Looking Glass

QuickTime Producer

Gainesville, GA

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Chapter 1

Getting Set Up

This chapter provides information for getting started with Looking Glass. This chapter contains the following sections:

- System requirements
- Installing Looking Glass
- Starting the application for the first time
- Project workflow
- Troubleshooting and support
- How to proceed
- Optimizing performance

Looking Glass streamlines the editing process by providing the traditional tools of postproduction, the creative control of digital editing, and a simple user interface. More than a method of saving time and money, non-linear editing introduces a whole new style of craftsmanship into the postproduction arena. It allows for greater experimentation in the composition of full-motion visual media.

System requirements

Your computer must meet these requirements to run Looking Glass:

- Mac OS 9.1, or 10.1 or greater
- QuickTime 4 or greater (Pro version not needed)
- At least 32 MB RAM, 75 or greater recommended
- Firewire port for DV capture

Installing Looking Glass

To install Looking Glass

Looking Glass can be distributed either electronically or via CD. You will need to open the folder containing the Looking Glass installer to begin.

- If you received a CD, insert the CD and locate the folder named “Looking Glass.”
- If you downloaded the application, you will need to decompress the enclosing folder, which should be named “Looking Glass.”

Once you have located the folder “Looking Glass,” open the folder and double-click the file “Looking Glass Install.” Next, follow the prompts to install the Looking Glass application. Make sure you read the Looking Glass README before you begin using the application.

To install QuickTime

To use Looking Glass you will need QuickTime 4 or greater. QuickTime comes pre-installed on Macintosh computer.

If you need to re-install or upgrade your version of QuickTime then you can go to http://www.apple.com/quicktime/download. You do not need the Pro version of QuickTime to use Looking Glass.

Allocating memory to Looking Glass

Before you launch Looking Glass, set up the RAM memory allocation. How much memory you allocate will depend on how many clips you will be working with and the size and quality of those clips. If you will be working with DV clips, then we recommend you allocate at least 75 MB of RAM. You can only manually allocate memory in OS 9, as OS X handles memory allocation automatically. You can check the amount of memory you have available to Looking Glass by closing all applications, then choosing About This Computer from the Apple Menu (**Figure 1.1**). To allocate memory:

- Click the Looking Glass icon to select it.
- Choose File > Get Info > Memory
- In the Looking Glass info window enter a value in the Preferred Size field (**Figure 1.2**).
- Enter a value in the Minimum Size field and then close the window.

Figure 1.1 Check the amount of RAM you have available to allocate to Looking Glass.

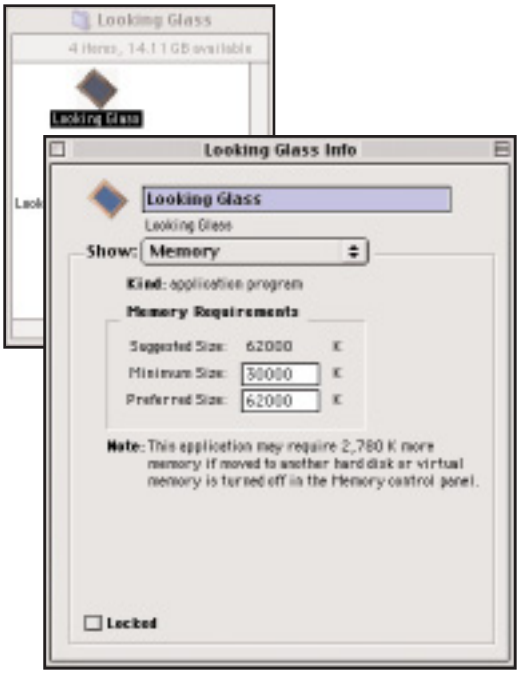


Figure 1.2 Set memory allocation in the Looking Glass Info window.

Starting the application for the first time

To start Looking Glass, simply double-click the icon labeled “Looking Glass.” Looking Glass is a fully carbonized application and is tested to work in Mac OS 9.x or Mac OS 10.1. When prompted for a serial number, enter the serial number received via e-mail, or enclosed with your CD. For a demo you can enter ‘Demo’. Note that in demo mode many of the advanced features, including the ability to export a finished movie, will be disabled.

- On OS X systems, Looking Glass opens as a standard Mac OS X application.
- On Mac OS 9.x systems, Looking Glass will open as a Mac OS 9 type application automatically.

Running in Demo mode

Looking Glass has a Demo mode that allows you to try out the application for thirty days, after which you will need to register Looking Glass and purchase a serial number.

The first time you start Looking Glass, a dialog box will appear asking you to enter a serial number. Type 'Demo' (without the quotation marks) in this box (**Figure 1.3**). Looking Glass will be active for thirty days, but with some features disabled, such as Exporting.

Figure 1.3 Enter 'Demo' into the serial number screen to use Looking Glass for 30-day in demo mode.

Project workflow

The following sections introduce the five stages of a project, along with the system terms you encounter in Looking Glass.

Starting a project

Starting a project involves the following steps:

1. Start Looking Glass.
2. Name your sequence in the Sequence window.
3. Select a size and frame rate for the sequence in the Sequence window.
4. Input video.
5. Save your project.

Editing a sequence

1. View your clips in advance and mark IN points and OUT points.
2. Double-click the Sequence icon to open the Editor and Timeline.
3. Build your sequence in the timeline.
4. Fine-tune your edits and effects.
5. Adjust volume of audio tracks.
6. Save your project.

Generating Output

1. Make movie or export movie.
2. Export to tape.

Troubleshooting and support

For the most up to date troubleshooting and support tips see the README that came with your copy of Looking Glass.

How to proceed

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

- Review this guide completely before starting Looking Glass. A good point of comfort is to browse the Table of Contents. If you are familiar with all the terms, you are ready for Looking Glass.
- Begin performing basic procedures using the default settings. As your confidence increases, begin to explore additional procedures and settings.
- Keep **Appendix C: Keyboard Shortcuts** available during editing sessions to speed the use of keyboard commands.

Optimizing performance

Here is a short list of suggestions that might help speed up performance in OS 9 and OS X.

OS 9

- Turn off virtual memory in the Memory Control Panel (**Figure 1.4**).
- Set your disk cache to the default setting.
- Turn off Web Sharing in the Extensions Manager.
- Turn off File Sharing in the Control Panel.
- Turn off Apple Talk in the Control Panel.
- Try to avoid running other software while working in Looking Glass, especially networking software or software that runs in the background.
- Do not set Looking Glass' memory allocation to an amount higher than the available RAM.
- Sprite tracks can slow down editing some. The more sprite tracks that are in one sequence the more overhead Looking Glass has to process, and editing slows down.

OS X

- Turn off the Classic Environment.
- Memory cannot be allocated in OS X as in OS 9, the operating system will do it itself.
- Watch out for how many movies you have in one project, or sequence at a time. The more movies, the slower the editing will be. Likewise, if you have just a few movies that are huge sizes (up to 2 GB a piece) editing will be extremely slow.

Figure 1.4 In the memory control panel, turn off virtual memory, and use the default disk cache setting.

Chapter 2

Welcome To Looking Glass

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

- The workspace
- Sequence settings window
- The Project Window
- The Source Window
- The Editor Window
- The Sequence Window

Looking Glass has a simple an intuitive interface. From the four main windows, down to the extra features, Looking Glass makes video editing simple and easy. Before moving on to more complex tasks, it's necessary to be familiar with the simple concepts of the program. This chapter will be a walk through and introduction, allowing you to "meet" Looking Glass before using it.

The workspace

The workspace is the combination of windows in Looking Glass that make up the primary working area. The workspace consists of: the Project Window, Editor Window, and Sequence Window (**Figure 2.1**).

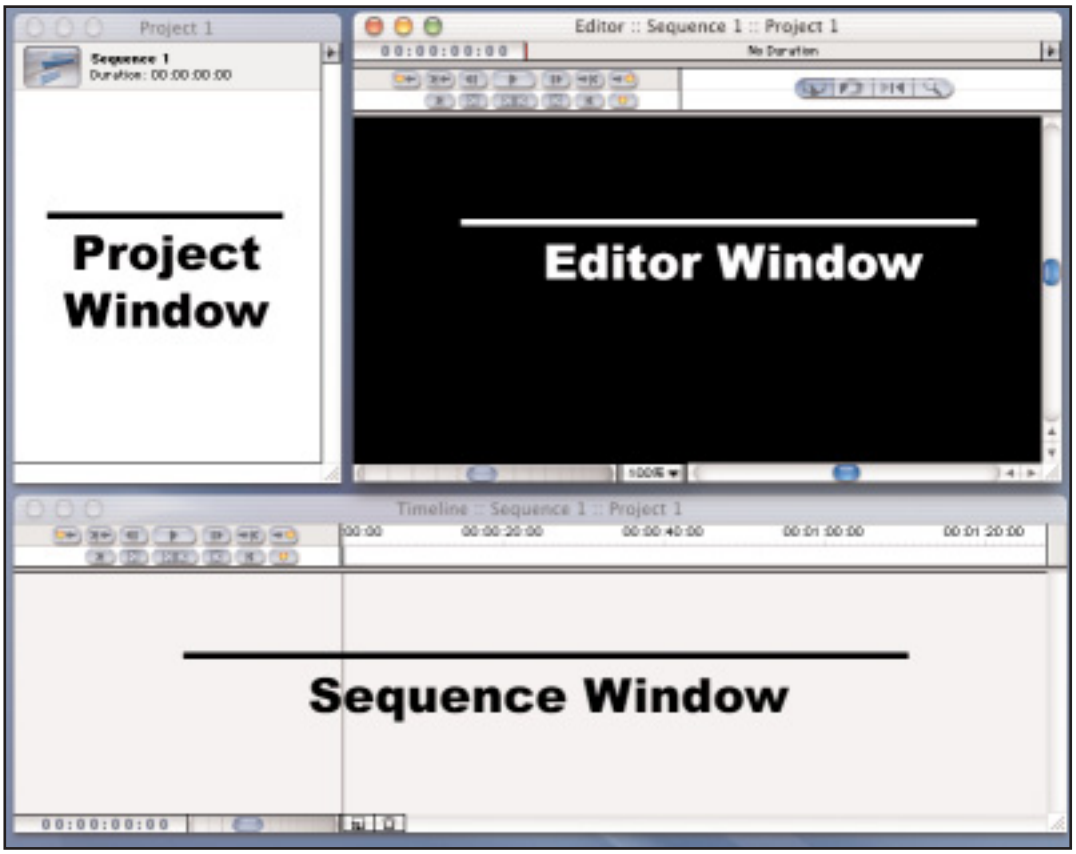


Figure 2.1 The workspace consists of these three main windows.

The Project window contains the sequences, imported media and rendered movies. Any media or movie item in the Project Window can be previewed by double-clicking its icon (**Figure 2.2**).

The Editor window shows a rough preview of the timeline. It displays all non-hidden tracks at the time noted by the scrubber (**Figure 2.3**).

The Sequence window is the center for editing. Media is placed here and arranged into a movie. All effects, transitions and keyframing is handled here (**Figure 2.4**).

Figure 2.2 The Project Window holds all source clips and sequences.

Figure 2.3 The Editor Window displays the sequence being edited.

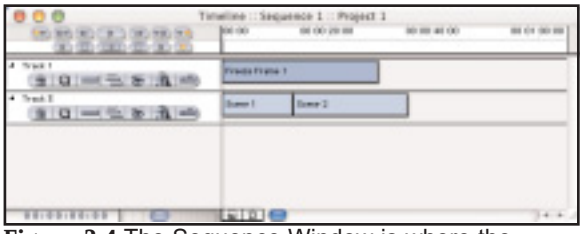


Figure 2.4 The Sequence Window is where the editing takes place.

Opening the workspace

As described above, the workspace is made up of three windows: the Project Window, the Sequence Window, and the Editor Window.

When a new project is started, the only window that appears is the Project Window. In order to have access to the other two windows, a sequence must be opened. If there is not a sequence present in the Project Window, one can be started (**Figure 2.5**).

- Make sure a project is open.
- Click on Sequence from the main menu.
- Choose 'New.'

Once a sequence is present in the Project Window, double-click it to access the rest of the Looking Glass workspace.

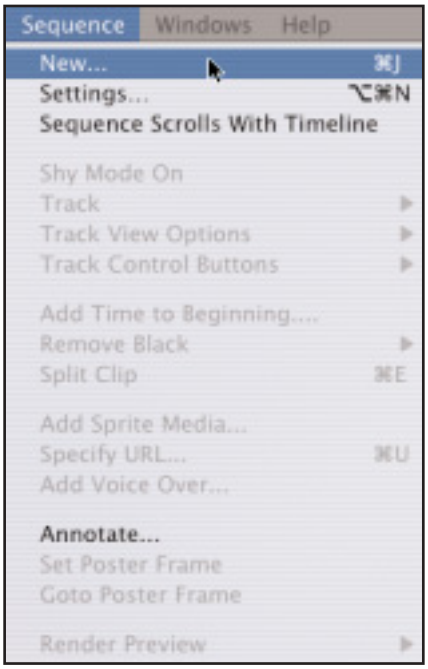


Figure 2.5 Chose File > New > Sequence to start a new sequence.

Sequence Settings Window

Double click on the Looking Glass icon to open the application. The first window that will appear is called the Sequence Settings window (**Figure 2.6**). It allows you to tell Looking Glass the size of the clips you are going to be working with. It's also important to remember to name your sequence here.

If you will be importing media using a USB capture device choose Internet Broadband. You can change the frame rate to support your USB device if needed. If you will be using a DV Camera, or deck connected via FireWire, and live in North America, choose (DV) - NTSC. You can change your sequence settings at any time while in the application by clicking 'Sequence' in the main menu and choosing 'Settings.'

The Frame Rate box in Sequence Settings is used to configure the display in the Timeline. Whatever you set the frame rate at determines how the Timeline displays your movie. This will also be the frame rate used with the Make Movie feature. The original movie's frame rate is never changed, just how the frame rate is displayed. Frame rate can be changed at any time while working in a Project.

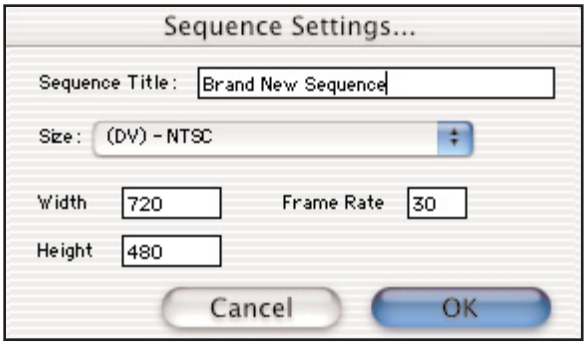


Figure 2.6 The Sequence Settings Window lets you name and set up the sequence.

Name	Size	Frames Per Second
(DV) - NTSC	720 x 480	30
(DV) - PAL	720 x 576	25
Internet Broadband	320 x 240	15
Internet 56K	160 x 120	4

Project Window

The Project Window (**Figure 2.7**) contains all the media and sequences for a particular project. The top of the Project Window lists the name given to the saved project. In this case, the project name is "Project 1." There is no limit to the number of media clips or sequences that can be added to any one project.

The Project Window has an Options Tab that contains several special features to assist in the editing of a project, and the managing of the media in that project.

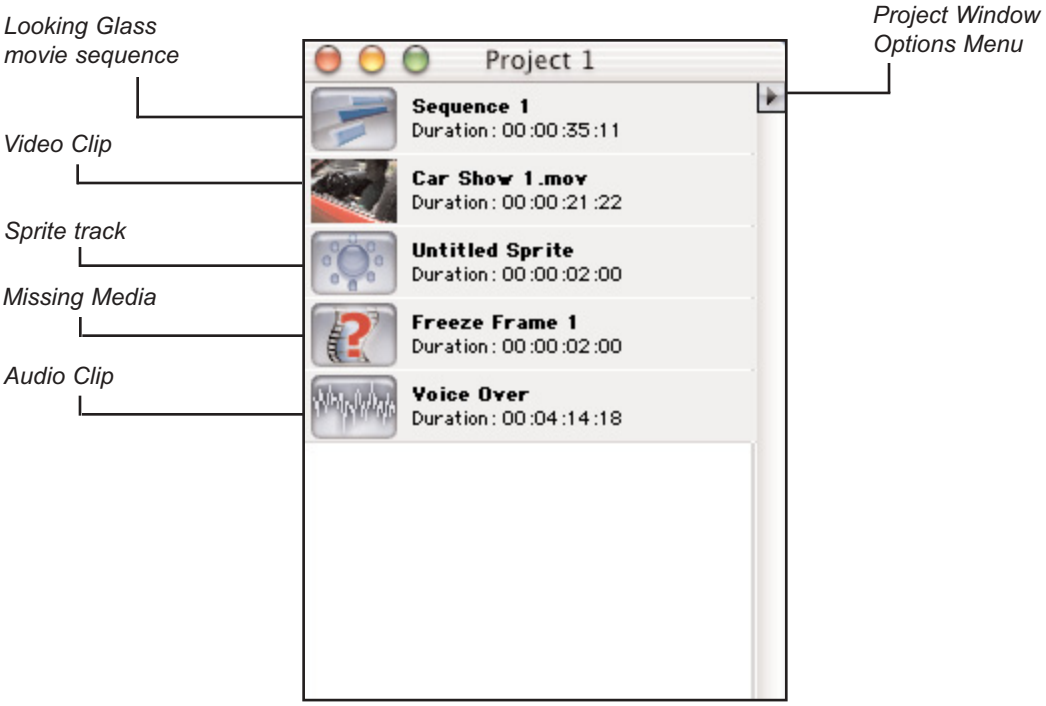


Figure 2.7 The Project Window holds the sequences and source clips.

Creating a new project

To create a new project (**Figure 2.8**):

1. Click 'File' in the main menu
2. Select 'New'
3. Choose 'Project'

Next, you will be asked to set your sequence settings. After this, you will have a new, fresh project ready.

Multiple projects cannot be opened at once.

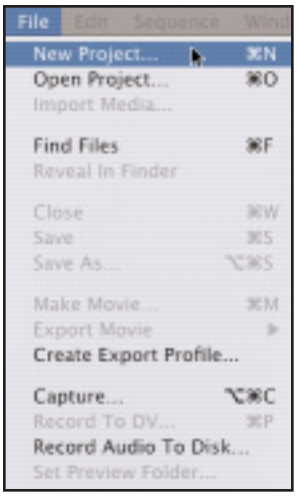


Figure 2.8 Choose File > New > Project from the main menu to start a new project.

Renaming sequences and clips

It's possible to rename the media and sequences already placed in a Looking Glass project (**Figure 2.9**).

To change the name of a clip or sequence in the Project Window, follow these steps:

1. In the Project window, click on the name of the clip or sequence you want to change. Make sure you click on the text.
2. A cursor will appear inside a text box around the current name.
3. Type a new name and then click anywhere in the Project Window to close the text box.

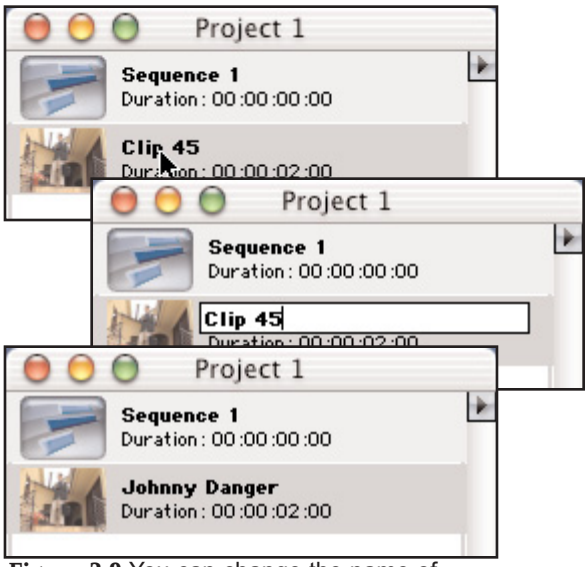


Figure 2.9 You can change the name of sequences and clips in the Project Window.

Saving projects

Saving a project is simple, and you'll want to do it often since projects hold all the important information about the movie you're working on.

To save a project

- Click 'File' in the main menu and choose 'Save' (**Figure 2.10**).
- OR, push ⌘-S on your keyboard.

To save as

- Click 'File' in the main menu and choose 'Save As' (**Figure 2.10**) or push Option-⌘-S on your keyboard.

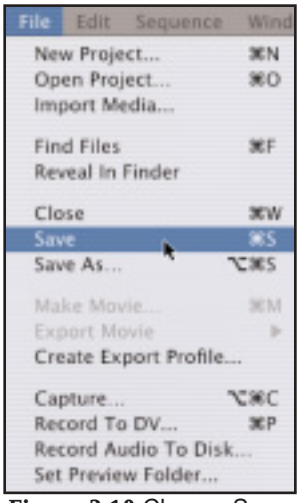


Figure 2.10 Choose Save or Save As in the File main menu to save your project.

Changing sequence settings

The settings for a sequence can be changed at any time.

1. Click on the sequence you want to change in the Project Window.
2. In the Sequence main menu, choose Settings (**Figure 2.11**).
3. When the Sequence Settings window opens, input the settings you now to apply to that sequence (**Figure 2.12**).

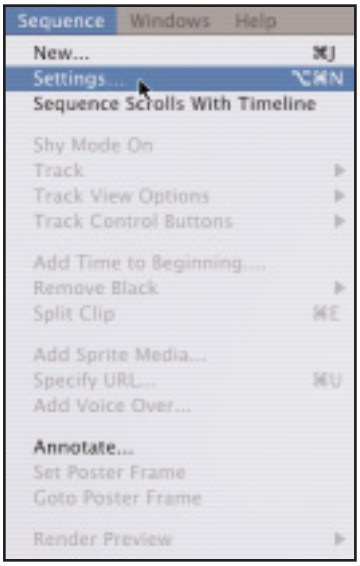


Figure 2.11 You can change the settings for a sequence by choosing Settings from the Sequence main menu.

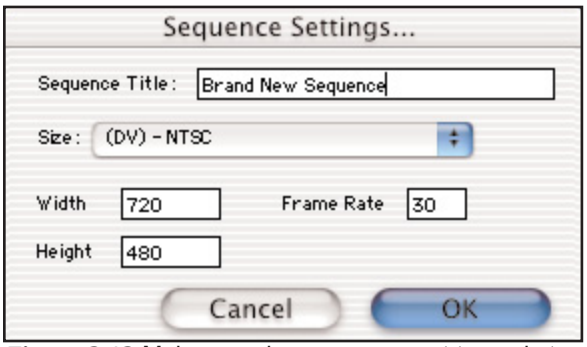


Figure 2.12 Make any changes you want to apply to the sequence and click OK.

The Options Menu

In the upper right hand corner of the Project Window is the Options Menu (**Figure 2.13**). The Options Menu holds features to assist in media management and editing. Four features are accessible through the Project Window Options Menu: **Assets**, the **Info Window**, the **Transitions Window**.

To view the options simply find the arrow in the upper right hand corner of the Project Window and click it. A drop down list will appear. Click on the desired feature in the drop down list in order to access it.

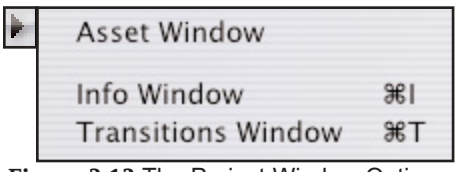


Figure 2.13 The Project Window Options Menu is available from the small tab in upper right hand corner of the window.

Figure 2.14 Open the Asset Window from the Project window Options Menu.

Asset Window

The Assets Window (**Figure 2.14**) is a tool for organizing, analyzing, and managing. It lists all of the sequences, media, and files in the current project. The tabs along the top indicate what type of information is being examined in that column. All the tabs are sortable, so clicking on a tab will sort all the items listed in that window.

The Asset Window contains several types of information. They are:

- Type
- Name
- Content Duration
- Content Type
- Time Scale
- URL
- Text
- Volume 1
- Volume 2
- X Anchor
- Y Anchor
- Content Offset
- Height
- Width
- Transparency
- Z- Order
- X-Position
- Y-Position
- Rotation Angle
- Start Time
- Horizontal Scale
- Vertical Scale
- Duration
- Remote URL
- Constrain X,Y

The Asset Window has two divider tabs, one in the lower left corner, and one on the top right (**Figure 2.15**).

These tabs allow the Asset Window to be divided into fourths, letting you see more information at once.

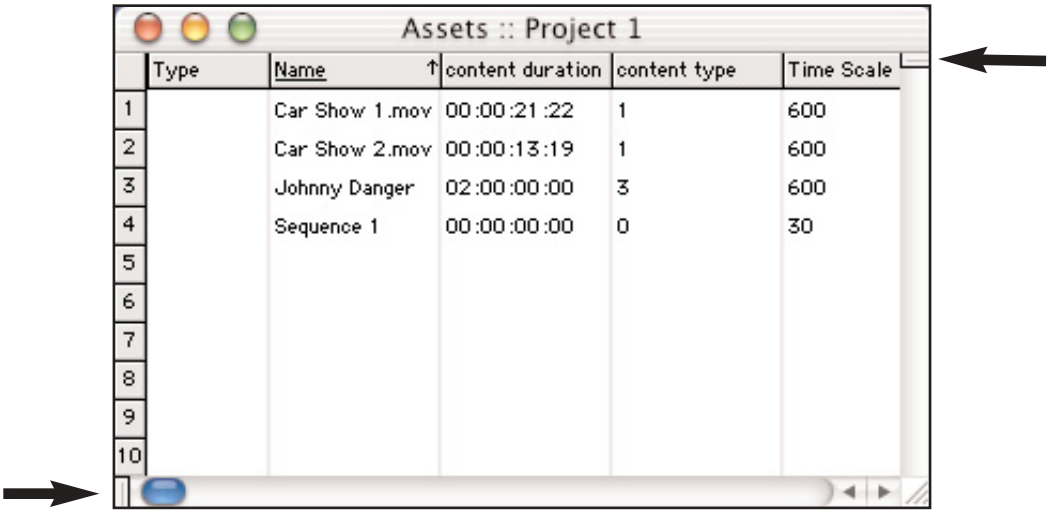


Figure 2.15 The Asset Window has two tabs that divide the window horizontally and vertically.

To split the Asset Window:

- To split the Asset Window vertically grab the tab in the lower left corner and drag to the right. Release it where you want.
- To split the Asset Window horizontally grab the tab in the upper right corner and drag down. Release it where you want.

Figure 2.16 shows the Asset Window split vertically and horizontally.

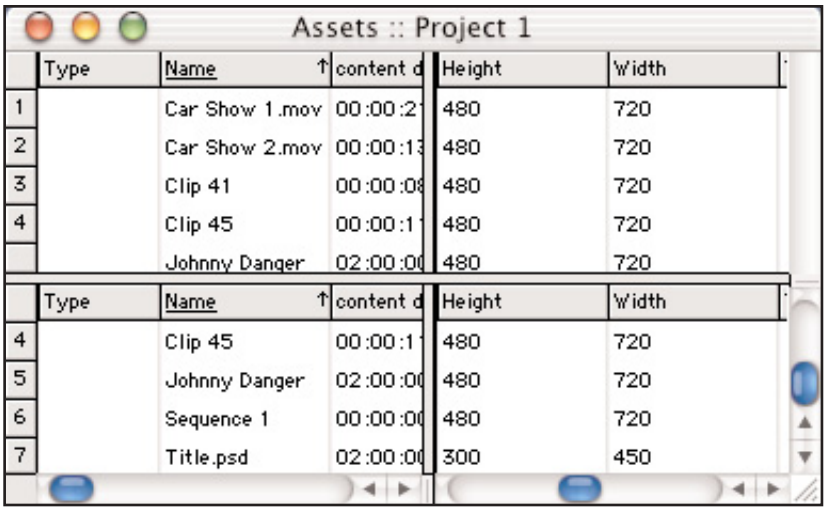


Figure 2.16 The Asset Window splits into four distinct sections, and each section allows you to view a different piece of information.

Info Window

The Information Window (**Figure 2.17**) supplies a clip's name, length, video and audio format, its size, as well the clip's In and Out points if it has been placed in the Timeline as part of a project.

The Information Window also keeps track of all the annotations that are added to a sequence. Annotations are codes that are embedded in a QuickTime movie that supply the creation date, author, copyright, etc. Annotations are discussed more in **Chapter 4: Editing A Movie**.

- To view the annotations that have been added to a sequence make sure the sequence icon is highlighted in the Project Window.
- Next, open the Information Window from the Options Tab in the Project Window.
- Click the small triangle in the upper right corner of the Information Window to roll out the Annotations section. This menu lists all the annotations available and displays which fields have been added.

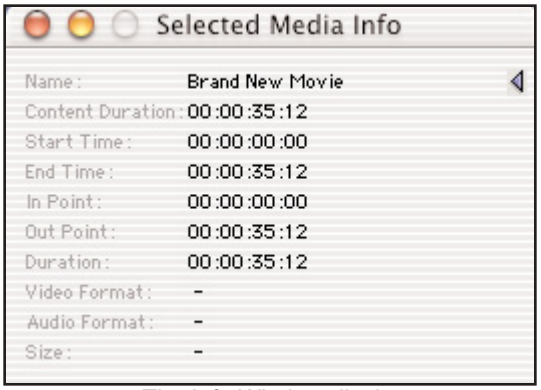


Figure 2.17 The Info Window displays information about a clip or sequence.

Transitions Window

The Transitions Window (**Figure 2.18**) holds the video transitions that can be applied between clips. Applying and using transitions is discussed further in **Chapter 5: Creating Transitions**.

The Transitions Window allows you to drag the transition you want to the timeline and add it between two clips. Transitions can only be applied to video clips.

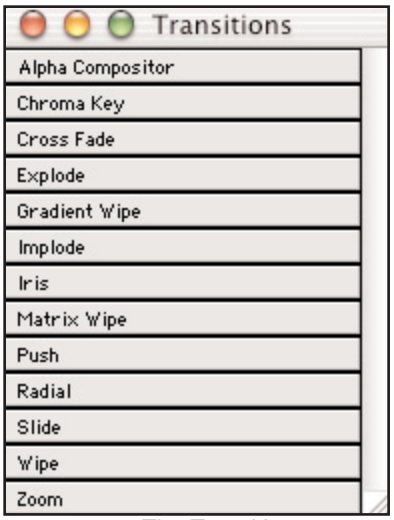


Figure 2.18 The Transitions Window holds all the transitions available for use.

Source Window

The Source Window(**Figure 2.19**) allows for quick viewing of the video and audio media that is in a project. The Source Window plays the original media source clip. You can access the Source Window by double clicking a clip in the Timeline or Project Window.

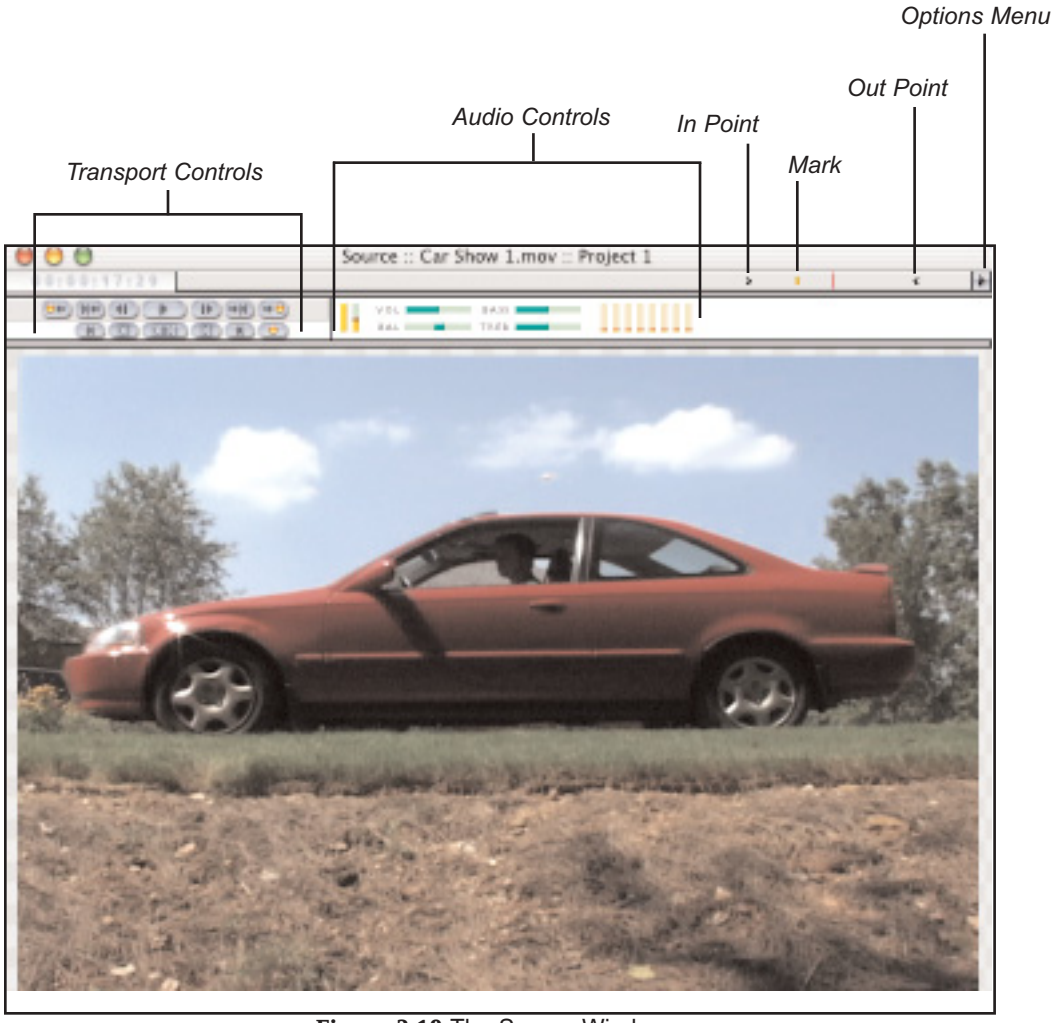


Figure 2.19 The Source Window

On-screen controls & display

All the controls listed here, except for the Audio Controls appear in the Editor and Sequence Windows as well. The controls operate the same way in the Editor and Sequence Windows as they do here.

Transport controls

Figure 2.20 shows the video controls that appear along the top of the Source Window.

- **Go To In** will move the Scrubber to the In Point set in the Source Window.
- **Go To Out** will move the Scrubber to the Out Point set in the Source Window.
- **Previous Mark** moves the Scrubber to the previous mark set n the Source Window.
- **Next Mark** moves the Scrubber to next mark that has been set in the Source Window.
- **Previous Frame** moves the scrubber backward one frame.
- **Next Frame** moves the Scrubber forward one frame.
- **Play** plays the project from the Scrubber's current position to the end of the clip.
- **Set In Point** sets an In Point for the clip at the Scrubber's current location.
- **Set Out Point** sets an Out Point for the clip at the Scrubber's current location.
- **Clear In/Out Points** removes both the In and the Out points from the Source Window.

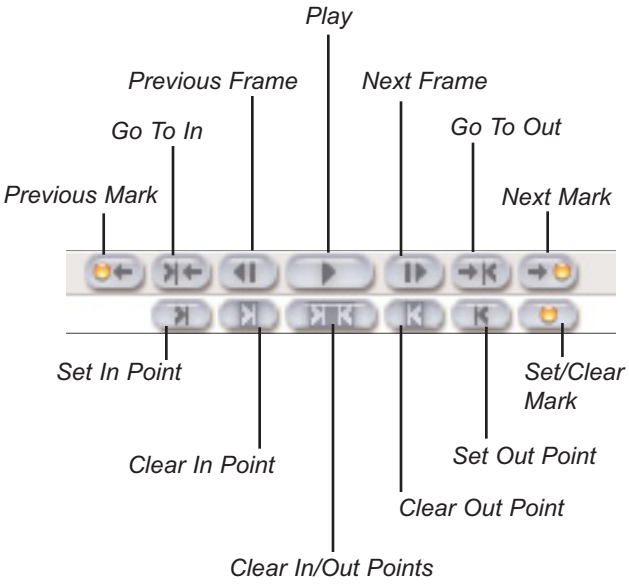


Figure 2.20 The video controls for the Source Window

Audio controls

Figure 2.21 shows the audio controls that appear along the top of the Source Window. These controls adjust the audio for playback in the Source Window only, and have no effect on clips for editing.

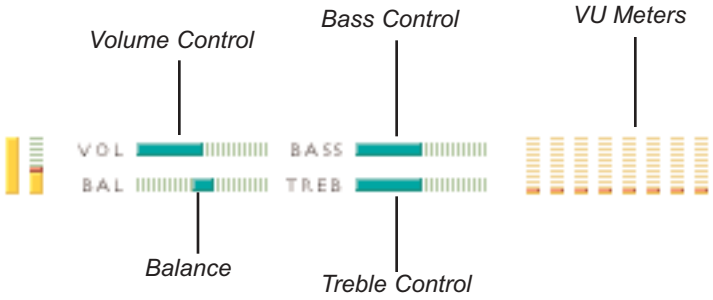


Figure 2.21 The audio controls for the Source Window

- The Volume Control slides to the left and right, and adjusts the decibel level of the clip's audio.
- The **Bass Control** raises or lowers the bass response of the clip's audio.
- The **Treble Control** raises or lowers the treble response of the clip's audio.
- The **VU Meters** display the clip's frequency response in real time.
- **Balance** moves the strength of the audio signal between the left and right channel. Keeping it centered produces an even output from both channels.

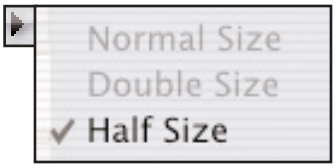


Figure 2.22 Source Window Options Menu.

Options Menu

The Options Menu (**Figure 2.22**) in the Source Window contains two choices, 'Normal Size' and 'Double Size.' This adjusts the size of the video clip being played back in the Source Window only, and has no effect on media for editing.

Time scrubber

The Scrubber (**Figure 2.23**) is a tool that quickly locates a certain point in time within a video clip, and appears as a thin red line in the gray area under the Source Window name.

To use the Source Window Scrubber, click on the red line and drag to the desired point.

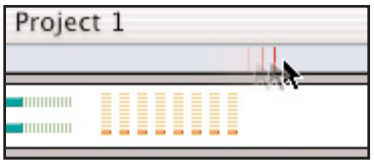


Figure 2.23 The Scrubber being moved to the right.

Using In & Out points

The In and Out points determine the start and end frames of a clip that is used for editing. The majority of editing functions are performed by adjusting these points, and setting them for each clip is the first step in editing a project.

You cannot set In and Out points on a graphic or image file.

To set In & Out points

1. In the Project Window, double-click the clip to open up the Source Window.
2. Position the Scrubber where you would like to place the In point.
3. Click the Set In button or press I and you will see the In point appear (**Figure 2.24**).
4. Position the Scrubber where you would like to place the Out point.
5. Click the Set Out button or press O and you will see the Out point appear (**Figure 2.25**).

To change In & Out points

1. Position the Scrubber where you would like to place the new In point.
2. Click the Set In button or press I and you will see the new In point appear. The old In point will be deleted (**Figure 2.26**).
3. Position the Scrubber where you would like to place the new Out point.
4. Click the Set Out button or press O and you will see the new Out point appear. The old Out point will be deleted (**Figure 2.27**).

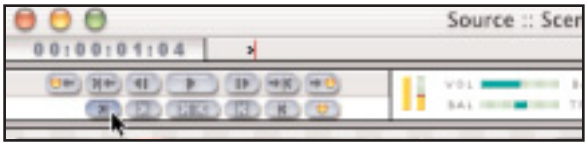


Figure 2.24 Set an In point by clicking the the Set In button.

Figure 2.25 Set an Out point by clicking the the Set Out button.

Figure 2.26 Move the scrubber and click Set In to set a new In point.

Figure 2.27 Move the scrubber and click Set Out to set a new Out point.

To clear In & Out points

- To clear In & Out points set in the Source Window simply click on the Clear In/Out button (**Figure 2.28**).

Figure 2.28 Delete In & Out points by clicking the Clear In/Out button.

Playing a clip

There are a couple options for playing a clip in the Source Window.

To play a clip

- To play a clip simply click the Play button (**Figure 2.29**) or use the L, 5, or ~ keys. The clip will play from the Scrubber's current position.

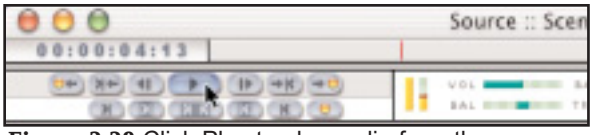


Figure 2.29 Click Play to play a clip from the Scrubber's location.

To play a clip between In and Out points

- To play a clip between the In and Out points that have been set, push the 6 key.

To play one frame at a time

- To play a clip one frame at a time, push the 3 (to go to the left) and 4 (to go to the right) keys, or use the left and right arrows on your keyboard.

To move the Scrubber to an In or Out point

1. To move the Scrubber to the set In point push the Q key.
2. To move the Scrubber to the set Out point push the W key.

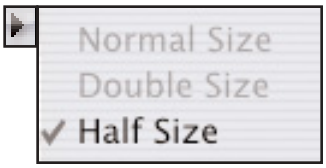


Figure 2.30 Source Window Options Menu.

Setting movie view size

The Source Window allows you to view a movie in either normal or double size. To change the movie view size:

1. Click the Options Menu to show the drop down list of movie view options (**Figure 2.30**).
2. Select the option you want and the movie will be resized.

Working with clips

Clips can be opened into the Source Window for viewing or In point, Out point adjustment from the Project and Sequence Windows. You can have multiple Source Windows open at once.

- To open clips in the Source Window from the Project window, simply double-click them (**Figure 2.31**).
- To open clips in the Source Window from the Sequence Window simply double-click on that clip anywhere in the timeline (**Figure 2.32**).

Using timecode to navigate

The Source Window allows you to navigate through a clip using Timecode. Timecode navigation works the same in both the Sequence and Source windows.

To navigate using timecode

1. Open a clip in the Source Window. **Figure 2.33** shows the timecode for a clip in the Source Window.
2. Highlight the timecode (**Figure 2.34**).
3. Type in the new timecode you would like to jump to (**Figure 2.35**). Push Enter.
4. The Scrubber will jump to the timecode position entered.

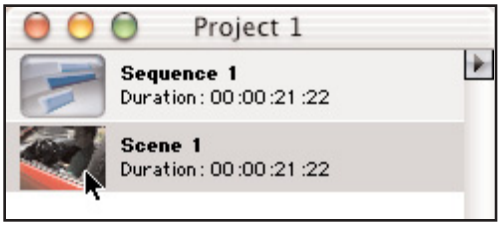


Figure 2.31 Click on any clip in the Project Window to view it in the Source Window.

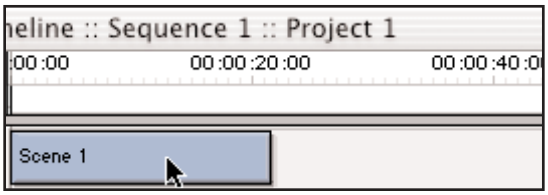


Figure 2.32 Click on any clip in the timeline to view it in the Source Window.

Figure 2.33 Timecode display in the Source Window.

Figure 2.34 Highlight the timecode to change it.

Figure 2.36 Type in the new timecode and hit Enter.

What Is Timecode?

Timecode is a number assigned to each frame. It reads in hours:minutes:seconds:frames. So, a timecode of 02:45:34:12 would mean two hours, forty-five minutes, thirty-four seconds, and twelve frames. There are 30 frames in one second of video.

Timecode can be measured in Drop Frame or Non-Drop Frame modes. To learn how Looking Glass handles timecode, read **Appendix A: Working With DV**.

Editor Window

The Editor Window (**Figure 2.37**) provides real-time playback of the media, effects, and transitions being edited, applied, and adjusted in the Timeline. The Editor Window can be accessed by double-clicking on any sequence in the Project Window.

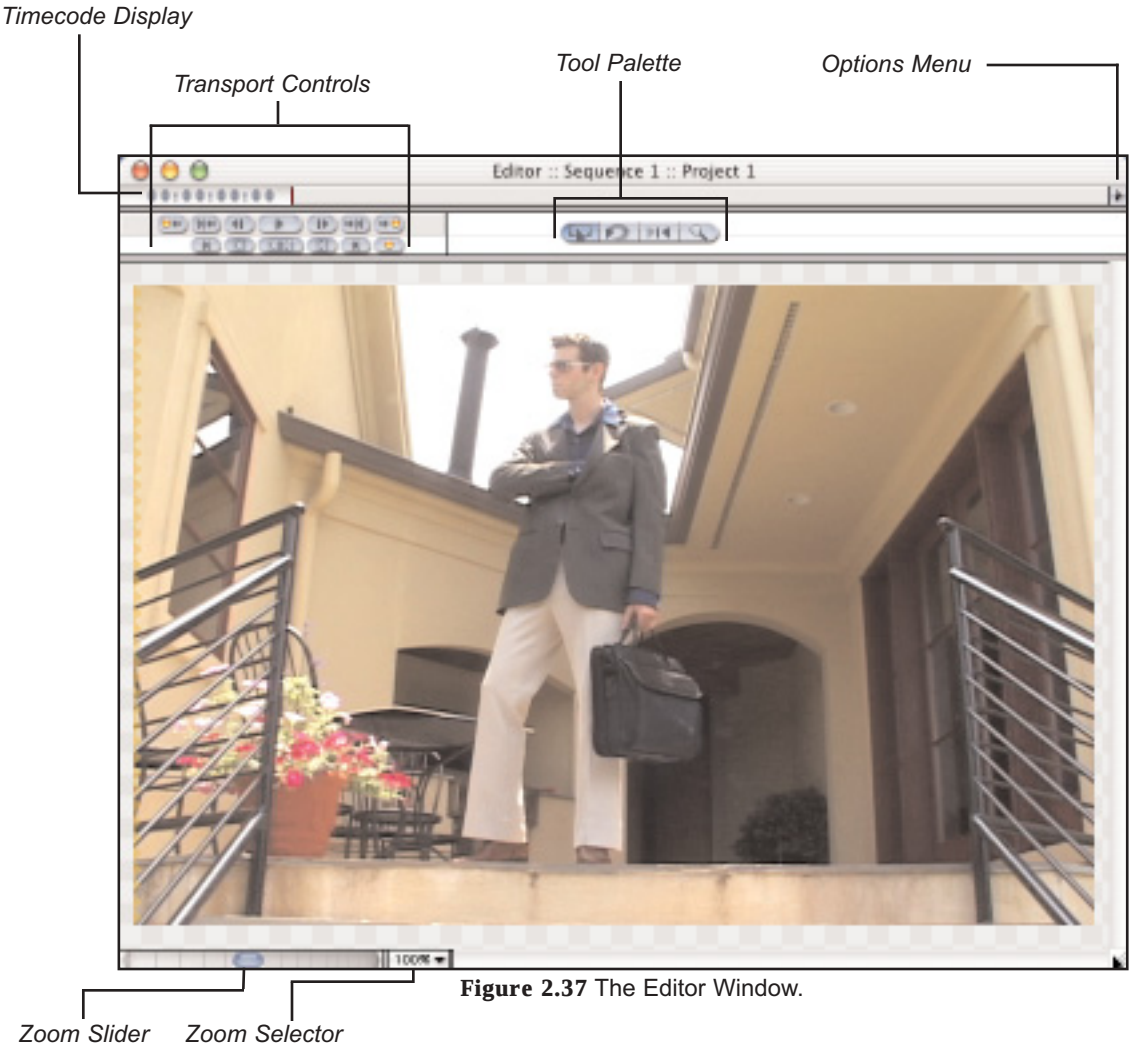


Figure 2.37 The Editor Window.

On-screen controls & display

All the controls listed here, except for the Tool Palette appear in the Sequence and Source Windows as well. The controls operate the same way in the Sequence and Source Windows as they do here.

The Editor Window is tied directly to a sequence. It is not used for viewing source footage, like the Source Window. The Editor Window displays the sequence that is being edited in the Sequence Window only.

Transport controls

Figure 2.38 shows the video controls that appear along the top of the Editor Window.

- **Go To In** will move the Scrubber to the In Point set in the Editor Window.
- **Go To Out** will move the Scrubber to the Out Point set in the Editor Window.
- **Previous Mark** moves the Scrubber to the previous mark set n the Editor Window.
- **Next Mark** moves the Scrubber to next mark that has been set in the Editor Window.
- **Previous Frame** moves the scrubber backward one frame.
- **Next Frame** moves the Scrubber forward one frame.
- **Play** plays the project from the Scrubber's current position to the end of the clip.
- **Set In Point** sets an In Point for the clip at the Scrubber's current location.
- **Set Out Point** sets an Out Point for the clip at the Scrubber's current location.
- **Clear In/Out Points** removes both the In and the Out points from the Editor Window.

Time scrubber

The Scrubber (**Figure 2.39**) is a tool that quickly locates a certain point in time within a video clip, and appears as a thin red line in the gray area under the Editor Window name.

To use the Editor Window Scrubber, click on the red line and drag to the desired point.

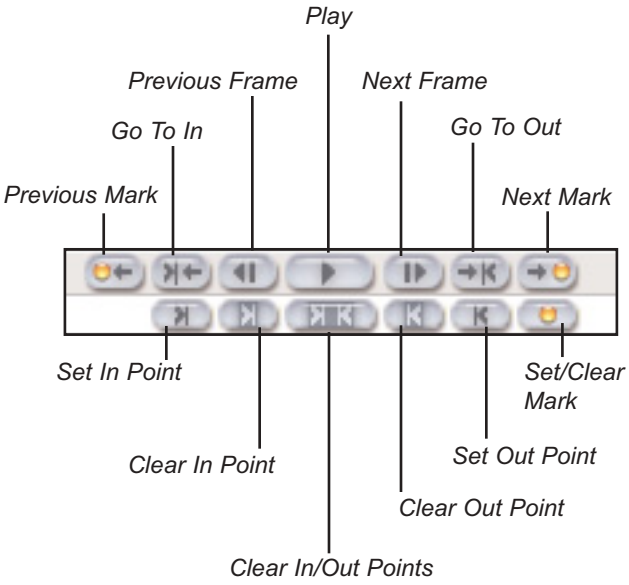


Figure 2.38 The Editor Window transport controls.

Figure 2.39 The Scrubber being moved to the right.

Setting movie view size

The Editor Window has two different zoom controls that allow you to adjust the window's view.

Using the slide zoom control

- **Figure 2.40** shows the slide zoom control. Click and drag to the left to zoom in, drag to to the right to zoom out.

Using the zoom selector

- **Figure 2.41** shows the zoom selector. The zoom selector is next to the zoom slide control, in the bottom left hand corner of the Editor Window. Simply choose the zoom level from the pop-down list that you would like.

Figure 2.40 The slide zoom control.

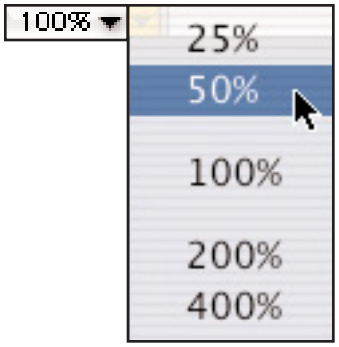


Figure 2.41 The zoom selector.

Using In & Out points

The In and Out points determine the start and end frames of a clip that is used for editing. The majority of editing functions are performed by adjusting these points, and setting them for each clip is the first step in editing a project.

You cannot set In and Out points on a graphic or image file.

To set In & Out points

1. Position the Scrubber where you would like to place the In point.
2. Click the Set In button or press I and you will see the In point appear (**Figure 2.42**).
3. Position the Scrubber where you would like to place the Out point.
4. Click the Set Out button or press O and you will see the Out point appear (**Figure 2.43**).

Figure 2.42 Set an In point by clicking the the Set In button

Figure 2.43 Set an Out point by clicking the the Set Out button

To change In & Out points

1. Position the Scrubber where you would like to place the new In point.
2. Click the Set In button or press I and you will see the new In point appear. The old In point will be deleted (**Figure 2.44**).
3. Position the Scrubber where you would like to place the new Out point.
4. Click the Set Out button or press O and you will see the new Out point appear. The old Out point will be deleted (**Figure 2.45**).

Figure 2.44 Move the scrubber and click Set In to set a new In point.

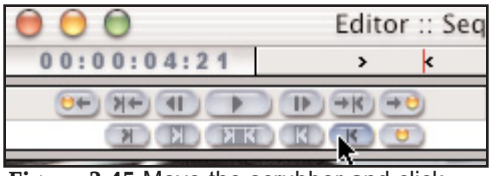


Figure 2.45 Move the scrubber and click Set Out to set a new Out point.

To clear In & Out points

- To clear In & Out points set in the Editor Window simply click on the Clear In/Out button (**Figure 2.46**).

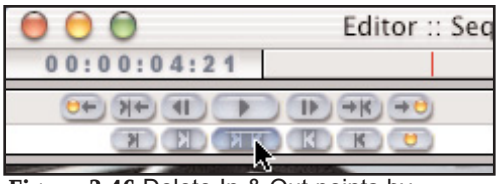


Figure 2.46 Delete In & Out points by clicking the Clear In/Out button.

Tool Palette

The Tool Palette(**Figure 2.47**) provides tools that allow you to manipulate the video image inside the Editor Window.

- The **Selection Tool** allows the content of the Editor Window to be moved and re-sized.
- The **Rotate Tool** rotates the content of the Editor Window.
- The **Flip Tool** flip the content of the Editor Window horizontally. Holding the Option key while using this tool flips the content vertically. Holding Option plus Shift while using this tool flips the content vertically and horizontally.
- The **Zoom Tool** zoom in on the content in the Editor Window. Holding the Option key while using this tool will zoom out.

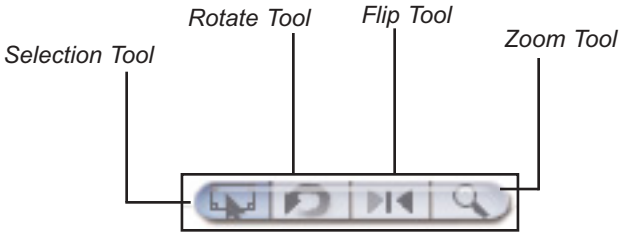


Figure 2.47 The Tool Palette in the Editor Window.

Options menu

The Editor Window Options Menu (**Figure 2.48**) is accessible by clicking on the small arrow-tab in the upper right hand corner. When clicked, a small drop down box will appear listing the choices available. The choices under the Editor Window Options Menu are Titling and Action Areas, Object Handles, and View DV Size.

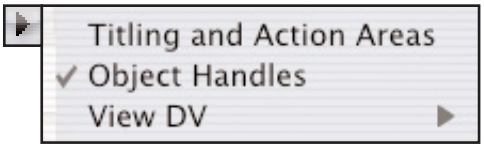


Figure 2.48 The Editor Window Options Menu.

Titling And Action Areas

Creating video for television presents a unique problem: not all televisions have the same viewable area. The Safe Titling Area (STA) is a standard dimension set up to ensure that all action and titles inside this area appears on a TV screen. By turning on the Safe Titling Area (**Figure 2.49**), Looking Glass superimposes two yellow bounding boxes into the Editor Window as guides. These boxes are not recorded onto the project. The STA is discussed further in **Chapter 6: Creating Effects & Compositing**.

Figure 2.49 Safe Titling area bounding box in the Editor Window.

Object Handles

Object Handles (**Figure 2.50**) appear as a thin, yellow bounding box around media inside the Editor Window. When using the Selection Tool, you can grab onto the edges of the object handles to resize the video or graphics in the Editor Window.

Figure 2.50 The Object Handles bounding box in the Editor Window.

View DV menu

DV (digital video) aspect ratio is different on a TV screen than on a computer screen. DV size is explained in further depth in **Appendix A: Working With DV**. The DV View menu, show in **Figure 2.51**, provides four options to how you would like to preview your project. Actual DV size allows you to view the current project in the aspect ratio it will be seen in on a T.V. screen.

See **Chapter 6: Creating Effects & Compositing** for an in depth look on how to use the View DV feature.

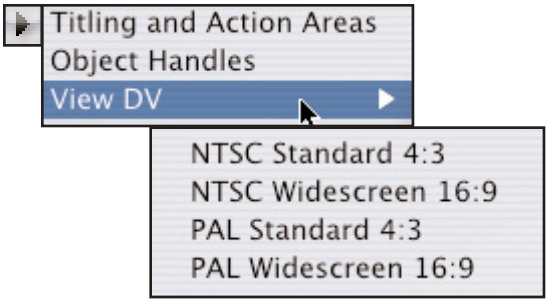
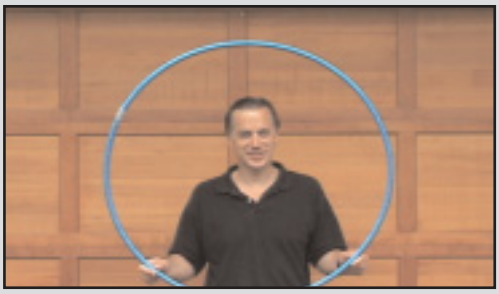


Figure 2.51 The View DV menu gives several options for viewing a clip as it will appear on a T.V.

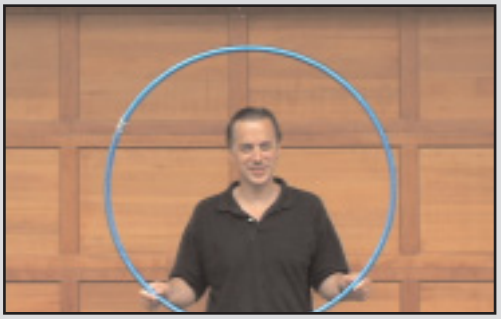
DV and Display Size

DV (digital video) aspect ratio is different on a T.V. screen than on a computer screen. DV size is explained further in **Appendix A: Working With DV**. The pictures below demonstrate the differences in DV on a computer and T.V. Notice that the hoop, a perfectly round image, is displayed properly on a television, but not a computer.



Unadjusted computer DV size

Figure 2.52 DV video displayed on a computer is compressed vertically.



Adjusted with View DV feature

Figure 2.53 DV video as it would appear on a TV.

Using timecode to navigate

The Editor Window allows you to navigate through a clip using Timecode.

To navigate using timecode

1. Open a clip in the Source Window. **Figure 2.54** shows the timecode for a clip in the Source Window.
2. Highlight the timecode (**Figure 2.55**).
3. Type in the new timecode you would like to jump to (**Figure 2.56**). Push Enter.
4. The Scrubber will jump to the timecode position entered.

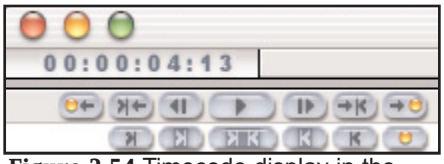


Figure 2.54 Timecode display in the Source Window.

Figure 2.55 Highlight the timecode to change it.

Figure 2.56 Type in the new timecode and hit Enter.

What Is Timecode?

Timecode is a number assigned to each frame. It reads in hours:minutes:seconds:frames. So, a timecode of 02:45:34:12 would mean two hours, forty-five minutes, thirty-four seconds, and twelve frames. There are 30 frames in one second of video.

Timecode can be measured in Drop Frame or Non-Drop Frame modes. To learn how Looking Glass handles timecode, read **Appendix A: Working With DV**.

Sequence Window

The Sequence Window (**Figure 2.57**) is where all editing takes place. It's in the Timeline that media is assembled to form a movie.

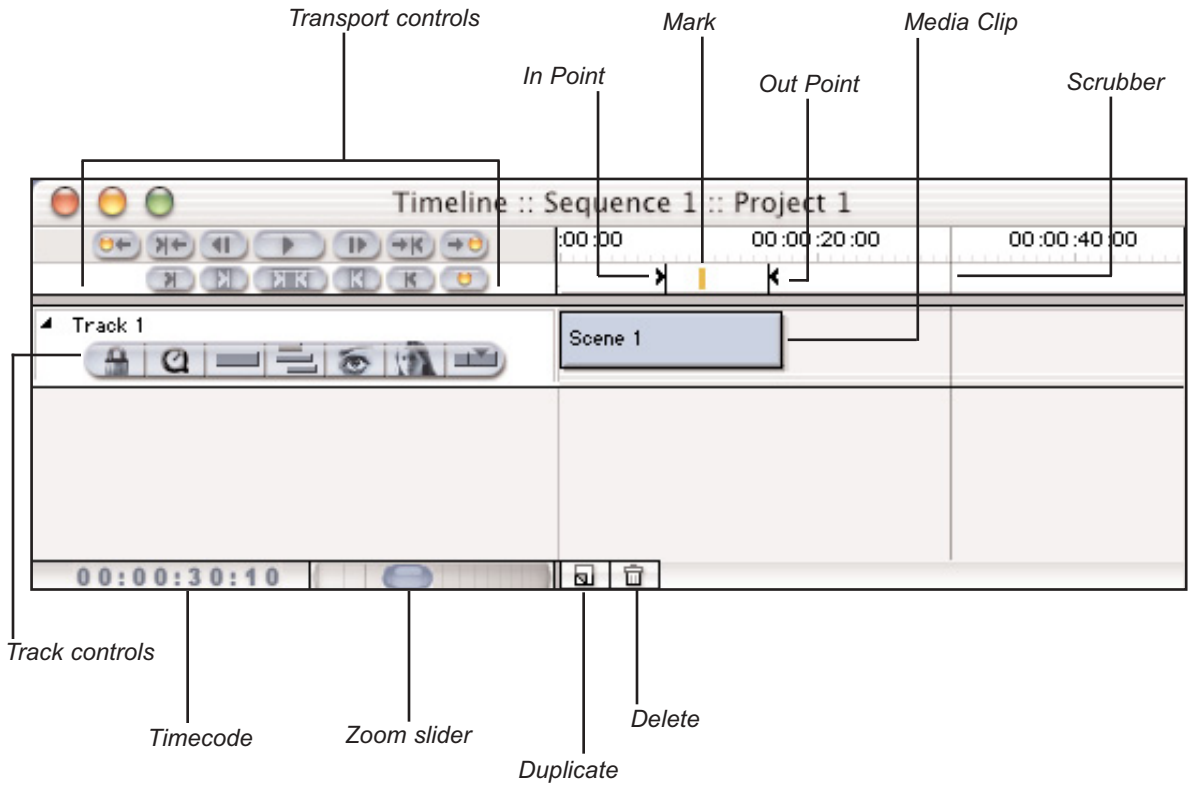


Figure 2.57 The Sequence Window

Transport controls

Figure 2.58 shows the video controls that appear along the top of the Sequence Window.

- **Go To In** will move the Scrubber to the In Point set in the Sequence Window.
- **Go To Out** will move the Scrubber to the Out Point set in the Sequence Window.
- **Previous Mark** moves the Scrubber to the previous mark set n the Sequence Window.
- **Next Mark** moves the Scrubber to next mark that has been set in the Sequence Window.
- **Previous Frame** moves the scrubber backward one frame.
- **Next Frame** moves the Scrubber forward one frame.
- **Play** plays the project from the Scrubber's current position to the end of the clip.
- **Set In Point** sets an In Point for the clip at the Scrubber's current location.
- **Set Out Point** sets an Out Point for the clip at the Scrubber's current location.
- **Clear In/Out Points** removes both the In and the Out points from the Sequence Window.

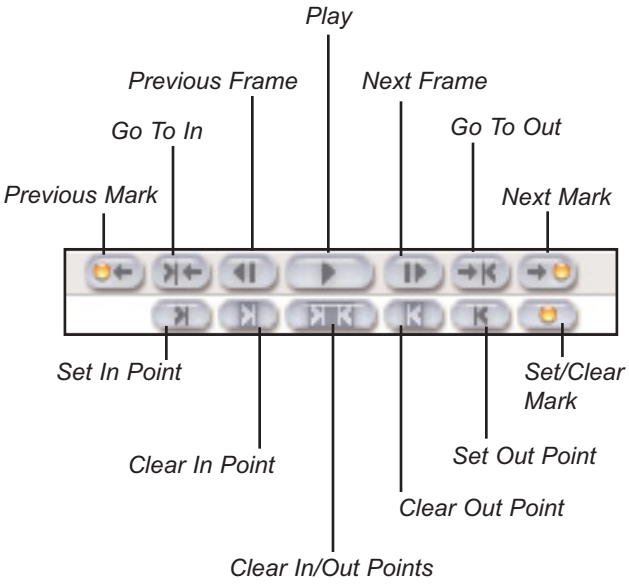


Figure 2.58 The Scrubber in the Sequence Window is a thin grey line.

Time scrubber

The Scrubber (**Figure 2.59**) is a tool that quickly locates a certain point in time within a video clip, and appears as a thin grey line that runs down the height of the Sequence Window.

To use the Sequence Window Scrubber, click anywhere in the timeline area at the top of the window and drag back and forth.

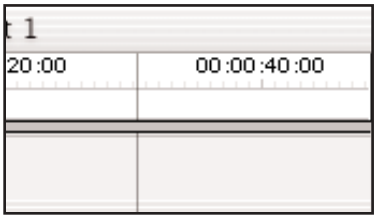


Figure 2.59 The Scrubber in the Sequence Window is a thin grey line.

Timeline zooming and scrolling

The Sequence Window in Looking Glass has a timeline with a variable time scale. You can view minutes at a time, or zoom in to view a project frame by frame.

To adjust the time scale of the timeline

1. The zoom slider (**Figure 2.60**) in the lower left hand corner of the Sequence Window is the tool that adjusts the time scale.
2. Drag the ribbed button to the left to zoom in on your project.
3. Drag the ribbed button to the right to zoom out and expose more of your sequence.

To scroll a sequence

1. If a sequence has become longer than the window length, use the scroll bar at the bottom of the Sequence Window to view the rest of your project (**Figure 2.61**).
2. If a sequence has become taller than the window, use the scroll bar at the right side of the Sequence Window to scroll vertically, and view the rest of your project (**Figure 2.61**).

Add time to beginning

Looking Glass allows you to add blank time to the beginning of a sequence. This effects all tracks within a sequence.

1. Make sure the Sequence Window is the active window.
2. Choose 'Add Time to Beginning' from the Sequence main menu (**Figure 2.62**).
3. A dialog box will appear asking you to specify how much time you want to add to the beginning of the sequence. The default time is 1 second.
4. Type in the time you desire to add and click OK (**Figure 2.63**).

Figure 2.60 The zoom slider in the Sequence Window changes the time scale of the timeline.

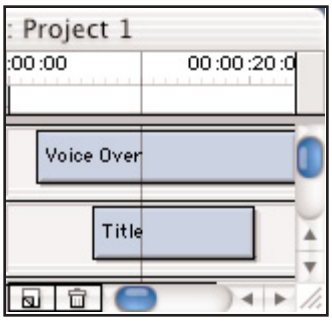


Figure 2.61 The scroll bars scroll horizontally and vertically to allow you to view big projects.

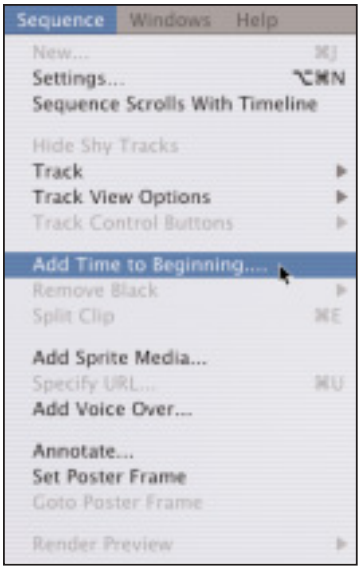


Figure 2.62 Choose 'Add Time to Beginning' From the Sequence main menu.

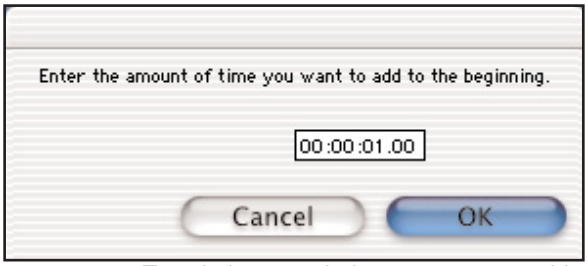


Figure 2.63 Type in how much time you want to add, then click OK.

Track controls

Each track in the Sequence Window has its own set of controls, as show in **Figure 2.64**. These controls allow changes to be made to each track individually. Several of these buttons have more than one state, and are illustrated in the pictures below.

- **Bar View**: The bar view toggles frame picons on and off for each clip in that track. It has three states: frames off, first and last frames, and all frames (**Figure 2.65**). Frames off is the default normal view for all clips in the timeline, and is also the fastest to work with. Turning on first and last frames displays the first frame and the last frame of each clip. Turning on all frames displays every frame of every clip in that track. **Figure 2.66** shows exactly how the bar view effects the clips in a track.

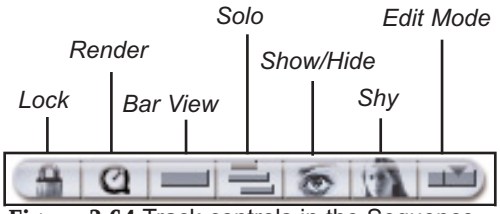


Figure 2.64 Track controls in the Sequence Window.

Figure 2.65 The bar view has 3 states.

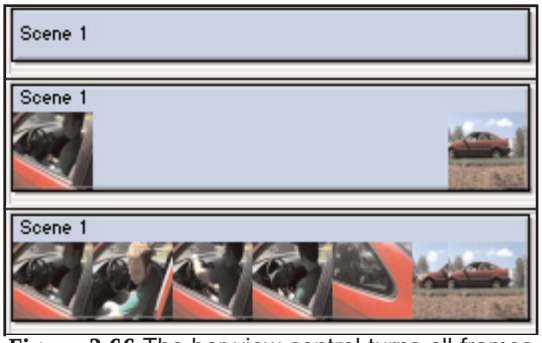


Figure 2.66 The bar view control turns all frames off, turns on first and last frames only, or turns on all frames.

- **Edit Mode**: The edit mode control toggles back and forth between overlay mode and insert mode (**Figure 2.67**). Overlay mode is the default mode for a track. While in overlay mode, media will be replaced and overwritten with any media you drag on top of it, including blank space. In insert mode, any media placed in a track is positioned inside any clip already there.
- **Render**: the render settings button (**Figure 2.68**) allows you to specify the compression settings for the audio, graphic, and video of each track. See **Chapter 8: Rendering** for more on this feature.
- **Show/Hid**e: This control (**Figure 2.69**) turns a track on and off in the Editor and Sequence Windows. If a track is hidden it is disabled when using the Export and Make Movie commands, and will not be visible or audible in final output.

- **Lock**: Lock makes a track unchangeable. When a track is locked, no adjustments, edits, or additions can be made to that track. Locked tracks will still appear in final projects that are saved out using Export and Make Movie. **Figure 2.70** shows the two states of the lock button.
- **Solo**: When solo (**Figure 2.71**) is turned on for a track, all the other tracks in the Sequence Window are automatically muted, making it the only track that will be processed if the Export or Make Movie command is used.

Figure 2.67 The edit mode control toggles between overlay (left) and insert (right).

Figure 2.68 The Render Settings Button

Figure 2.69 The show/hide button disables a track in the Editor and Sequence Windows.

Figure 2.70 Locking a track makes it unchangeable.

Figure 2.71 Use Solo to make only one track active.

- **Shy**: Using the shy control (**Figure 2.72**) on a track hides it from the Sequence Window to reduce clutter if there are too many tracks to keep up with at once. Using the shy control does not eliminate a track, and they will still be processed if the Export or Make Movie commands are used.

To use the shy control

1. Click the shy button for each track you want to hide.
2. Next, select 'Hide Shy Tracks' from the Sequence main menu (**Figure 2.73**). All the tracks you specified to be shy will be hidden from the Sequence Window.
3. To bring back the tracks you have hidden, click 'Show Shy Tracks' from the Sequence main menu (**Figure 2.74**).

Figure 2.72 Click the shy button to hide a track from the Sequence Window.

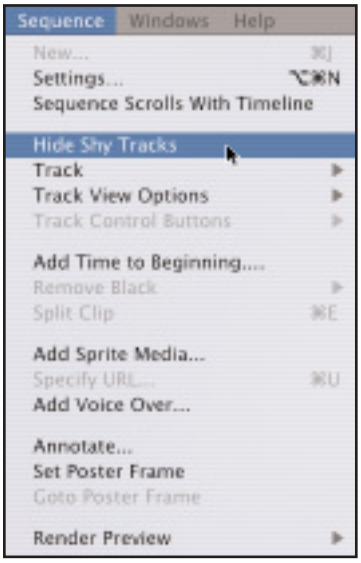


Figure 2.73 Select 'Hide Shy Tracks' from the Sequence menu to hide tracks.

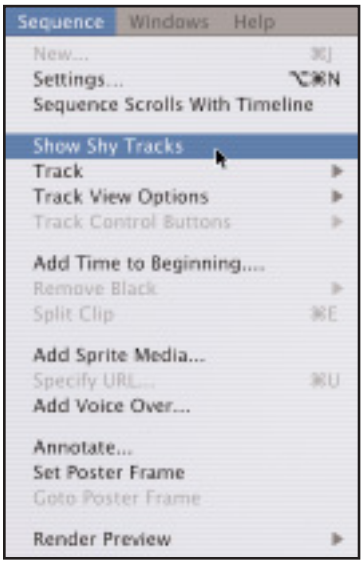


Figure 2.74 Select 'Show Shy Tracks' from the Sequence menu to reveal tracks you had hidden.

Tracks

A sequence in Looking Glass is composed of media clips which are held in tracks.

Creating a track

There are multiple ways to create a new track in the Sequence window.

From the File menu

1. Make sure the Sequence Window is active.
2. From the File main menu choose 'New,' then choose 'Track' (**Figure 2.75**).

Using the keyboard

1. Make sure the Sequence Window is active.
2. On your keyboard push ⌘-K.

By dragging in media

1. Dragging a video or audio clip into the Editor Window or Sequence Window will create a new track. **Figure 2.76** shows a clip being placed in the Sequence Window from the Desktop.

Naming a track

1. To change the name of a track, click on the default track name (**Figure 2.77**).
2. Next, a cursor will appear and allow you to change the name of the track.
3. After you type in the new name, hit Enter and the name will take effect (**Figure 2.78**).

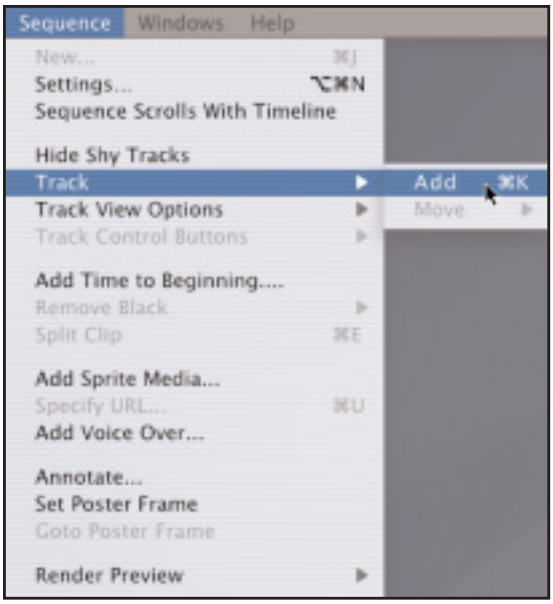


Figure 2.75 One way to create a new track is by choosing 'New Track' from the File menu.

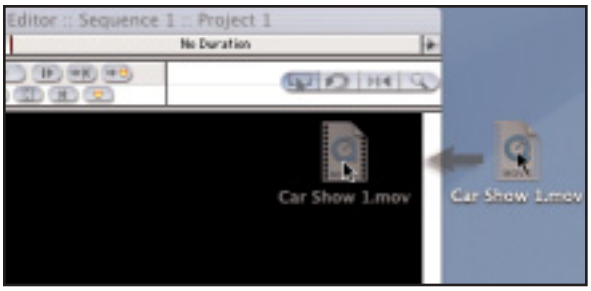


Figure 2.76 Dropping a clip into the Sequence Window from the desktop creates a new track.

Figure 2.77 Click on the default track name to change its title.

Figure 2.78 After you type in the new name, hit Enter for it to take effect.

Opening a track

A track can be opened to reveal the clip effect controls for each clip in that track.

1. Click the small arrow in the upper left hand corner of the track by the track name (**Figure 2.79**).
2. The track will roll open, revealing all of the clip in that track. Click on the small arrow by any clip (**Figure 2.80**) to reveal the clip effect controls.

Figure 2.79 Click on the arrow by the track name to open a track.

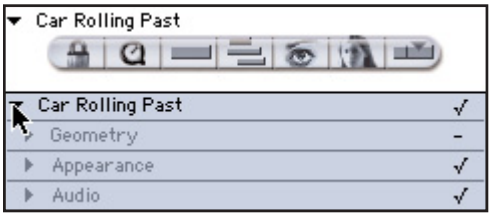


Figure 2.80 Click on the arrow by any clip to reveal the controls for that clip.

Duplicating a track

Duplicate all

1. To duplicate a track and everything in it, click on the grey area under the track name, selecting the track.
2. Click the duplicate button (**Figure 2.81**). The track will be duplicated and added to the current sequence.

Figure 2.81 The duplicate button in the bottom left hand side of the Sequence Window.

Duplicate with one selected clip

1. To duplicate a specific clip in a track that has multiple pieces of media, first click on and select the clip to be duplicated.
2. Next, click the duplicate button (**Figure 2.81**), the track will duplicated and added to the sequence but only the selected clip will be inside the new track.

Deleting a track

Using the trashcan

1. To delete a track using the trashcan, click on the grey area under the track name to select the track.
2. Next, click the trashcan button at the bottom left-hand side of the Sequence Window (**Figure 2.82**).
3. Or simply click and drag the track you want to be deleted to the trashcan, and it will delete automatically.

Figure 2.82 Click the trashcan icon to delete a selected track.

Using the keyboard

1. To delete a track using the keyboard, click on the grey area under the track name to select the track.
2. Next, push the Delete key on the keyboard.

Ways to delete a clip

Using the trashcan

1. To delete a clip using the trashcan, click on it to make sure its selected.
2. Next, click the trashcan button at the bottom left-hand side of the Sequence Window (**Figure 2.83**).
3. Or simply click and drag the clip you want to be deleted to the trashcan, and it will delete automatically.

Using the keyboard

1. To delete a clip using the keyboard,click on it to make sure its selected.
2. Next, push the Delete key on the keyboard.

Figure 2.83 Click the trashcan icon to delete a selected clip.

Clip effects

Each clip in a sequence has editable effects. This section will show you how to edit these effects.

Geometrics

Geometrics are turned off by default. You must turn them on if you desire to use any of these effects.

- **Anchor**: the anchor control defines the center point for the clip. The center point determines the axis the clip will rotate on when using the rotation control.
- **Position**: The position of a clip inside the Editor Window is adjustable. A clip can be dragged to a new position, or the placement values, in pixels, can be manually adjusted. Position is keyframeable.
- **Size**: A clip's size is given in pixels for width and height. These pixels values can be manually adjusted, or you can click on a clips object handles inside the Editor Window and resize a clip by dragging.
- **Rotation**: Rotation allows you to rotate a clip clockwise or counter-clockwise in the Editor Window.

Appearance

- **Transparency**: The transparency control determines the opacity of a clip. The default transparent value is 0, meaning a clip is fully opaque. Transparency is not keyframeable.

Audio

- **Wave form**: A waveform is a graphical representation of a clip's audio signal. This data is unalterable, but it can aid in making precise edits.
- **Gain**: The gain control adjusts a clip's volume. The default setting for a clip's volume is 0. Gain can be adjusted using positive or negative numbers, from -64 to +64.

Opening clip effects

1. Open a track as shown in **Figure 2.84** by clicking on the arrow by the track name.
2. Open the clip, like in **Figure 2.85**, by clicking on the arrow next to the clip you want to alter. The clip will open, revealing the three clip effects panels.
3. Open the clip effect you want to alter by clicking on the arrow by the clip effect name **(Figure 2.86**).

Figure 2.84 Click on the arrow by the track name to open a track.

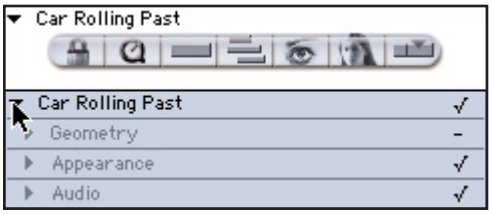


Figure 2.85 Click on the arrow by any clip to reveal the controls for that clip.

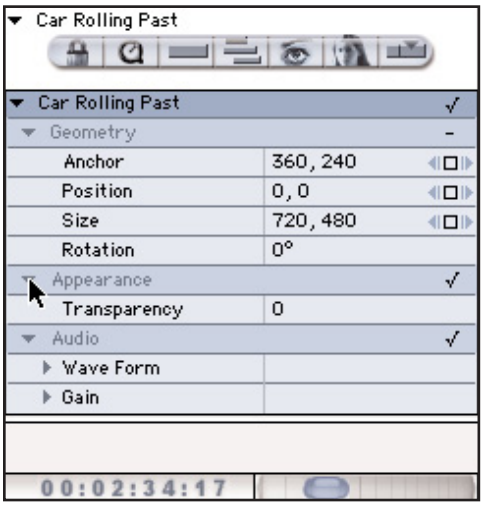


Figure 2.86 Click on the arrow by an effect to open up the control panels for each effect.

Turning clip effects off and on

When an effect is turned off it is not exported when using the Make Movie or Export commands.

Each effect individually

1. Beside each effect name is a check mark. To turn off that effect, click on the check mark (**Figure 2.87**). The check mark will become a line, indicating the effect is turned off (**Figure 2.88**).

Turning off all effects for a clip

1. To turn of all the effects for a clip, find the check mark to the right of the clip name.
2. Click this check mark to have it to turn to a line, this disables all the effects for that clip, including the audio (**Figure 2.89**). No audio will play when this check mark is turned off.

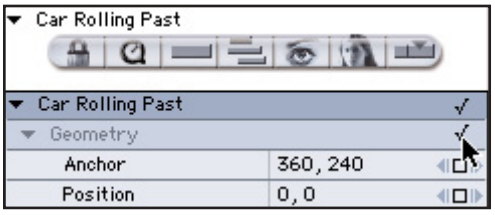


Figure 2.87 Click on the check mark by the effect name to turn that effect off.

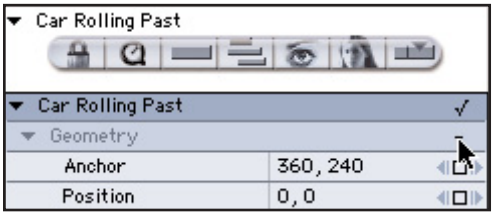


Figure 2.88 When the check mark becomes a line, the effect is turned off.

Working with keyframes in the timeline

Keyframes indicate that an effect parameter is changing over time. A keyframe is created at a place where you want to change the value of an effect's parameters, like an edit point.

The clip effects that are keyframeable are Size, Position, Anchor, and Audio Gain.

Using the keyframe controls

Keyframes have their own controls. They appear to the right of the clip effect controls (**Figure 2.90**). Clicking the box while it is empty like in **Figure 2.90** will set a keyframe at the Scrubber's present location with the current effect values.

When a keyframe is present the arrows on either side of the box will become dark. They are used to jump the timeline Scrubber from one keyframe to the next. When an X is present in the box, the Scrubber is resting on a keyframe. Clicking the X would then delete the keyframe (**Figure 2.91**).

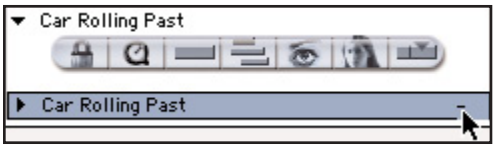


Figure 2.89 Click on the check mark by the clip name to turn off all the effects for that clip.

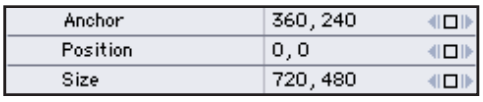


Figure 2.90 The keyframe controls appear as a box with an arrow on either side to the right of the effect controls. Clicking the box will set a keyframe with the current values.

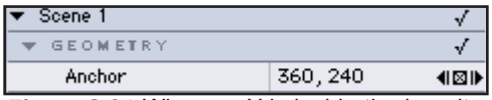


Figure 2.91 When an X is inside the box, it means the Scrubber is resting on a keyframe. Clicking the X will delete the keyframe.

Setting keyframes

A keyframe can be set either by adjusting the values in the clip effects control panels, or by moving an object in the Editor Window.

Using clip effects control panels

1. Open the effect you want to adjust by clicking the arrow next to the effect name.
2. Move the scrubber where you would like to place the first keyframe.
3. Enter the value you want in the effect control panel. **Figure 2.92** shows a new gain value being typed into the Audio effects control panel.
4. Push Enter after you type in the value you want and a keyframe will be set (**Figure 2.93**).

Moving objects in the Edit Window

The Size, Anchor and Position effects can be altered by moving the clip inside the Edit Window

1. In the timeline, select the clip you want to alter by clicking on it.
2. If you will be changing the size of the clip, make sure the Object Handles are turned on by using the Editor Window Options Menu (**Figure 2.94**).
3. Move the Scrubber to the point in the timeline that you would like to set a keyframe.
4. To change the size of the clip, grab the object handles and make adjustments. A keyframe will be set (**Figure 2.95**).
5. To change the position or anchor of the clip, click in the center of the clip and drag to the desired location. A keyframe will be set.

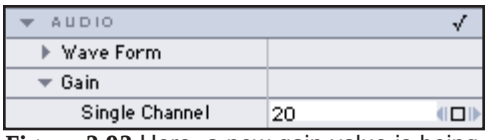


Figure 2.92 Here, a new gain value is being typed in.

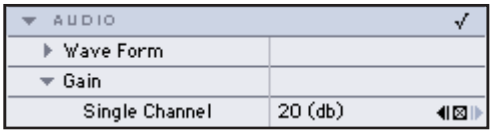


Figure 2.93 Push Enter after typing in the value you want, and a keyframe will be set.

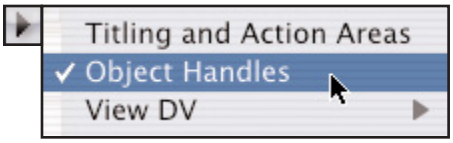


Figure 2.94 Turn on Object Handles in the Editor Window Options Menu.

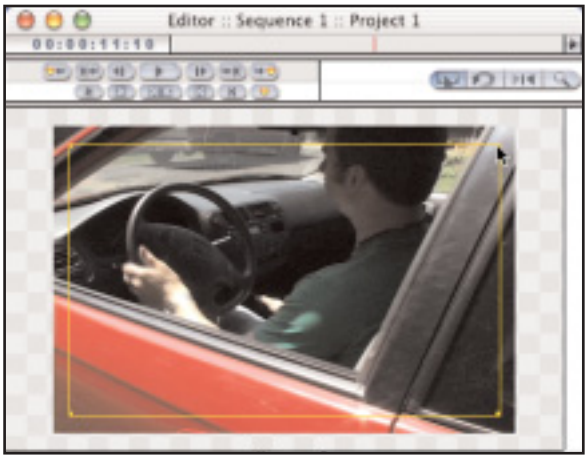


Figure 2.95 Click on the Object Handles and drag to change the size of a clip.

Moving keyframes

1. Keyframes appear as diamond icons in the timeline. **Figure 2.96** shows a keyframe being dragged to the left. Notice it is still visible in its old location for reference.
2. **Figure 2.97** shows the keyframe in its new location.

Deleting keyframes

1. Use the arrows in the keyframe controls to move the Scrubber to the keyframe you want to delete.
2. When the Scrubber is resting on a keyframe, an X will appear in the keyframe control box (**Figure 2.98**).
3. When the Scrubber is over the keyframe you want to delete, click the X and the keyframe will be removed (**Figure 2.99**).

To change keyframe parameters

1. Open the clip that contains the keyframe you want to alter (**Figure 2.100**).
2. Use the arrows in the keyframe controls to move the Scrubber to the keyframe you desire to change.
3. Once at that keyframe you can edit the values manually, or change the clip in the Editor Window. They keyframe will automatically update itself.

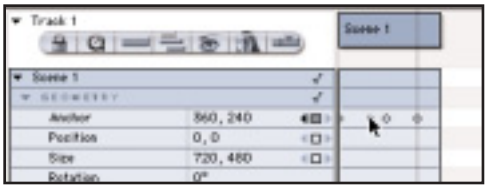


Figure 2.96 Keyframes appear as diamond icons in the timeline. Here, a keyframe is being moved to the left.

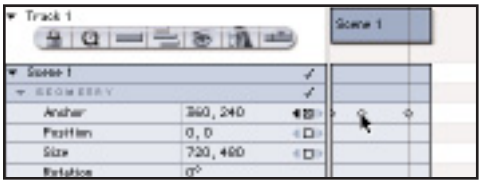


Figure 2.97 The keyframe is now in its new position.

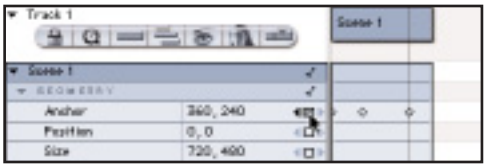


Figure 2.98 An X in the keyframe control box means the Scrubber is resting on a keyframe.

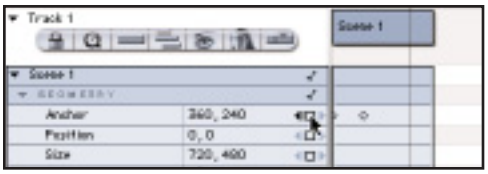


Figure 2.99 The keyframe has been deleted after clicking the X inside the box.

Figure 2.100 Click on the arrow by the track name to open a track.

Using marks

Marks are reference points that can be used for numerous things: to remind you of specific frames you wanted to line up with, use the mark notes functions to make small reminders for yourself among others.

Marks appear as yellow dots in the timeline. They also appear at the bottom of the Editor Window along with timecode they were set at, or the name you gave them (**Figure 2.101**). Marks will not appear in the final output of a movie.

Adding marks

A mark can be added to a sequence from the Sequence or Editor Windows.

1. First, move the Scrubber in Sequence or Sequence Window to where you would like to place the mark.
2. Click the Add Mark button to add a mark to the Scrubber's current position (**Figure 2.102**). A mark will appear in the timeline as a yellow dot (**Figure 2.103**).

Figure 2.101 A mark made in the Sequence or Editor Windows will appear on that frame of the clip at the bottom of the Editor Window.

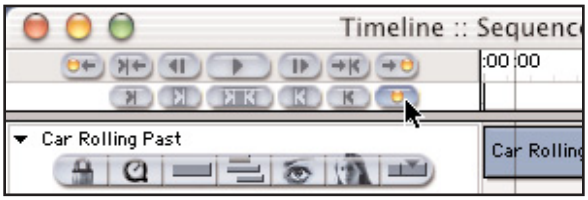


Figure 2.102 Click the Add Mark button to add a mark at the Scrubber's current position.

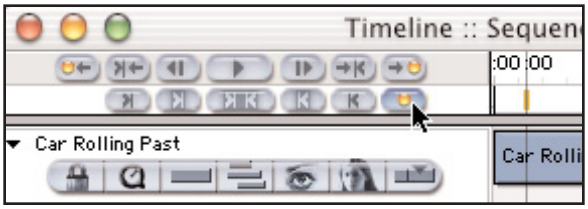


Figure 2.103 Marks appear as yellow dots in the timeline.

Moving between marks

1. Click the Previous Mark button, located in the Sequence and Editor Window transport controls, to move the Scrubber to the previous mark (**Figure 2.104**).
2. Click the Next Mark button, located in the Sequence and Editor Window transport controls, to move the Scrubber to the previous mark (**Figure 2.105**).

Deleting a mark

1. To delete a mark, use the Previous and Next mark buttons to move the Scrubber to the mark.
2. Hold down the Command key and lick the Add Mark button to delete the mark.

Deleting all marks

1. Hold down the Shift and Command keys and click the Add Mark button.
2. All the marks in the sequence will be deleted.

Mark options

1. Hold down the Option key and click the Add Mark button to bring up the Mark Options Menu (**Figure 2.106**).
   - **Add Mark**: The add mark option adds a mark at the Scrubber's current location and allows you to give it a unique name (**Figure 2.107**). The default name for a mark is the timecode at which it was set.
   - **Change Mark Name**: Allows you to choose of all the marks currently in the sequence and change their name. The default name for a mark is the timecode at which it was set.
   - **Jump To Mark**: The bottom of the Mark Options Menu lists all the marks in the sequence. Clicking on one of them automatically jumps the Scrubber to that mark.

Figure 2.104 Click the Previous Mark button to go to the previous mark in the sequence.

Figure 2.105 Click the Next Mark button to go to the next mark in the sequence.

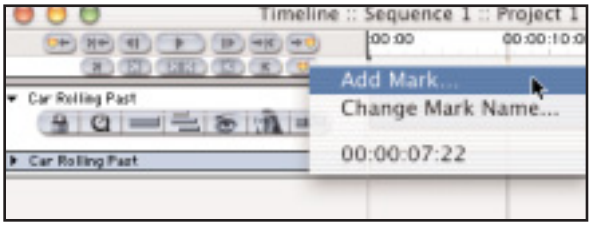


Figure 2.106 Hold down the Option key and click the Add Mark button to bring up the Mark Options Menu.

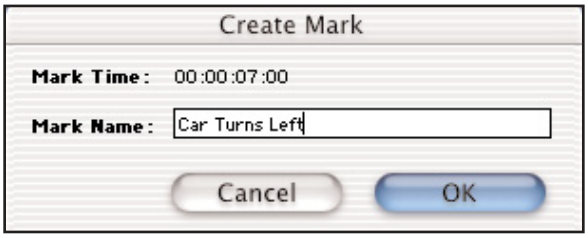


Figure 2.107 Add any name you would like to the mark about to be created.

Scrolling the sequence with the timeline

Sometimes a movie sequence can be so big that it "goes off the screen" so to speak of the Sequence Window. In these cases, you have to scroll over to view other parts of your project.

By default, the sequence does not scroll as it plays if it is bigger than the actual window. To make sure the sequence will scrolls as it plays:

1. In the Sequence main menu, choose Sequence Scrolls With Timeline (**Figure 2.108**).
2. When the command is checked, it is active (**Figure 2.109**).

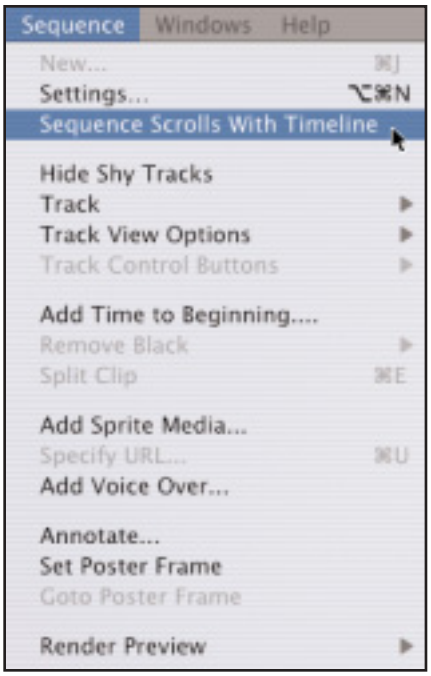


Figure 2.108 Choose Sequence Scrolls With Timeline to have the sequence scroll as it plays.

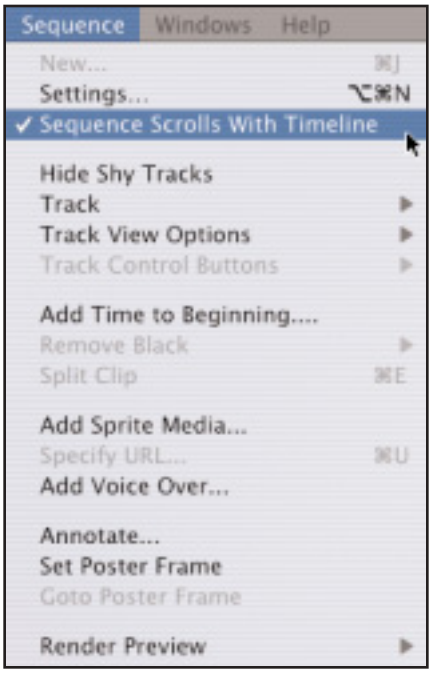


Figure 2.109 When there is a check mark by the menu command, then the sequence will scroll as it plays.

Chapter 3

Bringing Media Into A Project

This chapter will show you all the ways to bring media into Looking Glass. The following sections are in this chapter:

- Importing media
- Drag & drop
- Moving media from the Source Window to a sequence
- Find File
- Working with graphics
- Capture

Managing and organizing the media you'll be working with is a priority. This chapter will guide you through the many ways to get files into Looking Glass, how to search your computer for usable media files, and how to capture video from an outside source.

Importing media

Sometimes dragging and dropping a file into Looking Glass is not the most efficient way of working. This is what Import is for. Import does not change a file in any way, and it accepts the exact same type of files that dragging and dropping does.

Looking Glass will not import multiple track movies, and movies that are copyright protected cannot be used either.

1. To use the Import feature, select the Project window. Select 'Import Media' from the File menu (**Figure 3.1**).
2. From the window that opens, select the file you want to import into Looking Glass.
3. The file will automatically be added to the Project Window.

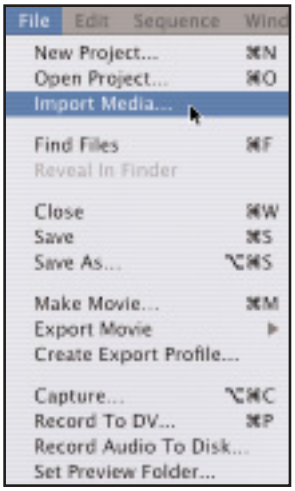


Figure 3.1 Choose File > Import Media to use the import command.

Drag & drop

Looking Glass fully supports the drag and drop capabilities of the Mac OS. Drag and drop allows you to simply a drag a file from anywhere on your computer to one of Looking Glass' three main windows and that file will automatically be added to your project.

To the Project Window

Files can be dropped into the Project Window from the desktop (**Figure 3.2**) or anywhere on your computer. These files are immediately added to the project.

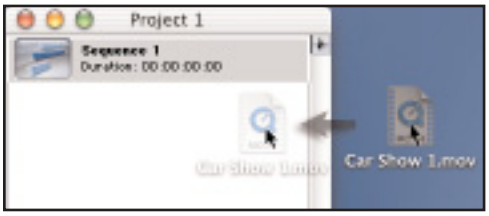


Figure 3.2 Here, a file is being dropped into the Project Window from the desktop.

To the Sequence Window

Files can be dropped directly into the Sequence Window from the desktop (**Figure 3.3**) or anywhere on your computer. This adds them to the current project, as well as to the current sequence.

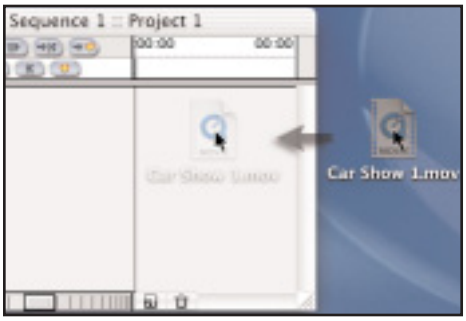


Figure 3.3 Here, a file is being dropped into the Sequence Window from the desktop.

To the Editor Window

Files can be dropped directly into the Editor Window from the desktop (**Figure 3.4**) or anywhere on your computer. This adds them to the current project, to the current sequence, and they are displayed in the Editor Window.

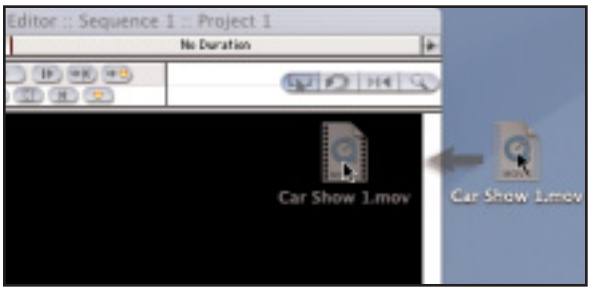


Figure 3.4 Here, a file is being dropped into the Editor Window from the desktop.

Moving media from the Source Window to a sequence

After setting the In and Out points for a clip in the Source Window as discussed in **Chapter 2**, it's simple to add that media to a sequence.

1. Make sure the Sequence Window is open.
2. Drag the clip from the Source Window to the Sequence Window and drop it in the time line (**Figure 3.5**).

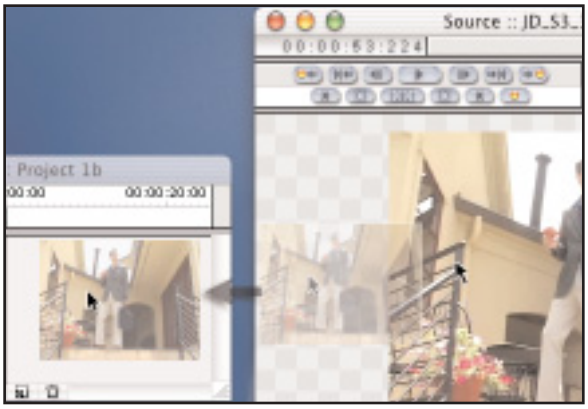


Figure 3.5 Drag a clip from the Source Window to the Timeline to add only the media between the In and Out points you have set.

Find File

Looking Glass will search your computer for media files that can be used in projects. The file types Looking Glass looks for are Looking Glass project files, movies, MP3 files, AIFF files, and text files.

1. To open the Find File window select 'Find File' from the File main menu (**Figure 3.6**).
2. When the Find Files window opens click the Options Menu arrow in the upper right hand corner.
3. A drop down list of the search options will appear (**Figure 3.7**). Choose which file type you want to search for.
4. After the search has finished, the found files will be displayed in the Find Files window.
5. Simple drag the files you want to use to the Project, Editor, or Sequence Windows and they will automatically be added to your project.

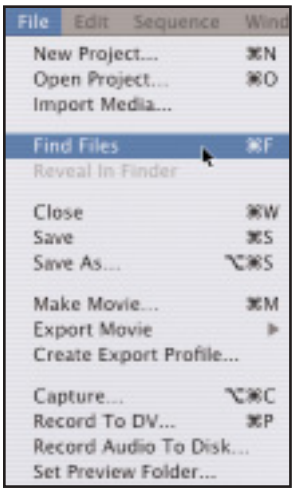


Figure 3.6 In the File main menu, select Find File, to have Looking Glass search for media files.

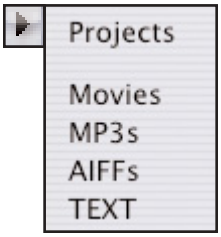


Figure 3.7 Click on the arrow to reveal the search options.

Working with graphics

Looking Glass supports several graphic formats. These include: JPEG, PSD, TIFF, GIF, PNG, BMP and TGA, among others. There is no conversion necessary to use these files, simply drag them into a project. Looking Glass does support multi-layered Photoshop (PSD) files.

When graphics are used in the timeline they have no duration, unlike a movie file. A graphic file can be as long or as short as you want it to be.

Alpha channels

Looking Glass supports the use of alpha channels in graphic images. The graphic formats that currently support alpha channels are TIFF, PSD and PNG. To use alpha channels with Looking Glass, you will need to use a graphic editing program like Adobe© Photoshop© to create the alpha channel, then bring that file in Looking Glass.

More On Graphics 1

Different aspects of working with graphics in Looking Glass are covered throughout this manual. For more information on working with titles see **Chapter 6: Creating Effects & Compositing**, for more information on getting the most out of graphics while working with DV footage see **Appendix A: Working With DV**.

Capture

Looking Glass allows you to capture video from a DV camera/deck, as well as by using a USB device. This section will deal with capture related issues you might encounter while trying to digitize your footage.

Connecting

1. From the File menu choose Capture (**Figure 3.8**).
2. When the video capture window appears, click Connect to connect Looking Glass to your DV camera/deck or USB device (**Figure 3.9**).

Getting an error message

If you get an error message trying to connect (**Figure 3.10**), then either your device was not properly connected to your Mac, or it was not turned on.

a. Check to see if you plugged the FireWire cable or USB device correctly into the back of your camera/deck and the back of your Mac. Refer to **Appendix E: Connecting Capture Devices** for help with this.

b. If your device is connected, make sure it is turned on. If it is a camera, make sure the camera is set to VCR, not camera.

c. After you make these corrections, close the Capture Video window and try again.

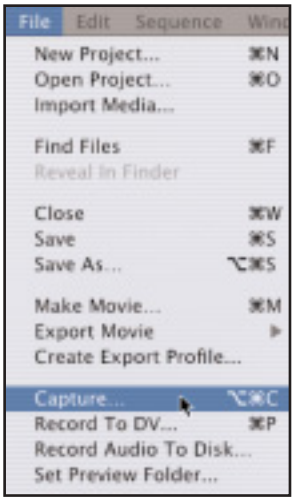


Figure 3.8 Choose File > Capture to digitize media.

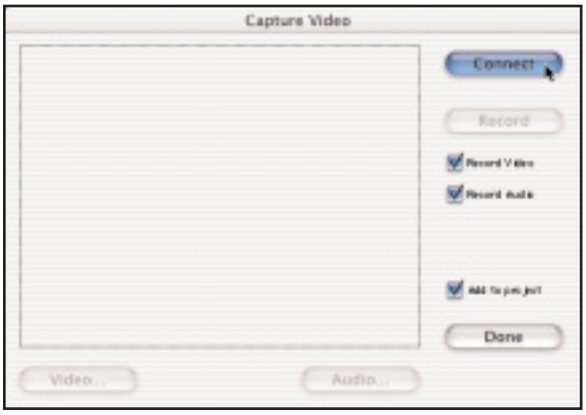


Figure 3.9 Click Connect to connect Looking Glass to your camera or deck.

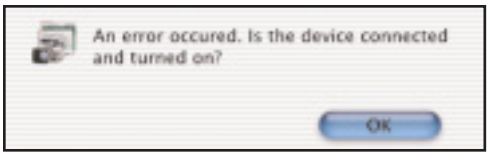


Figure 3.10 This error message means your device was not turned on or not connected.

Connecting Capture Devices To You Computer

This chapter deals with capture issues involving the Looking Glass software. For general information regarding connecting DV camera/decks, and USB capture devices to your Macintosh computer please refer to **Appendix E: Connecting Capture Devices**.

It is important to make sure Looking Glass is connecting through the correct port to the video source. The three possible ways to connect a device to your computer are DV port, USB capture device, and a 3rd party capture card. Usually, by default, Looking Glass will choose the correct port to digitize video from, but its always a good idea to double check and make sure.

For example, if you have a 3rd party capture card in your computer, but are going to import video via FireWire it's important to let Looking Glass know.

To change which port is being accessed

1. From the File main menu, choose Capture.
2. Push Connect in the Capture Video window.
3. Next, click on the Video button (**Figure 3.11**).
4. In the Video window, choose Source from the top-most drop down menu (**Figure 3.12**).
5. In the Source section, click on the menu next to Digitizer (**Figure 3.13**) and choose the proper port. For capturing via FireWire choose DV Video, for USB capture devices choose USB, and for any 3rd party card choose that card.

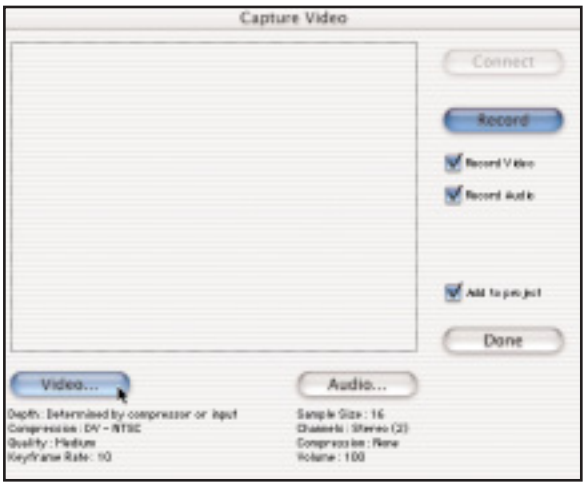


Figure 3.11 Click the button labeled Video in order to set the correct port.

Figure 3.12 Choose Source from the drop down menu, in the Video window.

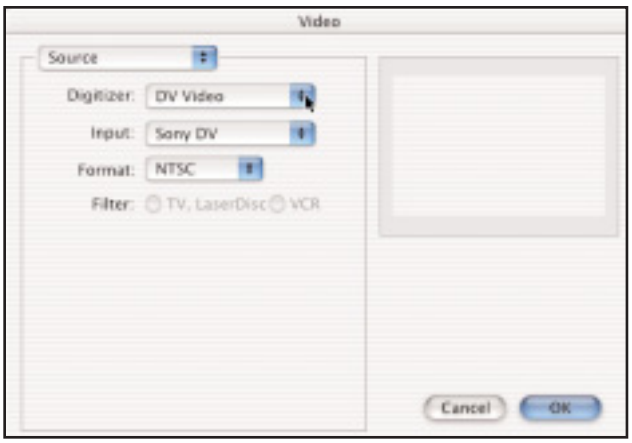


Figure 3.13 Next to Digitizer, choose the correct port.

Choosing capture options

After you've connected to your camera or deck, its time to choose your capturing options before digitizing begins.

Deciding what to capture

You can choose to capture both video and audio, audio only, or video only.

1. There are two check boxes in the Capture Video window. These boxes are labeled Record Video and Record Audio.
2. To not record something, uncheck the box. **Figure 3.14** shows the Record Audio box being unchecked so only video will be recorded.

Adding captured clips to projects

By default, all captured clips are adding immediately to the current project. You can turn this off if you want.

1. Uncheck the box labeled Add To Project in the Capture Video Window.

Figure 3.14 You can choose to record video or audio only by unchecking the boxes next to Record Video and Record Audio.

Saving captured files

1. When you are done capturing footage, click anywhere in the Capture Video window.
2. A dialog box will pop up asking for you to name the file just captured, and locate a folder to place it in.
3. When you click Save, the captured file is saved to your computer and added to the current Looking Glass project.

Chapter 4

Editing A Movie

This chapter will introduce you to editing terminology, and the editing functions found in Looking Glass.

- About Non-Linear editing
- What's a sequence?
- Basic editing step by step
- Advanced editing step by step
- Annotations

With digitized footage saved on your computer, and a general knowledge of how Looking Glass works, its time to begin editing. Even if you've never edited before, Looking Glass is simple and intuitive. This chapter is designed to be a non-technical explanation of basic editing functions and terms, easily accessible to the beginner.

About Non-linear editing

As a digital, non-linear editing tool, Looking Glass provides complete random access to footage, with instantaneous cuing and retrieval of sequences, segments, shots, and frames.

Looking Glass provides great freedom from the constraints of traditional editing. Its non-linear editing features allow you to make changes, and the entire sequence is immediately updated. Looking Glass 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.

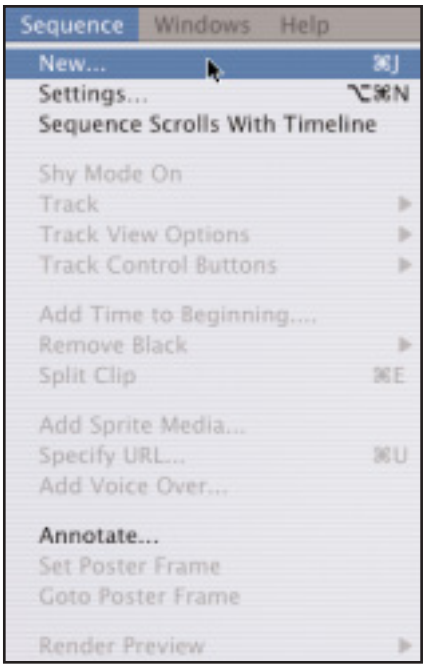


Figure 4.1 Create a new sequence by selecting Sequence > New.

What's a sequence?

A sequence is an series of video and audio clips that have been edited together. A sequence is part of a project, and you can have multiple sequences per project. When you export a finished movie, you export one sequence at a time into a self-contained file.

Creating a new sequence

When you create a new project, a new sequence is automatically generated in that project. If you want to create a new sequence on your own:

1. Make sure a project is open.
2. Select Sequence from the main menu, and choose New...(**Figure 4.1**).
3. Name the sequence and select the media type you will be using then click OK (**Figure 4.2**).
4. The new sequence will appear in the active project window.

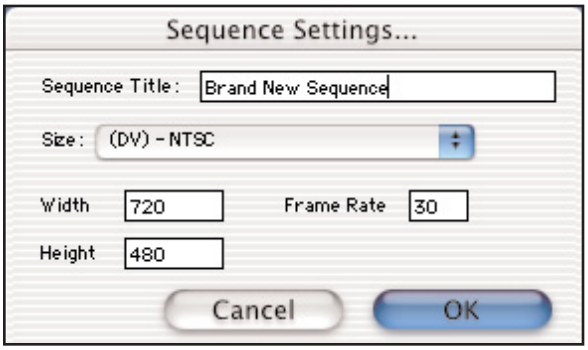


Figure 4.2 Enter in a sequence name, and select your media type in the Sequence Settings Window.

To open a sequence for editing

1. Open the project that contains the sequence you want to work on.
2. Double-click the sequence you want to edit in the Project Window (**Figure 4.3**).

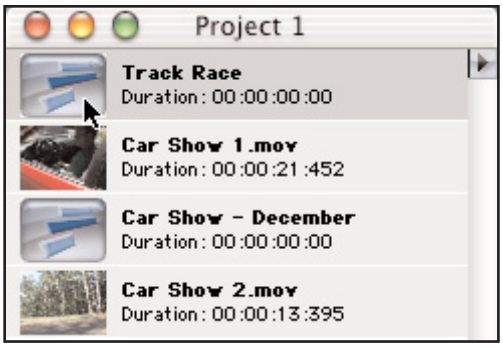


Figure 4.3 Double-click on a sequence in the Project Window to open it for editing.

To duplicate a sequence

1. Click on the sequence you want to duplicate in the Project Window.
2. From the Edit main menu, select Duplicate(**Figure 4.4**).
3. A copy of the sequence will be made and placed in the Project Window.

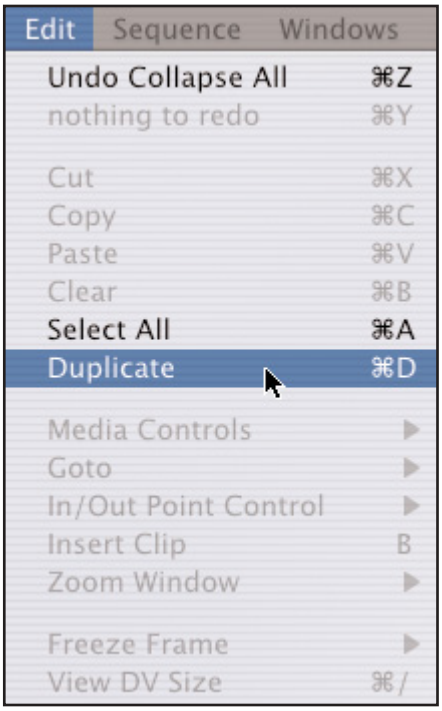


Figure 4.4 Use the Duplicate command in the Edit menu to duplicate a selected item.

Deciding which tracks receive new media

When adding a clip to the a sequence, you can either add the clip to an existing track, or create a new track.

To create a new track in the timeline

- Drag the clip into the Editor Window
- Drag the clip to the left-hand side of the timeline under the transport controls (**Figure 4.5**).

To add a clip to an existing track

- Drag a clip from the desktop, Project Window, or Source Window anywhere into an existing track and the new clip will be added to it.

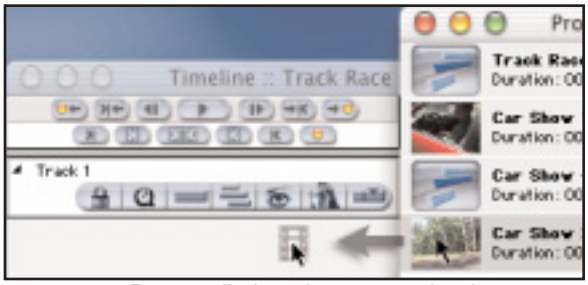


Figure 4.5 Drag a clip into the area under the transport controls in the Sequence Window to create a new track.

Basic editing step by step

Bringing media into the timeline

Media can be placed into the timeline from the Project Window, Source Window, or your computer desktop (**Figure 4.6**).

To learn more about setting In and Out points on media in the Source Window see **Chapter 2: Welcome To Looking Glass**. Placing media from the Source Window into the timeline is discussed in **Chapter 3: Bringing Media Into A Project**.

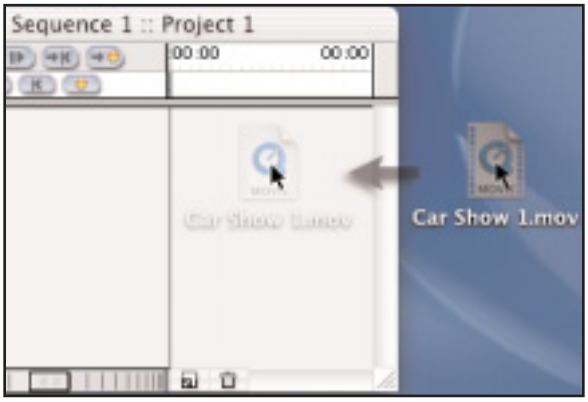


Figure 4.6 Here, a file is being dropped into the Sequence Window from the desktop.

Deleting clips from a sequence

There are two ways of deleting clips from a sequence.

- Deleting in Overlay mode removes the clip and leaves a gap where the clip was.
- Deleting in Insert mode removes the clip and closes up the space where the clip was, brining the surrounding media in that track together.

To perform an Overlay delete

1. Make sure the track you will be working in is in the Overlay mode. Click in the Insert / Overlay button until it is in the Overlay position (**Figure 4.7**).
2. Click on the track you want to delete (**Figure 4.8**).
3. Push the Delete key on your keyboard.
4. The clip will be removed, leaving a gap where it used to be (**Figure 4.9**).

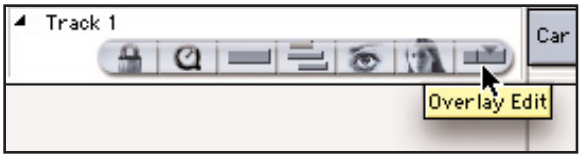


Figure 4.7 Click the Overlay/Insert button to put a track into Overlay mode.

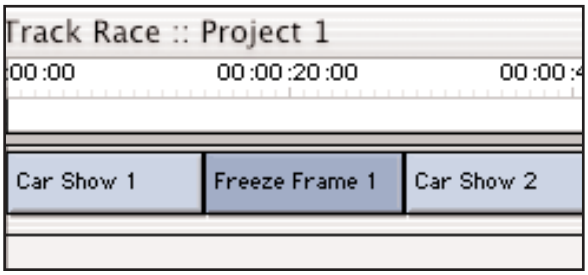


Figure 4.8 The clip to be deleted is selected in the timeline just before the Overlay delete.

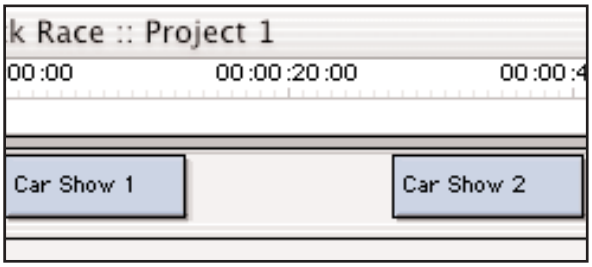


Figure 4.9 The timeline just after the Overlay delete is performed.

To perform an Insert delete

1. Make sure the track you will be working in is in the Insert mode. Click in the Insert / Overlay button until it is in the Insert position (**Figure 4.10**).
2. Click on the track you want to delete (**Figure 4.11**).
3. Push the Delete key on your keyboard.
4. The clip will be removed, closing in the gap where it used to be (**Figure 4.12**).

Figure 4.10 Click the Overlay/Insert button to put a track into Insert mode.

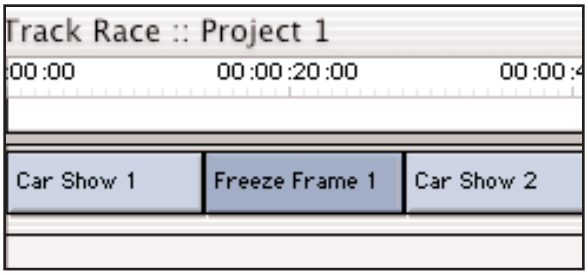


Figure 4.11 The clip to be deleted is selected in the timeline just before the Insert delete.

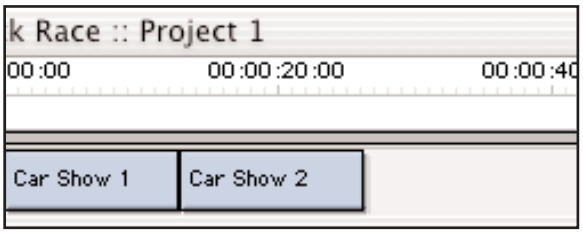


Figure 4.12 The timeline just after the Insert delete is performed.

Trimming clips

Each basic trimming type solves a particular editing problem, and familiarizing yourself with them all will be beneficial.

Trim Editing Window

Before getting into the editing functions of Looking Glass, it's important to know about the Trim Editing Window. The Trim Editing Window assists in making precise frame-specific changes to a clip's In/Out points.

Whenever a clip is being edited in the Sequence Window, the Editing Preview Window pops up, displays what the clip's I/O points as they change.

- **Figure 4.13** shows the Trim Edit Windows. The left window is displaying the end frame of the clip on the left, and the right window is displaying the starting frame for the clip on the right. The numbers in the upper left hand corner of the windows tell how many frames have been added or shaved off during the edit. The inverted bar in the right Trim Edit Window signifies that you are at the beginning (or end) of that clip's footage, and can't add (or subtract) anymore.

Figure 4.13 The Trim Editing Windows appear when you adjust the In or Out points of a clip.

Roller & Roller Cursors

Looking Glass uses a roller and a roller cursor to perform special edits. Clicking near the inside edges of the beginning or end of a clip will make a red bar appear. These are called Rollers. When you move the cursor over a Roller, it changes into a Roller Cursor (**Figure 4.14**). You can only manipulate the Rollers when the Roller cursor is displayed. To turn the Rollers off, click anywhere in the Timeline.

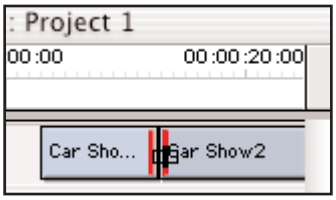


Figure 4.14 Clicking near the inside of the front or back of a clip activates the rollers.

QuickTrim

The QuickTrim is the basic editing feature in Looking Glass. It's the simplest, fastest way to make adjustments to a clip's In or Out point. QuickTrim adjusts the In or Out point of one clip without affecting the adjacent media.

1. Grab either the beginning or end of a clip. This will give you the QuickTrim cursor (**Figure 4.14**).
2. Drag either to the left or right to lengthen or shorten the clip.

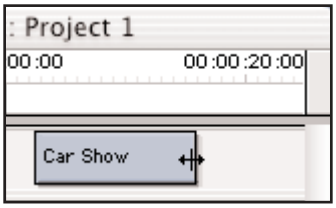


Figure 4.14 The QuickTrim cursor appears when you grab the beginning or end of a clip.

Ripple Edit

In a ripple edit, you change the duration of one clip but do not affect the duration of adjacent clips. This is done by activating a Roller on one end of a single clip, and using the Roller Cursor to to either lengthen or shorten that clip. When a ripple edit is performed all clips in that track change position in the timeline.

1. First, activate a roller on the end of the clip you want to perform the edit on (**Figure 4.15**).
2. Drag to the left or right to lengthen or shorten the clip.
3. The clip will change duration, but the adjacent clips will not (**Figure 4.16**).

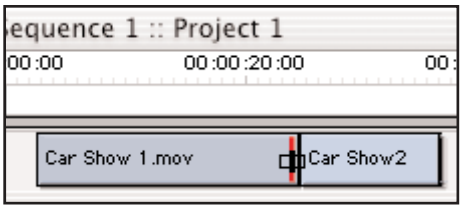


Figure 4.15 The two clips before a ripple edit is performed. Notice their duration and position in the timeline.

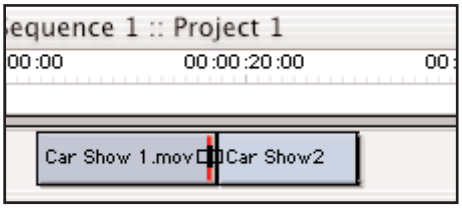


Figure 4.16 After the ripple edit the second clip's duration did not change, only its position.

Roller Trim

In a roller trim you change the out point of one clip while you change the in point of the adjacent clip. You make one clip shorter while you make another clip longer, so the total length of the sequence stays the same.

1. First, activate a roller on the two clips that you want to edit (**Figure 4.17**).
2. Drag to the left or right to lengthen or shorten the clip.
3. The two clips will change duration, but the adjacent clips will not, leaving the length of the sequence the same (**Figure 4.18**).

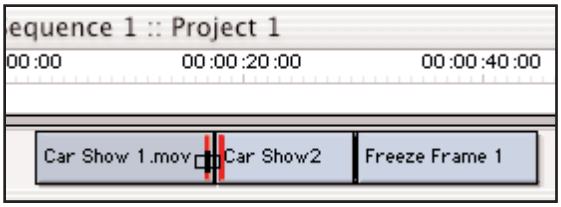


Figure 4.17 Before the Roller Trim: notice the sequence duration and clip placement.

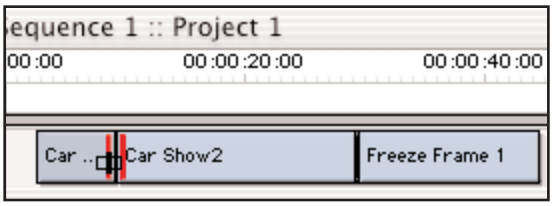


Figure 4.18 After the Roller Trim, the position of the last clip doesn't change.

Using Grey Bars

Grey Bars are a feature unique to Looking Glass. Grey Bars allow you to grab blank space in the timeline and shuffle it around just as if it were a clip. The grey spaces that are movable are any area before a clip (**Figure 4.19**), and any area between clips (**Figure 4.19**). The grey space after the last clip in a track is not grabbable.

Grey Bars have set behaviors depending on the mode you are in.

Using Grey Bars in Overlay mode

In overlay mode, the grey bars will overwrite whatever media they are placed over.

1. **Figure 4.21** shows the grey bar being selected while the timeline is Overlay mode.
2. When the Grey Bar is moved (**Figure 4.22**) not only does it overwrite the media it is dropped on, but the timeline retains the space where the Grey Bar used to be.

Figure 4.19 The grey space is selected in front of the clip.

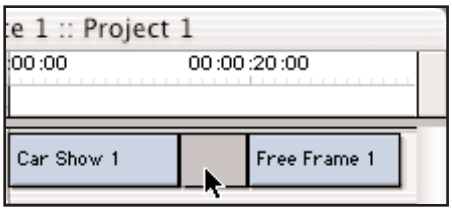


Figure 4.20 The grey space is selected in between the two clips.

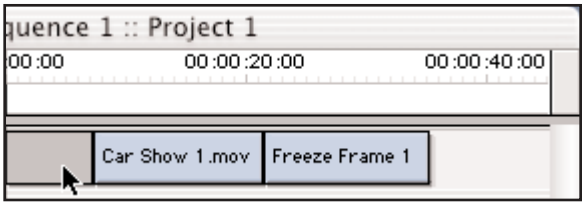


Figure 4.21 The grey space is selected, ready to be moved.

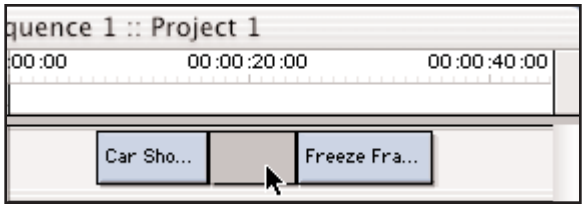


Figure 4.22 When moved between the clips, the grey space overwrote the media it was set on top of.

Using Grey Bars in Insert mode

In insert mode, the grey bars will not overwrite whatever media they are placed over.

1. **Figure 4.23** shows the grey bar being selected while the timeline is Insert mode.
2. When the Grey Bar is moved (**Figure 4.24**) it doesn't overwrite any media, it simple splits whatever it moves between. The gap where the Grey Bar used to be is also deleted, sliding the entire sequence to the left.

Positioning the Scrubber in the sequence

The Scrubber is a thin grey line that allows you to navigate through a sequence.

Navigate by scrubbing

Scrubbing is the act of grabbing the Scrub bar with your mouse and dragging it back and forth in the timeline.

1. To scrub through a sequence simply click anywhere in the white timeline area of the Sequence Window (**Figure 4.25**).
2. Then, holding down the mouse button, drag to the left or right to scrub through a sequence.

Move to keyframe

You can advance the scrubber from keyframe to keyframe by using the keyframe controls.

1. To move to the next and previous keyframes in a sequence first roll open the track the holds the keyframes.
2. Use the arrows in the keyframe controls to advance the Scrubber (**Figure 4.26**).

Move to mark

You can advance the scrubber from mark to mark by using the mark controls.

1. Click Next Mark in the Editor or Sequence Windows to advance the Scrubber to the next mark in the timeline (**Figure 4.27**).
2. Click the Previous Mark in the Editor or Sequence Windows to Advance the Scrubber to the previous mark in the timeline (**Figure 4.28**).

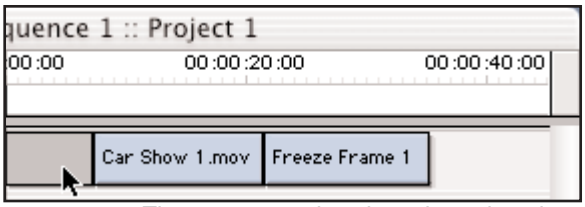


Figure 4.23 The grey space is selected, ready to be moved.

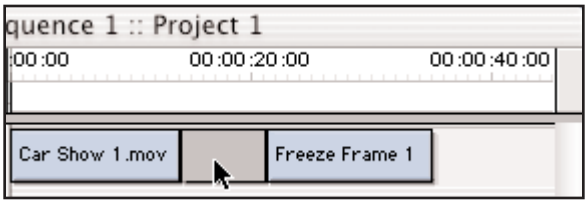


Figure 4.24 After moving, the Grey Bar simply slides between the two clips, not overwriting any media.

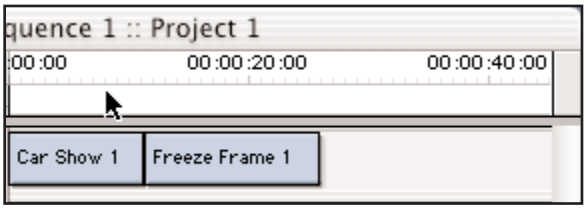


Figure 4.25 Click anywhere in the white timeline area to begin scrubbing.

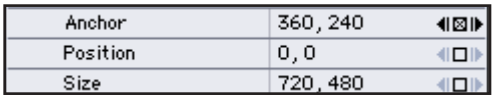


Figure 4.26 Click on the arrows by the X in they keyframe controls box will move the Scrubber to the next and previous keyframes.

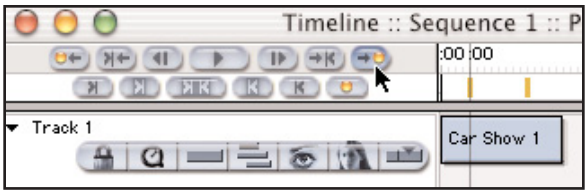


Figure 4.27 Click the Next Mark button to go to the next mark in the sequence.

Figure 4.28 Click the Previous Mark button to go to the previous mark in the sequence.

Advanced editing step by step

Insert and Overlay mode

Insert and Overlay mode determine how the clips effect each other in a track. You can toggle between Insert and Overlay mode using the track controls, as shown in **Figure 4.29** and **Figure 4.30**.

Insert edit

When Insert mode is turned on media cannot overwrite other media directly. In this mode when a clip is inserted into the timeline all subsequent clips are shifted in time to make room for the new clip. If the insertion point occurs at a point that is already occupied by media, the media is split to make room for the new clip.

- **Figure 4.31** shows a clip before the edit takes place.
- **Figure 4.32** shows the clip after the Insert edit. Notice how the clip was split, and shifted in the timeline to make room for the new piece of media.

Overlay edit

When Overlay mode is turned on, any media added to the timeline will replace whatever information they are added over.

- **Figure 4.31** shows a clip before the edit takes place.
- **Figure 4.33** shows the clip after the Overlay edit. Notice how the clip was overwritten at the edit point, keeping the sequence the same overall length.

Figure 4.29 In Overlay Edit mode.

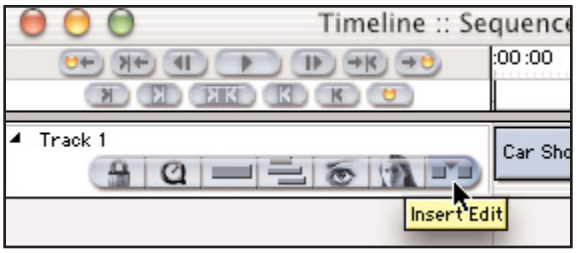


Figure 4.30 In Insert Edit mode.

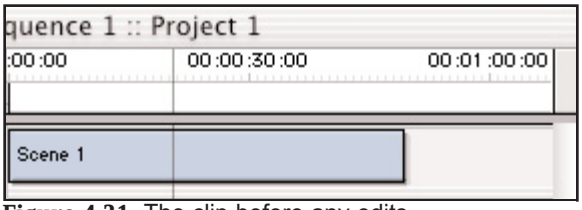


Figure 4.31 The clip before any edits.

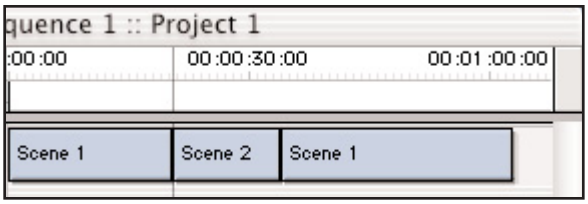


Figure 4.32 After the Insert edit. Notice the clip was split at the edit point, changing the duration of the sequence.

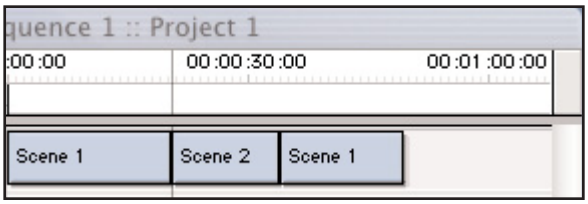


Figure 4.33 After the Overly edit. Notice the clip was overwritten at the edit point, and there was no change to the duration of the sequence.

Slip edit

A slip edit is used to adjust both the in and out points of a clip at the same time, while keeping its length in the timeline the same. To perform a slip edit there must be extra footage at the end and the beginning of the clip. A slip edit does not alter any adjacent media.

1. To preform a slip edit, hold down the Control key on your keyboard and click on the clip you want to edit.
2. Trim Edit Windows will appear, showing you the last frame and first frame of the adjacent clips, and the start and end frame of the clip being edited (**Figure 4.34**).

Figure 4.34 When you perform a a slip edit, Trim Edit Windows show you the first and last frame of the clip being adjusted. No other clips are affected.

Split clip

The Split Clip feature is used to cut the currently selected clip in two. It can be especially useful when editing audio only tracks such as voice-overs and narration.

1. Select the clip in the Timeline you want to cut by clicking on it (**Figure 4.35**).
2. Move the Scrubber to where you want to make the cut.
3. Select Split Clip from the Sequence main menu, or push Command-E on your keyboard(**Figure 4.36** & **Figure 4.37**).

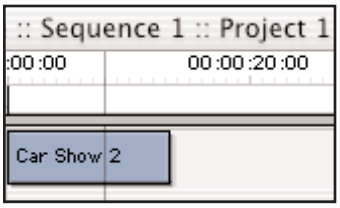


Figure 4.35 Select the clip you want to cut by clicking on it.

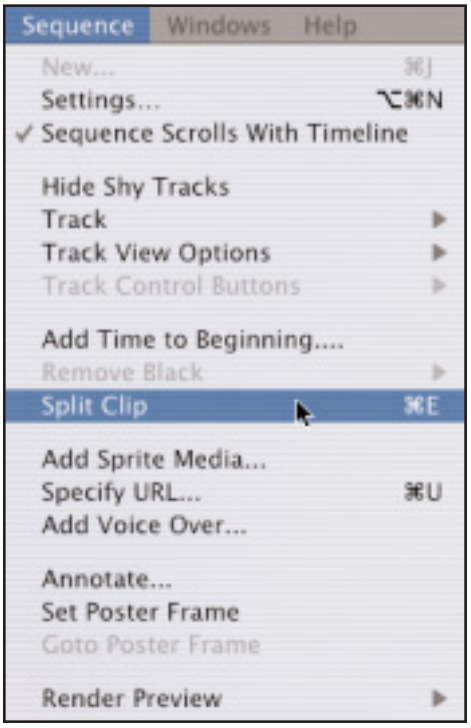


Figure 4.36 Select Split Clip from the Edit main menu, or push Command-E.

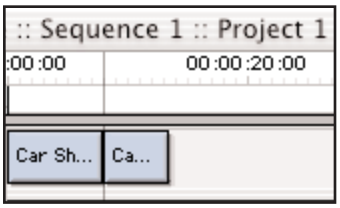


Figure 4.37 Select Split Clip from the Edit menu and the clip will be cut at the Scrubber's position.

Basic 3-point editing

Looking Glass allows you to preform basic 3-point editing from the Source Window to the Sequence Window.

3-point editing allows you to add specified portion of a clip into the active sequence.

1. Double-click on the clip in the Project Window, opening it in the Source Window.
2. Set In and Out points around the section of the click you want to add to the sequence.
3. In the Sequence Window, set an In point where you want the clip to come in at (**Figure 4.38**). If there is no In point set, the clip will be added at the Scrubber's current location.
4. In the Sequence Window, select the track you would like the clip to in at. If not track is selected a new track will be created.
5. If the clip will be added to a currently existing track, set that track's edit mode to Overlay or Insert (**Figure 4.39**).
6. In the Source Window, hit the B key. The clip will be added to active Sequence Window. If no Sequence Window is open, a error will be presented (**Figure 4.40**).
7. The new clip will be added to the sequence (**Figure 4.41**).

Figure 4.38 Set an In point where you would like the clip to come in at.

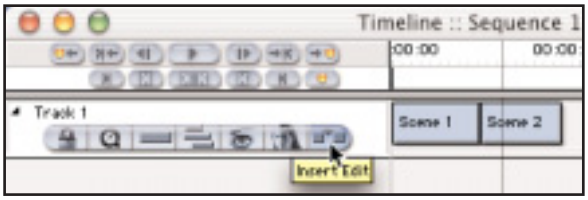


Figure 4.39 If the clip is to be added to an existing track, decide whether to have the track set to Overlay or Insert mode.

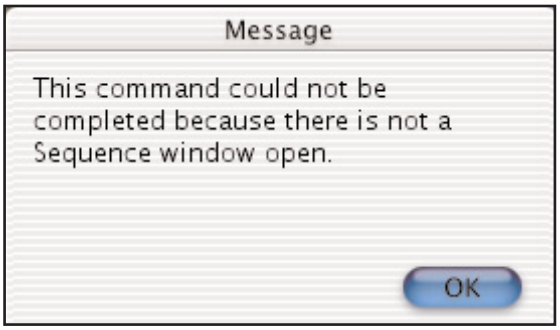


Figure 4.40 If no Sequence Windows are open, Looking Glass will present an error that the edit could not be completed.

Figure 4.41 The portion of the clip you specified will be added to a new track.

Using Text files

Text can play an important role in your movies. It can serve as titles, credits or sub-titles. Looking Glass has the power to use QuickTime's ability read a plain text file and use the text present in the file in a QuickTime movie. Using certain tags in a text file you can change the font, change the color, add a drop shadow, even key the text on top of the video. Also, since text is in vector format, when the final movie is resized the text will will resize with the movie.

Text descriptors and rules

Looking Glass reads certain descriptors put into the text file to know which way to scroll the text, what font to give it, etc.

Figure 4.42 is a sample of what a text document can look like. As you can see all text descriptors are enclosed with braces ({ and }). The timestamp information is enclosed in brackets ([and]). Also, all files must start with the descriptor {QTtext}. This can then be followed by any number of text descriptors, in any order. You can change the format at any time by inserting a new text descriptor. For example, inserting {plain} halfway through your document will override a previous settings of {bold}. There is no case sensitivity, and if you have a spelling error, it might not play correctly.

```
{QTtext} {font:Ariel}
{bold} {size:10}
{width:320} {height:240}
{timeStamps:absolute}
[00:00:00.00]
Once upon a time
[00:00:05.00]
there lived a brilliant editor
[00:00:06.00]
who stayed up late into the night
[00:00:07.00]
working on his masterpiece...
```

Figure 4.42 Text document sample.

Text Descriptors

{QTtext}

This is required at the start of any file that has descriptors or timeStamps. If this is not the first thing in the file, the file is assumed to be normal text.

{font: fontname}

The parameter is the name of the font. Example: {font:Apple Chancery} This will change all text after the descriptor to the Apple Chancery. The person who is playing the movie must have this font installed for it to display correctly, so be sure to choose common fonts.

{ fontstyle}

This specifies the style of the text that follows. There are eight valid font styles:

{plain} Plain text.

{bold} Bold text.

{italic} Italic text.

{underline} Underlined text.

{outline} Outlined text.

{shadow} Text with a drop shadow.

{condense} Text with spacing between characters decreased.

{extend} Text with spacing between characters increased.

{justify: alignment}

This specifies the alignment of the text that follows. There are four valid parameters for justify:

{justify:left} Text will be aligned flush left.

{justify:right} Text will be aligned flush right.

{justify:center} Text will be centered.

{justify:default} Text will align to whatever the script system has set.

{size: pointsize}

This is the point size of the text. {size:18} will set the point size of text that follows to 18 point.

{textColor: redvalue , greenvalue , bluevalue}

To set the color of the text. There are three numbers between 0 and 65535 that make up the parameters. These numbers are RGBColor values. The order is red, green, blue. The values are separated by a comma ','. For example, {textColor: 0, 0, 65535} is blue text, {textColor: 65535, 32000, 0} is orange.

{backColor: redvalue , greenvalue , bluevalue}

This is the same as textColor except that it changes the background color.

{height: texttrackHeightInPixels}

Takes one parameter, the height of the text track in pixels. {height:50} will set the text track height to 50. A value of zero will set the height to the best fit for the contents.

{width: texttrackWidthInPixels}

Same as height except a value of zero will set the width to 240 or to that of the movie if importing into a movie.

{language: languageNumber}

Text tracks can be set to a specific language. The ordinal (numeric) value of the language is used instead of the actual name. Example: {language:11} sets the language of the track to Japanese.

{timeStamps: relativeOrAbsolute}

Specifies if the timeStamps that follow are absolute or relative.

{timestamps:absolute} the timeStamps show the time the samples start relative to the beginning of the track. Note that since a track may not start at the beginning of a movie, this may not always (although it usually does) imply time relative to the start of the movie.

{timeStamps:relative} The timeStamps show the time relative to the previous sample.

{timeScale: numberPerSecond}

Think of this as the fractional part of a second. Ordinarily, people used to thinking about NTSC video probably think in 30ths of a second, while people used to film may think in 24ths of a second. So NTSC video users would specify a timescale of 30, while film animators would probably use a timescale of 24.

QuickTime expresses times based on a timescale of 30. If you are working with QuickTime, you will probably want to use a timescale of 30.

The number of digits in the last value of a timestamp is determined by the timescale. If {timeScale:10}, then the timestamp for 7.5 seconds would be ' [00:00:07.5] '. But If {timeScale:1000} , the same 7.5 seconds would be written as ' [00:00:07.500] '. The timeScale cannot go over 1000.

{textBox: top , left , bottom , right}

Used to set the dimensions and location of the textBox relative to the other visible tracks. Example: {textBox:0, 0, 80, 320} will draw the text in an 80-pixel-high by 320-pixel-wide box at the the top left of the movie window.

{anti-alias: onOrOff}

Display text anti-aliased. While anti-aliased text looks nicer, it incurs a significant performance penalty.

{keyedText: onOrOff}

Render text over the background without drawing the background color. This technique is otherwise known as "Masked Text."

{doNotDisplay: onOrOff}

QuickTime will not display the text after {doNotDisplay:off} . Kind of like commenting text out. To turn text display back on, use {doNotDisplay:on}.

{doNotAutoScale: onOrOff}

QuickTime will not scale the text following {doNotAutoScale:off} if the track bounds increase. To re-enable autoscaling, use {doNotAutoScale:on}.

{clipToTextBox: onOrOff}

Clips to just the text box. (This is useful if the text overlays the video, more of the video will be displayed during shorter text samples)

{useMovieBackColor: onOrOff}

Use the backColor of the movie instead of its own.

{shrinkTextBox: onOrOff}

Recalculates size of the textBox parameter to just fit the given text and stores this rectangle with the text data.

{scrollDelay}

{scrollDelay: 600} will cause subsequent text to be delayed one second (if the movie has a timescale of 600) before beginning to scroll. This only works when {scrolling:on} has been specified.

{scrollIn: onOrOff}

Scrolls the text in until the last of the text is in view. This flag is associated with the scrollDelay parameter.

{scrollOut: onOrOff}

Scrolls text out until the last of the text is out of view. This flag is associated with the scrollDelay parameter. If both scrollIn and scrollOut are set, the text is scrolled in, then out.

{horizontalScroll: onOrOff}

Scrolls a single line of text horizontally. If the horizontalScroll flag is not set, then the scrolling is vertical.

{reverseScroll: onOrOff}

If set, scrolls vertically down, rather than up. If not set, horizontal scrolling proceeds toward the left rather than toward the right.

{continuousScroll: onOrOff}

New samples will cause previous samples to scroll out (scrollIn and/or scrollOut must also be set for this to take effect).

{flowHorizontal: onOrOff}

Lets horizontally scrolled text flow within the text box. This behavior contrasts with letting text flow as if the text box had no right edge.

{hilite: firstcharacter , lastcharacter}

Usedfor hiliting text. The parameters are first and last character to hilite in the text that follows. Example "{hilite: 11, 14} This is a text track" hilites the word 'text' in "This is a text track" sample.

{hiliteColor}

Use this to change the color used in highliting. The order of the parameters is red, green, blue. Example: {hiliteColor:35000, 0, 0} sets the hilite color to a shade of red.

{inverseHilite: onOrOff}

Use inverse hiliting rather than hilitecolor .

{dropShadow: onOrOff}

Support true drop shadows. Using SetTextSampleData, the position and translucency of the drop shadow is under application control. Not the same as {shadow}.

{dropShadowOffset}

{dropShadowOffset: 3, 4} will offset the text shadow 3 pixels to theright and 4 pixels down. Only works when {dropShadow:on} has been specified.

{dropShadowTransparency}

Pass in a value between 0 and 255. Changes the intensity of the drop shadow. Example: {dropShadowTransparency: 127}.

Creating a text file

Creating a text file is simple. If you are in OS 9, SimpleText will work. If you are in OS X, at the time of this writing, the default OS X text editor, TextEdit.app did not produce usable plain text file. For this reason Microsoft Word or AppleWorks is preferrable.

To create a text file

1. Type a QTtext document in the text editor of your choice.
2. When it is time to save it, be sure to choose Save As from the File main menu.
3. In the Save As dialog box, follow your text editor's manual and choose Plain Text or Text Only as the file format.

SimpleText only saves documents in plain text format, so no extra steps are necessary.

Adding a text file to a Looking Glass movie

Once you have a fin ished text file, follow these steps:

1. Drag the text file into the Project Window.
2. Double-click on it in the Project Window to preview it in the Source Window.

It is important to note that a text file will only retain is descriptors and timestamps if it is rendered out using Make Movie. If you put a text file into a sequence and render out the sequence using Export Movie then the text filewill not display properly in the finished movie.

Using Make Movie and Export with text files

1. Finish editing the sequence in the Sequence Window. Do not add any text files to the sequence yet.
2. Use Export Movie from the File main menu and save your sequence to a QuickTime movie file. Compress the sequence using the codecs you desire for final viewing.
3. Click the Project Window to make sure it is active and from the Sequence main menu, select New (**Figure 4.43**).

(continued)

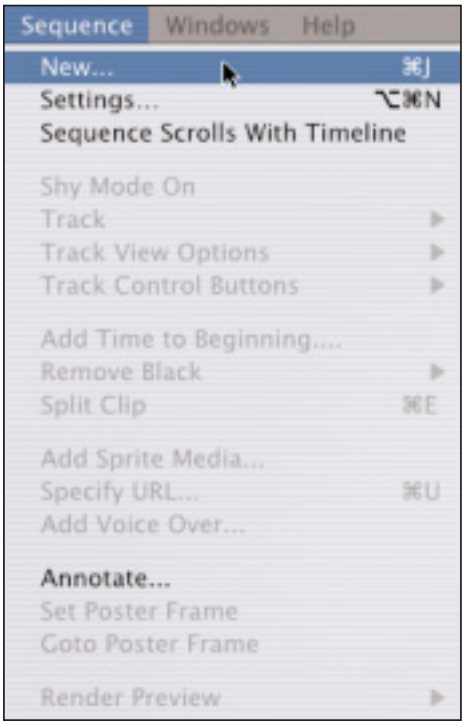


Figure 4.43 Choose to make a new sequence from the Sequence main menu.

4. Double-click on the new sequence in the Project Window to open it up.
5. Drag the movie you just exported from the Project Window into the new sequence.
6. Drag the text file from the Project Window into a new track above the exported movie in the sequence. Make sure the text file lines up how you want it with the movie (**Figure 4.44**).
7. When you're finished choose Make Movie from the File main menu.
8. Choose a save location for the file.
9. When the Compression Settings dialog box appears choose Use Default Settings. Make sure both the Video and Sound boxes are checked (**Figure 4.45**).

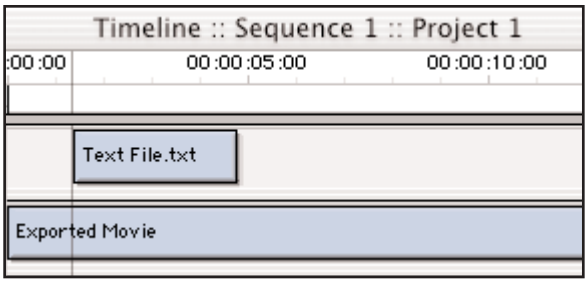


Figure 4.44 Line the text file up how you want.

Figure 4.45 Choose 'Use Default Settings' and make sure that both Video and Sound are checked.

Render Preview

Looking Glass gives you the ability to preview your sequence in the format that you will be exporting it to. More than just allowing you to see how a transition will look when exported, this feature allows you to also see how your sequence will look using the size and codec you plan on applying to it.

For example, if you are working with DV video but will exporting the finished product out for web use using a 320 x 240 size and the Sorenson compressor codec, Render Preview will render out the sequence with those settings and make a temporary file that allows you to see how it would look.

To set a Render Preview Folder

When you use the Render Preview function, Looking Glass places the preview file in a folder on your computer. Before using the Render Preview function you need to set a folder.

1. In the File main menu, choose Set Preview Folder (**Figure 4.46**).
2. Choose a folder on your computer to use as the Render Preview folder and click choose.

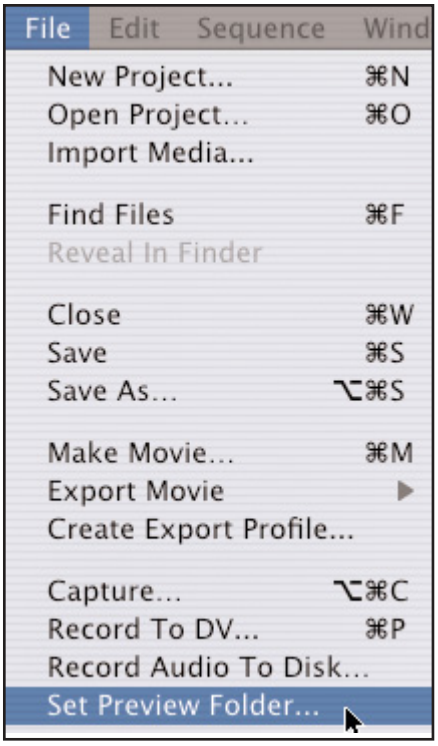


Figure 4.46 Choose Set Preview Folder in the File main menu to select a folder for the Render Preview files to go to.

To use Render Preview

1. Click on the Editor or Sequence window to make one of them the active window.
2. Select Render Preview from the Sequence main menu (**Figure 4.47**).
3. You can choose one of the predefined settings in the drop down menu that appears, or you can choose Other... to specify your own.
4. Looking Glass will build a preview (this might take a long time) and insert the file into your current sequence.
5. Simply place the sequence to view how your finished movie will look.
6. Delete the track holding the render preview to continue editing.

You can also set In and Out points in your sequence and Render Preview will render out only the video that is within those points.

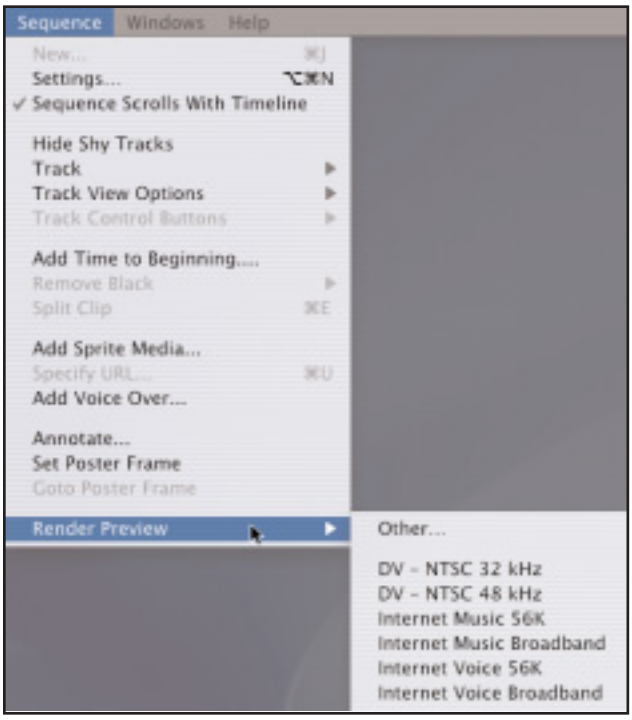


Figure 4.47 Choose Render Preview from the Sequence main menu, then decide on the settings.

Annotations

An annotation is text information about about certain properties of a movie, such as creation date and author. Annotations can be stored within all QuickTime movies.

It's important to add this information so viewers can find out about the movie's background, copyright ownership, title, etc.

Looking Glass allows you to apply annotations to the project you are working with and embed those annotations into your file, whether you choose to use the Export or Make Movie feature. The annotations available are:

- Album
- Artist
- Author
- Comment
- Composer
- Copyright
- Creation Date
- Description
- Director
- Disclaimer
- Encoded By
- Full Name
- Genre
- Host Computer
- Information
- Make
- Model
- Original Artist
- Original Format
- Original Source
- Performers
- Producer
- Product
- Software
- Special Playback Requirements
- Track
- URL Link
- Warning
- Writer

Applying Annotations

1. Click on the sequence you want to annotate in the Project Window.
2. Under the Sequence main menu, select Annotate (**Figure 4.48**).
3. In the 'Sequence Annotations' window, click 'Add' to add a new annotation. A list of available annotations will appear. There can only be one instance of each annotation per movie (**Figure 4.49**).
4. Enter a description in the text box for the annotation you have chosen (**Figure 4.50**).
5. After the text is entered click 'Ok' and the annotation will be added to that sequence in Looking Glass.

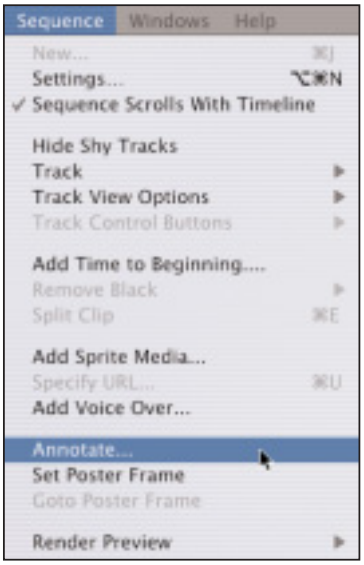


Figure 4.48 Select Annotate from the Sequence main menu.

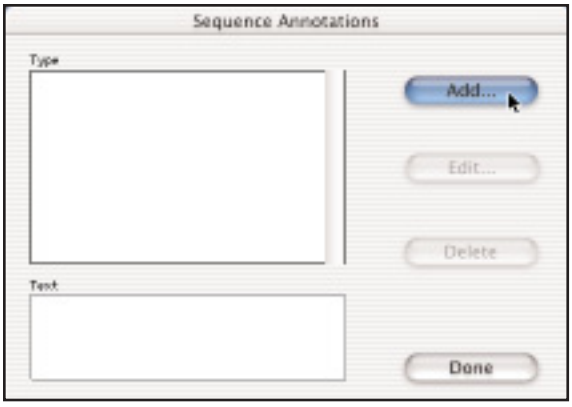


Figure 4.49 Click Add to add an annotation.

Figure 4.50 Pick an annotation and enter a description for it.

Editing Annotations

1. Click on the sequence that you would like to edit the annotation for in the Project Window.
2. Choose Annotate in the Edit main menu.
3. Highlight the annotation to be edited, and click Edit (**Figure 4.51**).

Deleting Annotations

1. Click on the sequence that you would like to delete the annotation for in the Project Window.
2. Choose Annotate in the Edit main menu.
3. Highlight the annotation you want to delete, then click the Delete button (**Figure 4.52**).

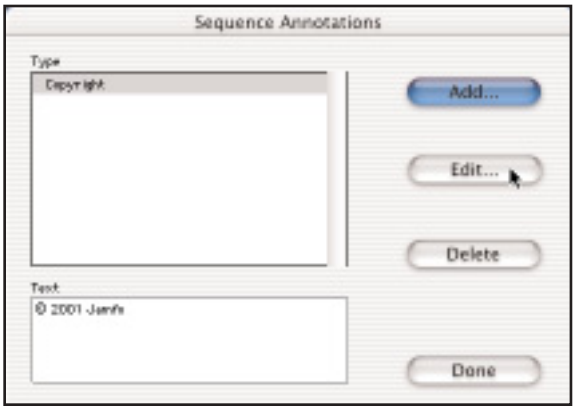


Figure 4.51 Highlight the annotation to be edited, then click Edit and change the description.

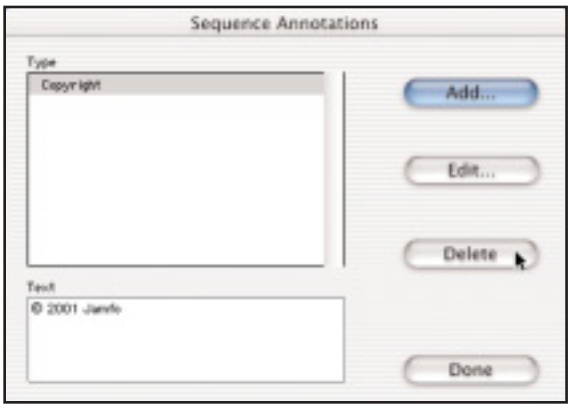


Figure 4.52 Highlight the annotation to be delete, then click Delete.

Viewing Annotations

Looking Glass

1. Select the sequence you want to view the annotations for in the Project Window.
2. Push ⌘-I on your keyboard to open the Info Window.
3. Click the triangle in the upper right hand corner of the Info Window (**Figure 4.53**).
4. The annotations for that sequence will appear.

QuickTime 4

1. Open the movie in QuickTime Player
2. Push ⌘-I to open the Info Window.

QuickTime 5

1. Open the movie in QuickTime Player.
2. Push ⌘-I to open the Info Window to view the first six annotations.
3. Push ⌘-J to open the Properties Window and view all annotations.

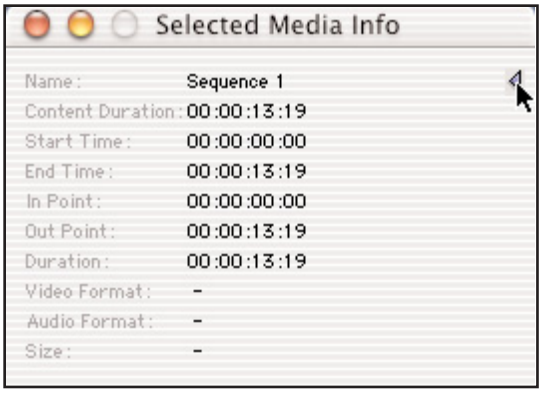


Figure 4.53 Click the triangle in the Info Window to view annotation information.

Saving Annotations to a movie

Saving annotations to a QuickTime movie from Looking Glass is simple. Whenever you render out a finished project with the Export or Make Movie command, any annotations you added will automatically be embedded into the file.

Chapter 5

Creating Transitions

There's more to Looking Glass than just editing. In this chapter you'll learn about:

- Transitions
- Adding Transitions
- Editing Transition Properties
- Effects of editing on transitions
- Deleting Transitions

You can add life to a project by using transitions, titles, and other effects. Looking Glass supports all the transitions that QuickTime's powerful engine has to offer. This chapter will walk you through how to add, edit, and delete transitions from your movie.

Transitions

A transition is the visual change from one clip to the next. There are many types of transitions. The most common is the cut. Looking Glass is powered off of Apple's QuickTime engine, so it is capable of handling every transitions that QuickTime can. To learn more about QuickTime's capabilities visit http://www.apple.com/quicktime.

To open the Transitions Window (**Figure 5.3**)., use one of these three ways:

- Click the Options Menu in the Project Window and select Transitions Window in the drop down menu (**Figure 5.1**).
- Select Windows in the main menu and choose Transitions Window (**Figure 5.2**).
- Press ⌘-T

There are some rules to remember when working with transitions. They are:

- The clips must be on the same track and directly against each other (**Figure 5.4**).
- There must be at least 15 extra frames on the tail of the first clip and the head of the second clip. You might have to QuickTrim the clips to allow the transition enough room.

Adding transitions

Transitions are added by dragging them from the Transitions Window and placed on the bordering edges of two adjacent clips in the Sequence Window.

- Drag a transition from the Transition Window into the Sequence Window, and drop the transition on the bordering edges of two adjacent clips.

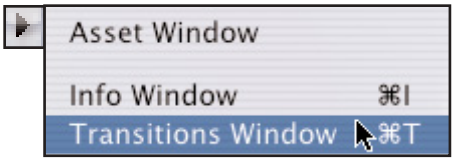


Figure 5.1 You can open the Transitions Window from the Project Window Options Menu.

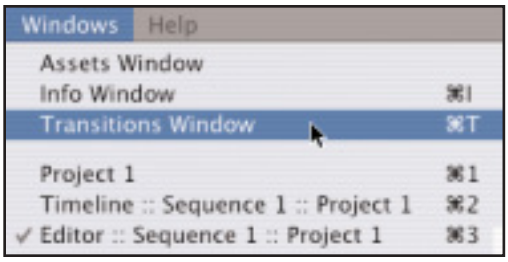


Figure 5.2 You can also open the Transitions Window from the Windows main menu.

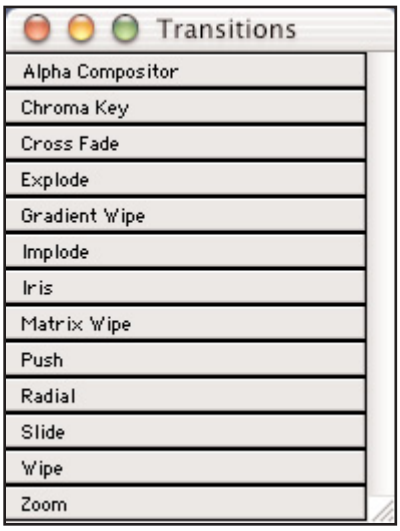


Figure 5.3 The Transitions Window.

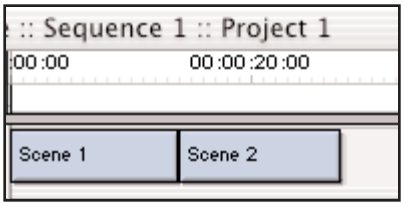


Figure 5.4 Two clips must be adjacent before a transition can be added,

Editing transition properties

To access a transition's properties:

1. Click the arrow to the left of the Track name.
2. Next, click the arrow to the left of the transition (**Figure 5.5**).
3. The transition controls will appear (**Figure 5.6**).

The transition control panel is made up of four main segments: Type, Duration, Input 1 and Input 2.

- **Type:** Shows which transition you chose. The pull down menu to the right allows you to choose another. Also, some transitions, such as Wipe have multiple variations. To access these variations double-click on the name of the transition type. A dialog box will pop up allowing you to fine tune your transition effect.
- **Duration:** Shows the entire duration of the transition from start to finish. This can be changed by clicking once on the duration number and entering in a new one. Note: To make a transition longer you must have the appropriate amount of extra footage for each clip.
- **Input 1** and **Input 2:** Show which clips are being used in the transition and the duration for the transition on each clip.

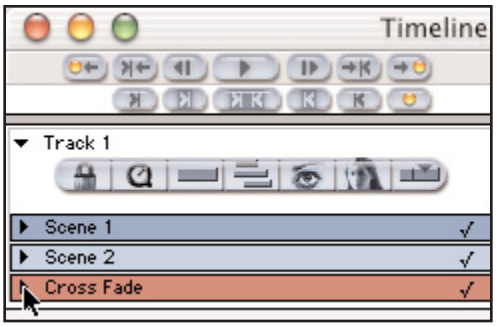


Figure 5.5 Click the arrow by the track name to reveal the transition, then click the arrow by the transition to reveal its controls.

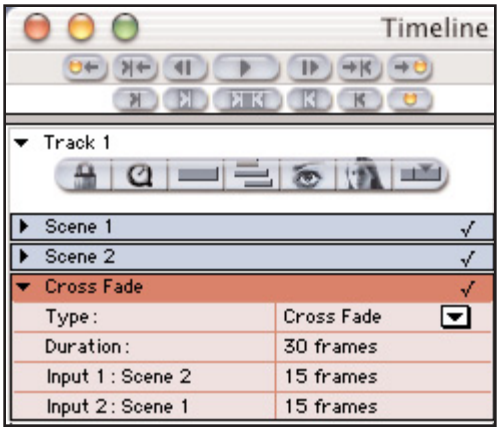


Figure 5.6 The transition controls.

To replace transition type

You can change the type of transition you are using, even after you have applied it.

1. Open the transition control panel.
2. Click the arrow next to the transition's name and a drop down box will appear allowing you to change the type of transition you are using (**Figure 5.7**).

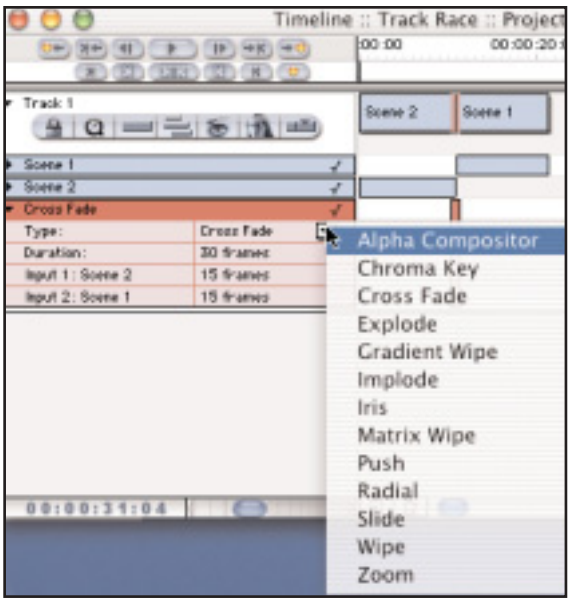


Figure 5.7 Clicking the arrow next to the transition's name lets you change transition type.

To edit time duration

The duration of a transition can be edited after it is applied.

1. Open the transition control panel.
2. Click on the duration frame number (**Figure 5.8**).
3. Type in a new duration and push Enter. The transition will be divided equally between the two clips (**Figure 5.9**).

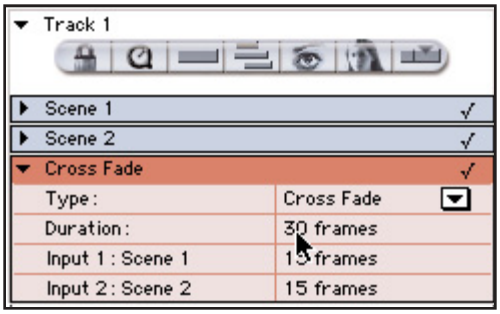


Figure 5.8 Click on the frame duration number in order to change it.

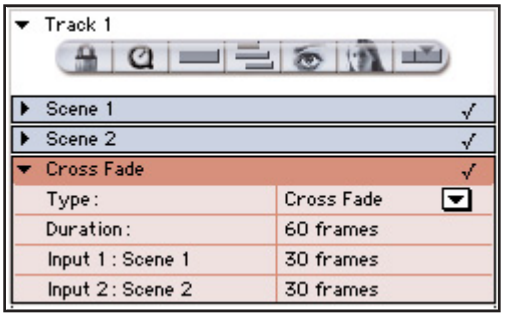


Figure 5.9 After you type in a new duration, push Enter for it to take effect.

Effect of editing on transitions

After a transition has been applied two clips, certain edits on those clip will affect the transition.

- Moving the clips away from each other will delete the transitions.
- QuickTrimming the adjacent edges of the clips will delete the transition.

Deleting Transitions

- To delete a transition simple open up the transition control panel, click on the transition name to select it and push the delete key.

Chapter 6

Creating Effects & Compositing

In this chapter you'll learn about:

- Working with keyframes in the timeline
- Titling
- Viewing Actual DV size
- Adding freeze frames

Looking Glass allows you to keyframe certain effects over time, giving your movies a dynamic, professional quality. This chapter will describe all the keyframing capabilities that Looking Glass offers, as well as explain the best ways to apply titles to your movies, and adding freeze frames.

Working with keyframes in the timeline

Keyframes indicate that an effect parameter is changing over time. A keyframe is created at a place where you want to change the value of an effect's parameters, like an edit point.

The clip effects that are keyframeable are Size, Position, Anchor, and Audio Gain.

Using the keyframe controls

Keyframes have their own controls. They appear to the right of the clip effect controls (**Figure 6.1**). Clicking the box while it is empty like in **Figure 6.1** will set a keyframe at the Scrubber's present location with the current effect values.

When a keyframe is present the arrows on either side of the box will become dark. They are used to jump the timeline Scrubber from one keyframe to the next. When an X is present in the box, the Scrubber is resting on a keyframe. Clicking the X would then delete the keyframe (**Figure 6.2**).

Setting keyframes

Using clip effects control panels

1. Open the effect you want to adjust by clicking the arrow next to the effect name.
2. Move the scrubber where you would like to place the first keyframe.
3. Enter the value you want in the effect control panel. **Figure 6.3** shows a new gain value being typed into the Audio effects control panel.
4. Push Enter after you type in the value you want and a keyframe will be set (**Figure 6.4**).

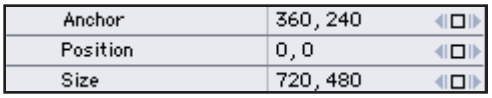


Figure 6.1 The keyframe controls appear as a box with an arrow on either side to the right of the effect controls. Clicking the box will set a keyframe with the current values.

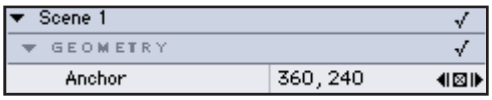


Figure 6.2 When an X is inside the box, it means the Scrubber is resting on a keyframe. Clicking the X will delete the keyframe.

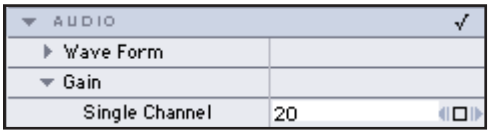


Figure 6.3 Here, a new gain value is being typed in.

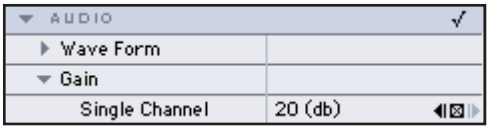


Figure 6.4 Push Enter after typing in the value you want, and a keyframe will be set.

Moving objects in the Edit Window

The Size, Anchor and Position effects can be altered by moving the clip inside the Edit Window

1. In the timeline, select the clip you want to alter by clicking on it.
2. If you will be changing the size of the clip, make sure the Object Handles are turned on by using the Editor Window Options Menu (**Figure 6.5**).
3. Move the Scrubber to the point in the timeline that you would like to set a keyframe.
4. To change the size of the clip, grab the object handles and make adjustments. A keyframe will be set (**Figure 6.6**).
5. To change the position or anchor of the clip, click in the center of the clip and drag to the desired location. A keyframe will be set.

Moving keyframes

1. Keyframes appear as diamond icons in the timeline. **Figure 6.7** shows a keyframe being dragged to the left. Notice it is still visible in its old location for reference.
2. **Figure 6.8** shows the keyframe in its new location.

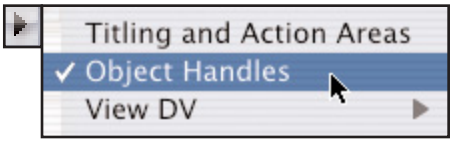


Figure 6.5 Turn on Object Handles in the Editor Window Options Menu.

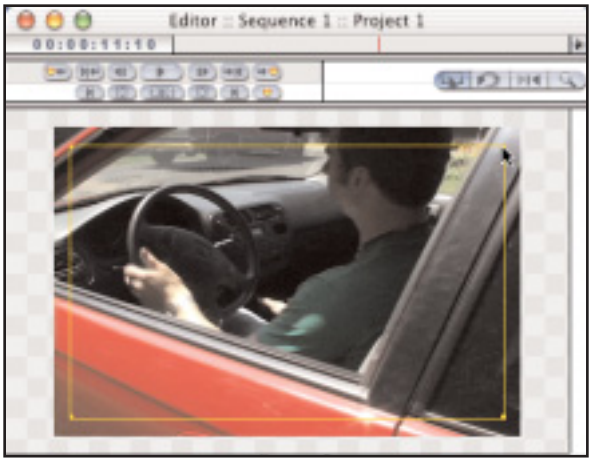


Figure 6.6 Click on the Object Handles and drag to change the size of a clip.

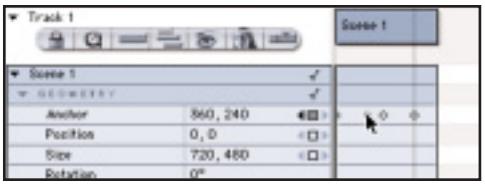


Figure 6.7 Keyframes appear as diamond icons in the timeline. Here, a keyframe is being moved to the left.

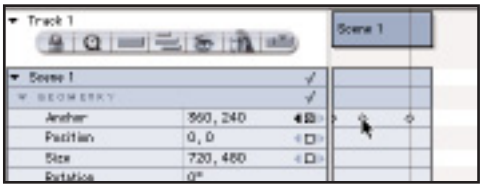


Figure 6.8 The keyframe is now in its new position.

Deleting keyframes

1. Use the arrows in the keyframe controls to move the Scrubber to the keyframe you want to delete.
2. When the Scrubber is resting on a keyframe, an X will appear in the keyframe control box (**Figure 6.9**).
3. When the Scrubber is over the keyframe you want to delete, click the X and the keyframe will be removed (**Figure 6.10**).

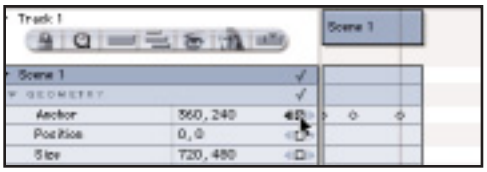


Figure 6.9 An X in the keyframe control box means the Scrubber is resting on a keyframe.

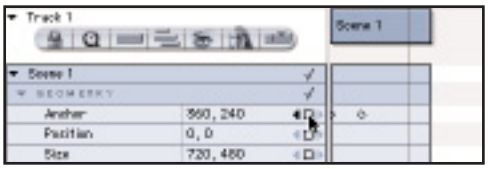


Figure 6.10 The keyframe has been deleted after clicking the X inside the box.

To change keyframe parameters

1. Open the clip that contains the keyframe you want to alter (**Figure 6.11**).
2. Use the arrows in the keyframe controls to move the Scrubber to the keyframe you desire to change.
3. Once at that keyframe you can edit the values manually, or change the clip in the Editor Window. They keyframe will automatically update itself.

Figure 6.11 Click on the arrow by the track name to open a track.

Titling

Looking Glass allows you to put titles in your movies. By using Adobe© Photoshop© or some other graphics program, you can make titles with alpha channels that meld seamlessly with your video.

Creating titles

Titles can be any image file you desire. These can be made in most graphic editing programs, such as Adobe Photoshop. If a title does not have Alpha Channel for transparency however, it will cover the entire screen. Creating a title with an Alpha Channel will allow the video beneath the title to show through. Consult the manual of your graphics program for how to do this. TIFF, PSD, and PNG files support Alpha Channels.

Adding titles to Looking Glass

After you've made your title image file, drag it the Looking Glass Project Window to add it to a project. Once the title has been placed in the timeline, position the title and adjust the duration as you would a normal clip. You cannot fade a title in or out.

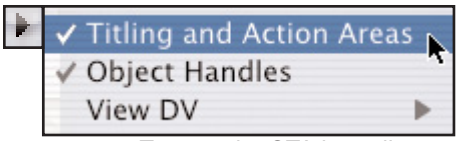


Figure 6.12 Turn on the STA bounding boxes by clicking Titling and Action Areas in the Editor Window's Option Menu.

Animating titles

Titles can be animated over time in the Editor Window. When placing or animating titles in its important to know about the Safe Titling Area.

Safe Titling Area (STA)

On a computer monitor, text and pictures can be displayed at the very edge of the screen. This is not so with a TV set. TV sets cut off the outer edge of a picture depending mostly on the televisions age. For this reason the video industry has come up with the Safe Titling Area, or STA.

Looking Glass allows you to turn on special bounding boxes in the Editor window that show you where the STA is. If you keep your action and text inside these boxes, they should be visible on any television.

1. To turn on the STA, click the Options Menu arrow in the upper right hand corner of the Editor Window and select Titling and Action Areas (**Figure 6.12**).
2. Two yellow bounding boxes will then appear in the Editor Window. Limit your titles to within the STA (**Figure 6.12**).

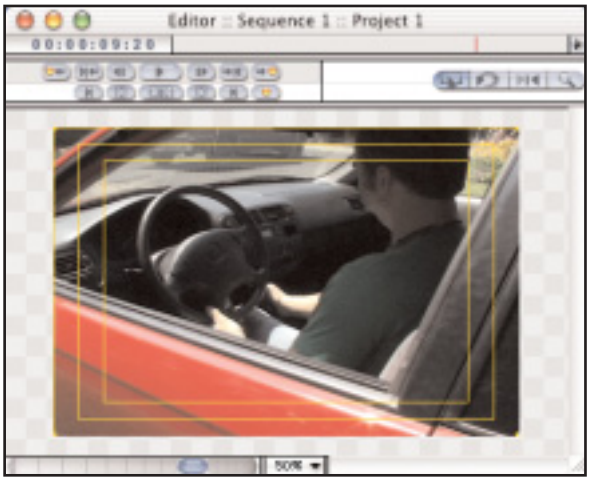


Figure 6.13 The STA bounding boxes help you know where to place and animate titles.

To animate a title

1. Place the title file in the timeline, arranging it where you would like.
2. With the scrubber at the beginning of the clip, position the title in the Editor window to where you want it to be.
3. Move the scrubber, and re-position the title in the Editor window.
4. Repeat this process, this will set a series of keyframes. When played back in the Editor Window, the title be animated.

Titling & DV

Understanding how DV size works becomes truly important when there is a title. If the title in your project based on a 720 x 480 size, it will be distorted and “stretched out” when recorded to DV tape. That’s because, even though 720 x 480 is DV size on a computer, things are vertically compressed on purpose. In pixels, the closest approximation a computer can make to true DV size is use 720 x 540.

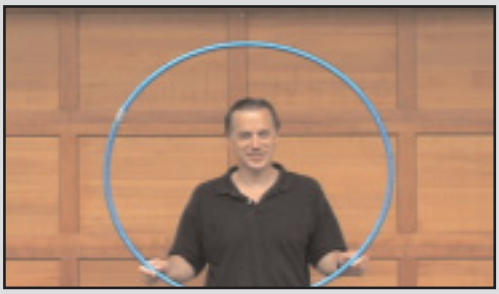
There is a solution to this problem. The solution is to make titles or graphics on a canvas size of 720 x 540, then change the size of the image to 720 x 480. This will make your title looked compressed, but when exported to DV tape, it will stretch out to its normal proportions.

More On Graphics 2

Different aspects of working with graphics in Looking Glass are covered throughout this manual. For more information on what graphic formats Looking Glass supports see **Chapter 3: Bringing Media Into Projects**, for more information on getting the most out of graphics while working with DV footage see **Appendix A: Working With DV**. **Chapter 9: Creating Final Output** discusses how to utilize Make Movie and Export to create crisp, un-compressed titles for a finished movie.

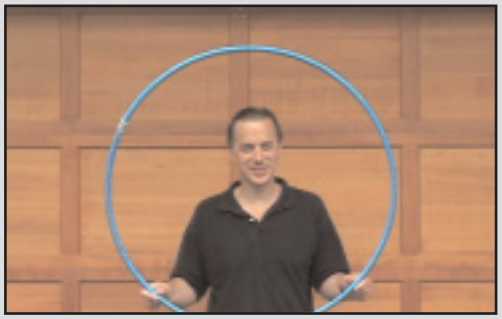
DV and Display Size

DV (digital video) aspect ratio is different on a T.V. screen than on a computer screen. DV size is explained further in **Appendix A: Working With DV**. The pictures below demonstrate the differences in DV on a computer and T.V. Notice that the hoop, a perfectly round image, is displayed properly on a television, but not a computer.



Unadjusted computer DV size

Figure 6.14 DV video displayed on a computer is compressed vertically.



Adjusted with View DV feature

Figure 6.15 DV video adjusted with the View DV feature as it would appear on a TV.

In the examples below, a title was made on a canvas size of 720 x 540. It was then changed to an image size of 720 x 480 in the graphics program. This made the title look compressed. **Figure 6.16** shows the title over the video in Looking Glass.

After the project was exported out to DV tape and played on a TV, the video and title were expanded to their full size as shown in **Figure 6.17**.

Figure 6.16 DV image and title at 720 x 480 on a computer monitor. The title was made at 720 x 540 and compressed down.

Figure 6.17 A DV image and title after being recorded back to DV tape. The title looks normal.

Viewing actual DV size

The View DV size feature allows you to quickly preview your sequence in the Editor Window in a number of formats to let you see how your video, graphics and titles will look when expanded to their full DV size on a T.V.

View DV is a feature, and not a working mode. The preview lasts until you click anywhere in Looking Glass.

1. In the Options Menu in the Editor Window select View DV
2. Choose a format from the drop down menu (**Figure 6.18**).
3. Now, whenever you want to preview your video in its actual DV size select View DV Size (**Figure 6.19**), or push Command - / on your keyboard. You will preview your video in the format you have specified from step 1.

Adding freeze frames

1. Double-click the clip in the Project Window so the Source Window opens.
2. Move the Source Window Scrubber to the frame you want to capture.
3. Select Freeze Frame from the Edit main menu and choose the duration you want your image to be. It will automatically added to your Project as a graphic file (**Figure 6.20**).
4. Place the graphic freeze frame into the Timeline. Remember, you can expand graphic files to take up as much or as little time as you like.

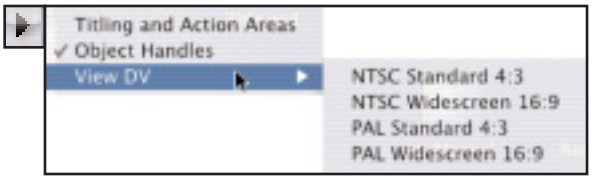


Figure 6.18 From the View DV option in the Editor Window Options Menu, choose the format you want to preview your video in.

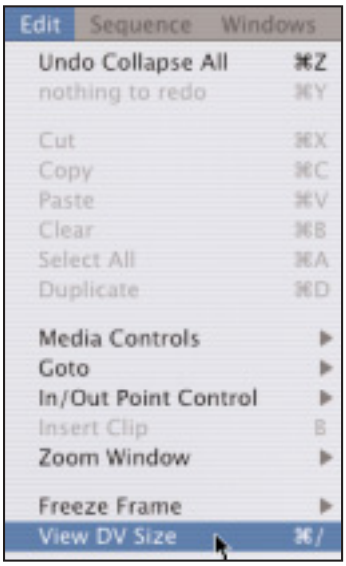


Figure 6.19 Choose View DV Size from the Sequence main menu to preview your video in DV size.

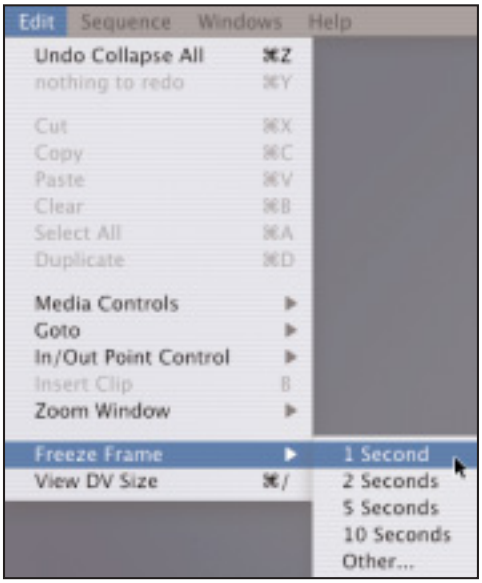


Figure 6.20 Select Freeze Frame from the Edit main menu, the choose the duration you want the freeze frame to be.

Chapter 7

Multimedia

Looking Glass goes beyond just video, adding a level of interaction for computer and web-based media that will be the future of entertainment. In this chapter you'll learn about:

- Specify URL
- Sprites
- Voiceover

Making a video interactive moves your media beyond being merely a movie into becoming a presentation. Looking Glass allows you to utilize sprites in QuickTime movies, narrate an edited movie in real-time, link to reference movies, and more.

Specify URL

Specify URL allows you to create a reference movie that, when opened will download and play a movie from a remote location.

There are a few rules to remember when using the Specify URL feature:

- The sequence dummy media file you use in the sequence as a placeholder cannot have a longer timeline duration than the remote movie.
- Make sure your sequence and the remote movie have the same aspect ratio and size.

To use the Specify URL feature, place holder media needs to be used inside a sequence. Any media will work as a place holder. The place holder tells QuickTime how much of the remote file to play, and what size to play it at. Keep in mind that QuickTime will only play as much of the remote file as the place holder specifies. So, if the remote file is two minutes long, but the place holder in Looking Glass was only set to one minute, then QuickTime will only play one minute of the remote file.

It is important to note that you cannot specify a certain point in time to play from for a remote movie. QuickTime will always play from the beginning of a remote movie.

The Specify Media URL dialog box (**Figure 7.3**) lets you choose to pull a remote movie from a web address (HTTP) or from a local computer (file). The Auto Play URL check box is marked off by default. When it is checked and turned on, QuickTime will automatically download and play the remote media when it reaches that point in the reference movie.

To use Specify URL

1. Arrange a dummy file inside a sequence to represent where the remote URL movie will play (**Figure 7.1**).
2. Click on the dummy file in the sequence to select it.
3. From the Edit main menu, choose Specify URL (**Figure 7.2**) or push Command-U on your keyboard.
4. Type in the URL of the remote media in the Specify Media URL dialog box (**Figure 7.3**).

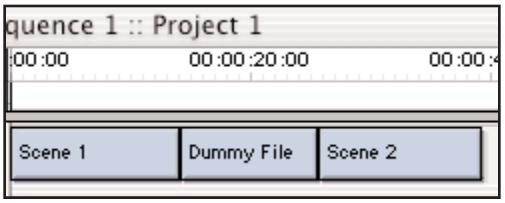


Figure 7.1 Arrange the dummy media file where you would like the remote movie to play.

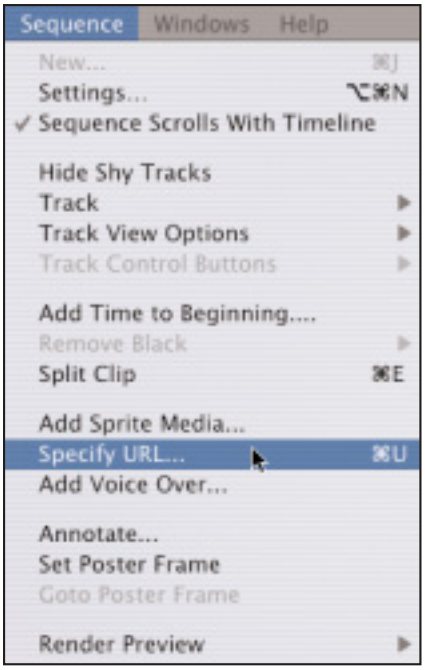


Figure 7.2 Choose Specify URL from the Sequence main menu.

Figure 7.3 Enter the URL of the remote movie in the Specify Media URL dialog box.

Sprites

One of the most powerful and professional features of Looking Glass is its ability to use sprites. Sprites are special graphical objects that can control related movies, or link to a web site or e-mail address. In other words, sprites give you a new way of presenting your content. Sprites only work when a project is rendered using the Make Movie feature. Sprites can only be JPEG image files.

The Sprite Window

Sprites are embedded into sequences in a "sprite track." A sprite track can contain a specific graphical image and can be told to do a number of things.

The sprite window (**Figure 7.4**) is the control center for a sprite. It's in this window that you issue commands and set specifics for a sprite track.

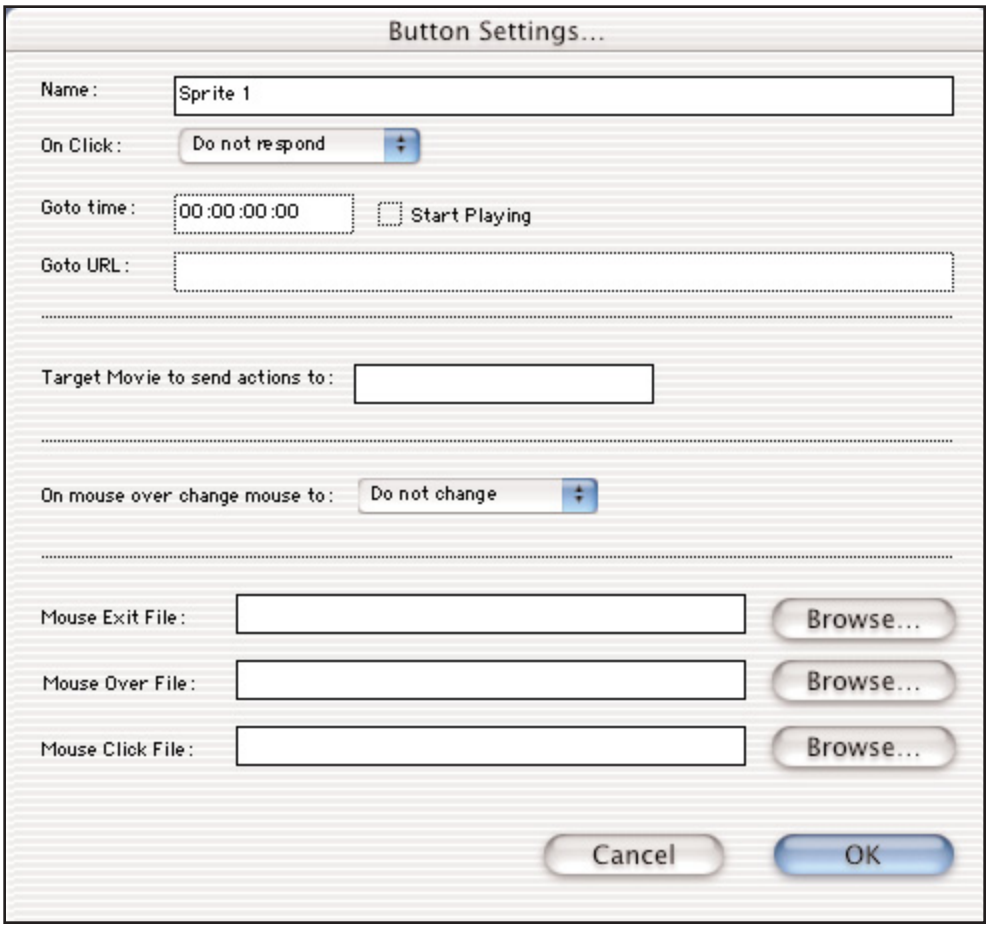


Figure 7.4 The Sprite Window.

The Sprite Window has the following components:

- **Name:** allows you to change the name of your sprite.
- **On Click**: lists a series of commands that can be executed when the sprite in your movie is clicked (**Figure 7.5**).
  - Do Not Respond: Does nothing when clicked.
  - Goto Time: Goes to a certain time point in the current movie.
  - Pause: Pauses the current movie.
  - Play: Tells QuickTime to play another movie specified by you.
  - Goto URL: Opens up the viewer's web browser to a specified URL.
- **Goto Time**: lets you specify the time point in your movie you want to jump to if your choices for On Click were Goto Time, Play, or Goto Movie. If you check 'Start Playing,' the movie will begin to play as soon as it loads.
- **Goto URL** allows you specify the web site you want your viewers to visit if your choice for On Click was Goto URL.
- **Target Movie To Send Actions To** let's you start playing another movie.
- **On Mouse Over Change Mouse To** lists the choices available for the cursor when it passes over the sprite in the viewer's movie Source Window (**Figure 7.5**).
  - Do Not Change
  - Open Hand
  - Closed Hand
  - Pointing Hand
  - Right Arrow
  - Left Arrow
  - Down Arrow
  - Up Arrow
  - Custom…

Figure 7.4 On Click choices.

Figure 7.4 On Mouse Over choices.

- **Mouse Exit File**: is used when the mouse is not over sprite's image.
- **Mouse Over File**: is used when the mouse is over sprite's image.
- **Mouse Click File**: is used when the mouse click's sprite's image.

Sprites can perform five distinct actions. You decide what the action will be using the 'On Click' area of the sprite window. You can have multiple sprites per project, and each sprite can do something different.

Sprites are only active when you render out a project with Make Movie. They are not active in Looking Glass, or if you Export your project.

Creating Sprites

To create a sprite track:

1. Click on the Sequence Window to make it active.
2. Under Sequence in the main menu, choose Add Sprite Media (**Figure 7.5**).
3. A sprite track will be automatically added to your project, and the Sprite Control window will pop up.
4. Specify the actions you want to attribute to the sprite track and click OK.

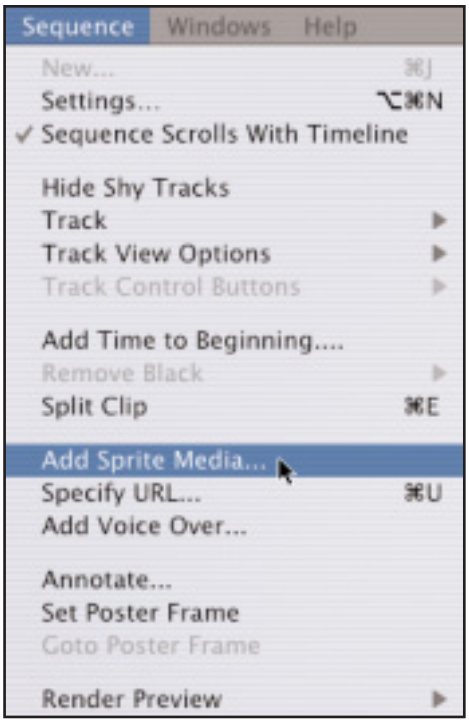


Figure 7.5 Choose Add Sprite Media from the Sequence main menu.

Editing Sprites

To edit the sprite controls:

- Double-click on the sprite media bar in the Sequence Window, or in the Project Window. The control window will pop-up.

To edit the sprite's duration:

- You can perform a QuickTrim on a sprite just like on any other clip. Use this feature to adjust the duration of the sprite. A sprite track has no limit on how long it can be.

To edit the sprite's position:

- Simply click the sprite in the Editor Window and drag to the desired position.
- A sprite's position is keyframable. Follow the animate directions in **Chapter 6: Creating Effects & Compositing**.

Voice Over

One feature that is unique to Looking Glass is the ability to voice over a sequence in real time. With a microphone plugged into your computer, Looking Glass allows you to play the sequence that you have edited while you record your commentary. And it doesn't stop with just your voice. You can use any input source for narration, be it your CD-ROM drive or DV deck.

iMacs and newer Mac G4s come with a built in mini-din microphone port. Connecting a microphone this way gives you instant, no set-up access to an external mic. But you can also use the mic on a DV camera that is connected to your Mac via Firewire, if you don't have a stand-alone microphone.

Capturing a voice over

1. Make sure the Editor window is selected. Then, choose 'Voice over' from the 'Sequence' menu.
2. A pop-up box will appear asking you to specify the recording settings. The first three settings you have to choose from are Source, Sample and Compression.
   - The **Compression** option will allow you to choose the form of compression, if any, will be applied to the audio you are about to record.
   - The **Sample** option lets you specify the quality of the sound sample you are about to record. Select from mono, stereo, 22 or 44 kHz and other options.
   - The **Source** option allows you to choose from where your audio will come. Choosing 'Built-In' gives you the option to choose to import via an external microphone and other devices. Choosing 'Internal CD' lets you record audio directly from a CD on your CD-ROM drive.

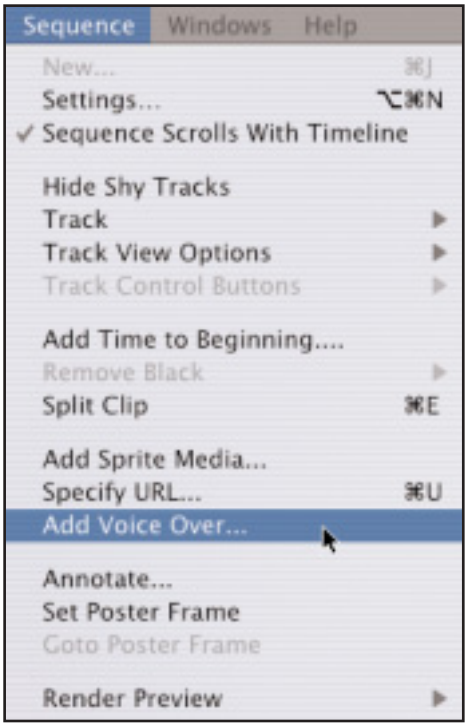


Figure 7.6 Choose Voice Over from the Sequence main menu.

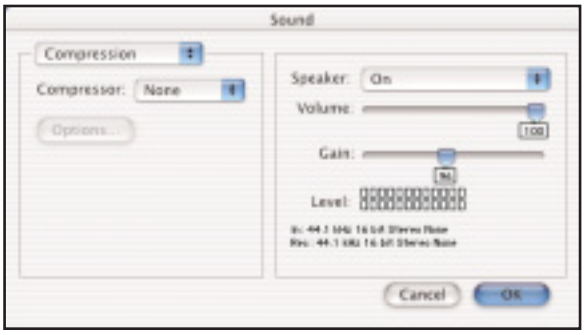


Figure 7.7 Pick your settings.

Capturing from a microphone

1. Select ‘Source’ from the Sound pop-up box that appears, and make sure the Device setting reads ‘Built-In’ then select ‘External Mic’ from the Input section. Click OK (**Figure 7.7** .
2. Next, when you confirm where to save your file, the sequence will immediately begin playing. Record your audio while the sequence plays.
3. When the sequence reaches the end (or you click to stop) your audio will automatically be added to the Project window, ready to be used.

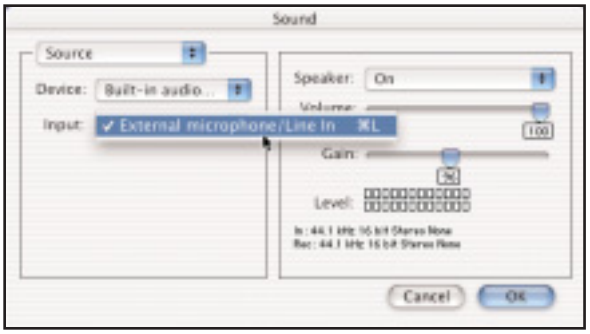


Figure 7.7 Pick your settings.

From A DV-Cam microphone

If you don’t have an external microphone, you can use the mic on your camera, as long as your camera is plugged into your computer through a FireWire cable. Note: This only works on DV cams through Firewire. It does not work through USB Capture Devices.

1. In the Sound pop-up box, choose ‘Source’ from the main pull down menu.
2. Next, make sure ‘Device' is set to ‘DV Audio’ (**Figure 7.8**). Make sure your camera is connected and turned on.
3. Once you’ve chosen ‘DV Audio’ speak into the mic on your camera. The levels will oscillate, letting you know the mic is active.
4. Click OK. Once you confirm where to save your file, the sequence will immediately begin playing. Record your audio while the sequence plays.
5. When the sequence reaches the end (or you click to stop) your audio will automatically be added to the Project Window, ready to be used.

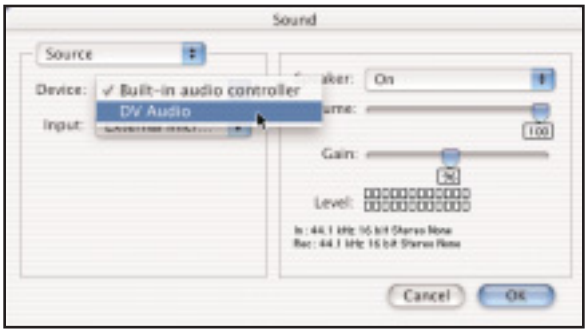


Figure 7.8 Choose DV-Audio from the Device menu.

Editing a voice over

After a narration has been completed, it's added to the Project Window. Editing a voice over is just like editing any other video/audio track in Looking Glass.

- Drag the narration clip from the Project Window into the Editor Window. It will be given its own track in the Timeline (**Figure 7.9**).
- Use the Split Clip feature to cut up the audio and space it out of needed(**Figure 7.10**).
- Expand out the audio's waveform, for more precise Split Clip edits (**Figure 7.11**).
- Adjust the clip's volume level, or keyframe volume fades if desired (**Figure 7.12**).

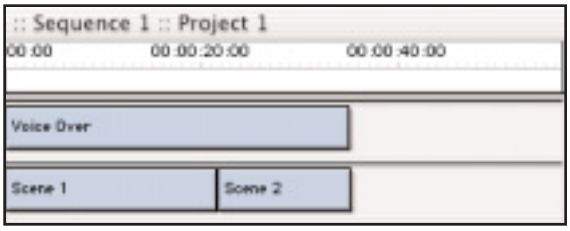


Figure 7.9 Dragging the Voice Over into the Editor Window will give it its own track.

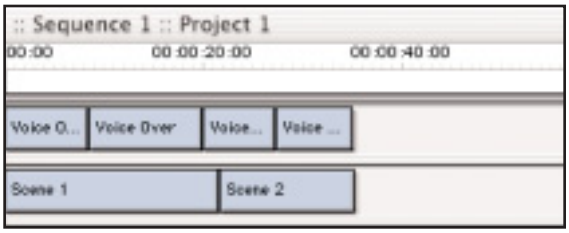


Figure 7.10 Use the Split Clip feature to splice up the voice over to better fit with the pace of your video.

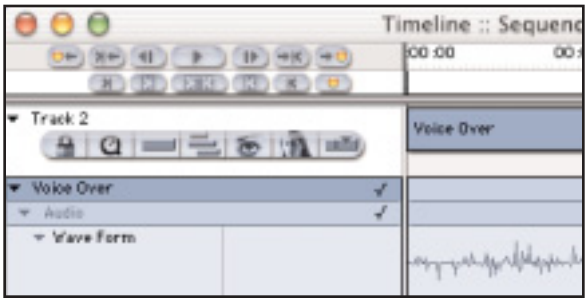


Figure 7.11 Viewing the waveform can help make precise edits.

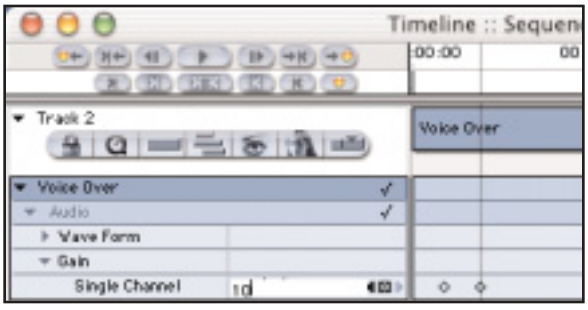


Figure 7.12 Adjust the volume, and fade the voice over in or out if desired.

Chapter 8

Rendering

The ability to selectively render out the exact media types you desire is a powerful Looking Glass feature. This chapter will discuss the following topics:

- Setting output length
- Using track based render settings
- Rendering just audio or video

Looking Glass provides you the ability to choose the compression schemes for each individual track, and for each type of media. This chapter will walk you through using all of the many render features available.

Setting output length

Looking Glass allows you to set the output length of a sequence using both the Make Movie and Export commands. When it comes time to render out a finished sequence to a movie file, you can choose to render the entire sequence or just a piece of it.

To render an entire sequence

Rendering out an entire sequence is the default setting for both Make Movie and Export. No special settings need to be applied.

1. Click on the Sequence Window to make it active.
2. Choose either Make Movie or Export from the File main menu.
3. Choose where to save your file, set your various options and click OK.

To render a section of a sequence

Make Movie and Export allow you to render out a section of your sequence.

1. Set In and Out points in the Sequence Window to specify the section of the sequence you want to render out to a file (**Figure 8.1**).
2. Choose either Make Movie or Export from the File main menu.
3. Choose where to save your file, set your various options and click OK.

No other special procedures are necessary.

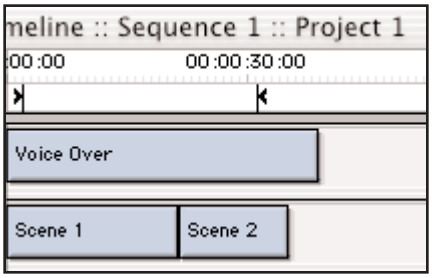


Figure 8.1 Notice that the sequence is bigger than the In and Out points, but only what is inside the In and Out points will be rendered to a file.

Make Movie vs. Export

The difference between Make Movie and Export might be confusing. They are both used to turn your Looking Glass sequence into a movie file, but they each have their own specific uses.

To find out more about each feature, as well as how to use both Make Movie and Export to their fullest potential see **Chapter 9: Creating Final Output**.

Using track based render settings

Setting render levels for each track

This feature only works with Make Movie.

1. Click the Track Render Settings button in the Track Controls (**Figure 8.2**).
2. When the Track Compression Settings dialog box appears, select the type of media you have media that is present in that track by turning on the check-boxes (**Figure 8.3**). Disable the media types that are not present.
3. Click the Settings button to choose the compression settings for each media type in the track.
4. If Video or Audio is present, but you don't want to change their format in any way, click the 'Do Not Change...' check-box (**Figure 8.4**). This options is not available for Graphics.
5. When you are done with specifying your settings for each track choose Make Movie from the File main menu.
6. After choosing a save location for your file, choose Individual Track Settings from the Compression Settings window and click OK (**Figure 8.5**).

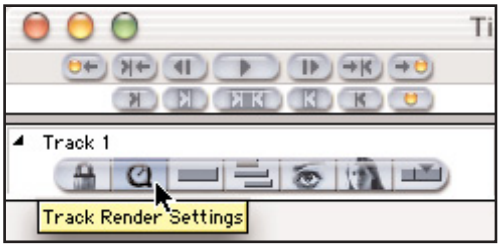


Figure 8.2 Click the Track Render Settings button to open the render settings options.

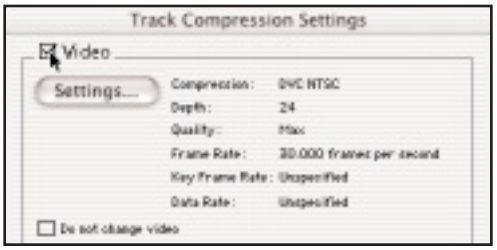


Figure 8.3 Click the check-boxes to activate or deactivate that media type.

Figure 8.4 Clicking the 'Do Not Change...' check-box for Audio and Video means that the media type will render out unchanged.

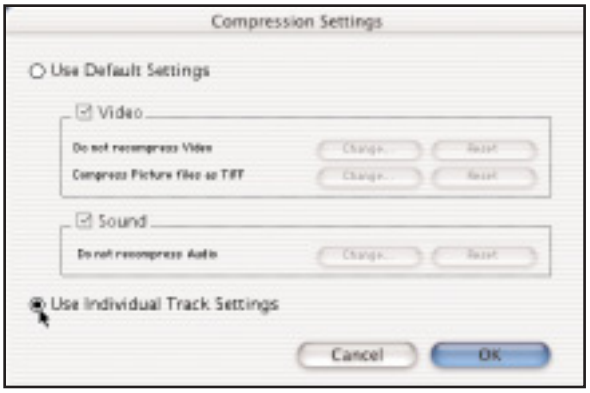


Figure 8.5 Choose Use Individual Track Settings from the Compression Settings window.

To render a single track

This feature works with both Make Movie and Export.

1. In the Timeline, click the Solo button in the Track Controls on the track that you want to render out by itself (**Figure 8.6**).
2. Choose Make Movie or Export from the File main menu and follow the procedures to save the track to a movie file.

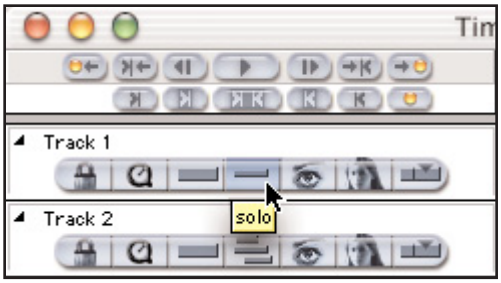


Figure 8.6 Click Solo on the track that you want to render out by itself.

Rendering just audio or video

Both Make Movie and Export allows you to save out just audio or video.

Export

1. Click on the Sequence Window to make it active.
2. In the File main menu, select Export Movie, then choose the Export... option (**Figure 8.7**).
3. When the Media Settings window appears, make sure only the type of media you want to export (video or audio) is checked(**Figure 8.8**).

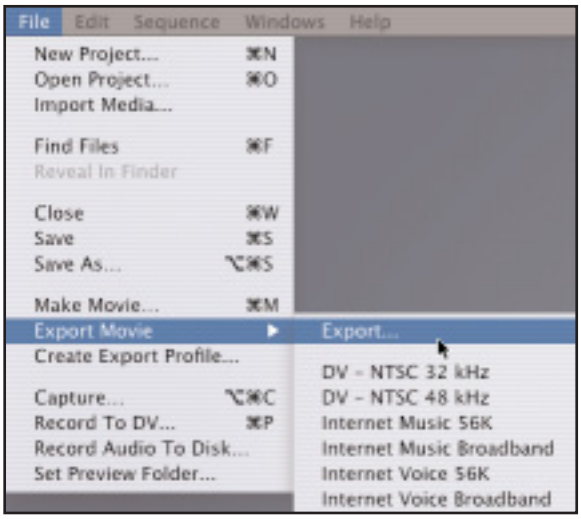


Figure 8.7 Chose Export... from the Export drop down list in the File main menu.

Figure 8.8 Make sure the type of media you want to export is the only one checked.

Make Movie

Globally

1. Click on the Sequence Window to make it active.
2. In the File main menu, choose Make Movie.
3. In the Compression Settings dialog box, make sure Use Default Settings is the active choice. This will affect every track in the sequence.
4. Make sure only the media type you want to render is checked (**Figure 8.10**).

Track by track

1. Click on the Sequence Window to make it active.
2. Click the Track Render Settings Button for each track (**Figure 8.11**).
3. In the Track Compression Settings dialog box, make sure only the media type you want to render is checked (**Figure 8.12**). Click OK.
4. In the File main menu, choose Make Movie.
5. In the Compression Settings dialog box, make sure Use Individual Track Settings is the active choice (**Figure 8.5**).

Figure 8.10 Make sure that Use Default Settings is checked. Then check only the media type you want to render. In this case, just audio and no video.

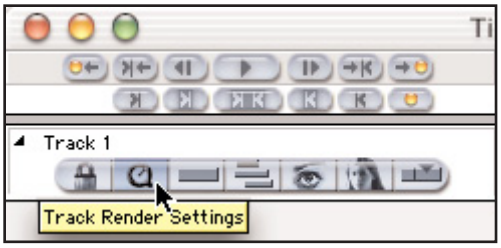


Figure 8.11 Click the Track Render Settings button to open the render settings options.

Figure 8.12 Make sure only the media type you want to render for that track is checked. In this case, only the video of this track will be rendered.

Chapter 9

Creating Final Output

When a project is finished it's time to output it for others to see. This chapter will cover:

- Poster frames
- Make Movie
- Export
- Creating Export Profiles
- Record to DV Tape

The most exciting part of finishing a project is being able to show it to people and clients! This chapter will discuss the various options Looking Glass gives for exporting the movie you've made out to a finished, viewable format.

Poster frames

QuickTime has a built in feature for poster frames. A poster frame is a frame from the movie file selected to be the “icon” or “poster” for that file. In other words, when that file is viewed in the Macintosh Finder, or in QuickTime video cataloging programs this file will appear as the icon. Poster frames are per sequence, not per clip or per project.

To set a poster frame

1. Move the Scrubber in the Sequence Window to the frame you want as the poster frame.
2. Choose Set Poster Frame from the Sequence main menu (**Figure 9.1**).

To view the poster frame

1. Select GoTo poster frame from the Sequence main menu **(Figure 9.2**).

The poster frame will be automatically embedded into the movie file when you use the Export Movie or Make Movie command.

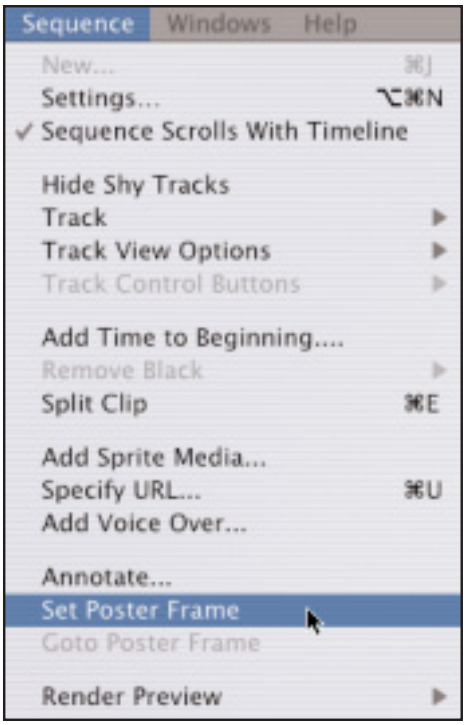


Figure 9.1 Choose Set Poster Frame from the Sequence main menu.

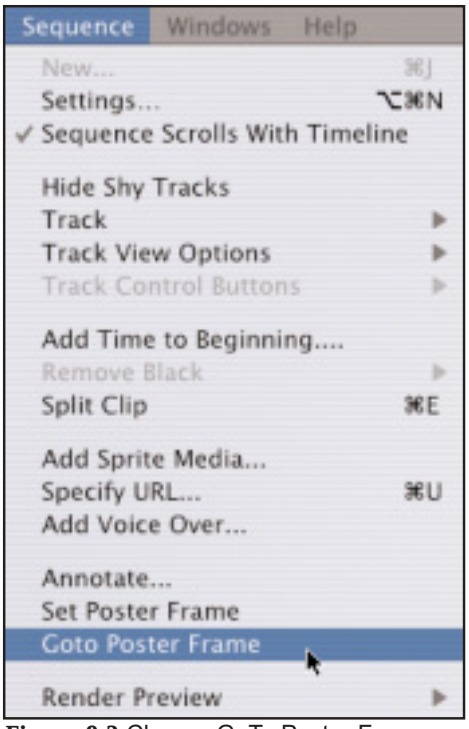


Figure 9.2 Choose GoTo Poster Frame to view the set poster frame.

Make Movie

Make Movie renders out multiple track QuickTime movies. It allows you to render each track with different render settings. Make Movie also allows you to apply different compression to video, audio and graphics in the same sequence. It has several functions, one of which is keeping your titles crisp and clear (see **Appendix A: Working With DV**).

QuickTime Real Time Effects

Whenever a transition or other effect is applied to a movie in Looking Glass, it is handled in real time. The effect is not burned into the movie file yet, so your Mac has to process all the frames on the fly. When a movie is rendered with Make Movie, the transitions are not burned in, as they are when using the Export feature. When a movie rendered using Make Movie is viewed in the QuickTime player, it may seem choppy. This is because there are skipped frames, because QuickTime cannot handle the throughput.

Track Render Settings

Using the Track Render Settings icon in the Sequence Window allows you to specify different compression settings for each track in a sequence.

When you choose Make Movie and are taken to the Compression Settings dialog box, you are given the choice of using the individual track settings, or default settings

Global Compression Settings

After you choose Make Movie and specify where to save your file, the Compression Settings dialog box will appear. Selecting 'Use Default Settings' will allow you to specify compression settings for all video, audio and graphics in your project.

When is Make Movie useful?

Make Movie can be used on its own to quickly render out a sequence for preview, but its not recommended for final output due to the fact that it does not burn on transitions, and multi-track movies can be more troublesome to view.

Make Movie's strength comes in when it is used in conjunction with the Export feature.

With Sprites

Sprites only work when you render out a sequence with Make Movie. But what if you need sprites in your project, but you also have transitions that need to be burned in? That's when using Make Movie along with Export becomes handy.

With titles and graphics

If there is a graphic in a sequence it will be compressed using the Export command. Compressing a graphic, especially a title, can blur the image badly. The best case scenario would be to have a finished movie with compressed video, but an uncompressed title or graphic. Using Make Movie along with the Export command can do just this.

I Need to Know More

Chapter 8: Rendering has more detailed information about setting track render settings and global compressions settings. It walks you through how to set individual track render settings, how to choose between individual track and global compression settings, among other things.

Using Make Movie with Sprites

Chapter 7: Multimedia discusses the purpose of Sprites as well as how to use them. Sprites only work when a sequence is rendered out with Make Movie. So, if you have a sequence that uses transitions but you still need sprites in your finished product, what is the solution? The solution is to use Make Movie and Export together.

Using Make Movie and Export with sprites

1. Finish editing the sequence in the Sequence Window. Do not add any sprite tracks yet.
2. Use Export from the File main menu and save your sequence to a QuickTime movie file on your computer. Compress the video and audio using the codec you desire for final viewing.
3. Click on the Project Window to make it active and from the Sequence main menu, select New (**Figure 9.3**).
4. Double click on the new sequence in the Project Window to open it up.
5. Drag the movie you just exported from the Project Window into the new sequence.
6. Now, create your sprite tracks by choosing Add Sprite Media from the Sequence main menu (**Figure 9.4**).

(continued)

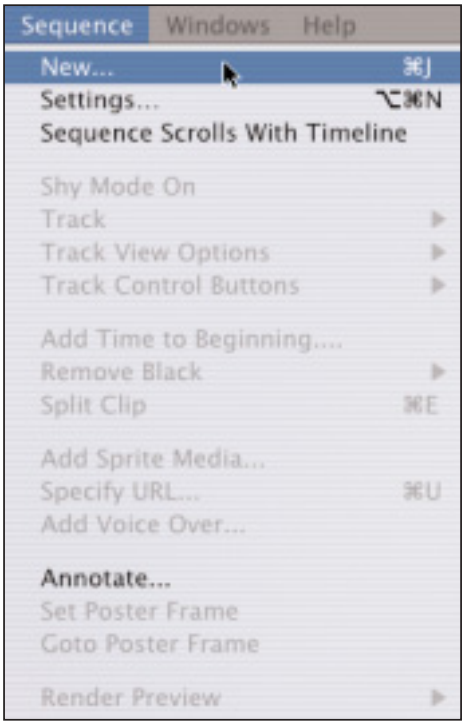


Figure 9.3 Choose to make a new sequence from the File main menu.

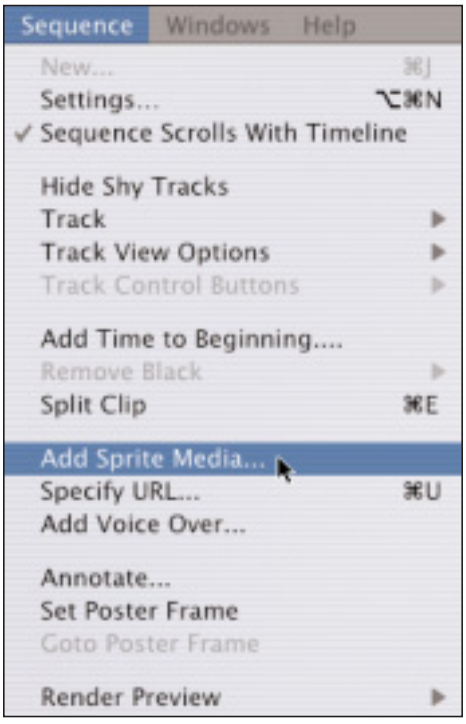


Figure 9.4 Choose Add Sprite media from the Sequence main menu.

7. Adjust sprite tracks how you need in the Timeline (**Figure 9.5**).
8. When you're finished choose Make Movie from the File main menu (**Figure 9.6**).
9. Choose a save location for the file.
10. When the Compression Settings dialog box appears choose Use Default Settings. Make sure both the Video and Sound boxes are checked (**Figure 9.7**).

Your project will now be rendered out with the sprites intact. Since you rendered the main portion of your movie containing transitions and effects using Export, your project will play smoothly in QuickTime.

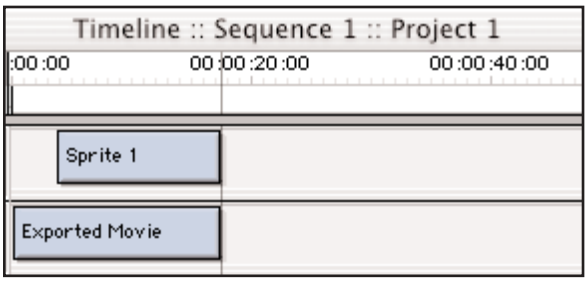


Figure 9.5 Add the exported movie to the new sequence, then create how ever many sprite tracks you need above it.

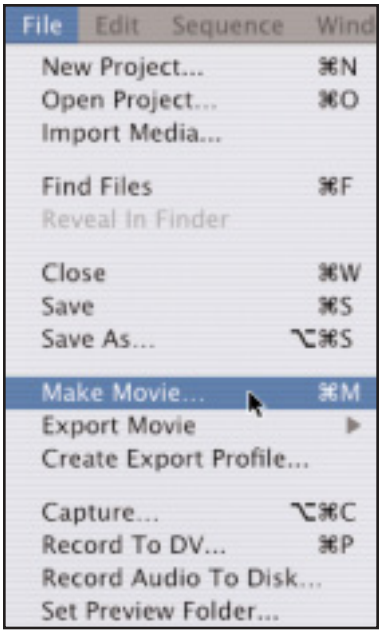


Figure 9.6 Choose Make Movie from the File main menu.

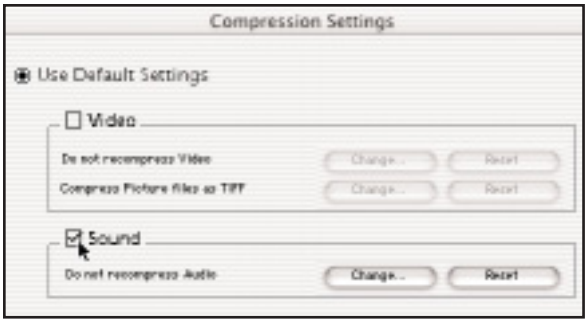


Figure 9.7 Choose 'Use Default Settings' and make sure that both Video and Sound are checked.

Using Make Movie with titles

Chapter 6: Creating Effects and Compositing discusses the basics of making titles for your movie that will work in Looking Glass. When making a movie for play on a computer video compression can often make titles appear blurry and sometimes unreadable. So, if you have a sequence that uses transitions but you still need a title in your finished product, what is the solution? The solution is to use Make Movie and Export together.

Using Make Movie and Export with titles

1. Finish editing the sequence in the Sequence Window. Do not add any title graphic images yet.
2. Use Export from the File main menu and save your sequence to a QuickTime movie file on your computer. Compress the video and audio using the codec you desire for final viewing.
3. Click on the Project Window to make it active and from the Sequence main menu, select New (**Figure 9.8**).
4. Double click on the new sequence in the Project Window to open it up.
5. Drag the movie you just exported from the Project Window into the new sequence.
6. Adjust the titles and exported movie as necessary in the timeline (**Figure 9.9**).

(continued)

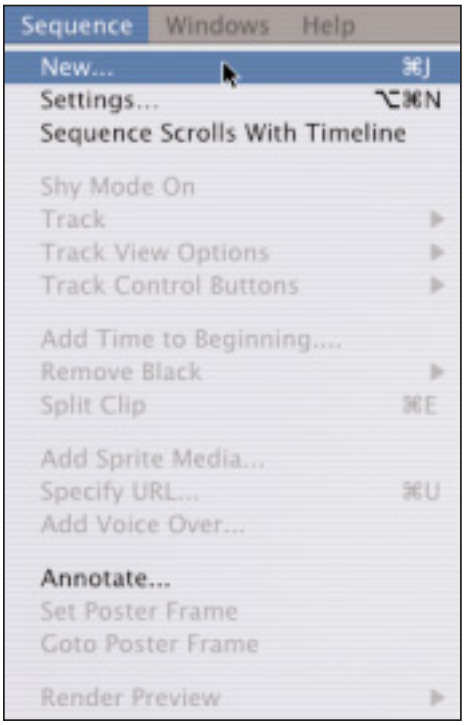


Figure 9.8 Choose to make a new sequence from the Sequence main menu.

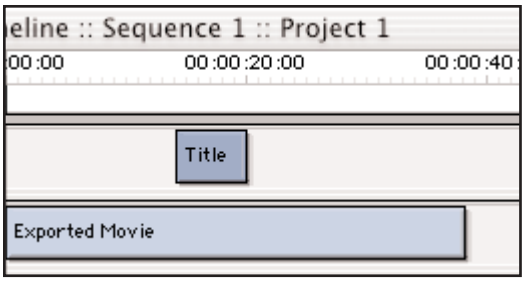


Figure 9.9 Arrange the title graphic file as necessary over the exported movie.

7. When you're finished choose Make Movie from the File main menu (**Figure 9.10**).
8. Choose a save location for the file.
9. When the Compression Settings dialog box appears choose Use Default Settings. Make sure both the Video and Sound boxes are checked (**Figure 9.11**).

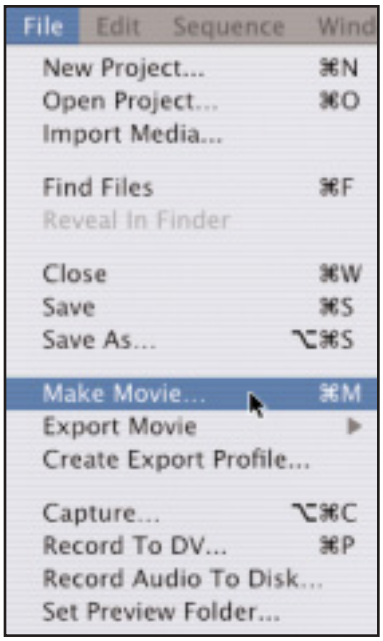


Figure 9.10 Choose Make Movie from the File main menu.

Figure 9.11 Choose 'Use Default Settings' and make sure that both Video and Sound are checked.

Export

When you're done editing your project you can export it out to a movie to be shared via the Internet, CD-ROM, or just to store on your computer. The Export feature compresses every track in your project to a one video and one audio track, flattening down your project to a QuickTime movie.

Supported formats

Listed below are the export formats that QuickTime 5 supports. We recommend choosing 'Movie to QuickTime Movie.'

- Movie to AVI
- Movie to BMP
- Movie to DV Stream
- Movie to FLC
- Movie to Hinted Movie
- Movie to Image Sequence
- Movie to Picture
- Movie to QuickTime Movie
- Movie to AIFF
- Movie to System 7 Sound
- Movie to Wave
- Movie to uLaw

Exporting defaults

Looking Glass comes with six default export settings. These can be accessed by choosing Export from the File main menu (**Figure 9.12**).

These settings are:

- DV - NTSC 32 kHz
- DV - NTSC 48 kHz
- Internet Music 56k
- Internet Music Broadband
- Internet Voice 56k
- Internet Voice Broadband

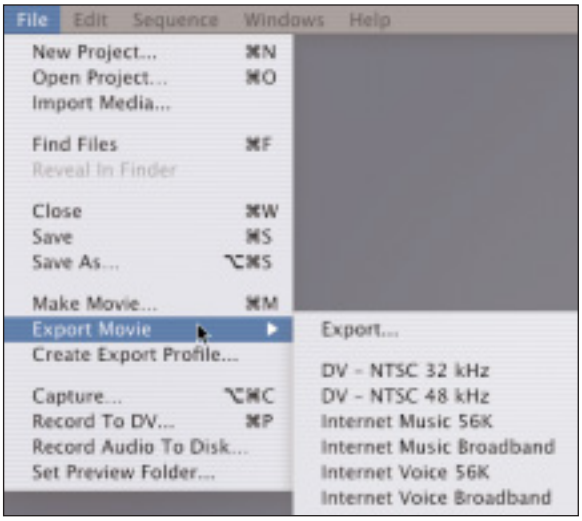


Figure 9.12 There are six default export settings.

DV - NTSC 32 kHz

This output is made for exporting full size, full quality DV content onto a tape. It is not intended to be streamed on the internet. Designed for the North American NTSC video standard.

Video:	**Sound:**
NTSC- DV	32 kHz sampling
Best Quality	16 bit stereo
29.97 FPS	**Streaming:**
	Fast Start

DV - NTSC 48 kHz

This output is made for exporting full size, full quality DV content onto a tape. It is not intended to be streamed on the internet. Designed for the North American NTSC video standard. This choice offers a much higher sampling rate for audio, but also creates a bigger file.

Video:	**Sound:**
NTSC- DV	48 kHz sampling
Best Quality	16 bit stereo
29.97 FPS	**Streaming:**
	Fast Start

Internet Music 56K

This scheme allows users with dial-up connections the ability to view your project. It's made to have good audio response to a wide frequency of sounds. This is the best choice for any project where that has more sounds involved than simply the human voice.

Video:	**Sound:**
Sorenson Video 3	Qdesign Music 2
Best Quality	22 kHz sampling
4 FPS	16 bit stereo
Keyframes every 400	20 kbits/s data rate
4 Kbytes/s data limit	**Streaming:**
160 x 120	Fast Start

Internet Music Broadband

This scheme is designed to have good audio response to a wide frequency of sounds. It's ideal for creating a movie that is small enough to be viewed easily by people with a broadband connection. This is the best choice for any project where that has more sounds involved than simply the human voice.

Video:	**Sound:**
Sorenson Video 3	Qdesign Music 2
Best Quality	44.1 kHz sampling
15 FPS	16 bit stereo
Keyframe every 1500	40 kbits/s data rate
150 Kbytes/s	**Streaming:**
320 x 240	Fast Start

Internet Voice 56K

This scheme allows users with dial-up connections the ability to view your project. It's made to reduce the amount of data size the audio track will take up, while still delivering crisp clear sound. This is the best choice for any project where the human voice is the primary sound source, like a news cast.

Video:	**Sound:**
Sorenson Video 3	Qualcomm Purevoice
Best Quality	44.1 kHz sampling
4 FPS	16 bit stereo
Keyframe every 400	Half rate
4 Kbytes/s data limit	**Streaming:**
160 x 120	Fast Start

Internet Voice Broadband

This scheme is designed to reduce the amount of data size the audio track will take up, while still delivering crisp clear sound. It's ideal for creating a movie that is small enough to be viewed easily by people with a broadband connection. This is the best choice for any project where the human voice is the primary sound source, like a news cast.

Video:

Sorenson Video 3
Best Quality
15 FPS
Keyframe every 1500
150 Kbytes/st
320 x 240

Sound:

Qualcomm Purevoice
44.1 kHz sampling
16 bit stereo
Full data rate

Streaming:

Fast Start

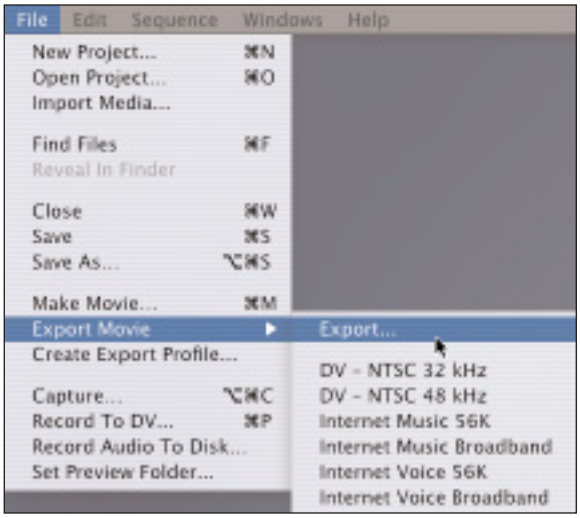


Figure 9.13 Export... is the custom export option.

Custom export

'Export…' from the Export Movie selection from the File main menu (**Figure 9.13**), is the custom export option. It allows you to specify the compressions settings for your movie.

To adjust the export options for a movie

1. Select Export... under Export Movie from the File main menu (**Figure 9.13**).
2. Click Options to open the Movie Settings Window(**Figure 9.14**).

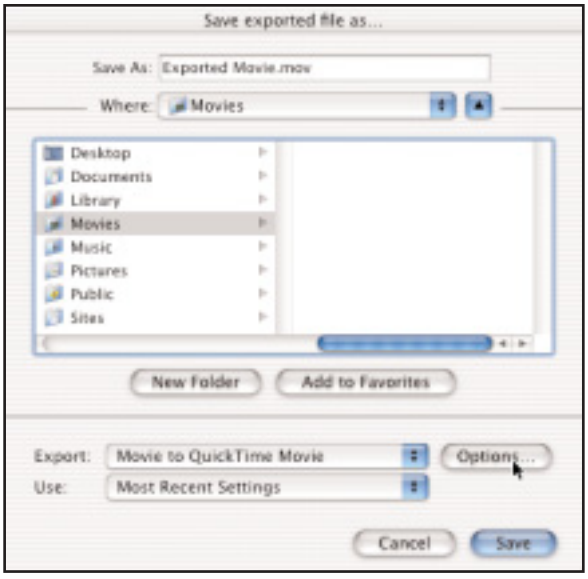


Figure 9.14 Choose Options to open the Movie Settings Window.

Movie Settings Window

The Movie Settings Window (**Figure 9.15**) has three major categories: Video, Sound, and Prepare For Internet Streaming.

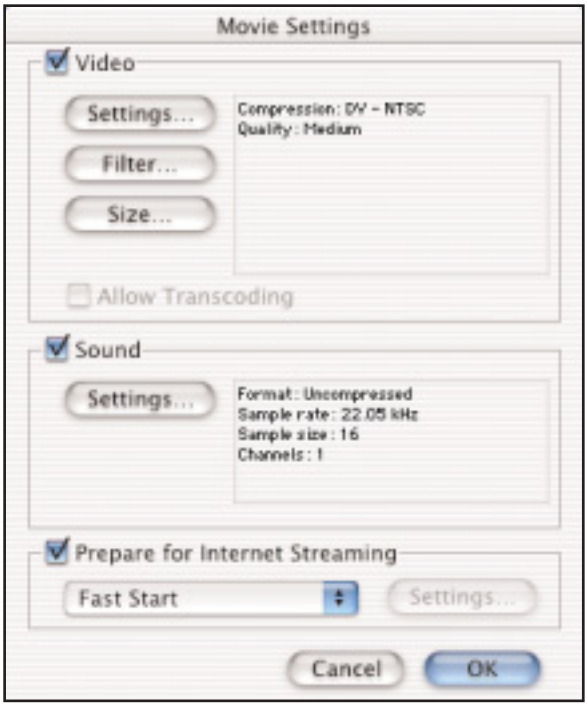


Figure 9.15 The Movie Settings Window.

Video

The video section allows you to choose the Settings, Filter and Size for your movie. As long as the box by VIDEO is checked, then video will be saved in your final file.

Uncheck this box if you do not desire your video tracks to be rendered. The area to the right displays the current video settings, and will update depending on the changes you make.

When you click the 'Settings…' button, you'll be presented with a dialog box called 'Compression Settings' asking you to specify the compressor and other specifics for your video.

Use the Quality controls to finish making adjustments to the compression settings of your video. Click 'OK' or 'Cancel' when you're done to return to the 'Movie Settings' dialog box.

Clicking on 'Filter…' open the 'Choose Video Filter' dialog box. These filters alter the color, hue, brightness, or other aspects of the video in your project. You can apply only one filter to your movie. The filter dialog box allows you to save a filter setting. Depending on which filter you choose, you'll be presented with controls. After adjusting these controls, you can click 'Save' and save these settings in a file. To obtain these settings later, click the 'Load' button.

Clicking 'Size…' in the 'Movie Settings' dialog box gives you the option to adjust the size of your exported movie. If you check 'Use Current Size,' the movie will be exported at the same size as the sequence.

If you check 'Use Custom Size' you specify the Width and Height in pixels.

Sound

Clicking the Settings button in the Sound portion of the Movie Settings Window opens up the audio compression options.

After selecting the compressor you want, specify the audio's quality by choosing the sampling rate, bit size, and number of channels.

Prepare for Internet Streaming

This option, by default, is set for Fast Start. Make sure it is checked, as this option loads the movie faster in QuickTime and is recommended.

Creating Export Profiles

Looking Glass comes with six pre-defined export settings, but it also lets you make your own. Once saved these settings will appear in the Export Movie sub-menu under the main File menu.

To create an export profile:

1. Choose Create Export Profile under the File main menu (**Figure 9.16**).
2. Input the selection you desire for Video, Sound and Internet Streaming in the Movie Settings dialog box (**Figure 9.17**).
3. When you are finished click the 'OK' button in the Movie Settings window.
4. You will be asked to name and your file, and then save it.
5. All export settings files will be kept in the Export Settings folder in the Looking Glass folder.

It is possible to share your export setting files. To use a file from someone else:

1. Quit Looking Glass and place a Looking Glass export setting file in the Export Settings folder in the Looking Glass folder.
2. Open Looking Glass, and the new file will appear in the Export Movie menu.

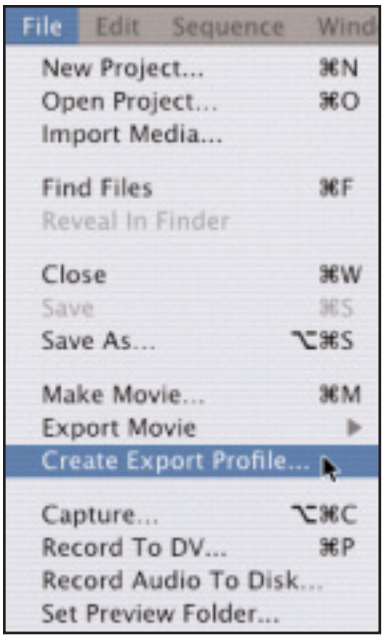


Figure 9.16 Choose Create Export Profile in the File menu too make export settings.

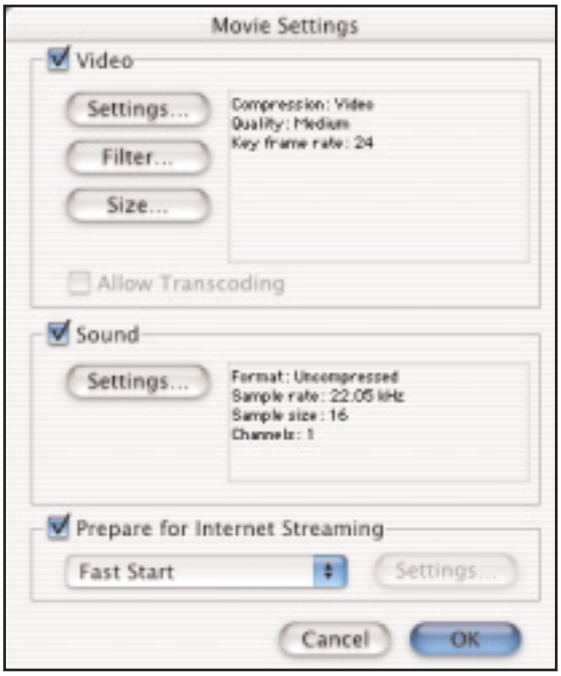


Figure 9.17 Adjust the settings in the Movie Settings dialog box.

Render Preview

Use the render preview settings before exporting for the web or recording to DV tape to see how it will look.

To set a Render Preview folder

When you use the Render Preview function, Looking Glass places the preview file in a folder on your computer. Before using the Render Preview function you need to set a folder.

1. In the File main menu, choose Set Preview Folder (**Figure 9.18**).
2. Choose a folder on your computer to use as the Render Preview folder and click choose.

To use Render Preview

1. Click on the Editor or Sequence window to make one of them the active window.
2. Select Render Preview from the Sequence main menu (**Figure 9.19**).
3. You can choose one of the predefined settings in the drop down menu that appears, or you can Other... to specify your own.
4. Looking Glass will build a preview (this might take a long time) and insert the file into your current sequence.
5. Simply place the sequence to view how your finished movie will look.
6. Delete the track holding the render preview to continue editing.

You can also set In and Out points in your sequence and Render Preview will render out only the video that is within those points.

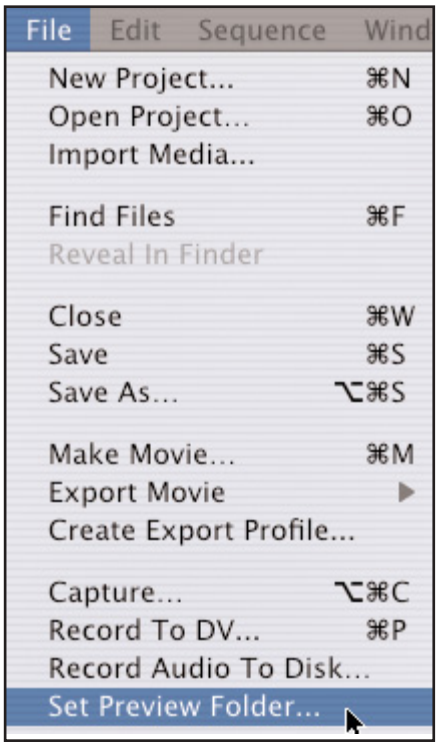


Figure 9.18 Choose Set Preview Folder in the File main menu to select a folder for the Render Preview files to go to.

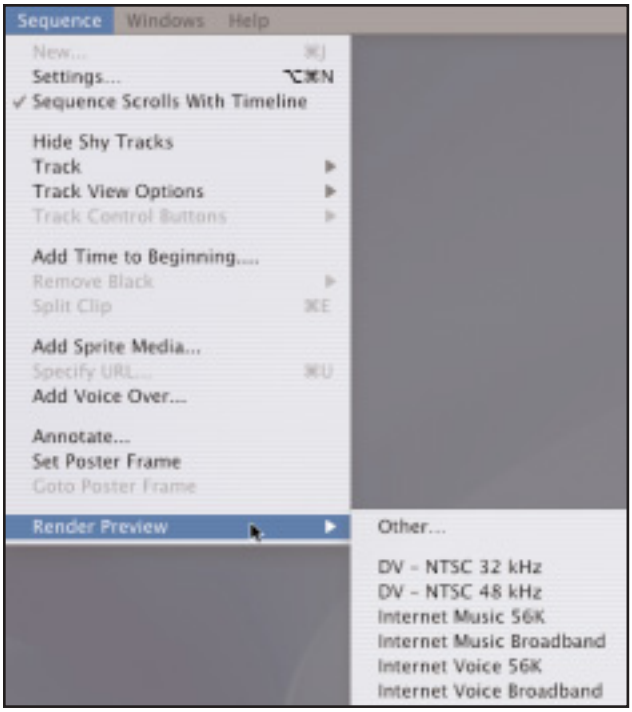


Figure 9.19 Choose Render Preview from the Sequence main menu, then decide on the settings.

Record To DV t ape

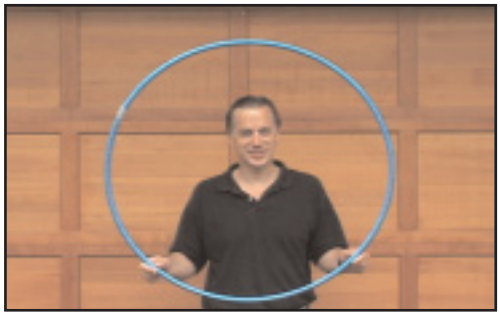
Once you're finished with your project, Looking Glass allows you to export to DV tape. You can only export to a DV camera or deck via FireWire. Exporting over a USB Capture Device or any other method is not supported.

There are multiple region DV codes. North America uses NTSC. Most of Europe uses PAL, and France uses SECAM. All equipment within a region is designed to work with that regions code. For this reason, **if you're in North America make sure you export only in DV - NTSC.**

Aspect ratio and issues

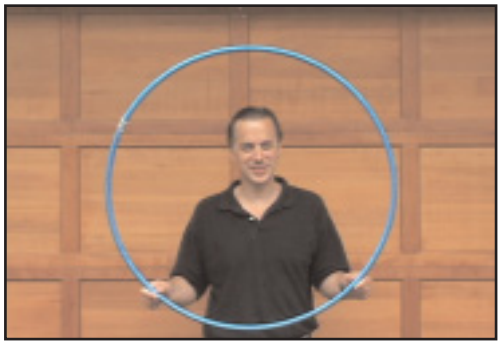
DV uses rectangular shaped pixels. Computer screens use square pixels. To make up for this difference, when a DV image is imported to a computer, its size is changed. When it's sent back to DV tape, the picture is reverted back to its original DV state.

When brought in on a computer, DV has a size of 720 x 480. For this reason DV on a computer might look vertically disproportionate. **Figures 9.20** and **9.21** illustrate this.



Unadjusted computer DV

Figure 9.20 DV video displayed on a computer is compressed vertically.



Adjusted with View DV feature

Figure 9.21 DV video adjusted with the View DV feature as it would appear on a TV.

To learn how to preview video in Looking Glass in actual DV size, see the titling section of **Chapter 6: Creating Effects & Compositing**.

Titles and graphics

Understanding how DV size works becomes truly important when there is a title or graphic in your project. If the title in your project based on a 720 x 480 size, it will be distorted and "stretched out" when recorded to DV tape. That's because, even though 720 x 480 is DV size on a computer, things are vertically disproportionate on purpose. In pixels, the closest approximation a computer can make to true DV size is use 720 x 540.

There is a solution to this problem. The solution is to make titles or graphics on a canvas size of 720 x 540, then change the size of the image to 720 x 480. This will make your title looked squashed, but when exported to DV tape, it will stretch out to its normal proportions.

Building DV content

Record to DV with all DV content

1. Make sure your camera or deck is connected to your computer via FireWire and that it is turned on.
2. Under 'File' in the main menu, choose 'Record to DV' (**Figure 9.22**)
3. A dialog box will appear (**Figure 9.23**), telling you to begin recording from your DV device. Once the tape in your camera or deck is recording click 'Record' in the dialog box.

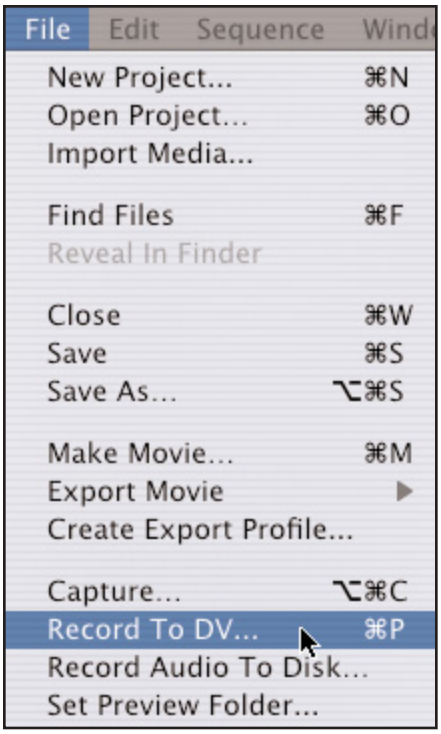


Figure 9.22 Choose 'Record To DV' from the File main menu.

Figure 9.23 Click Record to print your sequence to DV tape.

If some content in your sequence is non-DV, including graphic or sound files, then you will need to Export your sequence as a DV file before it can be transferred to tape.

Record to DV tape with non-DV content

1. Make sure your camera or deck is connected to your computer via FireWire and that it is turned on.
2. Under 'File' in the main menu, choose 'Record to DV' (**Figure 9.24**).
3. Looking Glass will present you with a notice message warning that converting your sequence to DV might take some time. Click OK to continue. (**Figure 9.25**).
4. When Looking Glass is done rendering your sequence to DV format, it will ask you if it is ok to begin recording to DV tap (**Figure 9.26**). Click RECORD to continue.

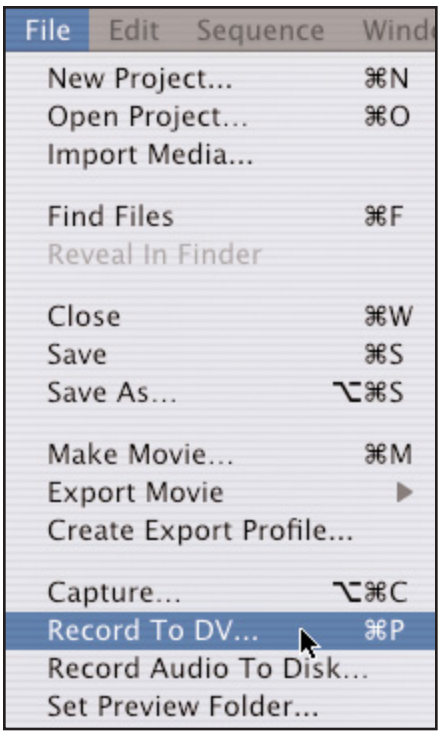


Figure 9.24 Choose DV - NTSC 48kHz from the Export Movie drop down menu.

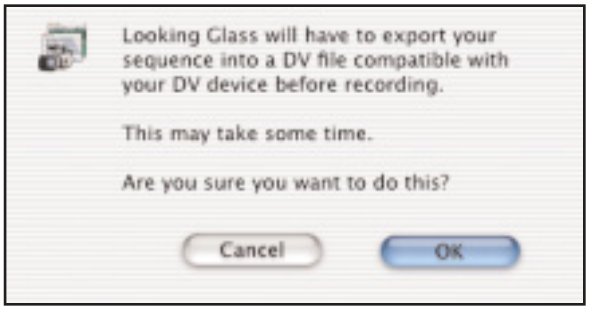


Figure 9.25 Looking Glass will present this notification message before converting your sequence to DV.

Figure 9.26 Click Record to print your sequence to DV tape.

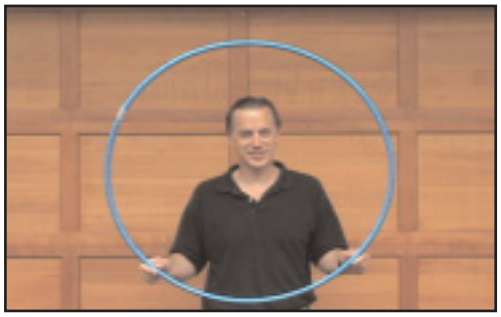
Appendix A

Working With DV

DV frame size

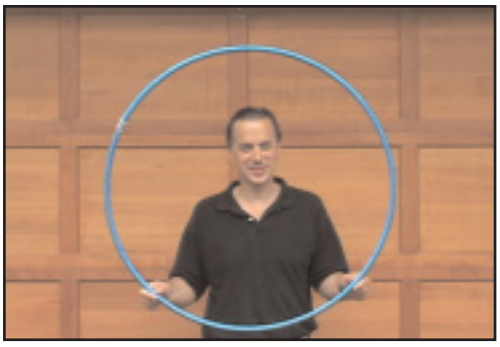
DV has a different aspect ratio on a TV screen than on a computer screen. DV uses rectangular shaped pixels, while computer screens use square pixels. To make up for this difference, when a DV image is imported to a computer its size is changed. When a DV image is sent back to DV tape its original size is restored.

When DV is brought into a computer it has a size of 720 x 480, as shown in **Figure A.1**. In reality, a closer approximation to a DV images actually shape is the aspect ratio of 720 x 520 as shown in **Figure A.2**. Looking Glass allows you to preview any video you are editing in its natural DV state. See **Chapter 6: Creating Effects & Compositing** for an in depth walk through on how to use this feature.



Unadjusted computer DV size

Figure A.1 720 x 480, computer DV size.



Adjusted with View DV feature

Figure A.2 720 x 520, TV DV size.

Graphics

Understanding how DV size works becomes truly important when there is a title. If the title in your project based on a 720 x 480 size, it will be distorted and “stretched out” when recorded to DV tape. That’s because, even though 720 x 480 is DV size on a computer, things are vertically compressed on purpose. In pixels, the closest approximation a computer can make to true DV size is use 720 x 540.

There is a solution to this problem. The solution is to make titles or graphics on a canvas size of 720 x 540, then change the size of the image to 720 x 480. This will make your title looked compressed, but when exported to DV tape, it will stretch out to its normal proportions.

When Exporting a movie with a text title, the title will become muddy due to compression. Sometimes, it’s best to Export your finished movie without that title, bring the exported movie back into Looking Glass, lay the title graphic where you want it, and choose Make Movie with no compression for graphic files. This will ensure the title has a clean appearance. See **Chapter 9: Creating Final Output** for a detailed walk through on how to use Export Movie and Make Movie together to keep titles and graphics crisp.

Non-drop frame mode

The standard spec for DV is 29.97 frames per second (FPS). This is called drop-frame mode. Normal timecode reads an exact 30 FPS and drop-frame timecode compensates by dropping two frames at every minute except the tenth.

The timeline in Looking Glass works in non-drop frame mode only. Looking Glass shows DV at a constant 30 FPS. This will have an effect on long project, resulting in a loss of roughly 18 frames for every 10 minutes. Your video will play back correctly, without obvious skips or stutters. Because of this the Sequence Window can only show FPS rates that are whole numbers.

Appendix

B

Menus

This Appendix walks through all the main menus in Looking Glass, with a description of each function.

- **Figure B.1** shows the File menu.

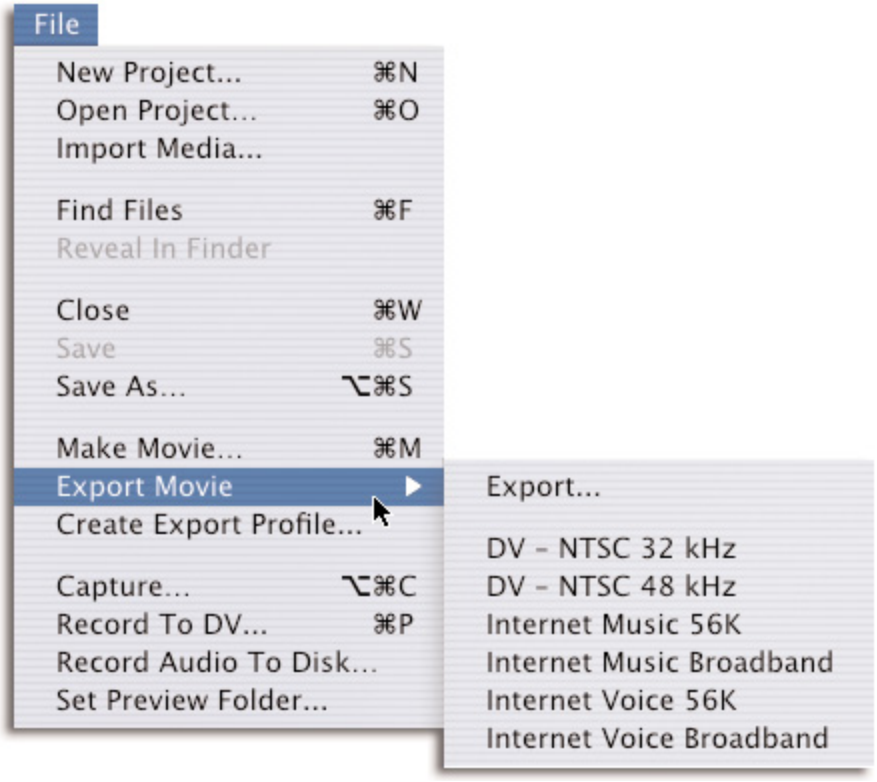


Figure B.1 The File menu.

Command	Description
New	Creates a new Project, Sequence or Track.
Open	Opens a Looking Glass Project.
Import Media	Imports a QuickTime compatible media file.
Find Files	Finds media files on your computer.
Reveal In Finder	Shows where on your computer a file is located.
Close	Closes the Project currently open.
Save	Saves the current project under the same file name.
Save As	Allows you to save the current project under a new name.
Make Movie....	Renders out a multi-track QuickTime movie.
Export Movie	Exports a compressed QuickTime movie.
Capture...	Captures video from an outside source.
Record Audio To Disk...	Allows you to record audio to your computer.
Record To DV...	Prints the current DV project back to DV tape.

- **Figure B.2** shows the Edit menu with the Media Controls sub-menu dropped down.

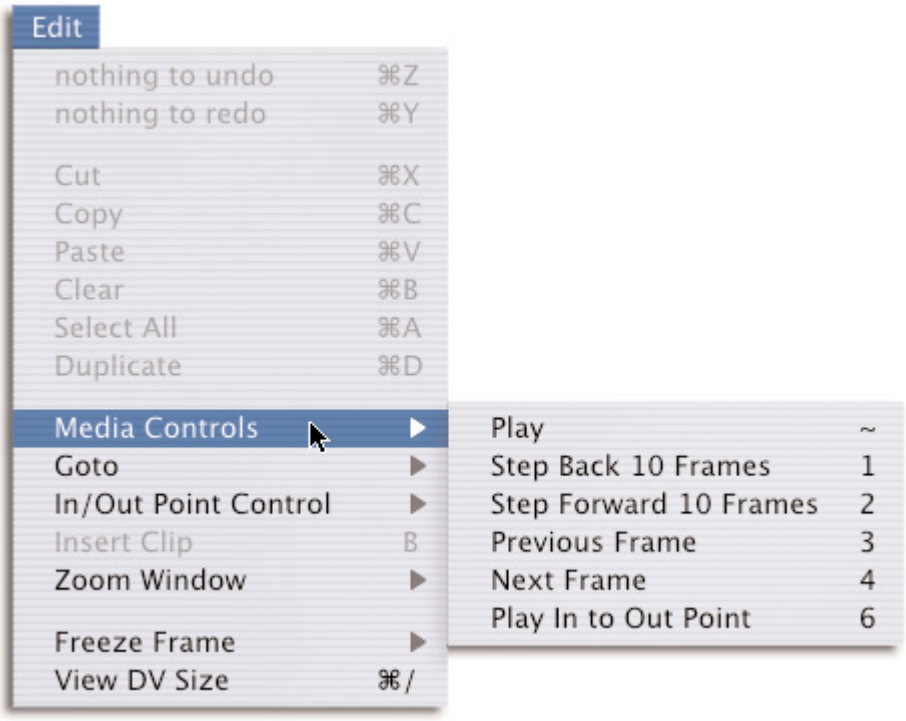


Figure B.2 The Edit menu.

Command	Description
Undo...	Undoes the last action.
Redo	Reinstates the last undo.
Cut	Cuts text to the clipboard.
Copy	Copies text to the clipboard.
Paste	Pastes the text in the clipboard.
Clear	Clears the currently selected text.
Select All	Selects all items in the active window.
Duplicate	Moves a track forward or backward in a sequence.
Media Controls	Control the video in the Editor, Source and Sequence windows .
Goto	Jump to the beginning or end of a sequence.
In/Out Point Control	Sets, deleted and jumps to an in or out point.
Insert Clip	Performs a basic 3-point edit from the Source to Sequence window.
Zoom Window	Zooms in and out of the Edit and Sequence windows.
Freeze Frame	Exports a frame as a still image.
View DV Size	Previews the sequence in the Edit window in full DV size.

- **Figure B.3** shows the Edit menu with the Goto and Zoom Window sub-menus dropped down.

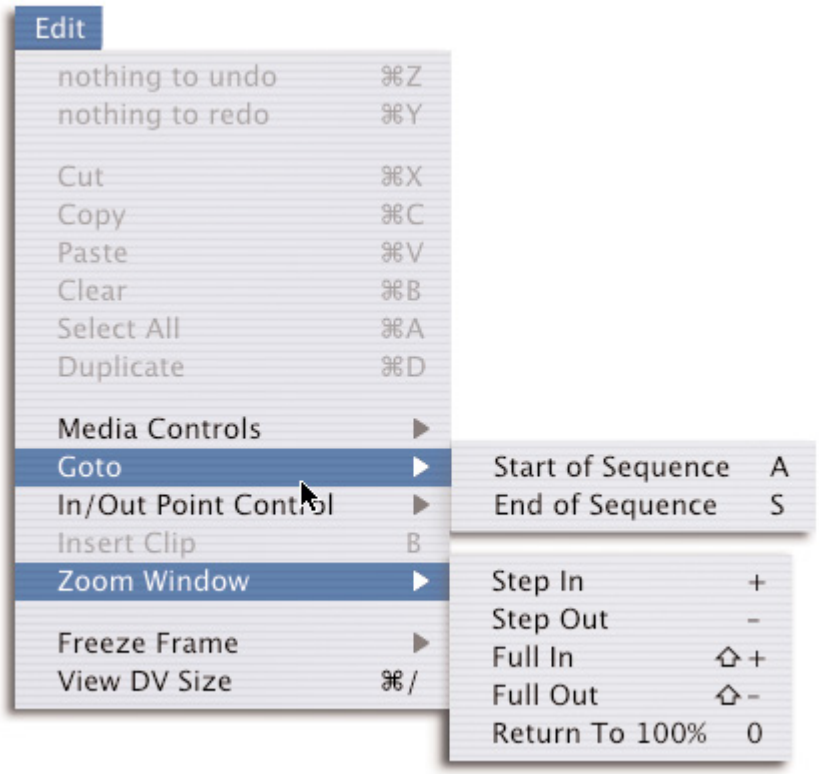


Figure B.3 The Edit menu.

Command	Description
Undo...	Undoes the last action.
Redo	Reinstates the last undo.
Cut	Cuts text to the clipboard.
Copy	Copies text to the clipboard.
Paste	Pastes the text in the clipboard.
Clear	Clears the currently selected text.
Select All	Selects all items in the active window.
Duplicate	Moves a track forward or backward in a sequence.
Media Controls	Control the video in the Editor, Source and Sequence windows .
Goto	Jump to the beginning or end of a sequence.
In/Out Point Control	Sets, deleted and jumps to an in or out point.
Insert Clip	Performs a basic 3-point edit from the Source to Sequence window.
Zoom Window	Zooms in and out of the Edit and Sequence windows.
Freeze Frame	Exports a frame as a still image.
View DV Size	Previews the sequence in the Edit window in full DV size.

- **Figure B.4** shows the Edit menu with the In/Out Point Control sub-menu dropped down.

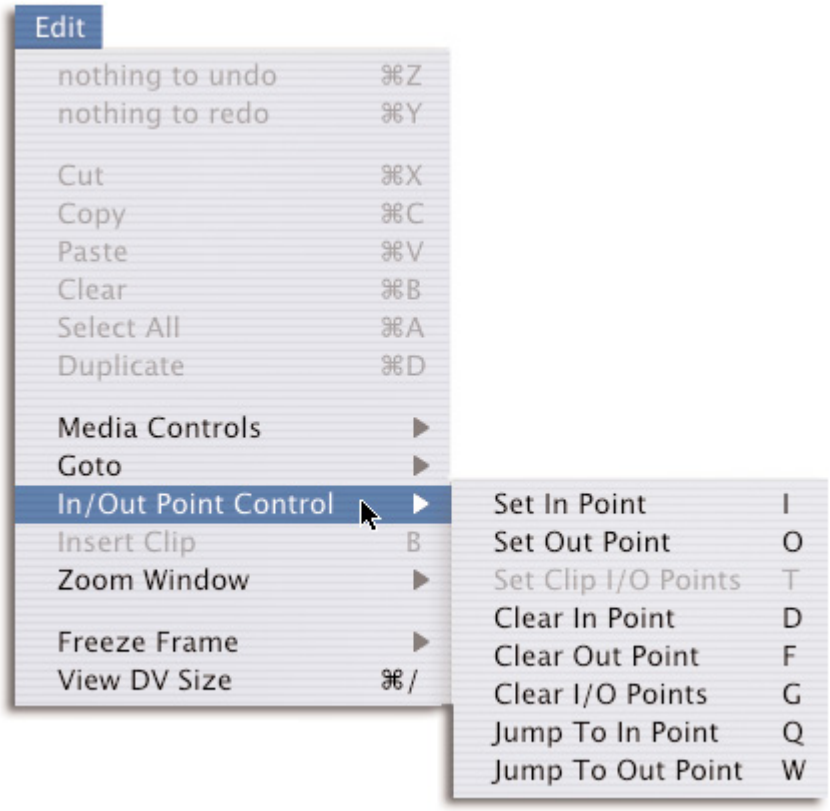


Figure B.4 The Edit menu.

Command	Description
Undo...	Undoes the last action.
Redo	Reinstates the last undo.
Cut	Cuts text to the clipboard.
Copy	Copies text to the clipboard.
Paste	Pastes the text in the clipboard.
Clear	Clears the currently selected text.
Select All	Selects all items in the active window.
Duplicate	Moves a track forward or backward in a sequence.
Media Controls	Control the video in the Editor, Source and Sequence windows .
Goto	Jump to the beginning or end of a sequence.
In/Out Point Control	Sets, deleted and jumps to an in or out point.
Insert Clip	Performs a basic 3-point edit from the Source to Sequence window.
Zoom Window	Zooms in and out of the Edit and Sequence windows.
Freeze Frame	Exports a frame as a still image.
View DV Size	Previews the sequence in the Edit window in full DV size.

- **Figure B.5** shows the Edit menu with the In/Out Point Control sub-menu dropped down.

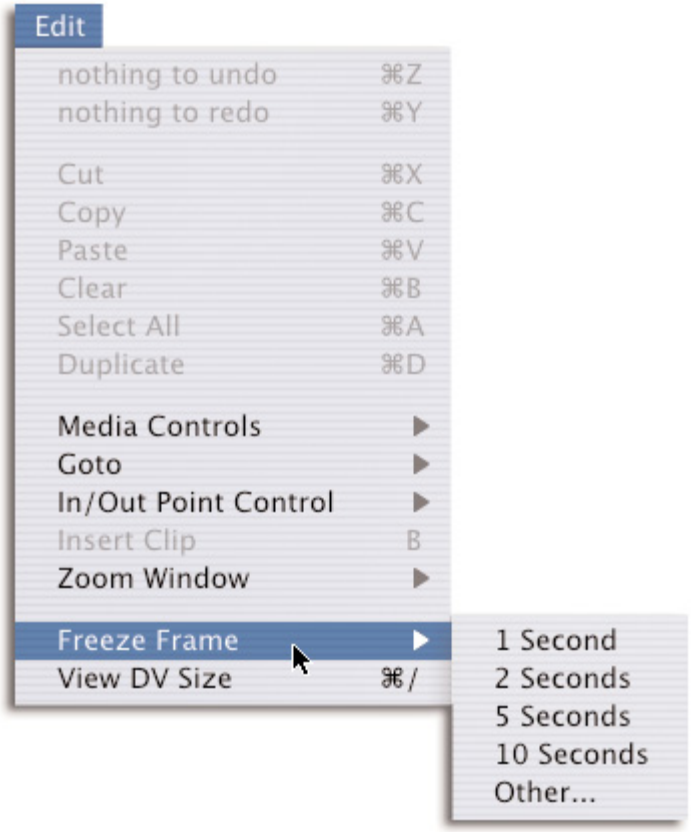


Figure B.5 The Edit menu.

Command	Description
Undo...	Undoes the last action.
Redo	Reinstates the last undo.
Cut	Cuts text to the clipboard.
Copy	Copies text to the clipboard.
Paste	Pastes the text in the clipboard.
Clear	Clears the currently selected text.
Select All	Selects all items in the active window.
Duplicate	Moves a track forward or backward in a sequence.
Media Controls	Control the video in the Editor, Source and Sequence windows .
Goto	Jump to the beginning or end of a sequence.
In/Out Point Control	Sets, deleted and jumps to an in or out point.
Insert Clip	Performs a basic 3-point edit from the Source to Sequence window.
Zoom Window	Zooms in and out of the Edit and Sequence windows.
Freeze Frame	Exports a frame as a still image.
View DV Size	Previews the sequence in the Edit window in full DV size.

- **Figure B.6** shows the Sequence menu with the Track and Render Preview sub-menus dropped down.

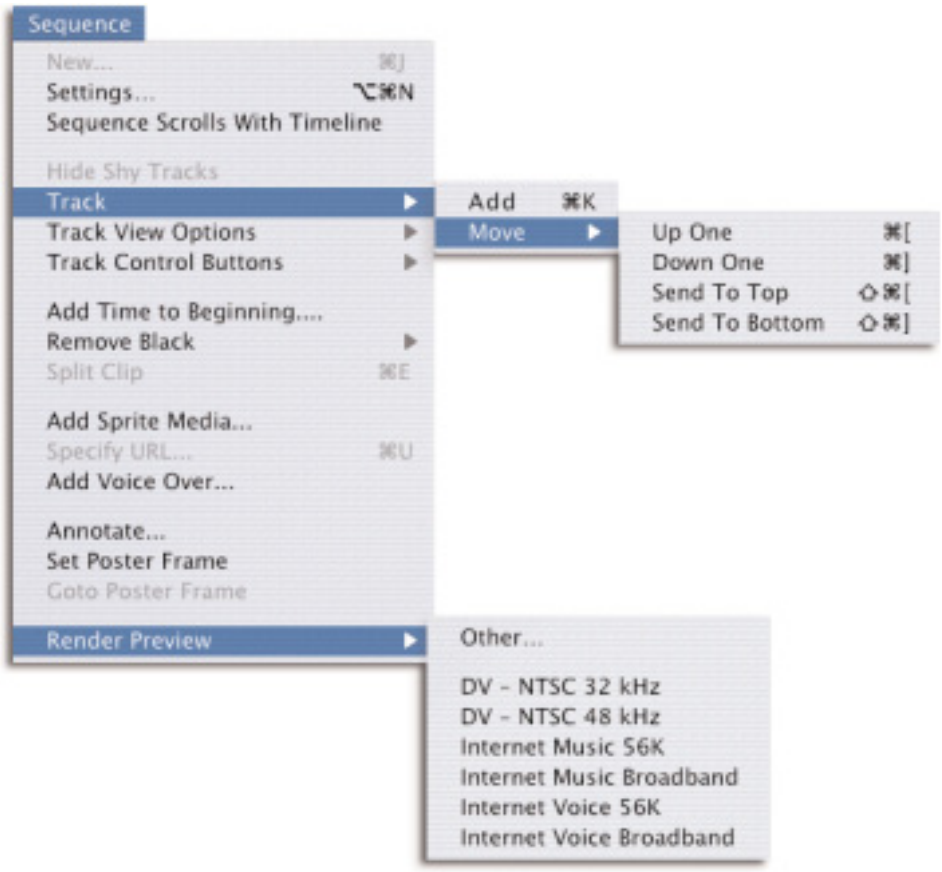


Figure B.6 The Sequence menu.

Command	Description
New...	Creates a new sequence.
Settings...	Changes the sequence settings.
Sequence Scrolls With Timeline	When checked, sequence will scroll with timeline while playing.
Hide/Show Shy Tracks	Hides/Shows tracks that have been marked to be shy.
Track	Adds a new track or re-arranges their order in the Sequence Window.
Track View Options	Changes how tracks are presented in the Sequence Window.
Track Control Buttons	Provides the functionality of the control buttons in each track from the menu.
Add Time to Beginning...	Adds blank time to the start of a sequence.
Remove Black	Removes blank space inside a track.
Split Clip	Cuts a clip at the scrubber's location.
Add Sprite Media	Inserts a Sprite Track into the current sequence.
Add Voice Over...	Allows you to record narration for the current project.
Annotate...	Opens up the Annotation Add/Edit dialog box.
Set Poster Frame	Sets the frame to be seen as the icon of the exported movie file.
Goto Poster Frame	Goes to the set poster frame.
Render Preview	Allows you to see a sequence as it would look rendered to a file.

- **Figure B.7** shows the Sequence menu with the Remove Black sub-menu dropped down.

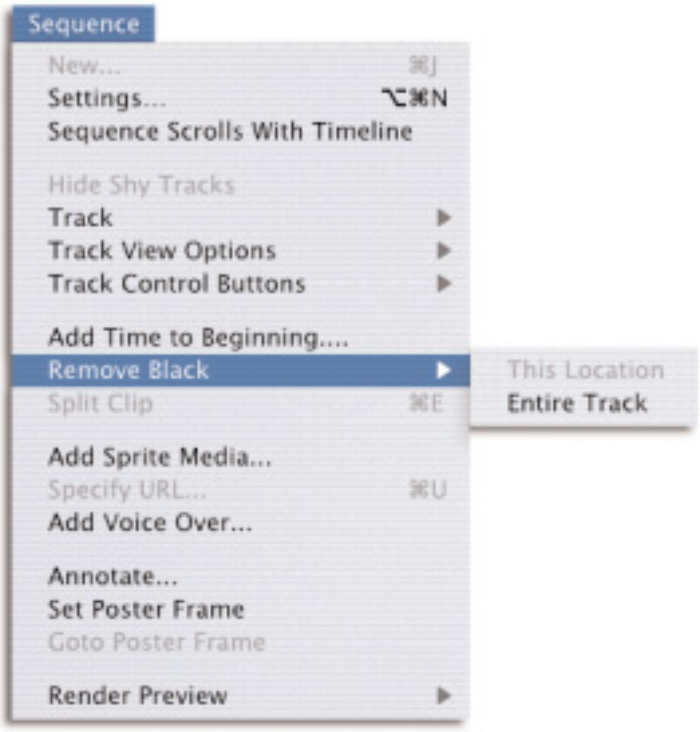


Figure B.7 The Sequence menu.

Command	Description
New...	Creates a new sequence.
Settings...	Changes the sequence settings.
Sequence Scrolls With Timeline	When checked, sequence will scroll with timeline while playing.
Hide/Show Shy Tracks	Hides/Shows tracks that have been marked to be shy.
Track	Adds a new track or re-arranges their order in the Sequence Window.
Track View Options	Changes how tracks are presented in the Sequence Window.
Track Control Buttons	Provides the functionality of the control buttons in each track from the menu.
Add Time to Beginning...	Adds blank time to the start of a sequence.
Remove Black	Removes blank space inside a track.
Split Clip	Cuts a clip at the scrubber's location.
Add Sprite Media	Inserts a Sprite Track into the current sequence.
Add Voice Over...	Allows you to record narration for the current project.
Annotate...	Opens up the Annotation Add/Edit dialog box.
Set Poster Frame	Sets the frame to be seen as the icon of the exported movie file.
Goto Poster Frame	Goes to the set poster frame.
Render Preview	Allows you to see a sequence as it would look rendered to a file.

- **Figure B.8** shows the Sequence menu with the Track View Options sub-menu dropped down.

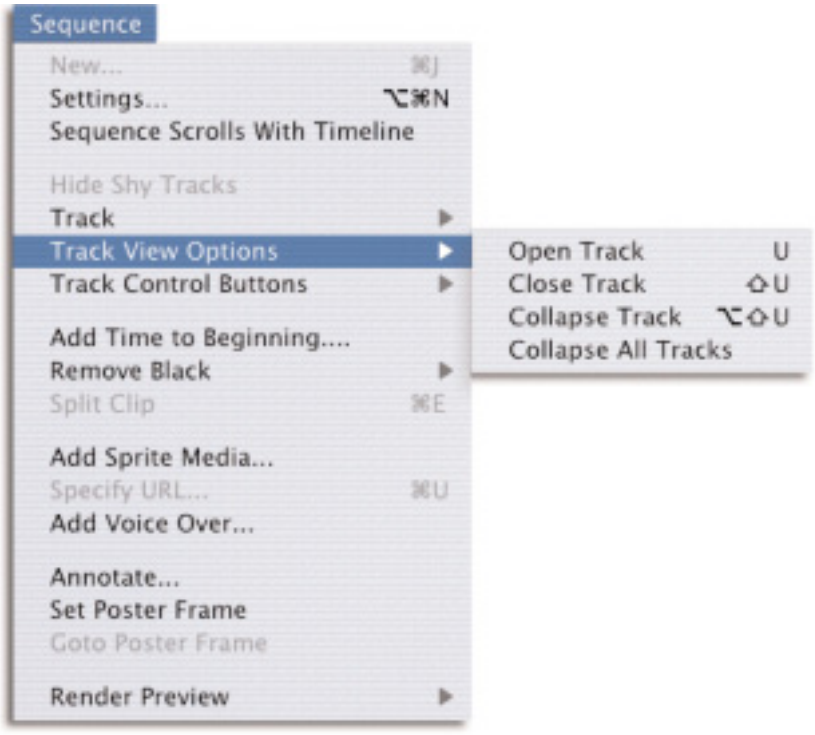


Figure B.8 The Sequence menu.

Command	Description
New...	Creates a new sequence.
Settings...	Changes the sequence settings.
Sequence Scrolls With Timeline	When checked, sequence will scroll with timeline while playing.
Hide/Show Shy Tracks	Hides/Shows tracks that have been marked to be shy.
Track	Adds a new track or re-arranges their order in the Sequence Window.
Track View Options	Changes how tracks are presented in the Sequence Window.
Track Control Buttons	Provides the functionality of the control buttons in each track from the menu.
Add Time to Beginning...	Adds blank time to the start of a sequence.
Remove Black	Removes blank space inside a track.
Split Clip	Cuts a clip at the scrubber's location.
Add Sprite Media	Inserts a Sprite Track into the current sequence.
Add Voice Over...	Allows you to record narration for the current project.
Annotate...	Opens up the Annotation Add/Edit dialog box.
Set Poster Frame	Sets the frame to be seen as the icon of the exported movie file.
Goto Poster Frame	Goes to the set poster frame.
Render Preview	Allows you to see a sequence as it would look rendered to a file.

- **Figure B.9** shows the Sequence menu with the Track Controls Buttons sub-menu dropped down.

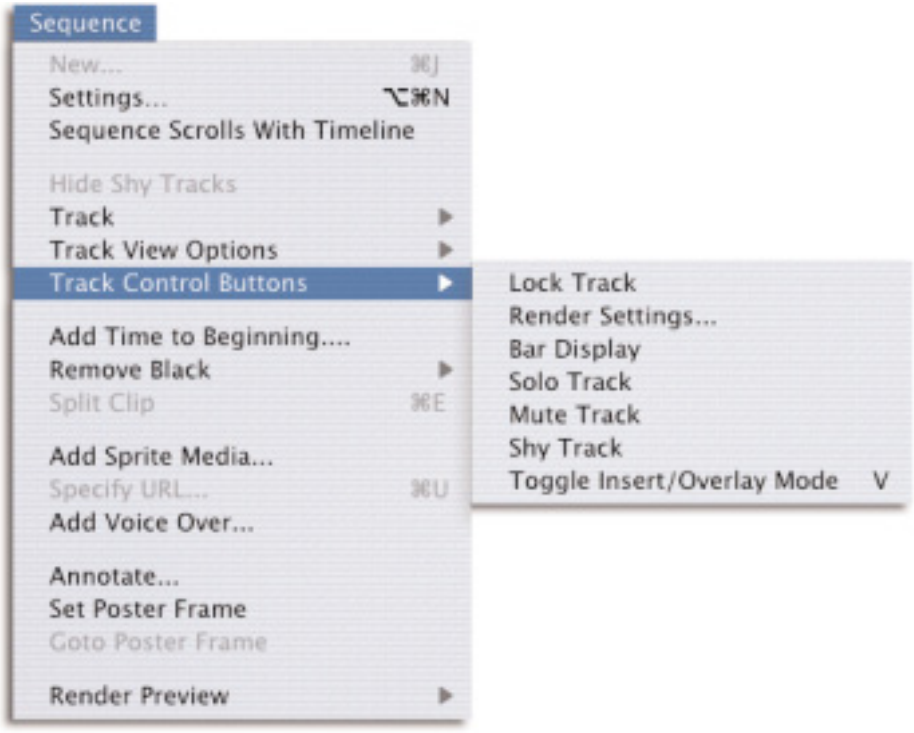


Figure B.9 The Sequence menu.

Command	Description
New...	Creates a new sequence.
Settings...	Changes the sequence settings.
Sequence Scrolls With Timeline	When checked, sequence will scroll with timeline while playing.
Hide/Show Shy Tracks	Hides/Shows tracks that have been marked to be shy.
Track	Adds a new track or re-arranges their order in the Sequence Window.
Track View Options	Changes how tracks are presented in the Sequence Window.
Track Control Buttons	Provides the functionality of the control buttons in each track from the menu.
Add Time to Beginning...	Adds blank time to the start of a sequence.
Remove Black	Removes blank space inside a track.
Split Clip	Cuts a clip at the scrubber's location.
Add Sprite Media	Inserts a Sprite Track into the current sequence.
Add Voice Over...	Allows you to record narration for the current project.
Annotate...	Opens up the Annotation Add/Edit dialog box.
Set Poster Frame	Sets the frame to be seen as the icon of the exported movie file.
Goto Poster Frame	Goes to the set poster frame.
Render Preview	Allows you to see a sequence as it would look rendered to a file.

- **Figure B.10** shows the Windows menu and
- **Figure B.11** shows the Help menu.

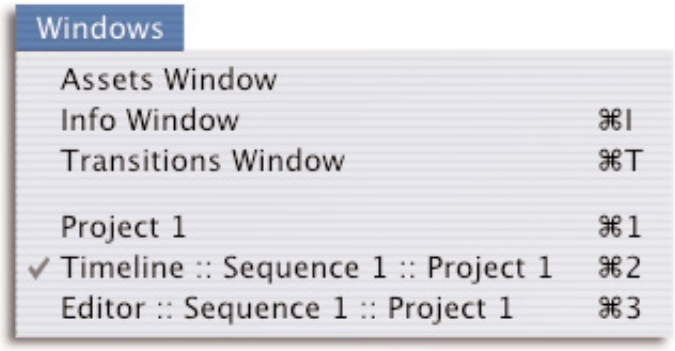


Figure B.10 The Windows menu.

Command	Description
Assets Window	Opens the Assets Window.
Info Window	Opens the Information Window for media.
Transition Window	Opens the Transition Window.
Windows	Brings the selected window to the front.

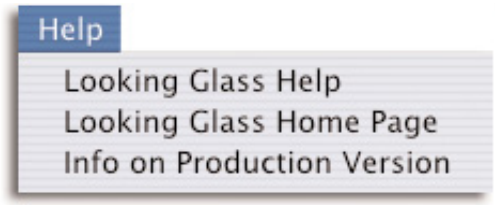


Figure B.11 The Help menu.

Command	Description
Looking Glass Help	Opens the Help topics.
Looking Glass Home Page	Opens the Looking Glass home page in your web browser.
Info on Production Version	Gives information about the professional edition of Looking Glass.

Appendix C

Keyboard Shortcuts

Timeline Shortcuts

- Q = Jump to In Point
- W = Jump to Out Point
- E = Set In Point
- I = Set In Point
- R = Set Out Point
- O = Set Out Point
- T = Set In/Out points based on highlighted clip
- D = Clear In Point
- F = Clear Out Point
- G = Clear I/O Points
- B = Insert clip from Source window to timeline.
- A = Go to start of sequence
- S = Go to end of sequence
- V = Toggle Insert/Overlay mode
- K = Pause
- L = Play
- ~ = Play
- 1 = Step back 10 frames
- 2 = Step forward 10 frames
- 3 = Previous frame
- 4 = Next frame
- 5 = Play
- 6 = Play till Out Point
- + = Step zoom in
- - = Step zoom out
- SHFT + = Max zoom in
- SHFT - = Max zoom out
- 0 = Return to 100% zoom
- Home = Start of sequence
- End = End of selected sequence
- U = Open bar view for selected track
- SHFT U = Close bar view for selected track
- SHFT OPT U = Collapse selected track

General Shortcuts

- -A = Select All
- -D = Duplicate
- -E = Split Clip
- -F = Find Files
- -I = Information Window
- -J = New Sequence
- -K = New Track
- -M = Make Movie
- -N = New Project
- -O = Open Project
- -Q = Quit Looking Glass
- -R = Redo
- -S = Save As
- -T = Transition Window
- -U = Specify URL
- -W = Close
- -Z = Undo
- - / = View DV Size

- ⌘ - B = Delete
- ⌘ - P = Record To DV
- ⌘ - Y = Redo
- OPT ⌘ N = Sequence Settings...
- OPT ⌘ S = Save As
- OPT ⌘ C = Capture...
- ⌘ [= Move a track up one
- ⌘] = Move a track down one
- ⌘ SHFT [= Move a track to the top
- ⌘ SHFT] = Move a track to the bottom

• **Option +  = Movie snaps to 100%**

Using this shortcut automatically sizes the movie in the Editor Window to 100%.

• **Option + Source Window = Put in sequence**

Clicking anywhere in the Source Window while holding down Option inserts the clip in the Source Window into the current sequence.

• **Option + ⌘ + Click between Scrubber & clip's end = Go to last frame**

Clicking between the end of a clip and the scrubber, while holding down the buttons listed, will automatically move the scrubber to the last frame of that clip

Appendix D

Buttons

Editor Window

Transport Controls

Button		Description
Previous Mark		Moves the Scrubber to the previous mark.
Go To In Point		Moves the Scrubber to the set In Point.
Previous Frame		Moves the Scrubber to the previous frame.
Play		Plays the Sequence from the Scrubbers position.
Next Frame		Moves the Scrubber to the next frame.
Go To Out Point		Moves the Scrubber to the set Out Point.
Next Mark		Moves the Scrubber to the next mark.
Set In Point		Sets an In Point at the Scrubber's location.
Remove In Point		Deletes the In Point.
Remove In and Out Points		Removes the In & Out Points in a sequence.
Remove Out Point		Deletes the Out Point.
Set Out Point		Sets an Out Point at the Scrubber's location.
Set/Clear Mark		Adds or deletes a mark at the Scrubber's current location.

Tool Palette

Button	Description
Arrow Tool	Reposition media in the Editor Window.
Rotate Tool	Rotates media in the Editor Window.
Flip Tool	Flips media horizontally in the Editor Window.
Zoom Tool	Zoom In/Out on Editor Window content.

Sequence Window

Transport Controls

Button	Description
Previous Mark	Moves the Scrubber to the previous mark.
Go To In Point	Moves the Scrubber to the set In Point.
Previous Frame	Moves the Scrubber to the previous frame.
Play	Plays the Sequence from the Scrubbers position.
Next Frame	Moves the Scrubber to the next frame.
Go To Out Point	Moves the Scrubber to the set Out Point.
Next Mark	Moves the Scrubber to the next mark.
Set In Point	Sets an In Point at the Scrubber’s location.
Remove In Point	Deletes the In Point.
Remove In and Out Points	Removes the In & Out Points in a sequence.
Remove Out Point	Deletes the Out Point.
Set Out Point	Sets an Out Point at the Scrubber’s location.
Set/Clear Mark	Adds or deletes a mark at the Scrubber’s current location.

Track Buttons

Button		Description
Lock		Lock makes a track unchangeable.
Render Settings		Sets render options per track for Make Movie.
Frames		Cycles through frames preview in the Timeline.
Solo		Solo mutes all tracks but the one selected.
Mute		Turns a track off in the Editor & Sequence Windows.
Shy		Shy hides track from the Timeline.
Overlay/Insert		Cycles between overlay and insert modes.

Appendix

E

Connecting Capture Devices

This appendix covers general issues regarding connecting a camera or deck to your computer via FireWire or a USB capture device, as well as a comprehensive breakdown of the options QuickTime gives when capturing video and audio.

For more information regarding using the Looking Glass software to capture media, see **Chapter 3: Bringing Media Into Projects**.

DV

FireWire is used to transfer digital video from DV cameras. The FireWire cable plugs into a special FireWire port on your camera and into the back of your Macintosh. Most Macintosh computers produced since the iMac in 1998 come with a FireWire port.

FireWire is not only fast, but transfers both video and audio. On some cameras FireWire is referred to as iLink or DV In/Out.

- **Figure E.1** shows what a FireWire cable looks like.
- **Figure E.2** shows where the FireWire ports are on the back of a PowerMac G4 tower.

Connecting

1. To connect your DV camera or deck to your computer first plug the FireWire cable into the back of your computer (**Figure E.3**).
2. Next, plug the other end of the FireWire cable into your camera or deck (**Figure E.4**).

Figure E.1 A FireWire Cable.

Figure E.2 The FireWire ports on a PowerMac G4 tower.

Figure E.3 Plug the FireWire cable into your computer.

Figure E.4 Then, plug the FireWire cable into your camera.

USB

USB (Universal Serial Bus) is used for connections of all types. It can be used to connect printers, keyboards, digital still camera, microphones, and even a video camera to a computer. To capture video on a computer through a USB port you will need a USB Capture Device.

- **Figure E.5** shows what a typical USB capture device looks like.
- **Figure E.6** shows where the USB ports are on the back of a PowerMac G4 tower.

USB Capture Devices only capture video at 320x240 resolution.

USB Capture Devices connect to cameras through RCA and S-Video cables. Most modern cameras have both RCA and S-Video ports built in.

RCA cables (**Figure E.7**) have three plugs: yellow, white and red. The red and white plugs carry the left and right channels of a stereo audio signal. The yellow RCA plug carries the video signal.

S-Video (**Figure E.8**) carries video only. The S-Video signal is higher quality than the signal for RCA video. We recommend using the RCA red and white plugs for audio, and the S-Video plug for video. The yellow(video) RCA plug will not be necessary.

Figure E.5 A USB capture device.

Figure E.6 USB ports on a PowerMac G4.

Figure E.7 RCA plugs.

Figure E.7 S-Video cable.

Modern cameras come with both S-Video and RCA ports. **Figure E.8** illustrates where these ports typically are. Keep in mind that all cameras are different.

Connecting

1. Plug the USB capture device into a USB port on the back of your computer (**Figure E.9**).
2. Plug the RCA cables you will be using into the USB capture device (**Figure E.10**).

(continued)

Figure E.8 RCA and S-Video ports on a video camera.

Figure E.9 Plug the USB capture device into your computer.

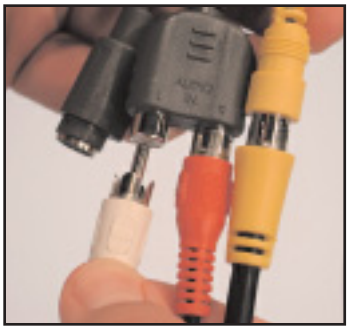


Figure E.10 Plug the RCA cables you will be using into the USB capture device.

Connecting (cont.)

3. If you will be using the S-Video cable, then plug it into the USB capture device. (**Figure E.11**).
4. Plug the RCA cables you will be using into the camera (**Figure E.12**).
5. Lastly, plug the S-Video cable into the camera. (**Figure E.13**).

Figure E.11 RCA and S-Video ports on a video camera.

Figure E.12 Plug the RCA cables into your camera.

Figure E.13 Plug the S-Video cable into your camera.

Capture Options

QuickTime provides many options, such as compression schemes, when capturing video and audio. These options are accessible from the Capture Video window in Looking Glass. The video and audio options buttons are just below the video display (**Figure E.14**).

At the time of this writing, no USB capture device drivers have been written for OS X.

Figure E.14 The Video and Audio option buttons are just below the video display.

Video

The capture Video dialog box contains all the options for altering video before digitizing. The first pull down menu (**Figure E.15**) lists four options: **Compression, Image, Source, USB Vision**. The USB Vision options is only shown if you have USB capture device connected to your computer.

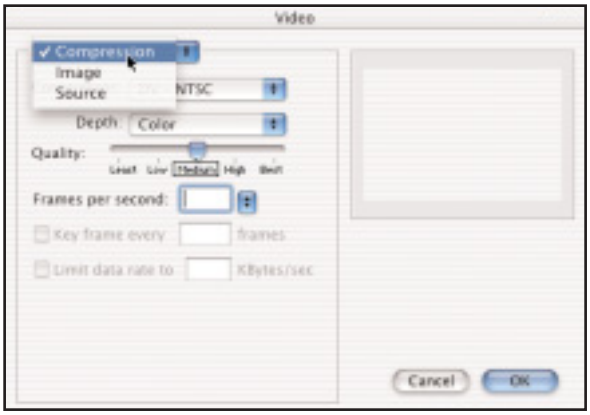


Figure E.15 The three main choices in the video options window are Compression, Image, Source and USB Vision if you have a USB capture device connected.

Compression

The Compress section allows you to specify a compression codec for your video, a frame rate, keyframes, data rate, and color depth.

Compressors

When the camera or deck is connected via a USB Capture Device, Looking Glass will default to the USB Vision compressor. If a DV camera or deck is connected via FireWire, the default compressor will be DV - NTSC. The other compressors are:

- Animation
- Apple BMP
- DV-NTSC
- DV-PAL
- Graphics
- H.261
- H.263
- Intel Indeo© Video R3.2
- Intel Raw
- Microsoft RLE
- Microsoft Video 1
- Microsoft JPEG A
- Microsoft JPEG B
- On2 VP3 Video 3.2
- Photo - JPEG
- PNG
- Sorenson Video
- TGA
- TIFF
- Video
- USB Vision

Depth

The depth feature allows for selecting the color depth of the image you are capturing. The default is Color and cannot be altered.

Quality

The quality feature allows for selecting the quality of the image you are importing. Looking Glass automatically chooses the optimum quality setting. The higher the quality, the bigger the file.

Frames Per Second

You can bring your video in at any FPS rate you choose. The default is 30 for both DV and USB connections. It is recommended you import your video at 30 FPS, and lower it if necessary when outputting your finished project.

Key Frame

The Key Frame feature allows you to set key frames throughout the media clip for smoother playback. This is not needed on import, and is disabled.

Limit Data Rate

This feature allows a ceiling to be applied to the data rate of a media clip. This is disabled for digitizing by QuickTime.

Image

The Image section allows you to adjust the color, brightness and other aspects of the video you are importing. This is only functional if importing using a USB Capture Device. The options are:

Source

The Source section contains options for choosing the format and digitizers the video will be processed by during input.

Digitizer

The Digitizer option contains the codecs available for video that Looking Glass is importing. If video is being imported via FireWire, the choices are DV Video and USB Vision. DV Video is the default and the optimum choice.

Input

Input is dependent on the particular drivers that are loaded when you plug in your camera. QuickTime supports dozens of FireWire capable digital devices and automatically loads the correct driver when the device is connected. Looking Glass automatically sets this selection for you.

Format

The format option specifies the regional format of your video. NTSC is the default, and is the standard for a video signal in the United States. PAL is the European standard, and SECAM is used by France, the Middle East and most of Eastern Europe.

Do not select a regional standard that is not your own. If you import your video using a standard that is not used by the media devices sold in your country, you could possibly lose all chances of playing your finished product on a standard television or camera for your region. The default format is NTSC.

Filter

The filter option is only available when using a USB Capture Device. The choices are 'TV/Laserdisc' or 'VCR.' The 'TV/Laserdisc' setting is superior and is the recommended choice.

USB Vision

USBVision is only available when connecting your camera to your computer via a USB capture device.

USB Bandwidth

This option lets you adjust the amount of information that your USB capture device can send to your computer at one time. Looking Glass recommends you keep the setting at 100 (the default).

X off-set

Adjusts the position of the video over the X coordinate. Looking Glass sets a default value for you. Hitting the 'Default' button restores the Looking Glass' default if you have moved it.

Y off-set

Adjusts the position of the video over the Y coordinate. Looking Glass sets a default value for you. Hitting the 'Default' button restores the Looking Glass' default if you have moved it.

Still Image

Clicking this button will take the current video frame being displayed and record it as a still image.

Audio

When you click the audio tab you'll be presented with all the options Looking Glass provides to alter and tweak your audio while digitizing. The first pull-down menu lists three options: Compression, Sample, and Source (**Figure E.15**).

The right side of the window presents you with an option to turn on or off your external speakers during digitizing, a Volume and Gain control, as well as a VU meter. This meter fluctuates as you play audio from your deck or camera through your computer. If the meter goes into the red, then your volume is to hot and it will sound distorted. If the VU meter hardly moves, then your volume is to low and will be barely audible. Adjust the Volume and Gain controls as necessary. **It is recommended that the Volume remain at the default setting of 100, and that only the Gain control be adjusted.**

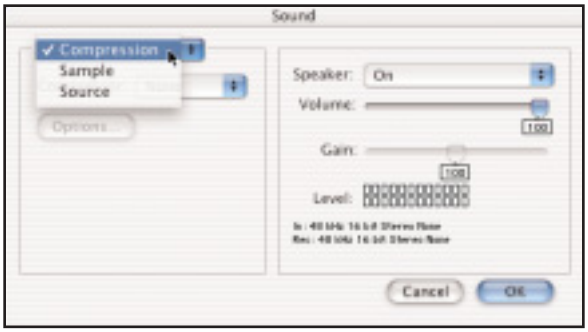


Figure E.15 The Sound options window has three main choices: Compression, Sample, and Source.

Compression

The compress section allows you to specify a compression codec for your audio. Looking Glass currently supports 29 audio compressors.

Some of these compressors have options that you adjust to fine tune their effects. If a compressor does have options available the then 'Options' button will become clickable when that compressor is chosen. The compressors available are:

- MACE 3:1
- MACE 6:1
- Qdesign Music 2
- Qualcomm PureVoice™
- MetaSound AC24v1
- MetaVoice RT24v2
- MetaSound AC8v1
- MetaSound AC10v1
- MetaSound AC16v1
- MetaSound AC24v2
- MetaSound AC32V2.0
- MetaSound AC40V2.0
- MetaSound AC48V2.0
- MetaSound ACS16V2.0
- MetaSound ACS20V2.0
- MetaSound ACS32V2.0
- MetaSound ACS48V2.0
- MetaSound ACS64V2.0
- MetaSound ACS80V2.0
- MetaSound ACS96V2.0
- MetaSound AC06V2.0
- MetaSound ACS12V2.0
- ALaw 2:1
- 32-bit Floating Point
- 64-bit Floating Point
- IMA 4:1
- 24-bit Integer
- 32-bit Integer
- uLaw2:1

Sample

The sample section allows you to specify the sample rate your audio will be captured at. Choose between the kHz, sample bit rate. The higher the quality you choose, the bigger your audio files will be.

Source

Source has two options: 'Device' and 'Input.' The Source section allows you to choose the source for the audio input.

Device

When your camera or deck is plugged in via a FireWire cable then you will be presented with three options in the 'Device' drop-down menu: Built-In, DV Audio, and Internal CD.

Input

The choices in the Input drop down menu will be based on what you have chosen as your Device in the previous menu.

- **Built-In:** This option for Device allows you to select from the audio sources built into your computer. The selections include External Mic, Sound In, Internal Modem.
- **DV Audio:** Selecting DV Audio will pull the sound directly from the device you have hooked up to your computer via FireWire. You can then choose to record the sound in First 2 Channels (stereo), Second 2 Channels, or Mix 4 Channels.
- **Internal CD**: This option will give you only one input choice: your CD-ROM drive. If you place an audio CD inside your CD-ROM drive you can record the sound from CD as you digitize.

Appendix F

Supported File Types

This appendix will list all the file types, compression codecs, and export files that are compatible with Looking Glass.

Audio Files Supported

- Audio Interchange Format (aiff, aif, aifc)
- Global System for Mobile Audio (gsm, gsd)
- MP3 playlist files (m3u)
- Qualcomm PureVoice™ (qcp)
- uLaw (au, snd, ulw)
- MPEG Audio (mpeg, mpg, mp3)
- MPEG-1 Audio (mpeg, mpg, m1s, m1a, mp2, mpm, mpa)
- MPEG-2 Audio (mpeg, mpg, m1s, m1a, mp2, mpm, mpa)
- Musical Instrument Digital Interface (midi, mid, rmi, smf, kar)
- QuickTime Audio (mov, qt)
- Sound Designer 2 (sd2)
- Windows Wave (wav)
- SoundFont 2 (sd2)

Video Files Supported

- AutoDesk Animator (flc, fli)
- Digital Video Stream (dv, dif)
- Shockwave Flash 3/4 (swf)
- MPEG-1 System (mpeg, mpg, dat, m1s, mpgx, mpm, rtf)
- MPEG-2 System (mpeg, mpg, m2s)
- MPEG-1 Video (mpeg, mpg, mpv, m1v, m75, m15)
- MPEG-2 Video (mpeg, mpg, m2v)
- QuickDraw Picture Sequence (pics)
- QuickTime Video (mov, qt)
- Video For Windows (avi, vfw)
- Animated Graphics Interchange Format (gif)

Graphic Files Supported

- Graphics Interchange Format (gif)
- JPEG File (jpg, jpeg, jpe)
- MacPaint (pntg, pnt, mac)
- Photshop (psd)
- Portable Network Graphics (png)
- QuickTime Image Format (qti)
- Silicon Graphics Image (sgi, rgb)
- Targa (tga, targa)
- Tagged Image File Format (tiff, tif)
- Windows Bitmap (bmp)

Video Export Files Supported

- Animation
- BMP
- Cinepak
- Component Video
- DV – NTSC
- DV – PAL
- Graphics
- H.261
- H.263
- Intel Indeo® Video 5.0
- Microsoft JPEG A
- Microsoft JPEG B
- None
- Photo – JPEG
- Planar RGB
- PNG
- Sorenson Video
- Sorenson Video 3
- TGA
- TIFF
- Video

Audio Export Files Supported

- 24-bit Integer
- 32-bit Floating Point
- 32-bit Integer
- 64-bit Floating Point
- ALaw 2:1
- IMA 4:1
- MACE 3:1
- MACE 6:1
- MetaSound AC06 V2.0
- MetaSound AC10v1
- MetaSound AC10v2
- MetaSound AC16v1
- MetaSound AC16v2
- MetaSound AC24v1
- MetaSound AC24v2
- MetaSound AC32 V2.0
- MetaSound AC40 V2.0
- MetaSound AC48 V2.0
- MetaSound AC8v1
- MetaSound AC8v2
- MetaSound ACS12 V2.0
- MetaSound ACS16 V2.0
- MetaSound ACS20 V2.0
- MetaSound ACS32 V2.0
- MetaSound ACS48 V2.0
- MetaSound ACS64 V2.0
- MetaSound ACS80 V2.0
- MetaSound ACS96 V2.0
- MetaVoice RT24v2
- QDesign Music 2
- Qualcomm PureVoice
- uLaw 2:1