

MediaStudio® 6.5

DIRECTOR'S CUT

User Guide

Ulead Systems, Inc.
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Sample files

Files provided as samples on the program CD can be used for personal demonstrations, productions and presentations. No rights are granted for commercial reproduction or redistribution of any sample files.

Introduction

Welcome to MediaStudio 6.5

Director's Cut

Congratulations on purchasing Ulead MediaStudio 6.5 Director's Cut, the ultimate video editing solution for desktop professionals and digital video enthusiasts. Built around a powerful suite of versatile and high performance programs, MediaStudio is the first choice for anyone wanting to work with and control digital video. This software package is ideal for graphic designers, multimedia producers, Internet developers, home video directors, and independent filmmakers. With intuitive controls and seamless integration, creating video has never been easier or more accessible. What's more, it comes with the Ulead DVD Plug-in, allowing you to instantly create VCD, SVCD or DVD titles.

MediaStudio 6.5 Director's Cut is also optimized to create peak performance when working with CPUs like Intel Pentium III & IV as well as AMD 3DNow!. The latest Windows Media streaming format is supported too.

In this manual you will learn about:

- *Using MediaStudio 6.5 Director's Cut p.4*
- *Digitizing with Video Capture p.7*
- *Editing with Video Editor p.16*
- *Adjusting the sound in Audio Editor p.41*
- *Working on your files p.44*
- *Upgrading to the full version p.45*

Using MediaStudio 6.5 Director's Cut

MediaStudio is a high caliber, professional level video editing software suite. More than just a simple video editor, it is truly, a complete digital studio, encompassing computer graphics effects, rotoscope animation, and other amazing filters and effects. Acclaimed by industry experts as being the most intuitive and easy to use video editing software around, it is a powerful program that needs ample time to master. Our best advice to you is to begin first by browsing through this manual, then reading the sections you are interested in. Now, you are ready to fire up the program and give it a try. We strongly recommend working through the Tutorials section of this manual and checking out the sample projects found in the Samples folder of MediaStudio 6.5 Director's Cut before really digging into the advanced stuff. Once the basics are covered, you should be able to begin editing your own movies in just half a day.



Help!

As you work, you will certainly have many questions that can be quickly answered by accessing the extensive online **Help**. Hold your mouse over an object in the program that you have a question about and press **F1** on the keyboard. Every item has a help topic associated with it, so this is a surefire way to get instant answers. You can also look at the bottom of these topics (which are usually just simple definitions of the item) and find links to **Related Topics**. Check the **Index** of both the Help and the manual to get to topics quickly.

More info

Once you've played with the program a little and can already edit clips, apply transitions, and add a title or two, you might want to visit the MediaStudio Web site that has a number of resources.

There are also a few private Web sites that have great tutorials and sample projects. One of the best is the MediaStudio User's Group, or MUG, at www.mugcentral.com. This is the home base for the MUG mailing list, which you can subscribe to at this site. Everyday, dozens of users, including quite a few video professionals, ask and answer questions in an amazingly useful forum.

Installation

The MediaStudio 6.5 Director's Cut installation program runs from within Windows and contains complete instructions to take you through the installation process.

To install MediaStudio 6.5 Director's Cut:

1. Read the license agreement that comes with the MediaStudio Director's Cut package. The license agreement contains important legal requirements that you need to be aware of. If you agree to abide by it, continue with the installation.

Note: *Please take a moment to fill out the registration card during installation. Becoming a registered user entitles you to product updates and upgrade information, as well as technical support. You can also instantly register online after installing the program.*

2. Insert the MediaStudio Director's Cut CD into your CD-ROM drive. Windows should detect the CD and then automatically run the installation program. If the automatic detection feature is turned off, use Windows Explorer to run the **SETUP.EXE** program directly from your CD-ROM drive.

Follow the installation program instructions. While the program is installing files, a window will appear, displaying information about MediaStudio Director's Cut and the installation status.

If you want to browse the contents of the MediaStudio Director's Cut CD, run **AUTOEXEC.EXE** found in the Setup folder from your CD-ROM drive.

Installing Acrobat Reader

An electronic copy of the user guide is also available in the Adobe Acrobat Portable Document format (PDF). To view this, first run the **ar500enu.EXE** file (in the **DRIVERS** folder of the MediaStudio 6.5 Director's Cut CD) and follow the installation instructions. After successfully installing the Reader program, run the program and select **File: Open** to open the file **MS65DC.PDF**. You can then view the user guide online.

Note: *The PDF file (manual_msp.PDF) is for the full version of Ulead MediaStudio Pro 6.5. It contains broad overview of all the program modules with detailed step-by-step instructions covering all of the basic functions, clearly outlining the most commonly used tasks. (For more information on how to upgrade to the full version, see page 45.)*

What's in the full version

Although MediaStudio 6.5 Director's Cut offers a suite of powerful digital editing tools already, it is only a *Lite* version of the complete Ulead MediaStudio Pro 6.5 full version. The full version offers:

- **CG Infinity** is where you can easily produce television and film quality opening and ending credits as well as an extensive range of both regular and freehand graphical objects.
- **Video Paint** is where you can quickly create special effects such as lightning bolts, lasers beams, virtual sets and mattes.
- More **Image file format support**.
- More **Transition effects** and **Filters** in Video Editor that you can use in your video projects.

<p>Note: For information on how to upgrade to the full version, see page 45.</p>

Running the programs

To run the MediaStudio 6.5 Director's Cut programs, click on the appropriate command in the **Start: Programs: MediaStudio 6.5 Director's Cut** submenu. This submenu may differ depending on the choices you made during installation. If you are already working in any of these programs, the easiest method to run another MediaStudio Pro program is by using the **Switch** menu, located on the right of the Menu bar.

README

In the fast paced world of software, change occurs almost daily. While we have tried to keep this manual as up to date as possible, there will inevitably be some things that did not make it into the book by press time. Please browse through the **README** file installed in the MediaStudio Director's Cut directory to find out about the latest notes, drivers, and troubleshooting tips.

Digitizing with Video Capture

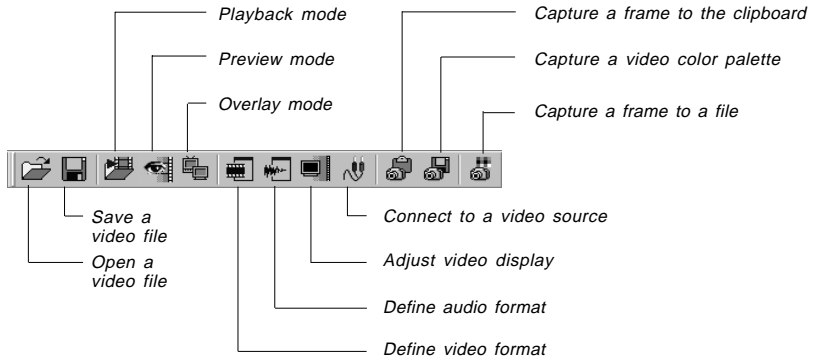
Understanding the basics

Video Capture is designed to work in conjunction with an installed video capture board. Video capture boards serve as the connection between an external video source, such as a VCR, camcorder or laserdisc, and your computer. (If you do not have a video capture board, you can still use Video Capture to play back existing video files.) Once you have your video source connected and playing, the video automatically appears in the Video Capture video window. If no video is playing, or you do not have a video capture board, the video window displays a color bar test pattern instead.

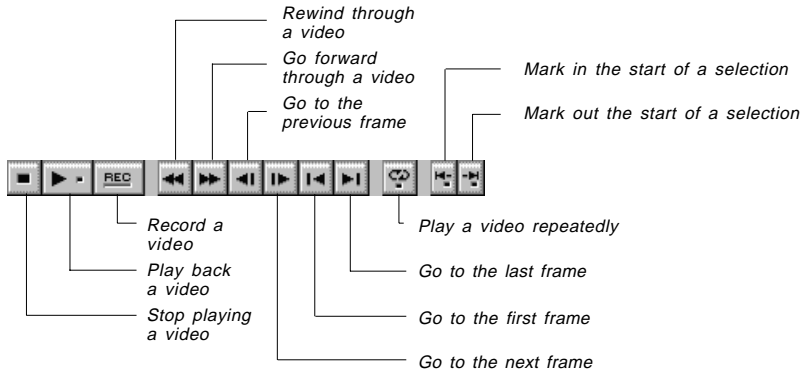


Video Capture's program window

Standard toolbar



Control bar



Video window



Note: Depending on the capture board used, some commands and buttons in Video Capture may not be applicable and may be grayed out.

Preparing video for display

The first step on your way to displaying video is getting your video source to communicate with your PC. This involves connecting the source to the video capture board and adjusting Video Capture so that it is ‘tuned in’ using the correct settings. The following sections describe how to do this, along with ways to improve video display and audio characteristics.



Connecting to an analog video source

If your video capture board is correctly installed, running pictures should immediately appear in the video window of Video Capture. If this does not happen, then you need to tune Video Capture to your video source. To do this, select **Setup: Video Source**. The **Video Source** dialog box opens with various options that allow you to connect to a video channel and specify the type of video source you have, as well as the television standard it operates on (these options may differ depending on your video capture board). In general, you should at least be able to select your video source, such as Composite or S-video and a broadcast signal, such as NTSC, PAL or SECAM.

Note: *If you are unsure about any of these options, or how they work, refer to your video capture board's instruction manual.*



Viewing your displayed video

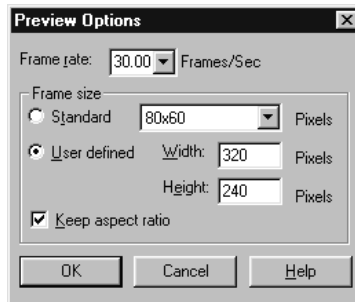
Depending on the type of capture board you have, you can view video in either **Overlay** or **Preview mode**. (To switch between them, click the appropriate buttons on the Standard Toolbar or select **View: Overlay** or **Preview** commands.) For viewing purposes, **Overlay** is the best option as it sends the video signal straight to your monitor via the display card, much like a television. **Preview**, on the other hand, sends the signal via your PC's system, and, depending on the capabilities of your PC, the video may appear choppy.

Note: *If you are only viewing video (not necessarily capturing), you may want to hide certain features, such as the toolbars, for a cleaner look and feel. To hide these, or show them once hidden, select the appropriate option in the Toolbars & Panels dialog box, opened by selecting **View: Toolbars & Panels** or by right-clicking on any displayed toolbar or panel.*

Setting display options

Video Capture allows you to control the size of the frames in a video sequence as well as the data type of the displayed video with the **Video Format** dialog box, opened by clicking **Video Format** on the **Standard Toolbar** or selecting **Setup: Video Format**. (The settings in this dialog box may differ for some video capture boards). You should adjust these settings according to how you plan on using the video. For example, if you are just watching a movie on your computer monitor, then it may be important for you to adjust the frame size to get a better picture with the most colors. If you are capturing video to use in a multimedia project then perhaps a smaller frame size with less colors may be more appropriate.

Note: *If you are displaying video in Preview mode, Video Capture allows you to control the frame rate and frame size with the Preview Options dialog box (opened by selecting **View: Preview Options**).*



Preview Options dialog box



Capturing video

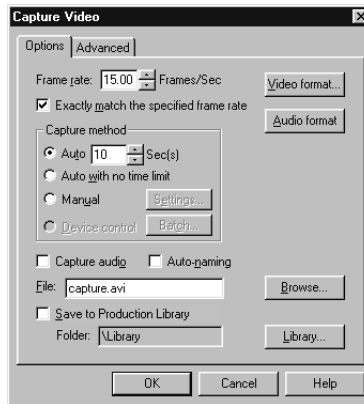
Once you have setup the video window to display your video the way you like it, you are ready to capture. Before capturing, maximize your system resources by closing all background programs and, if possible, defragment your hard drive first for the best possible results.

Note: *The following procedure only shows how to capture video from an analog source. See the succeeding procedure on how to capture DV.*

To capture a video sequence:

1. With Video Capture open, start playing the video from your video source. (The video should appear in the video window of Video Capture. If it does not, check the connection to your video source and your video capture board setup.)
2. Click **Record** on the **Control Bar** or select **Capture: Video [F5]** to open the **Capture Video** dialog box.

If the **Display capture options before capturing** option is cleared in the **Preferences** dialog box, Video Capture begins capturing immediately using your current settings.



Capture Video dialog box

3. Specify the desired frame rate in the **Frame rate Box**. (If capturing full motion video from a drop-frame NTSC device, specify the fractional frame rate of 29.97.)

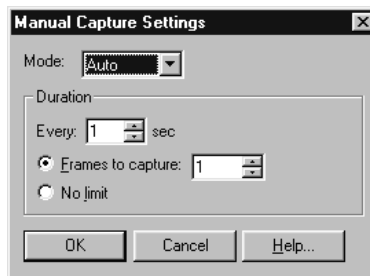
Remember that the higher the frame rate, the more demand on your resources and the greater the size of the resulting video file. As a guideline, 15 frames per second for NTSC devices is a good place to start and 12 frames per second for PAL devices. If your video has a lot of movement and panning, then you may need a higher frame rate to avoid any jerkiness. 'Talking head' shots and video with little movement can often get away with a much lower frame rate.

4. Select **Exactly match the specified frame rate** to ensure that the capture maintains the frame rate (essential if you are capturing drop-frame video). Clear this option for general or non-time critical captures.

The actual captured frame rate may differ from the specified frame rate due to rounding or synchronization errors. While this is not detrimental in most cases, you may find that it slightly affects the timing of larger video sequences.

5. In the **Capture Method Box**, select the appropriate method for capturing. **Auto** captures video according to the time specified in the **Auto Box** while **Auto with no time limit** continues capturing until you press the **[Esc]** key. If you want to perform single frame captures, then select the **Manual** option. If you have a controllable device, select the **Device control** option.

If you select **Manual**, you can define aspects of the capture by clicking **Settings**. This opens the **Manual Capture Settings** dialog box from which you can choose between two capturing modes: **Auto** and **Manual**. **Auto** allows you to specify the duration between captures while **Manual** allows you to control the timing of the capture directly. If you select the **Auto** option, the **Duration Box** is enabled with further options for defining how many frames are to be captured in total. If you want to capture continually, select the **No limit** option.



Manual Capture Settings dialog box

6. Select **Capture audio** to capture audio along with your video. (This is disabled if you do not have a sound card, your video capture board does not have sound capabilities, or you are performing a manual capture.)

Note: *If you want to change the current audio and video characteristics, click the respective **Audio** and **Video** buttons.*

7. Select **Auto-naming** to save each capture as consecutively numbered files. This file takes its name from the file name in the following **File Box**, adding four digits after it with sequential numbers. For example, if the file name you specify is called "VID", captured files will be called, VID0001, VID0002, and so on.
8. Enter the name in the **File Box**.
9. Select **Save to Production Library** to save the captured file to a library in Video Editor.

If you save a file to the library, you can then go straight to Video Editor and drag-and-drop the file into a video project. This is also useful for batch captures as the library creates an icon for each captured file which you can then use to storyboard and arrange before placing your work into a video project.
10. Click **OK**. Video Capture begins capturing according to your settings. If you chose to capture manually, the **Manual Capture** dialog box opens displaying two buttons, **Next** and **Cancel**. Click **Next** to capture a single frame: **Cancel** to end capturing.

Notes:

- *When you click **OK** to start capturing, there may be a slight delay before any capture takes place. This is because many machines first clear all available memory. For best results, start your capture a few seconds before the video you want to record appears in the video window.*
- *If you are in Preview mode when capturing the displayed video, the video may freeze. If this happens, select **Capture: Display When Capturing**. This allows the video to continue displaying while capturing. (This may, however, adversely affect the performance of your capture as it requires additional resources and as such frames may be dropped.)*

Capturing Digital Video (DV)

Digital Video (DV) is a video format that is fundamentally different from traditional analog formats like VHS, Hi-8, and S-VHS. It is much easier for your computer to capture DV than it is to capture other formats because DV is widely supported and the data rate is lower. In addition, the quality of the video is exceptional because it is retained in a purely digital form, from capturing to editing, and finally back to your camcorder.

Before you begin the DV capturing process, first make sure that you have configured your hardware and software, and then follow this procedure:

To capture DV video:

1. Turn on your camcorder and set it to **Play** mode (or **VTR** mode). See your camcorder's manual for specific instructions.
2. Run **Video Capture**.
3. Select **View: Preview**. You should be able to see the output from your camcorder in the Video Capture Preview window.
4. Use the navigation controls to locate the section of video you want to capture.
5. Click **Record**. This opens the **Capture Video** dialog box. In the **Options Tab**, select **Auto**.
6. Click **OK** to begin capturing. Press **[Esc]** to stop.

In step 5, there are a number of parameters you can modify. This can be done before you begin the capture procedure. For most projects the easiest way to capture your video is by doing a **Batch capture**, instead of capturing clips one at a time. Batch capturing requires a camcorder or device that can be controlled by the computer.

To set up the DV device control:

1. Turn on your camcorder and set it to **Play** mode (or **VTR** mode). See your camcorder's manual for specific instructions.
2. Run **Video Capture**.
3. Select **Setup: Device Control**.
4. In the **Device Control** dialog box, click the **Current device** list.
5. Select your device. This will vary depending on your hardware: **MS 1394 Device Control** or **TI 1394 Device Control**.
6. From the Setup Menu, select **Switch Capture Plug-in**.
7. Select the appropriate DV Capture Plug-in (for example: Ulead DirectShow Capture Plug-in).

Note: *The above is not exclusive to DV: it will work for any computer controllable device.*

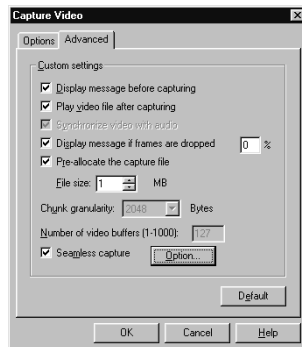
Seamless DV Capture

When using the DirectShow driver, the maximum file size is 4 GB under the FAT 32 file system in your hard drive. Yet, you can go beyond this limitation when using Windows 2000 and Windows NT with a NTFS formatted hard drive partition that allows a file size to exceed 4 GB.

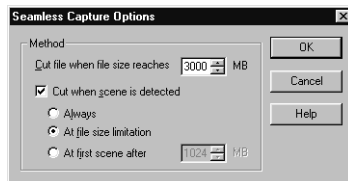
Seamless capture gets around this 4 GB file size limitation. Once a DV AVI file reaches 4 GB, the remaining video is automatically saved as another file. The capturing process remains uninterrupted no matter how long the video footage is.

To enable Seamless Capture:

1. Make sure the DirectShow capture plug-in is selected and a DV driver is used.
2. Select **Seamless capture** in the **Advanced** page of the **Capture video** dialog box then **Options**.
3. In the **Seamless Capture Options** dialog box, specify the maximum video file size in the **Cut file when file size reaches** box.
4. Select **Cut when scene is detected** and select the method.
 - a. **Always** Cuts the file whenever there is a scene change.
 - b. **At file size limitation** Cuts the file when the size reaches the value in the **Cut file when file size reaches** box.
 - c. **At first scene after** Cuts the file when the captured video file size exceeds the value entered in the box.
5. Click **OK**.



Capture Video dialog box

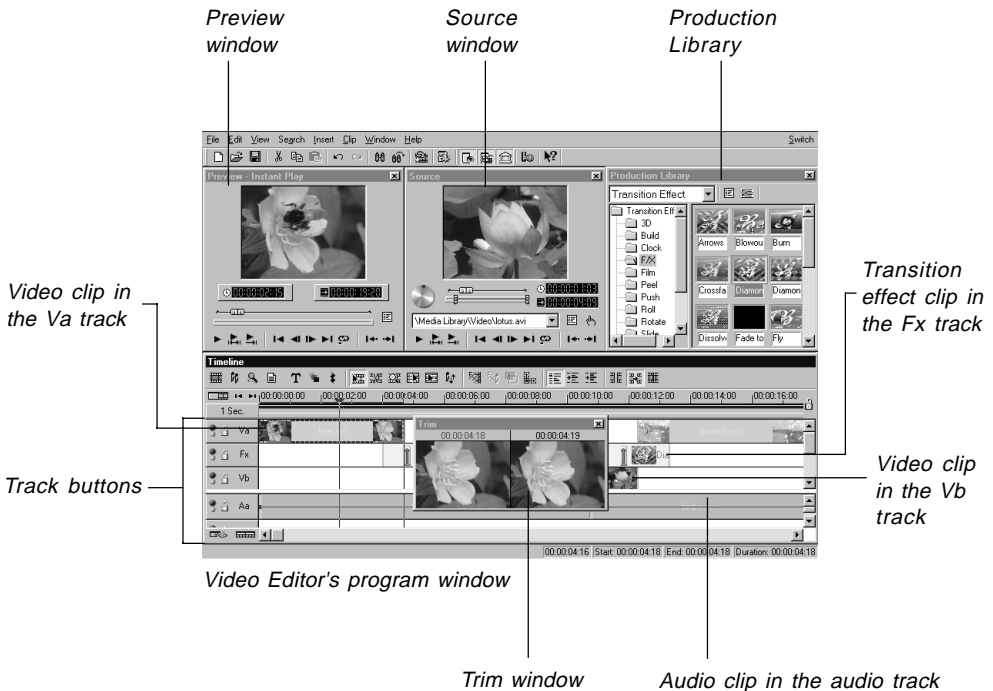


Seamless Capture Options dialog box

Editing with Video Editor

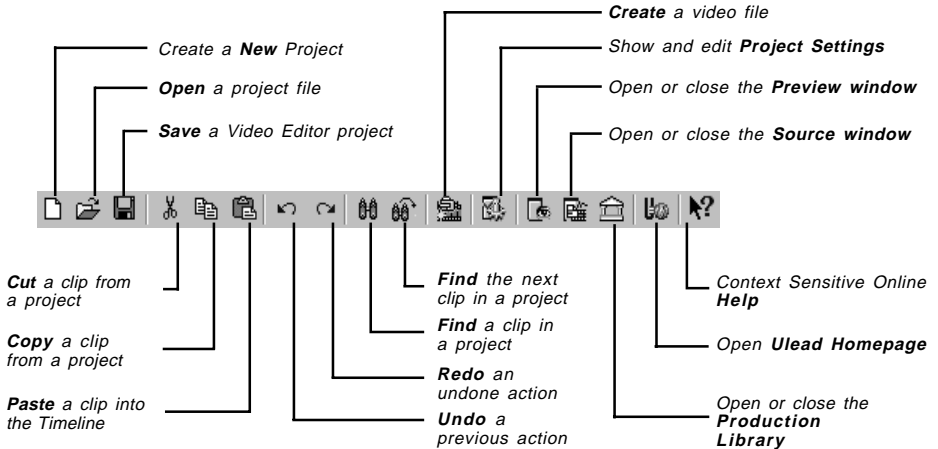
Understanding the workplace

Video Editor has several different windows which float in the workplace. The Timeline window is the key to working with and managing video on the desktop. As with the timelines found in history books or encyclopedias, it is laid out horizontally and composed of several independent layers or 'tracks'. These tracks hold the many different events that occur over time. In Video Editor, these events are referred to as clips, and they combine together to make up a video project. The other windows in the Video Editor workplace, such as the Production Library and the Preview Window, are there to help you in the editing process.

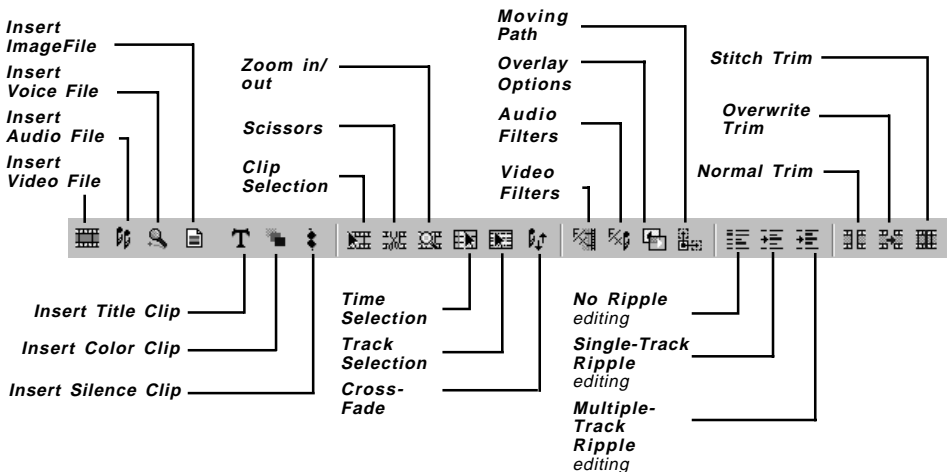


The main buttons in Video Editor are located on the **Standard Toolbar**, which is at the top of the workplace, and the **Timeline Toolbar**, which is in the TimelineWindow.

Standard Toolbar



Timeline Toolbar



Working with video projects

In Video Editor, the Timeline and its associated clips are referred to as a video project, which is saved as a digital video project file (DVP). When you save a video project, Video Editor only saves the positions and attributes of the clips in the Timeline, not the actual source files themselves. The advantage to this is that the DVP file has a relatively small file size and that any editing done is nondestructive – that is, the editing doesn't affect the original source files on disk. The next time you open a DVP file, Video Editor verifies that your hard disk still contains the source files for the clips in the project and then recreates the clips accordingly.

Creating a new video project

To get started in Video Editor you first need to create a video project. The video project not only holds the clips that you place into the Timeline, but also defines the properties for the resulting video, such as the television standard and the size of the frames used. Any clips that you place into the project subsequently adopt those properties, regardless of their original attributes.

To create a new video project:



1. Click **New** on the **Standard Toolbar** or select **File: New [Ctrl+N]**. The **New** dialog box opens displaying a list of project templates.
2. Click on the template you want to use. Its properties, as well as an annotated description, are displayed on the right side of the dialog box.
3. Click **OK**. The dialog box closes and a new project is created.

Note: When you run Video Editor for the first time, the **New** dialog box opens automatically. If you regularly use the same properties for a video project, you can hide the New dialog box each time you click **New** by clearing the **Always show this dialog box** option (Another way is to clear the **Display New dialog box** option in the **File: Preferences: General** tab.). Any subsequent projects take their properties from the current project.

Working with the Timeline

While organizing your media clips in the Production Library is a necessary first step, the real work occurs on the Timeline. As the name implies, the Timeline is a chronological workspace that allows you to visually lay out your clips, transitions, and overlays.

Inserting clips

Clips are the objects that make up your movie. A clip can be an image, a video, a transition, a title, a background color or an audio file. Following insertion into the Timeline, clips can be trimmed and special effects can be applied without modifying the original source files. This is designed to give you greater confidence in editing your video. To start work on a video project, you need to first insert clips into the Timeline. Once inserted, you can begin to edit and arrange them into your final video production. Clips that have been inserted directly onto the Timeline will also automatically be added to the Production Library's Project gallery.



Inserting video, audio and image clips

The easiest way to insert a video, audio or image clip into the Timeline is to click the appropriate **Insert** button on the **Timeline Toolbar**. You can also choose its corresponding command from the **Insert** menu or the right-mouse button pop-up menu. A dialog box opens allowing you to select any compatible file. If you choose a video file that contains both video and audio data, the clips are placed in both the video (**Va**) and audio tracks (**Aa**): these clips remain connected to maintain synchronicity. (You can separate them by selecting the **Clip: Split** command.) Clips already in the Production Library can simply be dragged onto the Timeline. You can also **drag-and-drop** clips directly from Windows Explorer.

Note: *The files you insert should match the properties of your video project to ensure the best possible output results.*

Extracting Extra Audio Tracks

MediaStudio 6.5 Director's Cut provides users with a way to extract extra audio clips from video files to standalone audio files. Video Editor allows you to use multiple audio clips for your projects. For a video file with multiple audio clips, only the first audio clip can be used. MediaStudio 6.5 Director's Cut has added a new button, **Tracks**, in the **Insert Video File** dialog box that allows you to extract audio files from a video that contains multiple audio clips. With this new feature, users can extract any or all the audio clip and insert them on the various audio tracks on the Timeline.

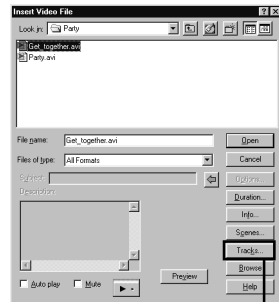
To extract an audio track:

1. Select **Insert: Video File**.
2. Select the file containing the audio clip for extraction.

Note: If the selected file has only one audio track, the **Tracks** button is disabled.

3. Click **Tracks**. The **Extract Extra Audio Tracks** dialog box will appear.
4. A list of all available tracks will appear in the **Audio Tracks** window. Select the file you want extracted by clicking on it.
5. Determine the file name, audio file type, and other options.
6. Press **OK**.

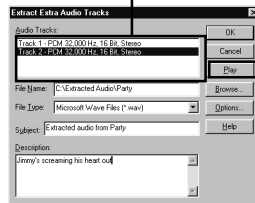
Tip: Press **Play** to listen to the track you have selected.



Insert Video dialog box

Tracks button

Audio Tracks window



Extract Extra Audio Tracks dialog box

Play button

Ripple Editing

Ripple editing is a mode in Video Editor that allows you to insert clips and automatically push other clips out of the way so the new clip will fit on the Timeline.

To select a Ripple Editing mode click one of three **Ripple Editing** buttons on the **Timeline Toolbar** or select from the **Edit: Ripple Editing** menu list. See the next two pages for specific examples.



No Ripple mode means that newly inserted clips are trimmed to fit the available empty time slot.

Note: When you are in **No Ripple** mode, select a file to Insert and hold down the **[Shift]** key while placing the clip on the Timeline. When this file is dropped on the Timeline, it will push all downstream clips in a single track out of the way. Empty spaces will not be preserved if the clip length fits perfectly or is longer than the available slot.



Single-Track Ripple editing will move everything (including empty space) out of the way to make room for the inserted clip, but only on the target track.



Multi-Track Ripple editing will move everything (including empty space) out of the way to make room for the inserted clip, moving all clips (audio and transitions included) on all tracks.

Notes:

- With any of the Ripple Editing modes selected, you cannot trim clips toward the start of the project (frame 0), unless there is an empty clip slot for the preceding clip to occupy.
- **Ripple Editing** only has an effect when the **Normal Trim** option is selected.
- **Ripple Editing** has no effect when dragging clips around the Timeline. It is only enacted when inserting, trimming, cutting, clearing or pasting clips.
- With either **Single** or **Multi-track Ripple** mode selected, hold down the **SHIFT** key while inserting a clip onto an occupied slot. This will split the existing clip on the Timeline and insert your clip in between.
- When **Ripple Editing** is turned on and you delete a clip, all downstream clips move left to fill in the space vacated by the deleted clip.

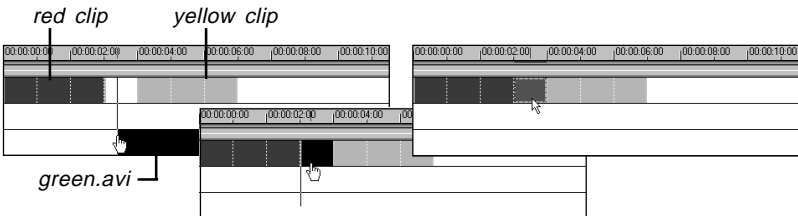
Ripple Editing examples

The following illustrations will help you understand the sometimes complex, but extremely important and useful aspects of Ripple Editing.

Note: *All of the following examples involve the initial insertion of a clip from outside of the Timeline. When moving already inserted clips around within the Timeline, results will differ.*

Automatically trimming an inserted clip (No Ripple)

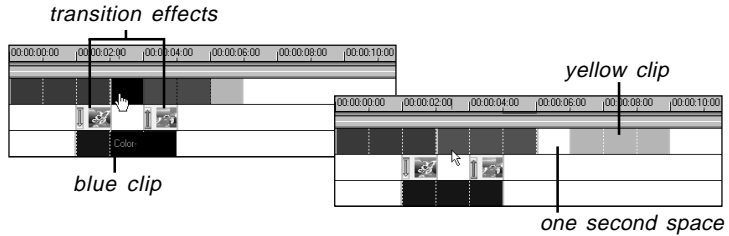
If you have a space in the Timeline between two existing clips, you can fill that space precisely with an inserted clip that will be automatically trimmed to fit the slot.



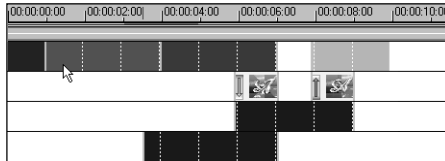
In this three clip sequence, a three second AVI (green.avi) is inserted between the red and yellow clips. In the first image, green.avi is black while it is moved into position. The second image, the clip being inserted is still black while it is being positioned, and the last image clearly shows that the inserted green clip has been trimmed to fit without altering the other clips in any way.

Inserting a clip into a full Timeline (Ripple)

In this example, green.avi is again inserted between the red and yellow clips. This time **Single Track Ripple** is selected.



As green.avi is about to be inserted, the part that overlaps the yellow clip turns bluish. When the clip is actually inserted, the yellow clip *and the one second space* are moved to the right three seconds. In other words, the entire track is shifted, spaces and all. (If you don't want the spaces preserved, use **Push Away Insertion**.) Note that the transitions and the blue clip are unaffected. This time **Multi-Track Ripple** is selected.



Everything downstream, including spaces, is shifted to the right three seconds. This includes transitions and clips on all of the other tracks. The entire project (to the right of the insertion point) is moved a few seconds to accommodate the new clip.

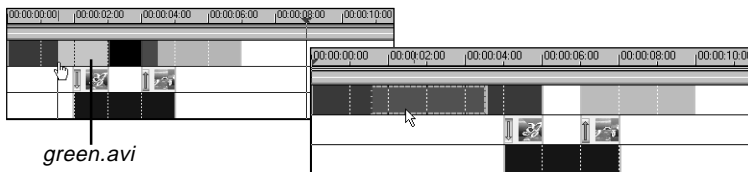
Inserting clips into the middle of an existing clip

Clips can be inserted right into the middle of an existing clip, automatically cutting the clip at the insertion point.

To insert a clip into another:

1. Select **Edit: Ripple Editing: Single-** or **Multi-Track**.
2. Click the **Insert Video File** button.

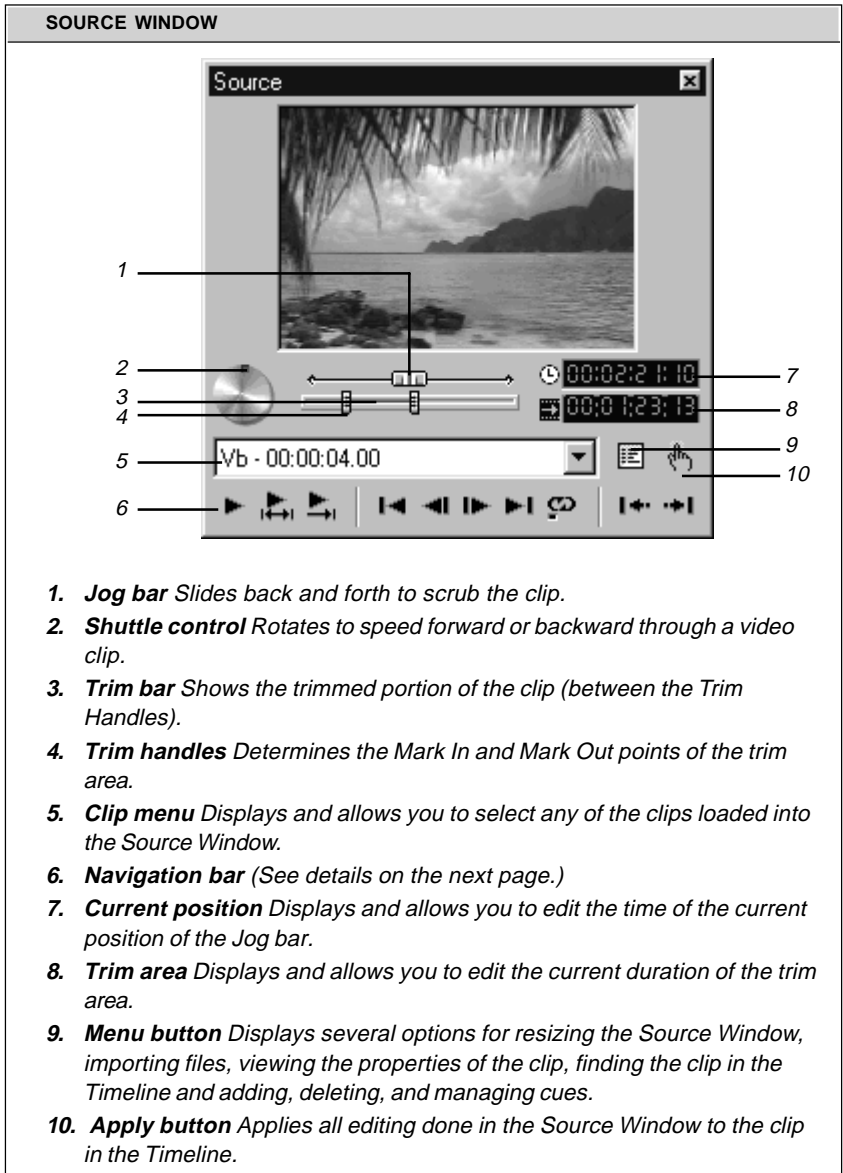
3. In the **Insert Video** dialog box, select the clip you want to insert.
4. Click the **Open** button.
5. Press and hold the **[Shift]** key while clicking in the middle of the clip on the Timeline that you want to insert the new clip into.



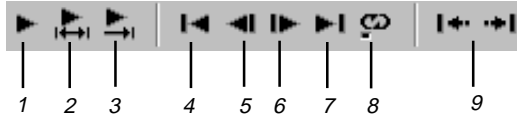
Here *green.avi* is inserted into *red.avi*. **Multi-Track Ripple** is on. In the first image, you can see where the inserted clip overlaps the existing clips. Notice how the red clip is split into two parts and the green clip is dropped into the middle. Again, the entire project (to the right of the insertion point) is shifted right three seconds.

Using the Source Window

The **Source Window** is a single, integrated tool that lets you easily view the contents of any audio, video or image clip, perform trimming operations, and place clip specific cues. Clips can be dragged to and from the Source window and into the Timeline or Production Library. A quick double-click will immediately open up a clip in the Source window. The Source window itself is made visible by clicking **Source Window** on the **Standard Toolbar** or by selecting **Window: Source Window**. Once a clip is opened you can use the menu list to select any other clip which you have previously opened in the Source Window, listed by track and start time. The next few pages cover the Source Window in more detail.



SOURCE WINDOW NAVIGATION BAR



1. **Play (Pause)** Plays the entire clip from beginning to end.
2. **Play Mark Area (Pause)** Plays only the trim area from Mark In to Mark Out point.
3. **Play from the current position to Mark out (Pause)** Plays the clip from the current position of the Jog bar to the Mark Out point.
4. **Previous Edit Point** Moves the Jog bar to the previous cue or the beginning of the clip.
5. **Previous Frame** Moves the Jog bar to the previous frame.
6. **Next Frame** Allows you to maneuver the Jog bar one frame at a time.
7. **Next Edit Point** Moves the Jog bar to the previous or next cue or the end of the clip.
8. **Repeat** Plays the active clip continuously.
9. **Mark In and Mark Out** position the Trim Handles at the current location of the Jog bar and adjust the Trim Area.

Trimming clips in the Source Window

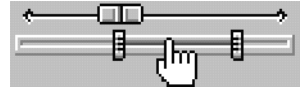
The **Source Window** allows you to visually trim any part of an audio or video clip and then update the clip automatically on the Timeline.

To trim a video clip:

1. Locate the first frame that you want to include in your clip and position the **Mark In** trim handle (on the left) at this point. The red line between the two trim handles represents the trim area. The actual duration of the trim area is shown on the lower of the two timecode displays.
2. Position the **Mark Out** trim handle (on the right) at the last frame you want included in your trimmed clip.
3. Click **Apply**.



The entire trim area can be repositioned by dragging it. The Jog bar automatically slides along with while dragging on the Trim bar.

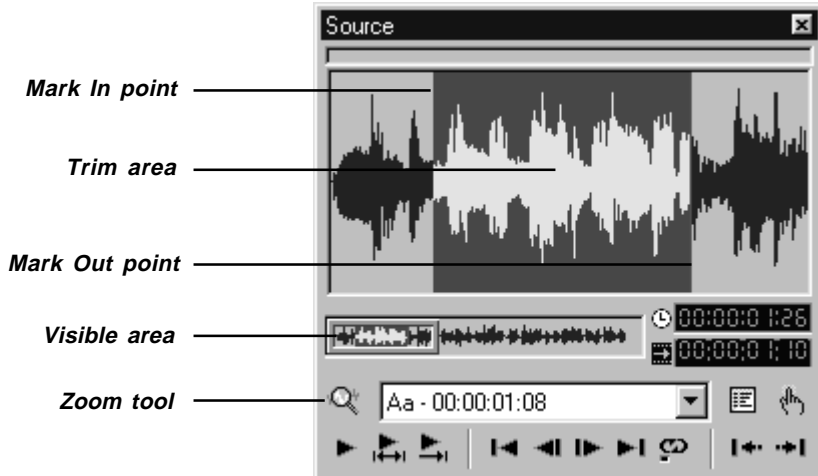


Sliding the Trim bar

The pointer will change to a hand when placed over the trim area. Use this hand to drag the two trim handles when trimming and for moving the trim area as a whole. Right-click on the trim area to automatically reset both trim handles to their original positions at the beginning and end of the original clip. Both the **Current Position** display and **Trim Area** display boxes can be manually edited. Just click on the box and key in the new numbers to automatically readjust the Jog bar and/or Trim bar.

To trim an audio clip:

1. Place the red vertical line where you want to begin the trim selection area.
2. Select the **Mark In** button. The unselected area changes to a blue waveform on a gray background.
3. Repeat steps 1 and 2 with the **Mark Out** button.
4. Click **Apply**. The clip on the Timeline is adjusted.



Note: Additional unlabeled controls are the same as the Source Window for video clips (see page 25). Trimming the audio track of a clip with attached video will also trim the corresponding video track.

Cutting in the Source Window

You can now use the **Source Window** to cut your video clips. Video Editor gives you two options on how you can cut your video clips: **Cut by Position** and **Cut by Cue**. Cut by Position slices the video clip based on the position of the Jog bar. Cut by Cue slices the video clip based on the cue positions.



Using Transition Effects

An integral part of any video or film presentation is the transition effects used to enhance the way clips merge, fade, and cut from one scene to another. An appropriate and well placed transition effect can make your video sequence flow better and add impact to your work.

Transition effects basics

Transition effects can only be placed into the **Fx** track of the Timeline between two overlapping clips in the **Va** and **Vb** tracks. The amount of overlap determines the duration of the effect.

To apply a transition effect:

1. Place a clip in the **Va** track and another in the **Vb** track, making sure the clips overlap a little.
2. Open the **Production Library** and select the **Transition Effect** folder to display its gallery of effects.
3. Drag-and-drop an effect to the **Fx** track between the overlapping clips.
4. The **Transition Options** dialog box appears. Click **OK** and preview.

Note: *The Transition Effects gallery displays all the available transition effects in Video Editor. There are over one hundred transitions which are conveniently grouped into folders. Each effect is displayed as an animated thumbnail for easy identification.*

Using Keyframe Controls

Keyframes are commonly used in computer animation to specify an animation sequence. Instead of drawing every frame of animation, the user can specify the starting and ending positions of a sequence, and the computer then generates all of the intervening frames automatically. All of the effects in **Video Editor** can be controlled with frame-by-frame precision using keyframes.

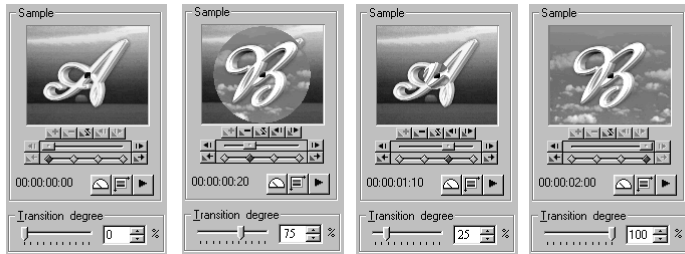
Note: *Keyframe Controllers can be found in the following: all Video Filter, Moving Path, and Transition dialog boxes, and the Overlay Options dialog box.*

Each dialog box containing keyframe controls is a bit different. The procedure below uses the Circle-Wipe transition effect dialog box to create a customized transition animated with keyframes.

To use keyframes to animate a transition effect:

1. Place a clip in the **Va** track and another in the **Vb** track, making sure the clips overlap.
2. From the **Wipe** folder in the **Production Library** under **Transition Effect**, drag the **Circle** thumbnail into the **Fx** track bridging the overlap.
3. In the **Circle-Wipe** dialog box, drag the slider on the **Keyframe Controller** about one-third of the way down.
4. Click **Add Keyframe**.
5. Drag the **Transition degree** slider to approximately 75%.
6. Go back up to the **Keyframe Controller** and drag the slider about two-thirds of the way down. Click **Add Keyframe**.
7. Drag the **Transition degree** slider to approximately 25%. Preview the effect.

You should have a circle that expands, contracts, and then expands out again to complete the transition. See the next page for an illustration.



Using keyframes to animate a transition



To add a keyframe:

1. Drag the **Keyframe Controller** slider to the desired position.
2. Click **Add Keyframe**.



To remove a keyframe:

1. Click on the unwanted keyframe (it will turn red).
2. Click **Remove Keyframe**.

To move a keyframe:

To move any keyframe, just drag it to a new location. Since keyframes are chronological in nature, it is impossible to drag a keyframe beyond a neighboring keyframe on either side.



To reverse keyframes:

1. Click on any keyframe diamond on the Keyframe Controller.
2. Click **Reverse Frame**.

Note: *This does not simply reverse the keyframes, but actually inverts the entire effect.*

Video overlay effects

Placing titles on a video is the most simple example of an **overlay effect**. An overlay could also be a picture-in-picture effect over the anchor's shoulder on the nightly news, or a shot of Superman flying over Metropolis. Overlays are commonly superimposed over a background video with portions of the overlay being transparent or keyed-out. Overlay effects can only be performed on clips in the **V1-V99** tracks, which are collectively known as the **Overlay tracks**.

To create a video overlay effect:

1. Locate the View.avi clip in the Samples folder of the MediaStudio 6.5 Director's Cut CD and drag it onto the **Va** track.
2. From the same folder, drag the Paint.avi clip onto the **V1** track and line it up underneath the clip in the **Va** track.
3. Click the **Overlay Options** button on the **Timeline Toolbar** or click **Clip: Overlay Options**. (This command can also be selected from the right click pop-up menu.) The **Overlay Options** dialog box opens.
4. From the **Type List**, select **Color Key**.
5. On the **Overlay clip**, click on the white area with the Eyedropper.
6. Set the **Similarity** value to 25.
7. Click **OK** to close the dialog box and apply the effect.



Lining up the clips



Using the Eyedropper



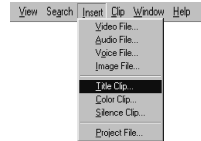
This procedure clearly demonstrates a simple overlay effect. If you preview the work now, you should see the painter painting his house "over" the man strolling outside. If your card supports an external monitor, you can watch this preview directly on your television by clicking **External monitor** in the **Overlay Options** dialog box.

Title Rolling with Shadow Attribute

In video projects, opening and closing credits are often presented using rolling or scrolling text. Title text can be formatted in Video Editor by applying color, outline, transparency, and other attributes. MediaStudio 6.5 Director's Cut now allows users to create rolling text with shadows.

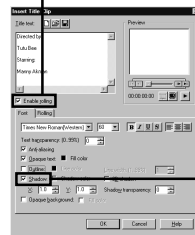
To create rolling text with shadow:

1. Select **Insert: Title Clip** to open the **Insert Title Clip** dialog box.
2. Type the text in the **Title text** window.
3. In the **Font Tab**, select the **Enable rolling** and **Shadow** options.
4. In the **Rolling Tab**, determine the rolling attributes, duration, and loop count of the text then click **OK**.

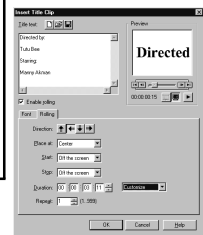


Enable rolling option

Shadow option



Font tab

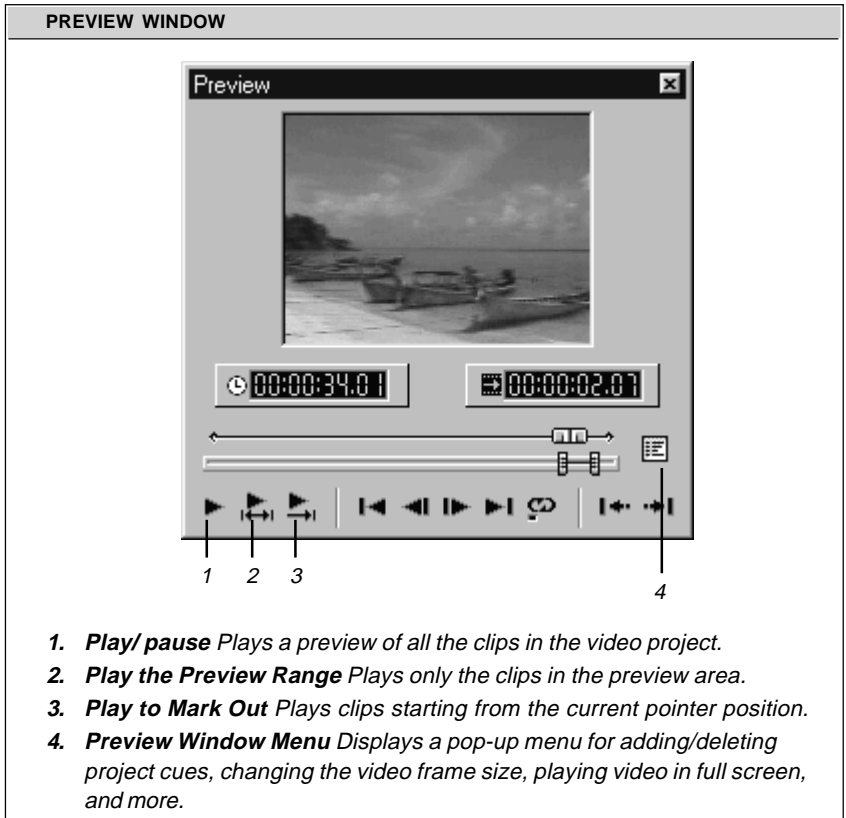


Rolling tab

Previewing your work

Video Editor allows you to see a portion of your project without performing a full save. It lets you render a small section of your project before you create your final video at the end. This way you can view a few seconds of a transition between two clips without having to take the time to render the whole thirty minute project. If your capture board supports an external monitor, you can also preview the output there.

The **Preview Window** itself is very similar to the **Source Window** (see page 25). Where the Source Window is used to view, trim and add cues to individual clips, the Preview Window is used to view your project, either in full or in part, or to add project cues.



Previewing

When you want to preview your work so far, simply press **[Enter]** or click **Play** on the **Preview Window**. If your project is long, this could take some time. Often you will only want to preview part of your project, for example, a few seconds of a transition sequence or an overlay effect. There are three different ways to select the portion of your project you want to preview:



- Create a preview area on the Preview bar over the Timeline. The cursor appears with a little filmstrip icon under it when over the Preview bar. A blue bar indicates the period for preview. A right-click on the cue bar will delete the preview range.
- Use the **Preview Window** to create a preview range. Use the Trim handles to define the preview range. This is also represented as a blue line, both in the Preview Window and on the Preview bar above the Timeline.
- Select **Edit: Preview Range** and enter specific timecode values to define the preview area.



After selecting the preview range, click **Play the Preview Range [Shift+Space]** to begin the preview. You can change the size of the **Preview Window** by clicking **Preview Window Menu** then selecting **Frame Size List**, and choosing a predefined size from the list that appears.

Performing scrub previews

You can instantly preview your video ‘on-the-fly’ at any time. This is known as **scrubbing** and is the quickest way to get an idea of how your project is going. When you scrub, you can preview your transitions and the timing of your video, but filters and effects will not be visible unless your hardware supports them. Unlike performing a regular preview however, scrubbing an area with too many effects may not be smooth.

To perform a scrub preview:

1. Move the pointer up to the top of the ruler above the Timeline. It will change to a star.
2. Drag your mouse across the top of the ruler to view your preview in the **Preview Window**. You can also use the Jog bar to scrub from within the Preview Window.



Instant Playback

MediaStudio 6.5 Director's Cut now features instant playback using its own video rendering engine. Users can now go directly to playback without the need to create a preview file for play project.

The Instant Playback function can be enabled/disabled on the pop-up menu of the preview window. Access this pop-up menu by clicking **Preview window menu**.

Note: *The Title bar of the **Preview Window** displays the current play mode selected.*



Creating a movie

When you're finished editing and the previews look good, it is time to do a final render of your project. The appropriate format of your final movie depends on the destination of the file, but the procedure is the same in every case.

To create a video file:

1. Select **File: Create-Video File** to open the **Create Video File** dialog box.
2. Select the drive and folder where you want to save the video and specify the file type you want to create, such as AVI, MOV or MPG.
3. Type a name for the file in the **File name Box**.
4. Click **Options** to open the **Video Save Options** dialog box to review and/or change the attributes of your video file.

5. Click **OK** to accept the current video attributes. The **Video Save Options** dialog box closes and you return to the **Create Video File** dialog box.
6. Click **Save**.

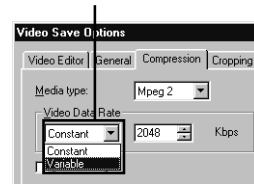
Notes:

- *Render your video with exactly the same attributes as your captured video. The movie should render very quickly and the quality will be the best you can get. The most important attributes you should check are: **codec**, **frame rate**, and **frame size**. You can check these settings by right-clicking on a selected video clip in your project and selecting **Properties** from the pop-up menu.*
- *Render your video as few times as possible, preferably only once.*

MPEG VBR Encoding

MediaStudio 6.5 Director's Cut now features enhanced quality of MPEG videos with the option of choosing the variable bit rate (VBR) encoding method. This method produces better picture quality with a smaller file size. This also results in DVDs and SVCDs having better picture quality.

Variable bit rate encoding option

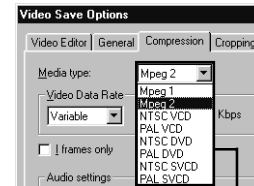


Video Save Options dialog box

DVD/VCD/SVCD Compatible MPEG Files

To help users create DVD/VCD/SVCD files, Video Editor now has three MPEG subsets under **Media Type** in the **Video Save Options** dialog box. Users can now easily save their videos as **DVD/VCD/SVCD** (NTSC or PAL) by simply selecting the desired media type from the drop-down menu.

Note: *Availability of MPEG-2 support depends on the product specifications in your region.*



Video Save Options dialog box

DVD/VCD/SVCD save options

Support for Software-based MJPEG Codec

MediaStudio Director's Cut comes with the Microsoft Direct X 8.0a that supports software-based MJPEG codec. In other words, unlike hardware-based compression, a video file with this type of codec does not require a hardware device to work with during playback.

Improved Support for Streaming Formats

In the previous version, Video Editor can create Advanced Streaming Format (ASF) files. Now, the latest version of Video Editor supports the latest Windows Media technology that allows you to create Windows Media (WMV) files.

Working with a Digital Video camcorder

All movies on a computer are composed of ones and zeros and are therefore digital. **Digital Video** (DV) with a capital "D" and a capital "V" however, stands for a very specific format of video, just like VHS, High-8, or Beta. This format can be understood (played back, recorded) by your camcorder. When you have the proper hardware (capture board) and software (DV codec), it can also be understood by your computer.

The most exciting thing about DV is that it can be copied from your camcorder to your computer, and then back to your camcorder (after editing, of course) without any loss of quality. While previous versions of Ulead MediaStudio Pro supported even the very first DV products on the market, this latest version now offers comprehensive support for DV in all of its manifestations. This includes, but is not limited to, Type-1, Type-2, PAL, NTSC, and even the device control of your camcorder.

Full Support for Types 1 & 2 DV Codecs

Microsoft defines two methods of storing DV video data in AVI files, type 1 and type 2. Accordingly, Video Editor fully supports both DirectShow and VFW codec for DV type 1 and type 2 format. For OHCI complaint IEEE-1394 capture cards, select the DV Video Encoder type 1 codec in the Compression tab in the Video Save Options dialog box.

To record a movie to your DV camcorder:

1. Turn on your camcorder and set it to **Play** mode (or **VTR** mode). See your camcorder's manual for specific instructions.
2. Select **File: Select Device Control**. From the **Current device List**, select the appropriate device control driver for your DV camcorder.
3. Select **File: Export: MS DV Record** (or **TI DV Record**, or **PAPI DV Record** depending on your capture board).
4. Select the DV AVI file that you want to send to your camcorder. Click **Open**.
5. In the **DV Recording - Preview Window**, preview your DV file and click **Next**.
6. In the **DV Recording - Record Window**, click **DV recording** to begin recording the movie to your camcorder.

Outputting to video tape

To output to video tape, you should ensure that all the video sequences you used were created from field-based video and that you saved the video file as field-based. Using non-field-based video results in a slight flicker in the final analog video. Your video should also be equivalent to the resolution of analog video, such as 640x480, 30fps (field-based), and 24-bit color (for NTSC devices). You must create your video using exactly the same settings as your captured video. Anything less results in resampling which introduces degradation. Consult your capture board's manual for detailed instructions on the attributes of the captured video. You can also right-click on a selected video clip on the Timeline and select **Properties** from the pop-up menu to see this information.

If you have already created an avi file with your project, it is easy to print the finished movie to tape.

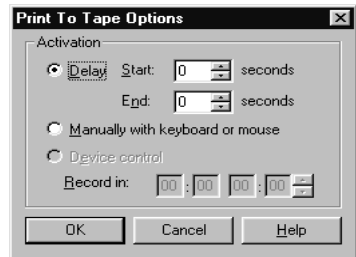
Note: To output a video to tape, you need a video capture board which supports this, or a similar device with a VGA to TV converter. It is also advisable to have a controllable device that allows you to control the recording from Video Editor.

To output an avi file to video tape:

1. Select **File: Print To Tape: Video File** to open the **Select Video File** dialog box.
2. Locate and select the file you want to output and then click **Options**. The **Print To Tape Options** dialog box opens.
3. Set the time **Delay. Start** determines the length of the delay before the video is played while **End** sets it for after the video has played. Selecting **Manual** allows you to control playback with your keyboard or mouse.

Note: Setting a delay gives you time to activate your recording device and get it up to speed before the video plays on your screen.

4. Select **Device control** if you want MediaStudio Pro to control your video camera while recording your project.
5. Click **OK** to close the dialog box and then **Open** to begin playing back the sequence.



Print To Tape dialog box

Once you click **Open**, your entire screen blacks out and after the specified duration, the video begins to play back. (Hit a key on the keyboard or click your mouse to start playing if you selected the **Manually with keyboard or mouse** option.) You may also want to print your movie directly from the Timeline to video tape without creating a file.

Using DV SmartPlay

DV SmartPlay plays your project (with a DV file format templates only) directly from the Timeline out to a DV camcorder or other 1394 device without rendering a final movie file. It also lets you view a project on an external monitor at any time.

To use DV SmartPlay:

1. Select **File: Project Settings** and click **Edit**. Here, select the options corresponding to your video clip attributes. (For example, on the **Compression** tab, make sure the audio format is set to DV Audio -- NTSC/PAL.)
2. Connect your DV camcorder or other 1394 device to the PC and turn it on.
3. Select **File: Select Device Control** to make sure a proper device control is activated.
4. Select **File: Print to Tape - Timeline**. Here, choose **Entire project** or **Preview range** and then click **OK**.

The movie then plays back while rendering, the same as it would when rendering for a preview. After the rendering is finished, the video is played for recording, the same as when copying an avi file to video tape.

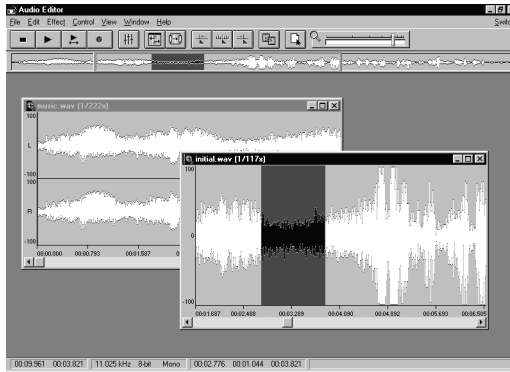
Notes:

- *Before the video starts playing, be sure to start your recording device.*
- *To cancel or end the playback press the **[Esc]** key.*

Adjusting the sound in Audio Editor

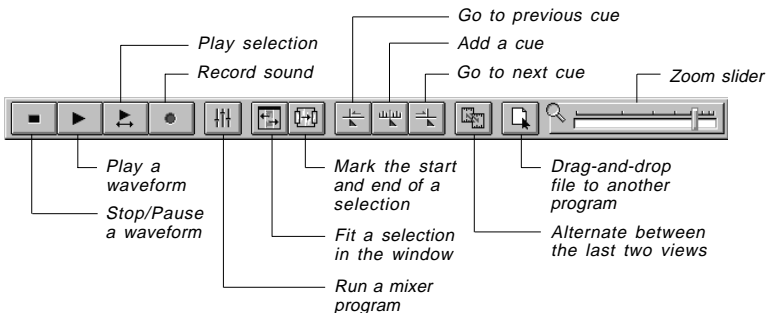
Understanding the basics

To get started with Audio Editor you can either open an existing audio file or record sound from an external device such as an audio CD, microphone or VCR. When you view sound, it appears in an edit window as a waveform. This waveform represents the various positive and negative peaks that a natural sound wave makes. If it is a mono file (single channel), only one waveform is present, while stereo files (two channels) have two waveforms representing the left and right channels accordingly.

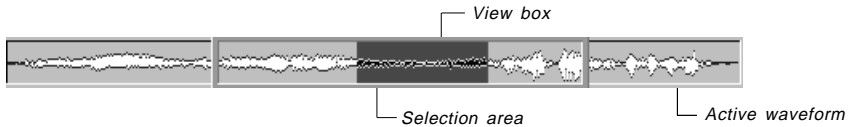


Audio Editor's program window

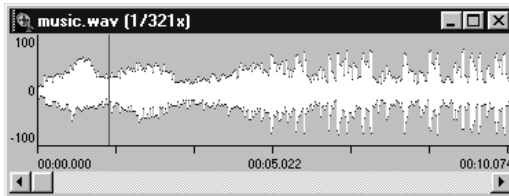
Toolbar



Overview strip



Edit window



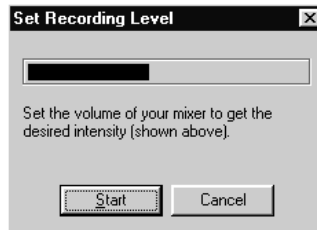
Recording sound

In Audio Editor, you can record sound to any open edit window; this can be an existing file or a new 'empty' edit window. Depending on your system's configuration, you can record from a variety of sources such as a CD player, MIDI player, microphone or MIDI file. Before you start recording, you need to specify the driver of the external audio source you will be using, such as a microphone or VCR. To do this, open the **Windows Control Panel** and double-click the **Multimedia icon**. The **Multimedia Properties** dialog box opens and in the **Preferred device for recording** option, specify the appropriate sound card driver (for audio sources) or video capture board driver (for video sources). For example, if you are using a SoundBlaster32 then you would set the **Preferred device for recording** as 'SB 32 (220).'

To record sound:

1. Connect the audio source into your PC audio card's line-in jack. Test whether or not the connection works by playing from the source. If you hear sound from your computer's speakers, then it is a good connection.
2. Run your audio mixing program by clicking the **Run Mixer Program** button on the Toolbar or select **Control: Run Mixer [Ctrl+M]**. (To use the Windows default mixer, select **Start: Programs: Accessories-Multimedia-Volume Control**.)

3. Make active the edit window you want to record the sound into and click **Record** on the Toolbar or select **Control: Record [Ctrl+R]**. A message box appears displaying the current recording level.



Set Recording Level dialog box

4. Adjust the recording level with the controls on the mixer control panel. For better recording quality, your peak level should stay close to, but not touch, the right side of the indicator.
5. Click **Start**. A message box appears telling you that Audio Editor is recording. Click **OK** in the message box to end recording. The new recording appears in the active edit window at the current cursor position.



Playing audio files

To play an audio file, click **Play** on the Toolbar or select **Control: Play [Space]**. The file starts playing from the current cursor position. To stop the file, click **Stop** or select **Control: Stop [Esc]**. The cursor pauses at the current position. Clicking Stop again returns the cursor to the start of the file. (Clicking Stop or pressing **[Esc]** when the file is not playing returns the cursor to the start of the file.)

Notes:

- To move the cursor to the start of a file, select **Control: Go To Start [Ctrl+Home]**. To move it to the end, select **Control: Go To End [Ctrl+End]**.
- If you have created a selection area you can play the contents of the selection by clicking **Play Selection** on the Toolbar or selecting **Control: Play Selection [F2]**.

Working on your files

Saving files

Once you have recorded or made changes to a waveform, you need to save it. To do this, select **File: Save** or **Save As [Ctrl+S]**. For previously saved files, clicking **Save** instantly overwrites the existing file with the new data. **Save As** opens the **Save Audio File** dialog box where you can specify a new name and/or destination. The **Save Audio File** dialog box also allows you to append subject and description information as well as assign a thumbnail image to use as a visual representation of the file in any preview enabled dialog box or browser.

Note: *If the saved audio file is included as a track in a Video Editor project, the track is automatically updated.*

Saving files to a video

Apart from saving audio as a wave file, you can also save it as an audio track to an existing AVI or MOV file. If the file contains an original audio track, the track is overwritten with the new data. (If the waveform is longer in duration than the video it is truncated to the video length.)

Converting files

After saving a file you may find that you need to change its attributes, particularly if you are planning on mixing it with other files that have different properties. When you convert a file, you can choose to convert down, reducing quality and file size, or convert up. Converting up, such as adding an extra channel or increasing the sample size, does not result in an improvement in the sound of the file. This is because the attributes of an audio file are determined at the time of its creation.

To convert a file, select **Edit: Convert To**. In the dialog box that opens, you can choose to change the sampling rate, channels and sample size according to your needs. Once you click **OK** the dialog box closes and the waveform is changed accordingly.

Upgrading to the full version

Owning MediaStudio Director's Cut entitles you to a special discount when you upgrade to the full version, MediaStudio Pro 6.5.

For more information, visit Ulead Systems' Web sites at

www.ulead.com/msp/upgrade.htm

www.asiapac.ulead.com/msp/upgrade.htm

www.ulead.co.uk/msp/upgrade.htm