Avid® Media Composer®

Getting Started Guide
Release 7.0

Avid

tools for storytellers™

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FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Ref: C97029a

Canadian ICES-003

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Declaration of Conformity (according to ISO/IEC Guide 22 and EN 45014)

Application of Council Directives: 73/23/EEC, 89/336/EEC. Standards to which Conformity is Declared: EN 60950: 1992 + A1, A2: 1993, IEC950: 1992 + A1, A2: 1993 Mod., CISPR 22:1985 / EN 55022:1988 Class A (1), EN 50082-1, IEC801 -2, -3, -4. Manufacturer's Name: Avid Technology Inc., 1925 Andover Street, Tewksbury, MA 01876, USA. European Contact: Nearest Avid Sales and Service Office or Avid Technology Int'l B.V., Sandyford Business Center, Unit 3, Dublin 18, Ireland. Type of Equipment: Information Technology Equipment. Product Name: Avid Editing System, PCI Media Composer, MCXpress for Macintosh, Film Composer. Base Model Numbers: 400S, 800, 900, 1000, 4000, 8000, MC Offline, Media Station. Product Options: All. Year of Manufacture:1997. (1) The product was tested in a typical Avid Media Composer configuration.

I the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

George R. Smith, Quality Manager Ref: C97029a, C97030a

Trademarks

Footage

Bullfrog, Duckhead, and Rain Forest footage was provided courtesy of Fireside Films, Atlanta, GA; Canyonlands and Flowers footage was provided courtesy of the National Park Service, Harpers Ferry, VA; Softrock (Fields of Gold) footage was provided courtesy of SouthPaw Productions Chicago, IL. Peter Hawley-Director, Jim Fiester-Director/Editor.

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Preface

This guide provides information about how to get started using your Avid® Media Composer® system.

Who Should Use This Manual

This guide is written for video and film editors who are learning to use an Avid Composer system.

About This Manual

The Table of Contents that precedes this preface lists all topics included in the book. They are presented with the following overall structure:

- Chapter 1 explains how to turn on your system, install the tutorial media, and use the online help and online documentation.
- Chapter 2 presents basic editing concepts and walks you through a typical workflow scenario.
- The main body of the guide presents introductory material on various aspects of your work, followed in most chapters by a tutorial

section. Step through the tutorial for guided hands-on experience with your Media Composer system.

- A detailed Index helps you quickly locate specific topics.

This guide should get you started. For more information, see the online help and the *Avid Media Composer User's Guide.*

Symbols and Conventions

The Media Composer documentation uses the following special symbols and conventions:

1. Numbered lists, when order is important.
    a. Alphabetical lists, when the order of secondary items is important.

- Bulleted lists, when the order of the items is unimportant.
    - Indented dashed lists, when the order of subtopics is unimportant.

⌘ This symbol refers to the Apple or Command key. Hold down the Command key and another key to perform the desired keyboard equivalent.

Look here in the margin for tips.

In the margin you will find tips that help you perform tasks more easily and efficiently.

A note provides important related information, reminders, recommendations, and strong suggestions.

A caution means that a specific action you take could cause harm to your computer or cause you to lose data.

A warning describes an action that could cause you physical harm. Follow the guidelines in the manual or on the unit itself when handling electrical equipment.

If You Need Help

If you're having trouble using Media Composer, you should:

1. Retry the action, carefully following the instructions given for that task in this guide.
2. Check the documentation that came with your hardware for maintenance or hardware-related issues.
3. Check the Services & Support section of the Avid web site at http://www.avid.com for the latest FAQs, Tips & Techniques, Avid Answers, and other Avid online offerings.
4. Check the Avid Bulletin Board, "Avid Online," for information on product and user conferences. If you do not find the solution to your problem, you can exchange information with other Avid customers and Customer Support representatives.
5. Contact Avid Customer Support at 800-800-AVID (2843).

Related Information

The following documents provide more information about Media Composer:

- *Avid Media Composer User's Guide*
- *Avid Media Composer Products Reference*
- *Avid Media Composer and Film Composer Effects Guide*
- *Avid Media Composer Products Site Preparation*
- *Avid Media Composer Products What's New for Release 7.0*
- *Avid Media Composer Products Quick Reference*
- Avid Media Composer Products Online Documentation

You can get help while you use your Composer system from the online help.

If You Have Documentation Comments

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E-mail your documentation comments to Avid Technology at

TechPubs@avid.com

Please include the title of the document, its part number, revision, and the specific section you're commenting on in all correspondence.

CHAPTER 1

Introduction

This chapter sets you up to use this guide and work through the tutorial sections that teach you the basics of your Avid Composer system. This chapter contains the following sections:

Using this Guide

This guide introduces you to Media Composer. It presents the essential features of the system; most chapters also contain hands-on tutorial sections so you can practice what you learn.

Using the Tutorial

The self-paced tutorial sections included in this guide are designed as guided Avid edit sessions using the basic features of the Media Composer system. In the tutorial sections, you're going to edit a one-minute sequence about a company in Amesbury, Massachusetts that makes small fishing boats called *dories*.

The footage for the sequence is on the Media Composer Tutorial CD-ROMs that came with your system. They contain digitized media that is ready for you to use.

The instructions in this tutorial take you through each step of the edit process:

- Starting a project (in **Chapter 3**)
- Getting ready to edit (in **Chapter 5**)
- Editing a rough draft (in **Chapter 6**)
- Refining the edit (in **Chapter 7**)
- Adding effects, titles, and other finishing touches to the sequence (in **Chapter 8** and **Chapter 9**)
- Preparing output (in **Chapter 10**)
- Backing up (in **Chapter 11**)

This tutorial assumes a basic familiarity with the Macintosh® computer. If you have never used a Macintosh system, please refer to the Macintosh Getting Started tutorial.

You don't need any previous experience with the Avid Composer system. The terms and techniques needed for each tutorial section are in each chapter. However, it will help to read **Chapter 2** of this manual before starting any of the tutorial sections. You can also use the Avid Composer Help (see **"Using Online Help" on page 31**) and online books (see **"Using Online Documentation" on page 33**) for more information.

This tutorial takes approximately four hours. Before you begin, you need:

- An installed Avid Media Composer system

  See the *Avid Media Composer Products Setup Guide* if you have not yet set up your Media Composer system. See the *Avid Media Composer and Film Composer Release 7.0 Release Notes* if you need to install the Media Composer software.

- The Boat Shop media and project files on the Media Composer CD-ROMs

Depending on your level of expertise in editing on Avid systems, you may choose to go through the tutorial in either of two ways.

- If you have no experience with Media Composer or other Avid systems, you should go through the entire tutorial.
- If you have used other Avid systems, you may want to read certain lessons to understand the specific features of Media Composer, and complete the tutorials for other lessons.

You can do this tutorial in one or several sessions. Each section is self-contained.

What You Need

The CD-ROMs packaged with your Media Composer system include all files necessary to do this tutorial:

- **Read Me First file —** contains the installation instructions for each of the files on the CD-ROMs. These instructions also appear in **"Installing the Media Composer Tutorial Files" on page 25**.
- **MediaFiles folder —** contains the digitized files you need for the tutorial. You need to copy these files onto your external media drive.
- **Composer Projects folder —** contains the project and bins you need for the tutorial. You need to copy these files onto your Avid drive.

Turning on Your Equipment

Begin your edit session by turning on the components of your Media Composer system. If any part of your system fails to turn on, make sure its electrical cord is plugged snugly into an appropriate electrical outlet or power strip. See the *Avid Media Composer Products Setup Guide* for information on setting up your system.

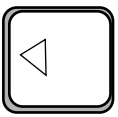
If you fail to follow the proper sequence for starting up your system, you could damage your Macintosh computer and/or storage drives.

Always turn on the devices as follows:

1. **Fixed-storage drives:** Turn on fixed-storage drives before starting the computer. Allow 10 to 15 seconds for the drives to spin up to speed before starting the Macintosh.
2. **Other peripheral hardware:** Turn on all other peripheral units except the Macintosh. This includes:
    - Monitors and speakers.

- Tape decks and/or additional autoassembly configurations (switcher, time-base corrector, and so on) if you plan to digitize or conduct an autoassembly.
- Digidesign® audio interface hardware, if your system includes these. Turn on the Digidesign hardware and black burst generator in order to maintain proper sync between audio and video while digitizing and editing.

The black burst generator that accompanies the Digidesign hardware should already be turned on if it is connected to an active power strip.



3. **The Macintosh:** Press the Power On key located at the upper right corner of the keyboard.

   When you start the Macintosh:

   - You hear a tone that means the hardware is operational.
   - The computer goes through a self-check routine. If the Macintosh passes all of its internal logic tests, the smiling Macintosh icon appears.

For information on Macintosh features, such as the desktop and icons, see your Macintosh documentation.

   - The Avid startup screen appears and the initialization process begins.

- The Macintosh desktop appears.

To avoid damage, do not disconnect or turn off hard disks or individual disk drives while the Macintosh is on.

Installing the Media Composer Tutorial Files

The Media Composer Tutorial CD-ROMs contain all of the files you need for the tutorial sections of this guide. It takes about 30 minutes to copy the media files from the CD-ROM to the external hard drive.

The CD-ROMs contain several versions of the tutorial media files digitized at different Avid Video Resolutions (AVRs). You must select the appropriate AVR for your Media Composer product model. Table 1-1 shows the correct tutorial media for your product. You also need to have enough free space on your external hard drive to accommodate the media sizes listed in the table.

Table 1-1 Choosing Media

If you have:	Use:	On the CD-ROM named:	Media Size
Media Composer Offline	AVR 3s	Avid Media Composer Products Offline Tutorial (PAL and NTSC)	260 MB
Media Composer online models with striped drives	AVR 70	Avid Media Composer Products Online Tutorial (PAL) Disks 1 and 2	1100 MB
		Avid Media Composer Products Online Tutorial (NTSC) Disks 1 and 2	970 MB
Media Composer online models without striped drives	AVR 3s	Avid Media Composer Products Offline Tutorial (PAL and NTSC)	260 MB

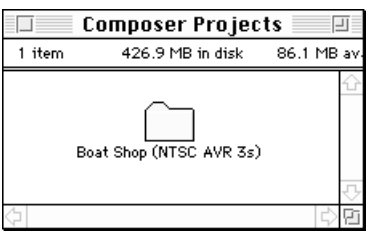
Installing AVR 3s Tutorial Files

To install the tutorial files for AVR 3s:

1. Insert the Avid Media Composer Products Offline Tutorial (PAL and NTSC) and double-click its icon.
2. Double-click the folder at the top level of the CD-ROM.
3. The AVR 3s CD-ROM has two top-level folders. Choose NTSC or PAL.

   You should see two folders labeled Composer Projects and OMFI MediaFiles.
4. Do one of the following:
   - If there is an existing OMFI MediaFiles folder on the external media drive, open the OMFI MediaFiles folder on the CD-ROM, choose Select All from the Edit menu, and drag the contents to the OMFI MediaFiles folder on the external media drive.
   - If there is no OMFI MediaFiles folder on the external media drive, drag the OMFI MediaFiles folder from the CD-ROM to the external media drive.

   The files are loaded on the drive.
5. Do one of the following:
   - If there is a Composer Projects folder on the Avid drive, open the Composer Projects folder on the CD-ROM and drag the Boat Shop folder to the Composer Projects folder on the Avid drive.



- If there is no existing Composer Projects folder on the drive, drag the Composer Projects folder on the CD-ROM to the Avid drive.

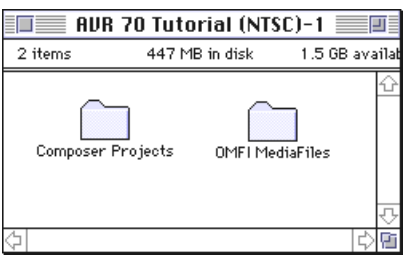
Installing AVR 70 Tutorial Files

The tutorial files for AVR 70 require two CD-ROMs for NTSC and two for PAL. The procedure is the same for installing either type.

To install the tutorial files for AVR 70:

1. Insert the CD-ROM labeled Avid Media Composer Products Online Tutorial (PAL) Disk 1 or Avid Media Composer Products Online Tutorial (NTSC) Disk 1 and double-click its icon.
2. Double-click the folder at the top level.

   You should see two folders labeled Composer Projects and OMFI MediaFiles.

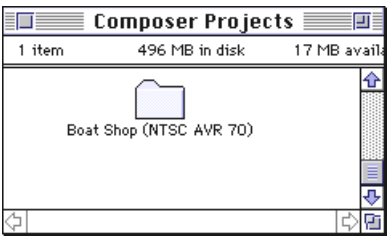


3. Do one of the following:
   - If there is an existing OMFI MediaFiles folder on the external media drive, open the OMFI MediaFiles folder on the CD-ROM, choose Select All from the Edit menu, and drag the contents to the OMFI MediaFiles folder on the external media drive.
   - If there is no existing OMFI MediaFiles folder on the external media drive, drag the OMFI MediaFiles folder from the CD-ROM to the external media drive.

The files are loaded on the drive.

4. Do one of the following:

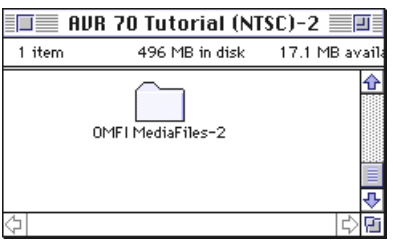
   - If there is an existing Composer Projects folder on the Avid drive, open the Composer Projects folder on the CD-ROM and drag the Boat Shop folder to the Composer Projects folder on the Avid drive.



   - If there is no existing Composer Projects folder on the Avid drive, copy the Composer Projects folder on the CD-ROM to the Avid drive.

5. Eject the CD-ROM in the drive.
6. Insert the CD-ROM labeled Avid Media Composer Products Online Tutorial Disk 2 and double-click its icon.
7. Double-click the top folder.

   You should see a folder labeled OMFI MediaFiles-2.



8. Choose Select All from the Edit menu, and drag the contents to the OMFI MediaFiles folder on the external media drive.

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.

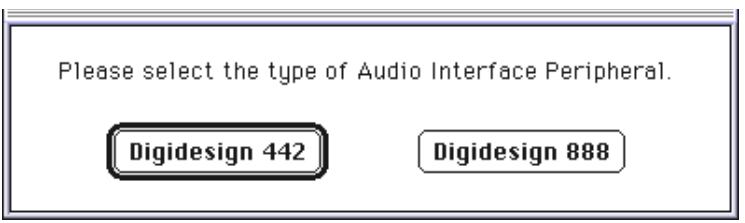
The application will not launch properly if the icon is moved out of the Media Composer folder. To launch the application from a convenient location, Avid recommends that you create an alias and place it in a convenient location.

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. The Avid splash screen appears.

Specifying Audio Hardware

The first time you launch the application, a dialog box appears.



Check your audio hardware configuration, then do one of the following:

- If your audio hardware is labeled Audio Interface, click Digidesign 442 in the dialog box.
- If your audio hardware is labeled 8 Channel Audio Converter, click Digidesign 888.

The Avid splash screen returns, then the License Agreement dialog box appears.

Electronic Licensing

To accept your Avid Composer product license electronically:

1. Read the License Agreement, then click the Accept button or the Decline button at the bottom of the screen.

   The agreement appears the first several times you launch the application. After several launches, a new button appears at the bottom of the screen.

2. If you do not want to see the license agreement again, click the Accept and Don't Show Again button.

   A dialog box appears.

3. Enter the name of your organization in the dialog box, and click OK.

   After the application starts, the Project Selection dialog box appears, as described in **"Opening a Project" on page 51**.

How to Proceed

The following are a few tips for taking full advantage of Media Composer documentation and other resources:

- Complete the tutorial sections in this book before starting a project.
- Begin learning about basic procedures by using the default settings. As your confidence builds, begin to explore additional procedures and settings.

- Keep the *Avid Media Composer and Film Composer Quick Reference* on hand during sessions to speed the use of functions, shortcuts, keyboard commands, menus, and icons.
- Make a habit of reading Avid's newsletters, mailings, and other trade publications.
- Make use of additional training resources provided by Avid whenever possible, such as classes and instructional videotapes. For more information, contact Avid at 800-867-2843.
- Check the Avid web site at www.avid.com/services/training/training.html for listings of courses, schedules, and locations.

Using Online Help

This release supports online help for your Avid Composer system. The online help is automatically installed with the application.

You can access online help in two ways:

- From the question mark menu in the upper right corner of your screen, choose Composer Help.
- As context-sensitive help:
  a. Position the cursor on the window for which you want help.
  b. Make sure your Avid Composer system is active.
  c. Press the Help key on the keyboard.

     A window appears representing the tool or feature for which you want help.
  d. Click on different aspects of the tool or feature to see pop-up help.

If no specific help for the window exists, the Topics window appears.

Procedures are displayed in yellow How To windows; background information and illustrations are displayed in white Reference windows.

The following sections explain how to use the help system. For more information, see “Online Help:overview” in the online help index.

Three Ways of Finding Topics in Help

To find a topic in Help:

1. Open the Topics window.
2. Do one of the following:
   - Click the Contents tab to view lists of topics in the main help window.
   - Click the Index tab to open the Index window and view a list of index entries.
   - Click the Find tab to search for words or phrases that may be contained in a help topic.

Finding Topics with the Index

To find topics using keywords in the Index:

1. Click the Index tab to display the Index panel.
2. In the text box, type the keyword you’re interested in or choose a topic from the list.
3. Click the Display button to view the topic or double-click the topic name in the Index scrolling list.

Searching with the Find Feature

To search for words in a help file:

1. Click the Find tab to display the Find panel.

2. In the text box, type a word you want to find. Use the pop-up menus to change the way in which you search for words.
3. If you'd like to search for additional words, click the More Choices button.
4. Click the Search button. Topics that are found are displayed in the list.
5. Choose a topic in the list (if any were found) and click the Display button.

Don't type quotes or asterisks in the text boxes.

Using Online Documentation

The Media Composer Products Online Publications are a collection of books on CD-ROM. They include:

- *Avid Film Composer User's Guide*
- *Avid Media Composer User's Guide*
- *Avid Media Station User's Guide*
- *Avid Media Composer and Film Composer Effects Guide*
- *Avid Media Composer Products Reference*

The books are in PDF format. You can read them on the screen or print out all or part of them.

CHAPTER 2

About Media Composer

This chapter provides a general overview of Media Composer's capabilities. It introduces basic concepts along with some tips for the beginning user in the following sections:

About Media Composer

Media Composer streamlines the editing process by combining the traditional tools of postproduction, the creative control of digital editing, and the simplicity of the interface.

More than a method of saving time and money, nonlinear editing introduces a whole new style of craftsmanship into the postproduction suite by allowing greater experimentation in the composition of full-motion visual media.

In addition, Media Composer blends the traditional benefits of previsualization familiar to the conventional offline editor with the advanced production tools and image quality of high-end online production.

Editing Basics

The unique nature of nonlinear editing — and the specific features of the Media Composer system — suggest a new way of approaching the process of editing and the flow of your work on projects, as described in this section.

About Nonlinear Editing

As a digital, nonlinear editing tool, Media Composer provides complete *random access* to footage, with instantaneous cueing and retrieval of sequences, segments, shots, and frames. This is much faster than the time it would take to mount and shuttle through tapes.

In addition, traditional editing requires that you electronically copy video from a source tape to a master tape. When you make changes in this linear arrangement, you must reassemble all of the shots that follow the change. By contrast, when you edit with Media Composer, you are not actually cutting or dubbing the footage. Instead, your source tapes are digitized into media files that can be played just like the original tapes. When you edit, you work with these images and sounds (*objects)* with great freedom, creating data files that refer to the media files and to your original source tapes. You can make changes, and the entire sequence is immediately updated. This is the primary benefit of nonlinear editing.

The system maintains frame-accurate links between each alteration of the objects you work with and the original media files. This allows you to experiment with every edit you make through multiple generations. When you play back your work, the system immediately accesses and plays the appropriate portions of the digitized video and audio.

You can use Media Composer to create:

- A final product based on the media files
- A work print as a reference to editing tapes

- An edit decision list (EDL) that you can use to control the editing of tapes in an online or offline editing studio

Editing Components

Knowing some basic terms for the editing components will help you use Media Composer more effectively.

- **Project**: the job that results in one or more sequences; the Project window organizes all the clips, sequences, effects, and media file pointers for a program or series of programs
- **Sequence**: an edited composition that includes audio and video clips and rendered effects connected
- **Bin**: the window in which you organize the material to be edited
- **Source clip**: the smallest media object that contains all the information necessary to reference footage
- **Master clip**: editing object that references the compressed media
- **Media file**: stored, compressed digital data representing the original video and audio
- **Source/Record mode**: a mode composed of a Source monitor that displays source clips, a Record monitor that displays the assembled sequence, and controls for making basic edits
- **Timeline**: the graphical representation of every edit made to a sequence, including all nested effects and layered tracks
- **Segment mode**: editing controls for moving, deleting, marking, and editing segments in the Timeline
- **Trim mode**: controls for fine-tuning edits and transitions with various trim procedures
- **Effect mode**: controls in the Timeline and the Effect Mode window to apply, render, and edit effects into the sequence
- **IN and OUT point:** starting and ending points of an edit

- **Subclip:** Part of a master clip, which references the master clip
- **EDL:** edit decision list containing detailed information on your sequence for online editing of a videotape master
- **Cut list:** a series of output lists containing specifications used to conform the film work print or negative
- **Digital cut:** a copy struck directly from disk to tape

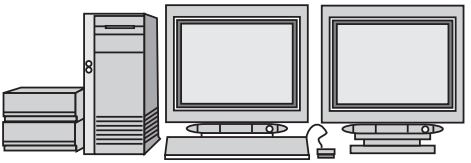
Project Workflow

The following sections introduce the four basic stages of a project, along with the basic system terms you encounter in Media Composer. Complete procedures for each phase are described in this guide, in the Avid Composer system online help, and the *Avid Media Composer User's Guide*. You can alter parts of each stage if necessary.

Starting a Project

Starting a project involves the following steps:

1. Turn on your equipment in a prescribed order and launch the Media Composer software.



Turn on and launch Media Composer.

2. Select or create a new *project*: the job that will result in one or more finished *sequences*.

Select or create a project.

3. Create and organize *bins*.

Create and organize bins.

4. *Back up* your project on a regular basis.

Back up the project.

Preparing to Edit

Preparing to edit involves the following procedures:

1. Import your logs into the bins, or log the material manually to create *source clips*.

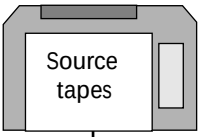
2. Digitize your analog footage, creating *media files* and *master clips*.

3. Work with bins and clips to organize your source material for easy access during editing.

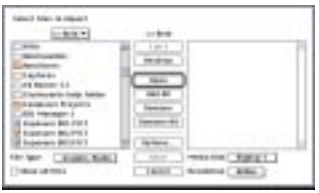
4. Build a *storyboard*, if desired, to begin previsualizing your final cut before editing.

5. Manage media files using controls provided by the system, such as the Media Tool.

1.



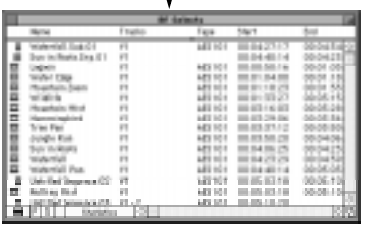
2.



Import shot logs into the bin.

Digitize footage, creating master clips and media files.

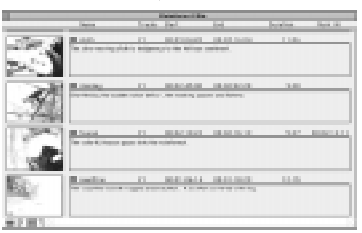
3.



Sort and organize clips in bins.

4.

5.



Previsualize with storyboards.

Manage media files for storage, efficiency, and backup security.

Editing a Sequence

Editing a sequence involves the following procedures:

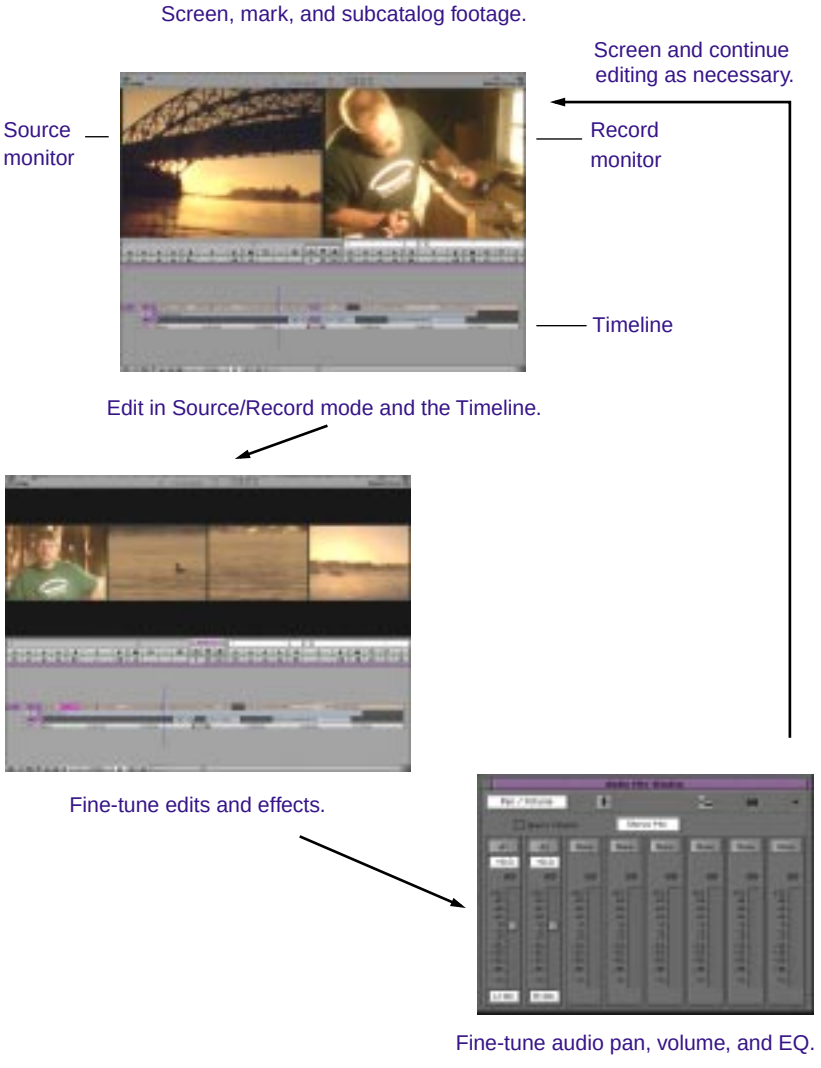
1. View your clips in advance and mark *IN points* and *OUT points*, or create *subclips* based on selected portions of your master clips.

2. Build your sequence in Source/Record mode, which provides nonlinear editing controls with Source and Record monitors, and the *Timeline*.

3. Fine-tune your edits and effects using functions of the various edit modes, such as Segment mode, Trim mode, and Effect mode.

4. Adjust and mix multiple audio tracks and prepare for final playback or output using Media Composer's *Audio Tool* and *Audio Mix Tool*.

5. Return to editing if further adjustments are required.



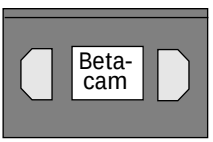
Generating Output

Generating various forms of output based on your sequence involves selecting among several options:

• Export and exchange material for audio sweetening or graphics enhancement in a third-party application, or for incorporating into a multimedia project.

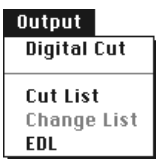
Export and exchange material for import into third-party applications such as AudioVision.

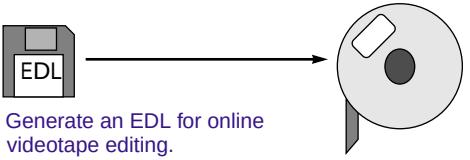
• Record the final sequence as a digital cut.



Record a digital cut directly to tape.

• Generate an EDL.





Generate an EDL for online videotape editing.

CHAPTER 3

Starting a Project

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.

The overview topics are described in the following sections:

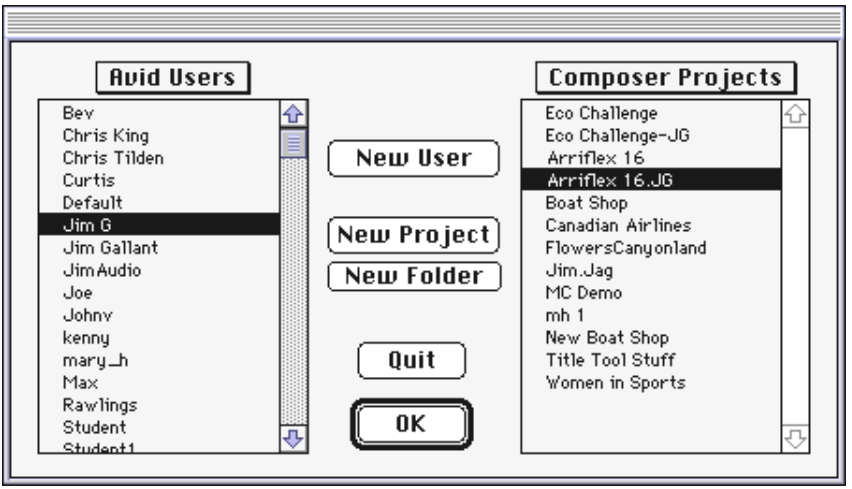
- **About Composer Projects and Avid Users Folders**
- **Using the Bins Display**
- **Using the Settings Display**
- **Using the Info Display**

Tutorial: Starting a Project contains the following sections:

- **Starting the Application**
- **Opening a Project**

About Composer Projects and Avid Users Folders

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



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

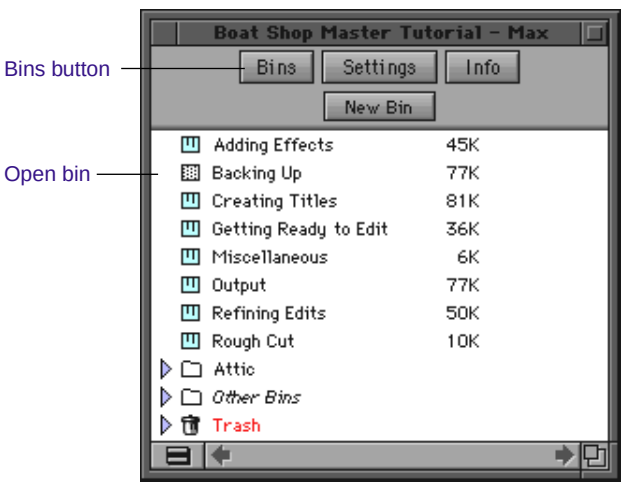
- When you create a new user, the system creates three items: a user profile file, a User settings file, and a user folder containing the two. Each item is given the user name you provide. This new folder is stored in the Avid Users folder on the Avid drive.
- When you create a new project, the system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

Using the Bins Display

Bins are windows that contain titles, “thumbnails,” and information about the material you digitize. These editable files are called master clips. They refer to the actual media files created when you digitize source material. While the physical media are stored on external hard drives, the master clips that refer to that media reside in the bin. Bins also store the sequences, subclips, group clips, and effect clips that you create during a project. The Project window allows you to make a new bin, close it, reopen it, and move clips among these bins. You can also open bins created for different projects.

After you select a user and project in the Project Selection dialog box, the Project window opens. To view a complete list of bins associated with the project, click the Bins button in the Project window. A scrolling list appears.



From the Bins list you can examine the number, names, size, and location of bins, and you can also open bins. Dotted bin icons next to bin names indicate bins that are currently open; solid icons indicate closed bins.

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. A scrolling list of settings appears.

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.
- **Workspace** settings let you associate a configuration of windows with a workspace setting name. If you are used 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. You can have as many workspace settings as you want. See the *Avid Media Composer User's Guide* and "Workspace, selecting" in the online help index for more information.

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
- **General settings** define fundamental system defaults, including:
  - Starting timecode for sequences edited in Media Composer

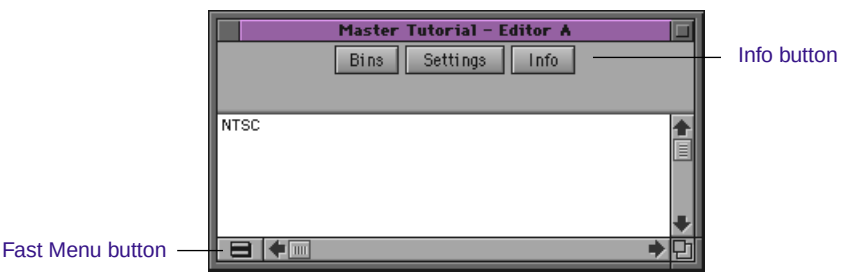
- Setup default for either American NTSC or Japanese NTSC video input (affects calibration)
- Whether the system uses the drive-filtering function to automatically target only the fastest drives when digitizing high-resolution media

- **Interface settings** determine the level of basic information displayed in the interface, including whether written labels are displayed beneath icons in the various command palettes.

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 the 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.

To see additional information:

1. Click the Fast Menu button at the bottom of the Info window.

A pop-up menu appears.

2. Choose one of the options from the pop-up menu. See the *Avid Media Composer User's Guide* or "Info display of project information" in the online help index for more information about these options.

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 objects 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 Media Composer tools repeatedly, your computer's memory may become fragmented. As a result your system may be sluggish. To solve this problem, close all applications and restart your Macintosh.
- If you need to open more or larger files within Media Composer, 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), consult your Macintosh documentation.

Viewing Memory

To view how your Avid Composer system is using the system memory, press ⌘–I on the keyboard or choose Memory from the Info window Fast menu. Also see the *Avid Media Composer and Film Composer Release Notes* for information about memory requirements.

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 the *Avid Media Composer User's Guide*.

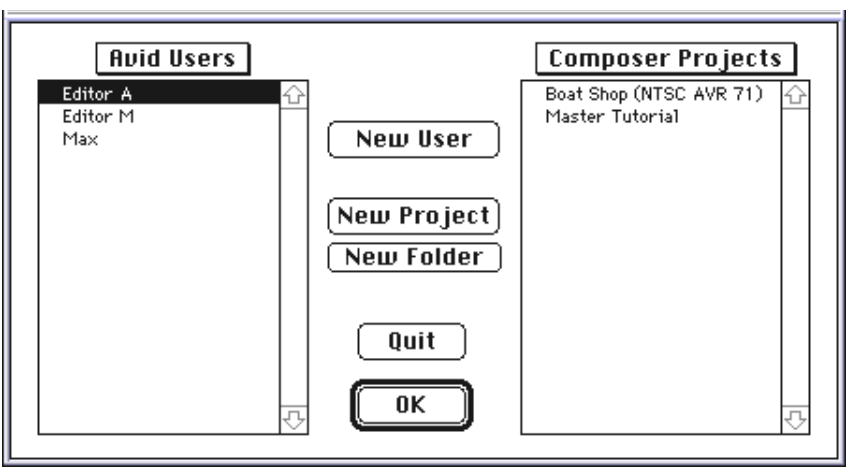
Tutorial: Starting a Project

In this tutorial, you will start Media Composer and select a user and a project. Before starting this procedure, make sure you have installed the Tutorial files (see **"Installing the Media Composer Tutorial Files" on page 25**).

Starting the Application

1. Double-click the desktop alias of the Media Composer folder icon to open the folder.
2. Double-click the Media Composer application icon to launch the program.

After a few moments, the Project Selection dialog box appears.



For this tutorial, you use the Boat Shop project (along with its settings file) that you copied into the Composer Projects folder in Chapter 1.

Opening a Project

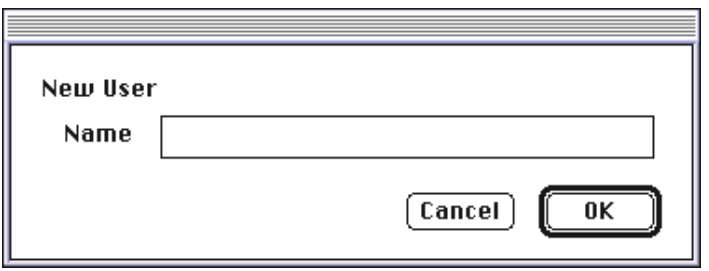
To open a project, you create a new user and select an existing project.

Creating a User

To create a new user:

1. Click the New User button.

   A dialog box appears.



2. Type your name and click OK.

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

Selecting a Project

To select a project:

1. Select Boat Shop from the Composer Projects list and click OK.

The Project window opens. It lists the bins, or storage areas, created to hold the clips and sequences you will need for this tutorial.

2. Double-click the icon to the left of **Getting Ready to Edi**t to open the bin.

   This bin contains the clips of the source footage you will use to begin to build the Boat Shop sequence.

You've finished this tutorial section. The next section is **Tutorial: Getting Ready to Edit** on page 76. Be sure to read Chapter 4 and the introductory material in Chapter 5 before continuing the tutorial.

CHAPTER 4

Digitizing

This chapter surveys the digitize process and related tools. Topics covered include:

Selecting Settings

A number of settings have a direct bearing on the digitizing process. Before digitizing, review the following options for General Settings, Deck Settings, and Digitize Settings.

- **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 setting is selected by default in the General Settings dialog box.

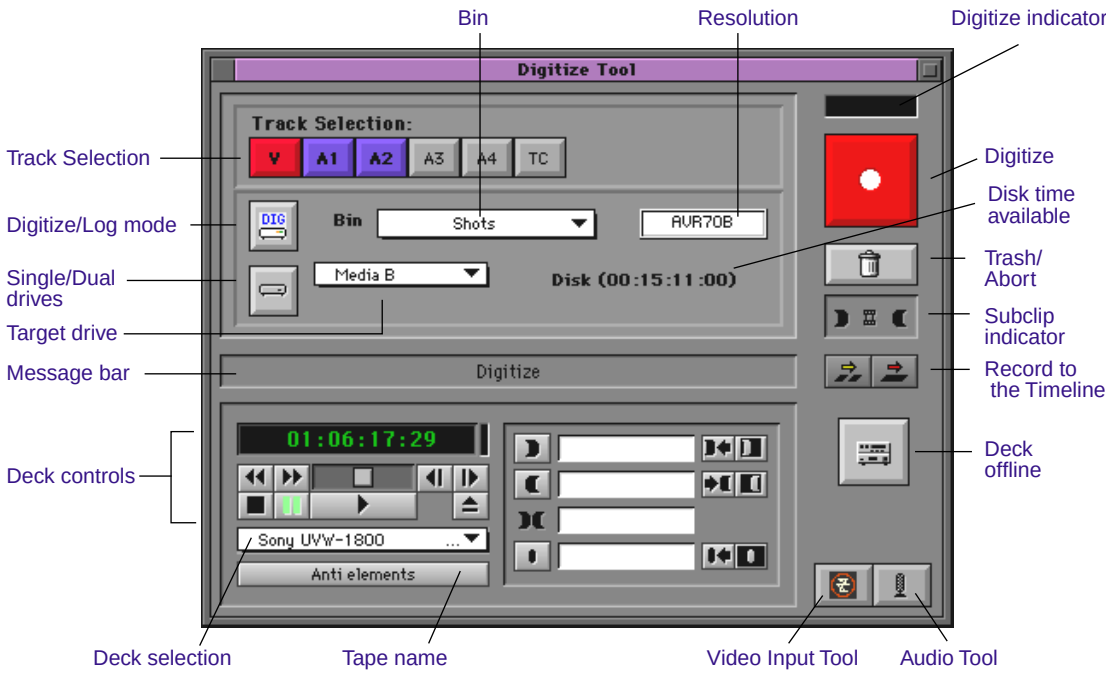
The Avid Composer system does not prevent you from using non-Avid drives, but their reliability cannot be assured.

- **Deck Settings** include various options for source deck, sync mode, preroll, drop/non-drop-frame preference, and deck control.
- **Digitize Settings** include essential options for digitizing and batch-digitizing, including general parameters for capture of the source material, and special conditions such as digitizing across timecode breaks or capturing a single video frame.
- **Deck Configuration Settings** allow you to establish deck control parameters for a single deck or for multiple decks. You can manually configure the deck or use the Autoconfigure option.

About the Digitize Tool

The Digitize Tool provides controls for digitizing your footage.

To open the Digitize Tool, choose Digitize from the Tools menu. The Digitize Tool window opens.



The Digitize Tool has the following characteristics:

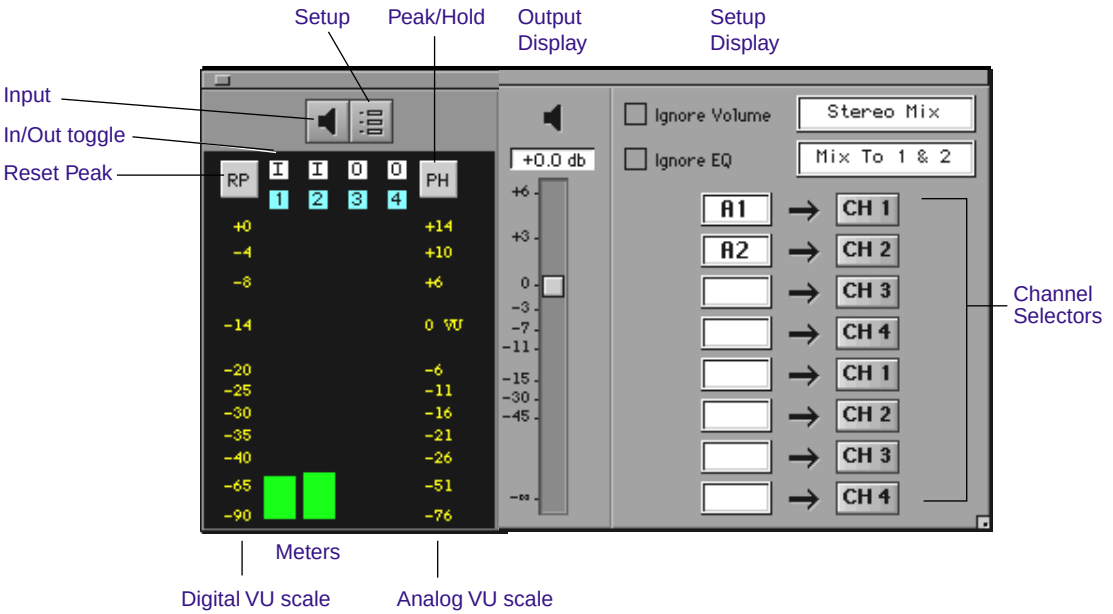
- **Track Selection panel** lets you choose which audio tracks you want to digitize from the source tape, whether you want to digitize video, and whether you want to record timecode.
- **Bin pop-up menu** lets you choose a target bin as the destination for the master clips created when you digitize on-the-fly. You can also choose a target bin containing the logged clips you will use to batch-digitize your media.

- **Resolution pop-up menu** next to the Bin pop-up menu lets you choose an Avid Video Resolution (AVR).
- **Digitize indicator** flashes on and off while you are digitizing.
- **Red Digitize button** begins the digitizing process.
- **Digitize/Log mode button** lets you switch between digitize mode and log mode.
- **Single/Dual drives button** lets you target a single or separate media drive volumes for digitizing the audio and video for each clip.
- **Target drive pop-up menu** lets you choose the target drive volumes.
- **Disk time available** is displayed after you select an AVR and target a drive or drives for the digitized media.
- **Trash/Abort button** stops the digitizing process and deletes the digitized media.
- **Status bar** displays information on the current status of the tool.
- **Subclip indicator** displays a subclip IN mark, a subclip OUT mark, and a clip icon or number. It provides visual feedback when you create subclips on-the-fly while digitizing.
- **Record to the Timeline** allows you to digitize footage directly from tape into a sequence loaded in the Timeline in one step. Recording to the Timeline works best when you are digitizing on-the-fly.
- **Deck Offline button** takes the deck offline: the software ceases to recognize the deck.
- **Deck controls** operate the deck.
- **Deck selection pop-up menu** lets you choose the deck you want to play from. It also lets you check and reset serial port connection to decks.
- **Tape name display** shows the name of the source tape.

About the Audio Tool

The Audio Tool controls parameters for incoming audio.

To open the Audio Tool, choose Audio Tool from the Tools menu or click the Audio Tool icon in the Digitize Tool window. The Audio Tool window opens.



The Audio Tool has the following options:

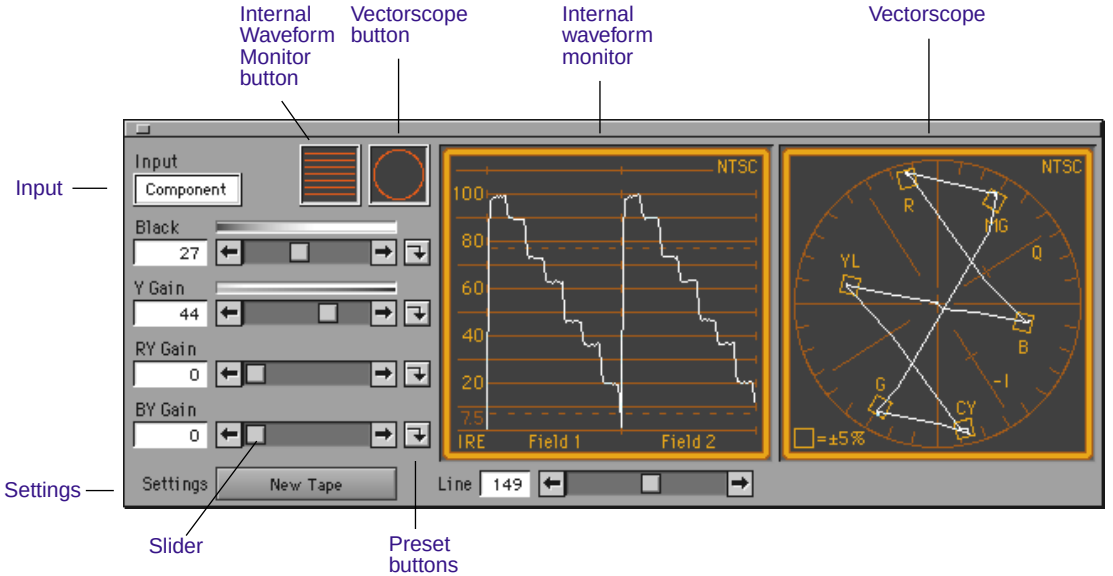
- **Input button** displays a panel that contains a single slider control for raising or lowering global audio input.
- **Setup button** displays a panel that contains information and controls for adjusting various audio hardware parameters.
- **Reset Peak button** resets the current maximum peak measurements. It also stops the playback of the internal calibration tone.

- **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.
- **Peak Hold pop-up menu** allows you to choose options for customizing the meter displays, and setting and playing back the internal calibration tone.
- **Digital VU scale** to the left of the meters displays a fixed range of values from 0 to -90 decibels (dB), according to common digital peak meter standards.
- **Analog VU scale** to the right of the meters displays a fixed range of values that you can conform to the headroom parameters of your source audio.
- **Meters** dynamically track audio levels for each channel as follows:
  - Meters show green below the target reference level (the default reference level is -14 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.
- **Channel Selector** pop-up menus let you map tracks in the sequence to output channels.

About the Video Input Tool

The Video Input Tool controls parameters for incoming video.

To open the Video Input Tool, choose Video Input Tool from the Tools menu or click the Video Input Tool icon in the Digitize Tool window. The Video Input Tool window opens.



Click the Internal Waveform Monitor button to bring up the Waveform monitor. Click the Vectorscope button to bring up the Vectorscope.

The Video Input Tool has the following options:

- **Input pop-up menu** lets you choose either a Composite or Component video input source.
- **Sliders** let you change the value for each setting.
- **Preset buttons** are highlighted when the factory preset levels are displayed. When you click a lit Preset button, it turns gray and the slider returns to the most recent manual level setting.
- **Settings pop-up menu** lets you save the site settings for an individual tape each time you calibrate bars.
- **Internal Waveform monitor** lets you adjust luminance values.
- **Vectorscope monitor** lets you adjust hue and saturation.

Digitize Preparations Check List

- [ ] 1. Check your hardware configurations: power switches, cable connections, pull-down switch on the Video Slave Driver, and remote switch on the source deck for deck control (see the *Avid Media Composer Products Setup Guide* for hardware configurations).
- [ ] 2. In the Project Settings scrolling list, make sure you have the desired options selected in the General Settings, Deck Settings, Deck Preferences, Deck Configuration, and Digitize Settings dialog boxes.
- [ ] 3. 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. You must stripe your drives if you work with AVR
- [ ] 4. Insert a tape into the deck and set up the Digitize Tool for track selection, target bin, target drives, source tape, and source deck.
- [ ] 5. Set up the Compression Tool for resolution (AVR) and color compression (see the *Avid Media Composer User's Guide* and "Compression Tool" in the online help index for more information).
- [ ] 6. Use the Audio Input Tool to set the audio input levels.
- [ ] 7. Use the Video Input Tool to set the video input levels; save your video settings for future use.

Digitizing

You can digitize your source material in one of the following ways:

- Digitize and log at the same time
- Batch digitize
- Redigitize
- Use Avid MediaLog and import shot logs

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.

See "Digitizing" in the online help index for more information.

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.
- **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.
- **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 long clip into the bin.

Batch Digitizing

Once you have imported a log or manually logged a group of clips into a bin, you can automate the digitize process by using your Avid Composer system's batch digitizing capabilities. In order to batch digitize, source tapes must have timecode. For more information and procedures, see "Batch digitizing" in the online help index.

Redigitizing

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. For more information and procedures, see "Redigitizing" in the online help index.

CHAPTER 5

Getting Ready to Edit

To get ready to edit, you need to understand how to organize your clips and manipulate them. The overview is in the following sections:

- About Bin Display Modes
- About Bin Views
- Controlling Playback
- Marking IN and OUT Points
- Creating Subclips

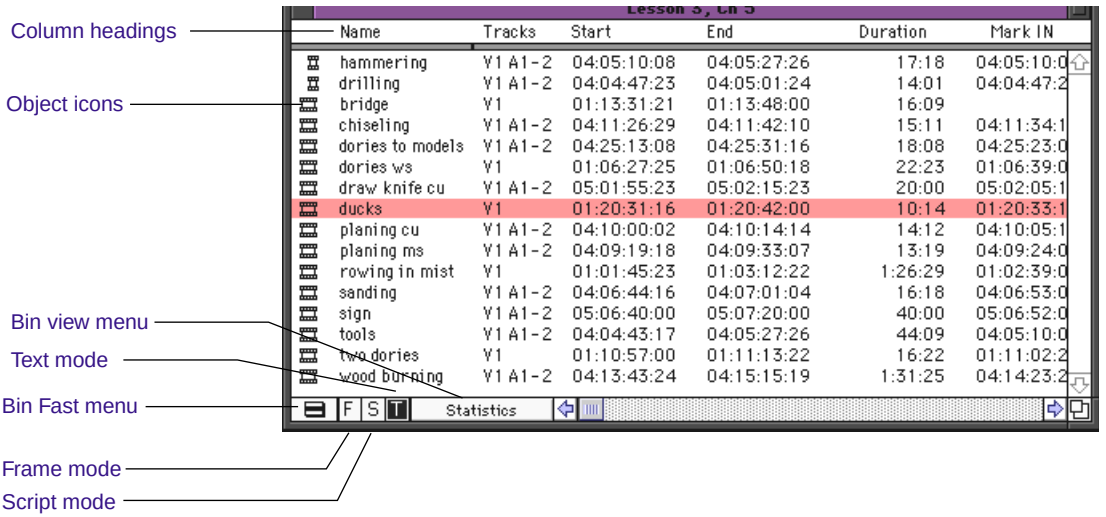
Tutorial: Getting Ready to Edit contains the following sections:

- Viewing Clips
- Playing Clips
- Marking Edit Points
- Subclipping

About Bin Display Modes

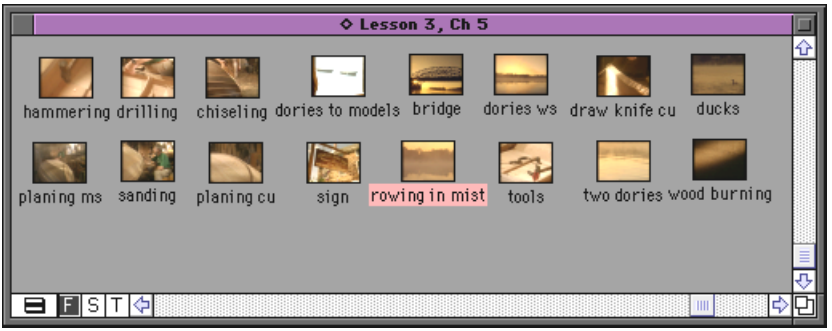
You can use three display modes for viewing and working with clips in a bin: Text mode, Frame mode, and Script mode.

- 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* by using the Bins settings in the Project window and the Bin Fast menu.



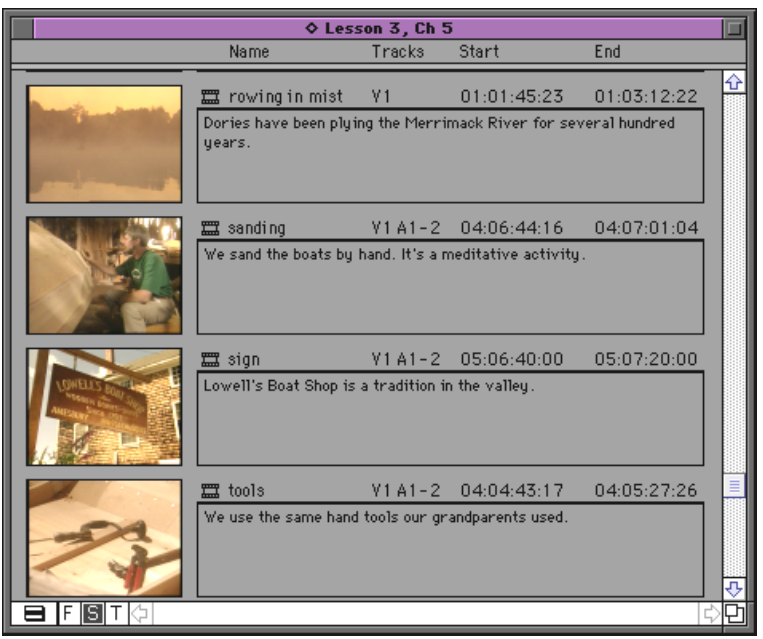
To enter Text mode, click the Text Mode button (labeled T) in the lower left portion of the bin.

- 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, change the size of frames, and rearrange frames in any order within the bin.



To enter Frame mode, click the Frame Mode button (labeled F) in the lower left border 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.



To enter Script mode, click the Script Mode button (labeled S) in the lower left portion of the bin.

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 the following 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.
- **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.

Controlling Playback

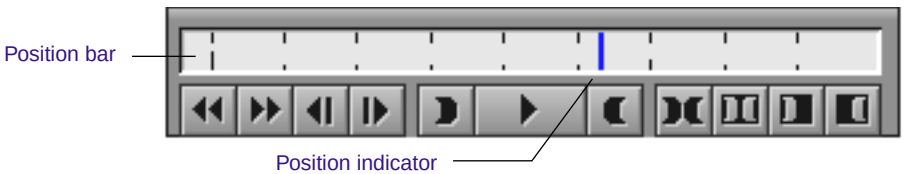
There are several ways to play, view, and cue clips:

- Instantly access frames or move through footage using the *position indicator* within the position bar under the Source or Record monitors
- Play, step (jog), or shuttle through footage using user-selectable buttons
- Play, step, or shuttle using keyboard equivalents
- Step or shuttle using the mouse

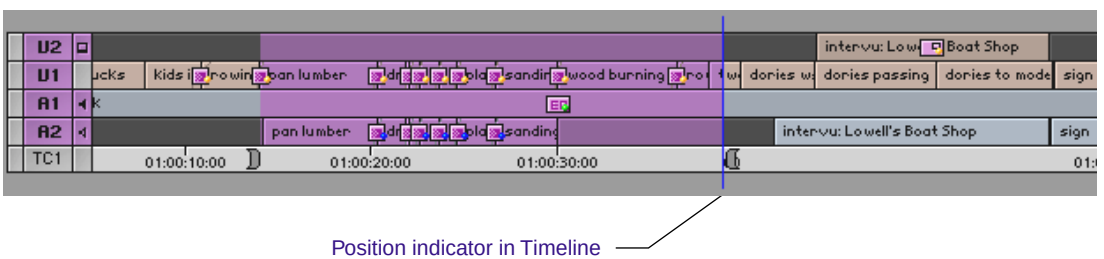
Using Position Bars and Position Indicators

You can quickly access frames within a clip that's been loaded into a monitor or move through the footage using the position indicators that appear in the position bars under Source or Record monitors, and in the Timeline when you are viewing a sequence.

- You can move the position indicator within the position bar under the Source or Record 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.



- 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 position indicator, or you can drag the position indicator through footage at varying speeds.



- 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 clip or sequence.

Using Buttons

You can use the user-selectable buttons that appear below the Source and Record 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.

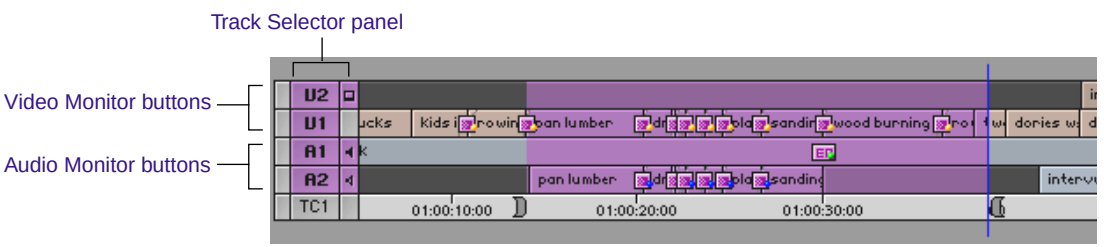
Play, Pause, Stop, Fast Forward, and Rewind Buttons

The Play, Pause, Stop, Fast Forward, and Rewind buttons work much like the buttons on any conventional VCR. With a clip loaded in a monitor, the Play 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 you to the beginning or the end of the clip.

Play, Fast Forward, and Rewind buttons appear by default in the first row of buttons below the Source and Record monitors. Map the Play Reverse, Stop, and Pause buttons onto your button rows from the Command Palette. Mapping replaces the existing button functions.

During playback, the Play 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.



To play a clip:

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- or 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 ten frames forward and ten frames backward.

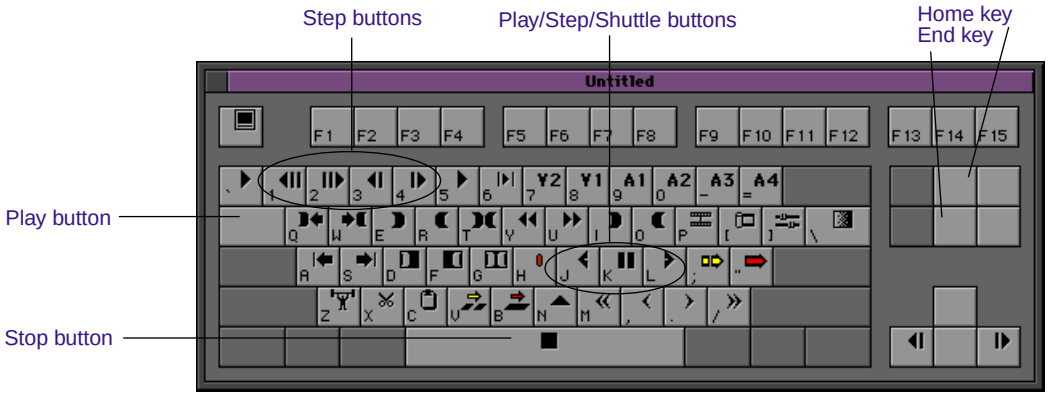
To display all four Step buttons, you must display two rows of buttons under the monitors when configuring the Source/Record window in the Composer Settings dialog box.

To step through footage:

1. Load a clip or sequence into a monitor.
2. Press the appropriate key to step one or ten frames forward or back.

Using the Keyboard

The default keyboard contains all of the buttons discussed so far.



You can move and replace buttons on the keyboard using the Command Palette; see "User-selectable buttons, mapping" in the online help index.

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 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.
   - 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, as desired.
    - Press the J key to move backward at the same shuttle speed increments.
    - Hold and press the K and L keys together for slow forward.
    - Hold and press the K and J keys together for slow backward.
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 on the keyboard 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 backward.
- The Right Arrow key moves the footage one frame forward.

Using the Mouse

You can also 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 into the Source monitor or a sequence into the Record 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.

Mouse Step button 

   - Activate the buttons on the Command Palette by deselecting both boxes at the bottom of the Palette, then click the Mouse Step button, which is available on the Play tab of the Command Palette and can be mapped to any button under the Record monitor (see **"Using the Command Palette" on page 119**).
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.
   - 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.

Mouse Shuttle button 

   - Activate the buttons on the Command Palette by deselecting both boxes at the bottom of the Palette, then click the Mouse Shuttle button, which appears on the Play tab of the Command Palette and can be mapped to an editing button under the Record monitor (see **"Using the Command Palette" on page 119**).

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, 240 fps for NTSC; 25, 50, 100, 200 fps for PAL; 24, 48, 96, 192 for film projects). You can continue to change the shuttle speed and direction with the mouse.

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 the *Avid Media Composer User's Guide*.
- 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.

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.

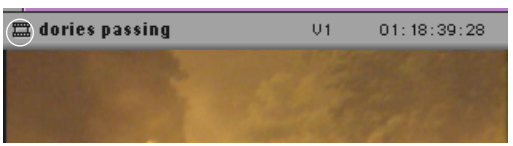
This is similar to creating selects of all your best footage before editing. Unlike selects, however, subclips do not directly reference the original media. Subclips remain linked to the master clips from which they are created, and the master clips in turn reference the digitized media files located on your storage drives. As a result, none of the original footage is lost.

You can also create subclips while digitizing as described in "Subclips:creating on-the-fly" in the online help index.

You can create subclips directly from the marked section of material in the monitors by using one of the following methods:

- **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.
- **Clip icon:** Click the icon next to the clip name in the Source monitor, then drag the icon to the bin in which you want to store the subclip.

Clip icon

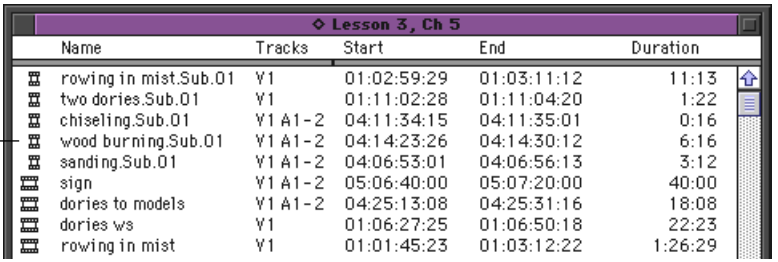


The clip icon changes to an icon of a frame during the drag, then becomes a subclip icon when you release the frame in the intended bin.

- **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 choose 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 Bin Text view



For more information on trimming, see “Trim Edits” in the online help index.

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.

Tutorial: Getting Ready to Edit

The following tutorial steps correspond to the clips and sequence in the bin titled **Getting Ready to Edit**.

*Be sure to read **Chapter 2** and the preceding overview sections of this chapter before you start this tutorial.*

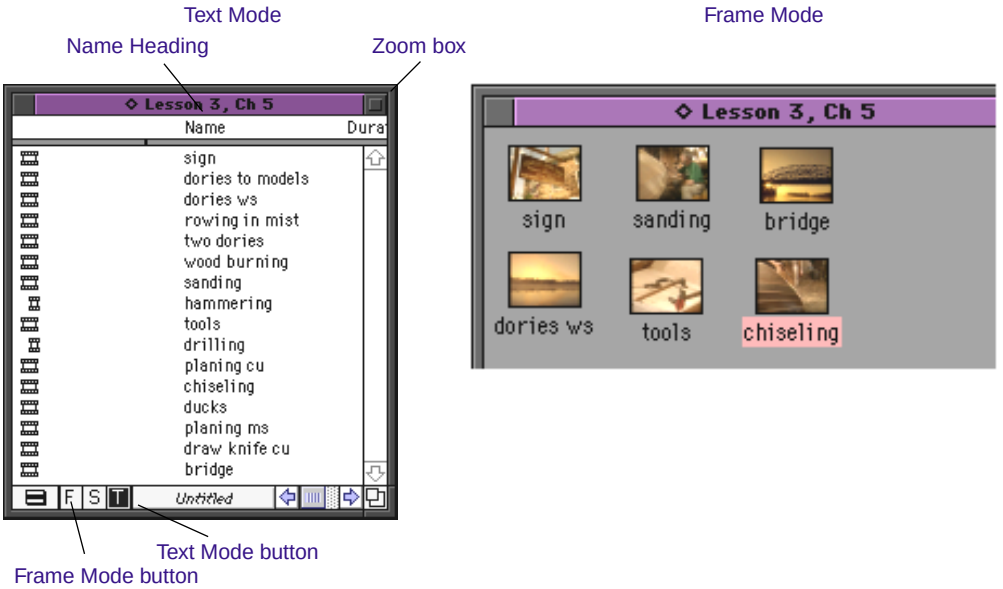
1. If Media Composer is not already running, launch it by double-clicking the application icon.
2. Choose your User name and your Boat Shop project and click OK.
3. From the Boat Shop Project window, double-click the **Getting Ready to Edit** bin**.**

   The clips associated with the lesson are displayed in the bin.

Viewing Clips

The information in a bin can be viewed in several ways.

- Text mode displays columns of information about your clips.
- Frame mode displays each clip as a single representative image.
- Storyboard mode displays each clip with an image and an area in which to enter text as part of a storyboard.



The S button is for Script mode.

Let's look at Text mode.

1. Click the Text Mode button (T) in the lower left corner of the bin to view information about clips in the **Getting Ready to Edit** bin.

   If the button is dark, you are already in Text mode.

   You can rearrange the clips in the bin by sorting on a particular column. Let's sort by clip name so we can easily locate any clip.

2. Click the Name heading in the bin.
3. Choose Sort from the Bin menu along the top of the screen.

   The clips' names are rearranged in alphabetical order.

To sort in numerical order, select another heading, for example, duration.

Now let's look at Frame mode.

1. Click the Frame Mode button (F) to see a pictorial representation of each clip in the bin.

The sorted order of clips does not carry over to Frame mode.

2. Choose Reduce Frame or Enlarge Frame from the Edit menu.

   To change frame size at the keyboard, you can also press ⌘-K (Reduce Frame) and ⌘-L (Enlarge Frame).

   If some clips are now off screen, do one of the following:

   - Click the zoom box in the upper right corner of the bin window.
   - Choose Fill Window from the Bin menu.
   - Drag the size box in the lower right corner of the bin window.

3. Click the zoom box in the upper right corner of the bin window labeled **Getting Ready to Edit**.

   The bin zooms out to enclose all the clips. However, they might be scattered randomly in the bin window. Let's fix that.

4. Choose Fill Window from the Bin menu.

   The clips are arranged in neat rows and columns in the bin.

   Now you can adjust frame size so the clips are "readable" but not so large that they won't fit in the bin window.

Playing Clips

Your Avid Composer system offers a variety of ways to play clips. The more you practice the various methods, the more control you will have over the editing process.

Playing Clips in the Source Monitor

The Source monitor is a window in which you can play clips.

1. In the **Getting Ready to Edit** bin, select the clip named **bridge** by double-clicking anywhere in the frame.

The **bridge** clip appears in the Source monitor.

2. Press the Home key on the keyboard (between the main keyboard and the numeric keypad) to go to the start of the clip.

   The End key, just below the Home key, moves the position indicator to the end of the clip.

3. Press the Play (5) key on the keyboard to play the clip at normal speed.

4. Press the Play (5) key again (or press the space bar on the keyboard) to stop playback at any point.

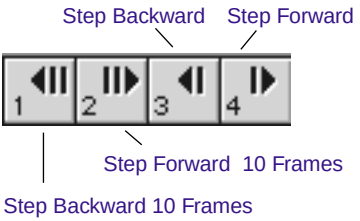
5. Press the L key (Play) on the keyboard to play the clip forward at normal speed. Press the key repeatedly to play the clip at 60, 90, 150, and 240 frames per second (fps).

6. Press the J key (Reverse Play) to play the clip backward at normal speed. Press the key repeatedly to play the clip backward at 30, 60, 90, 150, and 240 frames per second (fps).

7. Press the K key to stop playback.

8. To move forward or backward at slow speed, press and hold the K key while you press and hold the L or J key.

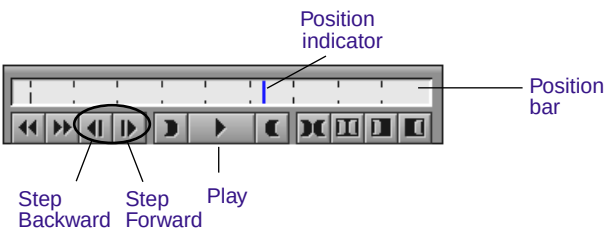
9. Use the 1, 2, 3, and 4 keys to step through the footage forward or backward in 1-frame or 10-frame increments.



Controlling Playback

In the Source monitor, you can use:

- Playback control keys
- Equivalent buttons below the Source monitor
- Blue position indicator to go to a specific position or scroll through a clip



1. Double-click the **tools** clip in the **Getting Ready to Edit** bin.

   The clip appears in the Source monitor.

2. Click the Play button.

   You can press the 5 key on the keyboard for the same purpose.

3. Click the Play button again (or press the space bar on the keyboard) to stop playback at any point.

4. Step through the footage forward or backward in 1-frame and 10-frame increments using the Step Forward and Step Backward buttons under the Source monitor. You can also use the 4, 3, 2, and 1 keys on your keyboard.
5. Locate the vertical blue position indicator in the position bar in the Source monitor.
6. Click to the left of the position indicator to step several frames back in the clip.

   To step several frames forward, click just to the right of the position indicator.
7. Press the Home key to go to the beginning of the clip.

   Press the End key or click the Fast Forward key to go the end of the clip.
8. Step through the clip by clicking different spots in the position bar.
9. Drag the position indicator to the left, then to the right, to scroll through the clip.

Marking Edit Points

Before making your first edit, you can mark the segments of the clips you want to use in your sequence. You can mark clips in the Source monitor.

In this section, you will:

- Mark IN and OUT points in the Source monitor
- Locate IN and OUT points by timecode in the Source monitor

Marking the *planing ms* Clip

Let's first display clips in the Source monitor, and then mark a couple of clips you will use when you edit the sequence.

1. Activate the **Getting Ready to Edit** bin by clicking anywhere in it or by choosing **Getting Ready to Edit** from the Windows menu.

   The bar above the active window turns purple.

2. Double-click the **planing ms** clip to activate it.

   The clip name turns pink and the clip appears in the Source monitor.

3. Play the clip from the head by pressing Home and then the Play (5) key, and find the approximate place where the boatbuilder begins to plane. Then use the Step Forward and Step Backward (3 and 4) keys to locate the frame where he starts the first planing stroke.

4. Mark an IN point by pressing the Mark IN (I) key.

   A white sawtooth pattern appears on the left edge of the Mark IN frame.

5. Step forward two full strokes of the plane.

6. Mark an OUT point by pressing the Mark OUT (O) key.

Media Composer remembers your IN and OUT points until you change them.

Marking the *ducks* Clip

Now mark the IN and OUT points for the **ducks** clip. This time, instead of using the 5 key, use the J-K-L keys to play the clip.

1. Double-click the **ducks** clip to activate it.
2. Locate the frame where the second duck enters the right edge of the frame behind the duck swimming in the foreground.

   Use the 3 and 4 keys to locate the precise frame.
3. Mark an IN point by pressing the I key.

   A white sawtooth pattern appears on the left edge of the Mark IN frame.
4. Step forward to locate the first frame where the same duck flies beyond the left edge of the screen.
5. Mark an OUT point by pressing the O key.

   A white sawtooth pattern appears on the right edge of the Mark OUT frame.

Marking the *draw knife cu* Clip

Let's mark another clip we'll use in the sequence.

1. Display the **draw knife cu** in the Source monitor by double-clicking it in the **Getting Ready to Edit** bin.

   When you edit the sequence, you want to show just three strokes of the knife.
2. Place the position indicator around the midpoint of the clip, and play forward until just after the first fairly large wood chip falls off.

Use the Play button (or J-K-L keys) to get close to the frame, and then use the Step buttons to locate the frame you want to use as your IN point.

3. Mark an IN point by clicking the Mark IN button under the monitor.

   A white sawtooth pattern appears on the left edge of the Mark IN frame.

4. Step forward, and locate a frame just after three strokes of the knife.

5. Mark an OUT point by clicking the Mark OUT button under the monitor.

   A white sawtooth appears on the right edge of the Mark OUT frame.

Using Timecode to Find a Frame

You can mark IN and OUT points by using timecode as your reference point. If you know the timecode for the frame you want to mark, you can go to that frame instantly by typing it on the numeric keypad.

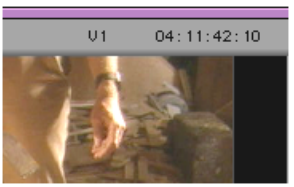
In this section, you will use visual cues to mark an IN point, and then locate a specific timecode. First, you need to display the appropriate timecode information.

1. Double-click the **chiseling** clip to open it.

2. Place the cursor in the gray title bar area over the timecode information displayed above the Source monitor.

3. When the cursor changes to a downward arrow, click to display the pop-up menu, then choose TC, V1 (timecode for track V1) from the menu. A checkmark means it is already selected.

The timecode references the frame displayed in the Source monitor.



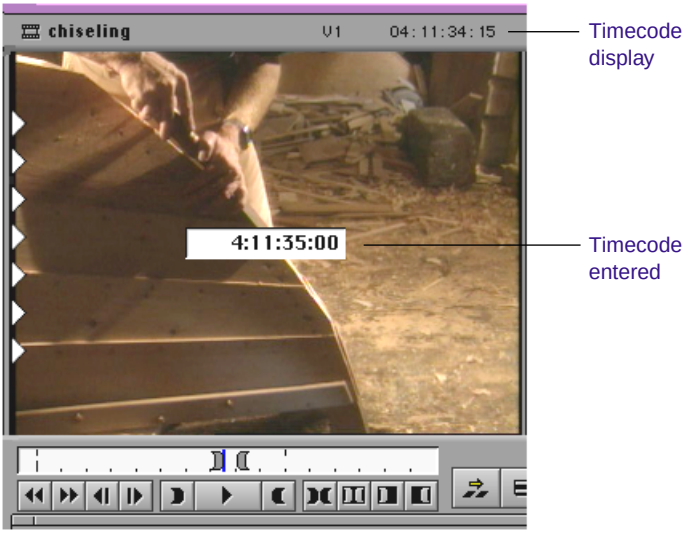
4. Use the Play and Step buttons to locate the frame where the boat-builder begins one of the first strokes of the chisel.
5. Click the Mark IN button.
6. Read the timecode in the Timecode display at the IN point. Add 15 frames (13 frames PAL) to the timecode number. (Remember, there are 29 frames in a second.)

   For example, if the timecode is 04:11:34:15, adding 15 frames gives you a result of 04:11:35:00.
7. Type **+15** on the numeric keypad on the right side of the keyboard and press Enter on the numeric keypad.

   As you start typing, a window opens in the middle of the Source monitor, showing the numbers you type. When you press Enter, the position indicator locates the specified frame.

   The Timecode window displays the current number.

To locate frames using the numeric keypad, you must show the appropriate timecode in the Timecode display. For example, the timecode display must show track V1 to go to a specific frame on the V1 track.



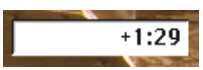
8. Click the Mark OUT button.

Using Frame Offset

Whenever you use the numeric keypad, you must press Enter after typing the number.

You can also use the numeric keypad to move the position indicator forward or backward a specified number of frames, with the frame offset feature. Let's mark an IN point for the **planing cu** clip and then use frame offset to locate the OUT point.

1. Double-click the **planing cu** clip to open it.
2. Use the Play and Step buttons to locate the frame where the boatbuilder begins making the first stroke of the plane.
3. Click the Mark IN button.



4. To advance two seconds, type **+129** (+124 PAL) in the numeric keypad and press Enter. The system inserts the colons for you.

Since Media Composer counts the frame it is parked on, you type one frame less than two seconds.

When using frame offset, type one frame less than the number of frames you want to advance.

If you want to move back a certain number of frames, type a minus sign (–) instead of a plus sign (+) in front of the number.

5. Mark that frame as the OUT point.

Subclipping

Now you will copy portions of one clip into shorter clips, called subclips. Subclipping is a great tool for organizing your footage into manageable units.

1. Double-click the **tools** clip in the **Getting Ready to Edit** bin.
2. Press the Home key to go to the start of the clip.
3. Scroll through the clip by clicking the Play button or dragging the blue position indicator, and notice there are two separate actions that can be copied into separate subclips.
4. Mark an IN point when the boatbuilder begins turning the auger drill.
5. Mark an OUT point 14 seconds later by typing **+1400** in the numeric keypad and pressing Enter.

   Actually, you have marked an OUT after 14 seconds and 1 frame, but that's okay because you need not be so precise here.

6. Click the clip icon next to the clip name in the upper left corner of the Source monitor, and drag the icon into the **Getting Ready to Edit** bin.

   As you begin dragging, the pointer changes to a hand attached to a small box.

   A new item called **tools.Sub.01** appears in the **Getting Ready to Edit** bin. The subclip has the name of the original clip, followed by

Sub.n, where **n** is the number of times the master clip has been cataloged to that bin. The name is highlighted.

7. Type **drilling** and press Return (or Enter on the numeric keypad) to name the subclip.

Clearing IN Points and OUT Points

1. With the **tools** clip in the Source Monitor, click the Clear Both Marks button under the Source monitor to clear IN and OUT points.
2. Mark an IN point in the clip when the boatbuilder begins hammering, after he takes a few practice swings.
3. Mark an OUT point at the end of the clip.
4. Press and hold the Option key and drag the clip from the Source monitor to the **Getting Ready to Edit** bin.

   The clip name is highlighted in the **Getting Ready to Edit** bin.
5. Type **hammering** and press Return (or Enter on the numeric keypad).

You've finished this lesson. You can go on to **Tutorial: Rough Cut** on page 100, or end the session.

Closing the Project

To close the project:

1. Choose Close Bin from the File menu.

   The bin closes.
2. Choose Close from the File menu.

   The system saves and closes the project. A dialog box appears.

3. Do one of the following:
    - Select an existing project.
    - Create a new one.
    - Click Quit.

Ending the Session

To end the session:

1. Choose Save Bin or Save All Bins from the File menu.
2. Click in the Project window labeled Boat Shop.
3. Choose Save All from the File menu.
4. Pull down the menu from under the Source monitor name and choose Clear monitor.
5. Do one of the following:
    - Go to the next lesson.
    - If you are ready to take a break, choose Quit from the File menu to leave Media Composer, then click OK in the Quit dialog box.

      The system returns to the desktop.

CHAPTER 6

Editing a Rough Cut

Beginning to edit involves moving around in the Avid Composer system. This is described in the following sections:

- Viewing Methods
- Navigating in the Timeline
- Displaying Source Material in the Timeline
- Using the Track Selector Panel

Tutorial: Rough Cut contains the following sections:

- Making the First Edit
- Splicing Video into the Sequence

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.

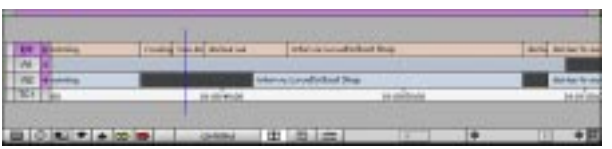
- **Viewing in bins:** Frame mode shows you pictorial images of the clips in your bins; Text mode shows you the clips listed by name.
- **Viewing in the Source monitor:** You can load clips and sequences into the Source monitor to view and mark or subcatalog shots for use in a sequence that you build 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 can Option-drag a clip or group of clips into the Record monitor to create a sequence.

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. (Enable a pop-up monitor by selecting Opens New Monitor for Clips in the Bin Settings dialog box.)

- **Viewing in the Timeline:** Use the Timeline to view individual tracks for either a sequence or a source clip.



- **Viewing in full-screen:** You can use the third, full-screen monitor to view your footage in a larger screen format.

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 make changes in the Timeline format by using the Timeline Fast menu or choosing Timeline in the Bin settings scrolling list.

Using the Position Indicator

The position indicator (the vertical blue line) 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

The 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.

Displaying More or Less Detail

The scale box on the scale bar stretches and contracts the Timeline area centered around the blue position bar, allowing you to either zoom in to focus on a specific area of your sequence, or zoom out for you to see your whole sequence. This is especially useful when you have a lengthy sequence with many edits.

The Timeline always expands or contracts proportionally on both sides of the position indicator.

- To see more detail, click and drag the scale box to the right.

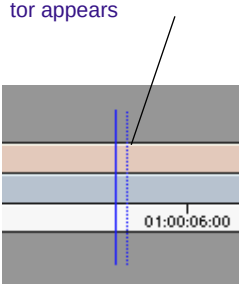
  As the Timeline expands, a second "shadow" position indicator appears next to the blue position indicator showing the end of a single frame, and the two continue to move apart as you expand the Timeline.

  The position indicator and its shadow mark the beginning and end of each frame. The solid bar is the mark or edit point. You can click on either the bar or the shadow to move exactly one frame forward or backward.

  In addition, the Timeline will split in half (or thirds) as it wraps through the sequence for you to see all the clips.

- To contract an expanded Timeline to see less detail but more of the sequence, click and drag the scale box to the left.

As Timeline expands, a shadow position indicator appears



Focusing the Timeline

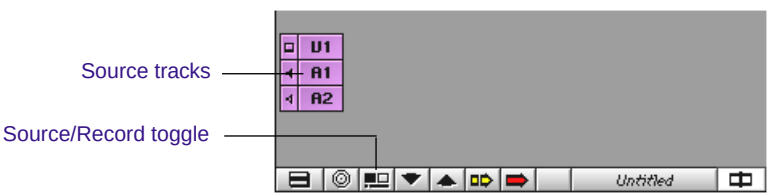
Another alternative to the scroll and scale functions is the Focus button.

The Focus button allows you to center the position indicator quickly and expand the Timeline. Unlike the scroll and scale functions, the Focus button expands the Timeline to one frame per four pixels. 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.

Displaying Source Material in the Timeline

The Source/Record toggle button allows you to view a Timeline of the clips in the Source monitor. This is especially useful if you are editing multitrack effects.

By default, the Timeline displays only the source material's tracks.



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

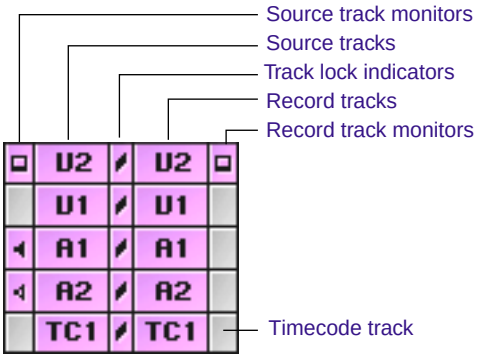
This feature is particularly useful when you are editing a sequence or a subclip created from a sequence; you can also use it to look at the contents of any source clip in a Timeline display.

Heads or Tails views are disabled when you are displaying material from the Source monitor.

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, 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 (on the source or record side) are available, active, patched, monitored, or locked. The configuration shown below is just one example. The Track Selector panel may look very different depending on the nature of the source material or the work underway in the sequence.



The source side (left 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.

A clip (or sequence) needs to be loaded in the Source and Record monitors to display both track panels.

Selecting Tracks

You can select tracks on either the record side or the source side 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 Selector button to select it. Click any activated Track Selector button to deselect it.
- Drag a lasso around multiple Track Selector buttons 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 on the Command Palette to cycle among selection of the video tracks, the audio tracks, and all tracks.

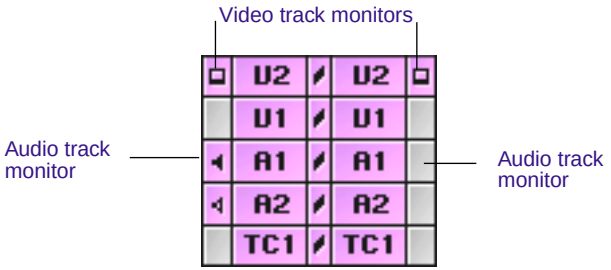
For example, you might select the source and record tracks for V1, A1, and A2 to edit video and audio from the source clip into the sequence. Select only V1 source and record tracks to edit the video without sound. Or, select only A1 and A2 to edit the sound without the video.

Selected tracks change color.

There are also keyboard equivalents for selecting tracks. Check your keyboard or the Keyboard settings in the Project window Settings scroll list.

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 and audio monitors behave differently in some circumstances, as described in this section.



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.

Tutorial: Rough Cut

In this tutorial you begin editing the Boat Shop sequence. This section corresponds to the clips and sequence in the bin titled **Rough Cut**.

Be sure to read the preceding overview sections of this chapter before you start this tutorial.

Table 6-1 Starting the Tutorial: Rough Cut

If you have worked on the previous tutorial and Media Composer is still running:	If you have worked on the previous tutorial but have quit the Media Composer system:	If you are just starting out with this tutorial and haven't completed the previous tutorials:
1. Double-click the **Rough Cut** bin to open it.	1. Launch Media Composer by double-clicking the application icon.	1. Launch Media Composer by double-clicking the application icon.
2. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Rough Cut** bin. Close the **Getting Ready to Edit** bin.	2. From the Boat Shop Project window double-click the **Getting Ready to Edit** bin and the **Rough Cut** bin to open them.	2. Click and drag the **Rough Cut** Sequence clip into the Composer monitor to begin the tutorial.
3. Drag the sequence you were working on from the **Rough Cut** bin into the Composer monitor.	3. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Rough Cut** bin. Close the **Getting Ready to Edit** bin. 4. Drag the sequence you were working on from the **Rough Cut** bin into the Composer monitor.	

Making the First Edit

In this section, you lay down the audio clip, which contains the sequence's music and narration. You learn how to mark exactly one minute of the clip, which will be the duration of your finished sequence. First, you play the clip.

1. Double-click the **Audio Track** clip and play the clip in the Source monitor.

   The clip displays as black because it's audio only.

2. Go to the head of the clip by pressing the Home key on your keyboard or clicking the Rewind button under the Source monitor.

Using Digital Audio Scrub

Digital audio scrub is used to locate a specific frame of audio. Use it now to locate the first frame of music in the audio clip.

1. Press the Caps Lock key to activate digital audio scrub.
2. Play the clip again and click the Play button to stop at the approximate place where the music begins.
3. Press the Step (jog) keys (1, 2, 3, 4 on the keyboard) to locate the first frame of the music and click the Mark IN button.

   When you use the Step keys, a frame of music or speech sounds scratchy or buzzlike. You might want to increase the volume of your speakers to hear the first frame of music.
4. Press the End key on the keyboard.
5. Press the Step Backward key to find the last frame of music.
6. Mark that frame as the OUT point.
7. Press the Caps Lock key again to exit digital audio scrub.

Splicing an Audio Clip

Click the yellow Splice-in button between the Source and Record monitors control panel to copy the clip into the Record monitor.

If no points are selected, the entire clip is edited into the Timeline.

The clip is edited onto track A1 of the Timeline. The first frame is the IN point you marked in the clip; the last frame is the OUT point you marked in the clip.

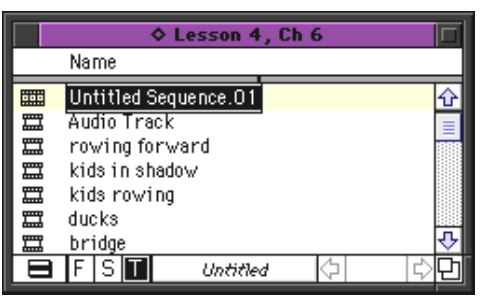
The audio track appears in the Timeline. The sequence also appears in the Record monitor (the audio track appears black).

Playing a Sequence

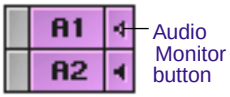
The **Rough Cut** bin contains your newly created sequence. By default, Media Composer names it **Untitled Sequence.01**. Let's change this name.

1. Click the name **Untitled Sequence.01** to select it; do not click the sequence icon.

   The name is highlighted in black and has a box around it.



2. Type **Boat Shop Cut** and press Return.



The Audio Monitor button appears when a speaker is activated.

3. Click the position bar beneath the Record monitor or anywhere near the left side of the Timeline, then click the Play button to play the audio.

   This audio track should run the length of the sequence, and its duration should be approximately one minute.

Confirming the Duration

The next steps explain how to confirm the duration by displaying the master timecode, which is the timecode of your sequence.

1. If Master timecode is not displayed, click and pull down the Timecode display from the gray area above the Record monitor and select Mas (Master) timecode.

   The master timecode displays the location of the position indicator in your sequence.

2. Move the position indicator in the Timeline or the Record monitor to the last frame of the sequence.

   The master timecode should read approximately 01:01:00:00.

Splicing Video into the Sequence

Now we'll start laying some video over the audio. For the opening shot in the sequence, use the **bridge** clip.

1. From the **Rough Cut** bin, double-click the **bridge** clip to display it in the Source monitor.

Play the whole clip through once first to get a sense of the material.

2. Mark an IN point midway through the clip, about 2 seconds after the camera begins to pan left. Watch the timecode at the top of the Source monitor to determine 2 seconds after the camera pans left.
3. Mark an OUT point 3 seconds and 6 frames (5 frames PAL) later, at approximately 01:13:43:23.

If you do not mark an IN point and OUT point, the entire clip will be edited into the sequence.

4. Move the position indicator in the Timeline or Record monitor to the head of the sequence.

5. Deselect record track A1.

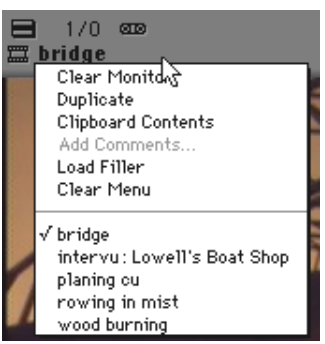
   A track changes color when it is selected; it is gray when it is deselected.

6. Press the Splice-in (V) key on the keyboard or click the Splice-in button under the Source monitor.

   The **bridge** clip is edited into the V1 track in the Timeline and is displayed in the Record monitor. The position indicator rests on the first frame of black following the splice.

When you want to bring an open bin or monitor to the foreground, you can click anywhere in it or choose its name from the Windows menu.

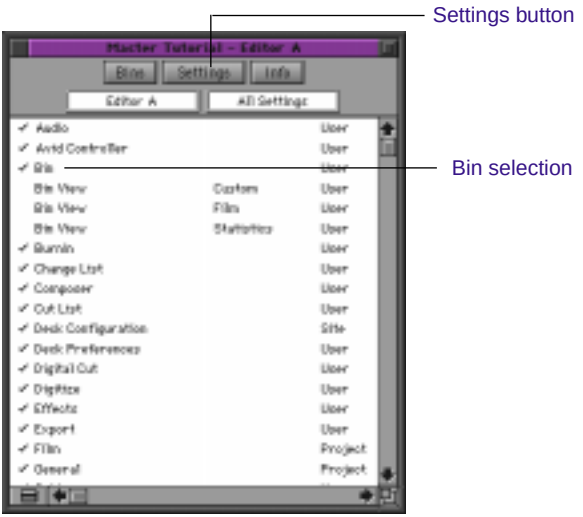
7. Click anywhere in the Record monitor to activate it.
8. Do one of the following to move to the head of the sequence:
   - Press the Home key.
   - Click the beginning of the Timeline.
9. Click the Play button to play the shot in the sequence.
10. Choose Clear Monitor from the clip name pop-up menu above the Source monitor to close the clip.



Splicing a Clip in a Pop-up Monitor

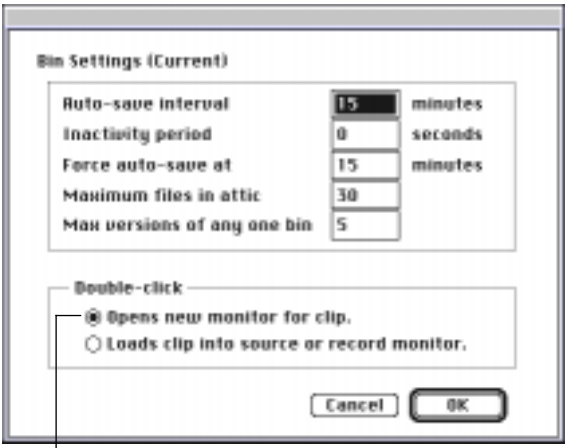
The default setting is to open a clip in the Source or Record monitor. If you want, you can change the default to open clips up in a pop-up monitor.

1. From the Project window, click the Settings button.



2. Double-click the Bin selection (you might have to scroll to locate the Bin selection).

   The Bin Settings (Current) window opens.



Click to open pop-up monitors.

3. Click the “Opens new monitor for clip” option and click OK.

   By default, this loads the clip into a pop-up monitor when you double-click the clip.

4. From the bin, double-click the **ducks** clip.

   This opens a pop-up monitor. Previously, you entered IN and OUT points, but we need to create different ones. It’s not necessary to clear the IN and OUT points. When you create a new IN point and OUT point, the system automatically clears previously set points.

5. Locate a frame in the pop-up monitor just after the clip’s midway point where the duck that has been sitting in the water is about to take off. Using the Step Backward key, mark an IN point five frames before the duck begins to move its wings to fly.

6. Mark an OUT point in the first frame after the duck leaves the monitor to the left.

Playing IN to OUT

Now you can take a look at the marked portion of the clip to make sure it is what you want.

1. Click the Play IN to OUT button or press the 6 key on the keyboard.

   The Play IN to OUT key plays a clip from the IN point to the OUT point.

   If possible, it would be nice to provide a little “breathing space” before the next shot.

2. Play the rest of the clip to see if there are several frames of water after the duck leaves the shot.

Using the Go to IN and OUT Buttons

Media Composer provides a number of methods for snapping the position indicator to an IN or OUT point.

Go to IN

Go to OUT

1. Click the Go to OUT button or press the W key on the keyboard.

   The Go to IN (or Q) key places the position indicator at the IN point.

Whenever you use the numeric keypad, you must press Enter after typing the number.

2. Type **+6** in the numeric keypad and press Enter to add 7 frames to the shot.
3. Mark that frame as the OUT point.

   The OUT point automatically moves to the new position.

You can also press the Option key and the Mark IN button to go to the IN mark. Press the Option key and the Mark OUT button to go to the OUT mark.

Moving to the Head and Tail of a Shot

Before splicing in the next shot, make sure the position indicator is on the first frame of black after the **bridge** edit. To do this:

1. Move the position indicator anywhere to the right of the **bridge** clip in the Timeline.

To snap the position indicator to the last frame of a shot, press Option–⌘ instead of ⌘ and click the mouse between the ending transition and the position indicator.

2. While pressing the ⌘ (Command) key, click the mouse between the transition and the position indicator. The position indicator snaps to the first frame of the shot.
3. Select source and record tracks V1 in the Timeline.

Using the Splice-in Button

To splice a shot:

1. With the position indicator at the end of the **bridge** clip, click the yellow Splice-in button under the Source monitor.

   The second shot is now edited into the sequence.
2. Go to the head of the sequence and play through the first two shots.

Splicing a Shot into the Middle of a Sequence

With nonlinear editing, you can splice a shot anywhere in your sequence.

1. To open the clip in the Source monitor, click the Settings button in the Project window.
2. Double-click the Bin selection.

   The Bin Settings dialog box appears.
3. Click the "Loads clip into source or record monitor" option again (to deselect it) and click OK.

   By default, this loads the clip into the Source monitor when you double-click the clip.
4. From the **Rough Cut** bin, open the **kids rowing** clip in the Source monitor.
5. Mark IN and OUT points to mark 4 seconds of the camera panning from the girl to the boy.

   Let's see what this shot looks like between the first and second shots.
6. Turn on the V1 and turn off the A1 record tracks.
7. Click in the middle of the **ducks** clip, between the position indicator and the **bridge** clip.
8. Press and hold ⌘ and click the mouse within the **ducks** clip in the Timeline to place the position indicator on the first frame of the **ducks** clip.
9. Press the Splice-in (V) key on the keyboard.

   Wherever you splice a shot into the middle of a sequence, the rest of the sequence moves down. Splicing lengthens the material on the track.
10. Play the sequence so far to see what you have done.

Undoing an Edit

The **kids rowing** shot doesn't seem to fit here. Let's undo the last step.

Choose Undo Splice-in from the Edit menu or press ⌘-Z.

Use the Undo feature whenever you feel you have made a mistake or want to go back a step. You can undo or redo up to 32 previous actions listed in the Edit menu.

Using the I/O (IN Point / OUT Point) Tracking Display

Now you will add two more shots to the sequence.

1. Open the **kids in shadow** clip.

2. Click the Clear Both Marks button.
3. Mark an IN point in the first half of the clip, one frame before the second boat enters screen left.
4. Mark an OUT point 3 seconds and 17 frames later (PAL: 3 seconds and 14 frames) by following this procedure:
    a. Choose I/O from the timecode display pop-up menu (under the timecode) in the gray area above the Source monitor.

       The I/O option displays the duration from the IN to OUT points. If you only mark the IN point, the I/O displays the duration from the IN point to the position indicator.

    b. Step forward until the I/O display reaches 3:17, and mark the OUT point.
5. Turn off the A1 record track.
6. Move the position indicator to the first black frame.
7. Press the V key on the keyboard to splice the clip into the Timeline as the third shot.

8. Open the **rowing forward** clip and mark an IN point a little less than halfway through the clip, when the dory is evenly centered between the right and left edges of the frame.
9. Mark an OUT point 5 seconds later.
10. Save the bin.
11. Splice the clip into the Timeline as the fourth shot.
12. Choose Save All Bins from the File menu.

You've finished this tutorial. You can go on to **Tutorial: Refining Edits** on **page 123**, or exit Media Composer.

CHAPTER 7

Refining the Edit

Refining edits tightens and improves the relationship between pictures and sound. This is described in the following sections:

- Using Segment Mode
- Basic Trim Procedures
- Using the Command Palette
- Audio Editing

Tutorial: Refining Edits contains the following sections:

- Overwriting Shots into a Sequence
- Marking Clips for Storyboarding
- Rearranging Shots
- Removing Footage from a Sequence
- Trimming
- Working with Audio

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 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.

Editing in Segment Mode

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.
- 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.

Distinguishing Two Types of Buttons

In Chapter 6, you used the Splice-in button. The Splice-in button and the Overwrite button (see **"Overwriting Shots into a Sequence" on page 124**) take clips from the Source pop-up monitor and put them into the Timeline. The Segment mode buttons, Extract/Splice-in and Lift/Overwrite, move segments around within the Timeline. The names are similar but you use them for different purposes.

Basic Trim Procedures

For illustrations of the various types of trim edits you can perform in Trim mode, see the *Avid Media Composer and Film Composer Quick Reference*.

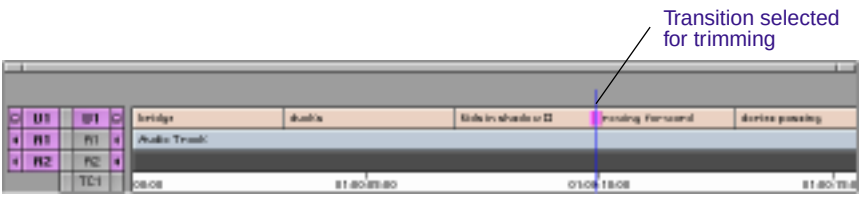
You can enter Trim mode in several different ways, depending on the type of trim you expect to perform. Once in Trim mode you can:

- Select additional tracks
- Toggle between Big and Small Trim mode
- Toggle between trim sides
- Perform and play back the trim

Entering Trim Mode

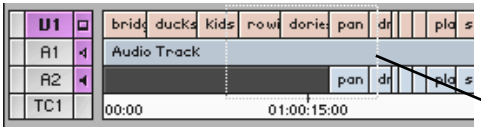
There are four alternative methods for entering Trim mode:

- **Clicking 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.

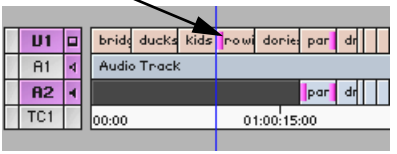


When you deselect one or more tracks in the Track Selector panel, by default only the transitions in the highlighted tracks are selected for trimming. If the transitions are not straight cuts (overlap cuts or L-edits), the system highlights the topmost track nearest the position indicator.

- **Lassoing the transitions in the Timeline.** 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, draw a lasso within the Timeline by pressing the Control key while you drag.

- **Using the Go to Previous/Next Edit.** 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.

- **Using the Play Loop button.** This is useful if you like to trim quickly as you edit, going back and forth between Trim mode and other edit modes.

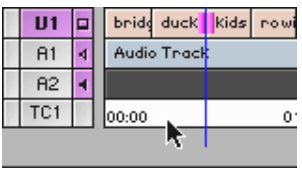
The Play Loop button does not appear in Source/Record mode by default. You must map it to the keyboard or a palette in advance. For information on button mapping, see "User-selectable buttons, mapping" in the online help index.

Exiting Trim Mode

You can exit Trim mode at any time in one of several ways:

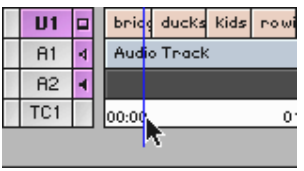

- Click the Source/Record Mode button or the Effect Mode button.

- 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. This feature has the following uses:

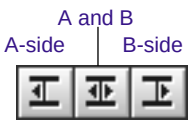
- If you prefer the display of Small Trim mode, but need quick access to the Playback Duration controls from time to time, you can perform most of your work in Small Trim mode. Whenever you need the controls, click the Trim Mode button. This saves you the extra step of opening the Trim Settings dialog box each time.

- If you prefer the larger monitors and controls of Big Trim mode, select this as the default. 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

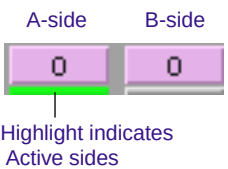
There are three ways to select sides of a transition to trim:

- 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.



- 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.

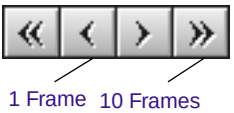
- You can use the Cycle Trim Sides button to cycle between selection of the A-side, B-side, or both.



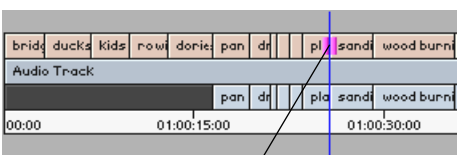
The selected parts of the transition are highlighted, and the corresponding rollers appear in the Timeline. Also, one or both of the frame counter indicators below the monitors are highlighted to reflect the active trim sides: A-side, B-side, or both. The number indicates how many frames have been added or subtracted (-) from the transition.

Performing a Basic Trim

With your transitions and trim sides selected, you can perform a basic trim using one of the following alternative procedures:



- Use the Trim buttons to trim forward or backward by one- or ten-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.
- Use controls in the Timeline by clicking a roller at the selected transition and dragging forward or backward in the sequence.



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.

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. 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.

You can use the buttons directly from the Command Palette without mapping them by deselecting the two boxes at the bottom of the Command Palette, 'Button to Button' Reassignment and 'Menu to Button' Reassignment.

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, and Other.

All buttons are displayed in the Command Palette. If you cannot find a particular button, open the Command Palette from the Tools menu and search for it there. For procedures on mapping user-selectable buttons and menu commands, see "User-selectable buttons, mapping" in the online help index.

Move buttons

Play buttons

Edit buttons

Trim buttons

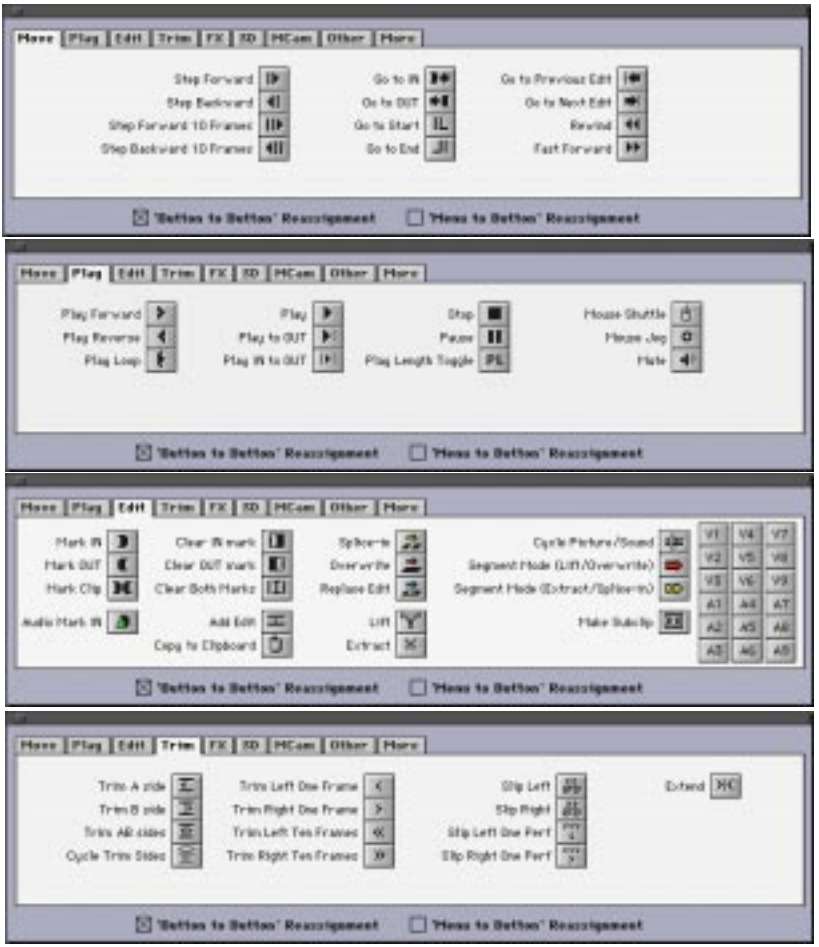


Figure 7-1 Master Command Palette Tabs

Effect buttons

3D buttons

MCam buttons

Other buttons

Workspace buttons

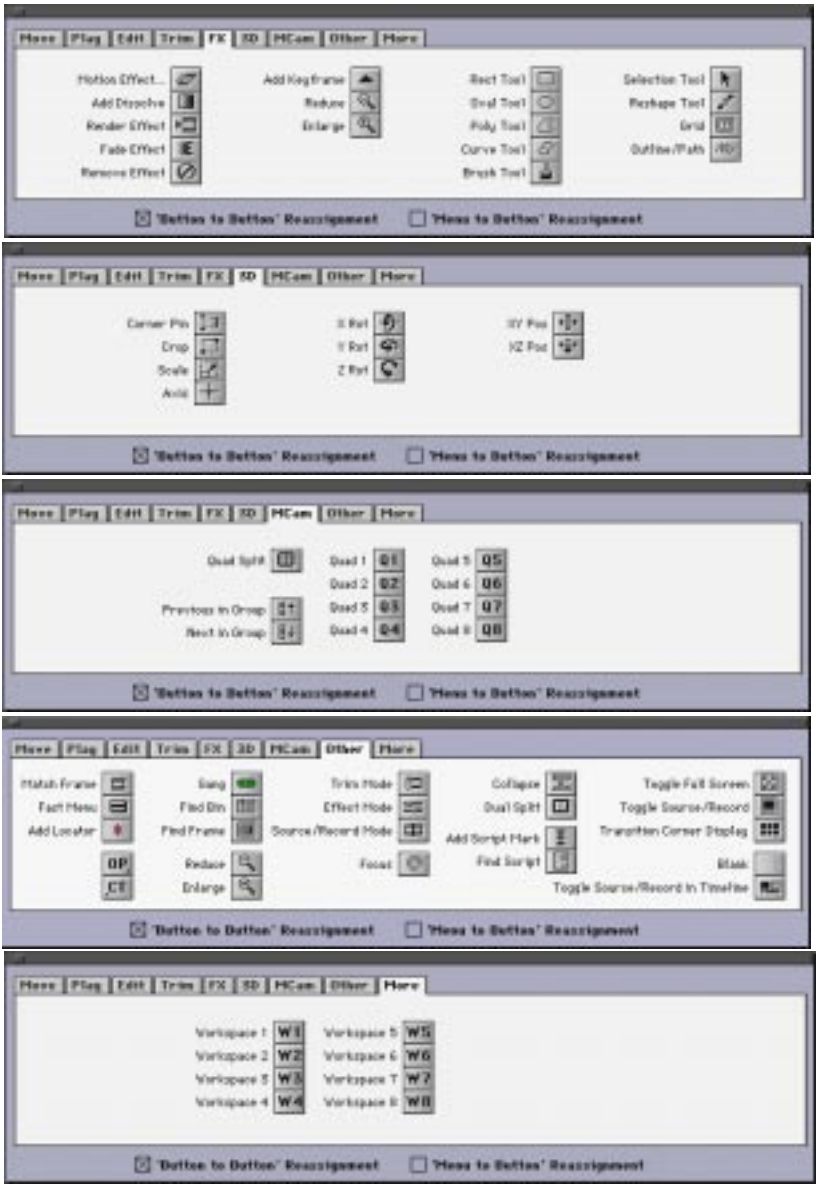


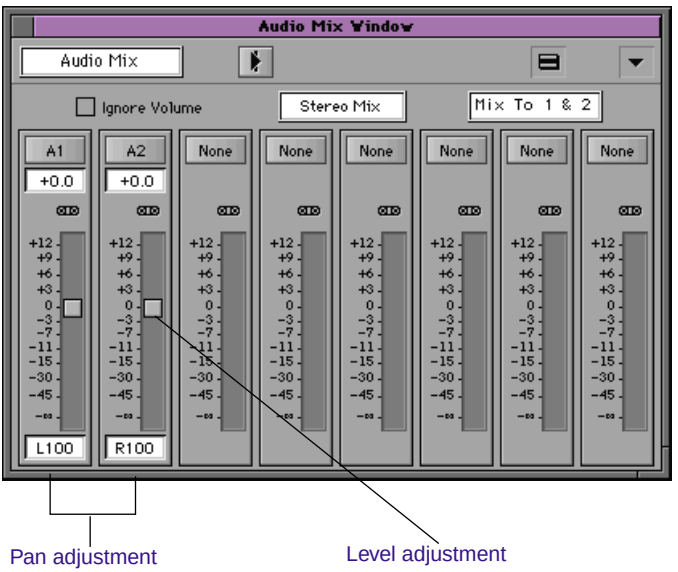
Figure 7-2 Master Command Palette Tabs (Continued)

Audio Editing

The Media 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.

Adjusting Volume

You can use the Audio Mix Tool to adjust volume (level) and balance (pan).



Tutorial: Refining Edits

In this tutorial you refine and trim edits and adjust audio levels. This section corresponds to the clips and sequence in the bin titled **Refining Edits**.

Be sure to read the preceding overview sections of this chapter before you start this tutorial.

Table 7-1 Starting the Tutorial: Refining Edits

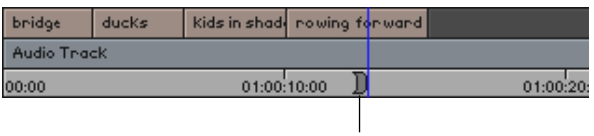
If you have worked on the previous tutorial and Media Composer is still running:	If you have worked on the previous tutorial but have quit the Media Composer system:	If you are just starting out with this tutorial and haven't completed the previous tutorials:
1. Double-click the **Refining Edits** bin to open it.	1. Launch Media Composer by double-clicking the application icon.	1. Launch Media Composer by double-clicking the application icon.
2. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Refining Edits** bin. Close the **Rough Cut** bin.	2. From the Boat Shop Project window double-click the **Rough Cut** bin and the **Refining Edits** bin to open them.	2. Click and drag the **Refining Edits** Sequence clip into the Composer monitor to begin the tutorial.
3. Drag the sequence you were working on from the **Refining Edits** bin into the Composer monitor.	3. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Refining Edits** bin. Close the **Rough Cut** bin. 4. Drag the sequence you were working on from the **Refining Edits** bin into the Composer monitor.	

Overwriting Shots into a Sequence

In addition to splicing, you can overwrite shots into a sequence. An overwrite edit replaces a section of a sequence with other source footage. An overwrite edit does not affect the length of the sequence.

The **rowing forward** shot is too long. In this section you will edit the next shot into the sequence before the end of the **rowing forward** clip.

1. Make sure the Record monitor is active.
2. Place the position indicator in the Timeline on the first frame of **rowing forward**.
3. Advance 3 seconds by entering **+229** (+224 PAL) in the numeric keypad, then pressing Enter.
4. Mark an IN point.



5. Open the **dories passing** clip.
6. Mark an IN point in the first half of the clip, 18 frames (15 frames PAL) after the tips of the two boats seem to touch in the middle of the screen.
7. Mark an OUT point a few frames less than 7 seconds later, when the girl's oars are both out of the water, and her left oar just catches the light.

Red on the monitor

8. Click the Overwrite button or press the B key on the keyboard.

   The shot overwrites the end of the **rowing forward** clip and extends beyond it, thus lengthening the video portion of the sequence.

You should now be at about 19:20 into the sequence, with five video clips in it.

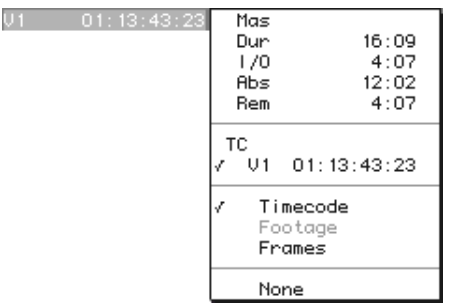
Marking Clips for Storyboarding

Storyboarding allows you set up a group of clips in a sequence of events and then load them into the Record monitor all at once.

In this section, you will mark a group of clips using instructions in Table 7-2. The table provides a timecode to set the IN point and based on the duration, you can use the numeric keypad to figure out the OUT point.

Use the following procedure to set your IN and OUT points for each clip in the table:

1. Load a clip listed in Table 7-2 in its Source monitor.
2. Choose V1 in the timecode display pop-up menu above the Source monitor.



You will use the V1 numbers to go to the IN point.

3. Mark your IN point based on the Mark IN timecode in Table 7-1.

   You might have set the IN and OUT points for these clips in the previous lesson. Check them to see whether or not they need to be reset.

4. To set the OUT point, enter the duration (from Table 7-2) in the numeric keypad and press Enter.
5. Mark the OUT point.
6. Continue marking IN and OUT points for the remaining clips, but do not edit the clips into the sequence yet.

Table 7-2 Mark Points for Boat Shop Clips

Clip name	Mark IN point	Duration
draw knife cu	05:02:08:09	1:16 (NTSC) 1:13 (PAL)
chiseling	04:11:34:22	00:16 (NTSC) 00:13 (PAL)
hammering	04:05:10:08	1:00
drilling	04:04:47:25	1:00
planing cu	04:10:05:17	2:00
planing ms	04:09:24:00	3:19 (NTSC) 3:16 (PAL)
sanding	04:06:52:03	3:12 (NTSC) 3:10 (PAL)
wood burning	04:14:24:02	6:15 (NTSC) 6:12 (PAL)
two dories	01:11:03:03	1:22 (NTSC) 1:18 (PAL)
rowing in mist	01:02:38:29	1:22 (NTSC) 1:18 (PAL)

Table 7-2 Mark Points for Boat Shop Clips (Continued)

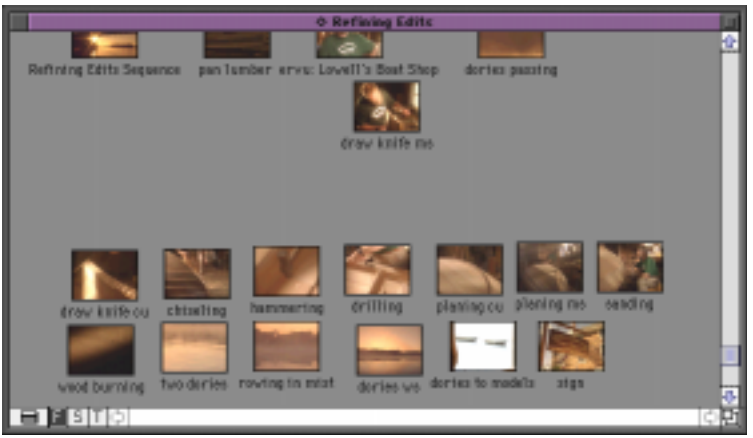
Clip name	Mark IN point	Duration
dories ws	01:06:38:26	4:00
dories to models	04:25:22:28	3:23 (NTSC) 3:19 (PAL)
sign	05:06:52:01	10:00 (NTSC) 10:00 (PAL)

Storyboard Editing the Clips

Frame mode

1. Display the **Refining Edits** bin in Frame mode and click the zoom box so the bin fills the screen, or click and drag the lower right corner of the bin to enlarge the window.
2. Choose Fill Window from the Bin menu to arrange the clips in the bin.
3. Drag the **draw knife cu** clip to a clear space in the lower left area of the bin.
4. Arrange the following clips (after **draw knife cu)** in two or three rows, from left to right, and top to bottom, to form the storyboard. Make sure you maintain the order of clips:
   - chiseling
   - hammering
   - drilling
   - planing cu
   - planing ms
   - sanding
   - wood burning
   - two dories

- rowing in mist
- dories ws
- dories to models
- **sign**



Now you're ready to load the marked clips into the sequence.

5. Place the position indicator in the Timeline on the first frame of black following the **dories passing** clip and press ⌘ while clicking the mouse.
6. Select only record track V1 and deselect A1 in the Timeline.
7. Select the storyboarded clips all at once:
   a. Position the mouse pointer in the bin in the blank area just to the left of the **draw knife cu** clip.
   b. Lasso the clips by dragging the pointer to the right and down, making sure to select all of the storyboarded clips.

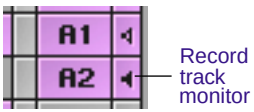
      A box forms as you move the mouse, starting next to the **draw knife cu** clip and ending at the last pointer position. All the names are highlighted in pink.
8. Hold the Option key, press the mouse on one of the clips (on the image, not the name), and drag the group into the Record monitor.

Release the mouse when a yellow arrow appears in the Record monitor.

The shots are edited in the sequence in the order you specified.

9. To play the sequence:

   a. Move the position indicator to the head of the sequence.



   b. Activate the speaker icons for tracks A1 and A2 by clicking the record track monitors (only one record track monitor can be activated at a time).

      Track A2 contains sound for several clips.

   c. Click the Play button under the Record monitor.

Rearranging Shots

You can rearrange shots by overwriting material, lifting material, or removing material. Overwriting material doesn't change the length of the sequence. Lifting material leaves filler and doesn't affect the length of the sequence. Removing material shortens the length of the sequence.

Overwriting with the Three-Point Edit

The three-point edit is an excellent way to replace a shot in a sequence. Use the Mark Clip button to select the shot in the sequence (or mark an IN and OUT point for a segment that's not a single shot), and mark either the IN or OUT point in the source clip. The system calculates the exact duration of the source clip to insert.

Let's replace the **chiseling** shot with **draw knife ms** to create a smoother movement across the cut.

1. To enlarge this area, in the Timeline:

   a. Press the Home key.

   b. Click the scale bar and drag the scale box to enlarge the Timeline.

      The Timeline wraps onto another line, displaying multiple Timelines.

   c. Click and drag the scale box to the right until you see the entire **chiseling** clip.

   The Timeline splits in half (or thirds) as it wraps through the sequence.

2. Move the position indicator to the **chiseling** clip.
3. Select only record tracks V1 and A2.

4. Click the Mark Clip button in the row of buttons below the Record monitor, or press T on the keyboard.

   The IN and OUT points appear at the head and tail of the clip in the TC1 track of the Timeline; the marked segment turns purple.

   The IN and OUT points also appear in the Record monitor's position bar.

5. Open the **draw knife ms** clip in the Source monitor and mark an IN point around 2.5 seconds into the clip, when the boatbuilder's motions become smooth.
6. Clear any OUT marks.

7. Click the red Overwrite button or press the B key on the keyboard to make the three-point edit.

   The shot **draw knife ms** replaces the **chiseling** shot.

8. Return to the previous Timeline view by doing the following:

   a. Click and drag the scale box to the left.

b. Move the position indicator in the Record monitor to the head of the sequence.

Rearranging Footage with Extract/Splice-in

Extract/Splice-in is a great tool for changing the order of shots in a sequence. Let's see what it looks like if we reverse the position of two shots in the sequence, **rowing in mist** and **two dories**.

1. Expand the Timeline again with the scale box; drag and click the scale box toward the end of the sequence until you reach the **rowing in mist** clip.

2. Click the yellow Segment Mode (Extract/Splice-in) button below the Timeline.

   When the button is activated, its background turns light gray.

Don't confuse the Extract/Splice-in and Splice-in buttons. The Extract/Splice-in button is located below the Timeline; the Splice-in button is located on the keyboard and between the Record monitor and the Source monitor (see "Distinguishing Two Types of Buttons" on page 113).

3. Select only track V1. Deselect all audio tracks.
4. Press and hold ⌘ key and click and drag the **rowing in mist** shot to the left, so it is completely over the **two dories** shot, and release the mouse.

   Two dories should now follow **rowing in mist**.
5. Click the Extract/Splice-in button again to deactivate it.
6. Click the Timeline in front of the two shots and play the shots.

   The edit works.

Removing Footage from a Sequence

You can remove footage from your sequence, and either close or retain the gap that results. Extract/Splice-in closes the gap, and Lift retains the gap.

Removing Footage with Extract/Splice-in

The **planing ms** shot breaks up the feeling of being close to the action. Let's remove it from the sequence and close the gap that results.

1. Use the scroll bar to locate the **planing ms** clip.

2. Click the yellow Segment Mode (Extract/Splice-in) button below the Timeline.

To eliminate footage that does not start and end at a transition, use IN and OUT points to delimit the segment that you want to extract.

3. Click anywhere in the **planing ms** clip on V1, then Shift-click the audio portion of the clip in track A2.

   The clip is highlighted in both tracks.

4. Press the Delete key on the keyboard.

   The selected shot is eliminated and the surrounding shots close the gap.

5. Click the Extract/Splice-in button again to deselect it.

Removing Footage with Lift

Lift retains the gap after lifting footage from the sequence. Use Lift if you want to maintain the rhythm of a sequence or the synchronization of the video and audio tracks.

The **dories passing** shot plays for too long, but we want the next shot, **draw knife cu**, to remain in sync with the audio. We will use Lift to

shorten **dories passing**, but maintain the same entrance point for the next shot. Later, we'll figure out something to put in its place.

1. Display the master timecode in the Record monitor's timecode display by choosing Mas from the timecode pop-up menu.
2. Turn off track A2.
3. Mark an IN point in the sequence at master timecode 01:00:17:29 (01:00:17:24 PAL) by using the Mark IN button below the Record monitor.
4. Go to the last frame of the **dories passing** segment by placing the position indicator in the next clip beyond **dories passing**. Press and hold ⌘-Option and click the mouse.
5. Mark an OUT point.

   You must mark an IN and OUT point in the sequence.

6. Click the Lift button or press the Lift key (Z) on the keyboard to remove the segment.

   The selected segment lifts out and leaves black filler in its place.
7. Play the entire sequence in the Record monitor.

Trimming

Trimming allows you to adjust incoming and outgoing frames of your clip. There are two types of trims: dual-roller and single-roller.

Dual-Roller Trimming

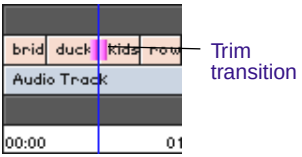
Use a dual-roller trim to adjust both sides of a transition simultaneously, adding frames to one shot while subtracting frames from the adjacent shot. The total duration of the sequence does not change.

Let's cut the **kids in shadow** shot right on the beat of the music.

1. Select record track V1 and deselect the audio tracks. Make sure the A1 speaker is turned on in the Timeline.

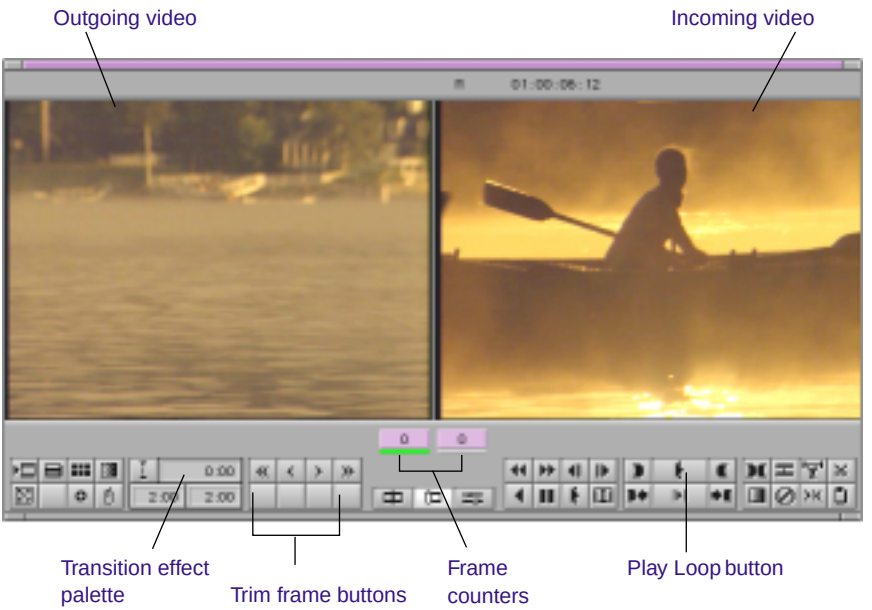
2. Place the position indicator near the **ducks**/**kids in shadow** transition, and click the Trim Mode button below the Timeline.

   The position indicator snaps to the transition.



   The Record monitor shows the last (tail) frame of the **ducks** shot and the Source monitor shows the first (head) frame of the **kids in shadow** shot on the right.

   New buttons appear below the trim windows. Note that during double-roller trim mode, both frame counters are purple.



To see the second row of buttons, click Settings in the Boat Shop Project window, then choose Composer. In the Composer Settings dialog box, click Second Row of Buttons, then click OK.

3. Play the transition by clicking the Play Loop button.

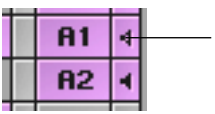
   If this button does not appear, choose Command Palette from the Tools menu, click the Play tab, deselect the boxes at the bottom of the tab, then click the Play Loop button.

   The transition plays repeatedly.

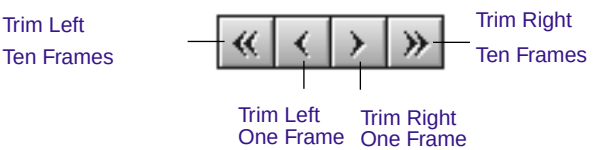
4. To stop the playback loop, click the Play Loop button again.
5. Press the Caps Lock key on the keyboard so you can hear the audio as you trim.

   To use digital audio scrub, make sure the speaker icon for record track A1 is hollow and increase the speaker volume, if necessary.

6. Press the Option key and click the speaker icon for track A1 if it is not hollow.



7. Click the Trim Right One Frame button under the Source monitor until you hear a change in loudness around the seventh frame (sixth frame PAL).



   This adds frames to the tail of the outgoing shot and removes them from the head of the incoming one. The duration of the video track remains unchanged.

8. Play the transition again by using the Play Loop button.

9. Do one of the following to exit Trim mode:

- Click the Source/Record Mode button below the Timeline.
- Press the Left Arrow key on the keyboard.

Using Dual Rollers to Trim the Outgoing Shot

Let's insert a shot to take the place of the filler we left in the sequence. You'll replace the filler with **pan lumber**, because this shot will provide continuity of movement from the previous shot. Once you overwrite the shot into the sequence, you'll trim it.

1. Place the position indicator within the filler between the **dories passing** and the **draw knife cu** clips.
2. Select record tracks V1 in the Timeline, and deselect A1 and A2.

3. Click the Mark Clip button under the Record monitor or press T on the keyboard.
4. Open the **pan lumber** clip and mark an OUT point where the lumber is in sunlight and the camera stops panning. Do not mark an IN point.
5. Select record tracks V1 and A2.

6. Click the red Overwrite button between the Source/Record window.

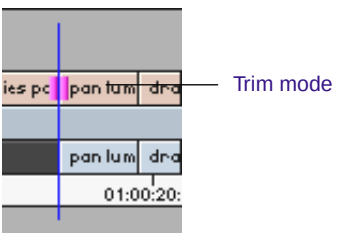
Don't confuse the Lift/Overwrite and Overwrite buttons. The Lift/Overwrite button is located below the Timeline; the Overwrite button is located on the keyboard and between the Source/Record window.

Trim Shot

In the next steps, you will trim the **pan lumber** shot so it enters a little earlier.

1. Enter Trim mode by lassoing the Timeline tracks:
   a. Click the cursor above all the Timeline tracks just to the left of the **dories passing**/**pan lumber** transition.
   b. Drag the mouse down and to the right to surround the transition.

      The trim rollers appear.



2. Move the transition 74 frames earlier by clicking the Trim Left Ten Frames button 7 times and the Trim Left One Frame button 4 times.

   You see the numbers change in the purple frame counters.

Single-Roller Trimming

In the trims you made so far, you trimmed both the head and the tail shots an equal number of frames, adding to one side and subtracting from the other. Now let's trim the tail of the **pan lumber** shot without affecting the head of the **draw knife cu** shot.

1. While still in Trim mode, advance to the **pan lumber / draw knife cu** transition by pressing S on the keyboard.
2. Select track A2 in addition to V1 in the Timeline because you will trim both the audio and video of the shot.

Left frame counter

3. Click the left frame counter (A-Side Trim counter).

   Your trim will only affect the outgoing shot, which is in the left Trim monitor. The left frame counter remains purple, while the right one is deselected.

4. Type **-10** and press Enter on the numeric keypad to subtract 10 frames from the outgoing shot.

   This moves the transition 10 frames to the left.

5. Leave Trim mode by pressing the Left Arrow key on the keyboard or by clicking the Source/Record mode button below the Timeline.

Adding Synced Audio

Now we'll add some synced audio to the sequence.

1. Open the **intervu: Lowell's Boat Shop** clip.

   Be sure the volume on the speakers is turned up.

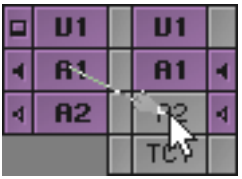
2. Mark the IN point at the start of the first phrase, "Lowell's Boat Shop isn't quite the same as it always has been..." and mark the OUT point at the end of the last phrase, "...a great symbol of New England."

3. Press the Play IN to OUT (6) button on the keyboard to play the clip from the IN to OUT marks.

   The audio is on track A1 in the source clip, but we want to add it to the end of track A2 in the Timeline.

   First we'll patch from source track A1 to record track A2.

4. To patch the track, quickly drag the cursor from the A1 source track icon to the A2 record track icon.



5. Display the master timecode (Mas) in the timecode display above the Record monitor.
6. In the sequence, place the Mark IN point at master timecode 01:00:41:00 (01:00:40:25 PAL), in the middle of the **dories ws** clip.
7. Make sure source track A1 and record tracks V1 and A2 are selected.

8. Click the Splice-in button between the Source/Record window.

   The audio is patched into the sequence.

Working with Audio

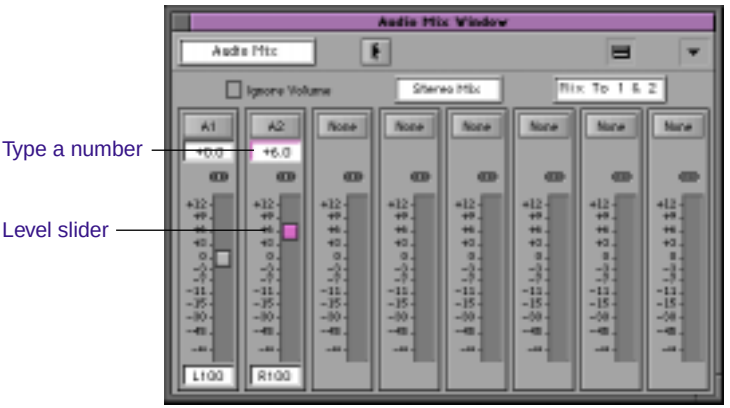
In this section, you'll adjust audio levels to the already placed **intervu: Lowell's Boat Shop** clip.

Adjusting Audio Level

The volume in the **intervu: Lowell's Boat Shop** shot is noticeably lower than in the rest of the sequence. Let's make this shot louder.

1. Select record track A2 and deselect track A1.
2. Place the position indicator anywhere within the **intervu: Lowell's Boat Shop** shot.
3. Choose Audio Mix from the Tools menu.
4. In the A2 area, move the A2 Audio Level slider to level +6 by doing one of the following:

- Drag the slider to level +6.
- Type 6.
- Press the Up or Down Arrow key on the keyboard to reach level +6.



5. Play a portion of the shot.

   The volume is still too low.

6. Activate the Audio Mix Tool by clicking in it, and move the slider to level +10.

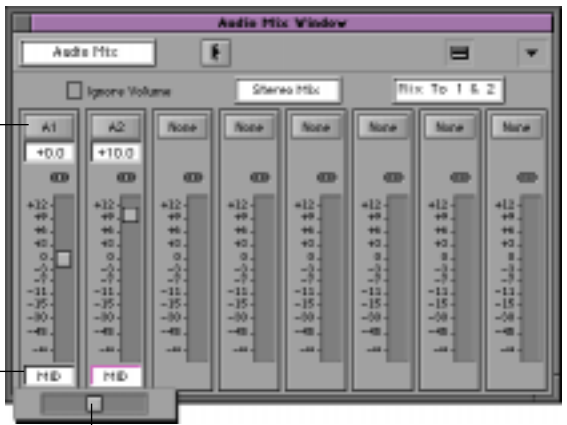
Adjusting Audio Pan

Most of the audio for the sequence plays only out of the left speaker; the **intervu: Lowell's Boat Shop** shot plays only out of the right speaker. You can adjust the audio pan (balance) so the sound plays equally from both speakers.

1. Clear any IN or OUT points from the sequence by pressing the G key on the keyboard.
2. Select record tracks A1 and A2.
3. Activate the Audio Mix window by clicking anywhere in it.

4. Click the Timeline's position indicator at a point that has audio on track A1.
5. From the Audio Mix window, pull down None and choose A1 from the first Pan Adjustment window.
6. Pull down the Pan Adjustment window for track A1.

   The Pan slider appears.



7. Drag the Pan slider to the middle of the scale until it reads MID.

To make the slider snap to MID, press the Option key and click the Pan slider.

8. Pull down the Pan Adjustment window for track A2 and drag the Pan slider until it reads MID.
9. Play a portion of the sequence to check speaker balance.
10. Click the close box to close the Audio Mix window.

You've finished this tutorial. You can go on to **Tutorial: Adding Effects** on **page 123**, or exit Media Composer.

CHAPTER 8

Adding Effects

Adding an effect to a clip enhances your sequence by fading in or out of a scene or adding video or a graphic on top of a clip. This is described in the following sections:

Tutorial: Adding Effects contains the following sections:

Effects Editing

The Avid Composer system offers many effects that you can apply to your sequences. You can also use third-party plug-in effects that are compatible with Adobe Photoshop™. The effects that are available on your Avid Composer system depend on the model and options that you purchased. For the list of effects available for your model, see the online book *Avid Media Composer Products Reference*.

This chapter explains how to apply effects to transitions or segments (clips) in your sequence. After you have selected the effect and applied it to a transition or segment, you can adjust the effect parameters to meet your requirements.

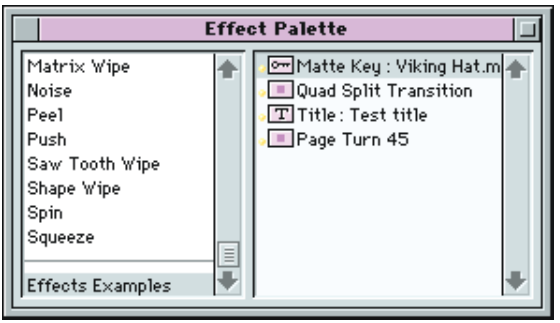
Many effects are *real time*, which means you do not have to render them before you play them. You can preview effects that are not real time before rendering. Rendering an effect creates a media file that plays with the sequence.

After you create an effect, you can save it as an effect template and reapply the template to other transitions or segments in your sequence. Some effects can be applied only to transitions, other effects can be applied only to segments, and some effects can be applied to both transitions and segments. In addition, some effects can be applied to a single video layer, and others to multiple video layers.

For an explanation of particular effects and the effect parameters, see "2D Effects Reference" and "3D Effects Editing" in the *Avid Media Composer and Film Composer Effects Guide*.

Displaying the Effect Palette

You select most effects from the Effect Palette in the Tools menu. The exceptions are Motion effects that you access from the Fast menu above the Source monitor, the Freeze Frame effect that you access from the Clip menu, and titles that you create with the Title Tool.



Effect Categories

The effects available through the Effect Palette are grouped by effect category:

- Blend
- Box Wipe
- Conceal
- Edge Wipe
- Film
- Image
- Key
- L-Conceal
- Matrix Wipe
- Peel

- Push
- Saw Tooth Wipe
- Shape Wipe
- Spin
- Squeeze

Each of these effect categories contains multiple effects.

Effect Types

There are two primary effect types that are defined by where you use them in a sequence:

- Transition effects
- Segment effects (single-layer and multilayer)

Transition Effects

A transition is the point where two clips meet. You apply a transition effect to the cut point between two clips on the same video track. After you apply a transition effect, you can adjust its relative position and duration. Depending on the specific effect, other effect parameters may apply.

Transition effects are included in all effect categories on the Effect Palette, except the Image effect category.

For an explanation of the transition effects in each effect category, see the *Avid Media Composer and Film Composer Effects Guide*.

Segment Effects

You apply a segment effect to an entire clip or a group of clips. There are two types of segment effects:

- A single-layer segment effect, such as a Mask, is applied to a segment on one video track.
- A multilayer segment effect, such as a Picture-In-Picture effect, is applied to the top layer of segments that contain two or more video tracks that will be played simultaneously.

All of the Avid effects and their effect types are listed in the *Avid Media Composer and Film Composer Effects Guide*.

Applying Effects to a Sequence

This section explains how to apply an effect to a sequence in the Record monitor. You can apply an effect:

- To one transition or segment on a single video layer
- To multiple transitions or segments on a single video layer
- To multiple transitions or segments on multiple video layers

The effect type (transition or segment) determines where you can place the effect in the sequence. For an explanation of the effect types, see “Effects:types of” in the online help index.

After you apply an effect, the next step is to adjust the effect’s parameters. To understand how to adjust the effect parameters, see “Effect Mode:adjusting parameters in” in the online help index.

Working in Effect Mode

After you have created an effect and applied it to a transition or segment in your sequence, you can adjust its appearance and operation by changing its effect parameters in Effect mode.

Not all effect parameters apply to all effects. Parameters that do not apply to an effect are disabled in the Effect Mode window. To determine which parameters pertain to an effect, refer to the effect's description in the *Avid Media Composer and Film Composer Effects Guide*.

Rendering an Effect

You must render a non-real-time effect before it can be played. When an effect is rendered, the system stores the effect and its media file as a precomputed master clip (often referred to as a precompute). The system uses the precompute to play the effect at its normal speed.

Tutorial: Adding Effects

In this tutorial you add dissolves and a picture-in-picture effect. This section corresponds to the clips and sequence in the bin titled **Adding Effects**.

Be sure to read the preceding overview sections of this chapter before you start this tutorial.

Table 8-1 Starting the Tutorial: Adding Effects

If you have worked on the previous tutorial and Media Composer is still running:	If you have worked on the previous tutorial but have quit the Media Composer system:	If you are just starting out with this tutorial and haven't completed the previous tutorials:
1. Double-click the **Adding Effects** bin to open it.	1. Launch Media Composer by double-clicking the application icon.	1. Launch Media Composer by double-clicking the application icon.
2. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Adding Effects** bin. Close the **Refining Edits** bin.	2. From the Boat Shop Project window double-click the **Refining Edits** bin and the **Adding Effects** bin to open them.	2. Click and drag the **Adding Effects Sequence** into the Composer monitor to begin the tutorial.
3. Drag the sequence you were working on from the **Adding Effects** bin into the Composer monitor.	3. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Adding Effects** bin. Close the **Refining Edits** bin. 4. Drag the sequence you were working on from the **Adding Effects** bin into the Composer monitor.	

Adding Transition Effects

Transition effects are added in between two clips. Effects you can use include: Blend, Box Wipe, Conceal, Edge Wipe, Film, Image, Key, L-Conceal, Matrix Wipe, Peel, Push, Saw Tooth Wipe, Shape Wipe, Spin, and Squeeze.

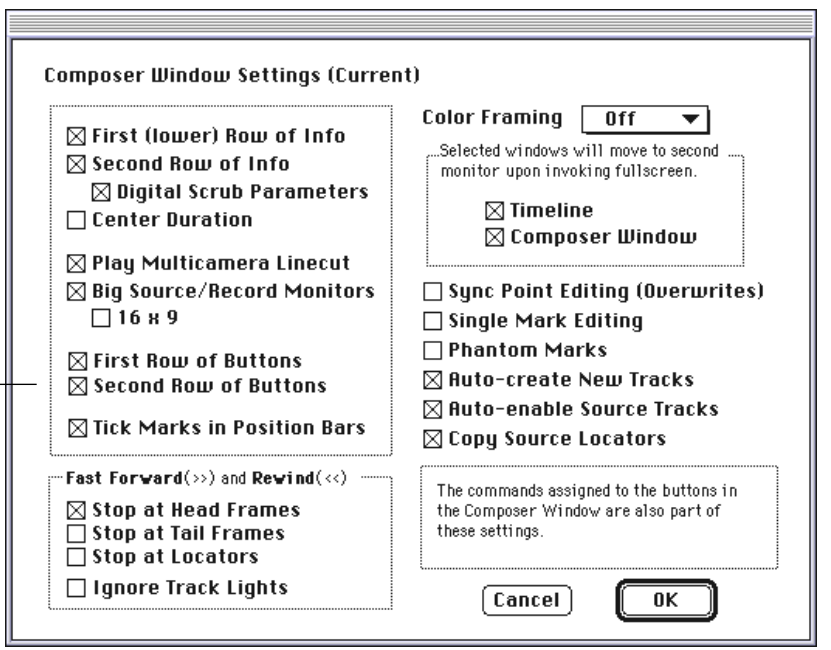
Displaying Editing Buttons

Before you add effects to the tutorial sequence, you need access to some effects editing buttons.

1. Choose Composer Settings from the Special menu.

   The Composer Settings window opens.

2. Make sure the Second Row of Buttons is selected.



3. Click OK.

   A second row of buttons appears under the Source/Record window.

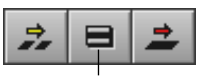
Adding Fade In

Now we'll add a fade in effect to a transition.

1. If you don't see any video in the Record monitor, click the box to the right of V1 so a square (tiny monitor) appears.

   The video appears in the Record monitor.

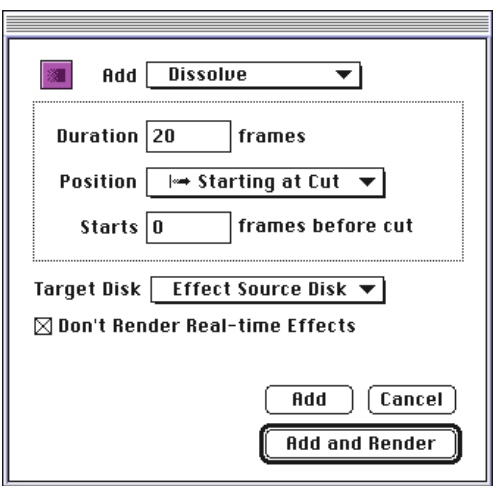
2. Select the V1 record track and click the head of the sequence.



3. Press and hold the Fast Menu button between the Source/Record monitors.

4. Click the ADD DISS (Add Dissolve) button.

   A dialog box appears.



5. Create a 20-frame dissolve (fade in), starting at the cut by doing the following:
    a. Choose Dissolve from the Add pop-up menu.
    b. Type 20 in the Duration text box.
    c. Choose Starting at Cut from the Position pop-up menu.
6. Choose the disk on which the effect media file should be stored from the Target Disk pop-up menu.

    The default disk is Effect Source Disk.

Make sure the Don't Render Real-Time Effects box is not selected.

7. Click the Add and Render button to render the effect.

    The system creates the media file of the video effect during the rendering process. It also places a box in the Timeline where you added the effect.
8. Play the effect. Press the space bar to stop playback.

Dissolving Between Shots

You can create a nice effect by adding a dissolve between the first two shots of the sequence.

1. Select the V1 record track and click the first frame of the **ducks** clip.
2. Click the Add Dissolve button in the Fast menu.
3. Create a 20-frame dissolve, centered on the cut.
    a. Choose Dissolve from the Add pop-up menu.
    b. Type 20 in the Duration text box.
    c. Choose Centered on Cut from the Position pop-up menu.
4. Choose the disk on which the effect media file should be stored.
5. Click the Add and Render button.

6. Play the effect. Press the space bar to stop playback.

Creating a Series of Dissolves

After you create one dissolve, you can quickly add it to other transitions in a sequence. In this section, you'll add a series of dissolves in the middle of the sequence to smooth the transition between several short shots.

1. Place the position indicator at the transition between **dories passing** and **pan lumber**.
2. Create a 10-frame dissolve, centered on the cut.
3. Repeat steps 1 and 2 for all transitions through **sanding/wood burning**.

   If you can't see the clips in the Timeline, use the scale bar to expand the Timeline.

You do not have to change any dissolve parameters when you make these dissolves.

4. Play the sequence through to see your work.

Creating Audio Dissolves

It's just as easy to add audio dissolves, and the procedure is the same as adding video dissolves.

As an exercise, create audio dissolves for every audio transition on track A2 through **sanding/wood burning** except the beginning and the end.

Use 10-frame dissolves, centered on the cut. Be sure to select track A2 and deselect other tracks.

Adding a Fade Within the Sequence

Now we'll create a fade to black within the sequence after the **dories passing** shot, to cut more forcefully on the words, "wooden boat building." Notice that the transition already has a 10-frame dissolve.

1. Place the position indicator on the last frame of the **dories passing** shot.
2. Select only track V1.

3. Click the REMO EFFE (Remove Effect) button in the Fast menu.

   The dissolve is removed from the transition.
4. Without moving the position indicator, mark both an IN and an OUT point on that frame.

   Don't use the Mark Clip button.

5. Click the red Segment Mode (Lift/Overwrite) button below the Timeline.
6. Press ⌘-X.

   A single frame is lifted from the sequence, leaving one frame of black.
7. Deselect the Lift/Overwrite button.
8. Add a 20-frame dissolve, ending at the cut.
9. Select the disk drive and click the Add and Render button to add and render the dissolve.

Adding a Picture-in-Picture Effect

We'll make one final change to increase the impact of the last part of the sequence. Using a Picture-in-Picture effect, you'll squeeze the image of the boat shop owner into the lower left corner of the screen, and lay some other images behind him.

Using the Second Video Track

This effect will take up two video tracks: V1 for the shots of boats and boating and V2 for the interview. First, you have to move the interview shot from track V1 to V2.

1. Select the V1 track only.

2. On the V1 track, place the position indicator within the **intervu: Lowell's Boat Shop** shot in the Timeline and click the Mark Clip button under the Record monitor.

   The **intervu: Lowell's Boat Shop** shot is highlighted.

3. To add a new video track, choose New Video Track from the Clip menu on the toolbar.

4. Click the red Segment Mode (Lift/Overwrite) button below the Timeline.
5. Hold down the Command key and click and drag the **intervu: Lowell's Boat Shop** clip to the track above, V2.

   The clip appears on track V2.

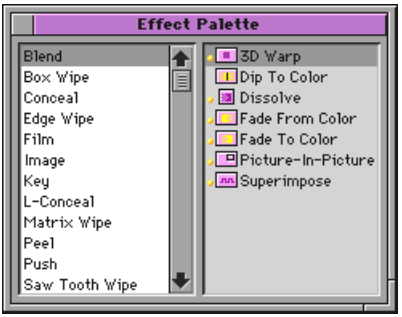
6. Click the Segment Mode (Lift/Overwrite) button again to deselect it.
7. Select track V2 and its monitor.

Creating the Picture-in-Picture Effect

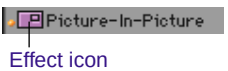
To create the picture-in-picture effect:

1. Select the V2 track and its monitor.
2. Choose Effect Palette from the Tools menu.

   The Blend effects, including Picture-in-Picture, are displayed in the right window.

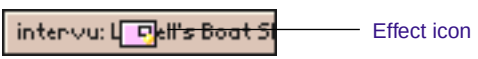


3. Place the position indicator anywhere in the **intervu: Lowell's Boat Shop** clip on V2.



4. Click and drag the Picture-in-Picture Effect icon from the Effect Palette to the **intervu: Lowell's Boat Shop** shot on track V2.

   The Effect icon appears in the Timeline.



   The boat shop owner appears in a box mid-screen.

Repositioning the Image

Let's move the image to the lower left corner of the screen.

1. In the Timeline, move the position indicator directly over the effect icon.

2. Click the Effect Mode button to enter Effect mode.

   Parameters for the Picture-in-Picture appear in the Effect Editor.

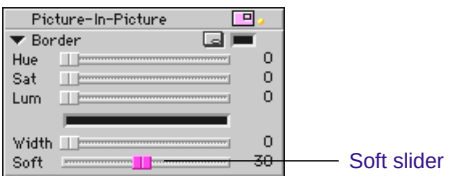
3. Click the image of the boat shop owner. Drag handles (the dots at the edges and in the middle of the box) appear, and a white hand appears when the mouse is over a handle.
4. Click the drag handle in the middle of the picture and drag the image to the lower left corner of the screen.

Adjusting a Parameter

Now let's use one of the Picture-in-Picture parameters to soften the edge of the image.

1. From the Effect Editor, click the Soft slider.
2. Drag the Soft slider to the right to a value of 30.

   You can also enter **30** in the numeric keypad.



3. Click the Play Preview button in the Effect Editor to view the effect.

You can click the mouse button or press the space bar at any time to stop.

Adding Key Frames

To add dissolves within the Picture-in-Picture effect, you need to add key frames. These let the system know this is the location in the Picture-in-Picture effect you want to start the dissolve.

1. Choose V1 from the timecode track menu.
2. In the Record monitor, click the first key frame.
3. Drag the Level slider all the way to the left to display 0.
4. Type **+1:00** on the numeric keypad and press Enter to move the position indicator one second after the first key frame.

5. Click the Add Key Frame button.
6. Drag the Level slider all the way to the right to display 100.
7. Click the mouse button on the last key frame.
8. Drag the Level slider all the way to the left to display 0.
9. Type **-15** on the numeric keypad and press Enter to move the position indicator 15 frames before the last key frame.
10. Click the Add Key Frame button.
11. Drag the Level slider all the way to the left to display 0.

12. Return to Source/Record mode by clicking the Source/Record mode button.

Adding Background Images

In this section you'll have the opportunity to add a background image on track V1, below the **intervu: Lowell's Boat Shop** image.

1. Select track V1 and its monitor and deselect V2.
2. Place the position indicator in the filler just above and below the **intervu: Lowell's Boat Shop** clip in V1 track.
3. Click the Segment Mode (Extract/Splice-in) button.
4. Press ⌘-X.

   This removes the filler and adds the three clips at the end of the sequence as your background to the picture-in-picture.
5. Select the V2 track.
6. Click the **dories to model** and Shift-click the **sign** clips on the A2 audio track.
7. Press ⌘-X to delete the excess audio.
8. Click the Segment Mode (Extract/Splice-in) button again to deselect it.
9. Play your sequence through.

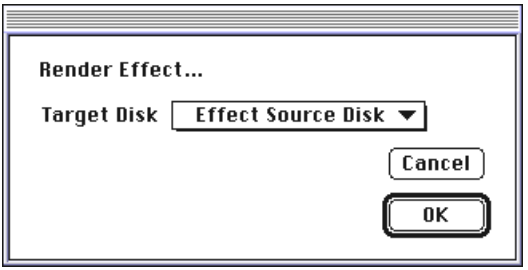
Rendering the Effect

You must render the Picture-in-Picture effect to play it at full speed.

1. Place the position indicator on the Effect icon in **intervu: Lowell's Boat Shop**.
2. Select track V2.

3. Click the REND EFFE (Render Effect) button in the Fast menu below the Record monitor or choose Render at Position from the Clip menu.

   The Render Effect dialog box appears.



4. Select a disk drive in the Render Effect dialog box and click OK.

   The Effect Source Disk is the default disk for storing the rendered effect.

5. After the effect is rendered, close the Effect Palette.
6. To save your work, choose Save All Bins from the File menu.

Screening the Sequence

You've done a lot of work. Now take a look at the sequence.

1. Move the position indicator to the beginning of the sequence.
2. Select the V2 monitor.
3. Click Play.

You've finished this tutorial. You can go on to **Tutorial: Creating Titles** on **page 169**, or exit Media Composer.

CHAPTER 9

Creating Titles

You can create a new title with the Title Tool and save the title in a bin, or add a new video track to the Timeline if you want the title to appear over video. This is described in the following sections:

Tutorial: Creating Titles contains the following sections:

Creating New Titles

You can create a new title with or without a sequence in the Timeline. However, if you want to create a title with a video background, you can load a video clip into the Record monitor to use as a reference frame while you create the title. The video reference frame you select appears in the background of the Title Tool while you create the title. The reference frame makes it easier to position text and objects exactly where you want them and to select colors from the frame to use in the text and objects.

Because the Avid Composer system automatically loads the new title into the Source monitor, you can immediately use the standard editing procedures to edit the title into your sequence. If you create multiple titles in the same Title Tool session, the system loads the last title you create into the Source monitor.

After you create a title with a particular video format (PAL or NTSC), if you want to create a title for a project using the other video format, you must exit and restart the Avid Composer system.

The Avid Composer system saves into a bin each title you create. You can load a title into the Source monitor at any time or drag the Title Effect icon from the bin to a segment in the Timeline. You can also drag a title from the bin onto an existing title in the Timeline; this causes the existing title to be replaced.

The procedures described in this section use a video reference frame to create a title.

Understanding the Title Tool Window

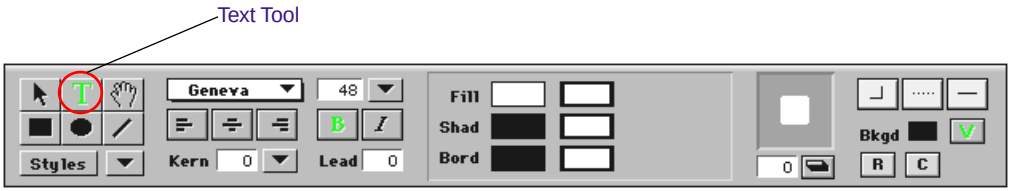
The Title Tool window has several major components:

- The tool bar at the bottom of the screen
- A video or color background
- The title that you create
- The safe title and safe action area guidelines. For more information, see “Safe Title/Action Area” in the online help index.

The following illustration shows a title over a video background:

Working with Text

By default, the Text Tool is active when you open the Title Tool. Click in the tool at the position where you wish to begin entering text.

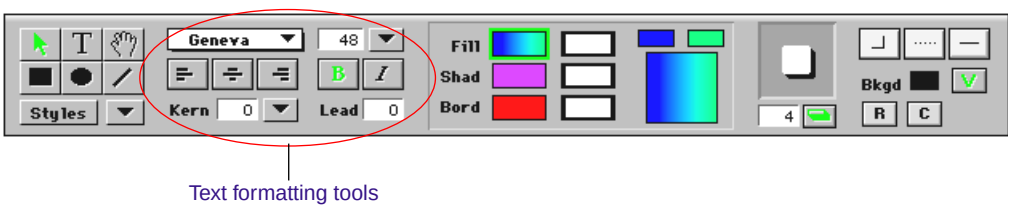


To use the Text Tool at any other time, click the Text Tool icon, click anywhere within the title frame, and begin typing. A blinking vertical bar indicates your cursor position in the frame.

The Text Tool remains selected until you select another tool.

Text Formatting Tools

The text formatting tools control the appearance of text. If a text object is selected when you change an attribute, the Avid Composer system automatically applies the attribute to the object.



The text formatting tools allow you to change the following text characteristics:

- Current font
- Bold and italic
- Point size
- Justification
- Kerning
- Leading

This section describes how to change these characteristics on a text string basis. You can also change these attributes on a character-by-character basis by editing the text string. For more information, see "Titles:text for, working with" in the online help index.

You can also modify the following text attributes on a text string basis:

- Color
- Transparency
- Drop and depth shadows
- Outlines surrounding text

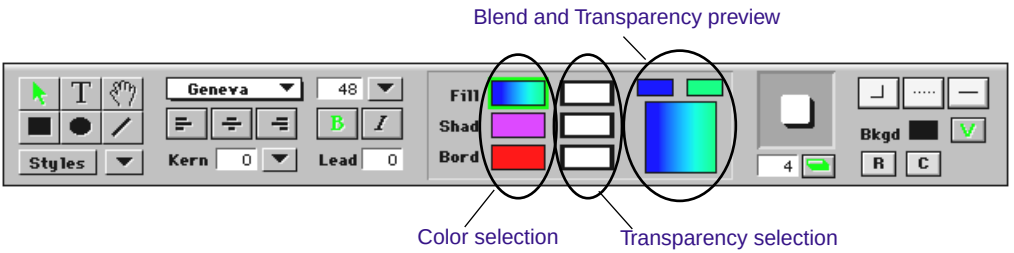
While you type text, only the text color is apparent. Shadows, outlines, and other color attributes appear when you finish typing the text and click the Selection Tool.

If you have multiple text elements in a title, and you want to give each element a different appearance, create separate text strings.

Choosing Colors and Setting Transparency

You can select the color and transparency for objects, shadows, and borders.

The following illustration shows the boxes associated with color and transparency:



- The Color selection boxes control the fill (Fill), shadow (Shad), and border (Bord) color selection.
- The Transparency selection boxes control the fill, shadow, and border transparency selection.
- The Blend and Transparency preview windows appear when you select the fill or border color or transparency selection box.

  If you select a color selection box, the top windows show the two colors that are used to create the blend. The bottom window shows the blended color and allows you to control the direction of the blend or transparency.

  If you select a transparency selection box, the top windows show the two transparency values that are used to create the blend. The bottom window allows you to control the direction of the transparency blend.

Adjusting the Color

To select a color from the Title Tool Color Picker, use an eyedropper to select a color from any open application on your computer, or use the Macintosh Color Picker to select a color. All of these features are available through the Title Tool Color Picker (see **Figure 9-1**).

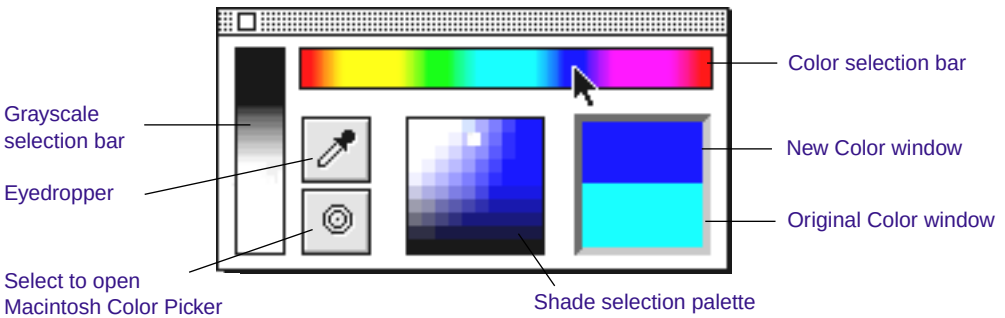


Figure 9-1 Title Tool Color Picker

The Title Tool Color picker allows you to select object, shadow, or outline color. The box you use controls whether the color applies to an object, creates a colored shadow, or places a colored outline around the selected object.

Saving Titles

There are three basic ways to work with titles:

- Create a new title by choosing New Title from the Clip menu.
- Edit an existing title by Control-double-clicking a Title Effect icon in a bin.
- Edit an existing title that is in a sequence.

The main difference between the three methods is that you can use Save As for the first two but you cannot use Save As for the third method.

Editing a Title into a Sequence

After you have created a title with the Title Tool, you can use one of the following two methods to edit the title into your sequence:

- **Method 1:** Add a new video track, load the title into the Source monitor, mark an IN point and an OUT point, and splice/overwrite the title into the sequence.
- **Method 2:** In Segment mode, drag the Title Effect clip from the bin to an existing segment in the Timeline between the edit points.

You edit titles into a sequence by using the same editing procedures you use for video. The only difference is that if you want to key the title over video, you must add a new video track.

Tutorial: Creating Titles

In this tutorial you create a title and edit and add a rolling credit to the end of the sequence. This section corresponds to the clips and sequence in the bin titled **Creating Titles**.

Be sure to read the preceding overview sections of this chapter before you start this tutorial.

Table 9-1 Starting the Tutorial: Creating Titles

If you have worked on the previous tutorial and Media Composer is still running:	If you have worked on the previous tutorial but have quit the Media Composer system:	If you are just starting out with this tutorial and haven't completed the previous tutorials:
1. Double-click the **Creating Ttiles** bin to open it.	1. Launch Media Composer by double-clicking the application icon.	1. Launch Media Composer by double-clicking the application icon.
2. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Creating Titles** bin. Close the **Adding Effects** bin.	2. From the Boat Shop Project window double-click the **Adding Effects** bin and the **Creating Titles** bin to open them.	2. Click and drag the **Creating Titles Sequence** into the Composer monitor to begin the tutorial.
3. Drag the sequence you were working on from the **Creating Titles** bin into the Composer monitor.	3. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Creating Titles** bin. Close the **Adding Effects** bin. 4. Drag the sequence you were working on from the **Creating Titles** bin into the Composer monitor.	

Adding a Title

Once you create and add a title to your sequence, you can reposition it, change the text color, adjust the font and point size, add a shadow or border, adjust levels and kerning, and bold or italicize it.

Creating a New Title

To create a new title:

1. In the Record monitor, place the blue position indicator on the **bridge** clip in the sequence.
2. Choose New Title from the Clip menu.

   The Title Tool window opens.

3. Click the Text Tool button. If it is already selected on the tool bar, the cursor becomes an I-beam when you click in the Title Tool window.
4. Click in the water below the bridge.

   A blinking insertion point appears.
5. Type **The Dory**.

6. Click the Selection Tool on the tool bar.

   Object selection handles surround the title.
7. Choose 72 for the point size.
8. Change the font to Palatino.
9. Click B for bold if it's not already selected.

You might want to drag the right side of the text selection box to eliminate any unused space, especially if you want to use the Alignment menu commands. To drag the right side, click the middle handle on the right side of the text selection box and drag it to the left until it is closer to the text.

Repositioning Text

Option-click anywhere in the Title Tool window to switch between the Selection Tool and the Text Tool.

1. With the Selection Tool selected, click and drag the title so that it appears across the water.
2. Use the arrow keys to move the title more precisely.

Changing Color

1. Click and hold the Fill box.

   The Macintosh Color Picker appears.

2. Click a blue color.

   The color is applied to the title.

Adding a Shadow

Enter a value of 3 in the Shadow Depth box.

Saving a Title

To save your title:

1. Choose Save Title from the File menu.

   A dialog box appears.

2. Type **The Dory** in the name text box.
3. Choose the **Creating Titles** bin and a target disk to store your title.
4. Click OK.

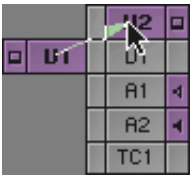
Closing the Title Tool

Click the close box. The title appears in the Source monitor and in the bin where you chose to save it.

Editing the Title into the Sequence

To add your title to your sequence:

1. Turn the V2 track on and turn V1, A1, and A2 off.
2. Click and drag the V1 source track to the V2 record track.



3. With the title clip loaded in the Source monitor, set an IN mark at the beginning of the clip and an OUT mark at 1:00:02:15.
4. In the Timeline, move the position indicator to 1:00:00:06.

5. Click the Overwrite button.

   This adds the title to the V2 video track.
6. Play the sequence to see your title.

Adding Rolling Credits

You can create a title in the Title Tool and then make it scroll vertically; this is known as a rolling title. You can also scroll horizontally; this is known as a crawling title.

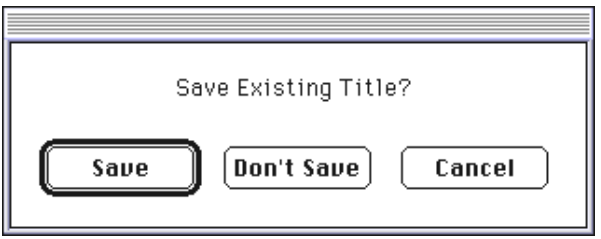
Editing an Existing Title

To edit an existing title:

1. In the bin, Control-double-click the **RollingTitle: Credits** clip to open it in the Title Tool.

2. Drag the cursor over the entire **Your Name** text to select it.
3. Type in your name.
4. Click the close box.

   A dialog box appears.



5. Click Save.

   Two titles appear in the bin (the old title and the new title you just edited).

Adding a Video Background

1. Double-click the **rowing in mist** clip to load it into the Source monitor.
2. Clear any IN and OUT marks.
3. Turn on the V1 record track and turn off all others.
4. Drag the V1 source track to the V1 record track.
5. In the Timeline, move the position indicator to the end of the **sign** clip.

6. Click the Splice-in button.

   The **rowing in mist** clip is added to the sequence.

Viewing the Creation Date

Your edited title has the same name as the version originally in the bin. To distinguish the two, you can look at the creation date.

1. Click the **Creating Titles** bin to select it.
2. Choose Headings from the Bin menu.
3. Select creation date and click OK.

Editing a Title into a Sequence

To splice the title into your sequence:

1. Double-click the new **Rolling Title: Credits** title clip to load it into the Source monitor. The new credits clip (you created) will have a new creation date.
2. From the Source monitor, click the Play button to play through the rolling credit.

   Black appears at first, then eventually the credits appear.
3. Set an IN mark at 00:00:02:12.
4. From the numeric keypad type **+33:09** and Enter, then click the Mark OUT button.
5. Drag the position indicator to the end of the **intervu: Lowell's Boat Shop** clip on V2.
6. Select the V2 record track and turn off all other tracks.
7. Drag the V1 source track to the V2 record track.

8. Click the yellow Splice-in button.

   The **Rolling Title: Credits** clip appears over the **rowing in mist** clip.
9. Press Play to view the rolling title over video.

Deleting Excess Footage

There is excess footage that continues beyond the rolling title that we can delete. To do this:

1. Turn on the V1 record track.
2. In the Timeline, move the position indicator to the end of the **Credits** clip.

3. From the Fast menu, click the Add Edit button.

   This creates a transition.

4. Click the Segment Mode (Lift/Overwrite) button at the bottom of the Timeline.
5. On the V1 track, click the last clip (the second **rowing in mist** clip) in the Timeline to select it.
6. Press the Delete key.

   The clip is deleted.

7. Save your project and bins and play the sequence.

Exiting the Title Tool After Creating a New Title

To exit the Title Tool, click the close box.

You've finished this tutorial. You can go on to **Tutorial: Output** on page 181, or exit Media Composer.

CHAPTER 10

Output

Media Composer provides tools for generating output for individual tracks or entire sequences to various videotape or audiotape 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. This is described in the following sections:

Tutorial: Output contains the following section:

Output Options

Media Composer provides tools for generating output for individual tracks or entire sequences to various videotape or audiotape formats. In addition, you can generate an 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 using an edit controller in an analog editing suite.

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 (see "Video:output, calibrating (basic or advanced)" in the online help index).
- Calibrate and adjust audio output levels (see "Audio output:preparing for" in the online help index).

For more information on mixing down audio tracks, see "Audio:tracks, mixing down" in the online help index.

- 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.
- (Optional) Select settings for direct four-channel audio output (see "Four-channel audio:output, generating" in the online help index).
- Prepare the record tapes.
- (Optional) Record reference bars and tone to tape.

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.

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 using either assemble or insert edits.
- Record a selected portion of the sequence or selected tracks.
- Record according to different timecode parameters.

Supported File Types for Export

There are several reasons why you might want to export video, audio, or both from the Media Composer system:

- You can export audio files for audio sweetening in compatible applications.
- You can export video 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 export files to be viewed as a Quicktime® Codec movie.

You can export files in the following formats:

- Shot log
- PICT
- QuickTime
- OMF Interchange®

Preparing to Export

If you are exporting part or all of a sequence, you can speed the export process by preparing the sequence in advance as follows:

See the *Avid Media Composer and Film Composer Effects Guide* for more information on rendering.

- Render all effects in advance. Although any unrendered effects are rendered on export (except for an OMF export), rendering effects in advance saves you time.
- Consider mixing down additional tracks in advance, see "Video:performing mixdown" and "Audio:performing mixdown" in the online help index.
- Check and adjust all pan and audio levels in advance, see "Using the Audio Mix Tool" in the online help index. All current pan and level settings in the sequence are carried through to the exported media.
- If you are exporting an OMF file, remember that OMF does not mix down the tracks in a sequence during export. OMF maintains all editing information in your sequence, allowing changes later. Media Composer mixes down video for PICT and QuickTime formats and audio for PICT formats.
- If you are exporting an OMF file, consider consolidating the media to save time and disk space. See "Consolidating:media" and "Transferring:OMF files to AudioVision" in the online help index.

Tutorial: Output

In this tutorial you create a digital cut. This section corresponds to the clips and sequence in the bin titled **Output**.

Be sure to read the preceding overview sections of this chapter before you start this tutorial.

Table 10-1 Starting the Tutorial: Output

If you have worked on the previous tutorial and Media Composer is still running:	If you have worked on the previous tutorial but have quit the Media Composer system:	If you are just starting out with this tutorial and haven't completed the previous tutorials:
1. Double-click the **Output** bin to open it.	1. Launch Media Composer by double-clicking the application icon.	1. Launch Media Composer by double-clicking the application icon.
2. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Output** bin. Close the **Creating Titles** bin.	2. From the Boat Shop Project window double-click the **Creating Titles** bin and the **Output** bin to open them.	2. Click and drag the **Output Sequence** into the Composer monitor to begin the tutorial.
3. Drag the sequence you were working on from the **Output** bin into the Composer monitor.	3. Press the Option key and drag the sequence you were working on from the previous tutorial into the **Output** bin. Close the **Creating Titles** bin.	
	4. Drag the sequence you were working on from the **Output** bin into the Composer monitor.	

Recording a Digital Cut to Tape

1. Choose New Deck Controller from the Tools menu. Use the deck controller to cue and the record tape during Digital Cut recording.
2. Load the **Boat Shop** sequence (or **Output Sequence)** into the Record monitor.
3. Choose Digital Cut from the Output menu.

   The Digital Cut Tool appears.

4. Select 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 and establish a specific IN point on the record tape.

6. 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.

7. Press 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.

8. 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.

You've finished this tutorial. You can go on to **Tutorial: Backing Up** on **page 193**, or exit Media Composer.

CHAPTER 11

Backing Up

When you digitize footage, the system creates digital media files for the video and audio tracks on the media drives attached to your system. Media Composer provides useful tools and features for directly managing media files for storage and playback, backup and transfer between systems. This is described in the following sections:

- About Media Files
- Basic Media Tool Features
- Freeing Storage Space
- Consolidating Media
- Backing Up Media Files
- Backing Up Project Folders

Tutorial: Backing Up contains the following sections:

- Using the Consolidate Command
- Saving Your Work on a Disk or Drive
- Restoring from a Backup
- Quitting and Shutting Down

About Media Files

The system stores the media files created during digitizing in folders on your media drives labeled OMFI MediaFiles (or 6.x MediaFiles if you are using an earlier release of the Media Composer software).

Media files are created in the following circumstances:

- During digitizing, a media file is created for each selected track (for example, V1, A1, A2), and they all are linked to the master clip.
- When you render effects, the system creates effect media files, otherwise known as *precomputes*, that are linked to the effect clip.
- When you create subclips and sequences, you do not create new media files. These refer to the media files for the source master clips.

To manage media files, the system also creates a *Database file* that is stored in each MediaFiles folder. The system updates the Database file each time you make a change to a media file.

The following illustration shows the links among media files (stored on the media drives), the various clips (stored in the bin files in the Composer Project folders on the Avid drive), and an edited sequence (shown in the Timeline and stored in the bin).

Media Objects and Files

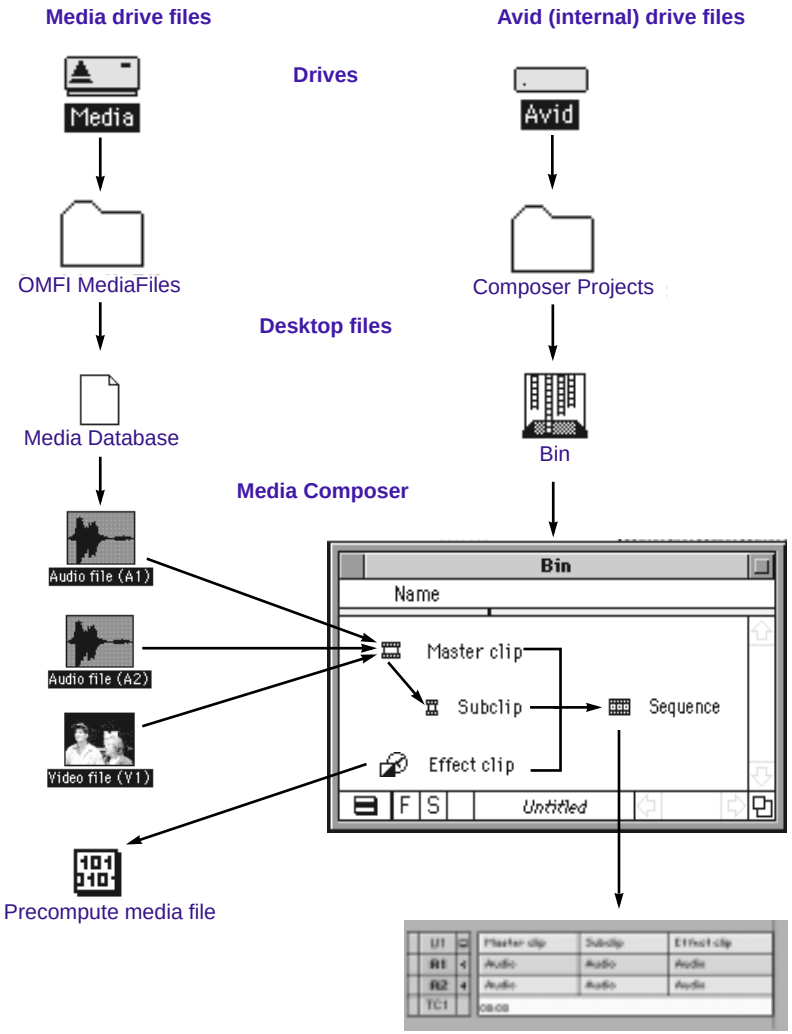


Table 11-1 displays the Media File icon and a description of each icon.

Table 11-1 Media Objects and Files

Object Icon	Object Description
 Source Clip	A clip that references the original videotape source footage for master clips.
 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.
 Group clip	A file in the bin that combines two or more clips based on marks or tracking info sync points.
 Motion effect	A file in the bin that references effect media files generated when you create motion effects.
 Rendered effect (precompute)	A clip that references an effect media file generated when you render an effect.
 Effect and Title	A clip that references an unrendered effect that you create.
 Multigroup clip	(For multicamera editing) A clip containing two or more grouped clips, strung together sequentially according to common timecodes.

Table 11-1 Media Objects and Files

Object Icon	Object Description
 Media file	A file on the media drive containing digital audio or video material. Media files are formed when you digitize footage or import files, mix down audio or video tracks, create an effect (precompute media file), or render an effect.

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.
- 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 described in “Media Tool:comparing with bins” in the online help index.
- You can use the same Frame mode display options described in **“About Bin Display Modes” on page 64**.
- You can use the same Script mode display options described in **“About Bin Display Modes” on page 64**.
- You can print Media Tool data using the same procedures for printing bins, described in “Bins:printing” in the online help index.

In addition to the procedures just 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, 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 are 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.

Freeing Storage Space

Unlike the bin files stored in project folders on the Avid drive, media files require considerable storage space. To maximize your use of storage during larger projects, you can abridge and/or convert media files. You can perform these procedures on clips selected in either the Media Tool or in bins.

In addition, you can delete unreferenced media files for a finished sequence. This procedure is performed on clips selected in bins only.

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 choose to 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 both 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.

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 **"Consolidating Media" on page 190**, to make copies of selected media files on a target hard drive connected to the system.
- 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 "Consolidating:media" in the online help index.

For information on archiving procedures, see your AVIDdrive DLT documentation. For information on purchasing AVIDdrive DLT, contact your Avid sales representative.

Backing Up Project Folders

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

Although Media Composer 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

Tutorial: Backing Up

In this tutorial you learn to back up and free up space on your media drive. This section corresponds to the clips and sequence in the bin titled **Backing Up**.

Be sure to read the preceding overview sections of this chapter before you start this tutorial.

Table 11-2 Starting the Tutorial: Backing Up

If you have worked on the previous tutorial and Media Composer is still running:	If you have worked on the previous tutorial but have quit the Media Composer system:	If you are just starting out with this tutorial and haven't completed the previous tutorials:
1. Double-click the **Backing Up** bin to open it.	1. Launch Media Composer by double-clicking the application icon.	1. Launch Media Composer by double-clicking the application icon.
2. Press the Option key and drag the **Boat Shop** sequence you were working on from the previous tutorial into the **Backing Up** bin. Close the **Output** bin.	2. From the Boat Shop Project window double-click the **Output** bin and the Backing Up bin to open them.	2. Click and drag the **Backing Up Sequence** into the Composer monitor to begin the tutorial.
3. Drag the sequence you were working on from the **Backing Up** bin into the Composer monitor.	3. Press the Option key and drag the **Boat Shop** sequence you were working on from the previous tutorial into the **Backing Up** bin. Close the **Output** bin. 4. Drag the sequence you were working on from the **Backing Up** bin into the Composer monitor.	

Using the Consolidate Command

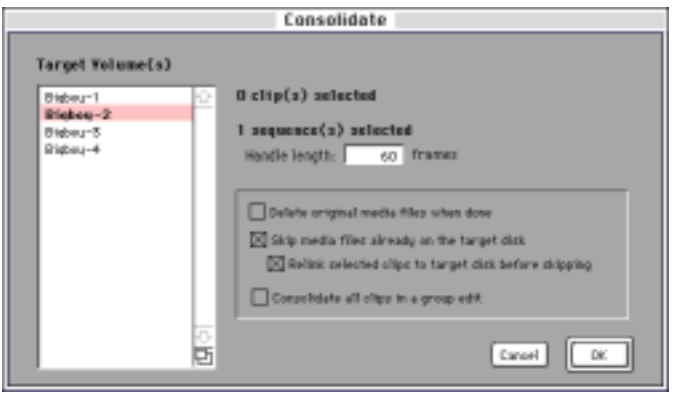
To consolidate the **Boat Shop** sequence:

For more information on rendering effects, see the *Avid Media Composer and Film Composer Effects Guide*.

1. Select the **Boat Shop** sequence (or **Backing Up Sequence**).
2. Choose Duplicate from the File menu.

   This allows you to maintain links to the original files, if necessary, and render any unrendered effects.
3. Choose Consolidate from the Clip menu.

   The Consolidate dialog box appears.



4. Choose 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. Choose 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. Click OK.

   If you did not choose to delete the original media files, a second dialog box appears and offers you a choice.

8. Link the original master clips to the new or old media files, according to preference.
9. 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 Media Composer 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.

Saving Your Work on a Disk 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.
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.

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 "Media files:relinking" in the online help index.

Quitting and Shutting Down

To quit and shut down:

1. Click Quit in the Project Selection dialog box.
2. Choose Leave when the system prompts you.
3. Choose Shut Down from the Special menu.
4. After a few seconds, turn off the rest of your hardware.

Summary

Congratulations on completing the Avid Media Composer Tutorial! We hope you've enjoyed this introduction to the Avid editing process. After mastering these skills, you can proceed to learn more advanced techniques for inputting media, adding other effects and titles, and outputting work for digital cuts or EDLs.

For further information about any Media Composer techniques or features, see the online help system or the *Avid Media Composer User's Guide*.

Avid also recommends that you consult the latest Avid Training Catalog for complete descriptions and schedules of Avid's course offerings. All classes are led by trained, experienced professionals. A variety of hands-on student activities encourage participant learning. Call 800-867-2843 for more information.

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