User's Manual

Version 1.1.1

radius

EditDV Unplugged

Dive into DV Editing for Everyone

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Contents

Chapter 1: Welcome To EditDV Unplugged

Welcome to Radius EditDV Unplugged, the easy to use, QuickTime nonlinear editing software for all digital video post production using the DV format. With integrated titling and keyframe animation Radius EditDV Unplugged provides important easy to use tools for the digital artist working in desktop video. EditDV Unplugged includes both drag and drop and professional three-point video and audio editing, high quality easy to use transitions, and multi-colored, WYSIWYG titling right on your video in a simple three window environment.

With Radius EditDV Unplugged you can:

- Organize audio and video media to use in a program
- Capture source clips from DV tape
- Trim source clips for use in a program
- Assemble source clips into a sequential program
- Add transitions between clips
- Apply filters to add special effects
- Utilize the Titling filter to create titles and credits
- Animate effects over time with keyframing capabilities
- Print final programs to DV tape to create digital masters

System Requirements

Radius EditDV Unplugged is a QuickTime application and is compatible with IEEE 1394, FireWire hardware. To use Radius EditDV Unplugged effectively for video production you need the following:

- Mac OS computer with a minimum of 32 megabytes of memory
- Qualified hard disk.
- FireWire card.
- Apple System 8.0 or later and QuickTime 2.5 or later

Note: Please refer to the specifications of your FireWire card for complete compatibility information. Please check the Radius Web site at www.radius.com for the latest information on recommended equipment.

Optional Equipment:

- one or more hard drives (internal or external) for storing your video and audio media.
- A DV format camera or VTR with bi-directional FireWire support (DV in/out).
- A video monitor attached to your DV device is required for full motion full screen play back of your DV footage.

Before Running Radius EditDV Unplugged

Make sure that you've installed your FireWire card and software and that everything is working properly. Owners of MotoDV can capture their clips using MotoDV and are ready to edit them. Owners of Apple FireWire must first install device control into EditDV Unplugged.

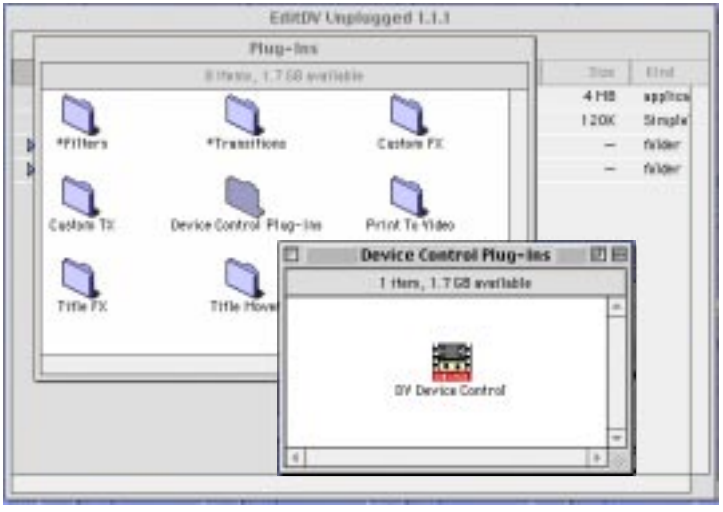
To install Device control plug-in for Apple FireWire owners:

1. Locate your "FireWire" folder that was installed on your system and open the folder called "FireWire Plug-ins for Premiere".

   It should look like this.

2. Drag the file named “DV Device Control” into the EditDV Unplugged/Plug-ins/Device control folder.

It should look like this.



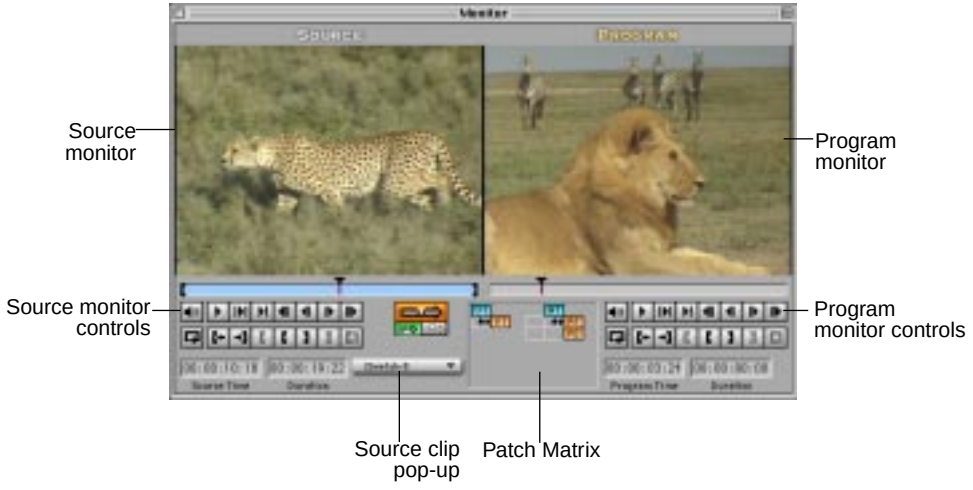
Chapter 2: An Overview of Radius EditDV Unplugged

This chapter provides an overview of Radius EditDV Unplugged to get you started on your first project. After installing your FireWire card and Radius EditDV Unplugged application you are ready to begin working with Radius EditDV Unplugged to create a video program.

This chapter includes a tour of EditDV Unplugged that describes the three main windows of the interface and how they relate to each other. It then provides a step-by-step tour of creating a complete video project – from capturing video clips to completing your final video tape.

A Tour of the Windows in Radius EditDV Unplugged

The Monitors Window



The picture above shows the Monitors window with the Source monitor and Program monitor displayed. EditDV Unplugged uses a side by side display where the player on the left is used to review source clips that are

then assembled into a sequence to create a program, displayed on the right. Your program will ultimately contains all clips and effects that you specify in the Sequencer window.

The Source monitor - on the left of the Monitors window is used to play your source clips and select the frames you want to use in your program. It includes controls to play your clips, scrub through them by dragging the mouse on the time pointer. You can also select part of a clip by marking the beginning (mark in) and ending (mark out) of the section of the clip that you want to use in your program.

The Program monitor - on the right of the Monitors window displays your program as you assemble it. You can play or scrub the entire program, or any individual track.

The FX monitor - replaces the Program monitor when you are working with the special effects filters included with Radius EditDV Unplugged. The FX monitor displays previews of how your video will look after it has been modified by an effect. It provides a highly interactive workspace where you can work directly with the mouse to position video, text and graphic effects.

The Trim window - is used to adjust the cut points between your clips after you have placed them into your program. The Trim monitor is a film style, tail/head, side-by-side display of the cut point. It allows you to adjust one or more cut points to create roll and split edits, including audio trimming.

Trim window

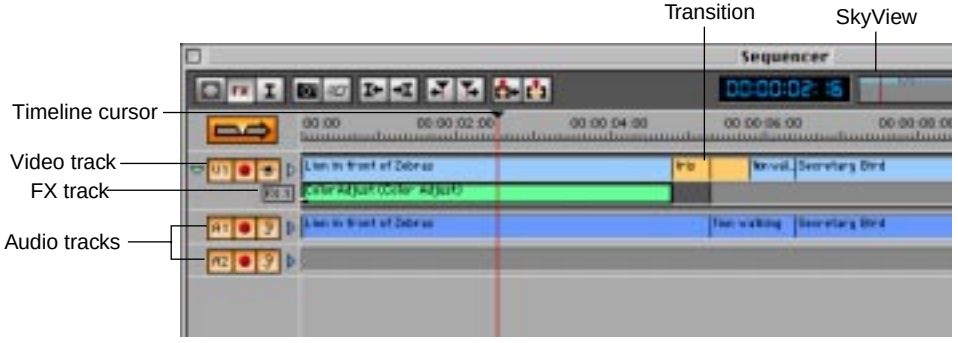
The Project Window

The Project window - is used to organize your audio and video source clips. You place information about your clips in separate bins that can be displayed in either text or picture view. These references are maintained as part of your project so EditDV Unplugged can locate all of your clips on disk.

The Sequencer Window

The Sequencer window - is a graphic representation of your entire video and audio program along a Timeline with the beginning of your program at the left. This visual description of your program is one of the most powerful features of a non-linear editing system. It allows you to see the relative position of video clips, audio clips and special effects in your program. To add source clips to the Timeline in the Sequencer

window, you drag them either from the Source monitor or the Project window, or you can set the in and out points in the Source monitor and use the Edit button to add them to the timeline.



Window Management

Radius EditDV Unplugged is preset to display the Project window, Sequencer window, and Monitors window on your computer monitor. You can show or hide any of the windows using the Window menu.

Building a Program with Radius EditDV Unplugged

The following sections describe how to build a program in Radius EditDV Unplugged – from starting a new project to printing the final project to videotape.

Getting Started

To start Radius EditDV Unplugged:

1. If necessary, double-click the icon for the hard disk where Radius EditDV Unplugged is stored.

   You see the Radius EditDV Unplugged folder in the volume you chose during installation.

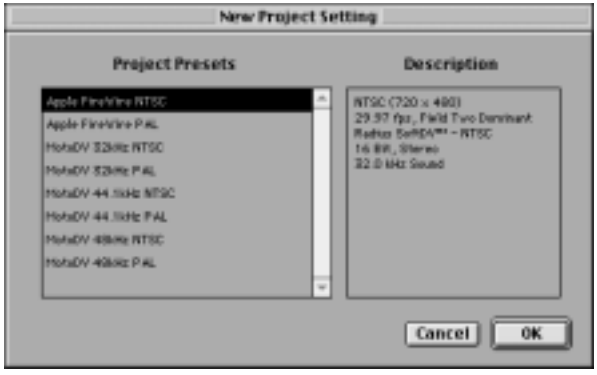
2. Double-click the Radius EditDV Unplugged folder.

3. Double-click the Radius EditDV Unplugged icon.

   You see the Open Project dialog.

4. Click New to create a New Project.

   The New Project Setting dialog box will appear.



5. Select a project preset from the dialog box and click OK to start a new project.

When you select a **project preset** you see a short description of it in the Description box. Each preset specifies video and audio options that will be used to build your final project.

The project presets provided with Radius EditDV Unplugged provide options for the audio formats supported by the DV format. Select the audio sampling rate that will work with your DV system, to output to

tape when you print your final project. If your DV system supports multiple sample rates select the sample rate that matches the audio format that you will be using for your project.

Capture Source Media

If you are a MotoDV owner, use Radius MotoDV to capture your DV format video and audio clips following the instructions in the MotoDV manual. If you have any other FireWire boards use the capture window to capture your clips. You can also import PICT files, QuickTime movies and music from CD's, and a variety of other computer graphics and animation files into EditDV Unplugged.

Using MotoDV

Radius EditDV Unplugged includes special drag and drop features to facilitate importing clips captured with MotoDV. Use MotoDV and the Finder to organize your clips into separate folders, then import them into EditDV Unplugged by dragging files or folders to the left or right side of the Project window as follows:

- Drag clips from the Finder into the appropriate bin.

  Select one or many clips (using Shift-Select) in the Finder and drag them into the right side of the Project window to put them in the currently opened bin. You can also drag them to the left side of the Project window over the bin name you would like them stored in.

- Drag a folder to the left side of the Project Window.

  A new bin will be created with the folder name and all of the clips in that folder will be stored in that bin.

- Drag a folder to the right side of the Project Window

  All of the clips in the folder will be placed in the currently open bin.

You can also use the Import command in the File menu to import clips one at a time into bins.

After importing source clips, you are ready to use Radius EditDV Unplugged to create a video program.

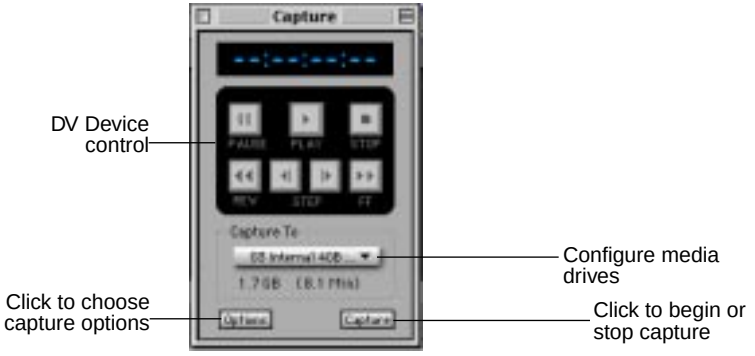
Using the Capture Window

Radius EditDV Unplugged is designed to capture clips using the Capture window. Be sure to capture to a drive that you've configured and tested for DV performance with your FireWire card. Before capturing clips you must configure your system for capture from a DV device. Be sure that the Device control/Plug-ins folder contains the appropriate device control plug in. For more information see, "To install Device control plug-in for Apple FireWire owners:" on page 2.

To Configure System for Capture:

1. Select Open Capture Window from the Capture Menu.

   You see the Radius EditDV Unplugged Capture window the controls will be grayed-out until a DV device control plug-in has been selected.



2. Select the Options button.

   You see the Radius EditDV Unplugged Options dialog. Select DV Device Control from the Plug-in pop-up.

3. Set the Sound and Video input dialogs for DV.

   For more information, see "To Configure Video Input Settings:" on page 35 and "To Configure Sound Input Settings:" on page 36.

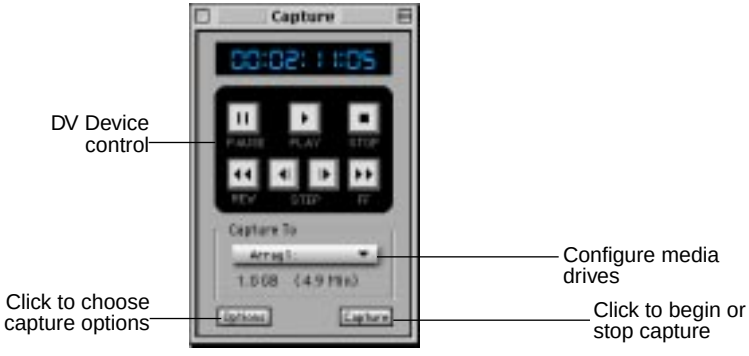
4. Be sure your DV device is attached and in VTR mode.

   You are now ready to capture clips using Radius EditDV Unplugged.

To Capture Clips:

1. Select Open Capture Window from the Capture Menu.

   You see the Radius EditDV Unplugged Capture window.

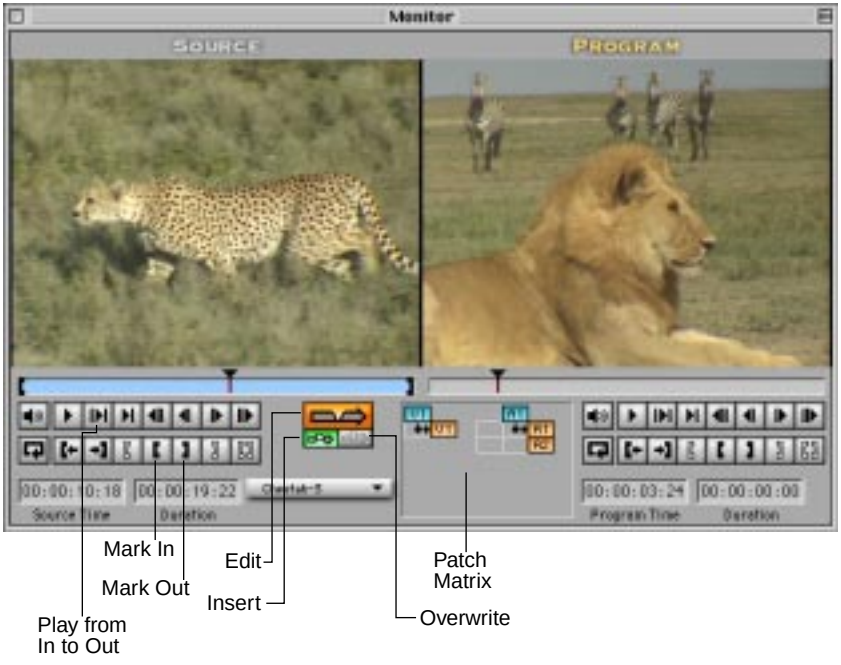


2. Use the controls in the Capture window to control your camera to navigate to the position on your tape that you wish to record.

3. When you find the starting point you want to record, make sure the DV device is playing the tape and press the Capture button.
4. Each clip you capture will be placed in the current bin in the Project window.

Reviewing and Choosing Source Clips

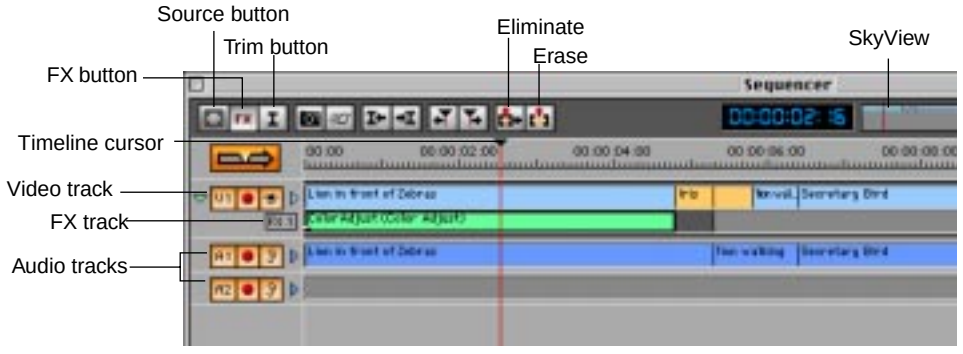
After placing source clips in the Project window, you are ready to view the clips in the Source monitor. Double-clicking on the clip icon in the Project window or dragging the clip from the Project window to the Source monitor opens the clip in the Source monitor. Once the clip is in the Source monitor, you can play it, scrub through it and mark In and Out points to select the portions of clips you want to add to your program.



Assembling a Program

You assemble a program by moving clips from the Source monitor or Project window into the Sequencer window. This window contains a graphic representation of your program along a Timeline beginning at the left of the window. It shows the order the clips will play in your program, and which audio and video clips will play together. Clips that are positioned at the same time in the Sequencer window play back simultaneously.

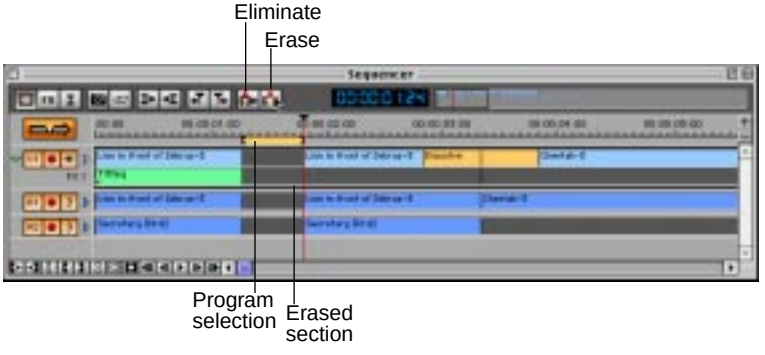
When you first open a new project, this window contains empty tracks into which you place video media, audio media and filters to create special effects. It opens with one empty video track (V1), two audio tracks (A1 and A2) and one (FX1) track. You add source clips to your program by dragging from the Source monitor to the position on the Timeline where you want that clip to play, or by using the Patch Matrix and pressing the Edit button. To create a program, you place source clips one after the other along the Timeline in the Sequencer in the order you want them to play, then add special effects and audio tracks to accompany them.



You modify clips after placing them in the Timeline by adjusting the cut point between them using the Trim window. To select a cut for trimming, place the Timeline cursor over it and press the Trim button. The Trim monitor is a film style, tail/head, side-by-side display of the cut point. The tail of the outgoing clip is displayed on the left and the head of the incoming clip is displayed on the right. The Trim window allows you to adjust two adjacent video clips as if they were two pieces

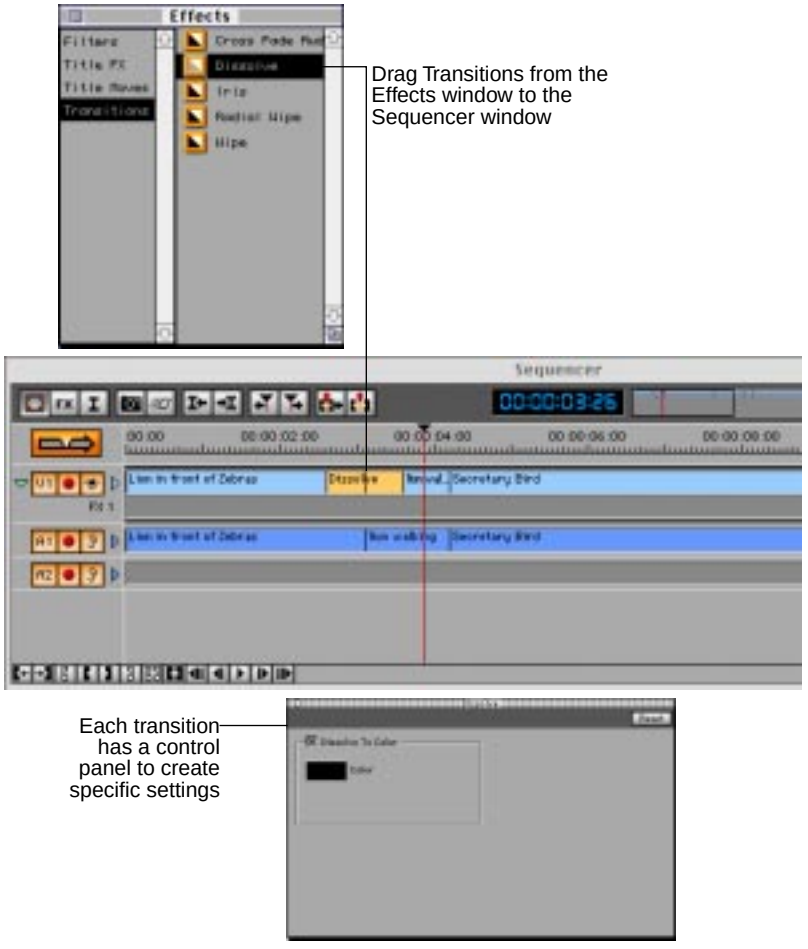
of film spliced together. You can shorten or lengthen either piece, separately or together. The Trim window includes support for traditional roll and split edits, while maintaining the splice.

The Erase and Eliminate buttons are also used to adjust clips after placing them in the Timeline. You first mark in and out points in the Sequencer to define the section of your program to be removed. You then click the Erase button to remove that section and replace it with filler that will appear as black in video or silence in audio. You click the Eliminate button to remove that section and shorten your program by the length of the removed section.



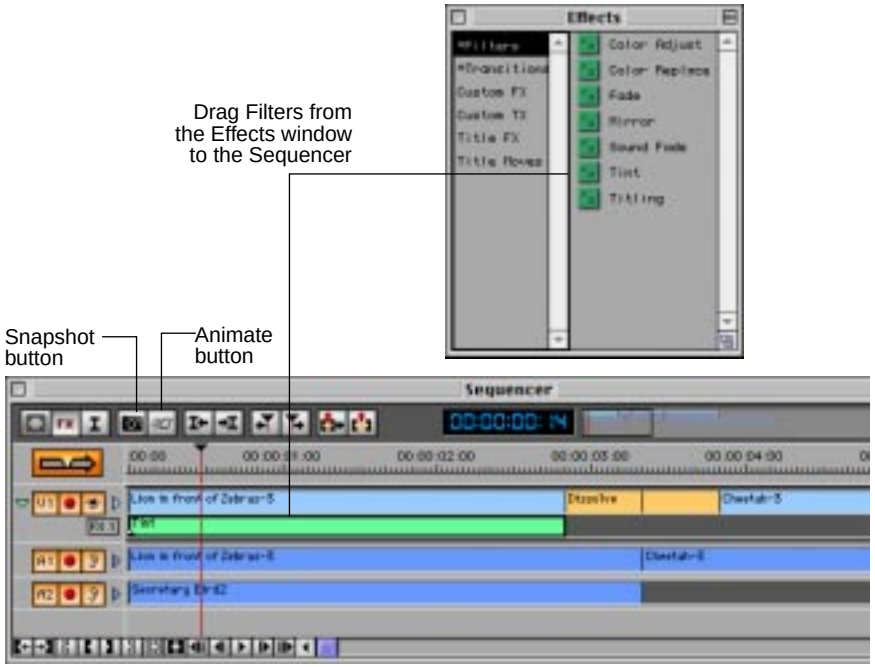
Placing Transitions Between Clips

Radius EditDV Unplugged provides a variety of professional quality transitions you can use between clips. To apply a transition, drag it from the Effects window to a cut between two clips in the Sequencer window. Because transitions involve two clips side by side, they are placed on the cut point between the clips, rather than in an FX track. You can adjust the length and position of the transition after it is applied and you can modify a transition to create a custom version. You can also trim the two clips involved in the transition using the Trim window without disturbing the transition itself.



Applying Filters to Achieve Special Effects

You create special effects with Radius EditDV Unplugged by choosing a filter from the Effects window and dragging it onto an FX track in the Sequencer window just below the video that you wish to modify. You

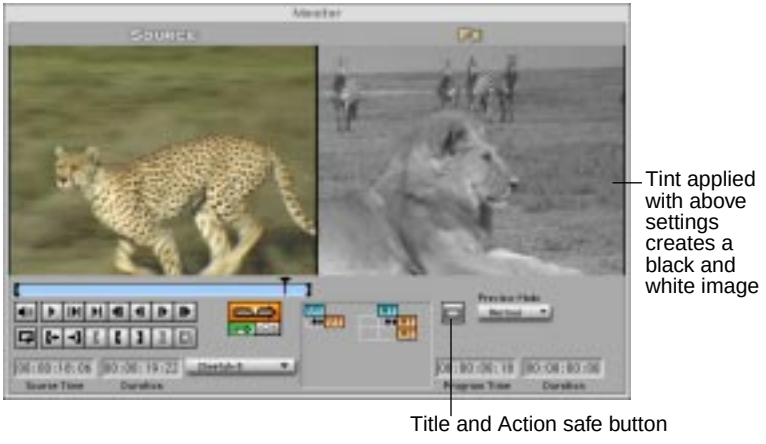


can also use the filters as a starting point for creating your own custom filters, which can be saved to disk and used again in other parts of your program or in other projects.

The FX monitor appears in place of the Program monitor whenever you drag the timeline cursor over a selected special effects filter or double click an effects filter. Each filter has a Control window where you adjust controls to choose the style of the effect. Filters can be previewed using the Animate button in the Sequencer window. With Radius EditDV Unplugged's keyframing capabilities you can animate any filter control over time to create dynamic effects.

Tint Control Window

FX Monitor



Adding Titles

The Radius EditDV Unplugged Titling filter provides the ability to easily create titles, credits, and other text for use in your program. It provides access to these powerful features:

- an assortment of TrueType and Type 1 fonts and font sizes
- the capacity for developing shadows and backgrounds to your specifications
- a color palette for text, shadows, and backgrounds
- settings for opacity and the creation of gradients for text, shadows, and backgrounds
- the ability to work with an unlimited number of text layers and to move text through a video, in a variety of ways, using keyframes

Use the Titling filter as you would any other filter in Radius EditDV Unplugged by dragging it into an FX track in the Sequencer window. With the Titling filter you can then type and format text directly in the FX monitor.

Using Keyframes

Radius EditDV Unplugged keyframes allow you to create dynamic effects that change over time. A keyframe is automatically created at the beginning of any filter. When you adjust the controls on a filter,

additional keyframes are created. Radius EditDV Unplugged calculates and uses progressive settings for each frame between the keyframes to create the final effect frame by frame.

Previewing a Program

While the Source monitor allows you to view source clips, the Program monitor is used to review the program you are constructing in the Sequencer window. Since it is possible to have many video and audio tracks within the Sequencer that are all combined to create your final program, buttons are provided along the left edge of the Sequencer window to allow you to select the tracks to play at any given time. When you click Play in the Program monitor, the track in the Sequencer with the Eyeball button active will be displayed All audio tracks, within the limits of the processing power of your computer, that have active Ear buttons will be played at the same time.

When you place your first video clip on the video track (V1) in the Sequencer window, you will see that clip in the Program monitor as long as the Eyeball button on track one is active. The buttons on the button bars below the Program monitor allow you to play your program in different ways: play, play selection only and play to the next mark point.

Previewing Effects:

You work directly with a single special effect by selecting it in the Sequencer, or double clicking it to bring up its Control panel. The result of any adjustment you make to the effect controls are previewed on the current frame in the FX monitor. To see the effect in the context of your entire program, including all video tracks, click the Snapshot button.

The Animate button in the Sequencer window is used to preview an animation of the effect over the entire length of the filter so you can review how the effect will play in your final program. This is especially useful with filters that move in the video frame, such as titles.

You can view a single finished frame containing effects in the Program monitor by positioning the Timeline cursor in the Sequencer window at the desired frame and clicking the Snapshot button in the Sequencer window. Radius EditDV Unplugged renders a snapshot of your video program at that time by applying any transitions and filters used in the frame. The resulting frame is displayed in the FX monitor for review but not stored on disk.

Making Your Master Videotape

If your video program only contains cuts you can play it immediately either in the program monitor or on your video display (using Print to Video). However, if it contains transitions, filters or too many audio tracks for your computer to mix in realtime, it must first be rendered before it can be played. When using Radius EditDV Unplugged you can render all or part of your program by making a selection in the Timeline. If there are no mark in and mark out points defining a selection, the entire program will be rendered.

You build your program into two special tracks: the VP (Video Program) and AP (Audio Program) tracks. These tracks take the place of the program or record tape deck in a traditional studio where final programs are assembled. Thus, rendering causes EditDV Unplugged to assemble all of your source clips, transitions and filters into a final, playable program in your Program Tracks. These program tracks can then be played in the Monitors window, played at full screen through your DV tape deck or camcorder, or recorded to video tape.

This chapter has been a brief overview of the main steps in completing a program using Radius EditDV Unplugged. The following chapters discuss each of the Radius EditDV Unplugged digital video production tools in depth to help you utilize the full potential of the power of Radius EditDV Unplugged to create high quality video programs.

Chapter 3: Managing Source Media

The source material used in production of a Radius EditDV Unplugged program can include many different kinds of media. CDs, DATs, videotapes, audio tapes, computer graphics and animation, can all be used as source material. You combine and edit the source media to create a video production or **program** with Radius EditDV Unplugged. All of the different formats are converted to DV when the program tracks are updated so your final program can play out through your DV camcorder.

Creating a Project

"Chapter 2: An Overview of Radius EditDV Unplugged" on page 5 gave an overview of beginning work with Radius EditDV Unplugged. On subsequent start-ups or during work sessions, you can create completely new projects or open an existing project. By double-clicking on the project file in the Finder, you can open Radius EditDV Unplugged and the existing project at the same time. Only one project can be open at a time in EditDV Unplugged.

To start Radius EditDV Unplugged and open an existing project:

1. Double-click the icon for the hard disk where Radius EditDV Unplugged is stored.

   The Radius EditDV Unplugged folder appears in the volume you chose during installation.

2. Double-click the Radius EditDV Unplugged folder. Double-click the icon.

   You see the Open dialog box.

3. Open the folder you want to use, click the project to select it and click Open.

   Radius EditDV Unplugged starts and the file you selected is opened. You see the project as it was last saved.

   If you choose Open from the File menu with a project already opened, you see a dialog box. Select a project and click open. The project you were working on closes and your new choice is opened.

   You can also open a project file by double clicking it in the Macintosh Finder, or dragging it to the EditDV Unplugged application icon.

Creating a New Project During a Work Session

You can create new projects at subsequent start-ups or in the middle of a work session.

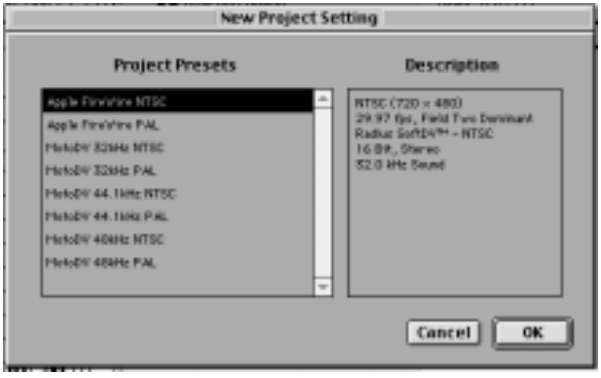
To create a new project:

1. Choose Save from the File menu to save any changes you have made to the existing project.

   You can close your current project or keep it open until you start your new project. Once you open a new project, Radius EditDV Unplugged automatically closes your previous project. If you have not saved changes on your previous project, a dialog will appear asking if you want to save the changes.

2. Choose New from the File menu.

   You see the **New Project Setting dialog box.**



   Select a project preset. Each preset specifies the audio options for the program you will be creating in the project. The audio data rate that you select in the preset will be the rate at which all audio in your program is mixed and sent out over FireWire.

3. Select a preset for your new project and click OK.

Saving and Backing up a Project

It is a good idea to save your project on a regular basis to protect your work. When you save your project all of the changes you have made since your last save, which are temporarily stored in computer memory, are written to your hard disk. It is generally advisable to save your project on a regular basis, every 10 or 15 minutes, while working. It is also advisable to occasionally save a copy of your project using the Save Copy As command under a different file name to protect yourself in the event that your project file should become corrupted.

You can also change the name of your project at anytime using the Save As command without altering any previously saved versions of the project.

The project you are working on resides only in computer memory until you use one of the save commands to create a hard disk version of the project.

It is advisable to save often so that your saved version of the project is always up-to-date. If there is a system failure, your most recent changes to the project will remain intact.

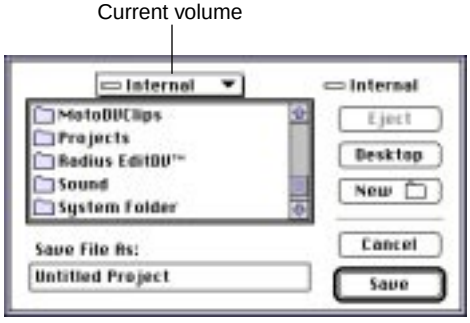
The individual save commands are described below.

Saving a Project for the First Time

To save your current project the first time:

1. Choose Save from the File menu.

   You see the **Save dialog box**.



2. Choose the volume and folder where you want to store your project.

   By default your project is saved in the same volume and folder where Radius EditDV Unplugged is stored, unless you choose a different one. It is recommended that you save your project in a separate folder at the same level as your source clips folder and media drive folder to keep all of the media required for a project in a one place. Thus, a project folder might contain a project named My Project, a folder named My Project Source Clips and another named My Project Media Drive. This organization separates source clips, rendered program clips and the project itself, making it easy and efficient to locate projects and source clips.

   You can choose a different volume or folder in which to save your project from the Save dialog box, or you can click New to create a new folder.

3. Type a name for your project in the Save File As box.

4. Click Save.

Saving a Project During a Work Session

To save your current project:

1. Choose Save from the File menu.

   Your project file on disk is updated to reflect any changes since your last save. A progress window displays clip names as your project is saved.

Saving a Copy of a Project

You can also save a copy of the project you are currently working on under a different name and in a different volume or folder, creating a back-up version of your project. You may want to save your project first, in its current form.

To save a copy of your current project:

1. Choose Save A Copy As from the File menu.

   The Save Copy As dialog box will appear.

2. Type a new name in the Save File As box.

   You can choose a different volume or folder in which to save the project, or click New to create a new folder.

3. Click Save.

   Your current project is saved under a new name and in its new location.

Note: The current project remains on disk with its previous name and location as it was when you last saved it, and is not updated. Only the copy is updated.

Changing the Name of a Project

You can save the project you are currently working on under a new name and make that newly named project the current working project.

To save your current project under a new name:

1. Choose Save As from the File menu.

   You see the **Save As dialog box**.

2. Type a new name in the Save File As box.

   Choose a different volume or folder in which to save the project, or click New to create a new folder.

Radius EditDV Unplugged displays the name of the file so you can add a version number or rename it.

3. Click Save.

   Your project is renamed, saved and opened with the new name.

Reverting to a Previous Copy

If you are not satisfied with the latest changes you made to your current project, you can revert to the project as you last saved it.

To revert to the most recently saved version of your project:

- Choose Revert to Saved from the File menu.

  The changes you made since last saving your project are discarded. The project returns to what it was when it was last saved.

  Note: If you want to preserve your current project changes for later use, make a copy of the project by choosing Save A Copy As from the File menu before reverting to the most recently saved version.

Capturing Media Into a Project

If you are a MotoDV owner, use Radius MotoDV to capture your DV format video and audio clips following the instructions in the MotoDV manual. If you have another FireWire board and software use the capture window to capture your clips. You can also import PICT files, QuickTime movies and music from CD's, and a variety of other computer graphics and animation files into EditDV Unplugged.

Using MotoDV for Capture

Radius EditDV Unplugged includes special drag and drop features to facilitate importing clips captured with MotoDV. Use MotoDV and the Finder to organize your clips into separate folders, then import them into EditDV Unplugged by dragging files or folders to the left or right side of the Project window as follows:

- Drag clips from the Finder into the appropriate bin.

  Select one or many clips (using Shift-Select) in the Finder and drag them into the right side of the Project window to put them in the currently opened bin. You can also drag them to the left side of the Project window over the bin name you would like them stored in.

- Drag a folder to the left side of the Project Window.

  A new bin will be created with the folder name and all of the clips in that folder will be stored in that bin.

- Drag a folder to the right side of the Project Window

  All of the clips in the folder will be placed in the currently open bin.

You can also use the Import command in the File menu to import clips one at a time into bins.

After importing source clips, you are ready to use Radius EditDV Unplugged to create a video program.

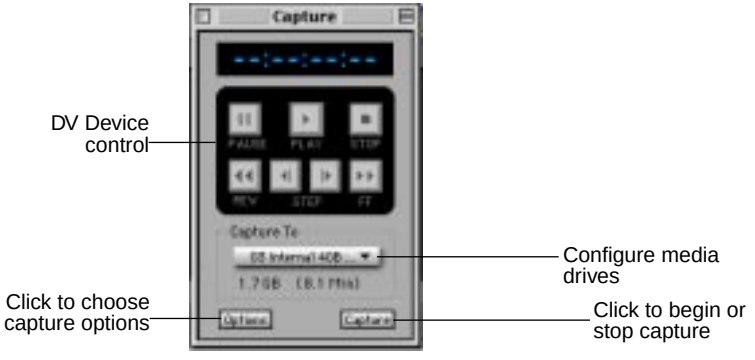
Configuring EditDV Unplugged for Capture

Radius EditDV Unplugged is designed to capture clips using the Capture window. Be sure to capture to a drive that you've configured and tested for DV performance with your FireWire card. Before capturing clips you must configure your system for capture from a DV device. Be sure that the Device control/Plug-ins folder contains the appropriate device control plug in. For more information see, "To install Device control plug-in for Apple FireWire owners:" on page 2.

To Configure EditDV Unplugged for Device Control:

1. Select Open Capture Window from the Capture Menu.

   You see the Radius EditDV Unplugged Capture window that is grayed out.



2. Select the Options button.

You see the Radius EditDV Unplugged Options dialog. select DV Device Control from the Plug-in pop-up.

3. Click OK.

4. Be sure your DV device is attached and in VTR mode.

5. Select the Preview window.

To Configure Video Input Settings:

1. Select Video Input from the Capture menu.

You see the Video Input dialog. If the Video Input menu item is grey be sure that the Preview window is selected.

2. Set the compressor pop-up to DV- NTSC or DV-PAL.

   Choose the format that is appropriate for your video standard. Typically NTSC if you are in the Americas or Japan and PAL if you are in Europe or Australia.

To Configure Sound Input Settings:

1. Select Sound Input from the Capture menu.

   You see the Sound dialog.

2. Set the Compression pop-up to None.
3. Select Source from the Compression pop-up.
4. Select DV Audio from the Device pop-up.

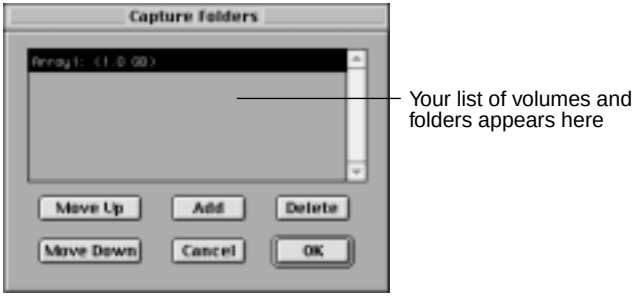
   You see the Sound dialog source settings.

Choosing Volumes and Folders for Storing Clips

Organize your disk storage by constructing a list of volumes and folders in which to store your source clips. If you fill one volume, EditDV Unplugged uses the next volume on the list to store your clip. If a clip is too large to be stored in the available space in one volume, the entire clip is stored on the next volume.

To set up multiple volumes and folders for storing captured clips:

1. Choose Configure from the Capture To pop-up in the Capture window.



2. Click the Add button in the dialog box.
3. Select a volume and folder and click Open.
4. Click Select this Folder to add the volume and folder to the bottom of your list.

   Available storage space on disk is shown.
5. Arrange your list so that the first volume to be used is at the top of the list.

   Select items in the list and use the Move Up and Move Down buttons to create the order in which your volumes are used during batch digitizing. To delete a volume and folder from the list, select it and click the Delete button.
6. When your list is complete, click OK.

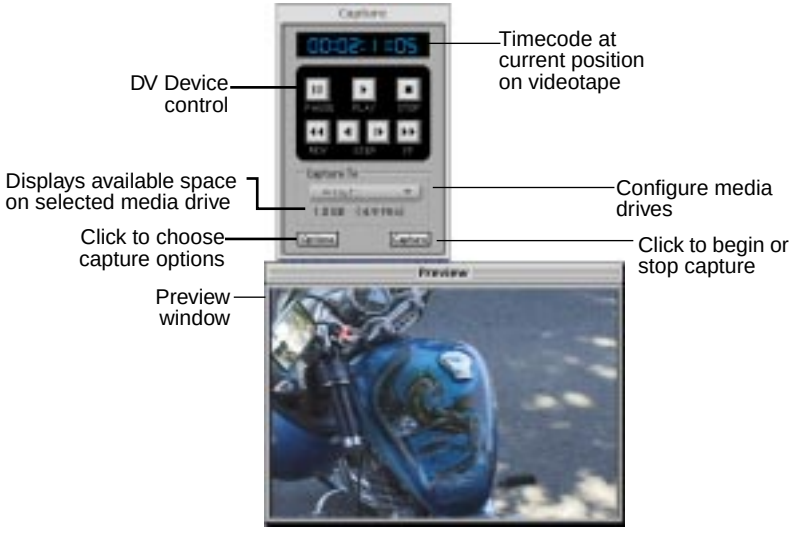
Capturing clips with EditDV Unplugged

Radius EditDV Unplugged is designed to capture clips using the Capture window and a QuickTime VDIG supported FireWire card. Please be sure to capture to a drive that you've configured and tested for DV performance with your FireWire card.

To capture source clips:

1. After selecting the Project window where you plan to store your clip information and preparing your DV device for use, choose Open Capture Window from the Capture menu.

   You see the Capture and Preview windows on your computer monitor.



2. Choose the volume and folder where you want to store your captured clips.

   See "Choosing Volumes and Folders for Storing Clips" on page 37, for specific directions on setting up volumes and folders to store information and organize your projects.

3. Start playing your source tape using the controls in the Capture window.

   You see the tape playing in the preview window and on your video monitor if attached to your camera.

4. When you reach the position in the tape where you want to capture a clip, click the capture button in the capture window (or press Command-T).

   Your clip is captured to your disk in the location you specified. The capture button in the capture window becomes the Stop button.

5. When you reach the position in the tape where you want to end your clip, click the Stop button in the capture window (or press Command-period).

   Capturing stops. Clip information entered in the capture window is added to the selected bin in the Project window. The tape in your video deck continues to play unless you stop it.

   You will see the Clip name box.

6. Type a name for your clip in the Clip Name box.

   Being descriptive and consistent in naming your clips can be helpful. If you do not type a name for your clip, the clip is given a name untitled with a numerical suffix.

7. Continue capturing clips using this procedure.

   When you finish capturing your clips, choose Close capture from the capture menu to close both the Capture and Preview windows.

Importing Media Into a Project

Radius EditDV Unplugged is designed to capture clips using the Apple FireWire software and hardware, however clips captured in MotoDV can easily be organized into file folders in the Finder and imported into Radius EditDV Unplugged maintaining the same structure that you devised in the Finder.

To drag a clip or clips into your project:

1. In the Project window, select the bin where you want to store the imported clip.

2. Drag the clip or selected clips into the right side of the Project window.

   If you would like to place them in a bin other than the currently selected one, drag over the bin name on the left side of the project window. Your clips will be imported into that bin.

To create a new bin and import a folder of clips:

1. In the Finder, select the folder of clips you want to import.
2. Drag the folder to the left side of the Project window.

   A new bin is created with the name of the folder and all of the clips are stored in that bin.

Radius EditDV Unplugged allows you to use clips from other projects and files. You can also use clips in other digital formats. Radius EditDV Unplugged supports the following digital media formats: PICT, Photo CD, QuickTime, and AIFF.

By using the Import command on the File menu, you can move multiple clips directly into your project, without closing Radius EditDV Unplugged or going to your desktop.

To use a clip from another project or in another format:

1. In the Project window, select the bin where you want to store the imported clip.
2. Choose Import from the File menu.

   You see the Import Dialog box.

3. Choose the volume and folder where the clip is located.
4. Select the clip.

   You can view your selected clip by clicking Create in the dialog. The clip will be shown under the word Preview, to the left of the file list. If the clip you selected is a PICT, see "To import a PICT:" on page 41.

   If the clip you select is an audio clip, the Import command becomes Convert. By clicking Convert your audio clip is changed to the QuickTime file format and is added to your project.
5. Click Import.

   The clip is added to the currently selected bin.

   After you have added your clips to your project, save it.

To import a PICT:

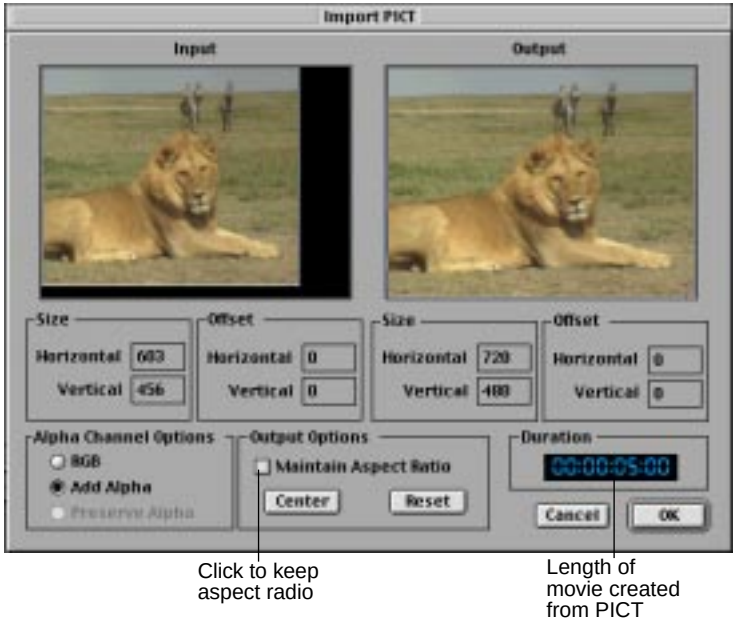
1. In the Project window, select the bin where you want to store the imported PICT.
2. Choose Import from the File menu.

   You see the Import Dialog box.

3. Choose the volume and folder where the PICT is located.
4. Select the PICT.

5. Click Import.

You see the Import PICT window



6. Adjust the PICT to accommodate your needs.

Use the Import Pict window to change your PICT clip to the appropriate size for use in your program.

7. Click OK.

   You see the Save PICT Dialog box.

The PICT is automatically given the .MooV suffix and is converted into a movie clip the length you selected, and is added to the currently selected bin.

Note: It is not necessary to keep the .MooV suffix you may name the clip any appropriate descriptive name.

After you have added your PICTs to your project, save it.

To Import Audio

Make sure that the audio CD is inserted into the drive and appears on the desktop.

To import an audio track from a CD:

1. In the Project window, select the bin where you want to store the imported audio track.
2. Choose Import from the File menu.

3. Choose the volume where the Audio CD is located.

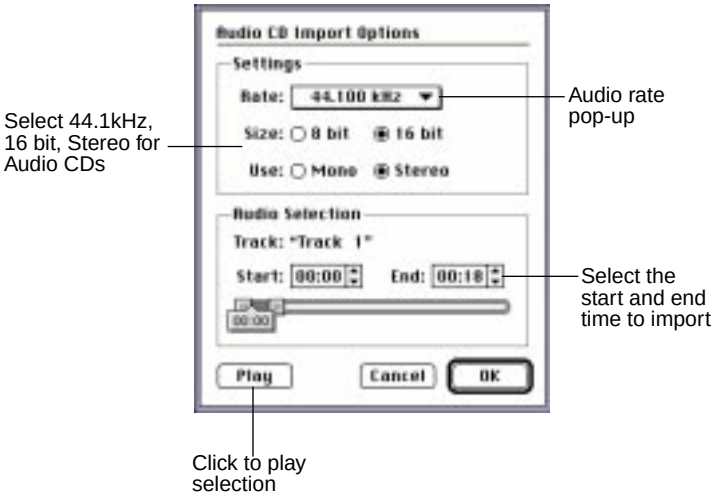
   You see the Audio Import dialog box

4. Select the Track to be imported.
5. Click Convert.

   You see the Audio Save as dialog.

6. Click Options.

You see the Audio Options window.



Select the audio import options and the start and end time of the clip you want to import.

7. Click OK to convert the audio clip.

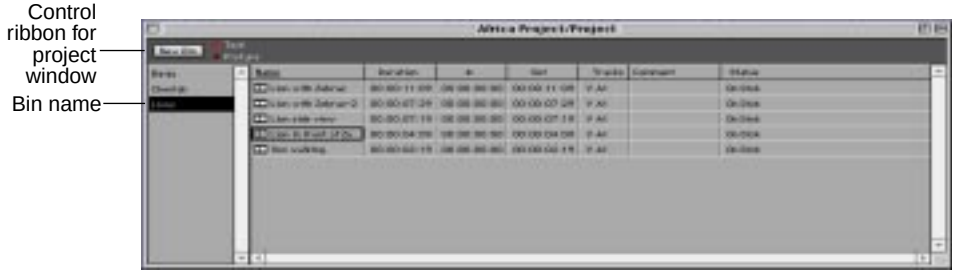
Select a folder and name for the audio file.

8. Click Convert.

The audio clip will be converted to a QuickTime audio file and stored in the selected bin.

Organizing Source Clips in Bins

When you begin a new project, you see one bin in the Project window. You see the bin name at the left of the window, and columns for information about source clips appear at the right.



As you add source clips to your project, information about the clip is stored in the bin, including its location on your hard disk.

Creating Bins

You can create as many bins as you need to organize your source clips in groups that work best for you and your editing style.

To create a bin:

- Click the New Bin button in the control ribbon of the Project window.

  A new bin name appears in the left column of the Project window. When you add a new bin, it is selected as the current bin.

Renaming Bins

When you create a new bin, it is automatically assigned a number. You can rename bins to organize your clips into meaningful groups and put them into bins with descriptive names you have chosen.

To rename a bin:

1. Double-click the bin name in the left column of the Project window.

   You see the **Bin Name dialog box.**

2. Type a new name for the bin and click OK.

   The selected bin in the left column of the Project window changes to the new name and all bins are sorted in alphabetical order. The renamed bin remains selected.

Selecting Bins for Use

To add clips to a bin, use the clips in a bin, or delete an empty bin, you must first select the bin.

To select a bin:

- Click the bin name in the left column of the Project window.

  You see the selected bin highlighted. Its contents are displayed at the right.

Deleting Bins

If you decide you no longer need a bin, you can delete it. You cannot delete a bin that contains clips or is the last bin in a project.

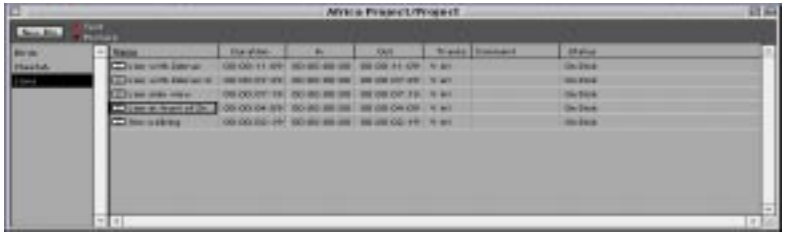
To delete a bin:

1. Select the empty bin that you want to delete.
2. Choose Clear from the Edit menu (or press the Delete key).

   The bin name disappears from the left column of the Project window.

Using Text View

You can view the content of a bin as a list of names or as pictures. When you create a new project, Radius EditDV Unplugged is preset to display in text view as shown. Use the mouse to click on bins or column information or use the arrow keys to move through the **text view**.



In addition to the first column of clip names, the text view contains several other columns of information described in the following table.

Column:	Gives you this information:
Name	The name of the clip.
Duration	The length of the clip.
In	The SMPTE timecode for the frame where the clip begins, or an assigned number if there is no SMPTE timecode.
Out	The SMPTE timecode for the frame where the clip ends, or an assigned number if there is no SMPTE timecode.
Tracks	Which video and audio tracks are contained in the clip.
Comment	Your comments regarding the clip.
Status	States whether the clip is On Tape, On Disk, or Off-line.

Sorting the Text View

The text view is sorted in alphabetical order, according to the names of the clips, but you can choose any column for use in sorting the text view.

To change the column to be sorted in the text view:

- Click the column header for the column you want to use.

  The contents of that column are sorted and displayed accordingly. All columns are sorted in ascending order and the column header used for sorting is underlined.

  If you want to see the contents of a bin sorted according to the lengths of the clips in the bin from smallest to largest, click Duration.

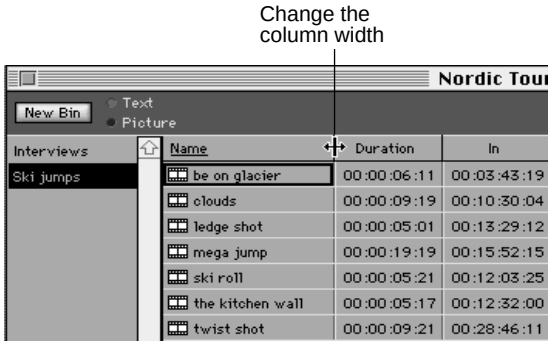
Changing the Column Width

When you first see the text view, each column is preset to a specific width. You can change the width of the Name and Comment columns.

To change the width of a column in the text view:

1. Click on the vertical line to the right of the heading, in either the Name or Comment columns.

   You see a short vertical line with two arrows.



2. Drag the line to the right to increase the size of the column or to the left to decrease the size.

   The other columns remain the same size.

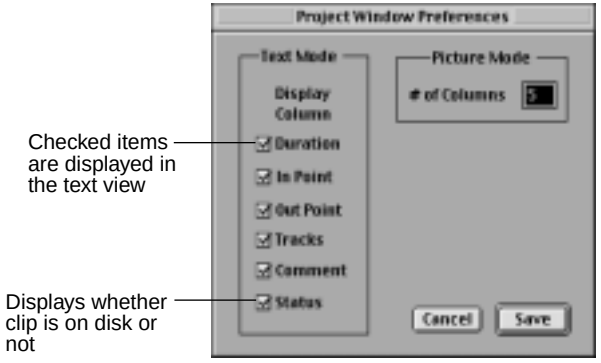
Hiding Columns in Text View

The text view is preset to display the Name, Duration, In and Out Point, Tracks, Status and Comment columns. To change the columns that are displayed, you must change specifications in the Project window Preferences dialog box.

To hide information columns:

1. Choose Preferences from the File menu and Project window from the submenu.

   You see the **Project Window Preferences dialog box**.



2. Click the checkbox to remove the checkmark for a column you don't want to display in the text view.

   When the checkmark is shown, that column is displayed in the Project window.

3. Click Save.

   When you save your preference settings and return to your project, you see the Project window with the information columns you selected.

Using Picture View

View the content of a bin as pictures by clicking the radio button in the control ribbon of the Project window. You see a small version of one frame in the clip, called the **poster frame**. The poster frame defaults to the first frame in each clip. The name of the clip appears under the picture. Use the mouse to click on areas in the picture view or use the arrow keys to move through it.

Changing the Frame Displayed for a Clip

It may be helpful to change the frame that is displayed in the picture view to one that is more descriptive of the entire clip.

To change the poster frame displayed in the picture view:

1. Double-click the source clip in the Project window to display it in the Source monitor.
2. In the Source monitor, move the Source Timecursor to the frame you want to use in the picture view.
3. Choose Set Poster Frame from the Edit menu.

   You see the frame in the Source monitor replace the frame currently in the picture view of the Project window.

Changing the Order in the Picture View

You can change the order of clips in the **picture view** as a first step in sorting clips for your program.

To change the order of clips in the picture view:

- Drag the clip you want to move to an empty block in the picture view.

  When you release the mouse button, the picture of the clip moves from its previous position to the empty block.

- You can also drag several pictures to a new location, at the same time. Click on the first picture, then hold down the shift key. While you continue to hold down the shift key, click on as many pictures as you want to move. When all your pictures are selected, you can

drag them, as a group, to the new location. Radius EditDV Unplugged places them in the order they were selected beginning at the new location.

Note: These clips may also be dragged directly to the Sequencer window and they will be placed in the order they were selected. This is a quick way to make a rough cut of your material to review how it works together in a program.

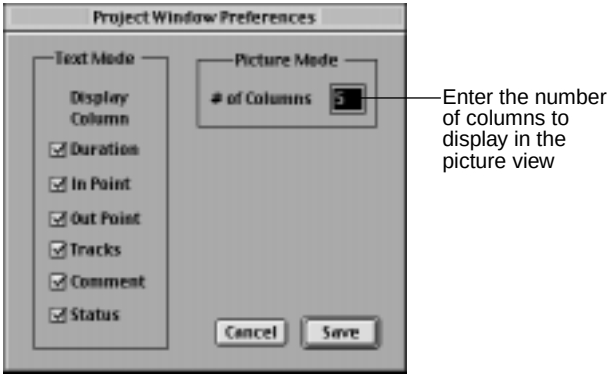
Changing the Number of Columns in the Picture View

Radius EditDV Unplugged is preset to display five columns in picture view. You can change this setting and display from one to fifteen clips across the Project window.

To change the number of columns displayed in the picture view:

1. Choose Preferences from the File menu and Project window from the submenu.

   You see the Project window Preferences dialog box.



2. Change the number after # of Columns in the Picture Mode area of the dialog box.

   Type a number between 1 and 15.

3. Click Save.

   When you save your preference settings and return to your project, the requested number of columns are displayed across the Project window.

You might need to extend your view of the Project window to see all of your columns. Use the scroll bar at the bottom of the Project window to scroll through the window.

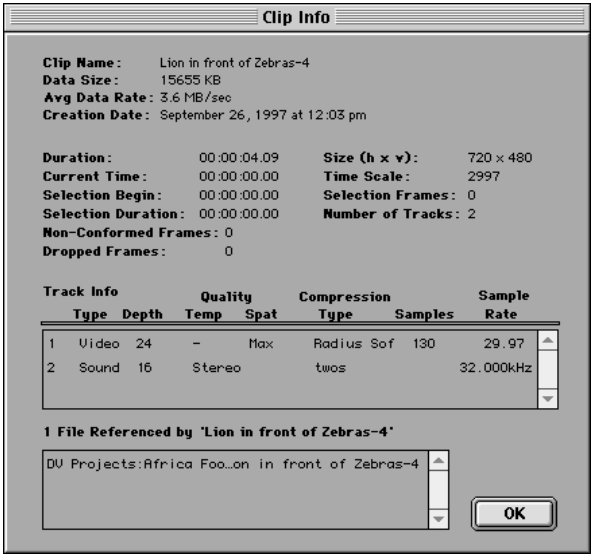
If you are using the picture view and decide you want to switch to viewing the contents of a bin in the text view, click the Text button in the control ribbon of the Project window.

Working With Clips in Bins

You can view additional information about the source clips you store in a project, move the clips, or delete them when they are no longer needed. You also can create secondary source clips that refer to primary source clips.

Viewing Additional Information About a Source Clip

For more detailed information about a source clip than what is displayed in the text view, for example, the size and frame rate of a clip; refer to the **Clip Info window**.



To access information about a source clip:

1. Click the clip in the Project window to select it.

   You also can click the clip in the Sequencer window.

2. Choose Get Info from the Edit menu (or press Command-I).

   You see the Clip Info window with the information about the selected clip.

Moving Clips Between Bins

You can move clips from one bin to another within a project to help organize your source material.

Note: Moving clips between bins does not move the location of the file in the Finder on your hard disk. It only changes the references from within your project.

To move clips from one bin to another:

- Drag the clip over the name of the bin you are moving it to and release the mouse button.
- Or, click on the name of the first clip you want to move, then hold down the shift key. While holding down the shift key, click on as many clips as you want to move. You can now drag them as a group over the name of the bin you are moving the group to and release the mouse button.

Creating Secondary Clips

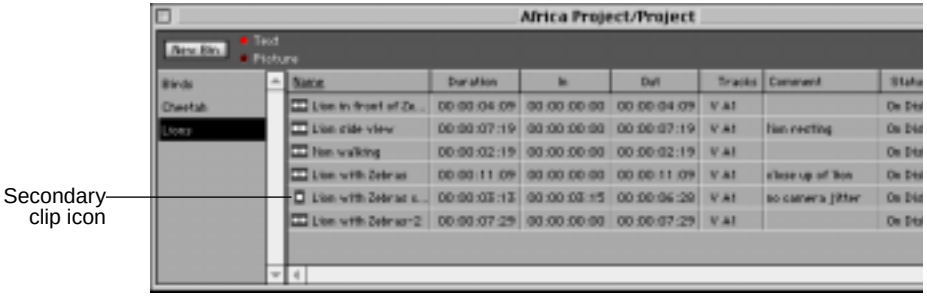
When you import a source clip into a project, you create a **primary** source clip in a bin in the Project window. That clip points to a media file stored on a hard disk. To store source clips in more than one bin in a project, you create one or more **secondary** source clips from your primary clip. A secondary source clip does not point to a media file. It points to the primary source clip.

To create a secondary source clip:

1. Click to select a source clip in the Project window. This is your primary clip.
2. Choose Create Secondary from the Edit menu (or press Command-D).

The new secondary clip, created from the In and Out points marked in the selected primary clip, appears next to the selected clip, in the picture view or below the selected clip in the text view. The secondary clip is given the same name as the selected primary clip, but is marked as a copy.

You also can create a secondary source clip from another secondary clip. Both secondary clips refer to the primary clip.



Renaming Clips

You can make a correction to the name of a clip or rename a clip at any time. Using descriptive names is generally useful in organizing your source material.

To rename a clip:

1. Click the name of the clip in the Project window.
2. Type a new name for the clip and press Enter.

   If you want to make a correction to the name of a clip, click the name in the Project window. Use the arrow keys to move the text cursor to the letters needing correction. Or, press Return to erase the entire name, then make your changes.

Note: Renaming clips in the Project window does not affect the name of the media file in the Finder.

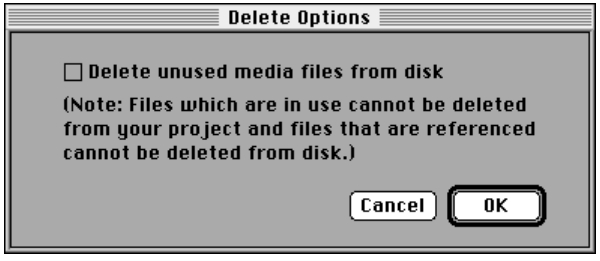
Deleting Clips From a Bin

Deleting a clip from a project bin deletes the clip information from that bin. It does not delete the clip information from other bins in the project or the clip media file from the hard disk, unless specified. For more information on managing your hard disk space see, “Chapter 10: Managing Disk Storage” on page 205.

To delete a clip from a project bin:

1. Click the clip in the Project window to select it.
2. Choose Clear from the Edit menu (or press the Delete key).

   You see a dialog box asking you if you want to delete the clip media from disk.



3. If you want to delete the media from disk, click the checkbox in the dialog box.

   If you are deleting a secondary source clip, no media files are removed from disk. Be cautious when removing media from your hard disk that may be used in other projects. Once removed, it will no longer be available to the other projects.
4. Click OK.

Chapter 4: Creating a Program

Creating a program consists primarily of placing video and audio clips in the order you want them to play in your final video to convey your story to the viewer. Reviewing clips in the Source monitor and placing the sections you want on the Timeline in the Sequencer window is the first step. The clips are then played for review, cut points adjusted, transitions and special effects added and the entire program rendered to final, playable form. This final movie can then be recorded out to video tape. This chapter outlines the Radius EditDV Unplugged tools used to develop a program from reviewing source clips to final program.

Working With Source Clips

After gathering a set of source clips into the Project window, you move them individually, or as a group, into the Source monitor, where they can be reviewed and trimmed before adding them to your program. It is also possible to directly drag clips from the Project window into the Sequencer.

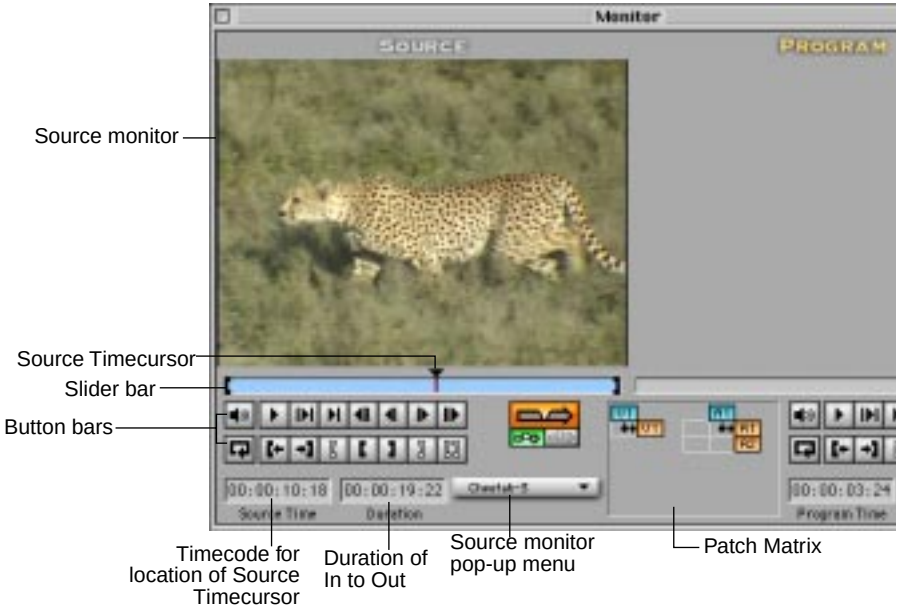
Reviewing Clips in the Source Monitor

The Source monitor lets you play your clips to see and hear what you have available. The Source monitor also provides the ability to scrub through your material with the mouse, mark in and out points as your movie plays to select the section you want and tools for frame accurate adjustment of in and out points.

To view a source clip in the Source monitor:

1. In the Project window, double-click on a clip or, drag the clip into the Source monitor.

   The first frame of the clip appears in the Source monitor. The name of the clip appears under the slider bar in a pop-up menu.



To view multiple source clips in the Source monitor:

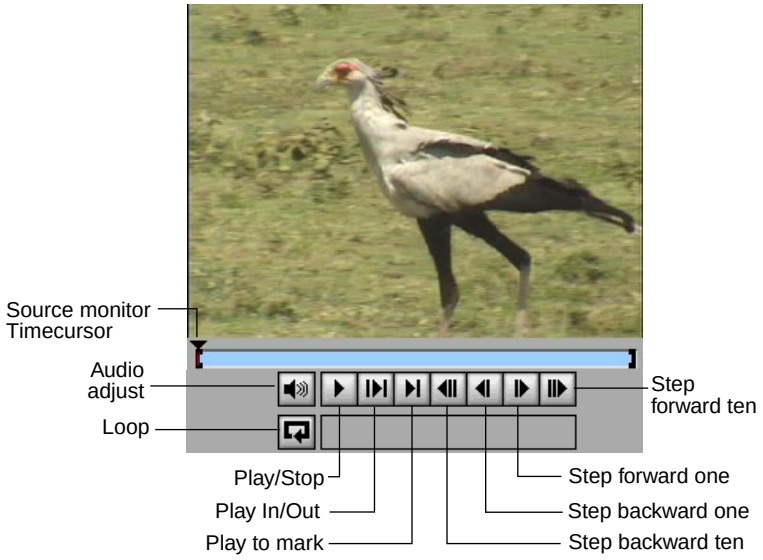
1. In the Project window, shift select the clips you plan to view then double-click on a clip or, drag the clip selection into the Source monitor.

   The first frame of a clip appears in the Source monitor. The name of the all of the clips appear in the Source monitor pop-up menu.

When a source clip is placed in the Source monitor, the slider bar represents the full length of the clip. In and Out points marked on the slider bar represent the beginning and ending of the clip. As you adjust the In and Out points you create a reference to the original clip with a new length.

Duration timecode displays the length of the clip from the In point to the Out point of the clip. The Source Time timecode indicates the position of the cursor on the slider bar. The Patch Matrix shows the video and audio tracks in the source clip along the top. The arrow shows where each track will be placed in the Sequencer. By default video is placed in track V1 and audio in track A1. Click in the grid of the Patch Matrix to change the target track in the Sequencer.

In the Source monitor, you can drag the Timecursor on the slider bar to scrub the clip or use the buttons on the button bar to step through and play the clip.



The following table summarizes the buttons in the Source monitor.

Button:	Name:	Key Stroke:	Use To:
	Audio adjust		Adjust the level of the audio in a clip. Audio changes made in the Source monitor continue to affect a clip in the Program.
	Play/Stop	"d" or spacebar	Toggle between playing and stopping the clip. The spacebar can also be used to play and stop.
	Play In/Out	"f"	Play only the media between the clip's In and Out points.
	Play to mark	"g"	Play to the next mark in the clip (the In or Out point).
	Step back-ward ten	"j"	Move backward ten frames.

	Step backward one	"k" or left arrow	Move backward one frame.
	Step forward one	"l" or right arrow	Move forward one frame.
	Step forward ten	";"	Move forward ten frames.
	Loop		When used with the Play buttons, causes the clip to play continuously as determined by the Play button.

Note: For keyboard equivalents for each of the buttons in the Source monitor, see "Appendix B: Radius EditDV Unplugged Shortcuts" on page 223 for a keyboard layout specifying these keys.

The Source monitor provides easy access to the most recently used clips through the pop-up menu below the monitor. Selecting a clip in the pop-up places it in the Source monitor for viewing.

To play Source clips at full screen using DV Player:

- Press Option and click the Play/Stop button in the Source monitor.

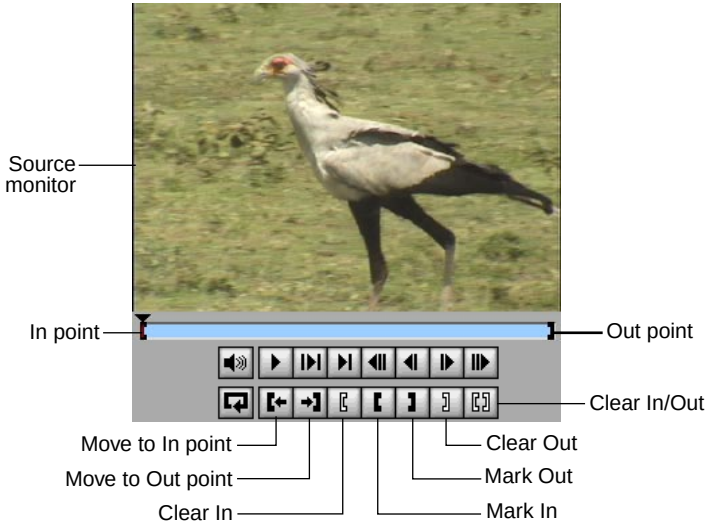
  While at full screen the space bar will Play and Stop the movie. While the movie is stopped the Option left arrow returns to the beginning of the movie and Option right arrow goes to the end, Shift left arrow fast scans in reverse and Shift right arrow fast scans forward.

  Note: For a summary of keyboard commands for controlling your full screen movie, see "Appendix B: Radius EditDV Unplugged Shortcuts" on page 223 for keyboard command table.

Changing In and Out Points in the Source Monitor

In and Out points default in the Source monitor to the first and last frame of your clip. Radius EditDV Unplugged provides many options for adjusting In and Out points. You choose In and Out points to define

the section of the clip that you plan to use in your program. The illustration below indicates the buttons in the Source monitor used for setting In and Out points.



To set In and Out points in the Source monitor:

- Click the Mark In and Mark Out buttons at any time, whether the movie is playing or paused. The current time becomes the In or Out point.

  Play the clip and select the In point as the frame that you want to be the start of your clip is played, allow the clip to continue playing and mark the Out point when the last frame of the clip you want is played. Review your selection by pressing the Play In/Out button.

  Mark In can also be set by pressing the 'i' key and Mark Out the 'o' key at any time. In and Out points can also be set by selecting in the Source Time timecode area and typing a timecode, then clicking Mark In or Out.

Adjust In and Out points in the Source monitor with any of the following methods:

- Use the Move to In or Out point, use the step keys to move frame by frame to the new point you want. Click Mark In or Out.
- Drag an In or Out point marker on the slider bar to a new position.
- Clear a point and reset it.

- Use the right or left arrow keys to advance or back up the Source timecursor one frame at a time, then mark an In or an Out point.
- Mark an In or an Out point and type in a duration.

Note: For a summary of keyboard equivalents for each of the buttons in the Source monitor, see “Appendix B: Radius EditDV Unplugged Shortcuts” on page 223 or a keyboard layout.

Creating Secondary Source Clips in the Source Monitor

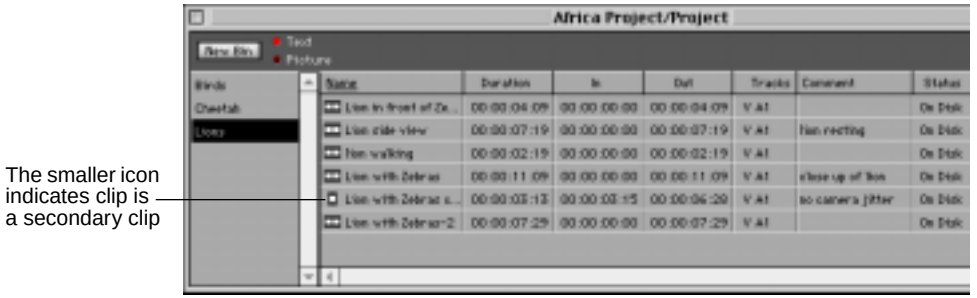
When a clip is imported into a project, a **primary source clip** is created and placed in a bin in the Project window. The primary source clip references a media file stored on hard disk. To use that primary source clip in more than one bin in a project, one or more **secondary source clips** must be created by selecting the primary clip and using the Create Secondary command on the Edit menu. A secondary source clip can be used to create another secondary source clip. A secondary source clip doesn’t point to a media file stored on disk, it points to a primary source clip.

A secondary source clip created in the Project window uses the In and Out points last marked in the primary clip. To create a secondary clip that uses different In and Out points, the Source monitor is used. There, the In and Out points for the source clip can be changed and the secondary clip created.

To create a secondary source clip in the Source monitor:

1. In the Project window, double-click on a source clip to display it in the Source monitor.
2. Set new In and Out points.

   These will be the In and Out points for the secondary source clip.



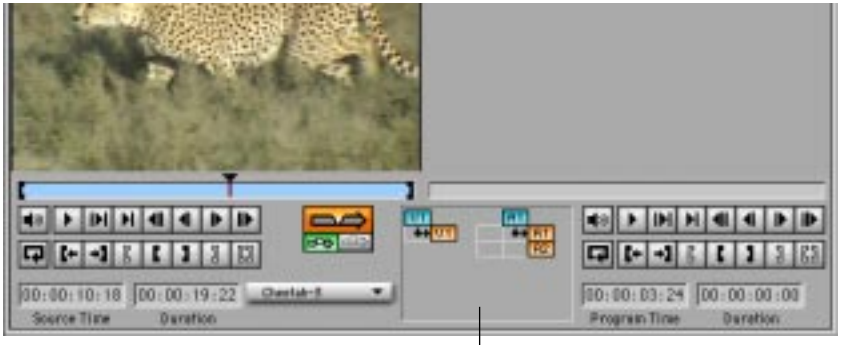
3. Choose Create Secondary from the Edit menu (or press Command-D), or drag the source clip from the Source monitor back to the Project window.

   A secondary clip is created. It is given the same name as the primary clip, but is labeled as a copy.

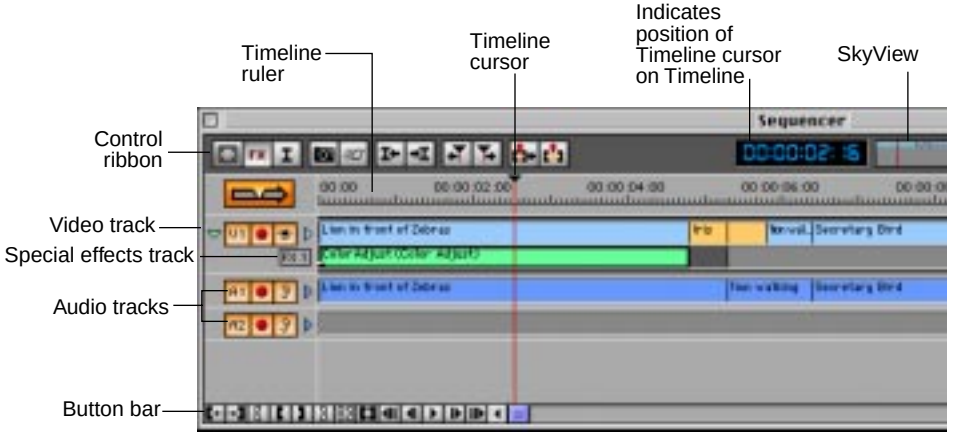
For more information on creating secondary source clips see, “Creating Secondary Source Clips in the Source Monitor” on page 62.

Assembling a Program

A program is assembled by moving source clips into the **Timeline** in the Sequencer window. Source clips can be moved into the Timeline by using the Patch Matrix in the Source monitor. They can also be moved into a program from the Source or Project window, by dragging them into the Timeline.



When a source clip is moved into the Timeline in the Sequencer, Radius EditDV Unplugged creates a reference to the section of the source clip marked by the In and Out points.



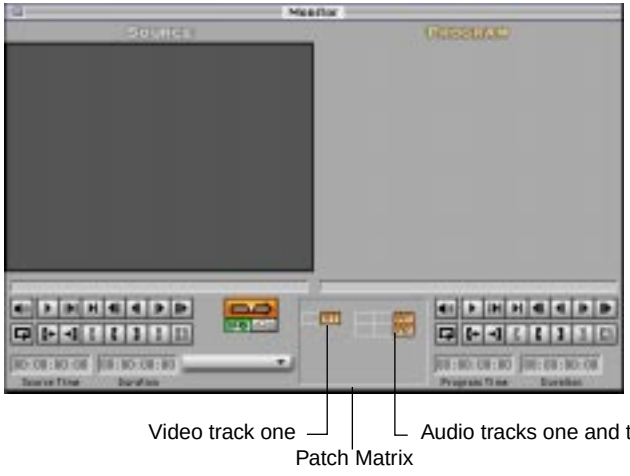
When the Sequencer window is first opened, it contains one video track (V1), one special effects track for this video track (FX 1), and two audio tracks (A1 and A2). You assemble your program by placing clips on the tracks in the Sequencer, left to right, in the order you want them to play.

The **Timeline cursor** shows your current position on the Timeline, its location in your program is reflected in the timecode at the top of the window, and the frame at that position is shown in the Program monitor.

The buttons in the button bar at the bottom left of the Sequencer window let you select portions of the program, mark In and Out Points, and move through a program in a variety of ways. The **SkyView** is a graphic overview of the entire program as an aid to navigating from one place in your program to another.

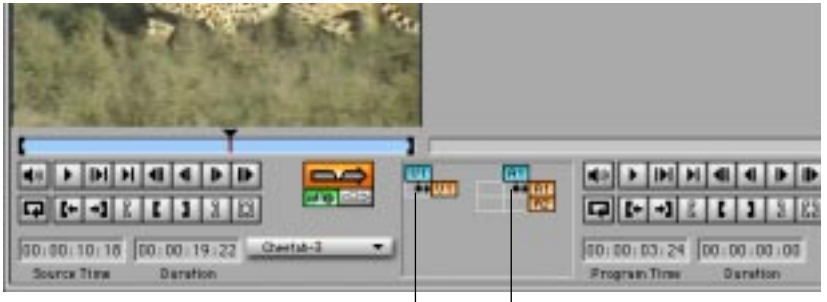
Using the Patch Matrix to Place Clips in the Timeline

The **Patch Matrix** in the Monitors window shows the tracks in the source clip and defines where the source clip will be placed in the Sequencer.



When the Monitors window is first displayed, the Patch Matrix contains two columns of gold Patch buttons that represent the tracks in the Sequencer. When a source clip is placed in the Source monitor, the Patch Matrix displays a row of blue buttons that represent the tracks in the source clip.

For example, the clip shown in the Source monitor below has one video and one audio track mapped to Sequencer tracks V1 and A1.



Choosing the Source Clip Tracks to Use

With the Patch Matrix, you can choose source tracks to use in a program. The video track in the source clip can be used without the audio, or the audio without the video. If a source clip has two audio tracks, either one can be used alone. Also, the source tracks may be mapped to any tracks of the appropriate type.

Note: Source clips can also be dragged directly to any appropriate track in the Sequencer.

When a source clip is placed in the Source monitor, it's tracks are active and ready to flow into the Sequencer tracks. A source track can be deactivated if it is not to be used in the program.

To deactivate a track in the source clip:

- Click the blue button for the track in the Patch Matrix.

  Radius EditDV Unplugged grays the blue button representing the track in the Patch Matrix. The media in this track will not be edited into the Sequencer. You can reactivate the track by clicking it again.

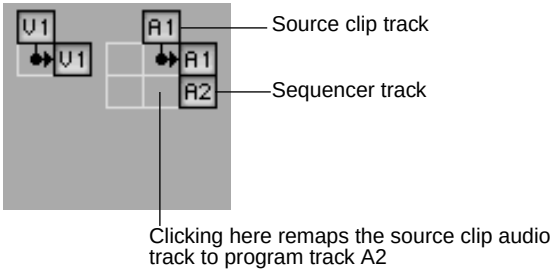
Mapping Tracks With the Patch Matrix

The source tracks to be included in a program are placed into the appropriate tracks of the Sequencer via the mapping in the Patch Matrix.

To change the mapping for tracks in the Patch Matrix:

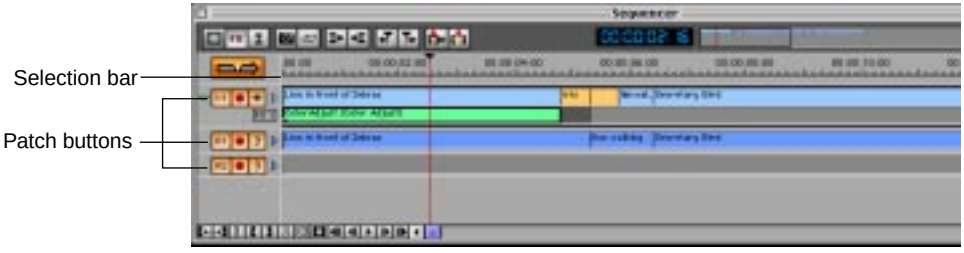
- Click the intersection of the source track and a Sequencer track in the Patch Matrix.

  For example, to map the audio track for a clip to the second audio track, click the intersection for the source clip audio track and the A2 Sequencer track. When you click, the mapping line changes. It indicates that source track, A1, will flow to the Sequencer track, A2.



Synchronizing Sequencer Tracks

The gold Patch buttons that represent Sequencer tracks in the Patch Matrix also appear in the Sequencer window.



When the Sequencer window is opened, the Patch buttons are active, which means the tracks to the right of the buttons are available for editing. A source track can only flow into a Sequencer track if the Sequencer track is active.

If a Sequencer track is active and nothing is mapped to it in the Patch Matrix, Radius EditDV Unplugged adds blank space (called **filler)** to that track. The filler is equal to the length of the source clip flowing into other Sequencer tracks and thus keeps all active tracks synchronized.

If a Sequencer track is inactive, you cannot patch source tracks into it and it will not be altered by edits to any other tracks.

To make a Sequencer track inactive:

- Click the Patch button for the track in the Patch Matrix or in the Sequencer window.

  Radius EditDV Unplugged grays the gold Patch button for the track in both the Patch Matrix and the Sequencer window. You can activate the track again by clicking its Patch button in either the Patch Matrix or Sequencer window.

Flowing the Clip Into the Timeline

After choosing In and Out points for a source clip, choosing the source clip tracks for a program, and mapping those tracks to Sequencer tracks, the source clip tracks are moved into the Timeline in the Sequencer window by flowing them through the Patch Matrix.

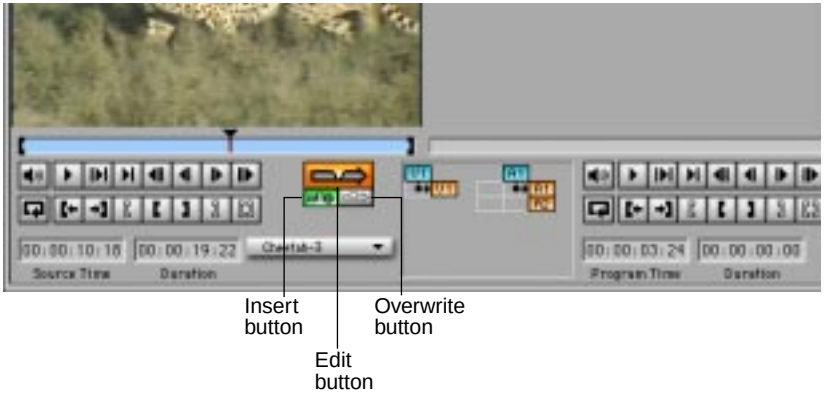
To flow a source clip into the Timeline using the Patch Matrix:

1. In the Sequencer window, position the Timeline cursor where you want to place the source tracks.

   The timecode display in the Sequencer window indicates the exact position of the Timeline cursor.

2. Click the Insert or the Overwrite button in the Monitors window.

   If **Insert** is clicked, the clip will be inserted at the position of the Timeline cursor when the Edit button is clicked. Any clips to the right of the cursor are moved farther to the right to make room for the clip and making the overall program longer.



   If **Overwrite** is clicked, the clip will be placed at the position of the Timeline cursor covering as much media to the right of the cursor as is necessary to place the clip when the Edit button is clicked. Overwrite has no effect on tracks that are active, but have nothing patched to them. Filler is not added when using the Overwrite command.

3. Click the Edit button or press the Enter key to flow the source clip into the Timeline of the Sequencer.

Dragging Clips Into the Timeline

You can drag a source clip onto the Timeline in the Sequencer from the Source monitor. One or more source clips can also be moved into the Timeline at the same time by selecting them in a bin in the Project window and dragging them into the Sequencer.

To drag a clip into the Timeline:

1. Point to a clip in the Project window or the Source monitor and press the mouse button.

   To drag several source clips from a bin at the same time, press Shift and click the clips you want to select.

   Note: Clips will be placed in the Sequencer in the order that you select them.

2. Drag the clip into an active track of the Sequencer.

   An insertion cursor is seen if the track is active. The Patch button is gold whenever a track is active, the button is gray if the track is inactive.

3. Position the insertion cursor where the clip is to begin. Release the mouse button.

   When dragging several source clips from a bin, the clips are placed in the Timeline in the order they were selected, providing a quick method for creating a rough cut of a program.

   If a source clip has multiple tracks, Radius EditDV Unplugged places each track in the first appropriate track in the Timeline (video on a video track and audio on an audio track) as long as there are active tracks available.

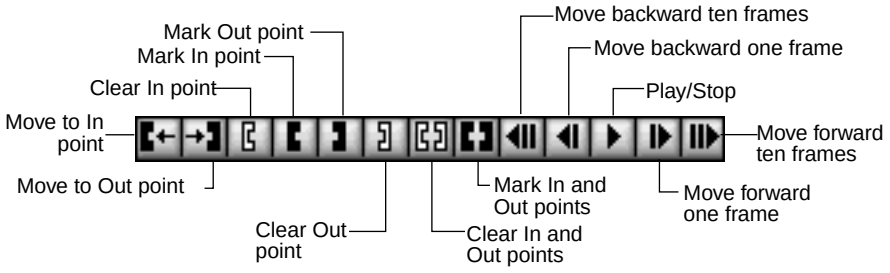
   After dragging a clip into a track in the Timeline, it can be repositioned by dragging it within the track.

   Note: When dragging clips into the Sequencer they are Overwritten into the Timeline. If you wish to insert them into the Timeline, hold the Command key while dragging.

Selecting Part of a Program

Any portion of a program in the Timeline can be selected for updating, playback or editing. By marking an In and Out point in a program a selection is defined. The length of this selection can be changed and the position of the selection in the Timeline adjusted by dragging the mark points or gold selection bar in the Sequencer window. This selection defines a portion of the program that may then be played, Erased (which leaves blank space in the program) or Eliminated (which shortens the overall program). This selection can also be used for fit-to-fill edits that

adjust the playback speed of the clip being placed to fit into a specific portion of the program. It also is used to define the portion of the program to be rendered when updating program tracks.



The button bar at the bottom left of the Sequencer window includes buttons to set In and Out points to define a selection.

To select a portion of your program in the Timeline:

1. Drag the Timeline cursor to the selected position for the In point. Click the Mark In button.

   The timecode display in the Sequencer window indicates the exact position of the Timeline cursor. It can be used to position the cursor precisely. If there is currently no selection, a click in the narrow track between the Timeline ruler and the first video track, the selection bar area, will set an In point.

2. Drag the Timeline cursor to the selected position for the Out point. Click the Mark Out button.

   A yellow bar appears in the selection bar area. If there is only an In point marked, a click in the selection bar area will set an out point. However, if the click is to the left of the In point, a new In point will be set.

   This selection bar can be extended or shortened by dragging the In and Out point markers.

The entire selection bar can also be dragged to a new position by clicking and holding on the yellow bar and dragging.

To create a selection for an entire clip:

1. Click the clip in the Timeline to select it.

2. Click the Mark In/Out button.

   A selection bar the size of the clip with the In and Out points for the clip marked at either end appears. If there is no clip selected before clicking Mark In/Out, Radius EditDV Unplugged creates a selection for the clip currently under the Timeline cursor.

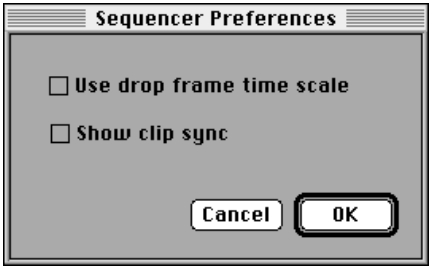
   When you click the Move to In or Move to Out buttons, the Timeline cursor moves to the In point or the Out point.

Displaying Drop Frame Timecodes

To display drop frame timecodes in the Sequencer window:

1. Choose Preferences from the File menu and choose Sequencer window from the submenu.

   The Sequencer Preferences dialog box appears.



2. Click the Use drop frame time scale checkbox and click OK.

   Drop frame timecode is displayed for the program in both the Sequencer window and below the Program monitor in the Monitors window.

Navigating a Program

As a program grows, only a portion of it can be seen in the Sequencer window. EditDV Unplugged provides tools to allow you to move efficiently from place to place in a program to work effectively.

To navigate through a program:

- Drag the Timeline cursor through the program in the Sequencer window. As the cursor reaches the end of the Timeline that is visible, the view in the window changes and moves with the cursor. In this way you can move sequentially through an entire program.
- Move to the next or previous interesting time in the program, which may or may not be visible in the Sequencer prior to making the move. Interesting times include cut points and the beginning and end of special effects filters.
- Use the SkyView in the Sequencer to move easily to areas of a program that are outside of the display in the Sequencer window. The SMPTE time of the new location is displayed in the Sequencer as you drag the SkyView controller.
- Drag the Timeline cursor in the Program monitor.

Using the Timeline to Navigate a Program

The Timeline in the Sequencer window is the graphic representation of a program. The Timeline cursor can be moved through the Timeline in a variety of ways.

To move the Timeline cursor:

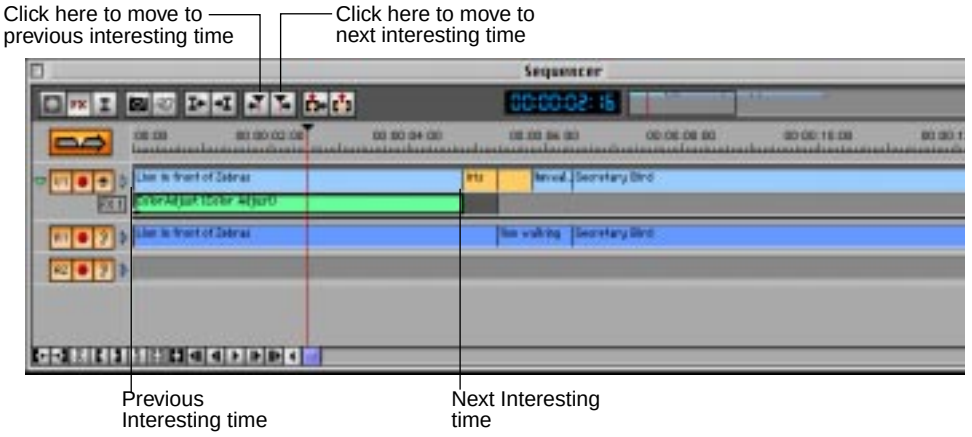
- Drag it with the mouse cursor
- Click a desired point along the Timeline and the cursor will move to that point.

The timecode displayed above the Timeline reflects the position of the cursor in the Timeline. The timecode display changes as the cursor moves.

- Highlight the timecode display and type a new timecode. The Timeline cursor will then change to the point reflected by the new timecode.

Using Interesting Times

The Sequencer window contains two buttons that allow movement to interesting times in a program.



Any change in a program is considered an interesting time. For example, the beginning and end of a clip, a transition, or a filter are interesting times. When a clip is selected any markers within it are considered interesting times and when a filter is selected keyframes are interesting times. Clicking either button to move to the previous or next interesting time moves the Timeline cursor accordingly. A track must be active for an interesting time to be recognized.

Note: Using the Previous Interesting Time and Next Interesting Time buttons can quickly and easily position the Timeline cursor exactly at a cut between two clips or directly on a keyframe. They are also useful for moving to the very end of a filter to set a keyframe at the last frame of an effect.

Inserting and Moving to Markers

As a program is created, markers can be inserted in clips to help locate additional points of interest. Markers are considered interesting times only when a clip is selected.

To insert a marker in a clip:

1. In the Sequencer window, click the clip to select it.

   When a clip is selected, there is a black border around it.

2. Drag the Timeline cursor to the position in the clip where the marker is to be inserted.

3. Choose Add Marker from the Edit menu, or press Command-M.

   The marker is inserted at the position of the Timeline cursor in the selected clip. In the Edit menu, Add Marker becomes Remove Marker.

To remove a marker from a clip:

1. Select the clip.

2. In the Sequencer window, position the Timeline cursor at the marker to be removed.

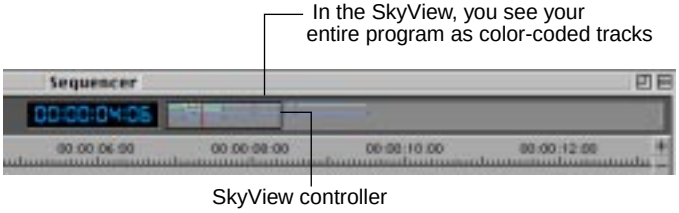
   The Move to Interesting time buttons can be used to easily position directly on the marker.

3. Choose Remove Marker from the Edit menu, or press Command-M.

   The marker is removed from the clip.

Using the SkyView

The SkyView in the upper right corner of the Sequencer window shows an overview of your entire program. Each track of the program is represented by a line in the corresponding color in the SkyView. As clips are added to a program, the display in the SkyView grows, from left to right.



Within the black border of the SkyView controller, is a view of the segment of the program that is visible in the Sequencer window. Dragging the controller moves it to any segment of the program. That segment becomes visible in the Sequencer window.

The SkyView is particularly helpful when you are working with a lengthy program or wish to move to a specific timecode.

Zooming the Timeline In and Out

The amount of detail seen in the Sequencer is controlled by zooming in and out. Zoom in to see less of a program in greater detail. You can zoom in to the point where each tick mark on the ruler represents one frame of a program. Zoom out to see more of a program, but in less detail.

To zoom in:

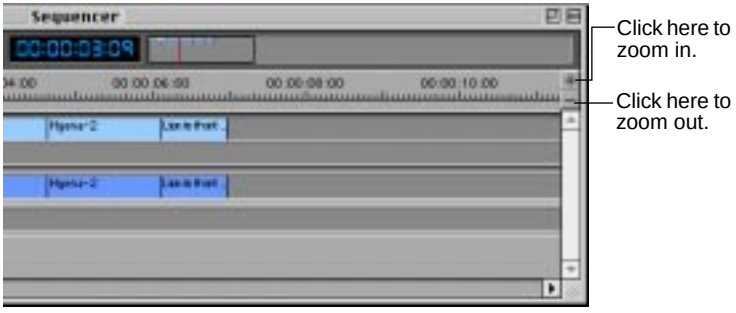
- Click the plus (+) sign at the right of the Sequencer window.

  The Timeline zooms in. When you have zoomed in the Timeline as far as possible, the plus sign is grayed and each tick in the Timeline represents one frame of video.

To zoom out:

- Click the minus (-) sign at the right of the Sequencer window.

  The Timeline zooms out. When the Timeline is zoomed out as far as possible, the minus sign is grayed.



To toggle between the current view of a program and a closeup view.

1. Move the mouse cursor to the ruler above the Timeline.
2. Press Option and Click the mouse button.

   A magnifying glass with a plus sign in it appears. The Timeline zooms in to its maximum magnification (every tick mark on the Timeline equals a frame), and the plus sign in the magnifying glass changes to a minus sign.
3. Click again, to zoom the Timeline back to its previous zoom level.

   As the Timeline in the Sequencer is zoomed in or out, the size of the SkyView controller is adjusted accordingly. Zoom in to see a smaller segment of a program in more detail, and the controller is smaller. Zoom out to see a larger part of a program in the Sequencer, in less detail and the controller becomes larger.

Reviewing a Program

The Program monitor, in the Monitors window, is used to review your program.

The slider bar in the Program monitor represents the entire length of your program, while the Duration timecode displays the length of the current selection. The Program Time timecode indicates the position of the cursor on the slider bar. Drag the slider on the slider bar to scrub through the program or use the buttons in the button bar below the Program monitor to play the program in different ways.

Playing a Video Track

You play a video track by making it the visible track in the Sequencer window and using the Play/Stop button in the Sequencer window or the Program monitor.

To make a video track in the Sequencer window visible:

- Click the eye icon to the left of the video track.

  The eye icon is gold when the track is visible, grayed when the track is not. Only one video track may be made visible at a time. To review your entire program you first update the Video Program track then

make it the visible track.

To play the visible track in the Program monitor:

1. Click the Play/Stop button in the Program monitor or Sequencer window.

   The track begins playing from the current position of the Timeline cursor in the Sequencer window.

2. To stop playing, click the Play/Stop button again or press the space bar.

To preview a section of the visible track:

- Drag the Timeline cursor in the Sequencer window.

or:

- Select a portion of the program in the Sequencer window and click Play in Selection. For more information, see "Selecting Part of a Program" on page 70

To play the Program monitor at full screen:

- Press Option and click the Play/Stop button in the Program monitor.

  Use the space bar when the Program monitor is at full screen to start and stop play. Arrow and Option-arrow keys provide for stepping and moving to the beginning and end of your movie. Shift-arrow keys provide fast scan forward and reverse.

- To return the Program monitor to its usual size, press Command-period (.).

Using Program Tracks

Before you can see your program at final quality the result of any transitions or special effects that you have applied must be calculated by your computer. This process is called **rendering.** The entire program can be rendered, reviewed, and changes made; or, it can be rendered and reviewed in sections, as it is assembled.

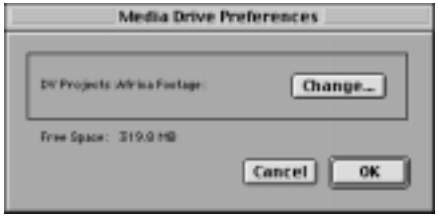
Setting Up Storage Space for Rendered Media

Rendering creates playable movies of your effects. A special area should be set up on a hard disk for storing this media using the project preferences.

To set up space for storing rendered media:

1. Choose Preferences from the File menu and Media Drive from the submenu.

   The **Media Drive dialog box** appears.



2. Click Change.
3. Select the volume and folder where you want to store rendered media and click Open.
4. Click Select this Folder.

   You see the Program Preferences dialog box with the folder you selected listed.

Rendering a Program Section

To render a section of a program:

1. Add a program track to the Sequencer window by choosing one of the Add options on the Program menu.

   Choose Add VP Track to add a video program track, or choose Add AP Track to add an audio program track. The program track is added below the existing video or audio tracks in the Sequencer window.

2. Select the portion of your program that you want to render.

   Define a selection by marking an In and an Out point in the Sequencer. See “Selecting Part of a Program” on page 70 for specific instructions.

3. Ensure that all tracks that you want included your program are render enabled.

   When the render button to the left of a track is red, that track is enabled for rendering. The button is grayed when a track is inactive for rendering and will not appear in the final program.

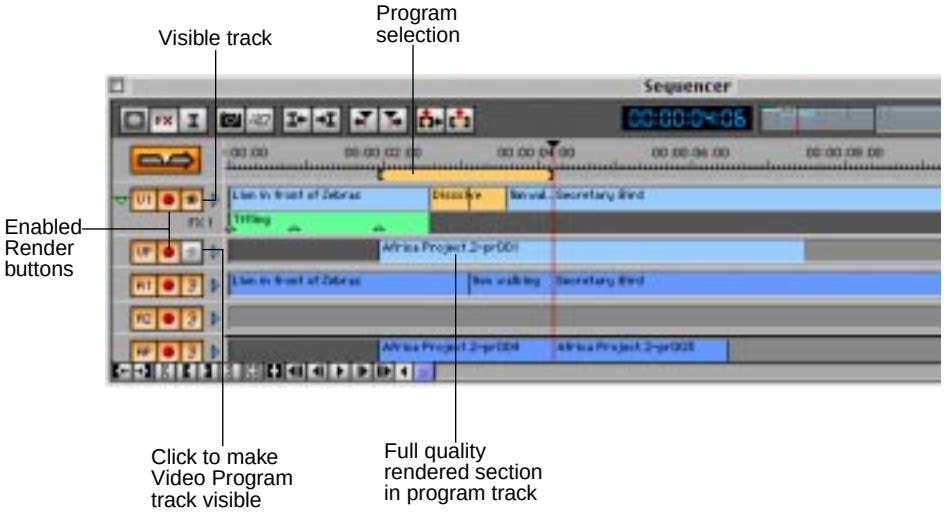
4. Choose one of the options from the Program menu.

   Choose Update or Overwrite VP Track for a video program track, and choose Update or Overwrite AP Track for an audio program track. Choose Update or Overwrite All Program Tracks for both.

5. Radius EditDV Unplugged renders the selection.

   While rendering, a progress window appears and indicates the number of frames still to be rendered. The thumbnail of the frames can be seen as they are rendered in the display in the Progress window.

   When rendering is completed, the rendered section is assigned a name by Radius EditDV Unplugged, and is displayed in the program track. The rendered clip is placed in the **Program** bin and stored to the disk drive specified in Media Drive preferences.



Playing a Rendered Section

After rendering a section of a program, it can be reviewed in the Program monitor.

To play a rendered section:

1. Click the eye icon to the left of the program track to make it the visible track in the Sequencer window.

   The eye icon is gold when the track is visible, grayed when the track is not.

2. Click the Play/Stop or Play in Selection button in the Program monitor.

   The rendered section is played in the Program monitor.

Removing Obsolete Sections of a Program Track

As you make changes to your program, sections of your program track become obsolete in that they no longer reflect the current state of your program. The program track, however, maintains the last render until you erase or overwrite it, so you can maintain a playable version of your program until you are ready to take the time to render again.

Sections of the program track can be erased either by selecting a clip in the program track and pressing the delete key, or making the program track the only active track, marking a selection and then erasing.

To erase a rendered section that is obsolete:

1. Make the program track active for editing by clicking the gold activate button.

   The program track may be made the only active video track by pressing the option key and clicking the active button. All other video tracks will be made inactive.

   Note: Be sure that your audio tracks are appropriately set before erasing any selection.

2. Define the program selection to be erased by defining In and Out points on the selection bar.

   Or, use the buttons in the button bar at the bottom of the Sequencer window to reset the mark In and Out points.

3. Click the Erase button to remove the media in the active program track.

   The program track will be erased under the selection and replaced with filler. The remaining blank section will be rendered again during the next Update program track.

Updating a Rendered Section

After rendering a section of a program, it can be added to and updated. When a rendered section is updated, Radius EditDV Unplugged only renders media where there is blank space in the program track.

To update a rendered section:

1. Define the program section to be updated by dragging the In and Out points on the selection bar.

   Or, use the buttons in the button bar at the bottom of the Sequencer window to reset the mark In and Out points. If no selection has been defined, your entire program will be rendered.

   For more information about selecting a section of a program, see “Selecting Part of a Program” on page 70.

2. Choose one of the Update options from the Program menu.

   Choose Update VP Track for a video program track, and choose Update AP track for an audio program track. Choose Update All Program Tracks to update both (or press Command-G).

3. Your program track is updated.

   A progress window is displayed to indicate the number of frames per section still needing to be rendered. You see the frames, as they are rendered, in the display window of that progress window. When rendering is completed, the new section is assigned a name and is placed in the appropriate rendered section in the program track.

Overwriting a Rendered Section

After rendering a section of a program, if tracks and special effects are added or the media in that section of the media tracks is changed, the rendering will need to be redone. When overwriting a rendered section, the media in the tracks being rendered is changed. The media on previously rendered tracks is still in a bin and still on the Finder level, but is no longer in the program track.

To overwrite a rendered section:

1. Select the portion of the program to render.

   See “Selecting Part of a Program” on page 70 for specific instructions.

2. Click the red Render button to the left of any track not to be included in the rendering process.

   Radius EditDV Unplugged grays the Render button when a track is disabled for rendering. Click the Render button again to enable the track for rendering.

3. Choose one of the Overwrite options from the Program menu.

   Choose Overwrite VP Track for a video render track, and Overwrite AP track for an audio render track. Choose Overwrite All Program Tracks if both are to be involved in the overwrite (or press Command-H).

4. The rendered section is overwritten to include any changes.

   While rendering, the progress window is displayed and indicates the number of frames still needing to be rendered. The frames can be viewed as they are rendered in the display of the progress window. When rendering is completed, the section is automatically assigned

a new name and displayed on the program track.

Rendering The Final Version Using Program Tracks

Program tracks are used to render the final version of a program.

To render the final version using program tracks:

1. Choose Add AP track or Add VP track from Program Menu.

   Be sure both VP and AP have been added to render a final program with audio.

2. Select all of the program that needs to be updated. This may be a small portion or the entire program, depending on how much you have rendered thus far.

   Personal styles of using program tracks differ. You may wish to render small portions of your program as you work, or do a great deal of editing then render a large section of your program at one time.

3. Choose Overwrite All Program tracks to render everything in the selection and replace the program track.

Removing a Program Track

If a program track is no longer needed, it can be removed.

To remove a program track:

1. Click to select the program track to be removed.

   When a track is selected, there is a black border around it.

2. Choose Remove Track from the Sequencer menu.

   The rendered clips remain on the hard drive and in their bin, but not in the sequencer. To clean up old render clips, click the Program bin in the Project window to make it the current bin, then select Clean Up Bin from the Edit menu. Unused clips will be removed from the Project window and associated files will be removed from disk.

Changing the Program Preferences

The media drive and render Mode settings can be changed through the Preferences submenu of the File menu. This can be used for rendering a selection or the entire program.

To change the media drive for rendering:

- Choose Media Drive from the Preferences submenu of the File menu.

  Choose the folder and drive from the list presented on the screen.

To change the Mode for rendering for the program tracks:

- Choose Program Track from the Preferences submenu of the File menu.

  Choose a rendering mode from the Mode pop-up. When using Radius EditDV Unplugged for video production the render mode should be set to Reference Clips. This mode allows complete clips to be quickly referenced when rendering.

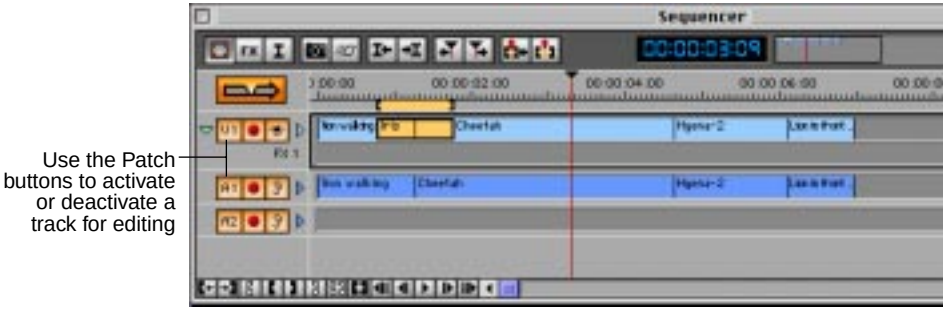
Chapter 5: Editing a Program

Radius EditDV Unplugged provides the video and audio tools for computer based nonlinear video editing. As you construct a program, work may be done in any order you choose. Sections of the program may be removed, clips rearranged and cuts repositioned.

Radius EditDV Unplugged provides easily accessible tools to address the complex video production issues of synchronization, split edits, back-timing, section replacement and speed changes to allow frame accurate modification of your program in the Sequencer window.

Selecting Tracks for Editing

The gold Patch buttons to the left of each track activate or deactivate the tracks for editing. Only active tracks will be affected by an edit. These



buttons are used to keep a video track synchronized with its audio while not affecting background music or additional dialog tracks.

To deactivate a track on the Timeline:

- Click the gold Patch button to the left of the track.

  The Patch button is grayed when a track is inactive. To activate the track again, click the Patch button.

  You can also activate and deactivate tracks from the Patch Matrix, see “Using the Patch Matrix to Place Clips in the Timeline” on page 65

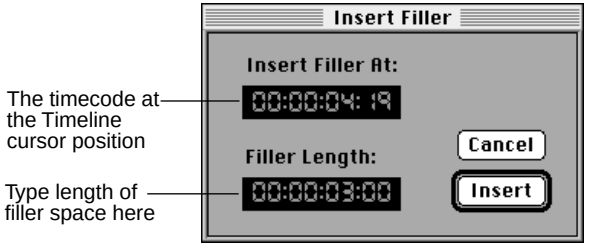
Adding Filler to the Timeline

Blank space, called **filler**, can be added to the Timeline. Filler creates space for clips to be added later, or can be used to hold a location to maintain the length of a program. It can also be used to move an entire section of a track or tracks later in time to synchronize them with another track, such as a particular section of music.

To insert filler on the Timeline:

1. Position the Timeline cursor where filler is to be added.
2. Deactivate any tracks where you do not want filler added. Click the gold Patch button to the left of a track to deactivate it.
3. Choose Insert Filler from the Sequencer menu.

   You see the **Insert Filler** dialog box.



4. To specify the amount of filler, select the appropriate numbers in the Filler Length area and type the duration desired.

   The Insert Filler dialog box is preset to add one second of filler space and remembers the amount you last specified. The duration is specified as a SMPTE time code represented as four number hours:minutes:seconds:frames.

5. Click Insert.

   The filler is inserted at the position of the Timeline cursor in all active tracks. Filler is placed at the location of the Timeline cursor, any In and Out points in the program are ignored.

Removing Part of a Program

Media in a track may be removed in one of two ways. If the clip or segment is Erased, filler is left in place of the segment and the overall length of the program remains unchanged. This is similar to erasing a portion of a tape and leaving that portion blank. If the clip or segment is Eliminated, all clips to the right of the removed section are moved left in the timeline to earlier times. In the this case the length of the program is reduced by the duration of the removed segment. The effect is similar to cutting out a section of film and splicing the remaining sections together.

To erase part of a program and leave filler:

1. Select the segment of the program to be removed.

   Mark in and out points in the program to define your selection. The gold selection bar is drawn over the section that will be removed. See "Selecting Part of a Program" on page 70 for specific directions.

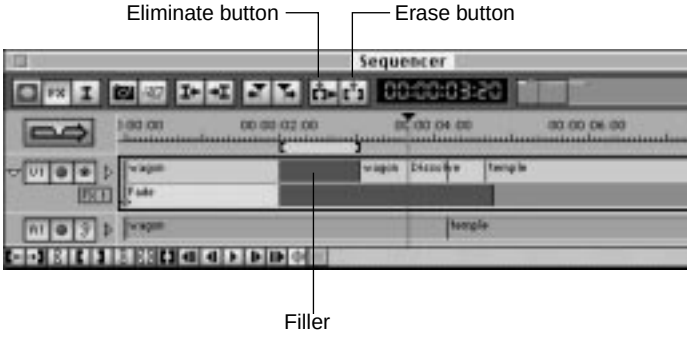
   Note: The selection may be defined in either the Program monitor or the Sequencer, these both refer to the same Program at all times.

2. Activate only the tracks where you want to erase your program.

   A track is active when the Patch button to the left of it is gold, inactive when the button is gray. Click the Patch button to activate or deactivate the track.

   Note: All active tracks, including audio, video, VP and AP will be affected by the Erase command.

3. Click the Erase button in the control ribbon of the Sequencer window.



When the **Erase button** is clicked, the selected section of each activated track in the Timeline in the Sequencer window is removed. Filler is left in its place.

To remove part of a program and leave no filler space:

1. Select the portion of the program to be removed.

   See “Selecting Part of a Program” on page 70 for specific directions.

2. Activate only the tracks to be changed.

   To remove clips or segments of a clip from a video track that is synchronized with an audio track, leave both tracks active to keep them synchronized.

3. Click the Eliminate button in the control ribbon of the Sequencer window.

   When the **Eliminate button** is clicked, Radius EditDV Unplugged removes the selected section of each active track in the Timeline and shortens those tracks to close the space occupied by it. The segment of the program following the deleted segment is shifted to the left and the overall program is shortened by the duration of the removed section.

Editing Clips

There are multiple ways to edit clips once they are in your program, depending on how you want the overall length of the program effected. The following sections describe 3 and 4 point edits, trimming and synchronization while editing.

Using a 3-Point Edit

Creating high quality video programs constantly presents a variety of editing challenges. At times, space in a program must be filled by adjusting the length of a clip, or clips. At other times it will be important to preserve the length of a clip or use a specific In and Out point in a clip. In these cases, professionals have developed a technique called **3-point editing**.

This technique allows you as editor to define three of the four mark points used to create an edit: In and Out point in the source clip and In and Out point in the Program. Once three points are defined EditDV Unplugged calculates the 4th and executes the edit. The three-point editing process is a powerful method for solving complex editing problems. For example, by marking In and Out points in your Program and one point in your Source clip you can fill in a segment of a predefined duration. The following section describes in detail how to use the power of 3-point editing for modifying your program.

To use a 3-point edit to fill a specific amount of space on the Timeline:

1. In either the Sequencer or Program monitor set the In and Out points over the space to be filled.

   Radius EditDV Unplugged also provides a “Mark In, Mark Out” button that will automatically mark the in and out points of a selected clip or filter.

2. In the Source monitor, set the point that is most important.

   Set the In point if you want the clip to begin at a specific frame. Set the Out point if you want the clip to end at a specific frame.

   Note: Setting only an Out point in the source clip and letting EditDV Unplugged use as much of the source clip as necessary is referred to as Back-timing.

3. In the Patch Matrix in the Monitors window, map the clip to the desired Sequencer tracks.

   Make sure the Sequencer tracks are active for editing. When a Sequencer track is active, the Patch button for the track in the Patch Matrix and in the Sequencer window is gold.

4. Click the Insert or Overwrite button.

   If Insert is selected, the clips in the Timeline are moved to make room for the new clip. If Overwrite is selected, the new clip will be placed exactly over the section as marked by the In and Out points.

5. Click the Edit button.

   The edit is executed on the Timeline. As much of the Source clip as necessary will be used to fill the space marked in the Sequencer.

To insert a clip of a specific length:

1. In the Source monitor, set the In and Out points for the clip.
2. In the Sequencer, set an In or Out point at the position where the clip is to be placed.

   Set an In point if the starting place for the clip in the Timeline is the most critical point. If having the clip end at a specific point in your program is more important, set an Out point on the Timeline.

   Note: If no points are marked in the Sequencer, the Timeline cursor will be used as the insertion point.

3. In the Patch Matrix in the Monitors window, make sure the clip is mapped to the appropriate Sequencer tracks.

   The Sequencer tracks must be active for editing.

4. Click the Insert or Overwrite button.

   If Insert is selected, Radius EditDV Unplugged moves clips in every active track in the Timeline to make room for the clip. If Overwrite is selected, Radius EditDV Unplugged places the new clip over as much of the Timeline as necessary.

5. Click the Edit button to execute the edit.

Using a 4-Point Edit

A **4-point edit** can be used when a specific clip must fill a precise amount of space on the Timeline. In this case the playback speed of the Source clip is changed to achieve the fit.

To create a 4-point edit:

1. In the Sequencer, set the In and Out points for the space to be filled on the Timeline.
2. In the Source monitor, set the In and Out points for the clip.
3. In the Patch Matrix in the Monitors window, map the clip to the Sequencer track.
4. Choose Fit to Fill from the Edit menu, or press Command-F.

   Radius EditDV Unplugged speeds up or slows down the clip as necessary to make it fit into the designated space in the Timeline. Fit to Fill is always an overwrite edit so any media on the track within the in and out points will be overwritten.

   Note: Some playback speeds will not result in smooth motion. In those cases, try changing the length of either the Source clip or the section to be filled and repeating the Fit to Fill.

Force an Edit

Inserting a cut (force an edit) may be necessary at a point in a clip where there is currently none. For example, you might insert a cut in a clip so that part of a clip can be moved to another position in the Timeline.

To force an edit:

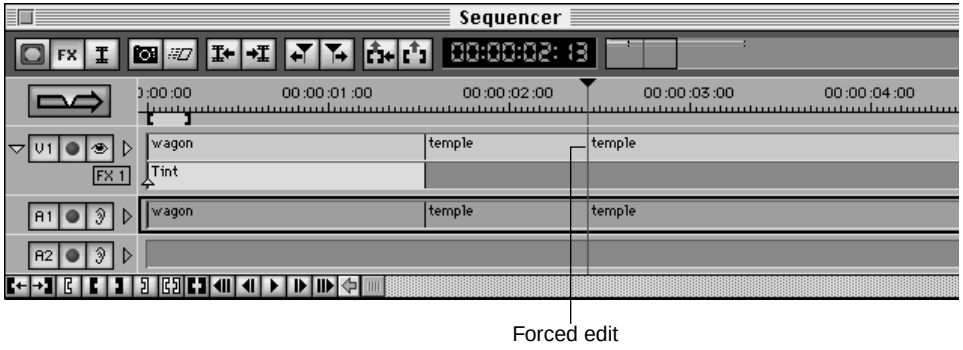
1. Move the Timeline cursor to the position in the clip where the cut is to be made.
2. Activate only the tracks that you want to cut.

   The Patch button to the left of the track is gold when the track is active.
3. Choose Force Edit from the Sequencer menu, or press Command-Slash (/).

   A cut is created at the location of the Timeline cursor in the active

tracks. Any FX track(s) associated with the newly edited clip will be cut off to the right of the new cut point.

You see two clips with the same name in the Sequencer.



Changing the Speed of a Clip

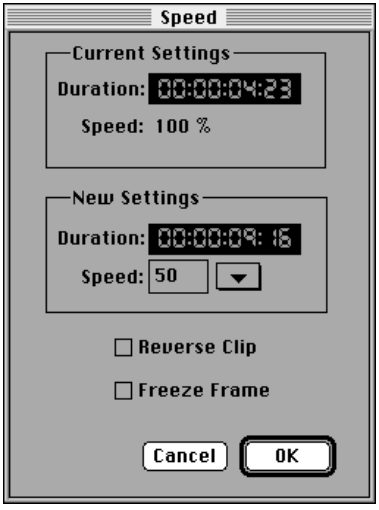
The Speed command in the Sequencer menu can change the speed of a clip in a program, reverse the direction of a clip, and freeze the frame at the In point for a clip.

To change the speed of a clip:

1. Click the clip on the Timeline to select it.

2. Choose Speed from the Sequencer menu.

   The **Speed dialog box** appears.



3. Choose the new speed from the Speed pop-up in the New Settings area of the dialog box, or Type in a new duration.

   When a speed is selected, the length of the reference clip is adjusted to accommodate that speed.

   Note: Due to the fixed frame rate and interlaced field nature of video some speed changes play more smoothly than others. Whenever possible, use the preset speed changes in the Speed pop-up for best playback.

4. Click OK to set the new playback speed.

5. The selected speed is shown in the clip on the Timeline.

   The Program monitor will be black whenever a clip with a changed speed setting is played until the program track has been updated.

Reversing the Direction of a Clip

To reverse the direction of a clip, use the Speed dialog box.

To reverse the direction of a clip:

1. In the Timeline, select the clip to be reversed.

2. Choose Speed from the Sequencer menu.
3. In the Speed dialog box, click the Reverse Clip checkbox and click OK.

   The clip's speed is indicated as a negative number, indicating that it will play backwards after it has been rendered.

Freezing a Frame

Selecting the Freeze Frame option in the Speed dialog box freezes the frame at the In point of the clip for the duration of that clip.

To freeze the frame at a clip's In point:

1. Click the clip in the Timeline to select it. The frame at the In Point of the selected clip is the frame that will freeze.

   To freeze a frame other than at the In point, use Force Edit as described in the previous section to create a new In point, then Freeze the resulting clip.
2. Choose Speed from the Sequencer menu.
3. In the Speed dialog box, click the Freeze Frame checkbox and click OK.

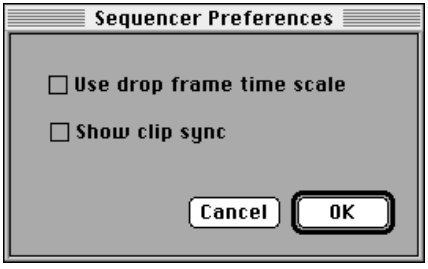
Synchronizing Clips

When a clip that contains both video and audio is placed in the Sequencer, Radius EditDV Unplugged places the video and the audio at the same position in the Timeline. The audio and video in clips captured with MotoDV are synchronized when they are captured. As clips are manipulated, it is possible for the video and audio to get out of sync if one is moved by an edit and the other is not. Radius EditDV Unplugged will display clip sync information to aid you in maintaining synchronization between picture and audio.

To display clip sync information in a project:

1. Choose Preferences from the File menu and Sequencer Window from the submenu.

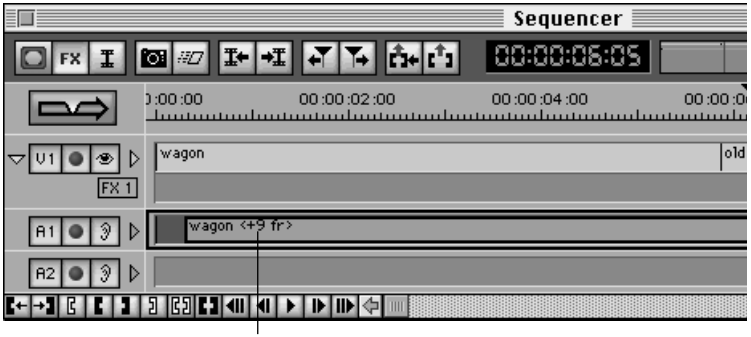
   The **Sequencer Preferences dialog box** appears.



2. Select Show Clip Sync option and click OK.

   A number is displayed in the audio track Timeline of each clip. The number indicates whether the clip is out of sync with its video counterpart and if so, by how many frames, and in which direction. A plus or minus sign precedes each number to indicate whether the audio occurs late or early relative to the video.

To hide the clip sync information from the Timeline, open the Sequencer Preferences dialog box and uncheck the Show Clip Sync option.



The Show Clip Sync option can also be activated by using the Sequencer menu.

To turn clip sync on and off:

1. Choose Show Clip Sync from the Sequencer menu.

   Show Clip Sync becomes Hide Clip Sync on the Sequencer menu.

2. To turn clip sync off, choose Hide Clip Sync.

As long as the clips share some common point in the Timeline, Radius EditDV Unplugged reports how many frames they are out of sync. If the clips become completely removed from each other and share no common point, they effectively become detached and are not reported as out of sync.

Finding a Source Frame from a Program

To find the location in the source clip of a specific frame in a program, use the Find Frame command on the Sequencer menu. You can use Find Frame to quickly locate a source clip that you would like to re-use in the Sequence.

To find a specific frame in a program:

1. In the Sequencer, click on the clip containing the frame you want to find.

   The clip is displayed with a black border around it.

2. Drag the Timeline cursor to the timecode for the frame you want to find.

   The timecode display in the Sequencer window indicates the exact position of the Timeline cursor. It can be used to position the cursor precisely at a frame.

   If the track containing the clip is the visible track, the frame is seen in the Program monitor. Click on the eye icon to the left of the track to make it the visible track.

3. Choose Find Frame from the Sequencer menu.

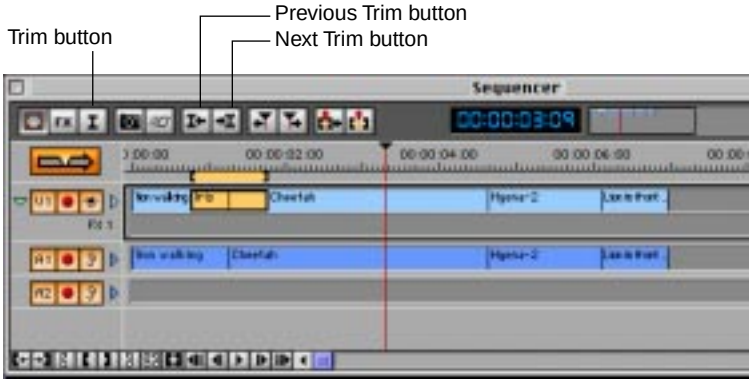
   The clip currently in the Source monitor is replaced by the source clip containing the selected frame. The Source monitor cursor is positioned to match the frame in the Program under the Timeline cursor.

Trimming Cuts

The Trim window is used to adjust cut points and modify clips after they have been placed in your Program. It allows you to view cuts as if they represented splice points between two pieces of film. The left display shows the last frame of the outgoing clip and the right display shows the first frame of the incoming clip. Using the Trim window, the cut points of two adjacent clips can be adjusted in several ways. A single cut point can be edited by itself, or multiple cuts, including audio can be edited simultaneously. You can:

- adjust the end (outpoint) of the outgoing clip, changing the overall length of the program. This removes frames from or adds frames to the clip on the left, then resplices the remaining clip back onto the unchanged one on the right.
- adjust the beginning (inpoint) of the incoming clip, changing the overall length of the program. This changes the clip on the right and resplices the result to the unchanged clip on the left.
- adjust the end of the outgoing clip and beginning of the incoming clip (shortening one while simultaneously extending the other) so that the program length remains the same. This is called a **roll edit** and consists of adding frames to one clip while simultaneously removing them from the other.
- maintain synchronization by trimming multiple audio and video cuts together.
- create split edits (L and J-cuts) by trimming video or audio cuts independently.

Note: In all cases the frames that are added or removed are from the original Source clip. When there are no more frames available in that clip, no more can be added. Also, Trimming can also be used at the splice point between filler and a Source clip, so the filler can be trimmed as if it were an independent Source clip.



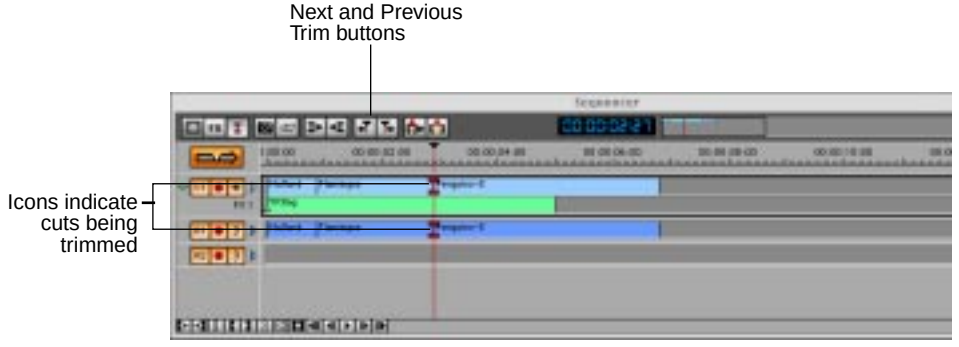
To use the Trim window to edit cuts:

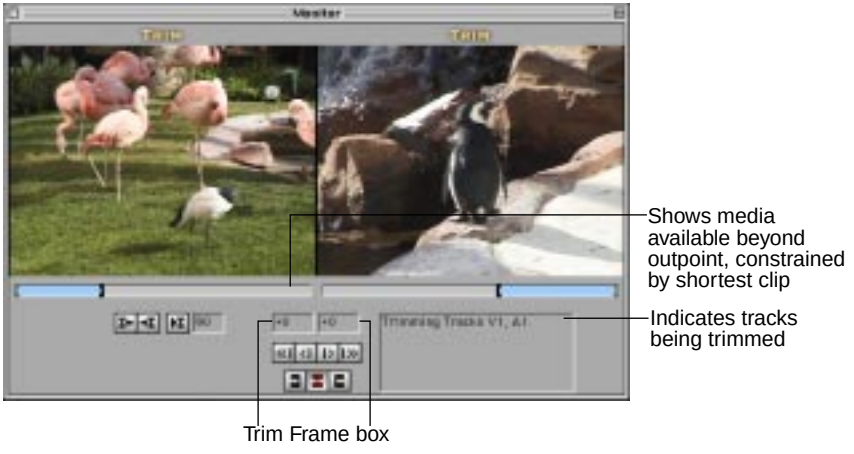
1. All tracks to be trimmed must be active in the Sequencer.

   The Patch button to the left of active tracks is gold.

2. Position the Timeline cursor at the cut and press the Trim monitor button or press F15.

Or, use the Previous Trim or Next Trim button to easily move to the exact position of a cut.

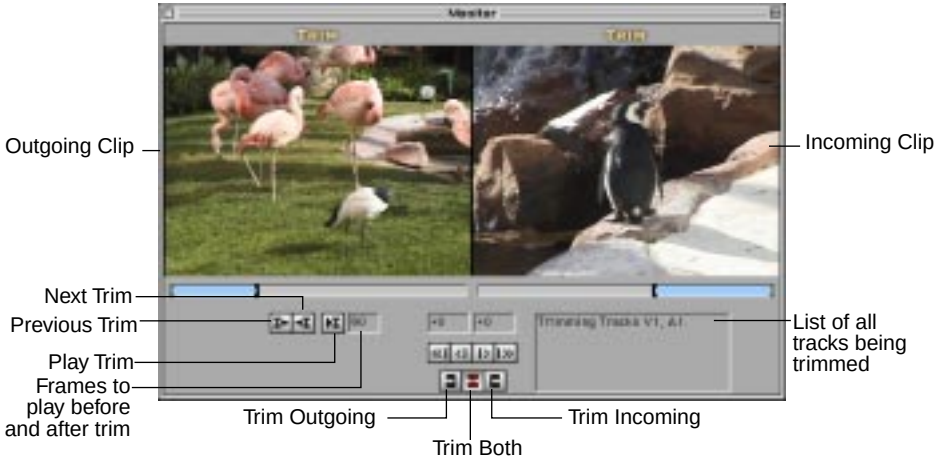




3. Click the Trim button in the control ribbon of the Sequencer window.

   Cuts in all active tracks at the location of the Timeline cursor are selected for trimming. The trim cursor will be displayed over each selected cut. The Trim window replaces the Monitors window. It displays the cut on the track with the eye icon on, and a list of the tracks involved in the trim.

   Once the Trim monitor is displayed, you can select other cuts to trim by clicking on the cut in the Sequencer, or shift-clicking to select multiple cuts. You can also deselect a cut that you do not want to trim by shift-clicking it in the Sequencer.



The slider bars in the Trim window graphically depict the amount the currently selected clips can be lengthened or shortened.

The following sections describe the different ways the Trim window can be used for editing.

Shortening or Lengthening the Outgoing or Incoming Clip

The outgoing clip can be shortened or lengthened at the cut without affecting the incoming clip, and vice versa, but doing so will affect the overall length of a program.

Note: Clips can be eliminated by trimming them to zero length using the trim buttons or by entering a number of frames directly. Clips will not be eliminated while dragging with the mouse.

Note: Any transitions applied to trimmed cut points will move appropriately with the trim.

To shorten or lengthen the outgoing clip:

1. Click the Trim Outgoing button in the Trim window or press F9.

   The Sequencer track containing the clip must be active and visible, the Patch button and eye icon to the left of it gold.

   Note: You can also Trim Outgoing with the mouse by clicking on the picture in the left trim frame and dragging left to shorten the Outgoing clip, and right to lengthen it, without first selecting the Trim Outgoing button. The cursor displays an icon indicating that you are trimming the Outgoing clip whenever the mouse is over the outgoing frame. When you press the mouse button down to begin trimming, the Trim Outgoing button will be selected automatically.

2. Clicking the arrow buttons pointing to the left will shorten the outgoing clip, either one or ten frames. Clicking the arrow buttons pointing to the right will lengthen the outgoing clip, either one or ten frames.

   Function keys F5-F8 mirror the action of the four trim buttons.

   Or, you can enter a number of frames in the left Trim Frame box. This text box indicates the change in the clip since you began the trim. Negative numbers trim to the left and shorten the clip, positive numbers trim to the right and lengthen the clip.

   Note: Your overall program length will change by the amount you have trimmed the Outgoing clip.

3. The end of the clip shifts in the Trim window and in the Sequencer. The Incoming clip remains unchanged.

   The left text box in the center of the Trim window displays the total number of frames added to or subtracted from (indicated by a number with a plus or minus sign) the outgoing clip.

4. When the cut is in the desired position, click the Play Trim button to review it.

   A player window replaces the Trim window and plays the cut. The movie will stop if you press the space bar while it is playing. After the

movie plays once, you are returned to the trim window. Click Option-Play Trim to play the clip out through FireWire using the DV Player.

Note: You can also set the "Play frames out FireWire" in SoftDV Playback preferences to play full screen at all times.

To shorten or lengthen the incoming clip:

1. Click the Trim Incoming button in the Trim window or press F11.

   The Sequencer track containing the clip must be active, the eye icon and patch button gold.

   Note: You can also Trim Incoming with the mouse by clicking on the picture in the right trim frame and dragging left to lengthen the incoming clip, and right to shorten it, without first selecting the Trim Incoming button. The cursor displays an icon indicating that you are trimming the Incoming clip.

2. Clicking the arrow buttons pointing to the left will lengthen the incoming clip, either one or ten frames. Clicking the arrow buttons pointing to the right will shorten the incoming clip, either one or ten frames.

   Function keys F5-F8 mirror the action of the four trim buttons.

   Negative numbers always move the mark point to the left, i.e. to earlier times in your program. Positive numbers always move the mark point to the right.

3. The end of the clip shifts in the Trim window and in the Sequencer. The Incoming clip remains unchanged.

4. When the cut is in the desired position, click the Play Trim button to review it.

   A player window replaces the Trim window and plays the cut. Use the space bar to toggle between playing and stopping play. After the movie plays once, you are returned to the trim window.

   The right text box in the center of the Trim window displays the number of frames added to or subtracted from (indicated by a number with a minus or plus sign) the incoming clip. Moving the mark point to the right results in a positive trim number, which shortens the Incoming clip. Moving the mark point to the left results in a negative number, which lengthens the Incoming clip.

Trimming Both Clips

Trimming both the outgoing and incoming clips at a cut allows one to be shortened while at the same time lengthening the other. This maintains the overall length of a program and is called a **roll edit**.

To trim both outgoing and incoming clips:

1. Click the Trim Both button in the Trim window or press F10.

   The eye icon to the left of the Sequencer track should be active, or gold. The Patch button must also be gold to make the track active for editing.

   Note: You can also Trim Both clips with the mouse by clicking on the picture between the two frames. The outgoing and incoming clips will both be adjusted as you drag left and right. The cursor displays an icon indicating that you are trimming both the Outgoing and the Incoming clips.

2. Click one of the arrow buttons above the Trim buttons, to move the cut in the direction of the arrow, either one frame or ten frames.

   Function keys F5-F8 mirror the action of the four trim buttons.

   The end of the outgoing clip and the beginning of the incoming clip will shift in the Trim window and in the Sequencer window. The direction and the duration of the shift depends on the arrow you click.

3. When the cut is in the desired position, click the Play Trim button to review it.

   A player window replaces the Trim window and plays the cut. Use the space bar to toggle between playing and stopping play. After the movie plays once, you are returned to the trim window.

   Note: To move to a cut or trim point adjacent to the one showing in the Trim window, use the move to Previous Trim and Next Trim buttons in the Sequencer.

   Note: To return to the Source/Program monitor click on the Monitors button in the Sequencer or press F13.

Trimming Multiple Tracks - Trimming Audio and Video Simultaneously

Multiple Audio and Video tracks in the Sequencer can be trimmed at the same time. The tracks to be edited must be active with the Patch buttons to the left of the tracks gold.

To trim multiple tracks:

- Click the Trim button in the Sequencer. All cuts that are aligned with the Timeline cursor will be selected. Thus, if video and audio tracks are both active, they will both be selected and video and audio will be trimmed together.

  If you want to trim cuts that are not aligned, such as in adjusting an L-cut, press and hold the Shift key while clicking each track at the cut to be trimmed. Only one cut may be selected for trimming in each track.

  The slider bar in the Trim window indicates the length of the shortest clip in the tracks being trimmed. This limits trim to only as much media as the shortest clip provides.

Split Edits: L-Cuts and J-Cuts

A split edit is typically used when the editor wants to smooth a transition from one clip to another. If audio and video in a clip are cut at precisely the same spot, the cut may be too noticeable and abrupt. An editor can create a split edit to reduce the abruptness of the cut by moving the audio cut point a few frames away from the video cut point. The incoming clips audio can begin before its video (a J-cut), or vice-versa (an L-cut).

To start playing one synchronized clip before or after another, the Trim window can be used to create a **split edit**. To establish a split edit the video and audio tracks must be adjusted independently of each other.

To establish a split edit do one of the following:

- Make either the audio or video track inactive by clicking the gold patch button to the left of the track so that it is grayed out. Trim the other track by placing the Timeline cursor at the cut point and clicking the Trim button in the Sequencer.
- Select both the video and audio tracks to be trimmed by placing the Timeline cursor at the cut and clicking the Trim button. Then shift-click either track to deselect it for trimming.

In the Trim window, adjust the cut point of the selected track. The audio and video will no longer cut at the same time, but will remain synchronized wherever they play together.

Changing the Number of Frames Played

Radius EditDV Unplugged is preset to play 90 frames (3 seconds) before and after a cut when you use the Play Trim button. The number of frames can be changed in the Trim window.

- Type a number of frames desired in the text box below the Outgoing Trim window on the left.

The next time you click the Play Trim button in the Trim window, Radius EditDV Unplugged will play the new number of frames typed in, before and after the cut point.

Chapter 6: Using Transitions Between Clips

The most common **transition** between clips in a program is a **cut**. A cut is the instantaneous switch from one clip to another. When you are creating a program, however, you may want some of your transitions to be different than a straight cut. You can use them to help define flow, feeling and pacing in your program. Radius EditDV Unplugged transitions provide you with a wide variety of controls and the option of creating custom transitions. With them, your program can move smoothly from one clip to the next.

Applying Radius EditDV Unplugged Transitions

The Cross Fade Audio, Dissolve, Iris, Radial Wipe, and Wipe (including Barn Door, Venetian Blind, and Band Wipe) transitions are easy to apply to a program. You can also use transition controls to vary the appearance of a transition to achieve pushes, pulls and zoom effects, based on the standard transitions provided in Radius EditDV Unplugged. In addition, many transitions support the addition of colored borders and softness settings.

Applying a Transition to Your Program

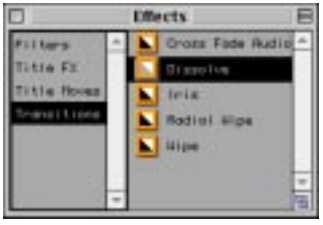
To apply a transition:

1. Choose Show Effects Window from the Window menu, or press Command-1.

   You see the Effects window.

2. Click Transitions in the left column of the window.

   You see the list of standard Radius EditDV Unplugged transitions in the right column.



3. Select a transition and drag it over the cut between two clips in the Sequencer. When you see the insertion cursor, release the mouse button to apply the transition.

   The transition is seen as a gold strip with a black border. The name of the transition appears in the gold strip.

   Note: All transitions except Cross Fade Audio are placed in video tracks and cannot be used in audio tracks. Cross Fade Audio can only be placed at a cut in an audio track.

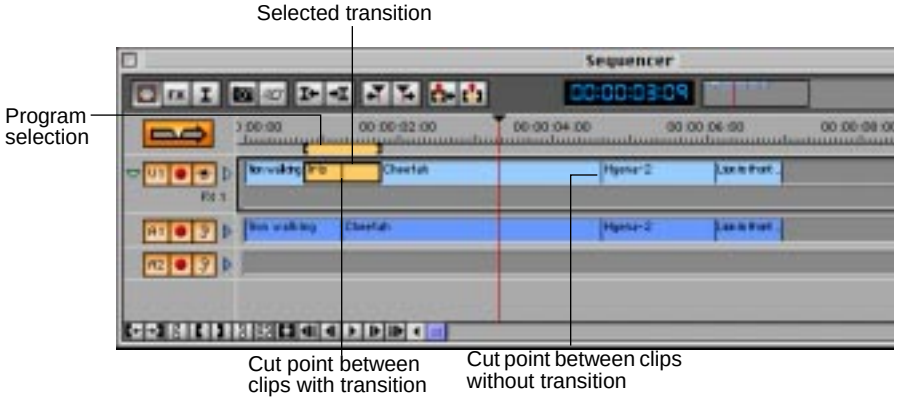
Changing the Duration and Cut Point

After adding a transition to your program, you can change its duration and where it occurs relative to the **cut point**.

To change the duration of a transition and the cut point position:

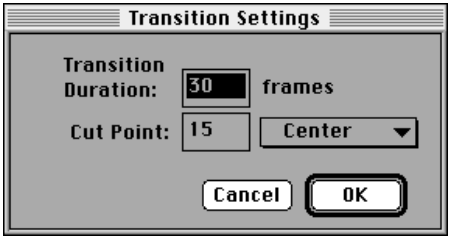
1. Click the transition on the Timeline in the Sequencer window to select it.

You see a black border around the selected transition.



2. Choose Transition Settings from the Sequencer menu. Or, press Option and double-click on the transition.

You see the **Transition Settings** dialog box**.**



3. Enter the number of frames to be used as the length of the transition in Transition Duration.

The preset number is 30, which is one second of video. The minimum number of frames that can be used is 3. The maximum number is either 300 frames or the shorter of the two clips involved in the transition.

Note: The clips involved in a transition use frames beyond the marked In and Out points to accommodate the duration of the transition.

Note: When a source clip does not contain enough frames to accommodate the transition, Radius EditDV Unplugged freezes the first or last frame of that clip, depending on whether it is the incoming or outgoing clip. To eliminate this freeze frame you can shorten the transition, change the cut point of the transition or change the In or Out point of the source clips. Freeze frames in transitions are indicated by a red bar at the end of the clip when the transition view is expanded in the Sequencer window.

4. Choose a position for the cut point between the clips from the Cut Point pop-up.

   The preset position is Center. To use a position different from the preset, use the pop-up, or enter a number of frames for the position of the cut point relative to the beginning of the transition.

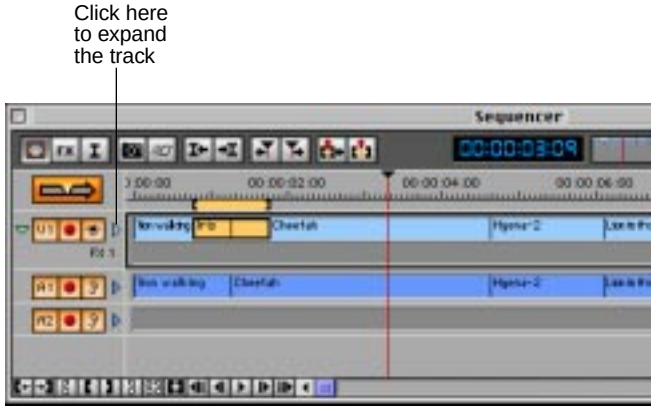
5. Click OK.

   The transition length is adjusted to the new setting. Its location is updated in the Sequencer window according to the settings entered in the Transition Settings dialog box.

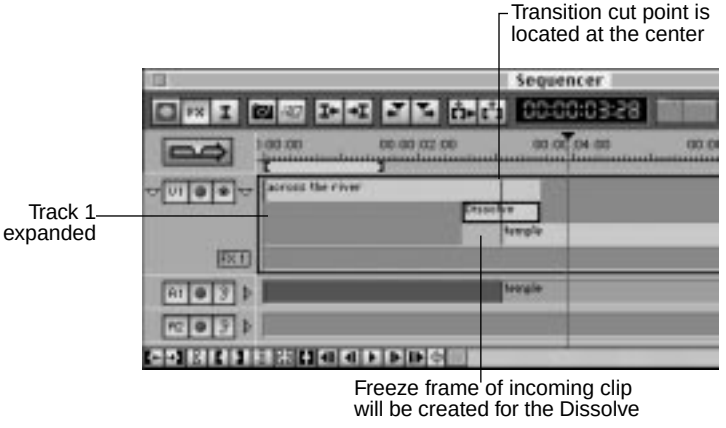
Viewing Transitions in Expanded View

To see exactly how a transition is positioned in relation to its clips, you can expand its display in a program track.

For example, if your primary video track looks like the following:



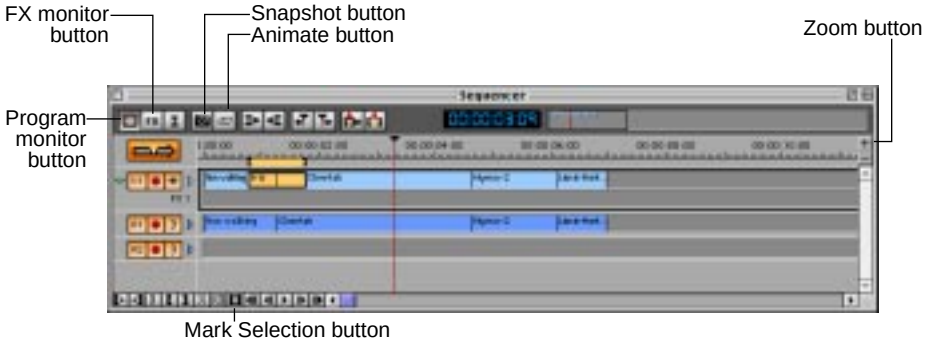
Expand the track by clicking the blue triangle to the right of the track's eye buttons. The track unfolds to an A/B roll style display to show the overlap between the clips and the transition.



Previewing a Transition

There are several ways for you to preview your transition. When a transition is selected in a track, the Program monitor in the Monitors window switches to the FX monitor. You can switch between using the

FX monitor and the Program monitor by using the buttons at the left end of the control ribbon in the Sequencer window, or their keyboard equivalents (F13 and F14).



You can preview a transition or review an **animation** of a **transition** to preview it in the FX monitor.

To preview a transition:

- You can see a preview of a transition by dragging the Timeline cursor through it while it is selected in the Sequencer. The transition is previewed on one frame from each clip to allow you to review the transition without waiting for a render.

Note: Hold the control key while dragging to disable the snap-to feature of the Sequencer, which may interfere with previewing short transitions. Zoom the Sequencer if necessary to display enough frames to allow for dragging. The left and right arrow keys can also be used to move conveniently through a transition.

To review an animation of a transition:

- Click the transition in the Timeline and click the Animate button in the control ribbon of the Sequencer window, choose Animate from the Sequencer menu, or press Command-L, to animate a transition.

  You see an animation of any movement in the transition in the FX monitor on still frames from the two clips. Since the animation returns to the location of the Timeline cursor, it is recommended that you place the Timeline at the end of the transition before animating.

You can also take a snapshot of a single frame from your program, at final quality, with the transition applied to that frame.

Note: A snapshot renders all enabled tracks, not just the transition. A Snapshot is useful to review how the transition will look in your final program.

To get a snapshot of one frame at final quality:

1. In the Sequencer, move the Timeline cursor to the desired frame.
2. Click the Snapshot button in the control ribbon of the Sequencer window, choose Snapshot from the Sequencer menu, or press Command-K.

To see the full effect of a transition at final quality:

- Click the transition in the Timeline of the Sequencer to select it, hold down Shift, and drag the Timeline cursor through the transition. You see the clip and the transition play in the FX monitor at final quality as quickly as your computer can render it a frame at a time.

  Note: To eliminate snap to grid in the Sequencer window, hold down the ctrl key while dragging. For short transitions you may want to Zoom in the Sequencer so that you can drag to each frame of your transition.

- To preview your transition at final or draft quality in the context of your program, update the Program track to include the transition, then play the Program track. To quickly select the region of the Timeline that must be updated, first ensure that the transition is selected, then click the mark selection button in the lower left hand corner of the Sequencer window and choose Overwrite Program Track from the Program menu. For more information on using the Program track to review your final program, see "Using Program Tracks" on page 79 for details.

Removing a Transition

If you decide you don't want to use a transition after dragging it into your program, you can remove it.

To remove a transition from a program:

- Click the transition to select it and press the delete key.

Modifying Transitions

The controls provided for each Radius EditDV Unplugged transition let you modify how the transition works.

To use transition controls:

1. Double-click a transition in the Timeline or, if the transition is already selected, press Command-2.
2. Choose the settings you want to use in the Controls window.

   The selected settings take effect immediately.
3. Click the Close button in the upper-left corner of the Controls window to close it.

The following sections describe each of the Radius EditDV Unplugged transitions.

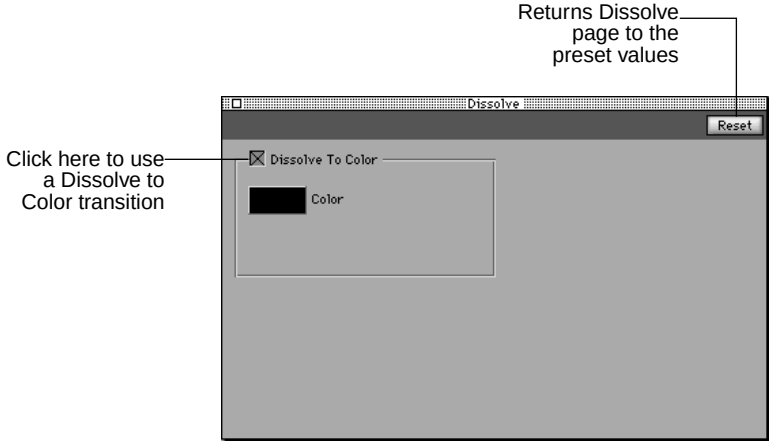
Using the Cross Fade Audio Transition

The **Cross Fade Audio** transition fades out the end of one audio clip while fading in the beginning of the next. After applying the transition, you can change its duration and its relation to the cut point. When you double click on a clip in an audio track, the Radius EditDV Unplugged Controls window displays controls that apply to that entire track, and the individual clip.

Using the Dissolve Transition

A **Dissolve** transition blends the end of the outgoing clip and the beginning of the incoming clip. It can also fade the end of the outgoing clip to a selected color, and fade in from that color to the beginning of the incoming clip.

When you apply the Dissolve transition and open the Controls window, you see the Dissolve page.

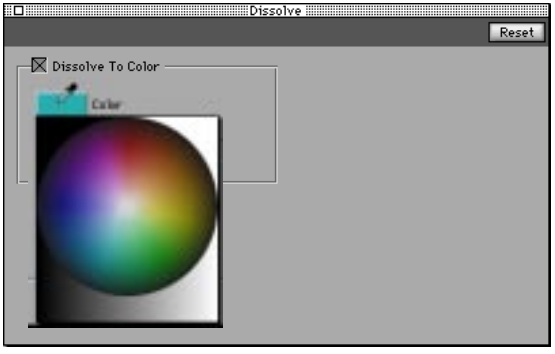


To use a Dissolve to Color transition:

1. With the Dissolve transition applied to a cut in the Timeline, open the Controls window by double-clicking or pressing Command-2.
2. Click the Dissolve to Color checkbox.

3. Hold the mouse button down over the Color box in the Controls window to display the Radius EditDV Unplugged color palette.

   The pointer changes to an eyedropper.



4. Drag the eyedropper to the color you want to use.

   If you want to match a color in your video, drag the eyedropper over the color in the Monitors window.

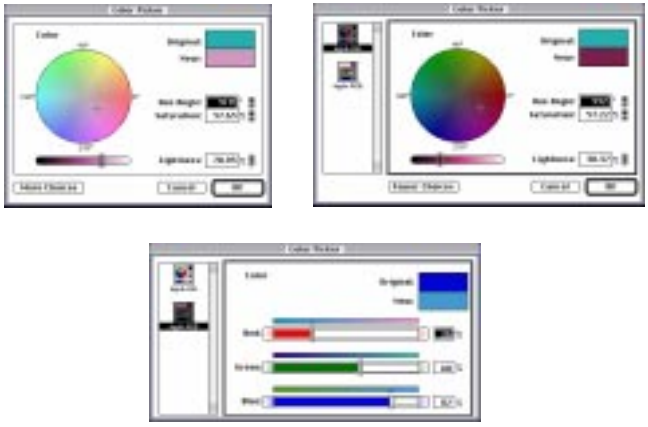
5. Release the mouse button.

   The eyedropper picks up the selected color, displays it in the color box, and uses it for the Dissolve to Color transition.

   Note: At the center point of the transition the frame will be entirely filled with the selected color, regardless of the transition cut point.

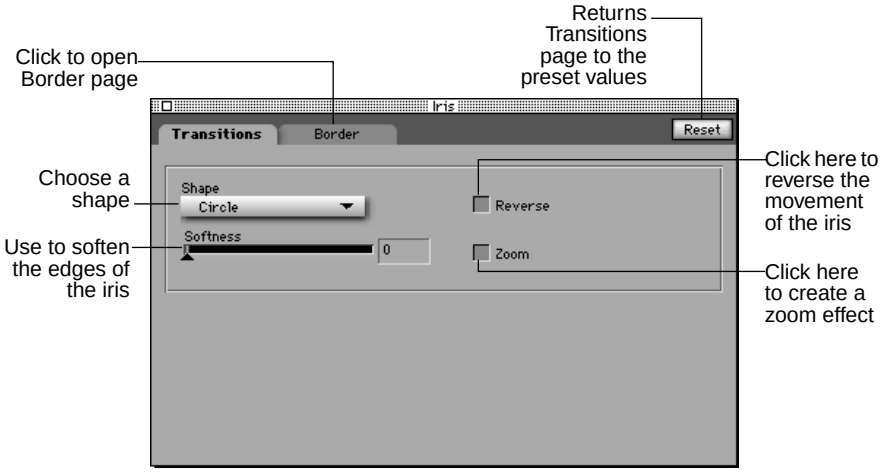
Note: You can use the **Apple Color Picker** to choose a color for your Dissolve to Color transition by clicking in the Color box.

Some Apple Color Picker Options



Using the Iris Transition

An **Iris** transition opens the beginning of the incoming clip over the top of the outgoing clip.



Choosing a Shape for the Iris

The Iris is preset to open as a circle. You can change the shape of the Iris to an oval, a square, or a rectangle.

To change the shape of the Iris:

- Choose the shape you want to use from the Shape pop-up on the Transitions page.

Reversing the Iris Transition

When you reverse an Iris transition, the outgoing clip in the Iris closes, revealing the beginning of the incoming clip.

To reverse the Iris transition:

- Click the Reverse button on the Transitions page.

Selecting a Softness Setting

The Iris is preset to have a distinct edge separating it from the clip behind it. You can use the Softness control on the Transitions page to change the softness setting and blur the edges of the Iris.

To select a softness setting for the Iris:

- Drag the slider on the Softness control to the desired setting.

  As you drag the slider, you see the number in the Softness box change. You can also type the new setting number into the Softness box.

Edges are softened more at higher softness settings. The result of the Softness setting is previewed in the FX monitor.

Zooming the Iris In or Out

Normally the Iris opens or closes to reveal the incoming clip. By using the Zoom button on the Transitions page, you can zoom in or zoom out the incoming clip over the outgoing clip within the selected Iris.

To zoom the Iris in:

- Click the Zoom button on the Transitions page.

  Use the Reverse button with the Zoom button and you can zoom out the outgoing clip in the transition to reveal the incoming clip.

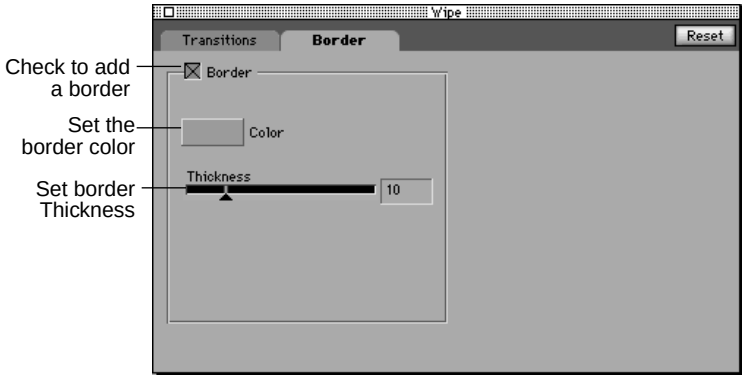
Using a Border With an Iris Transition

You can add a border of a selected color and thickness to the Iris. If you are using a Softness setting that blurs the edges of the Iris, it also blurs the border.

To create a border for an iris transition:

1. Click the Border tab at the top of the Controls window.

   You see the Border page for the transition.



2. Click the Border check box.

To choose a thickness for a border:

- Drag the slider on the Thickness control to the desired setting.

  You can also type the new setting number into the Thickness box. The smaller the setting, the narrower the border; the larger the setting, the wider the border.

To choose a color for a border:

1. Click the Color box on the Border page and hold the mouse button down to display the Radius EditDV Unplugged color palette.

   The pointer changes into an eyedropper.

2. Drag the eyedropper to the color you want to use.

   Or, if you want to match a color in your video, drag the eyedropper over the color in the monitors window.

3. Release the mouse button.

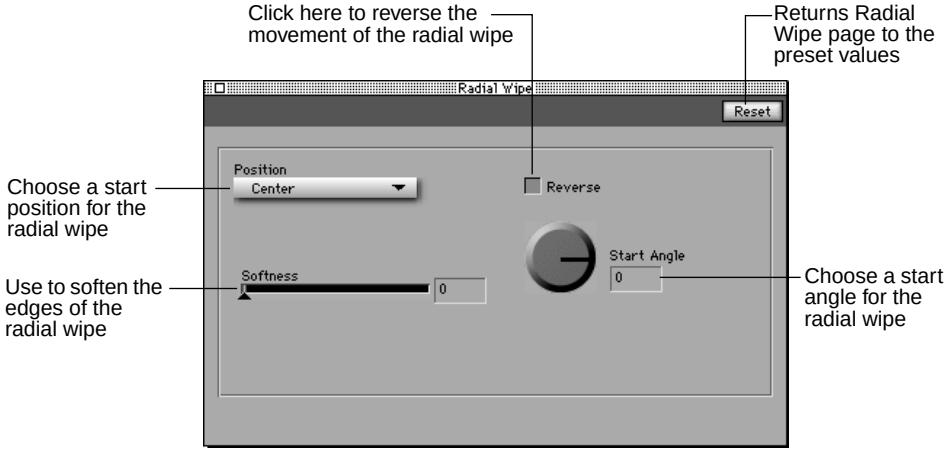
   The eyedropper picks up the selected color, displays it in the color box, and uses it for the border.

   Note: You can use the Apple color picker when choosing a color for your border by clicking in the Color box.

Using the Radial Wipe Transition

A **Radial Wipe** transition sweeps away the end of a clip with a circular or semi-circular motion, revealing the beginning of the next clip.

When you apply the Radial Wipe transition and open the Controls window, you see the Radial Wipe page.



Like the Iris transition, the Radial Wipe transition provides a Softness control that you can use to blur the edges of the Radial Wipe. For specific instructions about selecting a softness setting see “Selecting a Softness Setting” on page 120.

Choosing a Position for a Radial Wipe

A Radial Wipe is preset to wipe away the current clip in a circular motion with the center of the wipe positioned in the center of the clip, like the hands of a clock. You can change the Position setting from the center of the clip to one of the four corners.

To choose the center of rotation position for a Radial Wipe:

- Choose the center of rotation position from the Position pop-up.

Choosing a Start Angle for a Radial Wipe

When you use the Center start position for a Radial Wipe, you can also choose the start angle for the wipe. The preset start angle begins the wipe at the 3:00 o'clock position.

To change the start angle for a Radial Wipe:

- Drag the pointer on the Start Angle dial to the position where you want the wipe to start.

  As you drag the pointer, you can see the numbers in the Start Angle box change, as well as the angle on the FX monitor. You can also type the angle in degrees in the text box.

Reversing a Radial Wipe Transition

When you reverse a Radial Wipe transition, you reverse the direction of the current Radial Wipe setting. For example, if you reverse a Radial Wipe using the Center position and the preset start angle, the direction of the wipe reverses to move counterclockwise.

To reverse a Radial Wipe transition:

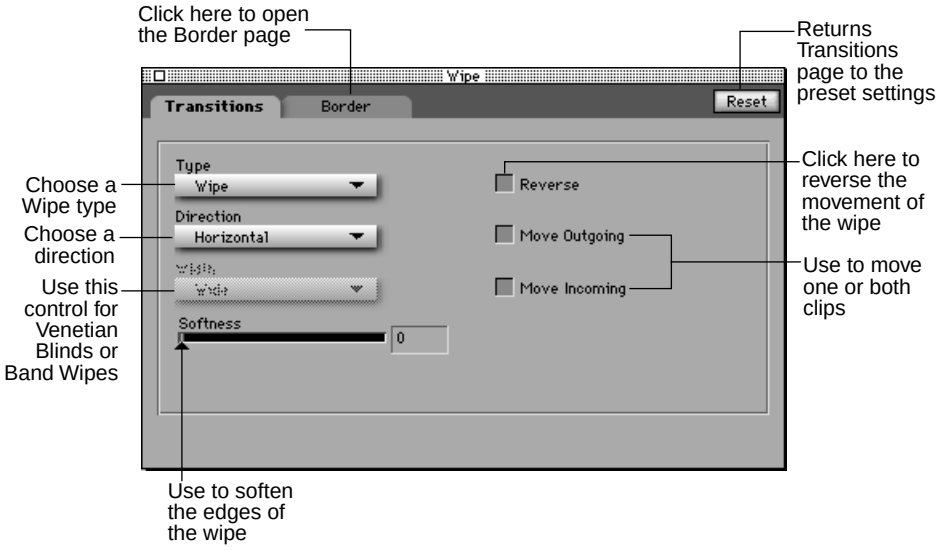
- Click the Reverse button in the Controls window.

Using the Wipe Transitions

A Wipe transition wipes away the end of a clip with a linear motion, revealing the beginning of the next clip underneath. Radius EditDV Unplugged provides several different types of Wipe transitions.

Like the Iris transition, the Wipe transitions let you blur the edges of a wipe and create a border for it. For specific instructions about selecting a softness setting and creating a border, see "Selecting a Softness Setting" on page 120 and "Using a Border With Wipe Transitions" on page 127.

When you apply the Wipe transition and open the Controls window, you see the Wipe page.



Choosing a Type of Wipe

You can choose from four different types of Wipes: Wipe, Barn Door, Venetian Blind, and Band Wipe. The Wipe is preset and sweeps away the current clip horizontally, from left to right, to reveal the incoming clip.

The other types of wipes work as follows, if used with the preset settings on the Transitions page:

- A **Barn Door** wipe shows the first frame of the incoming clip, as if it were a barn door, closing over the last frame of the outgoing clip.
- A **Venetian Blind** wipe displays the outgoing clip in strips over the incoming clip. The strips gradually open like a Venetian blind during the transition, revealing the incoming clip.
- A **Band** Wipe gradually moves the incoming clip, displayed in alternating bands, from both the left and right side of the clip. The bands eventually reach the opposite side of the clip and completely cover the outgoing clip.

Determining the Direction of a Wipe

Radius EditDV Unplugged is preset to create a horizontal wipe by default. You can change the Direction setting to create a vertical wipe.

To change the Direction setting:

- Choose Vertical from the Direction popup on the Transitions page.

Reversing a Wipe Transition

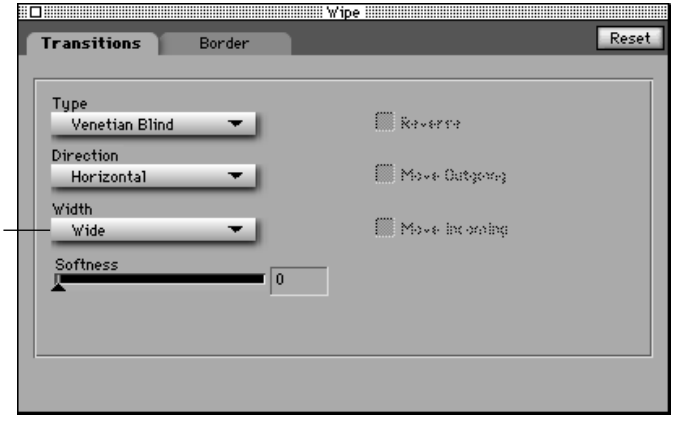
When you reverse a Wipe transition, you reverse the direction of the current wipe setting. For example, if you reverse a horizontal Barn Door wipe, the last frame of an outgoing clip opens outward from the center, as if it were a barn door opening, revealing the first frame of the incoming clip.

To reverse a Wipe transition:

- Click the Reverse button on the Transitions page.

Using the Width Control

You can use the Width control on the Transitions page to choose how wide or narrow Radius EditDV Unplugged makes the blinds used in a Venetian Blind wipe or the bands in a Band Wipe.



To choose a width for venetian blinds or bands:

- Choose Wide, Medium, or Narrow from the Width pop-up.

Adding Motion to Transitions

Using the Move Outgoing and Move Incoming controls on the Transitions page, you can create what is sometimes called a DVE or Push/Pull transition. Instead of using one of the methods of wiping out the outgoing clip to reveal the incoming clip, or vice versa; you cause one or both of the clips to move. The following table describes how to use the Move Outgoing and Move Incoming controls.

Click:	To do the following:
Move Outgoing	Move the outgoing clip in the transition aside, revealing the incoming clip behind.
Move Incoming	Move the incoming clip in the transition into view, covering the outgoing clip.
Move Outgoing and Move Incoming	Move both clips until the outgoing clip gradually disappears from view and the incoming clip gradually replaces it.

Note: The direction of movement of the clips in the above transitions depends on whether or not Reverse is checked.

Using a Border With Wipe Transitions

You can add a border of a selected color and thickness to a Wipe and a Barn Door wipe. Using a border with one of these Wipe transitions is the same as using a border with an Iris transition. For specific instructions for turning on a border and choosing a border thickness and color, see “Using a Border With an Iris Transition” on page 121.

Creating Custom Transitions

If you find that you are making the same changes to a transition over and over, you might want to save the settings as a new custom transition. When you save a custom transition, Radius EditDV Unplugged saves it in a folder in an effects bin under a name that you assign. You see a new transition document displayed in the Effects window with a special icon that designates it as a custom transition.

You can drag custom transitions into your programs just as you do the other Radius EditDV Unplugged transitions.

To create a custom transition:

1. In the Sequencer, double-click the transition you want to use as a starting point for your custom transition.

   The controls for the transition are displayed in the Controls window.

2. Choose the settings you want to use.

3. Drag the custom transition from the Sequencer to the Effects window.

   You see the following dialog box.

4. Click New to create a folder for storing custom transitions.

Or, if you've already created a custom transitions folder, double click on this folder to open it. When creating a new folder navigate one level up from the transitions folder so that Radius EditDV Unplugged places your custom folder in the Plug-Ins folder at the same level as Transitions.

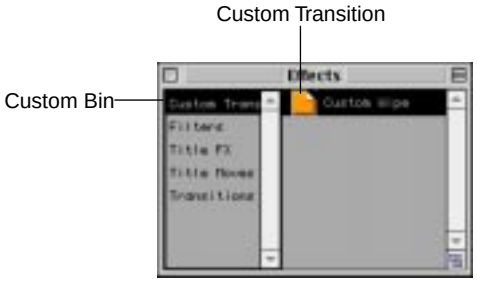
You see the following dialog box.

5. Enter a name for your custom transition folder.

It is not required but recommended that you store your custom transitions in their own folder to keep them separate from the Radius EditDV Unplugged supplied transitions.

6. Enter a name for your custom transition in the Save Transition As box and click Save.

A new transition bin is created with your custom transition in it.



Removing Custom Transitions

Custom transitions are stored in the finder and can be removed in the same way any file is removed from the finder, by dragging it to the trash. Be sure never to remove any of the transitions supplied with Radius EditDV Unplugged as these are the basis for all custom transitions.

Note: It is important that you never discard any of the Radius EditDV Unplugged transitions provided for you with the application. They are the foundation for all custom transitions. A custom transition file stores only the changes made to the preset transition used as its starting point.

Note: Since custom transitions and filters are simply files containing parameter settings, they may, like any Macintosh file, be moved from one workstation to another, sent via e-mail and shared among Radius EditDV Unplugged users.

Chapter 7: Working With Audio

Audio is an integral part of video production and critical to the success of a program. Radius EditDV Unplugged provides essential editing tools for working with audio as part of the editing process. Audio clips are generally handled in the same way as video clips. This chapter discusses the specifics of working with audio, setting volume, pan, and time varying control of audio volume envelopes using the Sound Fade filter.

Capturing Your Audio Media

In addition to the audio captured with video by your camcorder, audio media can be imported from a CD or an AIFF file. If source clips contain both video and audio media, you can import audio media at the same time video media is imported. To import audio from a CD, see “To import an audio track from a CD:” on page 43.

Reviewing Audio in the Source monitor

Audio is reviewed in the Source monitor in the same manner as video. You can double-click a source clip in the Project window to place it in the Source monitor, or drag the clip into the Source monitor.

When reviewing a source clip containing only audio in the Source monitor, an audio icon is displayed. The length of the clip is represented by the slider bar.

Audio clips are played by clicking the Play/Stop button in the Source monitor or by dragging the cursor through the slider bar.

For more information about reviewing source clips in the Source monitor, see unplugged.

Adjusting the Volume in the Source Monitor

The Audio Adjust button in the Source monitor controls the volume for a source clip. Each source clip has an associated clip volume. After a clip has been placed into the Sequencer its clip volume may be adjusted with the audio control panel.

To adjust the volume for a source clip in the Source monitor:

1. Point to the Audio Adjust button and hold down the mouse button to display the volume control.

   Note: Hold the Shift key while displaying the volume control to allow overdriving the audio beyond 100% (0 dB).

2. Drag the slider on the volume control to the desired position and release the mouse button.

   When the audio level of a source clip in the Source monitor is altered, the level selected effects the clip when it is played. When a clip is moved into the Sequencer from the Source monitor, the audio level of that clip retains the volume set in the Source monitor.

After moving a source clip into the Sequencer and creating an audio clip, you no longer adjust its volume from the Source monitor. Volume adjustments are then made in the Sequencer window or Program monitor. See “Setting the Volume of your Audio Program” on page 142.

For more information about the function of Source monitor buttons, see “Reviewing Clips in the Source Monitor” on page 57.

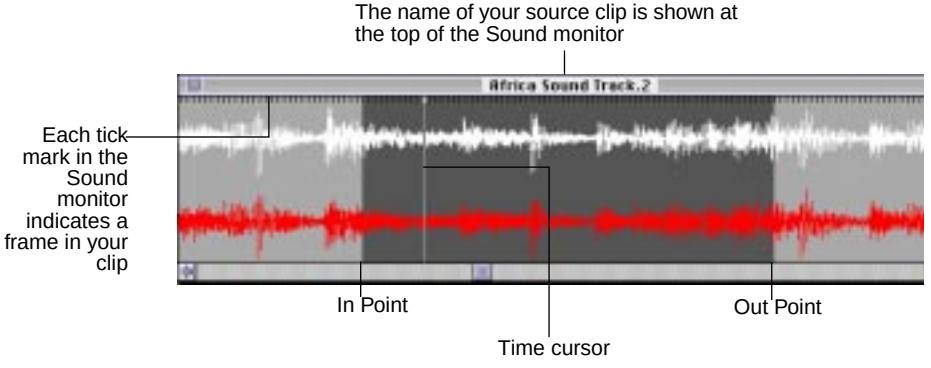
Reviewing Source Clips in the Sound Monitor

The audio from a source clip can be displayed as audio waveforms in the **Sound monitor**.

To use the Sound monitor:

- With a clip containing audio in the Source monitor, choose Show Sound Monitor from the Window menu, or press Command-3.

  Radius EditDV Unplugged displays the Sound monitor window containing the audio waveform for the source clip. If the clip contains stereo audio, both tracks are shown in the Sound monitor with the left channel, shown in white, above the right channel, shown in red.



The segment of the clip between the In and Out points is displayed with a darker background than the rest of the source clip. A time cursor in the Sound monitor reflects the current position of the slider in the Source monitor.

Close the Sound monitor by clicking the Close button in the upper-left corner of the Sound monitor window, or choose Hide Sound Monitor from the Windows menu.

Zooming the View in the Sound Monitor

You control the amount of detail seen in the Sound monitor by zooming in and out. When zooming in, less of the audio clip is seen but in greater detail. Zooming out allows a longer segment of audio to be shown, but in less detail.

To zoom in the display in the Sound monitor:

1. Move the pointer into the Sound monitor and press Option.

   A magnifying glass containing a plus sign appears.

2. Click to zoom in the display.

To zoom out the display in the Sound monitor:

1. Move the pointer into the Sound monitor and press Control.

   A magnifying glass containing a minus sign appears.

2. Click to zoom out the display.

Scrubbing Audio in Source Clips

In addition to playing a source clip, there are four ways to scrub audio in source clips.

- To **scrub** audio normally in the Sound monitor, drag the Sound monitor cursor to hear the audio played in small sound chunks.

Radius EditDV Unplugged also simulates the Jog/Shuttle wheel found on many professional tape decks by tracking your mouse movement. Hold the command key while dragging to place the Sound monitor in Jog/Shuttle mode. The current mode is defined by the setting in the Scrub While Stepping in the Audio Scrub settings in the Sequencer menu.

- When in **Jog** mode Radius EditDV Unplugged plays your audio at half speed as long as you are dragging the mouse. If you drag your mouse to the left your audio will play in reverse.

- While **shuttling**, Radius EditDV Unplugged plays your audio either half or normal speed depending on how far you have moved your mouse.
- You can also hear a clip play one frame at a time by stepping forward or backward through it with buttons or the keyboard and turning on Scrub While Stepping in the Audio Scrub settings in the Sequencer menu.

  Note: In order to scrub audio in the Source monitor the source clip must be in the Source monitor and the Sound monitor window must be open.

To prepare an audio source clip for scrubbing:

1. Double-click on a clip in a selected bin in the Project window or drag the clip, to place it in the Source monitor.
2. Select Show Sound Monitor from the Window menu.

   The Sound monitor window appears.

To scrub an audio source clip:

1. Click on the waveform in the Sound monitor to begin normal scrubbing. Hold the mouse button down and drag the time cursor through the Sound monitor.

   Audio will play as fast as you move the mouse. The Sound monitor time cursor appears as a vertical line when you first click on a waveform. The mouse pointer disappears when the time cursor moves. The audio will play in short staccato chunks, as long as the cursor is being moved.

To step through using the buttons in the Source monitor:

1. Choose Scrub While Stepping from the Audio Scrub submenu of the Sequencer menu.

   A check mark appears to the left of Scrub While Stepping, indicating that it is activated.
2. Use the step forward and backward buttons in the Source monitor to move through an audio clip as indicated by the buttons.

   You can also use the keyboard equivalents for stepping, Right Arrow and Left Arrow.

To jog the audio of a source clip:

1. Choose Jog in the Audio Scrub submenu of the Edit menu.

   A check mark appears at the left of the word Jog when it is activated.

2. Press Command and click in the Sound monitor over the waveform to begin scrubbing. Drag the time cursor through the Sound monitor.

   A vertical line, the Sound monitor time cursor, appears at the point you clicked. The mouse pointer disappears when the time cursor is moved. The audio clip will play at half speed for as long as the mouse is moving. The clip will play forward or backward, depending on the direction you move the mouse.

To shuttle the audio of a source clip:

1. Choose Shuttle in the Audio Scrub submenu of the Sequencer menu.

   A check mark appears at the left of the word Shuttle when it is activated.

2. Press Command and click in the Sound monitor, over the waveform to begin scrubbing. Drag the time cursor through the Sound monitor.

   A vertical line, the Sound monitor time cursor, appears at the point you clicked. The mouse pointer is replaced by a square stop icon.

3. If you press Command and drag the cursor a short distance, the mouse pointer will be replaced by a single triangle that points in the direction the cursor is moved.

   The clip will play at half-speed in the direction the mouse is moved.

4. If you press Command and drag the cursor a longer distance, the mouse pointer is replaced by two triangles pointing in the direction the cursor moves.

   The clip will play at full speed as long as the cursor is moving. It plays forward or backward, depending on the direction the mouse is moved.

   Note: Jog and Shuttle are mutually exclusive options, only one of them can be active at any given time.

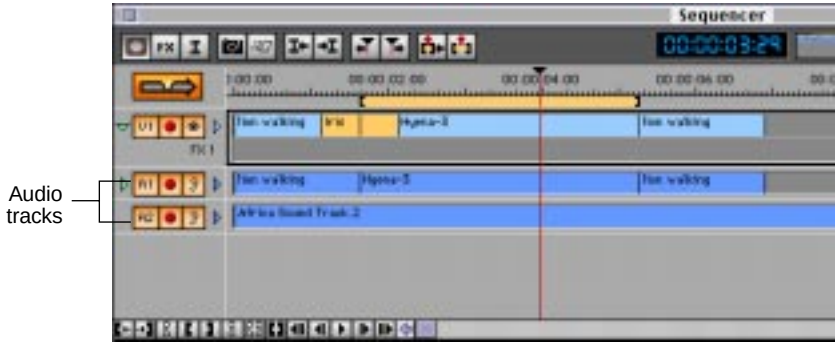
For more information about buttons in the Source monitor, see “Reviewing Clips in the Source Monitor” on page 57.

Editing Audio Clips into the Timeline

Audio clips, or source clips containing video and audio, are moved into the Timeline in the Sequencer either by dragging or via the Patch matrix. For additional information on moving clips, see “Assembling a Program” on page 63.

Two audio tracks (A1 and A2) are automatically open in the Sequencer window when a new project is started

Note: Stereo audio is displayed as A1 in the Tracks column in the Project window.



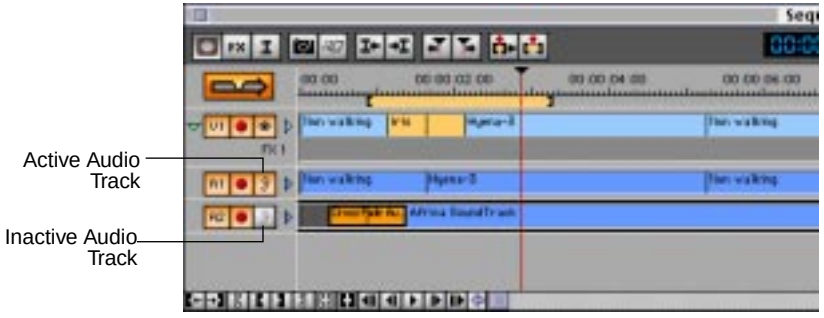
Note: If the audio clips in your program define the structure of your program more than your video (for example, a narration about a historical event or a music video), you may want to assemble your audio clips first.

Playing Audio Tracks

To play the audio tracks in the Timeline in the Sequencer, click the Play/Stop button in the Sequencer window or in the Program monitor. All audio tracks that are play-enabled in the Sequencer will play when the Play/Stop button is clicked. To select audio tracks in your program for playback:

- Enable each track you want to play by clicking the ear icon to the left of the track.

  The ear icon is gold when the track is activated, grayed when it is not.



Soloing Audio Tracks

An audio track may be soloed (all other tracks off) by option-clicking its ear icon. It will be enabled and all other audio tracks will be disabled. Option-clicking on a track that is already solo enabled will solo disable it, turning all other audio tracks on. Soloing is especially useful for turning on the AP (Audio Program) by itself for playback after rendering.

Editing Audio in the Sequencer window

Once audio source clips are placed in the Timeline, they can be manipulated and edited in the same way as video clips–dragging them to new positions on the Timeline, adding a cross-dissolve, forcing edits in them, etc. For more information about editing clips, see “Chapter 5: Editing a Program” on page 87. The following sections discuss aspects of editing specific to audio.

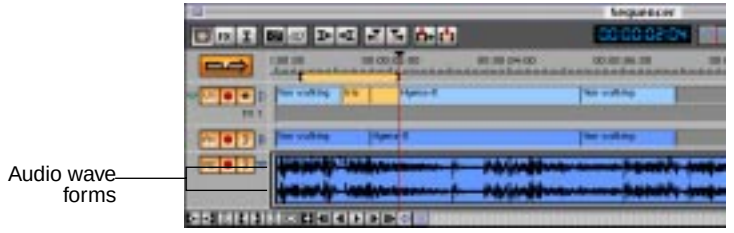
Viewing Sound Waveforms in the Sequencer

Sound waveforms of clips in the audio tracks of the Timeline can be viewed in the Sequencer. You can scrub, jog or shuttle these clips directly in the Sequencer.

To see the sound waveforms in the Sequencer:

1. Click on the ear icon to enable the audio track.
2. Click the blue arrow to the left of the audio track.

   The audio track expands, the arrow changes position indicating the track display is open and points down.



3. To return the track to normal mode, click the blue arrow again.

   The arrow returns to its original position. The track collapses and the waveforms disappear.

Scrubbing Audio Tracks in the Sequencer Window

Pressing the command key while dragging the Timeline cursor scrubs all enabled audio tracks together using the mode checked in the Audio submenu of the Sequencer menu.

To enable an audio track, click the ear icon to the left of the track. The icon is gold when the track is enabled, gray when it is disabled. The difference between scrubbing in the Sequencer and scrubbing in the Sound monitor is that audio is off by default in the Sequencer unless the command key is pressed.

To scrub audio tracks in the Sequencer:

1. Position a clip in the Timeline of the Sequencer and enable the audio track to be scrubbed.
2. Select Normal in the Audio Scrub submenu of the Sequencer menu.

   A check mark appears at the left of the word Normal when it is activated.
3. Press Command, point at the top end of the Sequencer Timeline cursor and drag through the clip or clips.

   Audio will play as fast as you move the mouse. The audio will play in short staccato chunks, as long as the cursor is being moved.

To jog while scrubbing audio clips in the Sequencer:

1. Position a clip in the Timeline of the Sequencer and enable the audio track to be scrubbed.
2. Select Jog in the Audio Scrub submenu of the Sequencer menu.

   A check mark appears at the left of the word Jog when it is activated.
3. Press Command, point at the top end of the Sequencer Timeline cursor and drag through the clip or clips.

   The arrow of the mouse pointer disappears. The audio clip will play at half speed for as long the cursor is moving. The clip will play forward or backward, depending on the direction the cursor is moved.

To shuttle while scrubbing audio clips in the Sequencer:

1. Place a clip in the Timeline of the Sequencer.
2. Enable the audio track.
3. Select Shuttle in the Audio Scrub submenu of the Sequencer menu.

   A check mark appears at the left of the word Shuttle when it is activated.
4. If you press Command, point at the top end of the Timeline cursor, and drag it, the mouse pointer becomes a square.

5. If you press Command, point at the top end of the Timeline cursor, and drag it a short distance, the mouse pointer will be replaced by a single triangle that points in the direction the cursor is moving.

   A clip will play at half-speed in the direction the cursor moves.

6. If you press Command, point at the top end of the Timeline cursor and drag it a longer distance, the mouse pointer is replaced by two triangles pointing in the direction the cursor is moving.

   The clip will play at full speed as long as the cursor moves. It plays forward or backward, depending on the direction the cursor moves.

   Note: Only one of the Audio Scrub submenu options: Normal, Jog or Shuttle, can be active at a time. These options can also be selected with the command key equivalents shown in the submenu for faster switching between modes.

   Note: These scrubs modes can be used with or without waveform display.

To hear program audio one frame at a time:

1. Enable the audio track by clicking the ear icon to the left of it.
2. Select Scrub While Stepping from the Audio Scrub submenu of the Sequencer menu.

   When you click, a check mark appears to the left of Scrub While Stepping, indicating that it is activated.

3. Use the step forward and backward buttons in the control ribbon of the Sequencer window, or the keyboard arrows, to move forward and backward through an audio clip.

   The audio will play in short chunks as you step through the Sequencer.

   Note: Scrub While Stepping can be activated with any of the scrub modes.

Setting the Volume of your Audio Program

Audio volume may be changed for an entire track, an individual clip or a section of a program using the Sound Fade filter. The volume of individual clips in an audio track can be set to balance differences in the audio levels between clips. You can also use the sound Fade filter to control the volume envelope using keyframes over a period of time.

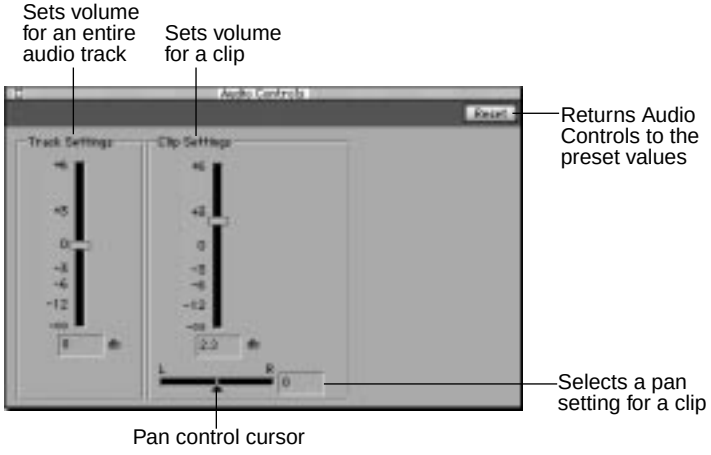
To set the volume in the Sequencer window, use the **Audio Controls window.**

To Set the Volume of a Clip or a Track

1. Select the audio clip or track and open the Controls window:

- Click the Audio Adjust button in the Program monitor.
- Choose Show Controls Window from the Window menu, or press Command-2.

In the Audio Controls window, the Track Settings and Clips Settings sliders are preset at zero, unless you have adjusted a source clip volume in the Source monitor. This indicates that the audio clips in the program are at 100% of the level at which they were captured. The boxes under the settings report the audio levels in decibels.



To change the volume for an audio clip in the Sequencer:

1. Click the audio track containing the clip.

2. Position the Timeline cursor over that audio clip.
3. In the Audio Controls window, use the slider on the Clip Settings volume control to adjust the audio level of the clip.

   Audio adjustments on tracks and clips may also be made interactively while the clip is playing.

To change the volume for an audio track in the Sequencer:

1. Click the audio track.
2. In the Audio Controls window, use the slider on the Track Settings volume control to adjust the audio level for the track.

   When the audio level for a track is changed, all clips on the track are adjusted accordingly, but their individual clip volumes remain unchanged.

   Note: When changing volumes for a clip or track the final volume you set is the one used by Radius EditDV Unplugged for the entire track or clip. To set volumes that vary over time within a clip use the sound fade filter. For more information on the sound fade filter, see "Using the Sound Fade Filter" on page 144.

Selecting a Pan Setting for an Audio Clip

Use the pan control cursor below the Clip Settings volume control in the Audio Controls window to select a pan setting for an audio clip.

To select a pan setting for a clip:

1. In the Sequencer, position the Timeline cursor over the audio clip.
2. Open the Audio Controls window by clicking the Audio Adjust button in the Program monitor.

   You can also press Command-2, or choose Show Controls from the Window menu.
3. Move the pan control cursor on the Pan Setting control left or right to the desired setting.

   The pan control cursor on the control is preset at zero, which sets the pan at Center. As you drag the pan slider, the numerical setting in the text box to the right of the slider changes.

You choose a pan setting for an entire clip. To fade the audio in a clip from Full Left to Full Right, or vice versa, force an edit in the clip and use the Cross Fade Audio transition at the cut. For more information see “Force an Edit” on page 93 and “Using the Cross Fade Audio Transition” on page 117.

Using the Sound Fade Filter

Track and clip volumes provide fixed control for the entire length of the track or clip respectively. Time varying control of audio volume is provided by the Sound Fade filter. Like most filters in Radius EditDV Unplugged, it supports keyframing of its volume parameter and linear- or spline-based interpolation for smooth changes between keyframes. In addition, it provides access to volume keyframes by dragging the rubber band control in the FX track of the audio track. Sound Fade filters can be saved as custom filters to create commonly used fades.

Applying the Sound Fade Filter

The Sound Fade filter is applied like other filters in Radius EditDV Unplugged, except that it can only be applied to audio tracks.

To apply a Sound Fade filter to an audio track:

1. Choose an audio track where you want to add the filter. Click that track to select it.

   You see a black border around the selected track.

2. Choose Add FX Track from the Sequencer menu, or press Command-Backslash (\) if there is not already an FX track on the audio track you want to adjust.

   A new FX track is added, below any existing FX tracks.

3. Choose Show Effects Window from the Window menu.

   Radius EditDV Unplugged opens the **Effects** window.

4. Click Filters in the left column of the window to select it.

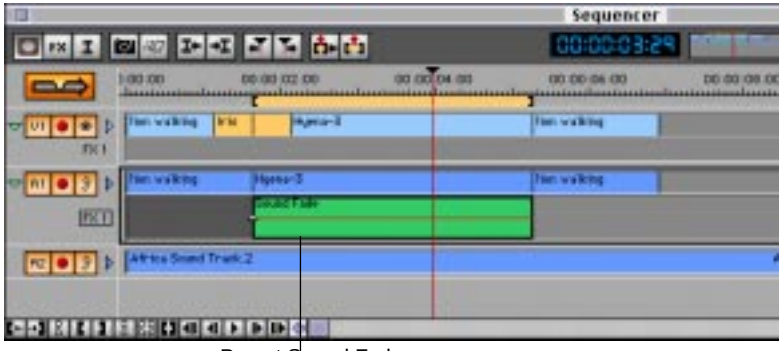
5. Select the Sound Fade filter and drag it into an FX track in the Sequencer.

   The audio track may either be opened, showing the audio waveform, or hidden.

6. Place the filter below the clip where you want to apply the Sound Fade.

   You see an outline where the filter will be applied before you release the mouse button. The filter will snap to the clip you apply it to, so it's easy to apply a filter to an entire clip, although it can be applied anywhere on the timeline. After you release the mouse button the filter is displayed as a green strip in the FX track. The black border indicates it is selected. The name of the filter appears in the strip.

   Note: For more information on using filters in Radius EditDV Unplugged, see Chapter 7: Creating Special Effects with Filters.



Adjusting Volume from the Controls Window

Audio levels may be adjusted, and keyframes created, either from the volume slider in the controls window or by dragging the keyframes directly in the Sequencer.

To adjust sound volume from the controls window:

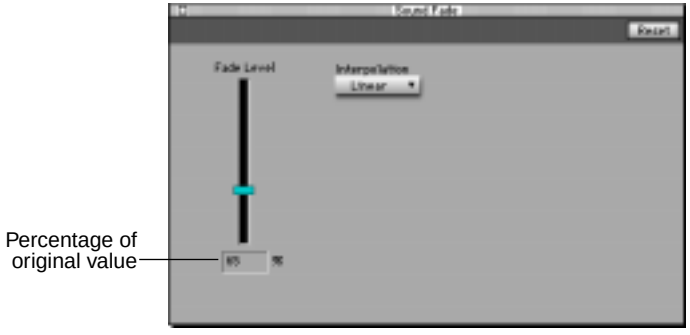
1. Double-click a Sound Fade filter on the FX track to select it. If the filter is already selected, press Command-2 or go to the Window menu and select Controls Window.
2. Position the Timeline cursor in the Sequencer where you want to adjust the volume.

3. Choose the volume setting you want to use in the Controls window.

   Radius EditDV Unplugged creates a keyframe at the position of the Timeline cursor using the selected setting. You see a small white triangle in the FX track that indicates the volume at that keyframe, and a line indicating the volume envelope.

4. After choosing filter settings, click the Close button in the upper-left corner of the Controls window to close it.

   Note: The Audio Program must be updated to hear the effect of a Sound Fade filter.



Adjusting Audio Levels in the Sequencer

When an audio volume is adjusted in the Controls window the appropriate keyframe is also adjusted in the Sound Fade filter in the FX track. To make adjusting audio levels more convenient, these keyframes may also be adjusted directly by dragging them. Audio keyframes may be dragged up or down to adjust volume level or, like other keyframes, left and right to change their position on the Timeline.

To adjust keyframes by dragging:

1. To show the FX track on an audio track, click on the green triangle to the left of the gold track button.

   The FX track will be displayed.

2. Click and drag the keyframes in the FX track directly.

   If the Controls window is displayed, the volume slider will change as you adjust the keyframe in the FX track.

Note: Hold the Control key while dragging to constrain the position of the keyframe. You can then move the keyframe vertically to change the volume, but it will remain at its original time in the Sequencer.

3. Add keyframes anywhere in the Sound Fade filter by clicking on the red line and dragging it to the desired volume.

   Remove a keyframe by clicking to select it, then pressing the Delete key.

   Note: The volume slider and text box in the Controls window provide greater precision for control of audio level than dragging keyframes in the FX track.

Updating the Audio Program

All or part of the audio portion of a program in the Sequencer can be rendered in the same way as video tracks are rendered. Audio and video tracks can be rendered together or separately. If you are using multiple audio tracks and plan to make a DV tape with audio and video, render them to a single AP (Audio Program) track and play that track alone. Track playback is controlled by the gold ear button and rendering is controlled independently by the red render button. All audio tracks with the red button enabled will be included when rendering, while all tracks with the gold ear enabled will be included on playback.

For more information about rendering in the Sequencer, see “Reviewing a Program” on page 78 and Chapter 10: Managing Disk Storage.

Chapter 8: Creating Special Effects With Filters

Special effects are created using Radius EditDV Unplugged **filters.** Filters are placed in FX tracks to define where in your program they are to be applied. When you update your Program track, your video is passed through the filters to modify it and merge it into a new video stream containing the effects that you've described in the Sequencer. You can use the filters with their presets, or develop custom versions of each, and save them to use again.

Applying Radius EditDV Unplugged Filters

Radius EditDV Unplugged filters are general purpose tools that can be used to create a wide variety of effects. Each filter has a wide variety of applications for creating compelling video. The Radius EditDV Unplugged filters are: Color Adjust, Fade, Mirror, Tint and Titling. All filters provide controls for creating dynamic effects that change over time using keyframes.

To use a Radius EditDV Unplugged filter:

1. Choose Show Effects Window from the Window menu.

   Radius EditDV Unplugged opens the **Effects** window.

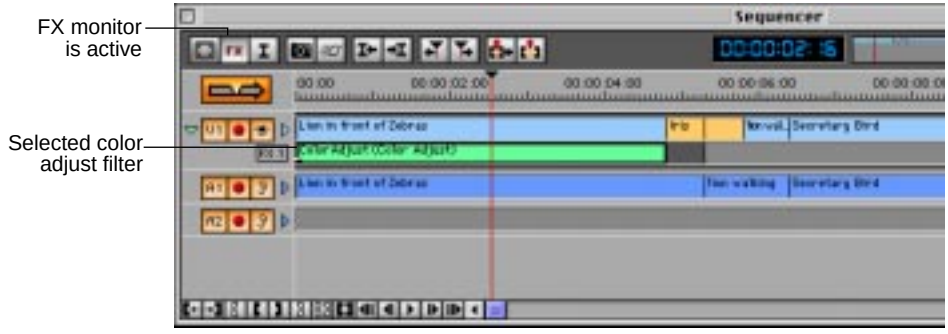
2. Click Filters in the left column of the window to select it.

   You see the list of Radius EditDV Unplugged filters in the right column.

3. Select the desired filter and drag it into an FX track in the Sequencer.

4. Place the filter below the clip you want to apply the effect to.

   You see an outline of where the filter will be applied before you release the mouse button. The filter will snap to the clip you apply it to, so it's convenient to apply a filter to an entire clip, although it can be applied anywhere on the timeline. After you release the mouse button the filter is displayed as a green strip in the FX track. The black border indicates it is selected. The name of the filter appears in the strip.



Changing Filter Position and Length

When you first drag a filter into an FX track, it assumes the same position and length as the clip you place it under. You can easily adjust its position and change its length.

To change the position of a filter:

- Click the filter to select it and drag it to a new position on the Timeline.

  You can drag the filter to cover part or all of one clip, or place it so that it covers more than one clip.

You can change the length of a filter by dragging the right end of it or by using the Set Filter Length command in the Sequencer menu.

Note: While dragging, you can turn off the snap to alignment feature by holding the ctrl key.

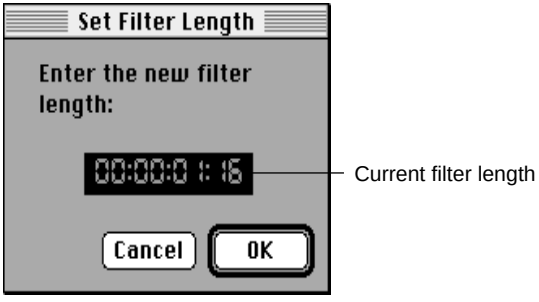
To change the length of a filter using Set Filter Length:

1. Click the filter to select it.

   You see a black border around it.

2. Choose Set Filter Length from the Sequencer menu.

   You see the **Set Filter Length dialog box**.



3. Change the current filter length to the desired length and click OK.

   The filter expands or contracts according to the length you entered.

You can also extend the filter by clicking on the right end of it and dragging it to the desired length.

Note: The filter is synchronized to the Timeline so even if you change the underlying source clip it remains in place.

Copying and Pasting Filters

Radius EditDV Unplugged provides ways to reuse filters that you have constructed. Filters can be copied and pasted like text in a word processor. They can also be saved in an effects bin for reuse on subsequent projects. For more information on saving custom filters see, “Creating Custom Filters” on page 165.

To copy a filter:

1. Click the filter to select it.

   A selected filter is surrounded by a black border.

2. Select Copy from the Edit menu.

   You may also use keyboard equivalents to copy a filter.

3. Select the track where you want to paste the filter.

   A selected track is surrounded by a black border.

4. Select insert or overwrite on the Monitors window.

   If you choose insert the effect will be inserted at the current time, pushing all filters to the right (to later times). The FX track will be lengthened by the length of the copied filter. If you choose overwrite the FX track remains the same length and any filter in the overwritten path will be removed.

5. Position the Timeline cursor where you want the In point of the filter.

6. Select Paste from the Edit menu.

   The filter will be inserted or overwritten at the location of the Timeline cursor in the selected track.

Using Filter Controls

In general, you adjust filter controls by opening a filter's control panel and placing the time cursor in the Sequencer at the time where you want the effect to occur. As you adjust the controls, Radius EditDV Unplugged places keyframes in the filter to remember your settings. Thus, what you see at any given time in the Sequencer is what you will get in your final program track at that time.

The controls provided for each Radius EditDV Unplugged filter let you determine exactly how the filter works. For example, you can use the Fade filter to perform a traditional fade to black over whatever length you choose. However, by changing the Fade To color and using keyframes, you can also use this same filter to flash to white or another color.

To use the filter controls:

1. Double-click a filter on the FX track to select it. If the filter is already selected, press Command-2 or select Show Controls Window in the Window menu.

2. Position the Timeline cursor in the Sequencer where you want to apply specific filter settings.

Note: An initial keyframe at the first frame of every filter is always required, you can adjust the settings of this keyframe but cannot remove it.

3. Choose the settings you want to use in the Controls window.

   Radius EditDV Unplugged creates a keyframe at the position of the Timeline cursor using the selected settings. You see a small white triangle at the lower edge of the FX track that indicates the keyframe.

4. After choosing filter settings to create the desired effect, click the Close button in the upper-left corner of the Controls window to close it or select Hide Controls Window from the Window menu.

Using Keyframes With Filters

At the beginning of a filter, Radius EditDV Unplugged sets a modifiable default **keyframe**. Each time you make an adjustment to the settings of the filter's controls, Radius EditDV Unplugged marks the frame where you made those adjustments as another keyframe. The settings at a keyframe remain in effect until the next keyframe. Thus, if you want an effect to apply for the length of the filter, make the changes with the Timeline cursor set on the first keyframe. When you make adjustments at several frames, multiple keyframes are established. Radius EditDV Unplugged calculates appropriate progressive values to gradually change from the values in the first keyframe, to the values set in the next keyframe, and so on. These values are used to create dynamic effects—effects that change over the length of the filter as your video plays.

To use keyframes with a filter:

1. Once you have placed a filter, position the Timeline cursor in the filter where you want a keyframe.
2. Choose the settings for this frame from the Controls window of the Window menu.

   The frame is marked as a keyframe, you see a small white triangle at the lower edge of the FX track.

3. Move the Timeline cursor to where you want the next keyframe.
4. Choose your desired settings in the Controls window.

To move a keyframe to a new time in a filter:

1. Select the keyframe by clicking on the small triangle that denotes a keyframe.

   The triangle becomes black when it is selected.

2. Drag the selected keyframe to the new location.

   You can drag the keyframe to any location within the filter.

To delete a keyframe:

1. Select the keyframe by clicking on the small triangle that denotes a keyframe.

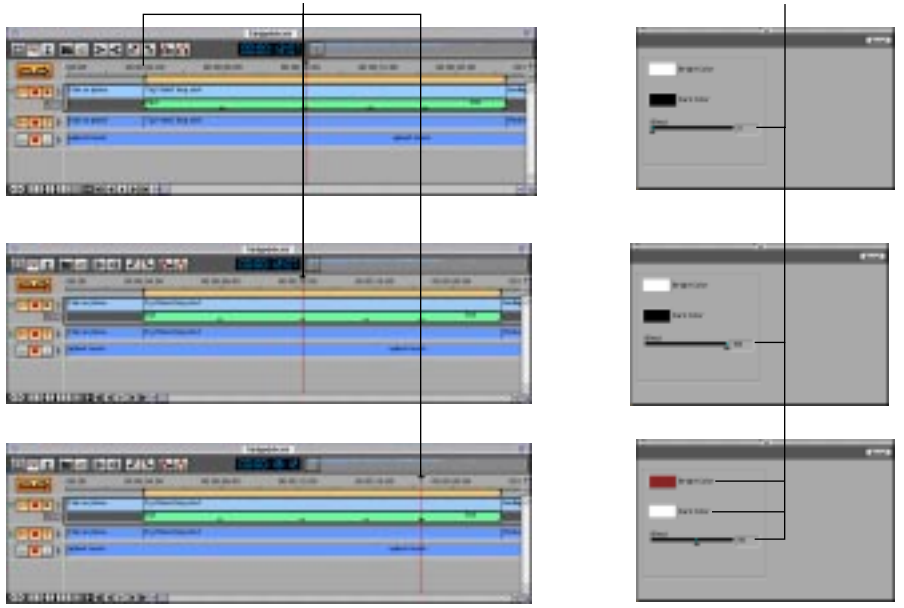
   The triangle becomes black when it is selected.

2. Press the delete key on the keyboard.

   The keyframe is removed and the triangle disappears.

You can set as many keyframes as you want in the filter, however each keyframe must be on a separate video frame. You can use keyframes with any of the Radius EditDV Unplugged filters.

As the Timeline cursor moves to a new keyframe the control panel displays the new parameters.



Note: To change the settings at the default keyframe at the beginning of a filter, position the Timeline cursor in that frame and adjust the settings in the filter's Control window.

Removing a Filter

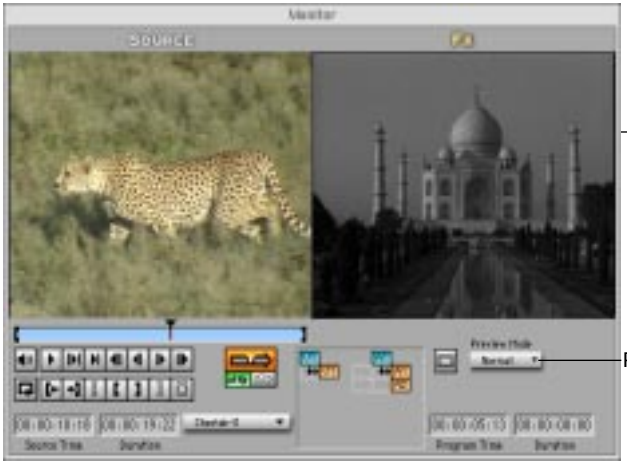
If you decide you don't want to use a filter after dragging it into your program, you can remove it.

To remove a filter from a program:

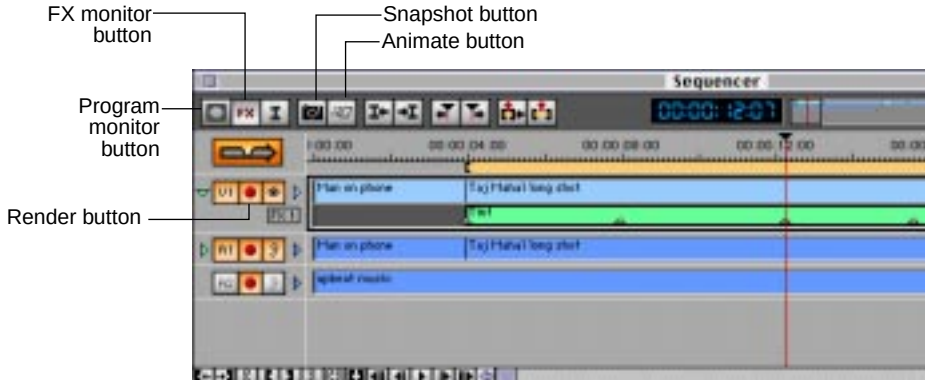
- Click the filter to select it and press the Delete key.

Previewing Special Effects Created With Filters

There are several ways to see the effect of applied filters before finishing your program. When you select a filter and position the Timeline cursor within the filter, Radius EditDV Unplugged switches the Program monitor, in the Monitors window, to the FX monitor. You use the FX monitor to preview filters and position your effects in your program.



You can switch between using the FX monitor and the Program monitor by using the buttons at the left end of the control ribbon in the Sequencer window.



To see a preview of a filter:

- Click the filter in the Timeline of the Sequencer to select it. Drag the Timeline cursor through the filter.

  You see a preview of the effect of the filter in the FX monitor applied to a single frame of the underlying clip. This allows you to review the effect of your settings without waiting for rendering.

To see the clip at final quality with the filter in place:

- Click the filter in the Timeline of the Sequencer to select it. Hold down the Shift key and drag the Timeline cursor through the filter.

  You see the clip with the filter applied in the FX monitor.

You can review an **animation** of a filter to see how it works over time. Such a preview provides you with an opportunity to adjust the pacing of the effect of the filter before rendering your program.

To review the animation of a filter:

1. Click the filter in the Timeline to select it.
2. Click the Animate button in the control ribbon of the Sequencer, choose Animate from the Sequencer menu, or press Command-L.

   You see an animation of any movement in the filter in the FX monitor. Radius EditDV Unplugged will skip frames as necessary to preview the flow of the effect in realtime.

You can also get a snapshot of your complete program at final quality, with all filters applied to that frame. When the FX monitor is in normal mode you will often see an instant render of the effect and all underlying tracks when you release the mouse button. You can use the snapshot button to see a rendering of all active tracks, including those that overlay the filter you are working with.

To see a snapshot:

1. In the Sequencer, move the Timeline cursor to the frame you want to see.
2. Click the Snapshot button in the control ribbon of the Sequencer, Choose Snapshot from the Sequencer menu, or press Command-K.

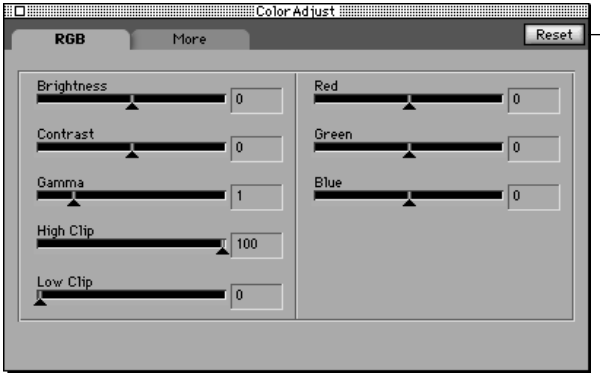
Using the Tint, Color Adjust, Fade and Mirror Filters

The following sections in this chapter explain some of the Radius EditDV Unplugged filters. For information about the Titling filter, see Chapter 9: Creating Titles.

Using the Color Adjust Filter

The Color Adjust filter provides tools to adjust the color balance in your clips. For example, you can use the Color Adjust filter to bring out the reds (or blues, or greens) in a clip. You could also brighten, change the contrast, or darken to compensate for lighting in the original video.

When you apply the Color Adjust filter and open the Controls window, you see the following:



The table below describes the various controls on the **RGB** page of Color Adjust:

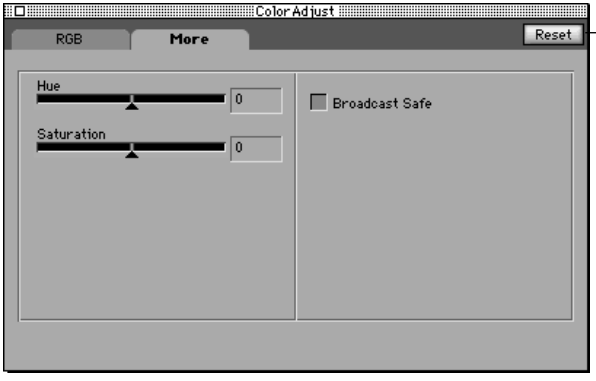
Control:	When you want to:
Brightness	Change the amount of light in an image.
Contrast	Increase or decrease the difference between the darkest and lightest parts of an image.
Gamma	Change the brightness of the mid-range values.
High Clip	Remove colors from the high end of the color values.
Low Clip	Remove colors from the low end of the color values.
Red	Change the amount of red used in an image.
Green	Change the amount of green used in an image.
Blue	Change the amount of blue used in an image.

The More page provides additional Color Adjust controls.

To display the More page for the Color Adjust filter:

- Click the More tab at the top of the controls window.

You see More page.



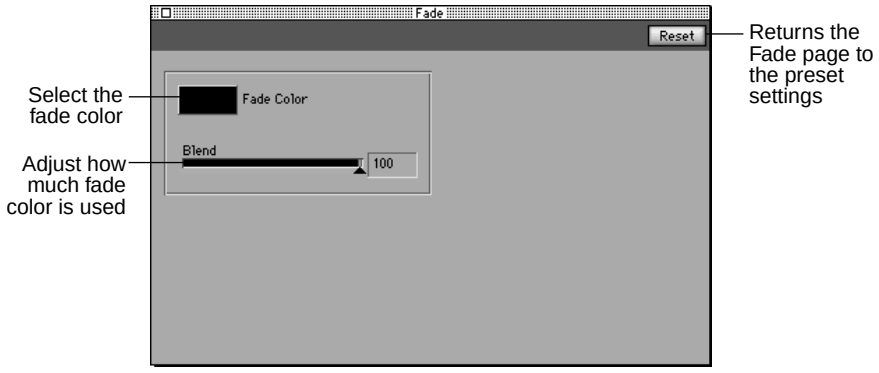
The following table describes the controls on the More page:

Control:	When you want to:
Hue	Adjust the color mix in an image.
Saturation	Changes the intensity of the colors.
Broadcast Safe	Constrains to colors allowed for television broadcasting.

Using the Fade Filter

The Fade filter lets you dissolve frames to or from a color. One common use of this filter is to gradually bring in the beginning of your program from black.

When you apply the Fade filter and open the Controls window, you see the Fade page.



When you first apply the Fade filter, you see a 50% blend of the fade color and the clip in the FX monitor. The preset fade color is black and the blend setting is at 50. You can choose a different fade color and change the blend setting to vary the appearance of the clip using the Fade filter.

To choose a fade color:

1. Click in the Fade Color box and hold the mouse button.

   The pointer changes into an eyedropper and you see the Radius Edit-DV Unplugged color palette.

2. Drag the eyedropper to the color you want in the color palette.

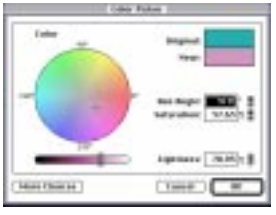
If you want to match a color in your video, drag the eyedropper to the color in the Monitors window. As you drag the eyedropper over different colors you will see the Fade Color box change.

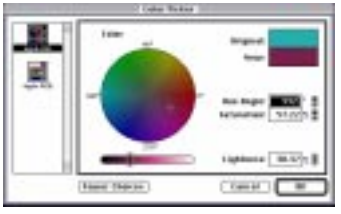
3. Release the mouse button.

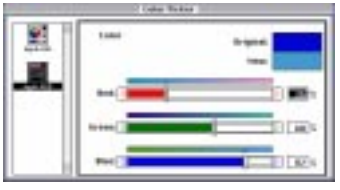
The eyedropper picks up the selected color, displays it in the color box, and uses it for the Fade filter. The results are also displayed in the FX monitor.

Note: Click in the Fade Color box to see the Apple Color Picker. This window can also be used to choose and adjust the color used with the Fade filter.

Some Apple Color Picker Options







To select a blend setting:

- Drag the slider on the Blend control in the Controls window to the desired setting.

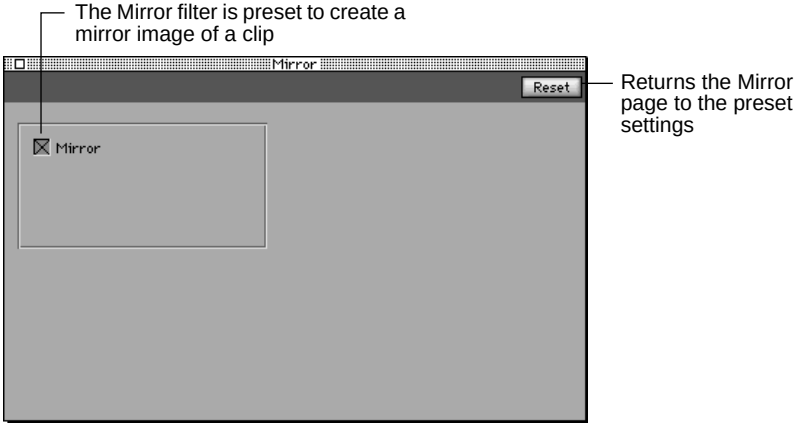
  As you drag the slider on the Blend control, you see the number in the Blend box change. If you know the exact setting, you can type the number into the Blend box. A preview of the blended image is shown in the FX monitor.

At a setting of 0, the fade color is not present. At a setting of 100, you see only the selected fade color.

You can use the Blend control with keyframes to gradually blend the fade color with the clip until it is completely faded to the selected color. Or, reverse the procedure and gradually fade from the color to the clip. You see your changes immediately in the FX monitor.

Using the Mirror Filter

Use the Mirror filter to flip frames horizontally, creating a mirror image. When you apply the Mirror filter and open the Controls window, you see the Mirror page.



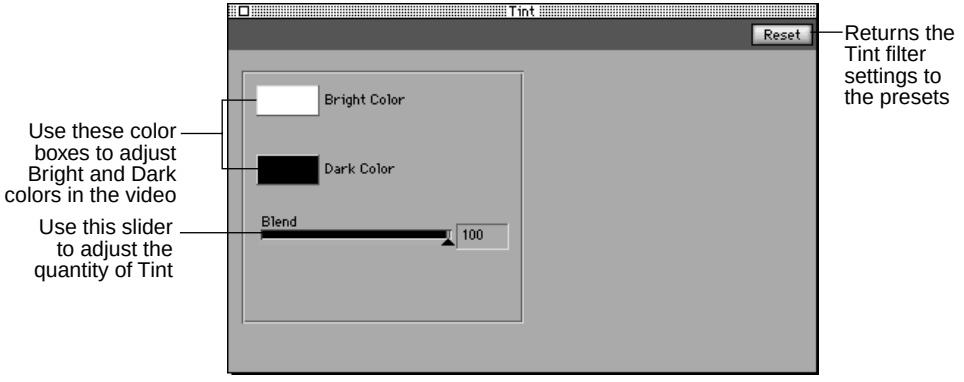
When you first drag the Mirror filter into an FX track of the Sequencer, you see the mirror image of the clip in the FX monitor. You can click the Mirror checkbox to return the clip to its normal orientation.

You can use the Mirror control to reverse the entire clip, or with keyframes to flip frames in a clip back and forth. You see your changes immediately in the FX monitor.

Using the Tint Filter

You can use the Tint filter to change color frames to black and white, or to tint frames in a clip with a selected color.

When you apply the Tint filter and open the Controls window, you see the Tint page.



When you first apply the Tint filter to an FX track, you see the clip displayed in black and white in the FX monitor. You can change the colors used to tint the clip and adjust the blend of the colors.

To choose a different bright or dark color:

1. Click in the Bright Color or Dark Color box and hold the mouse button down to display the Radius EditDV Unplugged color palette.

   The Bright Color selection affects the brighter colors, and the Dark Color selection affects the darker colors.

2. Drag the pointer, which now looks like an eyedropper, to the color you want to use.

   To match a color in your video, drag the eyedropper over the color in the Monitors window.

3. Release the mouse button.

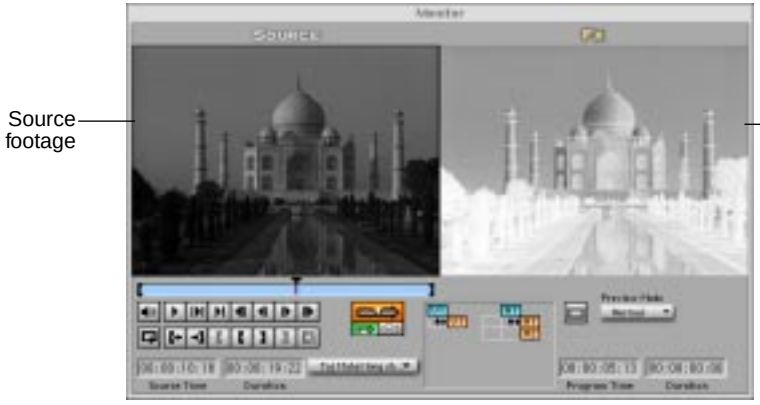
The eyedropper picks up the selected color, displays it in the color box, and uses it in the Tint filter.

Note: You can also use the Apple Color Picker to choose your tint colors. Click in the Bright Color or Dark Color box. You see the Color Picker Window.

To create a negative effect:

- Reverse the bright and dark colors.

  If you reverse the bright and dark colors in the Tint filter you'll see a negative effect similar to the following.



To select a blend setting:

- Drag the slider on the Blend control to the desired setting.

  As you drag the slider on the Blend control, the number in the Blend box changes. If you know the exact setting, you can type the number into the Blend box.

At a setting of 0, the clip used with the filter looks normal. At a setting of 100, you see the clip completely tinted by a blend of the selected colors.

By using keyframes with different Blend control settings, you can achieve a gradual blending of the colors. You see your changes immediately in the FX monitor.

Creating Custom Filters

If you find that you are making the same changes to a filter's presets and creating the same keyframes over and over, you might want to save your settings as a **custom filter**. You can use one of the preset filters or an existing custom filter as a starting point for a new custom filter.

Radius EditDV Unplugged saves a custom filter file in the plug-ins folder with the other Radius EditDV Unplugged filters using a name that you assign. You see the new filter displayed with a special document icon that designates it as a custom filter. You apply a custom filter to your program the same way you use any other filter.

To create a custom filter:

1. In the Sequencer, double-click the filter you want to use as a starting point for your custom filter.

   You see the filter's controls in the Controls window. In the Sequencer, the Timeline cursor s positioned within the filter and the filter is selected.

2. Choose the settings you want to use for your custom filter at this position.

   When you adjust the settings, you create a keyframe. You can reposition the Timeline cursor and choose new settings to create as many keyframes as you want.

3. Drag the filter from the Timeline in the Sequencer to the Effects window and drop it there.

   You see the following dialog box.

4. Enter a name for your custom filter in the Save Filter As box and click Save.

   Note: It is important that you never delete any of the Radius EditDV Unplugged preset filters, they are the foundation for all custom filters. A custom filter file stores only a document containing the settings for a particular effect and not the filter itself.

To create a New Effects bin to store custom filters:

1. In the Sequencer, double-click the filter you want to use as a starting point for your custom filter.

   You see the filter's controls in the Controls window. In the Sequencer, the Timeline cursor moves to the beginning of the filter.

2. Choose the settings you want to use for your custom filter at this position.

   When you adjust the settings, you create a keyframe. You can reposition the Timeline cursor and choose new settings to create as many keyframes as you want.

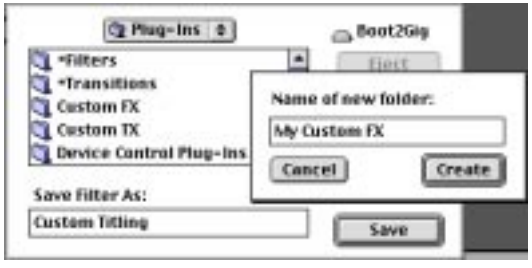
3. Drag the filter from the Timeline in the Sequencer to the Effects window and drop it there.

You see the following dialog box.

4. Click New to create a folder for storing custom filters.

Or, if you've already created a custom filters folder, double click on this folder to open it. When creating a new folder navigate one level up from the filters folder so that Radius EditDV Unplugged places your custom folder in the Plug-Ins folder at the same level as Filters.

You see the following dialog box.



5. Enter a name for your custom filter folder.

It is not required but recommended that you store your custom filters in their own folder to keep them separate from the Radius EditDV Unplugged supplied filters.

6. Enter a name for your custom filter in the Save Filter As box and click Save.

Note: It is important that you never delete any of the Radius EditDV Unplugged filters provided for you with the application. They are the foundation for all custom filters. A custom filter file stores only a document containing the settings for a particular effect and not the filter itself.

Removing a Custom Filter

Custom filters are stored in the finder and can be removed in the same way any file is removed from the finder, by dragging it to the trash. Be sure never to remove any of the filters supplied with Radius EditDV Unplugged as these are the basis for all custom filters.

Working with FX Tracks

Filters are placed in the FX track just below the video track.

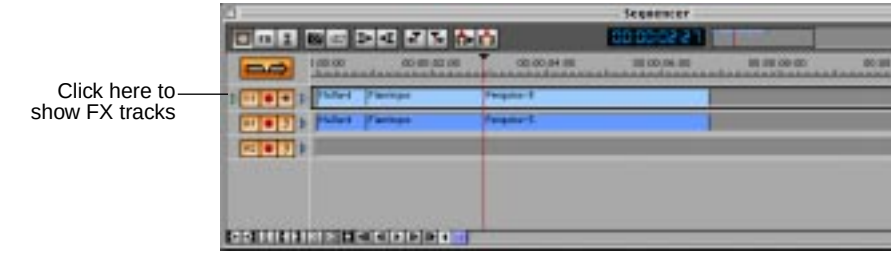
Hiding the FX Track

While you are not using the FX track Radius EditDV Unplugged allows you to hide it to save screen space.

To hide an FX track:

1. Click the green triangle to the left of the gold track button.

   You only see the source track.



Chapter 9: Creating Titles

Using text in a video program can include creating a main title, subtitles, and credits. Text is created in Radius EditDV Unplugged with the **Titling filter.** It can create text in various fonts, sizes, and colors; or enhance text using font styles, color and opacity gradients, borders, shadows and backgrounds.

Keyframes allow you to develop text that scrolls or crawls across your video or DVE style moving title effects. All titles employ sub-pixel motion and are anti-aliased for high quality results. The Titling filter also supports an alpha channel mode for video in text effects and traveling matte creation.

Title effects that you have created can be saved as custom filters for use as templates in any program. Custom titles can be used to efficiently create a program with consistent titles.

This chapter provides examples of how to use keyframes with the Titling controls. You can use keyframes with all of the text settings, except for those in the Font area of the Text Style page. The controls in that area have to do with selecting fonts, font sizes, font styles, positioning text, and kerning text characters and apply for the entire duration of the title effect. For more information on using keyframes with the Titling filter see, “Using Keyframes With Filters” on page 153.

Applying the Titling Filter

You can use the Titling filter with a video clip to superimpose titles and credits, or you can use it to play your titles and credits on a color background.

To use the Titling filter:

1. Choose Show Effects Window from the Window menu, or press Command-1.
2. Select Filters in the left column of the window.

3. Drag the Titling filter from the right column of the Effects window into the desired FX track in the Sequencer.

   When you see the insertion cursor, release the mouse button to apply the filter. You can place several Titling filters into multiple FX tracks over a single video track to layer titles.

4. Adjust the position and duration of the filter, if necessary.

   See "Changing Filter Position and Length" on page 150 for more information.

5. Double-click the filter in the FX track to open its controls in the Controls window. If the filter is already selected, press Command-2.

   The FX monitor replaces the Program monitor when you open the controls window.

6. In the FX monitor, click where you want to begin your text.

   You see a text cursor and a **text box** in the monitor. Set the controls on the different pages of the Titling controls window to determine the appearance of your text.

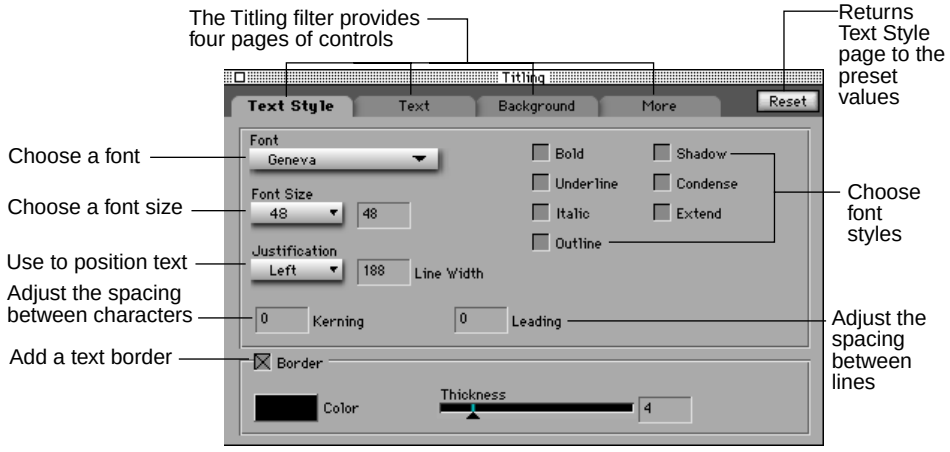
The following sections describe how to use the settings in the Titling filter controls window to create text over video. For general information about using Radius EditDV Unplugged filters, see “Chapter 8: Creating Special Effects With Filters” on page 149.

Using the Text Style Page

When you start typing in the FX monitor you see text appear in the text box on the FX monitor with the font and size currently selected in the Text Style page of the control window. The Radius EditDV Unplugged Titling filter works much like a word processing application. When you reach the right side of the text box, your text wraps to the next line, or you can press Enter to start a new line at any time.

You use the Text Style page for the Titling filter to select the appearance of the individual letters of your text. You can choose how you want your text to look before you start typing, or you can type your text and then select all or part of it and make changes.

When you apply the Titling filter and open the Controls window, you see the Text Style page.



Selecting Text

When working with text you either select individual characters for setting their style or you select the text as an object for setting properties such as color or position that apply to the text as a whole. Once you type text, you select all or part of it before changing its appearance.

To select text:

- Drag the text cursor over the text you want to select.

  The selected text is highlighted.

After selecting text, make choices from the Text Style page. These choices affect only the characters selected at the time you change a setting, except when you choose leading, which affects all of the text in the Title filter.

Positioning Text on the Screen

You may work with your text as a complete unit–as a **graphics object.** For example, to animate text you move it as an entire unit to a new location in the FX monitor.

To select text as an object:

- Click outside the text box.

  You see a selection box surrounding the text with selection handles in each corner. Whenever this selection box is displayed you may are

working with all of the text as a single graphics object.

To return to word processing mode to edit your text, click outside the selection box. You see the text cursor positioned where you last left it and the box changes to the resizing box with a single handle on the right side.

Choosing a Font and Font Size

The preset font in the Text Style page is Geneva at a preset size of 48 points. To use a different font and size, you can change these settings at any time. Whenever you type in text, it will use the current font and style settings.

To change the font for text:

- Select the text you want to effect.
- Choose a new font from the Font pop-up on the Text Style page.

  If you are changing the font for existing, selected text, you see the change immediately in the FX monitor.

To change the font size for text:

- Select the text you want to effect.
- Choose a new font size from the Font Size pop-up on the Text Style page.

  To use a font size that is not in the pop-up, type a number in the Font Size box and press Enter.

Choosing a Font Style

Checkboxes for the available font styles appear at the right of the Text Style page. You can use multiple font styles with the same text.

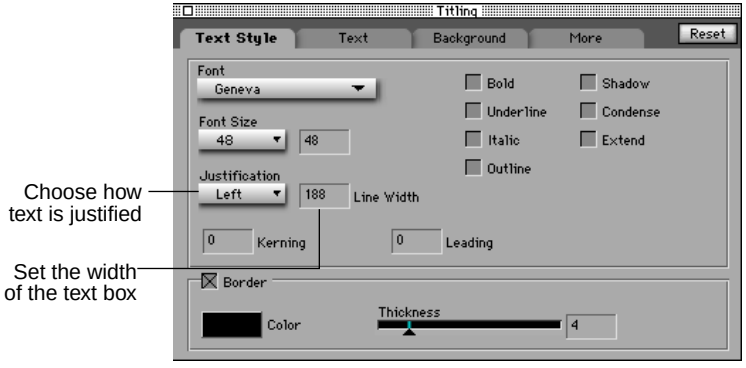
To add a font style to text:

- Select the text you want to effect.
- Click the checkbox for the style you want to use.

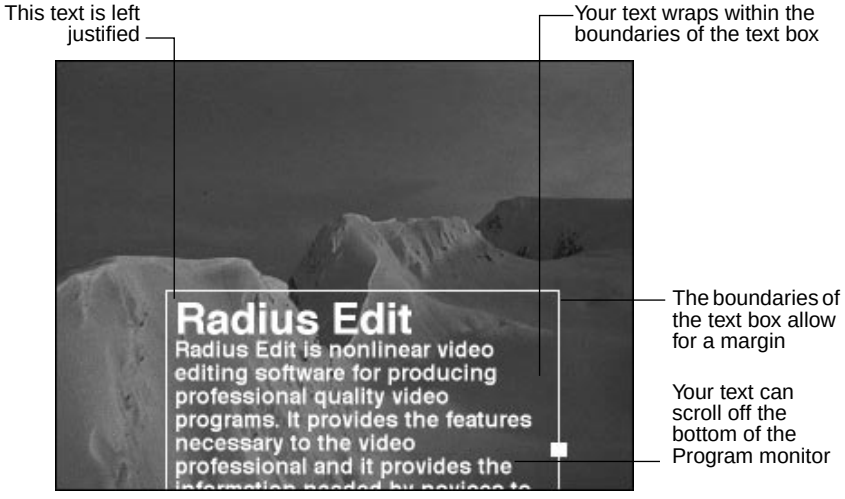
  If you are adding the style to existing, selected text, you see the change immediately in the FX monitor.

Setting Text Width and Justification

When you begin typing text into the FX monitor, you are typing in the text box. The setting in the Line Width box on the Text Style page controls the width of the text box, and the amount of text you enter determines the length of the box. As you add lines of text, the box extends. The selection in the **Justification pop-up** on the Text Style page controls how text is justified.



If you type text until the FX monitor is full, your text will scroll off the bottom of the monitor. However, you may continue to enter text and it



will be added to the bottom of the box. You can later move the text box or change its width to bring the text into view.

Changing the Width of the Text Box

You can change the width of the text box to present your text in different ways similar to setting paragraph attributes in a word processor. For example, you might want to create a narrow column of text and position that column at a specific location over a clip.

To change the width of the text box from the Text Style page:

- Drag the selection handle on the right side of the box in the FX monitor.
- or, Type the width you want to use in the Line Width box on the Text Style page and press Enter.

  You see the text box change size and any text in the box rewrap according to the new size.

Justifying Text

You can position your text at the left side of the text box, at the center, or at the right side.

To justify your text:

- Choose Left, Right, Center, or Off from the Justify pop-up.

  If you are justifying existing text, you see the change immediately in the FX monitor.

If you choose Off from the Justification pop-up, the left edge of text is positioned at the left side of the text box, but text does not automatically wrap at the right side of the text box. Press Enter when you want to begin a new line of text. Justification off can be used to produce a long line of text that scrolls horizontally across the screen.

Positioning Text Within the Safe Area

It is important to know that you can use only about 80% of the total video area for text if you are creating your program for standard video devices, such as television. This 80% area, where text is not distorted, is called the **title safe area**.

There is also an area called the **action safe area**, which encompasses about 90% of the total video and where you can be sure action in your video is visible.

To view the safe areas for your program:

- Click the Safe Area button in the FX monitor.

You see two frames in the FX monitor that outline the safe areas. You can select your text as an object and click anywhere inside the selection box to drag it.

Note: If you plan for your text to scroll off the screen, use keyframes and move it past the safe area. However, make sure that the text starts and ends within the safe area to ensure it will be visible in your final program.

Kerning Text Characters

Kerning adjusts the spacing between text characters, bringing them closer together or moving them farther apart. You can kern two text characters or a selection of text characters.

To kern text characters:

1. Select the characters you want to kern, or position the text cursor between two characters.
2. Type a number between -100 and +100 in the Kerning box in the Text Style window and press Enter.

   Negative numbers tighten the spacing between text characters. Positive numbers spread characters further apart. Each number is equivalent to one **point**.

Leading Text

Leading adjusts the spacing between lines of text, bringing them closer together or moving them farther apart. Leading affects the entire text object. You can also keyframe the leading so it changes over time.

To lead text:

1. Type a number between -100 and +100 in the Leading box in the Text Style window and press Enter.

   Negative numbers tighten the spacing between lines of text. Positive numbers spread lines further apart. Each number is equivalent to one point.

Adding a Text Border

You can add a border to text and control its color and thickness.

To add a border to text:

- Click the Border button at the bottom left of the Text Style page.

  You see a border around the letters of your text in the currently selected color and size.

To choose a color for the text border:

1. Point to the Color Swatch, press and hold the mouse button to display the Radius EditDV Unplugged color palette.

   The pointer changes into an eyedropper.

2. Drag the eyedropper to the color you want to use.

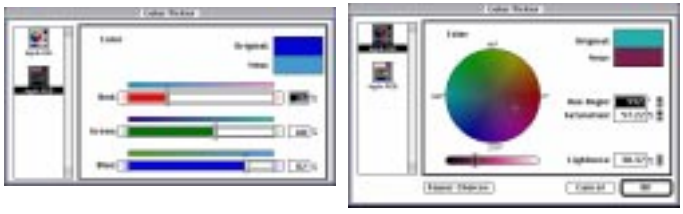
   If you want to match a color in your video, drag the eyedropper over the color in the Monitors window.

3. Release the mouse button.

   The eyedropper picks up the selected color, displays it in the color box, and uses it for the color of the text border.

Note: You can also use the Apple Color Picker to choose a color for your text border. Click the Color box to display the Color Picker.

Some Apple Color Picker Options



To choose a thickness for the text border:

- Drag the Thickness control slider to the desired setting.

  If you know the exact setting you want to use or if you want to use a size of less than a whole number, you can type the size into the box next to the Thickness control.

The smaller the setting for the border thickness, the narrower the border; the larger the setting, the wider the border.

Using the Text Page

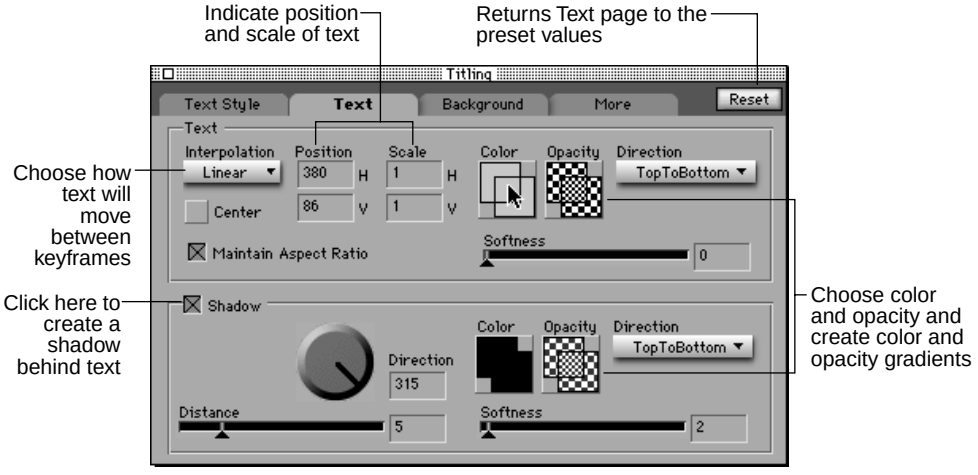
The Text page for the Titling filter provides additional control over the appearance of your text. It also provides controls for scaling, animating and positioning text. The Text page defaults to a color of grey text and a softness of zero.

Note: To create the best looking titles adjust the color and set the softness to at least one.

To display the Text page for the Titling filter:

- Click the Text tab at the top of the Controls window.

You see the Text page:



When using the Text page, you work with text as a graphics object. When you click the tab to display the Text page, the text cursor disappears, and your text is surrounded by a selection box with selection handles in the corners.

Moving Text

With text selected as an object, you can easily position it as a single unit within the video frame.

To move text as a unit:

1. Select your text as an object.

   Click the Text page, or click outside of the resizing box. You see a selection box with selection handles around the text.

2. Click anywhere in the text selection box and drag it to a new position.

If the Text page is displayed when you drag text in the FX monitor, you can see the numbers in the H (horizontal) and V (vertical) Position boxes on the Text page changing. You can also type numbers in the Position boxes and press Enter, if you know the exact setting or want to use a fraction of a number (expressed as a decimal) for **subpixel positioning**.

Scaling Text

When you first start typing text into the FX monitor, the text is scaled on a one-to-one, horizontal to vertical aspect ratio. You can change the scale of a unit of text, but you cannot scale individual text characters.

To change the scale of text:

1. Select your text as an object.

   You see a selection box with selection handles appear around the text.

2. Use the selection handles on the corners of the selection box to drag your text to a different scale.

   As you drag a selection handle in the FX monitor, you can see the horizontal and vertical numbers in the Scale boxes on the Text page change. If you know the exact numbers you want to use for scaling your text or if you want to use decimal numbers, type numbers in the Scale boxes and press Enter.

Radius EditDV Unplugged is preset to maintain the one-to-one aspect ratio of your text to make it easy to zoom the size of the text up or down without distorting its appearance. To create a squashed or stretched look you must turn off Maintain Aspect Ratio and adjust the numbers in the two scale boxes in the Text page.

Keyframe 1

Keyframe 2

You can set keyframes to make your text zoom. Radius EditDV Unplugged calculates appropriate progressive values and gradually zooms the size of your text from the size in the first keyframe to the size in the second keyframe.

Note: Higher quality is obtained by scaling large fonts down to smaller sizes than by scaling small fonts up to larger sizes.

To change the aspect ratio of the text while scaling:

- Click the Maintain Aspect Ratio checkbox on the Text page to remove the checkmark.

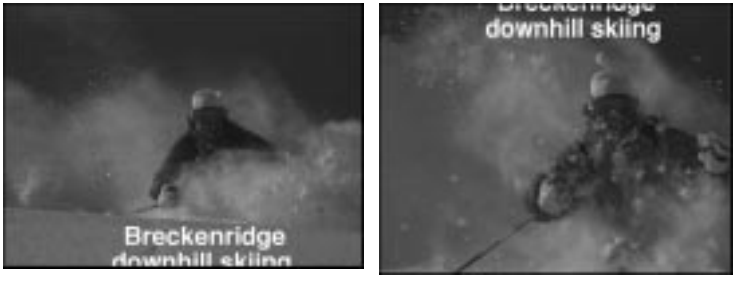
To create a zoom effect for a title, you can combine text scaling and keyframes.

Moving Text Between Keyframes

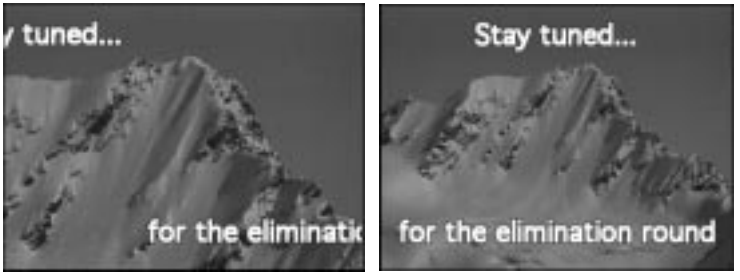
Text is animated by setting keyframes. Set the Timecursor in the Sequencer then drag your text, selected as an object, to the position you want it to have at that point in time. Then move the Timecursor and

reset the text to a new position in the FX monitor. A keyframe will be created each time you reposition the text. When the effect is rendered Radius EditDV Unplugged will move or change the effect as specified from keyframe position to keyframe position.

For example, you can have your title **scroll** across your video from bottom to top (or vice versa). You only have to set two keyframes one at the bottom of the screen at the start of the effect and one at the top of the screen at the end of the effect, Radius EditDV Unplugged will figure out the in-between positions.



You can also have your title **crawl** across your video from left to right (or vice versa). Or, you can use the Titling filter on two FX tracks to have different parts of your title flow onto the screen from either side.



Note: If you drag your text off the edge of the FX monitor and can no longer access it, you can click the Center button on the Text page to move the text back to the center. Then reposition it to the desired location.

How text moves between keyframes is controlled by the setting of the **Interpolation** pop-up on the Text page. The following table describes the pop-up settings.

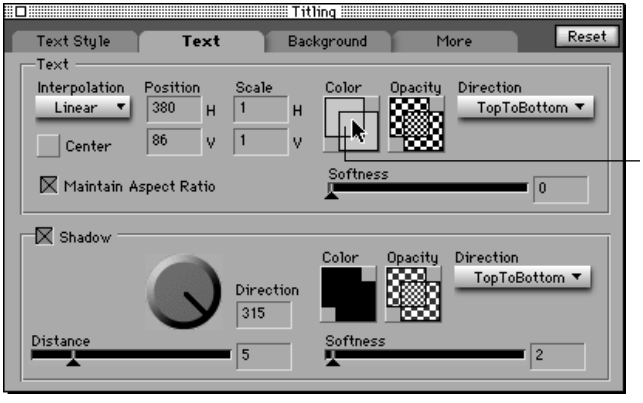
Setting:	Result:
Linear	Create movement between keyframe settings along straight lines.
Spline	Create movement between keyframe settings along curved lines, creating a smooth, flowing movement.
Hold	Hold settings from one keyframe until the next keyframe and use the space of only one frame to jump to the next settings.

Choosing a Text Color

Radius EditDV Unplugged provides a selection of colors for you to use with text. You select a text color using the Color Swatch on the Text page. You can also create a color gradient for the entire text object.

To choose a text color:

1. Point to where the two color squares (the Color Swatch) overlap.



2. Press and hold the mouse button to display the Radius EditDV Unplugged color palette.

   The pointer changes into an eyedropper.

3. Drag the eyedropper to the color you want to use.

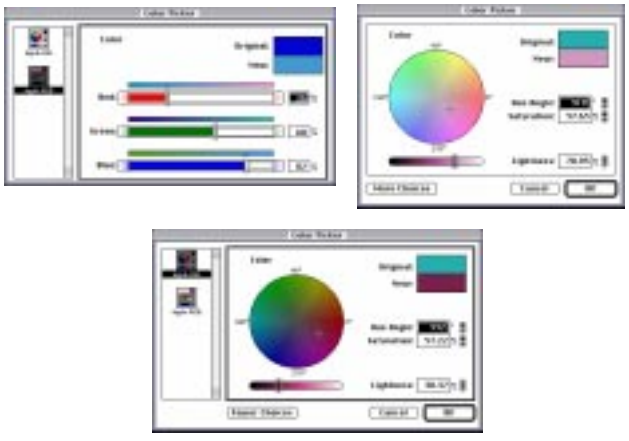
   If you want to match a color in your video, drag the eyedropper over the color in the Monitors window.You see the color in the Color Swatch change continuously as you move the eyedropper.

4. Release the mouse button.

   The eyedropper picks up the selected color and uses it for your text. You see the text color change immediately in the FX monitor.

   Note: You can also use the Apple Color Picker to choose a color by clicking in the overlap area of the color squares.

Some Apple Color Picker options

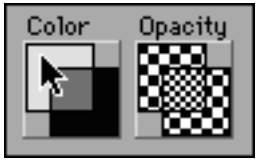


Creating a Color Gradient

You can create a color gradient for your text using the two squares in the Color Swatch separately.

To create a color gradient:

1. Select the first color for the gradient by pointing to the top square of the Color Swatch, outside the overlap area.



2. Press and hold the mouse button to display the Radius EditDV Unplugged color palette.

   The pointer changes into an eyedropper.

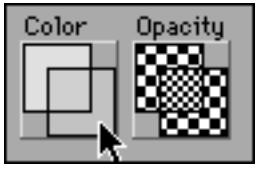
3. Drag the eyedropper to the color you want to use.

   If you want to match a color in your video, drag the eyedropper over the color in the Monitors window.

4. Release the mouse button.

   The selected color appears in the top square.

5. Select the second color for the gradient by using the same procedure to select a color from the bottom square, again outside the overlap area.



   The selected color appears in the bottom square. The overlap area reflects the combination of the two colors.

6. Select a direction for the gradient from the Direction pop-up at the right of the checkerboard squares.

   In normal preview mode you will see the effect of the gradient setting

when you release the mouse button. In Fast mode, click the Snapshot button in the Sequencer window to see a snapshot of the color gradient in the FX monitor.

Note: You can also use the Apple Color Picker to choose colors for a color gradient by clicking outside the overlap area of the color squares.

Selecting an Opacity Setting

Using the checkerboard squares that appear next to the color squares on the Text page, you can select an opacity setting or opacity gradient to create varying transparency effects in your text. Radius EditDV Unplugged is preset to create opaque text.

To change the opacity setting:

1. Point to where the two checkerboard squares overlap.

2. Press the mouse button.

   Radius EditDV Unplugged displays an Opacity control below the squares.

3. Drag the slider on the Opacity control to a different setting.

   The lower the setting, the greater the transparency. The higher the setting, the greater the opacity. You can see the opacity setting reflected in the checkerboard squares.

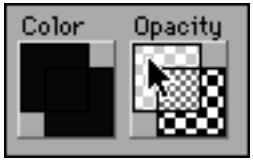
In normal preview mode you will see the effect of the opacity setting in the FX monitor when you release the mouse button. In Fast mode click the Snapshot button in the Sequencer window to see the effect of the opacity setting.

Creating an Opacity Gradient

You can use the same checkerboard squares that you use to select an opacity setting for your text to create an **opacity gradient**. A gradient can be used to fade in portions of the text.

To create an opacity gradient:

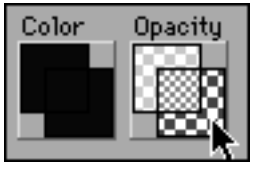
1. Select the first opacity setting for the gradient by pointing to the top square of the two checkerboard squares, outside the overlap area.



2. Press and hold the mouse button to display the opacity control and drag the slider to the opacity setting you want to use.

   You see the opacity setting reflected in the top square.

3. Select the second opacity setting for the gradient by using the same procedure to select a setting from the bottom square of the two checkerboard squares, again outside the overlap area.



   You see the opacity setting reflected in the bottom square. The overlap area reflects the gradient between the two settings.

4. Select a direction for the gradient from the Direction pop-up at the right of the checkerboard squares.

   In normal preview mode you will see the effect of the opacity gradient setting in the FX monitor when you release the mouse button. In Fast mode click the Snapshot button in the Sequencer window to see a snapshot of the opacity gradient in your text in the FX monitor.

Selecting a Softness Setting

You can use the Softness control to give text sharp, distinct edges or soft, blurred edges. You can keyframe softness to gradually change your text from one setting to another.

To select a softness setting:

- Drag the slider on the Softness control to the desired setting.

  As you drag the slider on the Softness control, you can see the number in the Softness box change.You can also type the exact setting you want to use into the Softness box.

At a setting of 0, the edges of text are sharp and defined and text will tend to look alaised, to remove this edge set the softness to at least one. At a setting of 10, the edges are blurred and undefined. At a setting of 50, the text is so blurred as to be nearly invisible. In normal preview mode you will see the effect of the softness setting on the FX monitor when you release the mouse button. You can also click the Snapshot button in the Sequencer window to see a snapshot.

Adding a Text Shadow

You can add a **drop shadow** to text, choose a color or color gradient, an opacity setting or opacity gradient, and select a softness setting. You can determine the apparent position of the shadow's light source by setting a direction and distance for the shadow.

To create a shadow behind text:

- Click the Shadow button on the Text page.

  A shadow appears behind your text, offset below and to the right of the text. The selection box shifts down and to the right to indicate that the shadow is selected.

You choose color and opacity, create gradients, and select a softness setting for a shadow the same way you choose these settings for text. For more information, see "Choosing a Text Color" on page 186, "Creating

a Color Gradient” on page 188, “Selecting an Opacity Setting” on page 189, “Creating an Opacity Gradient” on page 190, and “Selecting a Softness Setting” on page 191.

Selecting a Text Shadow

When you first create a shadow, it is selected. If you deselect your shadow by making changes to your text, you can select it again at any time.

To select a text shadow, do one of the following:

- Click directly on the shadow outside the selection box for the currently selected text object.
- Press Option and click the shadow.

Positioning a Text Shadow

Although a shadow initially appears offset below and to the right of its text, you can place the shadow anywhere in relation to the text. You can also keyframe the position of the shadow independently of the text. This is useful when creating 3D-motion effects.

To reposition a shadow behind text:

- With the shadow selected, drag it to a new position behind its text.

  As you drag the shadow, you can see the Direction dial and the numbers in the Direction box change and the position of the shadow

change in the FX monitor. You can also drag the pointer on the Direction dial to reposition the shadow. If you want to use a decimal number for the setting or if you know the exact setting, you can type a number in the Direction box and press Enter. You then see the shadow at its new position in the FX monitor.

For example, suppose you create the following keyframes:

Radius EditDV Unplugged calculates progressive values to move the text drop shadow between the keyframes, creating the illusion of the text moving in relation to the light source creating the shadow.

Note: To create a glow behind your text, choose a color for the glow, a softness setting near 10, and a setting distance of 0.

Choosing a Distance Setting

When you first create a shadow, its distance setting from the text is 5. You can change the preset distance setting for the shadow to one of your choice.

To change the distance setting for a shadow:

- With the shadow selected, drag the slider on the Distance control to a new setting.

  As you drag the slider on the Distance control, you can see the number in the Distance box change. If you know the exact setting or if you want to use a decimal number, you can type a number in the Distance box and then press Enter to see the new setting.

Creating a Background Behind Text

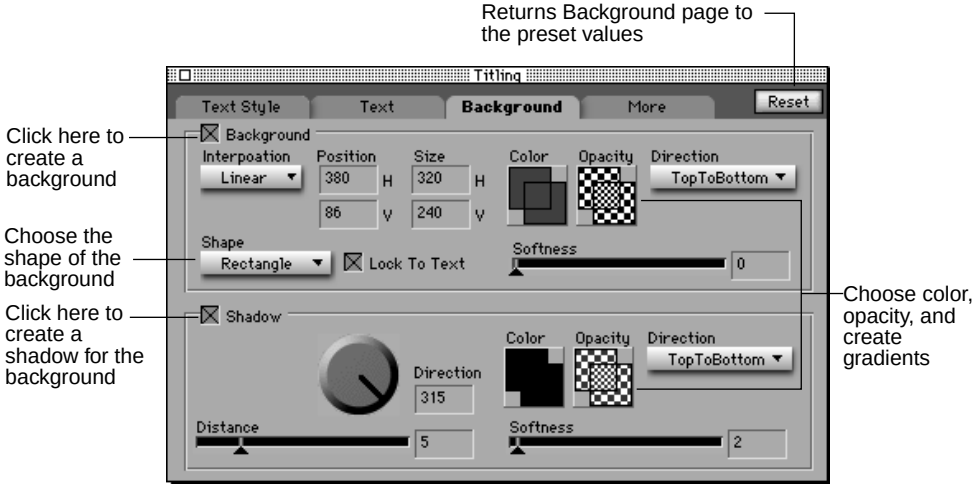
You can create titles and other text on top of program clips, or you can create solid backgrounds behind text. The background can totally cover the frame behind the text, or it can be a rectangle or oval between the text and a video clip.

You use the Background page for the Titling filter to create a background behind text. You can also create colored graphics objects with no associated text and use the objects to create mattes when layering video.

To display the Background page for the Titling filter:

- Click the Background tab at the top of the Controls window.

You see the Background page.



To create a background for text:

- Click the Background checkbox on the Background page.

  A blue rectangle is placed behind the text in the FX monitor. The background rectangle is surrounded by a selection box with selection handles.

In addition to choosing the shape of the background, you can determine its position, size, and whether or not its position is locked to your text so that it animates as your text animates. You can also choose a color or color gradient, an opacity setting or opacity gradient, and a softness setting.

You choose color and opacity, create gradients, and select a softness setting for a text background the same way you choose these settings for text. For more information, see “Choosing a Text Color” on page 186, “Creating a Color Gradient” on page 188, “Selecting an Opacity Setting” on page 189, “Creating an Opacity Gradient” on page 190 and “Selecting a Softness Setting” on page 191.

By dragging a text background to different positions in the FX monitor and creating keyframes at different times, you can cause the background to move any way you choose. This works the same as dragging text to different positions and creating different keyframes. For more information, see “Moving Text Between Keyframes” on page 184.

Selecting the Background

When you first create a background, it is selected. If you deselect your background by making other changes to your text, you can select it again at any time.

To select a deselected background, do one of the following:

- Click the background outside the selection box for the currently selected text object.
- Press Option and click the background.

You see the selection box appear around the background.

Positioning the Background

When you first create a background behind text, the background is selected. The background is rectangular and positioned behind your text. You can drag a text background away from its text to any position on the FX monitor.

To reposition a background rectangle:

- Drag the background rectangle to a new position.

  When you drag the background rectangle in the FX monitor, you can see the H (horizontal) and V (vertical) Position numbers on the Background page changing. If you know where you want to position your text background or if you want to use decimal numbers, you can type numbers in the Position boxes and press Enter.

Although you can drag a text background away from its text, when you start dragging text, the background follows it. To drag text away from its background you must unlock the text from the background.

To unlock text from its background:

- Click the Lock to Text checkbox on the Background page.

Choosing a Background Size

You can make your background rectangle any size you want, including full screen to cover the entire frame behind your text.

To change the size of a background rectangle:

- Drag the handles on the background selection box.

  When you drag the selection handles for the background selection box, you see the H (horizontal) and V (vertical) Size numbers on the Background page changing. If you want to maintain the aspect ratio of the background rectangle, press Shift while you drag the selection handles.

You can also type numbers in the Size boxes and press Enter.

Choosing a Background Shape

You can choose to use an oval shape for a background, rather than the preset rectangular shape.

To change a background rectangle to a background oval:

- Choose Oval from the Shape pop-up on the Background page.

  The background shape changes to an oval.

Adding a Background Shadow

You can add a shadow behind a text background, choose a color for the shadow or color gradient, an opacity setting or opacity gradient, and select a softness setting. You can also determine the position of the shadow's light source by choosing a direction setting and distance setting for the shadow.

To create a shadow behind a background:

- Click the Shadow button on the Background page.

  A shadow appears behind your background, offset below and to the right. The selection box shifts down and to the right to indicate that the shadow is selected.

You choose color and opacity, create gradients, and select a softness setting for a background shadow the same way you choose these settings for text. For more information, see “Choosing a Text Color” on page 186, “Creating a Color Gradient” on page 188,“Selecting an Opacity Setting” on page 189, “Creating an Opacity Gradient” on page 190, and “Selecting a Softness Setting” on page 191.

Selecting a Background Shadow

When you first create a shadow, it is selected. If you deselect your background shadow by making other changes to your text, you can select it again at any time.

To select a background shadow, do one of the following:

- Click the shadow somewhere outside the selection box for the currently selected text object.
- Press Option and click the shadow.

You see the selection box appear around the background shadow.

Positioning a Background Shadow

Although a shadow initially appears offset below and to the right of its background, you can place the shadow anywhere in relation to the background.

To reposition a shadow behind a background:

- With the shadow selected, drag it to a new position behind the text background.

  As you drag the shadow, the Direction dial and the numbers in the Direction box change. You can also drag the pointer on the Direction dial to reposition the shadow. Or, you can type a number in the Direction box and then press Enter to see the shadow at its new position in the FX monitor.

Choosing a Distance Setting

When you first create a background shadow, its distance setting from its background is 5. You can change this preset to one of your choice.

To change the distance setting for a background shadow:

- With the shadow selected, drag the slider on the Distance control to a new setting.

  As you drag the slider on the distance control, the number in the Distance box changes. You can also type a number in the Distance box and then press Enter to see the background shadow at its new distance setting in the FX monitor.

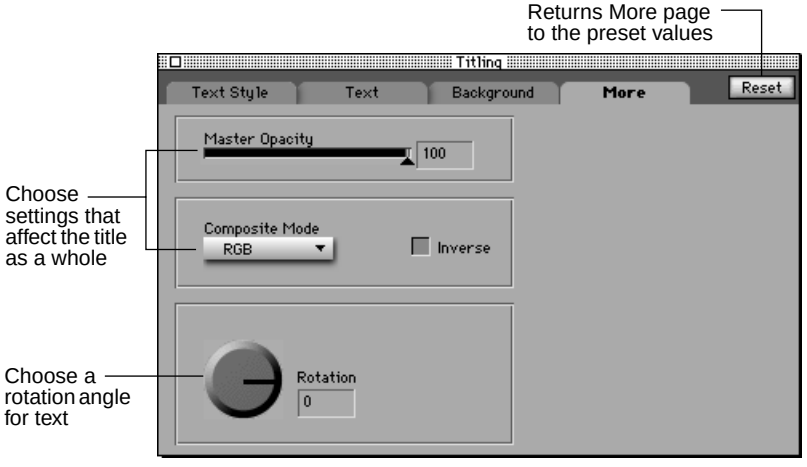
Setting the Master Controls

You use the **More page** for the Titling filter to choose settings that affect your title as a whole including all shadows and backgrounds. This page also provides controls to rotate text.

To display the More page for the Titling filter:

- Click the More tab at the top of the Controls window.

You see the More page.



Choosing a Master Opacity Setting

The Master Opacity control lets you control the overall opacity of your entire title. Using this control and setting keyframes, you can fade your title and all its shadow and background components in or out together.

To select a master opacity setting:

- Drag the slider on the Master Opacity control to a different setting.

  The lower the setting, the greater the transparency. The higher the setting, the greater the opacity.

In normal preview mode you will see the effect of the opacity setting when you release the mouse button. To see a snapshot of the effects of the opacity setting in the FX monitor, click the Snapshot button in the Sequencer window.

Choosing a Composite Mode

The Composite Mode setting lets you either place your text over video or place your text into an **Alpha channel** and play your video through the text. The preset value, RGB, indicates you want to place text over a video clip or background.

To place your text in an Alpha channel:

- Choose Alpha from the Composite Mode pop-up on the More page.

  If you are using one video track when you choose Alpha, you see your video clip through your text letters and black everywhere else. If you have video in two video tracks, use the Titling filter with the second track, and then choose Alpha, your second video track shows through the text letters and first video track can be seen everywhere else.

When you choose Alpha from the Composite Mode pop-up, all text attributes are ignored since the text itself is not displayed. However, the text border and background continue to be shown.

For example, the following shows a title placed over a clip with RGB selected as the composite mode.

With Alpha selected as the composite mode, it looks like this:

Inverting Text and Video

You can reverse the characteristics of your text with the video clip behind it so that your clip is tinted the color of the text and the video shows through the text characters.

To invert text and video:

- Click the Inverse button on the More page.

For example, suppose you create a title over a clip like this:

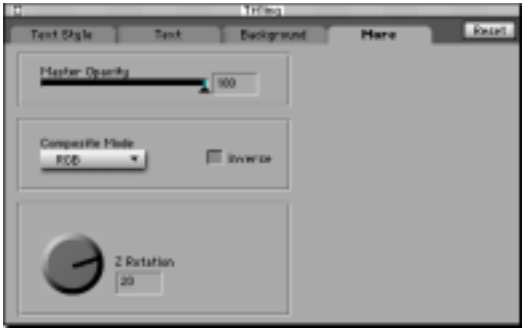
If you click the Inverse button, you see the following:

Rotating Text

You can rotate your text to any angle by using the Rotation control on the More page.

To rotate text:

- Drag the pointer on the Rotation dial until your text is positioned where you want it.



As you drag the pointer on the Rotation dial, you see the number in the Rotation box change and your text rotate in the FX monitor. You can also type a number in the Rotation box and then press Enter to see the new angle of rotation in the FX monitor.

Chapter 10: Managing Disk Storage

Desktop nonlinear video editing requires tremendous disk storage. To assist you with managing the large files necessary when editing, Radius EditDV Unplugged provides a method for managing disk files from within your project.

Detaching Source Clip Media

When a movie file is used in a project, the project contains a reference to the external disk file. The external file is said to be **attached** to the project. EditDV Unplugged provides commands for determining if clips are used in your project, detaching them, and optionally deleting them from disk if you no longer need them and wish to free up the disk storage for other purposes. When you **detach** a clip from your project, EditDV Unplugged retains a reference to its name in the Project window. If you wish to completely remove the clip and its reference from your project you can delete clips from a bin using the Clear command in the Edit menu, or the Delete key. For more information on deleting clips see, “Deleting Clips From a Bin” on page 56.

Note: Be very careful if you remove media from your hard disk while in the Finder. There is no easy way for Radius EditDV Unplugged to retrieve that media.

To detach and optionally delete source clip media from your project:

1. Click a source clip in the Project window to select it.

   Shift-click multiple clips to select them, or choose Select All from the Edit menu to select all of the clips in a bin.

2. Choose Detach Clip Media from the Edit menu.

   The Detach Options dialog box appears.

3. Click the "Only detach clips that are not in use" checkbox. Generally you want to detach only clips that you are not using in your program.

   If you are cleaning up your hard drive and want to detach the clips you haven't used in your program select the "Only detach clips that are not in use" checkbox. It is possible to detach clips that are in use, but they must be reattached or removed from your program before you can properly update your Program tracks or play your program.

4. If you want EditDV Unplugged to delete the movie files from your hard disk, click the "Delete media files from Disk" checkbox.

   You can optionally choose to leave the source files on your hard disk for use in other projects, even though they will be removed from this project.

5. Click OK.

Note: If media files are not deleted, they can be reattached to the project (see "To Reattach Clip Media" later in this chapter) or deleted by locating them in the Finder and dragging them to the Trash.

Warning: Before deleting media files from disk, be aware of all the places they may have been used. If media files that have been used in several projects are removed from disk, they are no longer available for any of those projects.

Reattaching Clip Media

If media is not deleted when detached it can be reattached to the source clip information in the Project window log. You may want to reattach media if you need to extend your program with previously unused media.

To attach source clip media:

1. Click a source clip in a Project window bin to select it.
2. Choose Attach Clip Media from the Edit menu.

   A dialog box appears.

3. Find and select the media file to be attached. Click Open.

   Radius EditDV Unplugged attaches the media file to the selected source clip.

Reclaiming Storage from Unused Clips

The Clean Up Bin command in the Edit menu deletes all of the clips in the current bin that are not in use in your project. This command removes all references to these clips from your project and removes the files from disk.

Note: If these files are used in other projects, those projects will not be able to play or render.

The Clean Up Bin command is especially useful for removing files from the Program bin that are no longer in use. As you update your Program tracks, files are created that contain the results of any effects you have added to your program. By applying the Clean Up Bin command to the

Program bin, any old Program clips that have been overwritten during editing will be automatically removed from your project and your hard disk.

To clean up a bin:

1. Click the bin name to make it the current bin.
2. Choose Clean Up Bin from the Edit menu.

   A warning dialog box appears.

3. Click Delete.

   All clips in the current bin that are not in use by your project will be removed from the project and deleted from your hard disk.

Chapter 11: Creating Final Output

Radius EditDV Unplugged includes a Print to Video component for Radius MotoDV and Apple FireWire Systems. This component is used to output your final program via FireWire to DV videotape. Before a program can be printed to videotape, however, all of the operations that you have specified via transitions, filters, and layering must be integrated to create a final movie. Radius EditDV Unplugged **renders** a final movie from the video and audio source clips using your instructions contained in the applied transitions and filters. The end result is a single playable media unit, the final product you will print to videotape–a video program with all the video clips, special effects, and audio media working together to convey your message.

Use the Save Program Movie command in the File menu to create a stand alone self-contained DV movie of your program track that may be imported into other QuickTime applications for further processing.

Printing to Videotape From the Program Tracks

Once the program tracks are fully updated the program can be reviewed or recorded to videotape. When printing to videotape, be sure to have the videotape equipment properly connected to your computer according to the instructions that accompanied it. For more information on using program tracks, see “Using Program Tracks” on page 79.

To record your program to videotape with Radius MotoDV:

1. Place the eye icon on the Video Program track and the ear icon on the Audio Program track to select them for playback, and mute all other audio tracks.

2. Choose Print to Video from the File menu and Radius DV PTV from the submenu (or press command-p).

   The DV Player dialog box appears.

3. Select the settings you wish to use for playback.

   Specify whether you want to play the clip once or multiple times. Specify the audio format. The Consumer setting creates unlocked audio and the Pro setting locked audio. Enter the number of seconds to pre-roll your videotape and how many seconds of black or color bars to output onto the tape before and after your movie.

4. Press the Shift key to enable the Record button and click Record to record your tape, or press Play to play it only.

   If you pressed Record your DV device will be placed into record mode and your movie will then be played after the delay you specify. If you clicked Play, it will playback immediately without first putting your DV Device into record mode.

   Note: Be sure that you have a blank, write enabled tape in your DV device before beginning to record.

To record your program to videotape with Apple FireWire:

1. Place the eye icon on the Video Program track and the ear icon on the Audio Program track to select them for playback, and mute all other audio tracks.

2. Choose Print to Video from the File menu and Apple DV PTV from the submenu.

Note: EditDV Unplugged is configured by default to use the Radius DV Player when pressing command-p. To change the default to Print to Video for Apple FireWire, remove the Radius DV Player plug-in from the Print to Video folder (in the Plug-ins folder in the Radius EditDV Unplugged folder).

A progress dialog box appears.

3. Your video and audio will be sent out over the FireWire to your DV device.

   If you have a video monitor attached to your DV device you will see and hear your program.

4. To record your program to tape you must manually put your DV device into record mode and then select Print-to-video.

   Note: Be sure that you have a blank, write enabled tape in your DV device before beginning to record.

Saving a Program Movie

A Program Movie is a version of the rendered audio and video clips, placed in the audio and video program tracks. It can be saved as a separate file that is independent of your project. While in your EditDV Unplugged project the Program tracks refer to your source clips and to the rendered material on your media drive. If you wish to move the project to another hard drive, you must move all of the source material with it in order for it to play properly.

You can, however, save your final program out to a separate file that does not refer to your source clips. This file is created by copying all necessary frames from source clips to the new file to make a self-contained QuickTime movie. This movie can then be played independent of the project and any source clips.

To create a self-contained Program Movie:

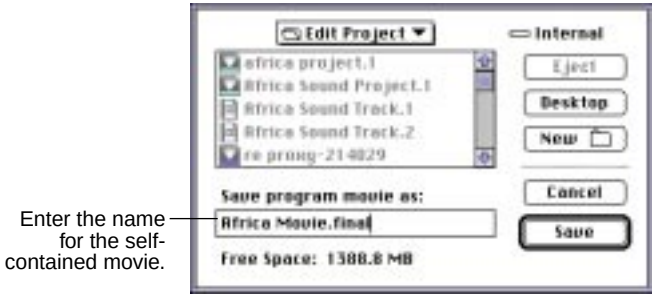
1. Place the eye icon on the Video Program track and the ear icon on the Audio Program track to select them, and mute all other audio tracks.

2. Select the portion of your program that you want to output to a separate file.

   Use the in and out points to specify part or all of the program. See "Selecting Part of a Program" on page 70 for more information on selecting portions of your program from the sequencer.

3. Choose Save Program Movie from the File menu.

   The Save Program Movie dialog appears.



4. Enter a name for the new file in the standard file dialog. Click Save.

   A progress bar will appear on your computer monitor while the movie is being made self-contained.

   When the file has been created it will be opened in a movie player window inside Radius EditDV Unplugged, with the first frame of the Program movie showing. This movie may be output using Print to Video or played using the DV Player application from your desktop.

   Note: The length of a self contained movie is currently restricted by the operating system to two gigabytes, which is approximately nine minutes of video when using DV format.

Appendix A: Glossary

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

3-point edit	Marking three of the four points needed to place a source clip into a program and allowing Radius EditDV Unplugged to calculate the fourth point. For example, an editor identifies an In and Out point in the source clip and an In point in the program and allows Radius EditDV Unplugged to calculate the Out point in the program. This technique allows for complex multi-track synchronized video/audio editing.
4-point edit	Marking all four points to place a source clip into a program. The speed of the source clip is adjusted (speeded up or slowed down) to fit the space allowed for it in the program.
action safe area	Approximately 90% of a the video frame, where action will be visible on a standard display.
alpha channel	Information attached to each pixel that represents how that pixel is to be blended with background.
analog media	The term used to refer to the media found on traditional videotape recordings.
animation	Any change of a parameter over time. Generally refers to a change in position of the video frame, moving the video over a background while it plays.
anti-aliasing	The process of smoothing the edges of graphics and text to prevent flicker and jagged edges.
Assemble Edit	A method for building a videotape in which a series of clips are placed one after the other to create, or assemble, a program.
back-timing	Using a 3-point edit to mark two out points and one in point, allowing the computer to match up the two out points and calculate the remaining in point. For example, marking an in and out point on a source clip and an out point in a program and allowing Radius EditDV Unplugged to calculate the in point in the program.
Band wipe	Transition that produces the effect of displaying an incoming clip as alternating bands that eventually cover the outgoing clip.
Barn Door wipe	A transition that opens or closes the first frame of an incoming clip over the outgoing clip as if it were two sliding doors.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

bin	A location for storing and organizing clips in the Project window.
Character Generator (CG)	The equipment used in a linear editing suite to create titles or other text on video. (Radius EditDV Unplugged provides the Titling Filter for creating text)
Chroma Key filter	A Radius EditDV filter that allows for a selected color in a clip to be made transparent. It is generally used to superimpose one clip on another.
clip	A set of contiguous frames beginning at a designated In point and ending at a designated Out point.
compression	The digital representation of media in an efficient storage format. For video, motion-JPEG is often used. Compression may be lossy in that the original picture cannot be reconstructed exactly.
Color Adjust filter	A Radius EditDV Unplugged filter that produces a change in the color aspects of a clip by allowing adjustment of individual channels.
Color Replace filter	A Radius EditDV filter that produces a change in the color of objects or areas within a clip based on their hue values.
crawl	The gradual movement of text across a clip. An effect produced by using the Radius EditDV Unplugged Titling filter and key frames.
Cross Fade Audio transition	A Radius EditDV Unplugged transition that causes the end of one audio clip to fade out, while the beginning of the next clip fades in.
cut	An abrupt transition between two clips. The first frame of the incoming clip immediately follows the last frame of the outgoing clip.
cut point	The position of a cut relative to an overlying transition.
device control software	A software module that controls a video deck to allow the capture of source clips to the hard drive of a computer.
digitize	To convert an analog video or audio signal into a digital signal that can be used by a computer.
Dissolve transition	A transition in which the end of one clip gradually blends with the beginning of the next.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

drop frame timecode	Timecode that is accurate relative to actual video running time. The numerical reference drops two numbers every minute to allow for the fact that there are actually 29.97 frames of video per second, rather than 30 frames per second.
drop shadow	A shadow that is offset from an object or text in a video.
DVE effects	A digital video effect (DVE) is created by taking any existing video source and manipulating its position within the video frame. In Radius EditDV Unplugged this is accomplished by using the PZR and PIP filters.
EDL	Edit Decision List. A computer generated list containing information about a specific program, the SMPTE timecodes and options chosen during production. It is used to inform an editing system of all the parameters involved in the creation of that program. An EDL is generally used to assemble a program in a traditional video editing suite.
eyedropper	A cursor symbol that appears when a Radius EditDV Unplugged color box is clicked. It is used to choose new colors from anywhere on the screen.
Eliminate	A Radius EditDV Unplugged procedure for removing media from a video program and also removing the space that the media occupied in the program.Using Eliminate forces the remainder of the program to adjust accordingly and shortens the length of the entire program. Sometimes called a ripple edit.
Erase	A Radius EditDV Unplugged procedure for removing media from a video program, leaving black space (called filler) in its place to maintain the spacing and length of the entire program. Sometimes called a non-ripple edit.
Fade filter	The Radius EditDV Unplugged filter that raises or lowers video levels in clips. With the Fade filter a clip will change over time to all one color or black (fade out); or will gradually develop from a color or black (fade in).
filler	Blank space added to the Timeline in the course of editing a program.
filter	A computer software module used to process and modify digital video for adding special effects to a program.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

flow	In Radius EditDV Unplugged the act of transferring video and audio tracks from a source clip into tracks in the Sequencer window using the Patch Matrix.
fps	Frames per second.
force an edit	To insert a cut at a desired point in a clip.
frame	One complete still image of video media. Video media is made up of a series of frames. Each video frame has two interlaced fields.
full field	A complete video image consisting of two fields of video per frame.
FX track	A separate track on the Timeline in the Sequencer used strictly for creating special video effects with Radius EditDV Unplugged filters.
Hold	An interpolation setting in Radius EditDV Unplugged that maintains settings from one key frame until the next key frame and uses the space of only one frame to jump to the next setting.
identifier	Name or number given to a clip or segment of a video to allow for easy recognition of the segment and its contents.
image resolution	A measurement of the quality of a video image based on the number of pixels that make up the image. Image resolution in Radius EditDV Unplugged is a component of RIQ (Radius Image Quality).
In point	The SMPTE time code of the specific frame at which a clip begins.
Insert Edit	Placing a section of a source clip in the Timeline of the Sequencer at the position of the Timeline cursor. The media currently to the right of the insertion point is moved farther to the right to accommodate the insertion of the new clip.
insertion cursor	Double triangles that appear on the FX tracks showing where a filter will be inserted.
interesting time	A place in a video program where an editorial event occurs, such as the beginning of a filter or transition, new clip, or key frame.
Interpolation	The progressive calculation of a parameter between key frames.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

Iris transition	A Radius EditDV Unplugged transition that creates the appearance of an enlarging opening revealing a incoming clip underneath. It is made to look like the iris of the eye opening, or enlarging.
jog	To move forward or backward in video or audio media by playing at slow speed through it.
JPEG	Joint Photographic Experts Group. An international standard for still picture data compression.
kerning	The amount of space between text characters. Kerning varies between fonts.
keyframe	A frame at which a set of specific parameters is assigned. Radius EditDV Unplugged automatically calculates differences between key frames in a clip and adjusts the frames accordingly.
key out	Removing a section of video by making it transparent by creating an alpha channel based on color (Chroma Key) or on brightness (Luma Key). Chroma and Luma are filters in EditDV.
leading	The space between lines of text.
Linear	A setting in the Radius EditDV Unplugged Interpolation pop-up that allows the creation of movement between key frame settings along straight lines.
linear editing	The traditional form of tape based video editing.
log	The numbers, either SMPTE or computer generated (for video that doesn't contain SMPTE timecodes), that Radius EditDV uses to identify media. The log also includes additional information, such as tape identifiers and clip duration.
Luma Key filter	Radius EditDV filter that allows the areas of light or dark in a clip to be made transparent, revealing the background clips in those regions.
Mirror filter	Radius EditDV Unplugged filter that flips frames horizontally to create an opposite but identical image.
non-drop frame timecode	Timecode that does not compensate for the 29.97 frames of video per second of NTSC video, rather than 30 frames per second. Each frame is assigned a unique, consecutive SPMPTE time code.
NTSC	The National Television Standards Committee.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

NTSC signal	The standard composite video signal adopted by the NTSC. It has a frame rate of 29.97 fps.
Off Line	When no disk file exists for a reference to a clip in a program, the file is said to be off line.
On Disk	The media file for a clip is stored on a hard drive and referenced from within a program.
opacity	The degree to which an image is transparent, allowing images behind to visually show through.
Out point	The SMPTE time code defining the end of a clip. The frame with this time code is not included in the clip.
Overwrite Edit	Placing a section of a source clip on the Timeline in the Sequencer and replacing or "overwriting" that program section.
PAL	Phase Alternating Line.
PAL signal	The most common composite video signal used in Europe. It has a frame rate of 25 fps.
pan	When used in reference to video, it is the sweeping movement of a camera across a scene or the appearance of such movement in a video as created by Radius EditDV Unplugged's PZR filter.
pan setting	When used in reference to audio, the setting that determines how audio output is divided between left and right speakers.
Patch Matrix	The display in the Monitors window that identifies the video and audio tracks in the current source clip and the available tracks in the Sequencer window. Allows the user to direct the flow of the source clip tracks into Sequencer tracks.
picture view	A mode of appearance for Radius EditDV Unplugged's Project window. The picture view contains small thumbnails of the clips stored in the bins in the Project window.
PIP	Abbreviation for Picture in a Picture, a video effect which places several complete images on the screen at the same time. Radius EditDV provides the PIP filter for creating a picture in a picture.
PIP box	The graphic image you manipulate in the FX monitor when creating a Picture in a Picture effect. Video in the video track immediately above the PIP effect will show in the PIP box once the effect is rendered.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

pixel	A single picture element. The smallest element in a graphic image. Pixels are combined with other pixels to make up a graphic image. Picture quality increases as the number of pixels increase in a measured area of an image.
point	A standard measurement unit for type sizes. One point equals approximately 1/72 of an inch.
primary source clip	A source clip that has media attached to it. The original source clip from which secondary source clips and reference clips are created.
program	A sequence of reference clips arranged in a meaningful order. The final result of production with Radius EditDV Unplugged—a video program.
project	A Radius EditDV Unplugged organizational unit containing the media units that when incorporated and edited will constitute a program.
project preset	Options that define the parameters for the production of a program, such as audio sampling rate that are established before beginning production.
PZR filter	Radius EditDV filter that enables the rotation of clip frames around any of three axes, the positioning of a frame in any of three dimensions and the control of the point of view through perspective adjustments.
QuickTime	System software from Apple Computer, Inc. that enables the storage, editing, and playing of digitized video and audio media on a computer.
Radial Wipe transition	A Radius EditDV Unplugged transition that sweeps away the outgoing clip with a circular or semi-circular motion to reveal the incoming clip.
Radius EditDV Unplugged Color Palette	Radius EditDV Unplugged's tool for choosing a desired color for use with many of the filters and transitions. A color might be chosen to be replaced, to be keyed out, to be changed, etc.
reference clip	A clip that Radius EditDV Unplugged creates from a source clip when the source clip is placed on the Timeline in the Sequencer. A reference clip does not contain any digitized media but refers to the digitized source clip. A reference clip only exists in a sequence and is the only kind of clip that a sequence contains.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

render	The processing of a series of individual clips, transitions and filters into a single playable media unit.
roll edit	An editing process where both outgoing and incoming clips are trimmed at a cut point to shorten one while lengthening the other to maintain the overall length of a program.
rotate	A function of Radius EditDV Unplugged's PZR filter that allows clip frames to be turned on any of three axes.
scroll	Moving text from the bottom to top and continuing off the visual boundaries.
scrub	To play through an audio or video clip interactively (under manual control) to evaluate it or locate a specific event. Radius EditDV Unplugged provides a display for observation of the audio waveform as it is scrubbed.
secondary source clip	A source clip created from a primary source clip, a subclip. It contains no media, it only refers to the primary clip.
shuttle	To move smoothly, forward or backward, through video or audio media at a constant rate.
SkyView	A graphic overview of the program in the Timeline. Visually relates the current view of the Timeline to the complete program.
SMPTE	Abbreviation for the Society of Motion Picture and Television Engineers.
SMPTE timecode	The timecode used by the SMPTE to identify frames in a videotape. Each frame has a unique address in an hours:minutes:seconds:frames format.
source clip	A clip that refers directly to physical media.
splice	The physical act of cutting a medium, such as film or audio tape, to add new tape to it or take out portions of it.
Spline	A setting in the Radius EditDV Unplugged Interpolation pop-up that produces movement between key frame settings along curved lines; creating a smooth, flowing motion.
Split Edit (L-cut or J-cut)	Adjusting synchronized audio or video clips so that one starts slightly before or after the other.
step	To move forward or backward one frame at a time.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

stereo	Audio split on two physical tracks, one on the right and one on the left.
text box	A box surrounding text created by the Titling filter. Allows for the text to be moved or adjusted in one piece.
text object	Radius EditDV Unplugged provides this option that allows you to work with text produced by the Titling filter as one unit, instead of individual text characters.
text view	A mode of appearance for Radius EditDV Unplugged's Project window. The text view contains names, descriptions, and numbers of clips stored in the Project window bins.
Timeline	The graphic representation of a program displayed in the Sequencer window.
Tint filter	Radius EditDV Unplugged filter that produces the appearance of viewing video through colored glass.
title safe area	The standard area of a video in which text can be seen on a television screen.
Titling filter	Radius EditDV Unplugged filter that produces text in a video in various fonts, sizes, and colors. Text can also be enhanced by using the filter's ability to create different color and opacity gradients, borders, shadows, and backgrounds.
track	A horizontal band across the Sequencer window that graphically represents a series of clips in your program. The Sequencer window has multiple tracks containing different types of media.
transition	The change from one clip to another in a video program.
trim handles	The frames before and after the In and Out points for a source clip to allow for trimming and transitions.
Venetian Blind wipe	A Radius EditDV Unplugged transition that produces the effect of having an outgoing clip displayed in strips over the incoming clip. The strips open, like a Venetian blind, to reveal the incoming clip.
Wipe	A type of transition that uses a moving edge to replace the current clip to reveal the next clip.

Note: Some of the terms listed may refer to features in Radius EditDV that are not included in Radius EditDV Unplugged.

Zoom

One of the functions of the Radius EditDV PZR filter that simulates the effect of having a camera move in very close to the subject, objects, or areas in a frame; or move away from the subject and display a wide view of the entire frame.

Appendix B: Radius EditDV Unplugged Shortcuts

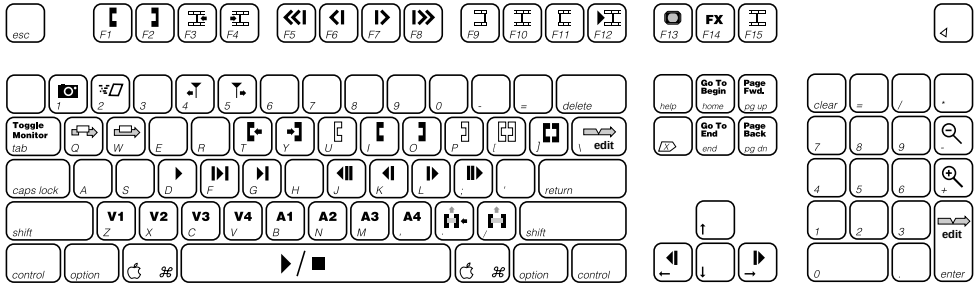
Most actions in Radius EditDV Unplugged can be performed either with the mouse or by using the keyboard. Menu commands have keys that initiate the command when used with the Command key. The buttons in Radius EditDV Unplugged windows can be activated by a mouse click or a keystroke. The following sections describe shortcuts for using the keyboard with Radius EditDV Unplugged.

Menu Shortcuts

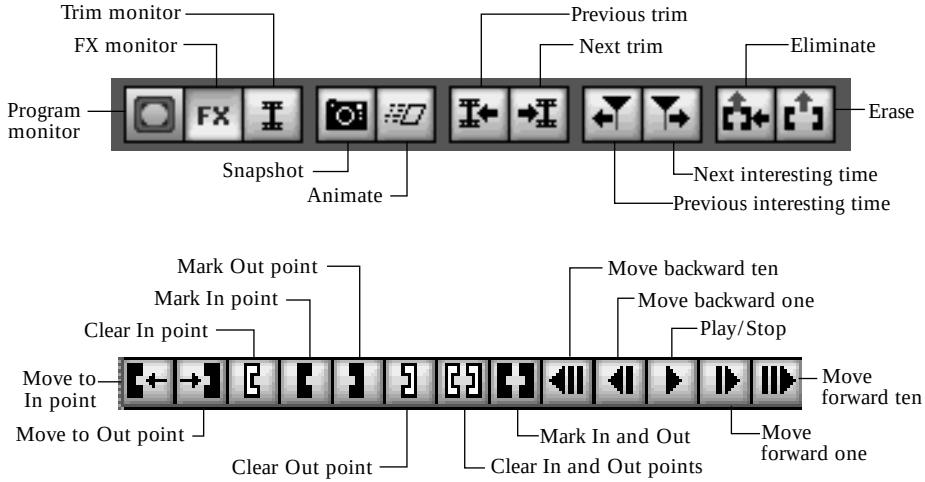
Many of the menu items in Radius EditDV Unplugged can be accessed directly from the keyboard. To use the shortcut keys for menu commands, hold down the Command key and press the key indicated in the menu to the right of the menu item. For example: to open a file press Command-o, to save a project press Command-s.

Keyboard Layout

The following table illustrates where commands are located on the keyboard. Pressing the key executes the same command as clicking the button in a window with the corresponding icon.



Sequencer Window Shortcuts

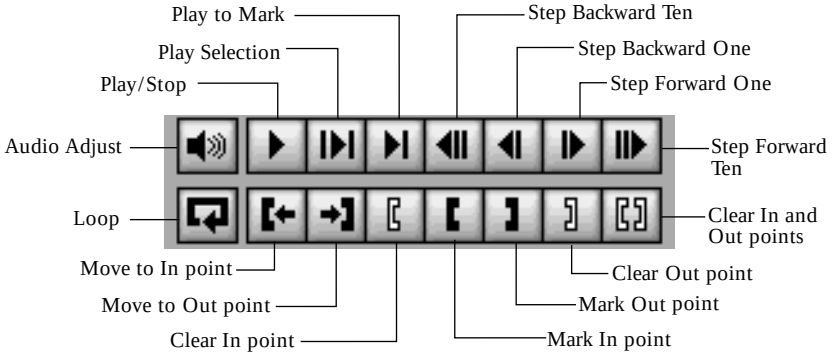


Result	Action
Add/delete marker on current clip at Timecursor position	Command - m
Animate the selected effect in the FX monitor	2 (two)
Automatic Snapshot when changing the current time	Shift - click in the timeline ruler
Bring clip up in source monitor	Double-click clip in Sequencer
Bring up control window and move time to closest keyframe	Double-click any filter or transition
Bring up filter length dialog	Option - double-click a filter
Bring up speed dialog	Option - double-click source clip
Bring up transition settings dialog	Option - double click a transition
Clear In point	u
Clear Out point	p
Clear In and Out points	[
Eliminate currently selected area of program and collapse the space underneath	. (period)
Erase currently selected area of program and leave filler	/ (forward slash)
Eliminate currently selected object and collapse the space underneath	Option - delete
Erase currently selected clip or filter	Delete
Find Frame	Command -]
Insert or Overwrite only video or audio	Option - drag clip from Source monitor or Project window to Sequencer
Mark In point	i or F1

Mark Out point	o or F2
Mark In and Out points	]
Mark the in point for your selection	Control - click in selection area below timeline ruler
Mark the out point for your selection	Option - click in selection area below timeline ruler
Mark the in point then the out point for your selection	Click in selection area below time-line ruler
Move backward one (1) frame	Left arrow or k
Move backward ten (10) frames	j
Move forward one (1) frame	Right - arrow or l
Move forward ten (10) frames	;
Move Eye to track V1	Control - z
Move to beginning of program	Home key
Move to end of program	End key
Move to In point	t
Move to Out point	y
Move Timeline one page to right	Page up key
Move Timeline one page to left	Page down key
Next interesting time	Option - right arrow or 5
Previous interesting time	Option - left arrow or 4
Next Trim point	F4
Previous Trim point	F3
Override snap to interesting time while dragging Timecursor	Hold control key while dragging
Override snap to interesting time while dragging clips	Hold control key while dragging clips
Play/stop program	Spacebar or d
Play Enable/Disable track A1	Control - b
Play Enable/Disable track A2	Control - n
Render Enable/Disable track V1	Option - z
Render Enable/Disable track A1	Option - b
Render Enable/Disable track A2	Option - n
Render every frame in an effect	Shift - right arrow, Shift-drag cursor
Scrub program sound	Command - drag in timeline
Scrub mode to normal	Command-7
Scrub mode to jog	Command-8
Scrub mode to shuttle	Command-9
Scrub while stepping on or off	Command-0
Select track above the currently selected track	Up arrow
Select track below the currently selected track	Down arrow

Snapshot of the current position of the Timeline cursor	1 (one)
Solo activate, render or audio play a track	Option - click on appropriate button
Toggle sequencer zoom between close-up and current setting	Option - click in the time scale
Zoom-in	-
Zoom-out	+

Monitor Window Shortcuts



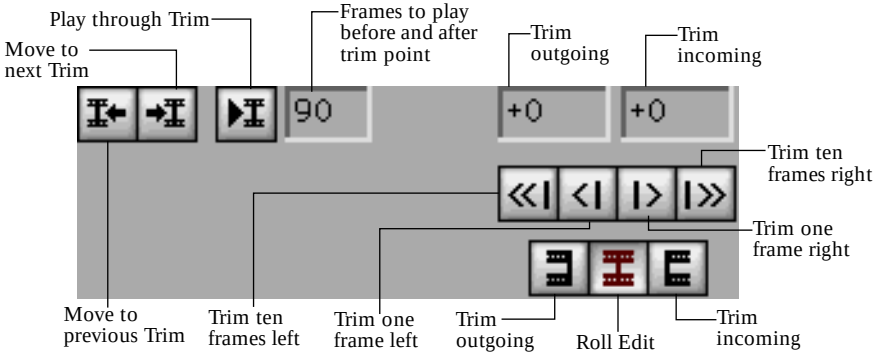
Results	Action
Add/delete marker on current clip at Timecursor position in Program	Command - m
Animate effects motion	2
Clear In point	u
Clear Out point	p
Clear In and Out points	[
Display volume control to allow overdriving the audio beyond 100%	Hold Shift key while pressing Audio Adjust button
Display Source/Program monitor	F13
Display FX monitor	F14
Display Trim monitor	F15
Edit	\ or Enter
Exit DV Player	Command-.
Mark In point	i or F1
Mark Out point	o or F2
Play	d or spacebar
Play in selection	f
Play to mark	g

Results	Action
Play full screen	Option - d or option - spacebar
Play full screen in selection	Option - f
Play full screen to In or Out point	Option - g
Play/stop clip	Spacebar
Set to edit in Insert mode	q
Set to edit in Overwrite mode	w
Snapshot	1(one)
Toggle between Source and Program monitor	Tab

Monitor Navigation Shortcuts

Results	Action
Move to In-point	t
Move to Out-point	y
Move to next interesting point	Option - right arrow
Move to previous interesting point	Option - left arrow
Step forward one (1) frame	Right arrow or l
Step backward one (1) frame	Left arrow or k
Step forward ten (10) frames	;
Step backward ten (10) frames	j

Trim Window Shortcuts



Result	Action
Move to next Trim point	F4
Move to previous Trim point	F3
Play through trim	F12
Play through trim full screen	Option - F12, Option - spacebar
Trim outgoing clip	F9
Trim incoming clip	F11
Trim both clips (Roll edit)	F10
Trim minus ten (-10) frames	F5
Trim minus one (-1) frame	F6
Trim plus ten (+10) frames	F8
Trim plus one (+1) frame	F7

Sound Monitor Window Shortcuts

Results	Action
Change scrub mode to normal	Command-7
Change scrub mode to jog	Command-8
Change scrub mode to shuttle	Command-9
Scrub the sound in jog or shuttle mode	Command - drag
Turn scrub while stepping on or off	Command-0
Zoom-in	Option - click
Zoom-out	Control - click

Filter Shortcuts

Result	Key
Toggle to original color while Color Palette is active	Escape

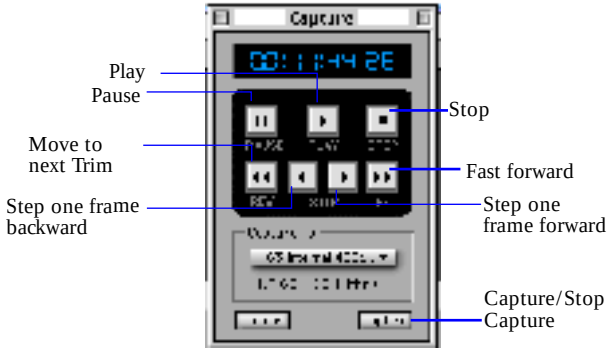
Titling Shortcuts

Result	Action
Constrain movement of text horizontally or vertically while moving	Shift - drag
Constrain the aspect ratio while resizing text	Shift - drag
Decrease kerning value by 1	Option - down arrow
Display text edit view	Control - click
Increase kerning value by 1	Option - up arrow
Move backward through the text	Left arrow
Move forward through the text	Right arrow
Move selected object up, down, left or right	Up, down, left, or right arrow

Print to Video and DV Player Shortcuts

Result	Action
Access the DVPlayer print to video	Command - p
Cancel playback	Command - . (period)
Pause/resume playback	Spacebar
When Paused	
Step back one frame	Left arrow
Step forward one frame	Right arrow
Fast Rewind	Shift - left arrow
Fast Forward	Shift - right arrow
Quickly step backwards	Control - left arrow
Quickly step forwards	Control - right arrow
Move to start of movie	Option - left arrow
Move to end of movie	Option - right arrow

Device Control Shortcuts



Results	Action
Toggle Play and Pause	d or spacebar
Step one-frame back	k or left arrow
Step one-frame forward	l or right arrow
Begin Capture	Command - t
Stop Capture	Command - . (period)
Fast play, fast forward	Shift-right arrow, Shift-right arrow
Fast reverse play, fast reverse	Shift-left arrow, Shift-left arrow

Appendix C: Using QuickTime

Radius EditDV Unplugged is designed to work seamlessly with DV footage and also easily create other types of QuickTime movies. QuickTime movies can be viewed in a player window inside of Radius EditDV Unplugged or with Apple's MoviePlayer application. A non-DV QuickTime movie can be created by using the QuickTime Movie Player application.

Opening a QuickTime Movie

Before you open a movie you can see a frame of it in the Preview section to the left of the file list in the Open dialog box. Click to select the clip and click Create in the Preview area.

To view a clip in a Player window:

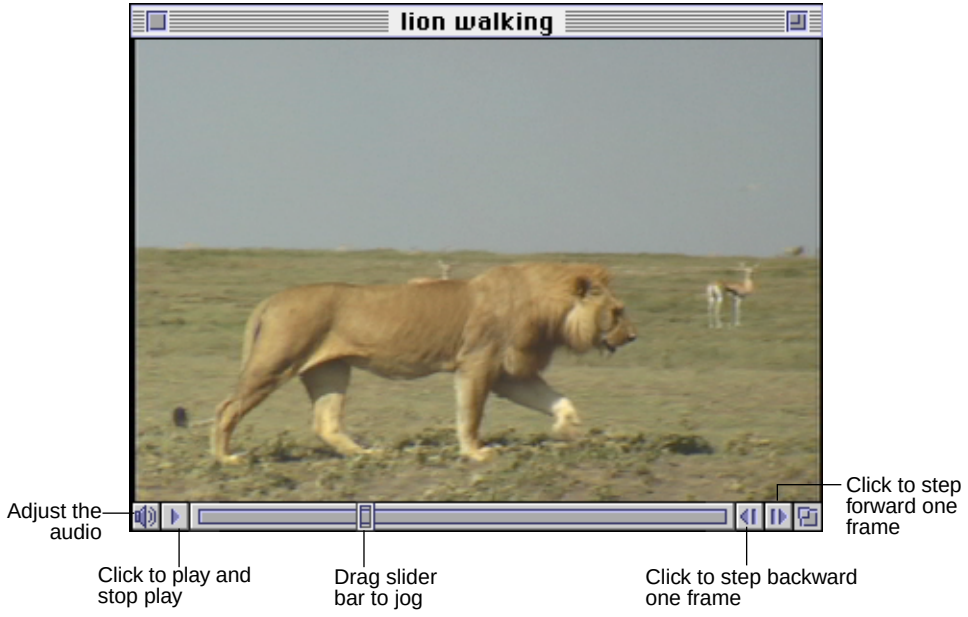
1. Select Open from the File menu.

   You see the Open dialog box.

2. Select Show Media Only from the pop-up in the Open Dialog.
3. Double-click the clip in the list in the Open dialog box. Or select the clip in the list and click Open.

   The clip is opened in the **player window,** on your computer monitor. Use the buttons and slider at the bottom of the player window to play and stop the clip.

   Use the Player Size sub-menu in the Window menu to set the size of the player window.



After opening a clip in the player window, you can adjust the window size. When you finish reviewing the clip, close the window or add the clip to your project.

To adjust the size of the player window, do one of the following:

- Drag the window from the lower right corner to the size you want.
- Choose Player Size from the Window menu, and choose a size from the submenu.

To close the player window:

- Click the Close box in the upper-left corner of the window, or choose Close Window from the File menu (or press Command-W).

  Choose Open again from the File menu to view more clips.

Adding a QuickTime Movie to a Project

A QuickTime movie open in a player window can be added to your project.

To add a movie in a player window to your project:

- With the clip in the player window, choose Add to Project from the Edit menu (or press Command-J).

  The clip information is added to the currently selected bin in the Project window and the player window closes.

Apple QuickTime Compressors

Apple Computer provides several compressors/decompressors (CODECS) with QuickTime. If you are creating a program to use on CD-ROM or in a presentation that needs to play on a variety of different Macintosh models rather than a full-frame video program, you may want to use one of these.

When working with compressors/decompressors, there are a number of trade-offs between the size of a program, how fast it plays (in frames per second) and the sound quality, limited by the speed of your computer and hard disk. To get more quality in one area, you may have to give up quality in another. The following sections describe and compare the compressors that are part of QuickTime.

The Video Compressor

The Video compressor was designed to decompress video data quickly so that movies can play smoothly on your Macintosh. This compressor is best suited for sequences of digitized video data. It is a good choice for creating final movies for software playback when you don't have time to create a Cinepak program.

The Animation Compressor

The Animation compressor is best suited to computer graphics and computer generated movies. It maintains the original video data exactly at its highest quality setting and maintains good image quality at lower settings, though it loses some of the original data at lower settings. Lower quality settings maintain a good balance between quality and speed. The millions of colors+ option of this compressor should be used for storing 32-bit PICT files that contain alpha channel information.

The Cinepak Compressor

The Cinepak compressor enables each frame of video to occupy less storage space than most other compressors, while retaining relatively high quality. It decompresses information smoothly and efficiently, and is ideal for making final production programs for playback in computer based presentations or CD-ROM applications. It is asymmetric in that it requires significantly more time to compress than to play back.

The Graphics Compressor

The Graphics compressor is best suited for 8-bit still images or when high compression ratios are more important than playback speed. It is not typically used for video.

The Photo-JPEG Compressor

The Photo-JPEG compressor implements a compression technique developed by the Joint Photographic Experts Group (JPEG). It is best suited for still images, but may be used for video programs. However, due to the decompression speed of this compressor, video programs generally don't play smoothly. You might want to make a JPEG program as a way to store a program with good quality, but you probably want to convert the program to another compressor before playing it.

YUV Codec Compressor

A YUV compressor/decompressor component stores data in YUV 4:2:2 format. The compression algorithm does not maintain the original video data exactly, but the image quality is extremely high. The compression ratio is approximately 2:1 and does not support frame differencing. The YUV Codec compressor typically gives better results than the Video compressor. In addition, it is also useful as an intermediate storage format if you are applying multiple effects or transitions to an image.

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