 666**.

11. Use the OMF Tool to convert the exported OMFI file to a Pro Tools Session.

For more information on acquiring and using the OMF tool, visit the OMF Web site at:
http//www.omfi.org

12. Open and save the Pro Tools Session in Pro Tools. For more information, see the Pro Tools documentation.

Using the Media Composer QuickTime Codec

You can speed the process of importing and exporting QuickTime files by using the Media Composer QuickTime codec when you intend to treat the files in a third-party application before reimporting them into Avid Composer products. The following sections describe the codec and procedures for using it:

- To learn more about how the codec works, see **"About the Media Composer QuickTime Codec" on page 655**.

- To prepare a third-party application for working with Avid Composer QuickTime files, see **"Installing the Codec in QuickTime Applications" on page 656**.

- To review specifications for QuickTime export, see the *Avid Media Composer Products Reference*.

- To prepare a sequence for QuickTime export, see **"Preparing to Export a Sequence" on page 629**.

- To perform the export, see **"Exporting with the Media Composer QuickTime Codec" on page 657**.

- To perform an export from a third-party application, see **"Exporting from a Third-Party QuickTime Application" on page 662**.

About the Media Composer QuickTime Codec

This software-based codec creates encapsulated media files for quick export of high-resolution files that are readable within QuickTime applications also equipped with the codec.

📖 *Using the QuickTime codec usually involves maintaining the ITU-R -601 (CCIR 601) standard video dimensions of the media (720 x 486 nonsquare pixels for NTSC, 720 x 576 for PAL) as well as large media file sizes. This codec might not be appropriate for some uses. For example, if the destination of your QuickTime export is a multimedia title, you should use another appropriate codec such as Cinepak.*

The codec allows you to maintain AVRs up to AVR 77. It also speeds the QuickTime import and export processes to a rate of approximately four times real time or better (depending on resolution). The codec provides a vast improvement over the standard QuickTime conversion, which can take as long as 300 times real time or more with full-size, high-resolution clips.

Avid Composer QuickTime files can be quite large, depending on the AVR, and require adequate storage and transfer capacities.

Installing the Codec in QuickTime Applications

After you install Avid Composer Release 7.0 on your system, the new codec is automatically installed in the Extensions folder inside the System Folder. You can copy this extension and install it at other workstations where you are using QuickTime-compatible applications. Once the Media Composer codec is installed on the workstation, you can export files either from the Avid Composer system or from the third-party application for reimport into the Avid Composer system.

You can install the codec on either a Power Macintosh® or non-Power Macintosh system. To install the Media Composer codec on the system where the third-party application resides:

1. Drag the copy of the extension labeled Avid Codec onto the System Folder and release the mouse button.

   A dialog box asks if you would like to install the file in the Extensions folder.

2. Click OK.

3. Restart your system.

   The codec is installed.

If you are having trouble opening or playing the export in a third-party application, increase the memory allocated to the program.

Exporting with the Media Composer QuickTime Codec

To export with the Media Composer QuickTime codec:

1. Select the material you want to export in one of the following ways:

   • To export specific tracks in a clip or sequence, enable those tracks in the Track Selector panel and disable all others.

⚠ **When you select specific tracks for export, you must select the option Use Enabled Tracks in the Export Settings dialog box. If no tracks are enabled and you want to export all tracks in the clip or sequence, you must deselect Use Enabled Tracks.**

   • To export a single frame, mark an IN point to export the marked frame from a bin or a monitor, or put the position indicator on the frame you want to export from a clip in the monitor.

   • To export part of a clip or sequence, mark IN and OUT points to export the marked range from a bin or a monitor. If you mark an IN point and no OUT point, the system exports from the IN mark to the end of the clip or sequence.

⚠ **When you place IN or OUT marks to determine a frame or range for export, you must select Use Marks in the Export Settings dialog box.**

   • To export the entire clip or sequence, deselect the options Use Enabled Tracks and Use Marks in the Export Settings dialog box, and make sure the topmost track is monitored.

▤ *When you export to an OMF file, you do not need to select both the sequence and its source clips. Select only the sequence to export all the necessary information, including reference clips.*

2. Choose Export from the File menu.

   The Export File Type dialog box appears.

```
┌─────────────────────────────────────────────────┐
│ ═══════════════════════════════════════════════ │
│                                                  │
│  Export File Type:                               │
│  ○ Avid Log Exchange                             │
│  ○ Tab Delimited                                 │
│  ⦿ OMFI Composition   │ Standard - AIFC ▼ │     │
│                       │ Video and Audio ▼ │      │
│             Version   │ OMFI 1.0 ▼ │            │
│                       □ With Media               │
│                                                  │
│  ○ QuickTime  │ Video and Audio ▼ │             │
│  ○ Sound      │ SD2 ▼ │                          │
│  ○ Graphic    │ PICT        ▼ │                  │
│  ..............................................  │
│  Using Entire Sequence                           │
│  Using All Tracks                                │
│                                                  │
│                                                  │
│                                                  │
│  [ Options... ]        [ OK ]  [ Cancel ]        │
└─────────────────────────────────────────────────┘
```

3. Select one of the following options:

   • **QuickTime Video and Audio:** Select this option if, for example, you are using an entire clip or sequence in a multimedia project.

   • **QuickTime Video Only:** Select this option if, for example, you are adding effects in a third-party application.

   • **QuickTime Audio Only:** Select this option if, for example, you are using or enhancing audio in a third-party application.

   After you select export options, note that additional current options for the clip or sequence are listed in the lower-third region of the dialog box. The following is an example of a sequence selected for export as a QuickTime file.

Lower-third region of the Export File Type dialog box

Using Entire Sequence
Using Enabled Tracks
Export Both Fields
Destination Size : 640 × 480
Audio Output : Stereo
Audio Sample Rate : Native
Audio Sample Size : 8 bits

Compressor : Media Composer
Color Depth : 24 bits
Spatial Quality : 0
Temporal Quality : 0
Frame Rate : 29.97 FPS
Key frame every 30 frames

[Options...]   [OK] [Cancel]
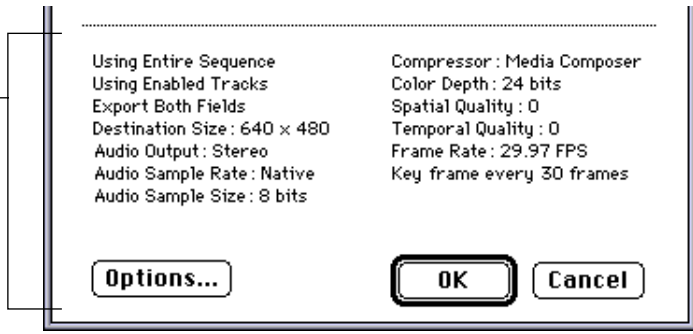
4. If the additional options listed need correction, click the Options button in the Export File Type dialog box and select options in Export Settings dialog box based on the descriptions in **Table 20-2**.

Table 20-2   Export Settings Options for QuickTime Codec

Option	Suboption	Description
Use Marks		Instructs the system to use IN and OUT marks currently set in the selected media to determine starting and ending frames for the export. To export the entire clip or sequence, deselect this option.
Use Enabled Tracks		Instructs the system to export only the currently enabled tracks for a selected sequence during the export. To export all tracks in the sequence, deselect this option.
Use Both Fields		Select this option if you are exporting any of the two-field resolutions (AVR 70B to AVR 77, or AVR 12). This option exports both video fields for higher resolution.
Destination Size	720 x 486 (NTSC) 720 x 576 (PAL)	Full-screen, non-square-pixel dimensions according to ITU-R-601 (CCIR 601) video standards.Use these dimensions, for example, when treating video footage in a third-party application before reimporting into the Avid Composer system.
Audio Output	Mono	Pans all tracks to center on export.
	Stereo	Exports all even-numbered tracks to track 1 and all odd-numbered tracks to track 2.

Table 20-2   Export Settings Options for QuickTime Codec

Option	Suboption	Description
Audio Sample Rate	Native Rate	The native rate of the chosen audio media (44.1 kHz or 48 kHz).
	22.254 kHz (Std Macs)	Half the sample rate of 44.1-kHz media for playback on standard Macintosh models.
	22.050 kHz (AV Macs)	Half the sample rate of 44.1-kHz media for playback on AV (Audio/Video enabled) Macintosh models.
	11.127 kHz	One-quarter the sample rate of 44.1-kHz media for playback on standard Macintosh models.
	11.025 kHz	One-quarter the sample rate of 44.1-kHz media for playback on AV Macintosh models.
Audio Sample Size	8 bits	Exports an 8-bit audio sample size for use in third-party systems that do not support 16-bit; also used to minimize the data through-put requirements (for example, to improve playback in multimedia projects).
	16 bits	Exports a 16-bit audio sample size (currently the industry standard bit rate for digital audio).
Create Movie Preview		Creates a QuickTime poster (a still-frame preview image) for your movie (slows the export process).
Cross-Platform Movie		Creates a single-fork, cross-platform compatible movie that can be opened on both the Macintosh and the PC for use in cross-platform multimedia development.
Compression Settings		This button appears when Use Source Compression is not selected. Click this button to open the Compression Settings dialog box. For more information, see the *Avid Media Composer Products Reference*.

5. Click the Compression Settings button in the Export Settings dialog box and select options in the Compression Settings dialog box based on descriptions given in **Table 20-3**.

Table 20-3   Compression Settings Options for the QuickTime Codec

Option	Suboption	Description
Compressor	Media Composer	Creates encapsulated media files for quick export of high-resolution files that are readable within QuickTime applications also equipped with the codec.
		Exporting with the Media Composer codec does not cause any loss in quality because the codec maintains the identical media data. However, the quality cannot be better than the original resolution of the digitized media.
Quality		If you selected the Media Composer codec, when you click the quality slider and drag it, a dialog box appears. This dialog box allows you to select another AVR.
		If you change the AVR, when you click OK to close the Compression Settings dialog box, another dialog box allows you to decide whether to accept the new AVR or maintain the original AVR.
		Because the Media Composer codec uses the AVR of your original source files, selecting another AVR requires conversion of the media and slows down the export process considerably. Maintain the AVR of the source media whenever possible.
Motion		Choose 29.97 to maintain NTSC video frame-rate standards.

6. Click OK to close the Compression Settings dialog box and return to the Export Settings dialog box.

7. Click OK to close the Export Settings dialog box and return to the Export File Type dialog box.

8. When all options are listed correctly in the Export File Type dialog box, click OK.

   A directory dialog box opens with a default file name in the Export As text box based on the file type.
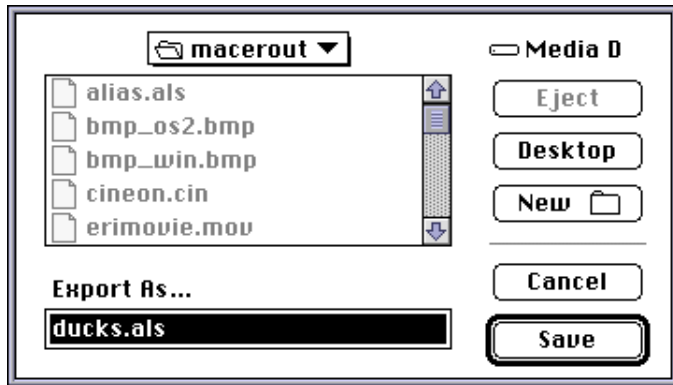
9. (Option) Change the file name if desired.

📄 *If you are transferring the files for use in a third-party application, keep the default extension to avoid conflicts. Also, avoid names that include spaces or special characters.*

10. Select the destination folder for the file and click Save.

The file is exported and appears at the chosen destination.

⚠️ **Macintosh systems prior to Release 8.1 allow a maximum file size of approximately 2 GB. If you exceed this limit, the file is unusable and the system displays an error message.**

📄 *If a power failure or mishap occurs during the export process, the entire file is unusable. You need to repeat the export process.*

Exporting from a Third-Party QuickTime Application

Exporting from a third-party QuickTime application by using the Media Composer QuickTime codec and the default Avid Composer system frame size allows you to speed the process of importing back into the Avid Composer system to approximately three to four times real time (video only).

To export Avid Composer files from a QuickTime-compatible application for import (or reimport) into the Avid Composer system:

1. Make sure the Avid codec is installed in the System Folder's Extensions folder.

2. Conduct the export procedure according to the manual included with the particular software.

3. When you get to the step where the standard QuickTime Create a Movie dialog box appears, select the option Use Source Compression.

If you select another frame size, the Avid Composer system will not import the file quickly using the Media Composer codec.

4. Complete the export according to the procedures used by the particular software.

Exchanging Audio Media Files Between Systems

You can transfer audio media files directly from the OMFI MediaFiles folder for use in any third-party application that supports the AIFF, AIFC, or SD2 formats:

- To identify the appropriate media files in the OMFI MediaFiles folder, use the Media Tool. For more information, see **"Finding a Related Media File" on page 281**.

- To convert some or all of the media files on a mixed project to either the SD2 or AIFF format for direct transfer to a third-party application, choose the desired format when exporting the master clips from the bin. For more information on exporting audio files, see **"Exporting Frames, Clips, or Sequences" on page 631**.

- To copy the selected files quickly onto a target drive, use the Consolidate feature. For more information, see **"Consolidating Media" on page 276**.

- To transfer the files, transport them on a removable or fixed drive. For more information, see .

⚠ **You cannot transfer audio media files that have been altered in a third-party application directly into the OMFI MediaFiles folder on an Avid Composer system.**

Transferring a Project to Another Media Composer Product

This section describes basic steps for transporting files with a removable storage device.

Compatibility Requirements for Transfer

When you transfer a project to another Avid Composer system, make sure that:

- The memory allocation of the Avid Composer system is similar in both systems.

- The AVRs are compatible between systems.

- The release of the Avid Composer system on each system is compatible. See the *Avid Media Composer and Film Composer Release Notes* for a complete description of compatibility issues between releases.

Transferring the Project

There are two basic methods for transferring projects between Avid Composer systems:

- Back up the project files to a 3.5-inch diskette, and transport the media files on a removable storage device.

- Send sequences, clips, or entire projects over a high-speed network using AvidNet.

For more information on using AvidNet, see the AvidNet Peer-to-Peer Setup and User's Guide. *If you would like to purchase AvidNet, contact your Avid sales representative.*

To transfer a work in progress and associated media to another Avid Composer system:

1. (Option) Consolidate the media for the project onto an appropriate drive for transfer to the other system.

   • For more information on consolidating, see **"Consolidating Media" on page 276**.

   • For more information on removable storage devices, see **"Recommended Storage Devices" on page 666**.

⚠ **Do not rename the folders named OMFI MediaFiles located on the media drive. The target Avid Composer system uses the folder names to locate the media files.**

2. Copy the project folder and any settings files you want to maintain at the new location onto a 3.5-inch diskette. For more information, see **"Backing Up Your Work" on page 42**.

3. Close the Avid Composer application and shut down your system.

4. Remove the drives containing the media, and take these and the 3.5-inch diskette to the new location.

5. With the system turned off at the new location, insert or connect the drives and boot the system.

6. In the Finder, copy the Project folder and any settings to the Avid drive. For more information, see **"Moving Projects and User Profiles from Another System" on page 28**.

7. Start the Avid Composer application, open the project, and resume work.

The Avid Composer system will reconstruct the MediaFiles database the first time you launch the application to incorporate the new media into the system's internal directory.

Methods for Transferring Media Files

The fastest methods for transferring media files between systems involve either transporting removable storage devices or sending your material over a high-speed network using AvidNet. These methods and others are described in the following sections.

Recommended Storage Devices

The following is a list of storage devices, and related restrictions, to consider for the transfer of media files:

- **Removable hard drive:** Both the Avid Composer system and the target system must have compatible RMAG XL or MediaDock chassis. Both systems should be running the same version (latest) of the AVIDdrive Utility.

- **Fixed hard drive:** Both the Avid Composer system and the target system must have compatible device drivers. Both systems should be running the same version (latest) of the AVIDdrive Utility.

- **Avid DLT (digital linear tape) drive:** Both the Avid Composer system and the target system must have compatible versions of AVID/MEZZO archive software.

If you are transferring media from striped drives, make sure the other system supports striped drives. Check the Extensions folder for the AVIDstripe™ extension.

Using AvidNet

If your facility is equipped with AvidNet, you can simplify and speed the exchange of media between workstations by sending your material over a network by using the AvidNet Transfer Tool and the Inbox located in the Tools menu.

For more information on AvidNet, see the AvidNet Peer-to-Peer Setup and User's Guide. If you would like to purchase AvidNet, contact your Avid sales representative.

Other Network Transfer Methods

Other methods of file transfer include:

- AppleShare®: You can transfer files between Macintosh systems by using Macintosh file sharing or an AppleShare server. See your Macintosh documentation for more information.

  From UNIX® systems to Macintosh systems, you can use programs such as Xinet® K-AShare™ to mount UNIX volumes on a Macintosh desktop.

- Internet File Transfer Protocol (FTP): You can transfer files between networked systems by using TCP/IP and FTP, including transfer from UNIX, PC, or other platforms. For transferring from Silicon Graphics systems to Avid Composer systems by using Fetch, see the Avid Technical Note, "Using Fetch to Transfer OMF Files," available through Avid Customer Support.

- To transfer audio media files back into a Avid Composer product, use the import procedures. For more information, see **Chapter 8**.

⚠ **You cannot transfer audio media files that have been altered in a third-party application directly into the OMF MediaFiles folder on an Avid Composer system.**

APPENDIX A

Using AudioSuite Plug-Ins

This appendix describes how to use the AudioSuite Plug-Ins. Access the Plug-Ins by choosing AudioSuite from the Tools menu. The following illustration shows the AudioSuite Plug-In Window.

Plug-In Selection pop-up menu

Drive Selection pop-up menu

Status display
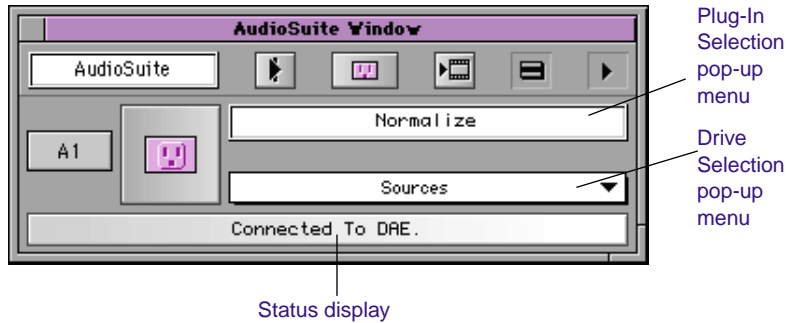
For details on installing and accessing the Plug-Ins, see **Chapter 16**.

AudioSuite Plug-Ins

The following basic plug-ins are installed automatically as part of the Avid Composer system software installation:

- Invert - Inverts the polarity (phase of the audio file).

- Duplicate - This plug-in does not work on Avid Composer system audio files.

- Normalize - Finds the peak value in the source audio file and scales the entire file proportionally to that maximum value.

- Gain - Same as normalize, but allows positive or negative gain adjustment.

- Reverse - Rewrites the selected audio in reverse.

- DC Offset Removal - Removes an audio artifact that is common in digital audio files. A DC offset is caused by poorly calibrated A/Ds (analog to digital converters), and can produce clicks and pops on clip edit transitions if not removed.

- Pitch Shift - Change pitch with or without changing length.

The following sections give a brief overview of each plug-in, and where appropriate, describe how to use the plug-in.

Invert

The Invert Plug-In reverses the polarity of the selected audio. All positive sample amplitude values are made negative, and all negative amplitudes are made positive. This process is useful for permanently altering the phase (polarity) relationship of tracks. Inverting can be useful when mixing because it alters frequency response between source tracks recorded with multiple microphones, and also allows you to correct for audio that was recorded out of phase.

Normalize

In cases where a sound file has been recorded with too little ampli-
tude, or where volume is inconsistent throughout the duration of a
sound file (as in a poorly recorded narration), the Normalize function
ensures that the inherent dynamics of the performance remain
unchanged while the overall volume level of the passage is raised.

In addition to the standard AudioSuite parameters (described earlier
in this chapter), the Max Peak At controls lets you specify how close to
maximum level (the clipping threshold) the peak level of your selec-
tion/file will be boosted. You can enter this in three ways:

- By entering a numeric decibel value below the clipping threshold

- By entering a percentage of the threshold

- By adjusting the on-screen slider

Editing any of these controls automatically calculates the equivalent
value in the others.

To configure the Normalize parameters:

1. Enter the amount of boost you want applied during the Normalize
   process.

2. To set a specific decibel amount below maximum, double-click
   and enter that value in the Max Peak at: (dB) field.

3. To set the amount of normalization as a percentage of maximum,
   enter the desired percentage in the Max Peak at: (%) field. To man-
   ually set the amount, click and adjust the Max Peak slider (hold
   down the Command key to fine-adjust).

Gain

Gain allows you to boost or lower amplitudes in a file or selection by a specified amount. The Change Gain command is ideal for smoothing out undesirable peaks and other dynamic inconsistencies.

To configure the Gain parameters, do the following:

- Enter the new level as a decibel amount (dB) or percentage (%) by double-clicking on the respective field and entering a new value.

- Use the slider to adjust the Gain manually (hold down the Command key while dragging the slider to fine-adjust).

Reverse

Reversed sounds are useful effects in many music and film/video projects. The Reverse Plug-In lets you perform this type of processing very easily.

DC Offset

The DC Offset Plug-In removes DC offset from your audio files. The term "DC Offset" describes a very specific type of audio artifact which infrequently appears in digital audio signals.

DC Offset Plug-Ins can be identified in a waveform overview because they appear to have a near-vertical fade in with a constant or "steady-state" offset from zero, when the file is actually "silent" (it contains no audible audio). The DC Offset Plug-In can help remove (or at least reduce) the DC Offset from your source audio files.

Pitch Shift

The AudioSuite Pitch Shift Plug-In allows you to adjust the pitch of any source audio file with or without a change in its duration. This is a very powerful function which essentially allows sounds to be transposed a full octave up or down in pitch with or without altering playback speed.
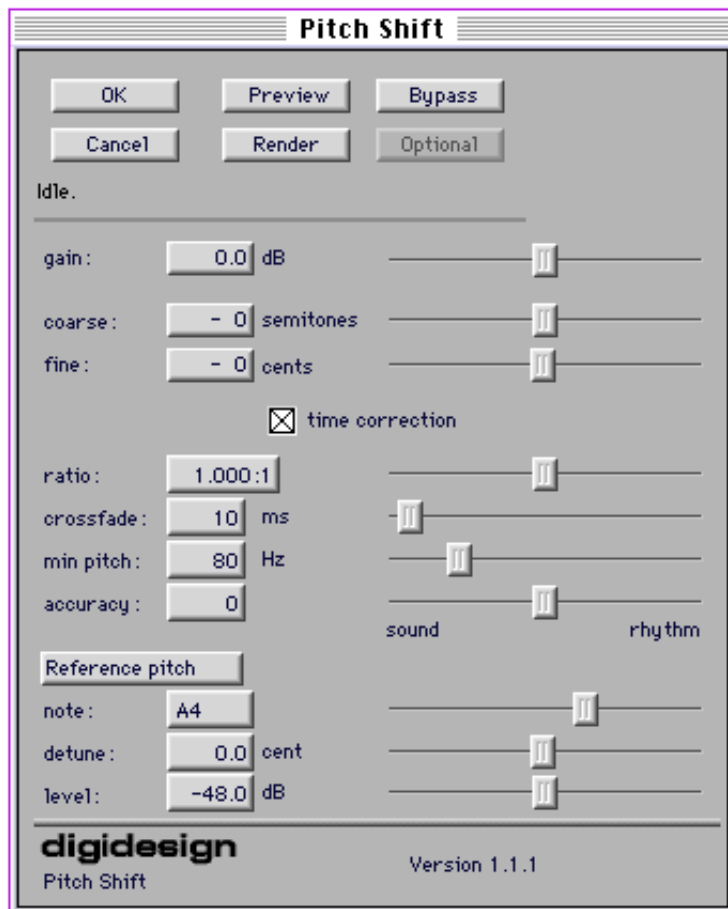
Edit the Pitch Shift parameters by double-clicking and typing into any the Destination fields (tempo, bar:beats:ticks, or time sig), or by clicking and dragging the coarse, fine or ratio sliders. All Pitch Shift Plug-In controls are linked so that changing one changes the others.

Gain

The gain controls set the input level, in tenths of a dB. This should be set so that the Plug-In can adequately handle amplitude peaks in the selection. Dragging the slider to the right increases gain, dragging to the left decreases gain.

Coarse and fine

Adjust the pitch by dragging either of the two faders, or by typing values in the boxes below them. The Coarse slider transposes in semitones (half steps); the Fine slider transposes in cents (hundredths of a semitone).

Time Correction

This box must be checked for Avid Composer systems.

⚠ **You cannot use plug-in options that perform time compression/ expansion because the output would have a different sample duration than the original file.**

Ratio

The Ratio slider lets you set the amount of transposition (pitch change). Moving the slider to the right raises the pitch of the processed file, while moving the slider to the left decreases its pitch. Hold down the Command key while dragging the slider to fine-adjust.

Crossfade

This slider allows you to manually adjust the crossfade length in milliseconds to optimize performance of the Pitch Shift Plug-In according

to the type of audio material you are processing. The Pitch Shift Plug-In achieves pitch transposition by processing very small portions of the selected audio material and very quickly crossfading between these alterations in the waveform of the audio material.

Crossfade length essentially affects the amount of "smoothing" performed on audio material to prevent audio artifacts such as clicks when the audio is looped to generate the desired pitch shift. In general, small narrow-range pitch changes require longer crossfades while larger transpositions require smaller crossfades. The disadvantage to long crossfade times is that they smooth the signal, including any transients. While this can be desirable for audio material such as vocals, it is not appropriate for material with sharp transients such as drums or percussion.

The default setting for this parameter is Auto (full left), in which crossfade times are set automatically, according to the settings of the coarse and fine controls. This setting should be sufficient for most applications. However, by using this slider, you can manually adjust and optimize crossfade times if necessary. For audio material with sharper attack transients, use smaller crossfade times. For audio material with softer attack transients, use longer crossfade times.

Min Pitch

The Min Pitch slider lets you select the minimum, or lowest, pitch that will be used in the Plug-In's calculations during the Time Compression/Expansion process. The slider has a range of 40 Hz to 400 Hz. By being able to control the minimum pitch, you can focus the Time Compression/Expansion process for maximum efficiency — it all depends on the audio's spectral shape. This slider should be set lower when processing bass guitar or other instruments with a similarly low range.

Set the min pitch higher when processing other instruments such as snare drums, violins, and other higher range instruments/sounds. After reading the following sections, begin experimenting with combinations of the other fine-tune controls in relation to the min pitch slider.

Accuracy

Use the accuracy slider to prioritize the processing resources allocated to audio quality (sound) or timing (rhythm). Moving the slider toward sound generally results in better sonic quality and fewer audio artifacts. Moving the slider toward rhythm puts the emphasis on keeping the tempo consistent. When working with loops, listen carefully until you find the setting which keeps timing solid within the region. Start and end times will be precise, but the perception of beats may be "shuffled" if the accuracy slider's rhythm setting is too low.

Reference Pitch

Generates a sine wave tone that you can adjust to match a selected portion of audio material, then use as an audible reference when pitch-shifting other audio material in your session.

To use the reference pitch feature:

1. Select the audio material you wish to use as a pitch reference. Click the preview button to begin playback of the selected audio.

2. Click the Reference Pitch button to activate the reference sine wave tone.

3. Adjust the note and detune settings to match the reference tone to the pitch of the audio playback. Adjust the level setting to change the relative volume of the reference tone. It may also be helpful to toggle the reference pitch on and off to compare pitch.

4. Select the audio material to be pitch shifted.

5. Adjust the coarse and fine Pitch Shift controls to match the pitch of the audio playback to the reference pitch.

Index

Numerics

A

X

Z