Grass Valley™ EDIUS®

EDIUS NLE Software

Reviewer's Guide

July 2007

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1. EDIUS Software Reviewer's Guide

1.1 Overview

Grass Valley EDIUS version 4 is the latest release of the powerful realtime NLE software engineered by Canopus, and incorporates a number of significant and highly requested new features, including multicam, nested sequences, alpha channel support in the HQ codec, and many other editing workflow improvements.

As before, EDIUS version 4 is available in two versions, EDIUS Pro and EDIUS Broadcast, the latter incorporating support for more broadcast-orientated formats, including Panasonic DVCPRO 50, DVCPRO HD, DVCPRO P2 and VariCam, Sony XDCAM, and XDCAM HD.

About the EDIUS v4.5 Update

This reviewer's guide incorporates the features and changes brought forth with the v4.5 update of the software, scheduled for release Q3 2007. As such the appearance and functions may differ from older 4.xx versions. You can read more about v4.5 in the second section of this guide.

1.2 Three Key Benefits

1. **Makes you more productive...**
   Important new features like multicam, sequences, time-remapping and keyframable color correction make editing even slicker and more productive.
2. **Saves disk space...**
   Alpha channel support in the Canopus HQ codec means you can choose to avoid using storage-consuming formats such as uncompressed HD or still image sequences when compositing and layering video.
3. **Saves time...**
   EDIUS version 4 has been optimized to give you even faster scrubbing (for long-GOP MPEG HDV files) and faster rendering (50% faster than version 3).

1.3 Three Key New Features

1. **Multicam**
   Quickly and easily edit a sequence using up to eight different sources, all viewable simultaneously in the Master Channel output window. Switching between cameras is as easy as pressing the numeric keys on the keyboard's number pad. Once the edit is complete, you can choose to keep all the footage on the timeline with original tracks intact, including the unused sections, or you can automatically condense the timeline into a single track, retaining only the trimmed clips.
2. **Nested Sequences**
   With EDIUS version 4, you can create projects within projects, complete with all of the realtime mixed-format, effects, keying, transition, and titling features already available within EDIUS. Sequences can be imported and treated like standard clips on a new timeline, allowing you to apply any number of subsequent filters and effects.
3. **Alpha Channel Support in the HQ Codec**
   The Canopus HQ codec has been enhanced even more, now supporting alpha channel information within the video data. Perfect for graphics-intensive work, animation, titling, lower thirds etc.

1.4 New Features in Detail (red text indicates a v4.5 addition)

Multiple Sequences

- Timeline can be nested into a sequence and treated as a clip within another timeline
- Tab-switch-able multiple timelines can be included in a project file
- Sequences support multiple formats, resolutions and frame rates in realtime

Multicam

- Multiple sources can be edited at the same time
- A maximum of eight sources can be displayed at once, with realtime preview on selecting tracks
- When importing, clips (or 'cameras') can be automatically synchronized by timecode, record time, or in point of the source clips
- Cutting between camera angles can be performed using either keyboard or mouse

Keyframeable Color Correction

- Realtime preview of color correction by parameter
- Bezier Spline control

Time Remapping

- Add multiple, realtime playback speed adjustments to clips without altering their length on the timeline

HQ Codec with Alpha Channel

- HQ codec supports 8-bit alpha channel in realtime
- Export video with alpha channel from any third-party animation application that supports VfW

Improved Editing Workflow

- Basic DVD Authoring, with DVD menu templates
- Batch export of multiple target files from a single project
- New trimming operations and trim window mode (play around trim point, move to previous/next trim point)
- Ripple edit mode (Trim In key, Trim Out key, Delete, Insert, Speed change)
- Audio channel mapping keyboard shortcuts
- Jump to In/Out markers using shortcut keys
- Trim multiple transitions/cross-fades simultaneously
- Delete all In/Out markers
- 'Add Fade In/Fade Out' commands for video and/or audio clips
- Free hard disk space indicator (always visible from the Timeline Window)
- More Safe Area Guidelines overlay options – title area (80%), action area (100%), 4:3, 13:9, 14:9
- More responsive timeline 'scrubbing,' particularly when using long-GOP MPEG video
- Faster application load time

- Faster rendering – up to 50% faster than EDIUS Pro 3 version 3.6
- Full-frame HD (1920 x 1080i) project preset
- AAF project import/export for Digidesign Pro Tools and Adobe After Effects
- Color bar tone level can be specified by dB
- Support for mono channel audio
- Channel mapping per audio track
- Panning values for Left and Right channels default to 100% when using mono channel mapping
- Broadcast Wave Format (BWF) export with channel and timecode information
- Dolby AC-3 import and export
- DPX SMPTE 268M-2003 import
- VU level meter display in Audio Mixer dialog box
- HD color bar added (ARIB STB-B28)
- Create, save and export User Profiles, which store application settings, window layouts, etc.
- Save and export custom project presets created with your own input/output settings
- Create and save custom export presets
- New 'New Project' (Welcome Screen) window appearance and options

New Format Support

- Sony XDCAM HD
- Sony XDCAM / XDCAM HD proxy data
- Panasonic DVCPRO HD 720 59.94p/50p/23.98p over 59.94p
- AVCHD MPEG-4 file import / direct edit
- Panasonic DVCPRO HD 720 59.94p/23.98p over 59.94p (for EDIUS HD-SDI systems)
- Panasonic P2 AVC-Intra import*
- Sony HDV 1080 30p/25p/24p (for HVR-V1J)
- Sony HVR-DR60 file import / direct edit (patent pending)
- JVC HDV 720 59.94p/50p
- Infinity JPEG 2000
- Grass Valley Aurora Edit VMF import**
- Grass Valley K2 GXF Import and Export**

* Requires EDIUS Broadcast, and the separate AVC-Intra plug-in

** Only available within GV EDIUS Edit Systems (turnkeys)

MPEG Enhancements

- Native MPEG TS Capture in Player Window (MPEGcapture application no longer needed)
- Split clips by record date on capture now supports long-GOP MPEG data
- Segment encoding ('smart rendering') for SD and 1080i MPEG-2 clips on the timeline

Included Output Plug-ins (for use with EDIUS hardware)

- Adobe After Effects, Adobe Photoshop, NewTek LightWave 3D, Alias Maya, Bauhaus Mirage, discreet 3ds max, discreet combustion

Improved GUI

- Completely new design, to better match Grass Valley industrial design
- The application now appears as a single task on the Windows taskbar
- Resizing of EDIUS windows is now more intuitive, and holds separate windows together
- Effect Palette icon view mode - display all filters, keyers and effects as visually recognizable icons
- Traditional Windows application menus added (File, Edit, Display, Clip, Tool, Rendering, Settings, Help)
- Selectable GUI color
- Combine the Bin window with Effect, Information and Marker palettes for better interface management

1.5 SKUs and Pricing

EDIUS Pro 4:	606256	$699
EDIUS Pro 4 Upgrade (from EDIUS Pro 3):	626254	$209
EDIUS Broadcast 4:	606034	$999
EDIUS Broadcast 4 Upgrade (from EDIUS Broadcast 3):	616033	$209
EDIUS Broadcast 4 Upgrade (from EDIUS Pro 3):	626032	$509
EDIUS Broadcast 4 Upgrade (from EDIUS Pro 4):	636031	$409

1.6 Shipping

Currently available. The free EDIUS v4.5 update will be available from the end of July, 2007.

1.7 Warranty

90-days Limited Warranty

1.8 Supported Languages

GUI support for English, French, German, Italian, Chinese and Japanese.

1.9 Trial Version

A fully-working, 30-day trial version of EDIUS is available for download. The trial version will be updated after v4.5 ships.

1.10 Descriptors (for press, Web sites etc)

EDIUS Pro

25 words: Grass Valley™ EDIUS® Pro video editing software, engineered by Canopus®, offers professionals the highest image quality and most advanced realtime performance available today in any HD/SD solution.

50 words: Grass Valley™ EDIUS® Pro video editing software, engineered by Canopus®, provides professionals with advanced realtime, mixed format SD/HD editing, compositing, chroma keying, titling and timeline output capabilities. Featuring the revolutionary Canopus HQ Codec, EDIUS Pro offers the highest image quality and performance available today in any SD/HD editing solution.

100 words: Grass Valley™ EDIUS® Pro video editing software, engineered by Canopus®, provides professionals with advanced realtime, mixed format SD/HD editing, compositing, chroma keying, titling and timeline output capabilities. Featuring the revolutionary Canopus HQ Codec, now enhanced to include alpha channel support, EDIUS Pro offers the highest image quality and performance available today in any SD/HD editing solution. Unrivaled video transcoding technology performs realtime conversion between different HD and SD resolutions, aspect ratios and frame rates. Delivering realtime playback and output of sequences, effects, keyers, transitions and titles, EDIUS Pro can export projects to any format or medium required, including DVD-Video, directly from the timeline.

EDIUS Broadcast

25 words: Grass Valley™ EDIUS® Broadcast, engineered by Canopus®, includes the acclaimed EDIUS Pro video editing software plus a full range of industry-standard equipment and format support features.

50 words: Grass Valley™ EDIUS® Broadcast, engineered by Canopus®, includes the acclaimed EDIUS Pro video editing software plus a full range of industry-standard equipment and format support features. Offering the highest image quality and performance available in any SD/HD editing solution, EDIUS Broadcast is designed to meet the requirements of higher-end broadcast and post-production environments.

100 words: Offering the highest image quality and performance available in any SD/HD editing solution, Grass Valley™ EDIUS® Broadcast, engineered by Canopus®, is designed to meet the requirements of higher-end broadcast and post-production environments. EDIUS Broadcast includes the acclaimed EDIUS Pro video editing software plus a full range of industry-standard equipment and format support features. EDIUS Broadcast includes support for newer, non-tape forms of video recording and storage with metadata preservation, including Panasonic DVCPRO, P2, VariCam, and Sony XDCAM. EDIUS Broadcast is included with EDIUS SP, and all Grass Valley EDIUS Edit Stations.

1.11 Formats Supported (italics indicate EDIUS Broadcast only, red text indicates a v4.5 addition)

Input Formats		
FireWire		AVI: SD: DV, *DVCPRO 50*; HD: Canopus HQ, *DVCPRO HD* HDV: HDV1080i/HDV720p (MPEG-2 TS)
File-based	**Video**	Uncompressed AVI (RGB + alpha channel, RGB, YUY2, UYVY) AVI: Canopus Lossless; Canopus HQ; Canopus DV; Microsoft DV; *DVCPRO 50*; *DVCPRO HD* DirectShow AVI HDV (MPEG-2 transport stream) QuickTime Movie (audio support for Linear PCM only) Flash (via QuickTime Importer, no audio) Windows Media Video MPEG-1 (system, elementary) MPEG-2 (transport, program, elementary) AVCHD MPEG-4 (*.M2TS) MPEG HDD MOVIE (*.MOD)
	Meta File	Sony HVR-DR60 Meta file (*.IDX) *Sony XDCAM* *Panasonic P2* *Panasonic AVC-Intra ** *Infinity JPEG 2000* *Grass Valley K2 GXF *** *Aurora Edit VMF (*.HDR) ***
	Audio	WAVE (including BWF format) AIFF AIFC (Linear PCM only) MPEG1 Audio Layer-3 (MP3) MPEG1 Audio Layer-2 Ogg Vorbis Windows Media Audio Dolby Digital AC-3
	Still Image	Photoshop (images are flattened) Targa DPX SMPTE 268M-2003 Windows Bitmap JPEG; JPEG File Interchange Format CompuServe GIF TIFF QuickTime Image files

	Still Image (cont.)	Silicon Graphics Portable Network Graphics Flash Pix Windows Meta File Maya IFF Imaginate (*.IVP, requires Imaginate 2.0 software) Inscriber (*.ICG,*.IPS) Quick Titler (*.ETL) Note: Sequences are also supported

Output Formats		
FireWire		DV (4:3, 16:9), (48kHz, 44.1kHz, 32kHz 2ch, 32kHz 4ch)
File-based	**Video**	Uncompressed AVI (RGB + alpha channel, RGB, YUY2, UYVY) AVI: Canopus Lossless; Canopus HQ; Canopus DV; Microsoft DV; DVCPRO 50; DVCPRO HD HDV (MPEG-2 transport stream) MPEG-1 (system, elementary) MPEG-2 (transport, program, elementary) DVD-Video (via DVD Creator exporter) Windows Media Video QuickTime (via ProCoder Express for EDIUS) RealVideo (via ProCoder Express for EDIUS) DirectShow AVI (via ProCoder Express for EDIUS)
	Meta File	*Sony XDCAM* *Panasonic P2* *Infinity JPEG 2000* *Grass Valley K2 GXF*
	Audio	WAVE (16-bit PCM) Windows Media Audio AIFF (16-bit PCM) Dolby Digital AC-3
	Still Image	Photoshop (flattened) Targa (RLE compression supported) Windows Bitmap JPEG JPEG File Interchange Format TIFF

	Still Image **(cont.)**	QuickTime Image Silicon Graphics Mac Pict file Portable Network Graphics Note: Sequences are also supported

* Requires the AVC-Intra plug-in option

** Only available with GV EDIUS Edit Stations (turnkey)

1.12 Project Presets (italics indicate EDIUS Broadcast only, red text indicates a v4.5 addition)

Output Device	Output Format	
Generic OHCI HD 60Hz	1920x1080 59.94i 48kHz 2ch	
	1440x1080 59.94i 48kHz 2ch	
	1440x1080 29.97p 48kHz 2ch	
	1280x720 59.94p 48kHz 2ch	
	1280x720 29.97p 48kHz 2ch	
	1280x1080 59.94i 48kHz 8ch	*(for DVCPRO HD)*
	1280x1080 29.97p over 59.94i 48kHz 8ch	*(for DVCPRO HD)*
	920x720 59.94p 48kHz 8ch	*(for DVCPRO HD)*
	920x720 29.97p over 59.94p 48kHz 8ch	*(for DVCPRO HD)*
Generic OHCI HD 50Hz	1920x1080 50i 48kHz 2ch	
	1440x1080 50i 48kHz 2ch	
	1440x1080 25p 48kHz 2ch	
	1280x720 50p 48kHz 2ch	
	1280x720 25p 48kHz 2ch	
	1440x1080 50i 48kHz 8ch	*(for DVCPRO HD)*
	1440x1080 25p over 50i 48kHz 8ch	*(for DVCPRO HD)*
	960x720 50p 48kHz 8ch	*(for DVCPRO HD)*
	960x720 25p over 50p 48kHz 8ch	*(for DVCPRO HD)*
	960x720 50p over 60p 48kHz 8ch	*(for DVCPRO HD)*
	960x720 25p over 60p 48kHz 8ch	*(for DVCPRO HD)*
Generic OHCI HD 24Hz	1440x1080 23.98p 48kHz 2ch	
	1280x720 23.98p 48kHz 2ch	
	1280x1080 23.98p over 59.94i 48kHz 8ch	*(for DVCPRO HD)*
	1280x1080 23.98pA over 59.94i 48kHz 8ch	*(for DVCPRO HD)*
	960x720 23.98p over 59.94p 48kHz 8ch	*(for DVCPRO HD)*
	960x720 24p over 60p 48kHz 8ch	*(for DVCPRO HD)*
Generic OHCI SD NTSC	*720x480 59.94i 4:3 48kHz 4ch*	*(for DVCPRO 50)*
	720x480 59.94i 16:9 48kHz 4ch	*(for DVCPRO 50)*
	720x480 59.94i 4:3 48kHz 2ch	
	720x480 59.94i 4:3 44.1kHz 2ch	
	720x480 59.94i 4:3 32kHz 2ch	
	720x480 59.94i 4:3 32kHz 4ch	
	720x480 59.94i 16:9 48kHz 2ch	
	720x480 59.94i 16:9 44.1kHz 2ch	
	720x480 59.94i 16:9 32kHz 2ch	
	720x480 59.94i 16:9 32kHz 4ch	

Generic OHCI SD NTSC (cont.)	720x480 29.97p over 59.94i 4:3 48kHz 2ch 720x480 29.97p over 59.94i 16:9 48kHz 2ch 720x480 59.94p 16:9 48kHz 2ch
Generic OHCI SD PAL	*720x576 50i 4:3 48kHz 4ch* *(for DVCPRO 50)* *720x576 50i 16:9 48kHz 4ch* *(for DVCPRO 50)* 720x576 50i 4:3 48kHz 2ch 720x576 50i 4:3 44.1kHz 2ch 720x576 50i 4:3 32kHz 2ch 720x576 50i 4:3 32kHz 4ch 720x576 50i 16:9 48kHz 2ch 720x576 50i 16:9 44.1kHz 2ch 720x576 50i 16:9 32kHz 2ch 720x576 50i 16:9 32kHz 4ch 720x576 25p over 50i 4:3 48kHz 2ch 720x576 25p over 50i 16:9 48kHz 2ch 720x576 50p 4:3 48kHz 2ch 720x576 50p 16:9 48kHz 2ch 720x576 25p 16:9 48kHz 2ch
Generic OHCI SD 24Hz	720x480 23.98p over 59.94i 4:3 48kHz 2ch 720x480 23.98p over 59.94i 16:9 48kHz 2ch 720x480 23.98pA over 59.94i 4:3 48kHz 2ch 720x480 23.98pA over 59.94i 16:9 48kHz 2ch

1.13 Input Settings (italics indicate EDIUS Broadcast only, red text indicates a v4.5 addition)

Input Device	Input Format
Generic OHCI Input	*DVCPRO HD 1080/59.94i* *DVCPRO 50 59.94i* DV 59.94i *DVCPRO HD 1080/50i* *DVCPRO 50 50i* DV 50i *DVCPRO HD 720/59.94p* *DVCPRO HD 720 Constant Rate Shooting over 59.94p* *DVCPRO HD 720 Constant Rate Shooting over 60p* *DVCPRO HD 720/50p*
Generic HDV Input	Canopus HQ 1920x1080/59.94i Canopus HQ 1440x1080/59.94i Canopus HQ 1440x1080/50i Canopus HQ 1440x1080/29.97p Canopus HQ 1440x 1080/23.98p over 59.94i Canopus HQ 1440x 1080/23.98pA over 59.94i Canopus HQ 1440x 1080/25p Canopus HQ 720/59.94p Canopus HQ 720/29.97p Canopus HQ 720/23.98p over 59.94p Canopus HQ 720/50p Canopus HQ 720/25p Canopus HQ 480/59.94p Canopus HQ 576/25p Canopus HQ 576/50p MPEG TS 1920x1080/59.94i MPEG TS 1440x1080/59.94i MPEG TS 1440x1080/50i MPEG TS 720/29.97p MPEG TS 720/59.94p, 720/23.98p over 59.94p MPEG TS 720/50p, 720/25p

1.14 System Requirements

CPU	Intel or AMD 3.0GHz CPU or faster (dual-core/dual processors recommended for HD/HDV editing, Hyper-Threading supported)
Memory	512MB RAM or more (1GB recommended for HD/HDV editing)
USB	One free USB port (1.1 or higher) required for software protection key
Hard Disk	800MB free disk space for the application • ATA100/5400rpm or faster hard disk recommended. • Ultra SCSI 160 or better is required for playing two or more uncompressed video streams simultaneously • RAID 0 is recommended for HD editing • Free space must be twice size of editing files
Internet Connection	Ideal, for user registration, technical support and software updates
Sound Card	Required
DVD-ROM	Required for installation
Graphics System	DirectX 9.0c or later; 32-bit color display at 1024x768 resolution
Video Memory	128MB of graphics memory is required when editing in HD resolution and/or Xplode for EDIUS
Operating System	Microsoft Windows XP Home Edition (SP 2 or later), Microsoft Windows XP Professional (SP 2 or later)

1.15 Package Contents

	EDIUS Pro
1	EDIUS Installation DVD-ROM
1	TitleMotion Pro for EDIUS Installation DVD-ROM
1	EDIUS Installation Guide
1	EDIUS Hardware Setting Guide
1	EDIUS User Guide
1	USB Dongle
1	Registration Form

	EDIUS Broadcast
1	EDIUS Installation DVD-ROM
1	TitleMotion Pro for EDIUS Installation DVD-ROM
1	EDIUS Installation Guide
1	EDIUS Hardware Setting Guide
1	EDIUS User Guide
1	EDIUS Broadcast User Guide
1	USB Dongle
1	Registration Form

1.16 Frequently Asked Questions (FAQs)

Q1.	**When is the v4.5 update due?**
A1.	EDIUS v4.5 is expected to ship Q3, 2007. It will be included with all Grass Valley EDIUS products shortly after this time. The update will also be made available free of charge on the Canopus Web site.

Q2.	**When will EDIUS support the Infinity JPEG 2000 codec used by the Grass Valley Infinity series?**
A2.	Infinity JPEG 2000 support is planned for inclusion in the EDIUS v4.5 update, but is only available for EDIUS Broadcast. Existing owners of EDIUS Broadcast will need to have their dongle replaced for a new one which enables access to the codec.

Q3.	**Will the Power Up Kit (Adorage and SoundSoap plug-ins) still be bundled?**
A3.	Yes, these are included on the DVD-ROM.

Q4.	**If I install the EDIUS trial version and wish to then purchase a full copy, do I need to uninstall and then reinstall the software again?**
A4.	No. However, you may want to check that you are running the latest version of the EDIUS software, since the trial version may not match the current shipping product's version number.

Q5.	**What happens if I lose my dongle?**
A5.	This would be the equivalent of losing your software license, BUT, it is possible to transfer the security key from the dongle to your PC, so that the dongle could be stored in a secure place for safekeeping. If you subsequently have a disk crash and need to reinstall EDIUS, the dongle can be returned to Grass Valley for re-serialization at no extra cost.

2. The EDIUS v4.5 Update In Depth

2.1 New Graphical User Interface (GUI)

The EDIUS GUI has been completely reskinned to bring the software closer to the look and feel of other interfaces found within Grass Valley's product lineup. It is important to note that although the appearance is different, the workflow and functions (aside from new v4.5 features) remains the same as any previous '4.xx' version of EDIUS NLE software.

Original v4.00 Interface

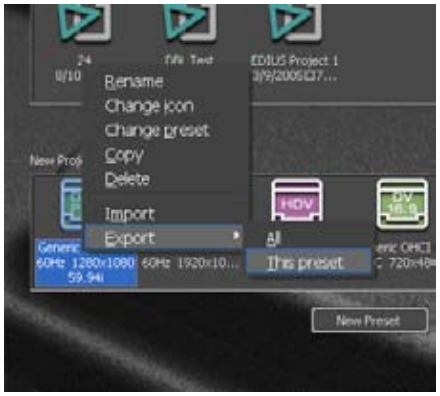
New v4.5 Interface

2.2 User Profiles and Project Presets Options

EDIUS v4.5 features a redesigned 'Welcome Screen' when starting the application. From this screen, you can create and choose between multiple user profiles, which in turn store all customized interface, application and shortcuts settings. You can also switch between user profiles while in the middle of a project. All user profiles can have an associated image file (or 'Avatar') to make them easier to recognize.

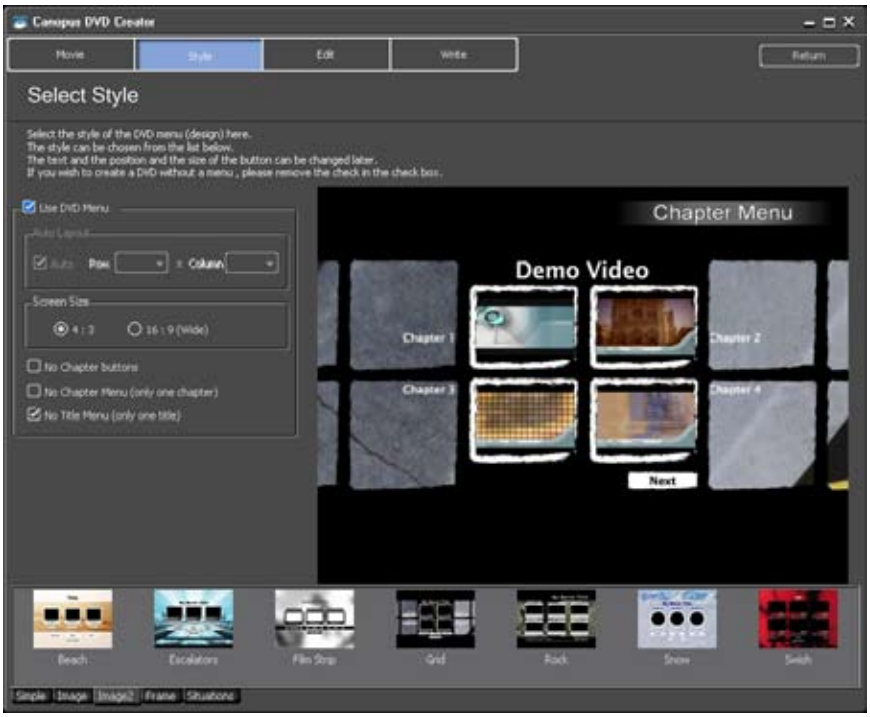
In addition to this feature, you can also create multiple project presets with your own custom settings applied. You start with a pre-built project preset and then make your own changes as need — numbers of tracks, timeline length, rendering codec, etc.

Both the User Profiles and Project Presets can be saved out and imported onto other machines. Given that these files are small enough to easily be e-mailed, or transported on a USB flash drive, your EDIUS workflow is now fully portable.



2.3 Basic DVD Authoring

While not as fully-featured as a standalone DVD authoring software package, DVD Creator provides editors with a quick and easy way to produce simple DVD titles with static menus based off the artwork included in the style gallery. DVD Creator can either use the material on the current EDIUS timeline, or import a pre-encoded MPEG-2 program or elementary stream. Additionally, the application supports authoring to single-layer and dual-layer drives, and Dolby Digital AC-3 (stereo) audio encoding.

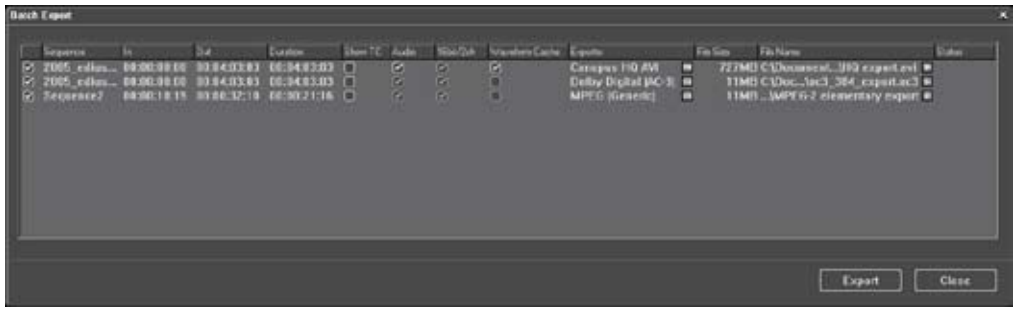


To access this feature, choose **Print to DVD** from the **Export** menu

2.4 Batch Exporting and Custom Export Settings

Working on a similar level to batch capturing, EDIUS v4.5 allows you to create a list of different export jobs for any given project. This means that you can now nominate multiple In/Out pairings of any sequence and have EDIUS export those in one fully automated process. Your Batch Export list is saved with your project, so you can build on your job list as you go, and enable/disable export jobs at any time via the check boxes.

Note: The Batch Exporter cannot use Speed Encoder for HDV, ProCoder Express or ProCoder 3 as a target exporter. Batch Export operates sequentially, not simultaneously.



In yet another example of the new workflow flexibility offered in v4.5, you can now create your own custom export targets based off the inbuilt exporters included with EDIUS. This means that you can have an exporter specifically create for a certain type of medium you want to deliver your work out on, and reuse that specialized exporter again in the future. These custom exporters are also stored in your current User Profile (explained earlier in this section).

2.5 Segment Encoding for SD MPEG-2, 1080i HDV and XDCAM HD

Segment Encoding ('Smart Rendering') makes its debut in EDIUS v4.5. Supporting standard definition (480i, 576i) and 1080i MPEG-2 content, Segment Encoding reduces the time taken to export your project to the same format and bitrate, by simply encoding the edited and modified sections of any source MPEG-2 clips that match the target MPEG-2 format (e.g. frame rate, resolution, bitrate).

To use this feature, check the **Segment Encode** box when exporting to **MPEG (Generic)**, **MPEG (HDV)** or **XDCAM HD** targets.

2.6 Added Formats and Improved Operability

EDIUS v4.5 continues to be a leader in supporting the latest cutting-edge video formats, as well as expanding its support for other commonly used formats.

Version 4.5 adds support for:

- Grass Valley Aurora VMF (*.HDR) file import*
- Grass Valley Infinity JPEG 2000 file import/export
- Grass Valley K2 GXF content import (export was added in v4.1)*
- Panasonic P2 AVC-Intra content import**
- Sony HDV 1440x1080/30p,25p,24p
- JVC HDV 1280x720/60p,50p
- AVCHD MPEG-4 (*.M2TS) file import
- Dolby Digital AC-3 audio (*.AC3) file export (import was added in v4.00)
- AAF project import and export (ideal for Adobe After Effects and Digidesign Pro Tools)

* Only available with Grass Valley Laptop and Desktop Edit Stations

** Requires EDIUS Broadcast and the optional AVC-Intra format plug-in, sold separately

EDIUS v4.5 also adds DirectShow video format import and direct editing support, for use with non-EDIUS codecs installed on the same system, such as Cineform's Aspect HD.

3. EDIUS Software Setup and Walkthrough Guide

3.1 Installing the Software

For the purposes of your review, Grass Valley is assuming that you will want to install the entire set of included software tools. These can be found on the two discs that were included with your materials. The first disc is the DVD-ROM containing the core editing application EDIUS, hardware drivers, supporting applications such as ProCoder Express, and bonus plug-ins, while the second disc is a CD-ROM containing installation files for the titling software Inscriber TitleMotion for EDIUS.

Installing from the EDIUS Installation Disc

Insert the Installation DVD in your DVD-ROM drive. The EDIUS Installation Launcher should appear. If not, find and run Launcher.exe from the DVD-ROM drive. Click the **Install** button to begin the installation.

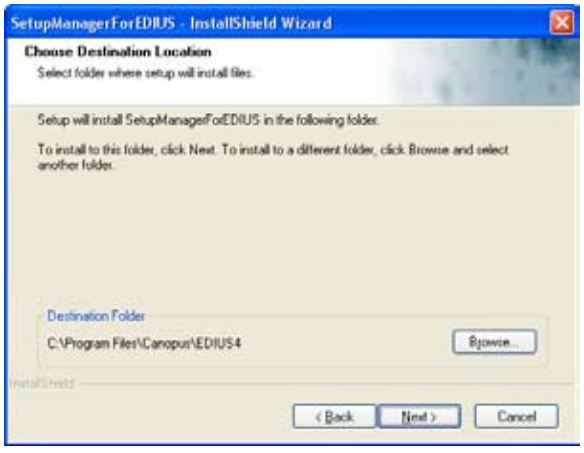
If prompted, choose the desired Setup language to use and click **OK**.

The EDIUS Setup dialog box appears. Click **Next**.

The License Agreement dialog appears. Click **Yes** to continue with the installation.

The Customer Information dialog box appears. Enter your name, company, and serial number in the fields and click **Next**.

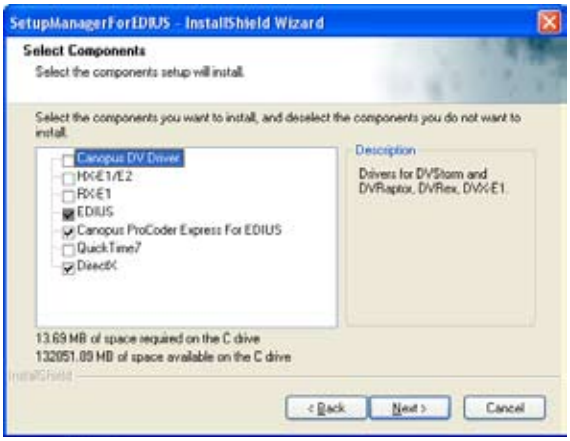
The Choose Destination Location screen appears. Choose where you want EDIUS installed and click **Next**.



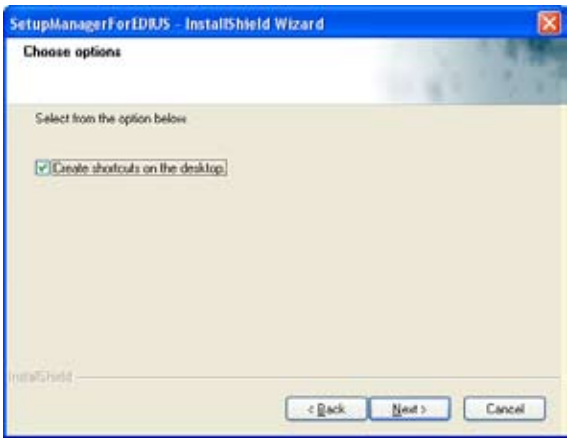
The Select Components dialog box appears. If you are planning to use a hardware board with the EDIUS software, make sure the appropriate device is also selected here; **Canopus DV Driver** for DVStorm series and DVRaptor RT2 series boards, **HX-E1**/**E2** for EDIUS NX series and EDIUS SP series boards, and **RX-E1** for EDIUS SD, EDIUS HDLE

and EDIUS HD systems.

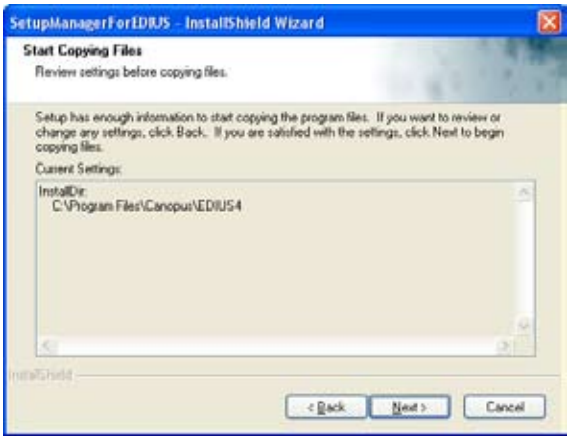
Click **Next**.



The Choose Options dialog appears. Choose whether you want an EDIUS shortcut placed on your desktop.



The Start Copying Files screen appears. Click the **Next** button to begin installing EDIUS.



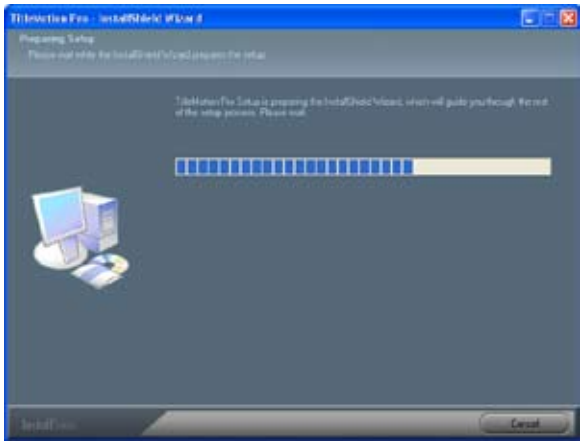
Click the **Finish** button when installation is complete.

Your computer will now restart.

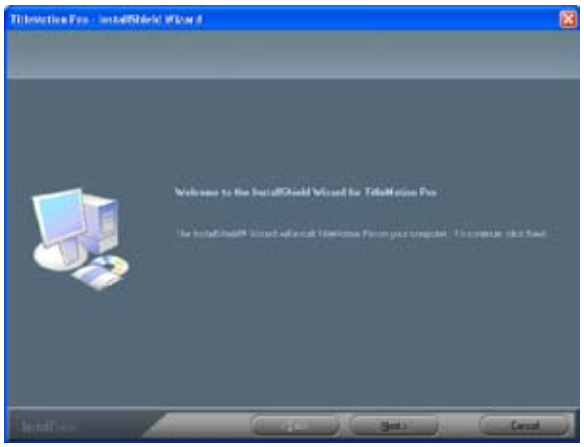
After the system has finished rebooting, you can install items from the Bonus folder located on the installation DVD if you wish.

Installing from the TitleMotion Disc

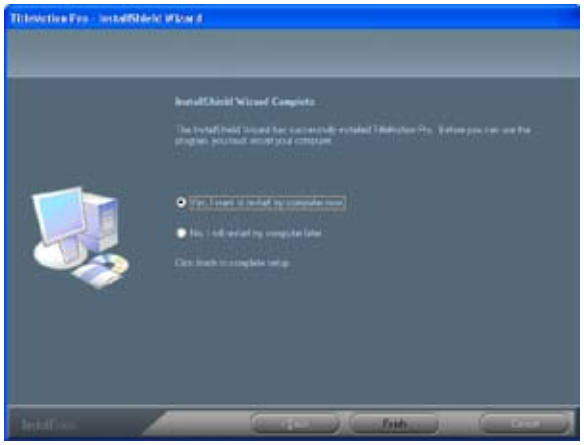
Insert the CD-ROM into your computer. The TitleMotion installer should automatically run. If not, find and run **setup.exe** from the CD-ROM drive. The installer will prepare to copy files to your system.



Click **Next** to begin installation.



Once the process is finished, you will be prompted to restart the system.


InstallShield Wizard Complete
Finish

3.2 Interface Overview

EDIUS version 4.5, offers powerful customizing control over the appearance and functions of the user interface. Features include a floating window design with adjustable preset positions, options to add and remove EDIUS function buttons within each window, and a keyboard shortcut mapping utility that provides you with the ability to change virtually any keyboard command to suit their workflow. All of these interface customizations can be stored and recalled within separate user profiles.

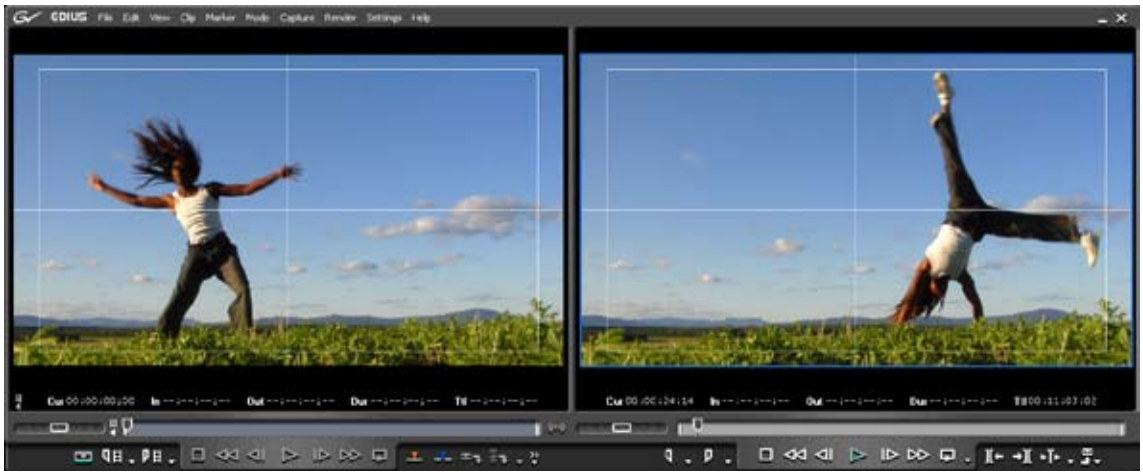
The EDIUS interface also features advanced bin window media management with "watch" folder support for import, media searching tools, productive yet simple mouse gestures for clip trimming, scrubbing and playback, and a realtime Vectorscope and Waveform monitor for detailed analysis of footage while capturing and editing.

Preview Window

Beginning with the Preview Window, which can be configured to display the Player and Recorder windows separately, or within a single space-saving window that switches modes as required, EDIUS offers a completely customizable working environment.

With its floating window interface supporting both dual and single windows, EDIUS can be resized and repositioned anywhere on the screen. After positioning and sizing EDIUS windows, the layout may be saved and recalled at any time. EDIUS can store multiple layouts within a single user profile; perfect for multiple users and/or different editing styles.

The Preview Window is responsible for capture, export and basic in/out clip trimming (including three-point and four-point editing). This window can also be used in conjunction with the Multicam editing mode, and will also display realtime previews when applying video effects and filters, such as White Balance color correction.

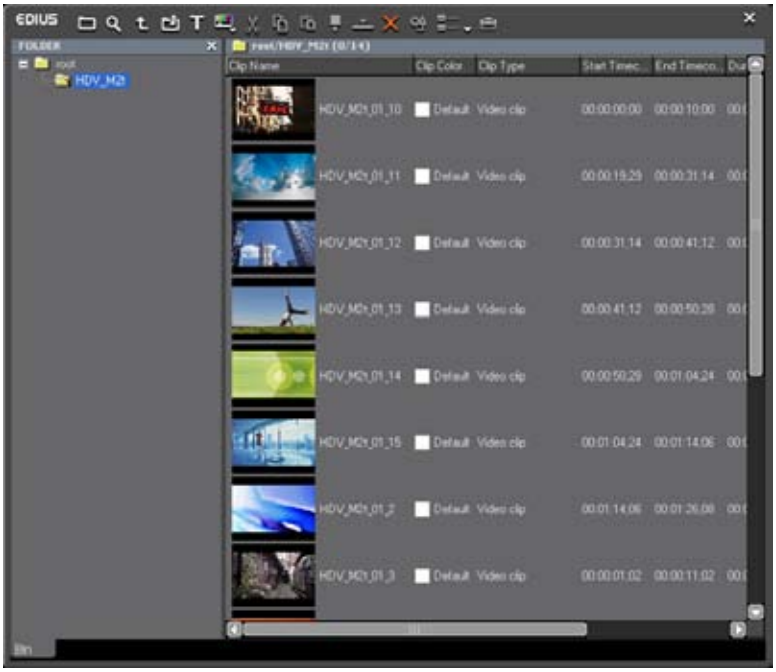


Timeline Window

This is the main operation window of EDIUS, showing all video, title, and audio track layers assembled within a project. In EDIUS, filter and effect configuration windows do not feature separate clip-scrubbing controls – the Timeline window serves this purpose. Timelines can also have a pre-determined fixed length, which provides a warning when the overall project duration exceeds the limit. As of version 4 of EDIUS software, projects can feature multiple timelines, or 'sequences,' capable of being nested within each other.

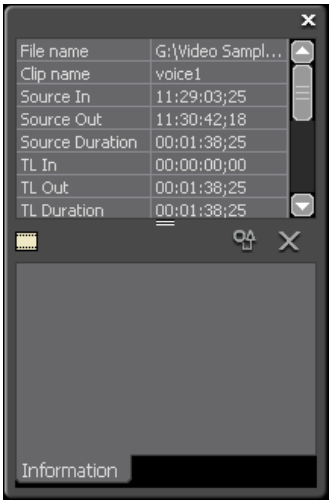
Bin Window

The Bin is used for basic management of clips used in a project. It is not necessary for clips used within projects to be included in the Bin; they can be imported directly from a normal Windows Explorer window. The Bin provides handy clip management tools such as various search, sort, and filter options.



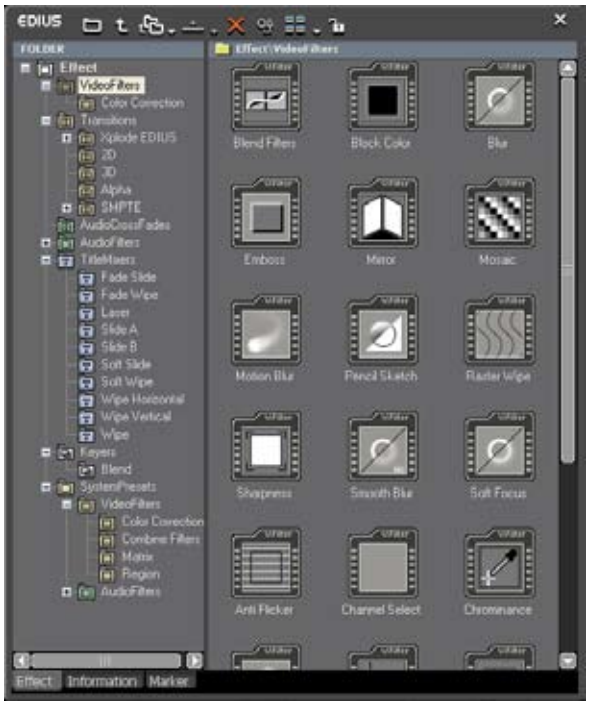
Information Palette

Lists properties of a selected clip including any filters or effects that have been applied. Applied effects can individually be enabled and disabled via the check boxes next to each listed effect.



Effect Palette

Contains all effects, filters, transitions and keyers available within EDIUS. Effects are typically applied by dragging and dropping them directly onto a clip located on the timeline. Effects may also be applied to the clip currently selected on the timeline, by dragging and dropping them onto the Information Palette.

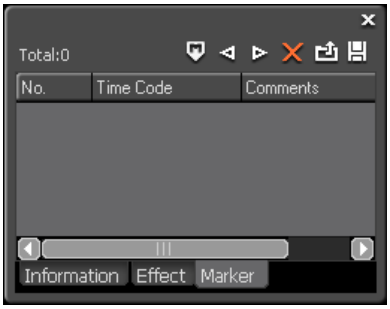


Marker Palette

Allows editors to double-click any entry to quickly jump to that marker, as defined on the timeline. Marker lists can be exported as CSV files, and may also be used to define DVD chapter points when using the EDIUS DVD Creator

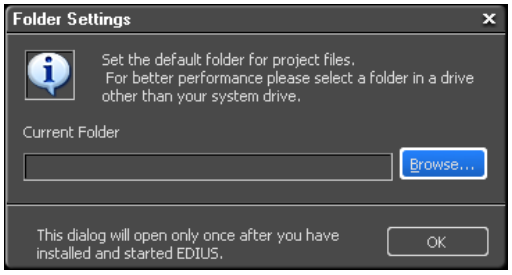
software.

Note that the Bin Window, and the Information, Effect and Marker Palettes can be combined for convenience into one overlapping floating or docked window as shown below by dragging the tab of one palette into another palette's window. Just select the tab at the bottom to select the tool you wish to use.

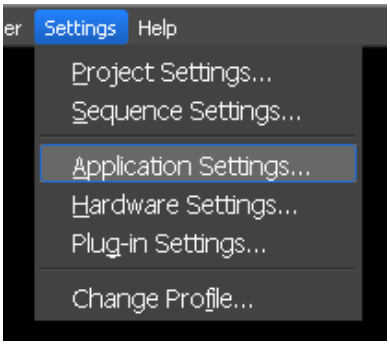


3.3 Configuring EDIUS

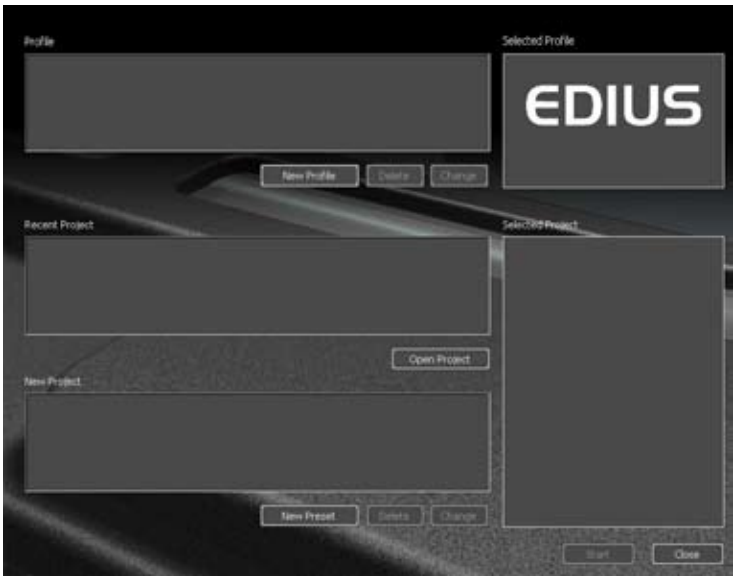
Upon launching EDIUS for the first time, you will be prompted by the Folder Settings dialog for a default path for your EDIUS projects. This should be set to the root of the video storage drive you want to use.



This setting can be changed later in the Application Settings located in the Settings menu. Simply choose **Settings > Applications Settings** to change the settings.



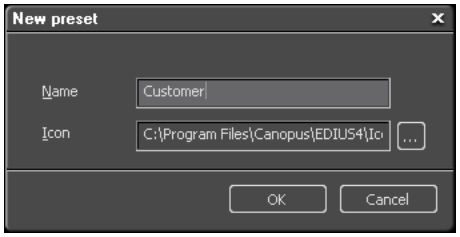
From then on, every time EDIUS is launched via the application's desktop icon or the Start Menu, the EDIUS Welcome Screen appears prompting you to choose a User Profile, and then either open an existing project or start a new one. Recently saved EDIUS projects are displayed in the Recent Project list. From this screen, you can create and delete User Profiles and Project Presets.



If you are starting EDIUS for the first time, you will notice that this Welcome Screen is essentially blank. The first

thing you will need to is create a new User Profile to use EDIUS with, which will record the window layouts, GUI button placement and keyboard shortcuts for instance.

Choose the **New Profile** button and then enter a name for your user profile.



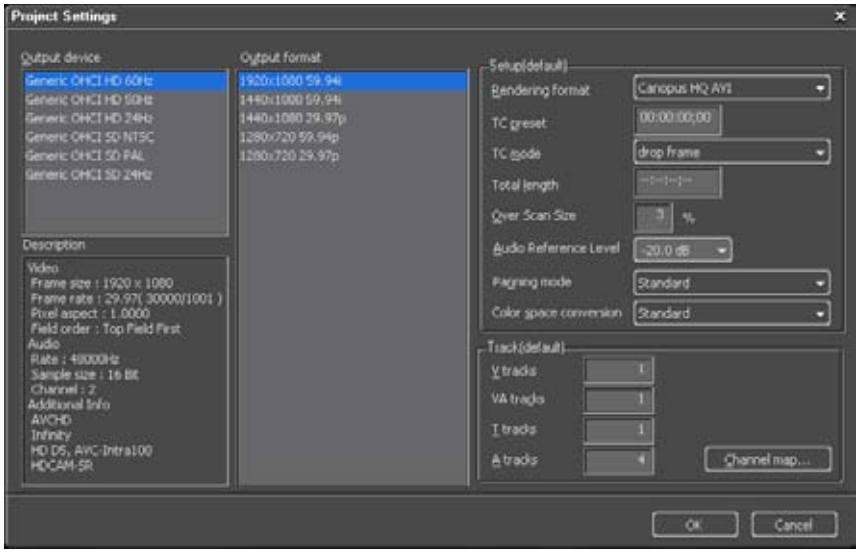
If you want to, you can change the default user picture to an alternate image located anywhere on your system.

Click **OK** to create the new User Profile.

Now that you have a User Profile to use, you will need to choose a project preset to base your new project off. Project presets contain information about the video aspect ratio, frame rate, and audio formats and channel mappings that will ultimately be used in the target format.

Choose the **New Preset** button.

You will be presented with Project Settings window, which is a core list of predefined project presets covering all the major video formats used with all popular cameras and decks.



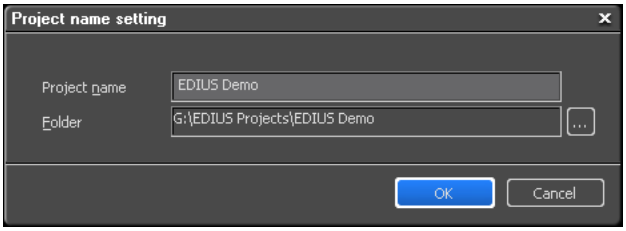
The Output device section of this window lists the different hardware outputs that supported in the system you are using. Typically, in software-only systems, the only available output device will be 'Generic OHCI' (a FireWire port). If you are using EDIUS with a Grass Valley EDIUS hardware board, such as EDIUS NX Express, you will also see additional Output devices listed. This lets you control the video output from the timeline.

The Output format lists will vary, depending on which version of EDIUS software you are running. More options will appear in EDIUS Broadcast, than in EDIUS Pro software. The names used in the Output format lists are meant to be treated as 'suggestions' only - they will not restrict you in terms of what types of clips can be used in a project. For example, if you choose the 'HDCAM/HDV 1080/59.94i' setting, you will still be able to use any mix of video format, aspect ratio and frame rate. The setting is designed with that particular class of device in mind, for output. You can always check the Description section of the window to make sure the settings are correct.

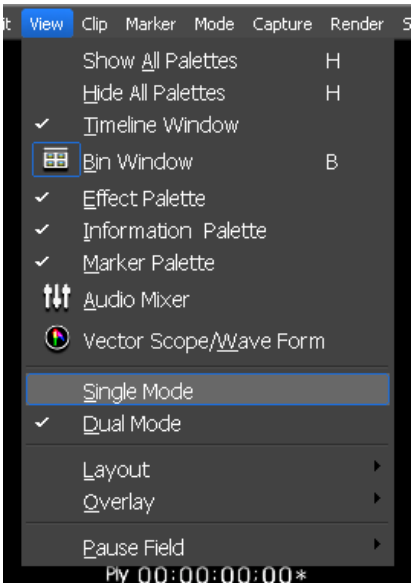
The Setup(default) and Track(default) sections allow you to customize some of the edit handling, such as the codec used for temporary renders, and interface selections to start your project with. These settings will be bound to the project preset that you are creating, so you can actually have many different presets that share the same output device and format, but may have different audio channel mappings, track numbers or total timeline lengths.

Click **OK** once you have chosen the settings you want to use. You will be prompted to give your new preset a name. Once this has been entered and confirmed, you will be back at the Welcome Screen.

You can now start a new project either by selecting the preset you want to use and clicking **OK**, or simply double-click the preset icon.

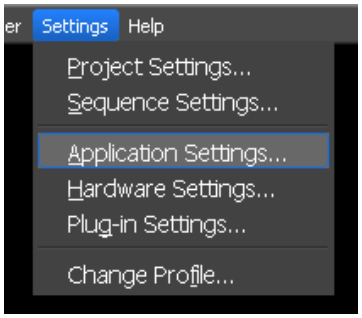


After confirming the project's name and file path, the main EDIUS interface appears. EDIUS defaults to the Dual Mode Preview Window layout when first installed, with the Player (source monitor) on the left and the Recorder (timeline monitor) on the right. This can be changed to better accommodate single monitor setups choosing **View** from the main menu and then choosing **Single Mode**.



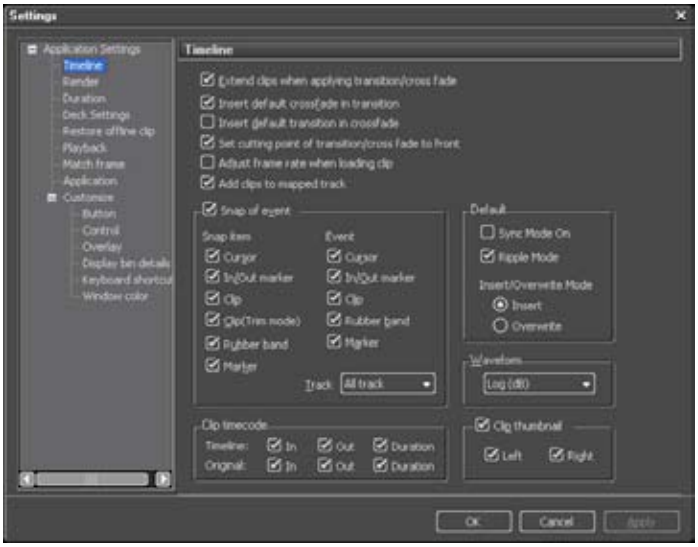
The positioning and size of all windows can be saved into presets for later use, from the **View > Layout** menu. Windows can also be reset to their default sizes by choosing **View > Layout > Normal**.

EDIUS allows you to configure and customize a wide variety of settings for hardware, software, and plug-in programs. These settings are found in the **Settings** menu (not to be confused with the Project Settings and Sequence Settings options). To configure any settings specific to the way EDIUS looks and operates, simply go to the **Settings** menu and choose between **Application Settings**, **Hardware Settings** and **Plug-in Settings**.

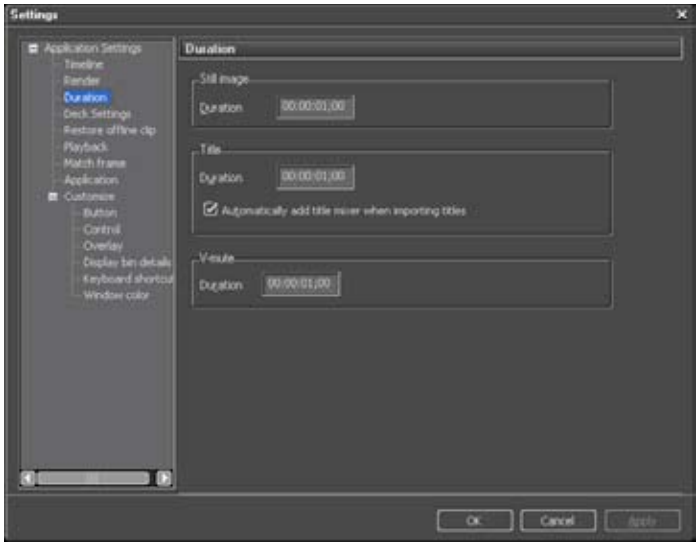


Application Settings

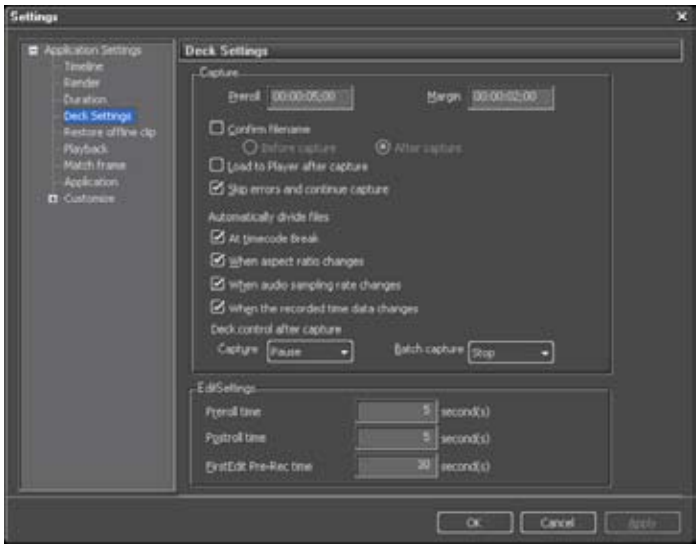
The Application Settings section lets you set general preferences for using EDIUS, such as remembering a specific number of recently used files, configuring how the timeline displays clips and tracks, saving EDIUS window positions that you set for your display setup, enabling Tooltips or Auto Save and setting a default project folder.



The **Duration** settings, shown below, allow you to set the duration of still image clips or titles placed on the EDIUS timeline. You can also set the V-mute duration to eliminate sound using frame units, which optimizes the deletion of small noise sound and gives users maximum control over these elements.



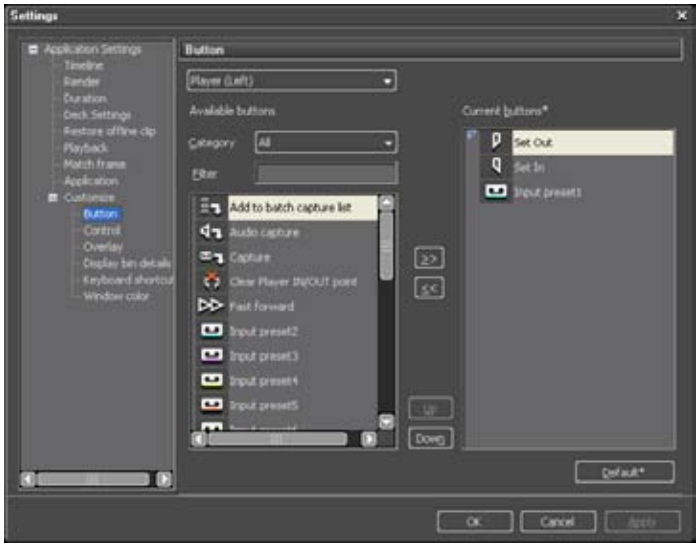
The **Deck Settings** menu allows you to set up the relationship for cooperation between the video deck and EDIUS. Users can use these options to set the deck or EDIUS operation and the file dividing conditions during capturing. For example, you can establish preroll rates and margin settings, and divide files based on timecode settings, aspect ratio settings, audio breaks, and so on. Using these presets provides for easier integration of content from diverse capture sources.



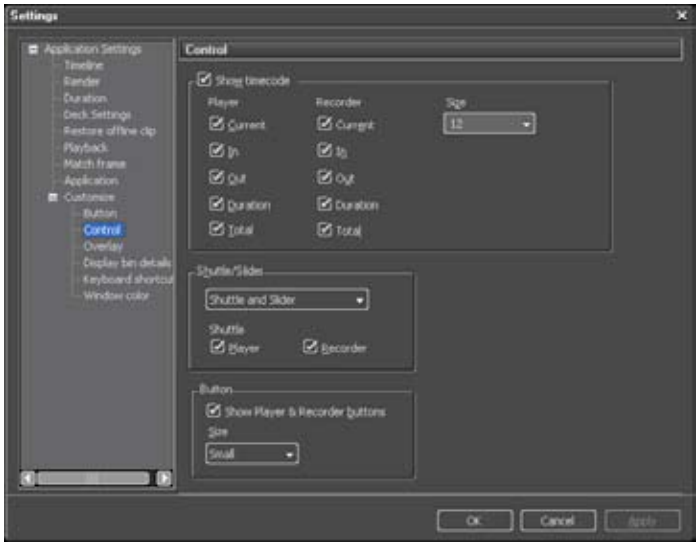
The available options for customizing the EDIUS software and interface settings are thorough and wide-ranging. By selecting **Application Settings > Customize** you can select customization options for how the buttons look

like, what controls are displayed, how information is displayed in the Preview Window, how clips are names and denoted in the Bin Window, and which shortcuts have been assigned to which keys. The changes you make in this area will be stored with the User Profile currently being used, so there is no risk of changing the shortcuts and appearance for other EDIUS users on the same system.

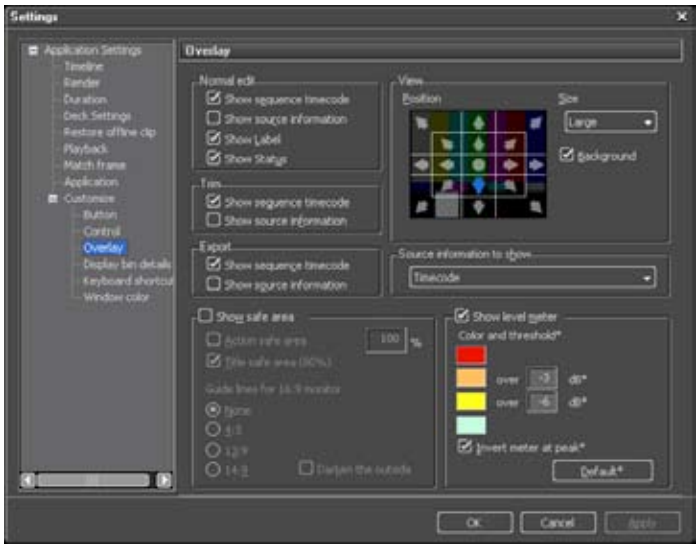
The **Button** section, shown below, lets you add or remove control buttons from the EDIUS toolbars. Simply double-click on any item in the **Available Buttons** column to move it to the **Current Buttons** column or simply use the **>>** button. Use the Space option if you want to separate a specific button group from another button group. To remove buttons, simply double-click on any item in the **Current Buttons** column or use the **<<** button. You can also reorder how the buttons appear in the toolbar by clicking on a button in the **Current Buttons** column and then clicking either the **Up** or **Down** button to move it do your desired location, or drag and drop them into place. This window now offers the ability to filter the lists, only displaying buttons that match your search terms.



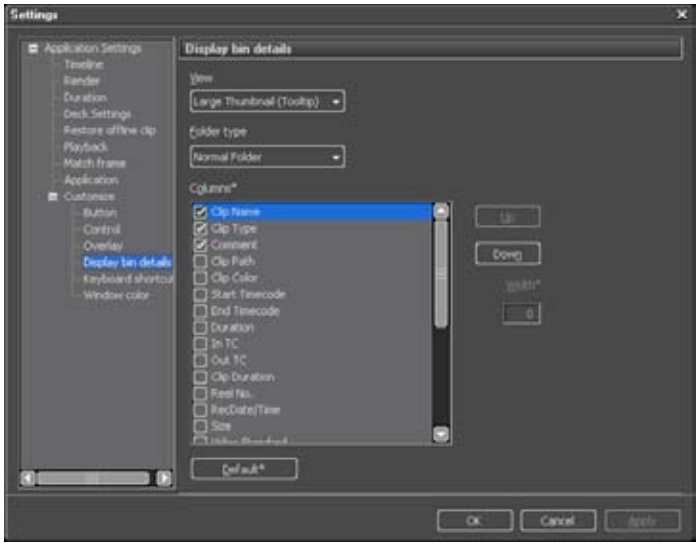
The **Control** section lets you specify which display options to use in the Preview Window. Options listed in the Show Timecode section control what is displayed directly below the video overlay in the Player and Recorder monitors. You can also enable or disable the Shuttle or Sliders in each monitor. The **Button size** option actually controls the size of all buttons within the EDIUS interface.



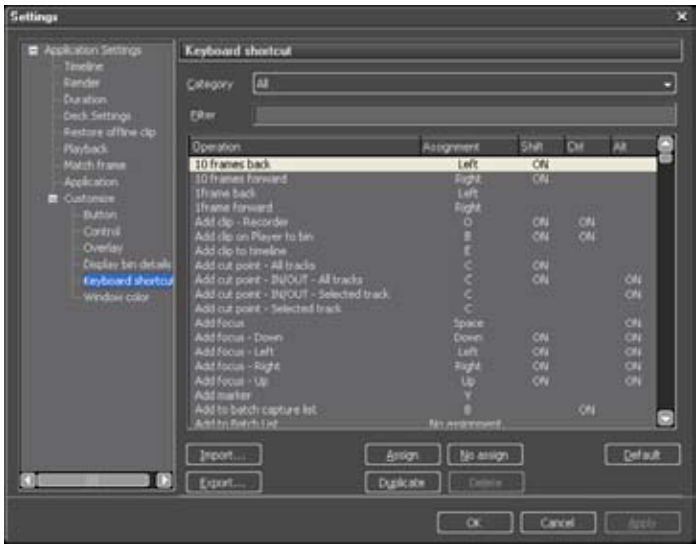
The **Overlay** section lets you set preferences for what is displayed on top of your video previews, such as the timeline's onscreen timecode that appears in the Player and Recorder windows. You can choose the position, size and whether the level meter is displayed. You can also choose which track to use to display the timecode of your original source video. The **Export timecode** section lets you choose between exporting the timeline timecode or the original source timecode. The **Show safe area** section controls the positioning and types of safe area guidelines that will be displayed.



The **Display bin details** customization options let you add or remove file parameters that are displayed in the Bin when it is in Detail mode. These include clip name, type, path, and timecode details, among other options.

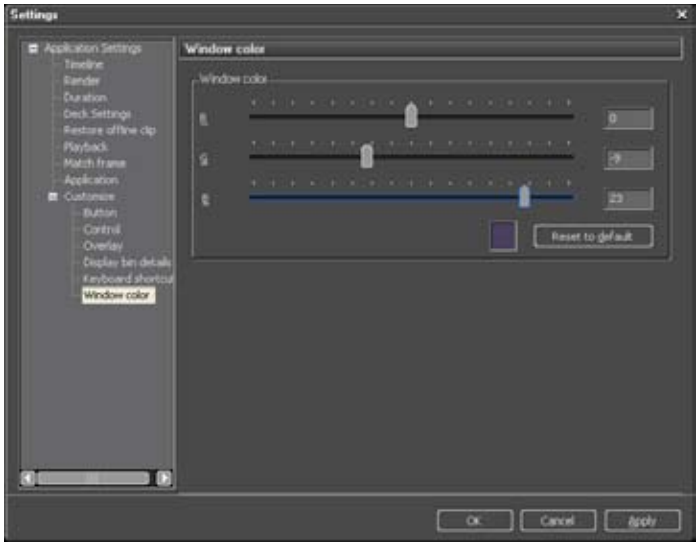


The **Keyboard Shortcuts** provides an index that shows the keyboard shortcut that has been assigned to each individual key. You can enter in search terms to filter down the list, making it easier to find a specific command to add or adjust the shortcut for. When modifying a shortcut, you will be presented with a window that graphically shows a keyboard. You can position the mouse cursor over any key and view all the associated shortcuts currently bound to that key. Assigning a key to use for a shortcut is as simple as clicking on the keys to use and then choosing **Close**.



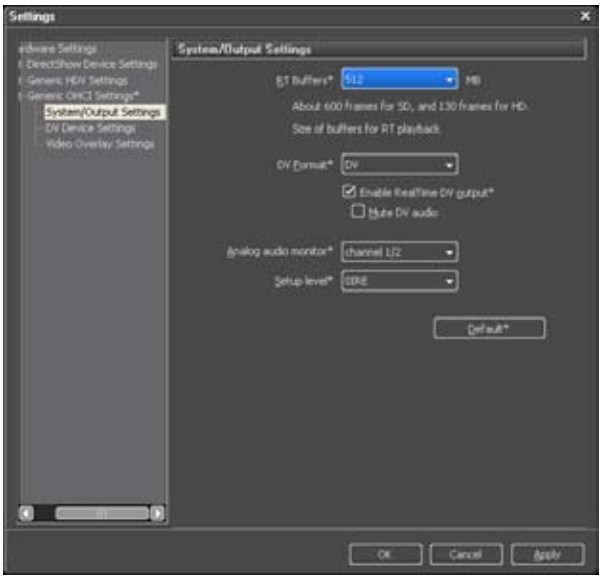
EDIUS also allows you to import and export your keyboard shortcuts data. Some premade shortcut presets that mimic functions from other NLE software packages, can be found on the EDIUS DVD-ROM.

The **Window Color** section allows you to adjust the window "tint" color of EDIUS, for editors who prefer a different color interface.



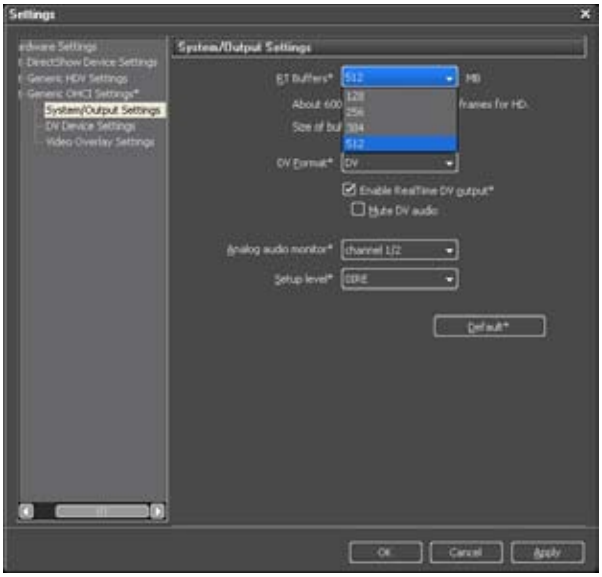
Hardware Settings

The **Hardware Settings** options include various configuration options for the Output Device choices users are given when a project is initially created.



EDIUS features a buffering system which preloads timeline data into your system's available RAM, thereby creating a direct pipeline between the system RAM and the CPU. This ultimately boosts the realtime playback capabilities of the system. Depending on how much RAM is in your system, you can set EDIUS to preload up to 600 frames of SD video and 130 frames of HD video.

In the **Settings List** on the left side of the dialog, choose **Hardware Settings > Generic OHCI Settings > System Settings**. From the **RT Buffers** drop-down menu, set the option of your choice. For a system with 1GB of RAM or more, it is fine to choose the highest value in this menu.

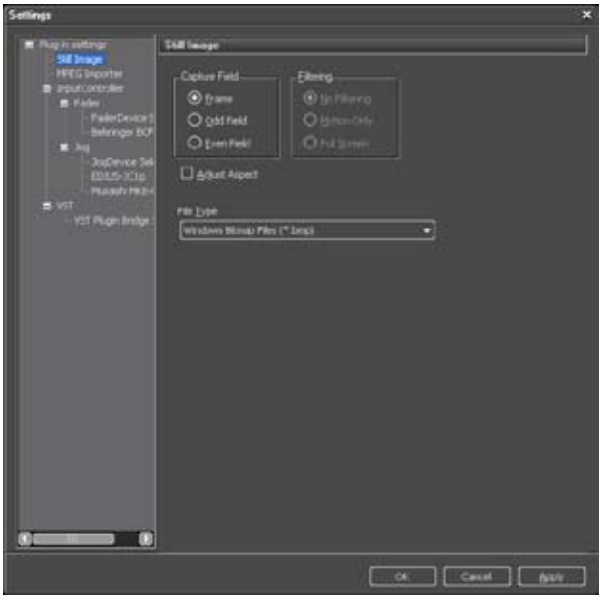


Note: If you are using a Grass Valley EDIUS hardware board, you will see additional Hardware Settings options in this window.

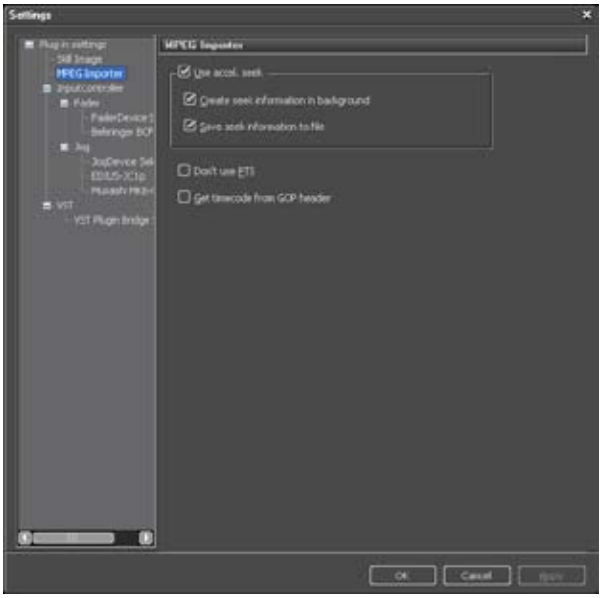
Plug-in Settings

The **Plug-in Settings** section of EDIUS also offers options for adjusting the settings of complementary software products from other suppliers. The Still Image, Jog/Fader, MPEG Importer, and VST Plugin Bridge Settings options will appear in the menu. If you are using EDIUS Broadcast, you will also see options for MXF and XDCAM handling.

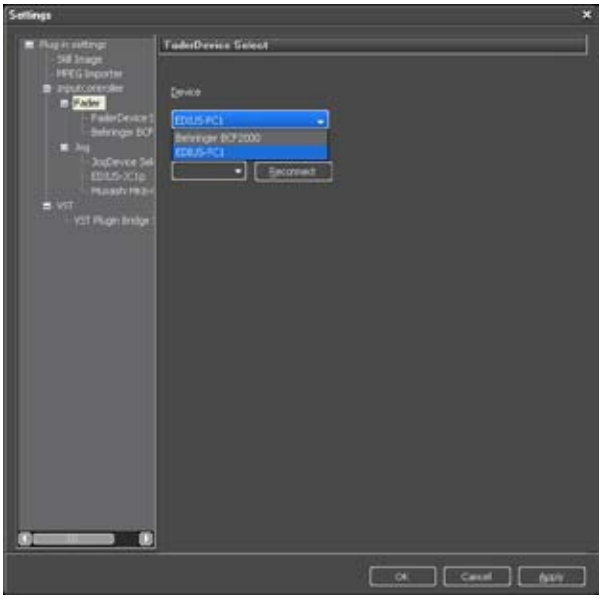
The **Still Image** section controls the default behavior of the Still Image export from the timeline.



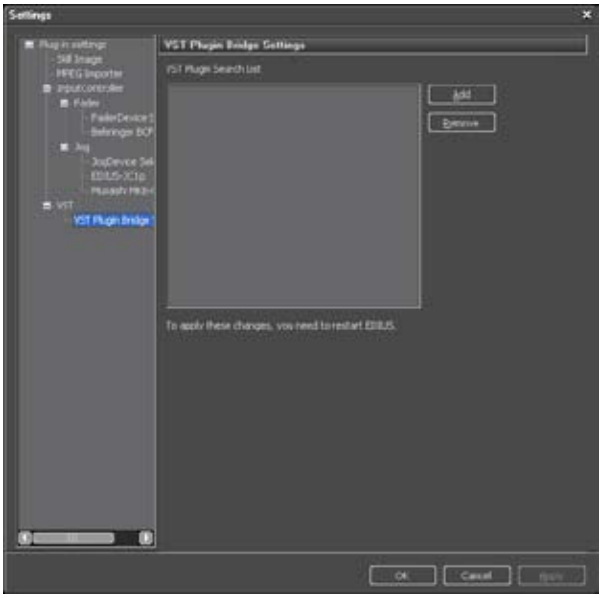
The **MPEG Importer** settings control how EDIUS handles MPEG clips loaded in the bin and on the timeline.



The **Input Controller** section is for configuring supported Jog and Fader hardware devices for use with EDIUS.



The **VST Plugin Bridge Settings** option controls the loading of VST audio plug-ins in EDIUS.

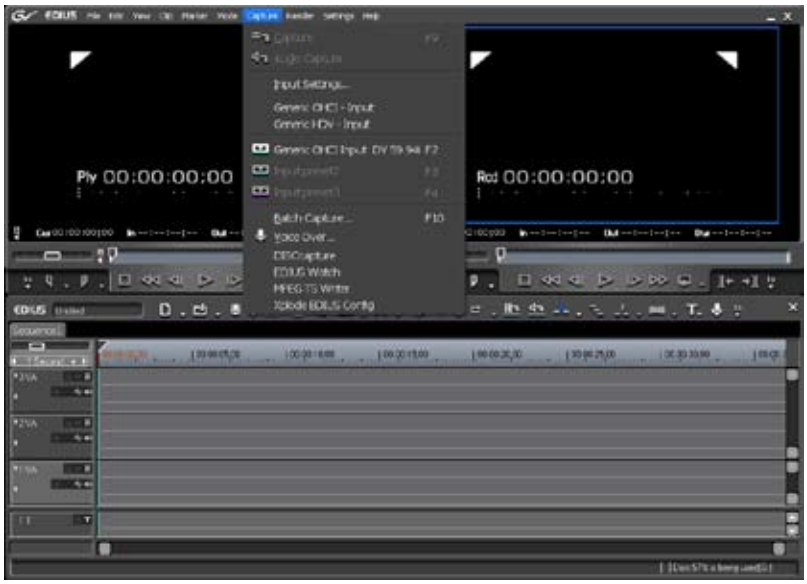

Settings
VST Plugin Bridge Settings
VST Plugin Search List
Add
Remove
To apply these changes, you need to restart EDIUS.
OK
Cancel

3.4 Using EDIUS

This section explains how to capture, edit and export SD and HD content – including video, audio, and still images – with EDIUS NLE software.

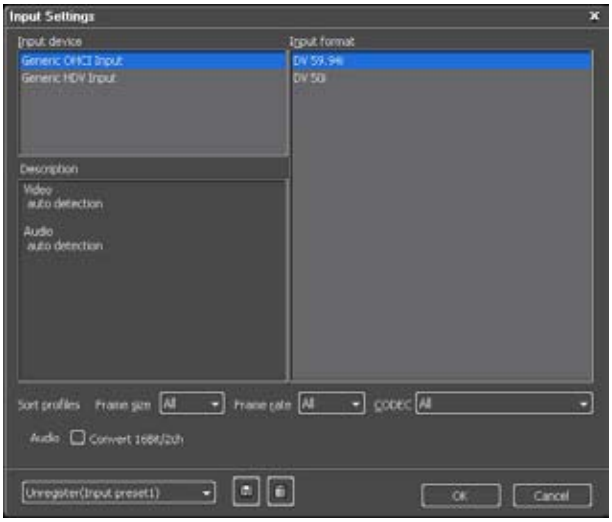
Capturing Video

Selecting an input device is performed using the Capture menu. The menu, shown below, includes the available digital input channels. The **P2 SELECT** and **XDCAM SELECT** options are for P2 and XDCAM support and will only appear if you are running EDIUS Broadcast software.



Before starting to capture, the capture settings for the appropriate input should be set. Choose **Input Settings** from the **Capture** menu to display the Input Settings window.

The Input Settings window looks similar to the Project Settings but instead of choosing a hardware output device and project resolution/rate, the Input Settings allows you to choose an input source and the compression format to use on the captured video.



The **Generic HDV Input** option is used to capture native HDV MPEG-2 Transport Streams and to capture HDV into the Canopus HQ format, transcoding on-the-fly. These options are described in further detail in the section on capturing from HDV sources below. The **Generic OHCI Input** option is used to capture DV and DVCAM. Depending on your EDIUS package, these input selections may include other devices and formats (e.g. uncompressed analog, DVCPRO).

Capture settings are determined by the input and EDIUS will remember the last capture setting used for each input.

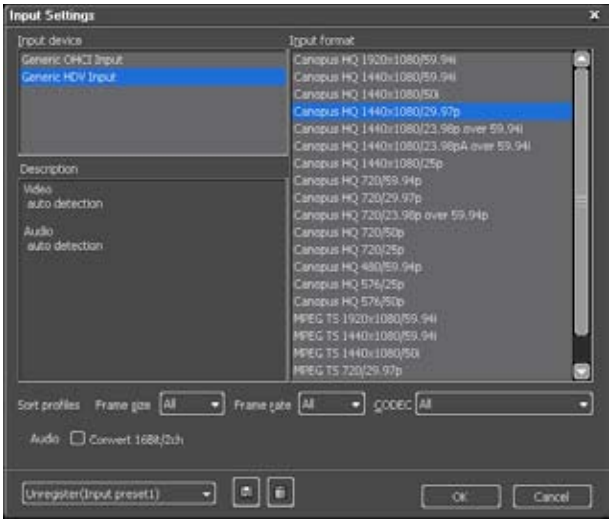
If you work with more than one connected FireWire device, or other external analog or digital devices connected via an EDIUS hardware board, you can save up to three input presets using the drop-down box in the lower-left portion of the Input Settings window. Each of the input presets is available as a button on the Player window. More than one preset can use the same input channel, but map to a different format. For example, you may have preset 1 set to Generic HDV Input capturing as Canopus HQ 1440x1080/59.94i, and preset 2 set to DV 59.94i.

Capturing from HDV sources

HDV footage can be ingested as one of two formats with EDIUS. The MPEG TS input format options will result in a direct lossless transfer of the footage. The captured data is stored as an MPEG-2 transport stream which can be imported and edited directly in EDIUS. Alternatively, HDV footage can be transcoded, on-the-fly, to the Canopus HQ format in realtime and captured as a Canopus HQ AVI file. Capturing as Canopus HQ AVI files makes the footage much easier for EDIUS to process with no additional loss of video quality, yielding increased realtime performance compared to native HDV transport stream editing. The end result is very high quality, full-resolution capture.

To Capture (Basic):

1. Connect the DV or HDV camera to the FireWire port on the PC and make sure the camera is powered on in VTR mode with the output is set to the appropriate output format (DV or HDV).
2. Select **Input Settings** from the **Capture** menu. The Input Settings dialog box, shown below, will appear. Select either the **Generic OHCI Input** or **Generic HDV Input** source from the list of devices and the preferred capture format matching your input resolution and frame rate from the available presets. For example, if your source is 1440x1080/59.94i HDV that you would like to capture as Canopus HQ, select Canopus HQ 1440x1080/59.94i. To capture the footage as native HDV, select MPEG TS 1440x1080/59.94i.



For subsequent captures from the same device, you can simply select either **Generic OHCI Input** or **Generic HDV Input** from the **Capture** menu and the same setting will be used. To change the capture settings at a later time, select **Input Settings** from the **Capture** menu again.

3. Turn on your camera or deck and stop the playback slightly before the point you would like to capture.
4. Click the **Capture** button to begin capturing footage.

5. Click the **Stop** button to stop the capturing process.

Capture Modes

Whether you are capturing HD or SD video, EDIUS supports three capture modes — standard, batch, and direct-to-timeline. Each of the three modes can automatically divide footage into separate files according to four different properties — date, timecode, aspect ratio change and audio sampling rate change. To avoid incorrect file creation, it is important that these four options be enabled correctly when performing a specific form of capture.

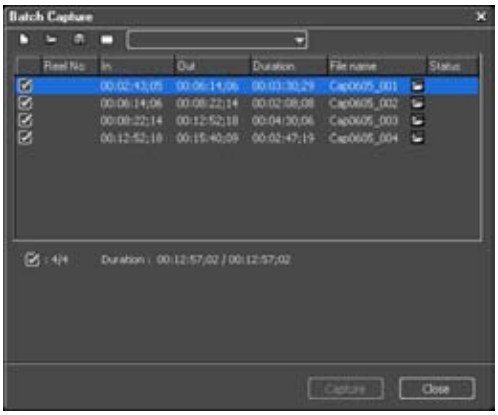
Standard Capture

A standard "set and forget" capture is started simply by clicking the **Capture** button. This automatically starts playback from the HDV or DV device and captures the footage into the folder you selected when the project was first created. For analog devices click **Capture** then start playback manually. If the option for confirming filenames is selected, a prompt for a filename appears once capturing is stopped. The filename supplied here applies to all subsequent files generated from the capture. This is the simplest and quickest way to import footage and have them broken into individual scenes.

Batch Capture

Batch Capture works for HDV sources when capturing to the Canopus HQ codec, and for DV sources. To perform a batch capture, click the **Batch Capture** button and choose **Batch Capture** from menu. While your tape is playing, you can add in and out points to the batch capture list by pressing the CTRL and B keys on the keyboard.

The batch capture list continues to grow as more in/out points are added and remain until you quit the EDIUS application or the list is cleared. The actual batch capture menu is the final option from the Capture menu. From here you can enable/disable capture jobs, modify file names and paths, open and save capture lists and open the **Capture Settings** dialog.



Automated batch capture monitors tasks using progress meters. When the meter reaches 100%, it automatically unchecks the job in the list and continues with the next capture. This is a useful way of monitoring progress, as well as avoiding capturing duplicate footage should the capture be interrupted for any reason.

Direct-to-timeline Capture

Direct-to-timeline capture lets you capture video directly to the timeline with DV sources. This streamlines the editing process by having clips prepared on the timeline in the quickest possible manner. Direct-to-timeline capture can incorporate file division if desired and also accepts three-point and four-point edit functions.

To capture directly to the timeline, a video track must first be selected with the timeline edit cursor positioned at the point where the clip will be placed. In the Player side of the Preview Window, there are two Edit buttons. One is for Insert assembly, which pushes any existing footage on the video track further down the timeline to accommodate the new clip, and the other is for Overwrite assembly, which overwrites the video track with the newly captured footage.

By clicking on either of these buttons, EDIUS begins capturing video, adhering to any conditions specified in the capture settings window with the exception of filename confirmation. Once capturing stops, the footage appears on the selected video track with the edit cursor positioned at the end, ready for the next capture.

When playing DV footage, in and out points may be set and used with the Edit buttons to perform a three-point edit to the timeline. EDIUS automatically controls the DV device to capture precisely the specified section of footage from the DV source. Additionally, in and out points may be set on the timeline before assembly to create a four-point edit. This captures footage from DV and places it within the timeline's in/out points by adjusting the footage speed automatically. Ideally, this serves as a "fit-to-fill" function and is a very powerful feature of EDIUS.

Capturing Sound and Still Images

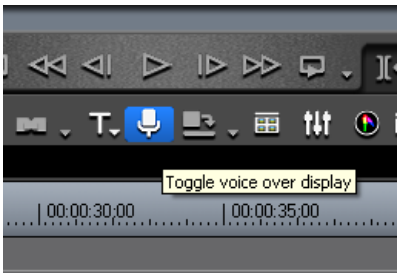
Capturing other kinds of source material such as audio clips, still images, and other video clips is easily done with EDIUS.

EDIUS features a live Voice Over recording feature that allows you to capture audio from an external source using your system's sound card. Using this feature, audio can either be captured to the Bin for storage and later use or recorded directly to the timeline into an audio track.

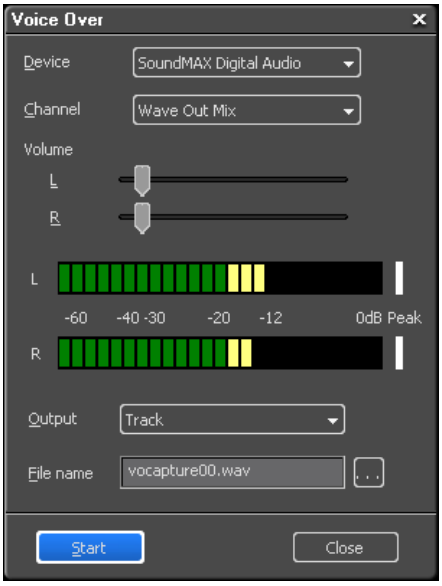
The Voice Over feature can support every form of input that the sound card supports, including multiple sound cards if that is the case. The most common audio inputs used with Voice Over are Microphone, Line In and CD Player.

To capture sound from an external audio recorder:

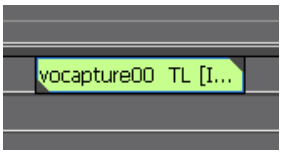
1. Click the **Voice Over** button as shown below. The Voice Over control window appears.



2. Select the device, channel, and output. After selecting your input source, the volume controls and audio level meter are enabled allowing you to make any adjustments to the input volume.



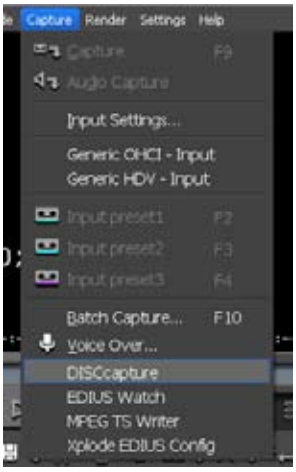
3. Choose whether you want to output the audio to the Bin or to a Timeline track. When recording audio directly to the track, the resulting clip is placed according to both the Timeline's currently selected audio track and the current position of the edit cursor.
4. Click the **Start** button – this starts a five second countdown to the beginning of the recording process. The countdown is displayed on the Recorder window.
5. Clicking on the **End** button stops recording and prompts you to confirm whether or not the Voice Over will be used. Once audio tracks are recorded, they can be used and handled as you would any other audio clip.
6. Click the **End** button when you are finished recording the audio clip.
7. Click **Yes** to confirm the recording and complete the process of registering the audio clip in the bin. The clip is now displayed as a graphic icon in EDIUS.



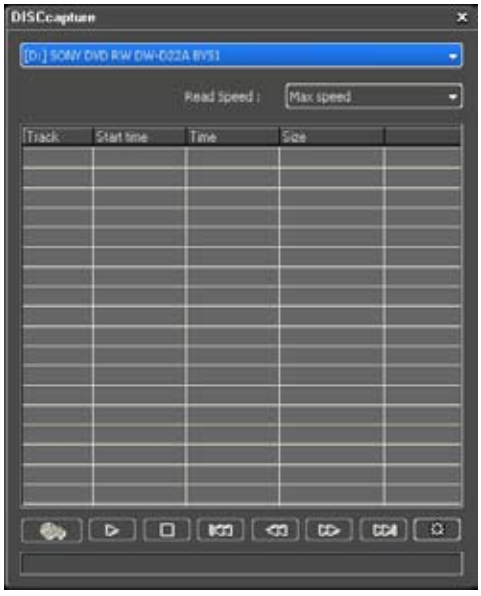
EDIUS also lets you capture from CDs through the DISCcapture utility.

To capture audio from a CD:

1. To start the capture process, select **DISCcapture** from the **Capture** menu.



2. The DISCcapture window will open. Select the audio input drive source, the drive speed, and specific tracks to capture.



3. Use the **Option** button to select how filenames will be created, how audio files will be divided, and so on. When you are finished, click **OK** to return to DISCcapture's main screen.
4. Click **Capture** to begin the process and **OK** when the process has completed.

To import still images and other pre-captured/pre-rendered clips:

1. From the EDIUS Bin Window, click the **EDIUS** button and choose **Functions > Add File** to open a file browser window.
2. Select the file you'd like to import and click the **Open** button. The clip is now displayed in the Bin Window.

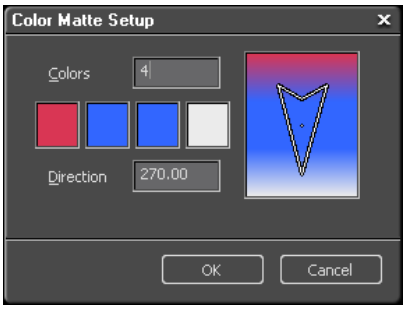
Bin Management

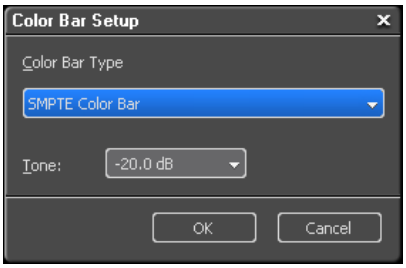
The Bin window offers easy management of media clips that are used in EDIUS projects. It is important to note that clips contained within the EDIUS bin can be totally independent to the actual timeline. This means that the clips that are used on any given project's timeline do not necessarily have to be in the project's Bin, allowing you to load up clips into the Bin when required.

Editors may store media clips in separate folders on a hard drive and simply load up specific clips into the Bin when required while clearing out clips that are no longer needed. If you have a Bin filled with clips, you can clear it out without affecting the contents of the timeline. Clips contained within the Bin may be selected and dragged down individually or in groups to where they are needed on the timeline and may also be dragged onto the timeline from a Windows Explorer window.

EDIUS can import many different video and audio file types into the Bin, including Canopus Lossless AVI, Canopus HQ AVI, Canopus DV AVI, Microsoft DV AVI, Uncompressed RGB AVI with Alpha Channel, MPEG-1, MPEG-2, AC3, MP3 and WAV. EDIUS can also import Inscriber Title files, JPEG, BMP, GIF, TIFF, Targa, and Photoshop PSD image files. If Alpha Channel information is included in a supported file format, EDIUS will recognize that, as well.

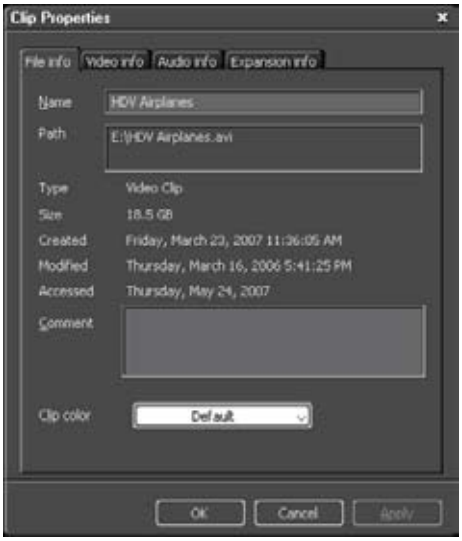
The Bin also allows for creation of alpha matted clips, color bar clips and color mattes for title keying, as shown below.





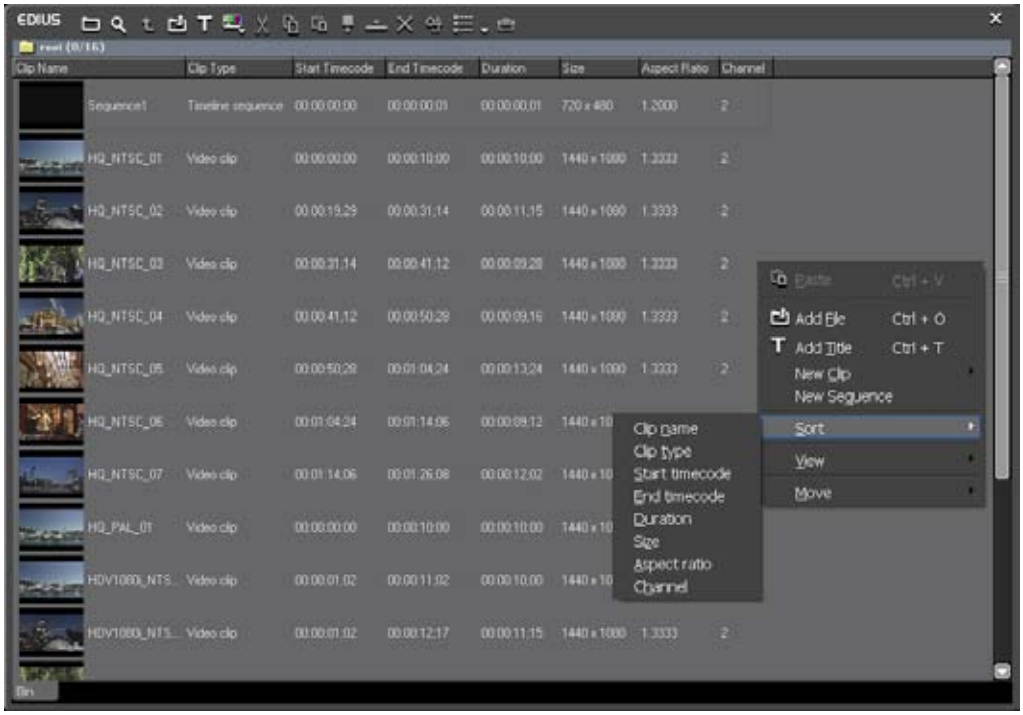
The Clip Properties dialog offers more information concerning a given clip and provides the ability to assign a clip alias and adjust the poster frame for easier clip recognition. EDIUS also supports the ability to retain the original timecode information of footage captured from DV or HDV tape.

Clicking on the **Video info** tab not only gives you clip information, but also lets you select the aspect ratio and field order of your clip if EDIUS has for some reason incorrectly detected these settings.

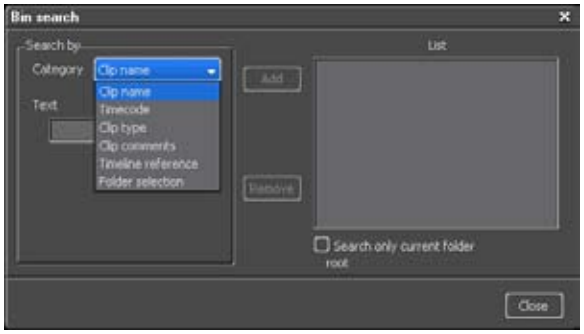


The Bin's secondary function is storyboarding. Multiple clips can be sorted in the order you desire and then sent to the timeline for easy assembly. Multiple clips can be selected either by dragging a box over several clips or by holding the CTRL key and clicking on individual clips. Clicking the **Add to Timeline** button assembles the selected clips onto the active video track at the current position of the edit cursor.

You can easily keep track of clips in the Bin with the **Sort** and **Search** features. Sort allows you to sort clips by eight convenient identifiers including name, clip type, timecode location, duration, and clip size.



Bin Search, on the other hand, allows you to filter these identifiers for more targeted Bin management. Just select which identifiers are characteristic of the clips and let the search tool go directly to the file or files. Together, the two Bin management tools provide you with the ability to manage even a large number of clips.



Timeline Editing

As shown in the previous section, EDIUS provides three- and four-point editing capability through the use of the Recorder window. The method used in that example may also apply to footage that has already been captured for use within a project. To do this, the clip must first be sent to the Player side of the Monitor window either by double-clicking it or dragging the clip into the player from the bin or timeline.

The Preview Window features a system of mouse gesture commands, also known as ShuttleScrubbing. This is an innovative way of quickly navigating through footage to set in and out points using only a mouse. ShuttleScrubbing can be performed by holding down the right mouse button and drawing circles with the mouse within the overlay (picture) of either the Player or Recorder area. The direction you move the mouse – either clockwise or counterclockwise – and the size of the circle that you "draw," determines the direction and speed of playback. Playback pauses when the right mouse button is released.

By default the ShuttleScrub feature is set to emulate the Jog mode of a Jog/Shuttle controller deck. To switch to Shuttle mode, simply click the middle mouse button (typically the scroll wheel button). You can alternate modes at any time with the middle mouse button.

To use the mouse to set in and out points, click and hold the left mouse button and draw a horizontal line from left to right (in point) or right to left (out point). To clear an in or out point, add a downward motion before the horizontal one. If you are working in the Player monitor window, you can quickly place a clip to the timeline. Simply click and hold down the left mouse button and make a downward motion only, and release. The clip is applied to the timeline according to the currently selected track and edit cursor position.

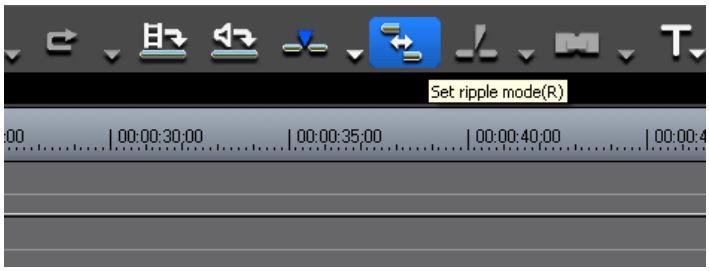
In the Player window, video and audio in and out points may be set by selecting the appropriate command from the In and Out drop-down buttons below the Player. The in and out points may also be trimmed using the mouse to drag the edges of the clip within the progress slider area below the overlay.

EDIUS supports several editing functions within two main modes — Insert mode and Overwrite Mode. The principle is the same as in word processing. By default, projects are set to Insert Mode, and clips that are added to a timeline track will push all clips that occur after it further along the timeline. Overwrite Mode replaces any clips on a timeline track that occupy the area where the new clip is placed. Switching between two modes is done either by clicking on the Edit Mode button in the Timeline window, or by pressing the Insert key on your keyboard.

When editing in Insert Mode, there is also a **Sync Mode** option, which when active causes all operations to ripple the insertion of clips across all timeline tracks, instead of just the track being edited. Sync Mode is quite useful when you want inserted clips to move the contents of all tracks.

Finally, Ripple Mode is another editing option, selected from the Edit Mode drop-down menu in the Timeline window. With Ripple Mode enabled, any trimming of tracks will automatically pull or push along all other clips to

prevent any gaps from being created. Ripple Edit mode also makes use of the **Sync Mode** toggle.



Standard clip positioning and trimming can be performed with the mouse by clicking and dragging on either end of the clip (trimming in/out) or within the clip (repositioning). When performing trims, the EDIUS Monitor window switches to a split-screen view to assist in aligning footage correctly

 SHIFT+ALT+Left mouse button **Ripple Move** — Slide all clips that occur after the selected clips.

 CTRL+Left mouse button **Copy** — Creates a copy of the selected clip to a new track or position

Trimming Mode

In addition to standard trimming on the timeline, clips can be manipulated in specific ways in Trimming Mode. To enter Trimming Mode, select **Trimming** from the **Mode** menu.

Trimming mode supports multiple trimming functions, preview of trim points and precise trim control by frames.

The Monitor controls appear differently in Trimming mode versus Normal mode, as illustrated below.

Monitor controls in Normal mode

Monitor controls in Trimming mode

Selecting In/Out points to adjust

When in Trimming mode, a clip's In point can be selected by clicking the beginning of the clip, its Out point can be selected by clicking the end of the clip, and a set of adjacent Out/In points can be selected by clicking between two adjacent clips.

The selected clip handle appears in yellow and any grouped handles appear in green. Using the mouse to move the handle will move all the grouped handles together.

To toggle whether a handle is selected (for example, to adjust just the audio portion of a VA clip), hold down the Alt key and click the handle.

To invert the handle selection and select linked/grouped handles that are currently not selected, hold down the Control key while clicking a handle.

To make handle selection easier in Trimming mode, five buttons are available to automatically select handles for common trimming tasks.

In point edit Selects handles to adjust the In point of the clip.

Out point edit Selects handles to adjust the Out point of the clip.

Slide edit Stretches a clip over an adjacent clip without adjusting their overall position on the timeline. The Out point(s) of the first clip and the In point(s) of the second clip are adjusted in unison.

Slip edit Retains the clip duration and position on the timeline but adjusts the in/out points of the clip. The In point(s) and Out point(s) of the selected clip remain in the same position on the timeline, but the In and Out times of the clip are adjusted together.

Rolling edit When you have three adjacent clips, adjusts the in/out points of the middle clip on the timeline without affecting the in point of the first clip or the out point of the third clip.

These different edit modes can also be engaged purely with the keyboard if you prefer. The Keyboard Shortcuts window contains these five options (unbound by default).

Making Adjustments

Once the appropriate clip handles are selected, simply drag one of the handles using the mouse to make adjustments.

In addition to using the mouse, the Trimming mode buttons and keyboard shortcuts can be used to make adjustments to selected handles as well.

-10 frames Adjust the selected handle(s) 10 frames backward (to the left)

-1 frame Adjust the selected handle(s) 1 frame backward (to the left)

+1 frame Adjust the selected handle(s) 1 frame forward (to the right)

+10 frames Adjust the selected handle(s) 10 frames forward (to the right)

Alternatively, you can click-and-drag in the Monitor window display to perform In point, Out point and Slide edits to the nearest point in the timeline, as described below.

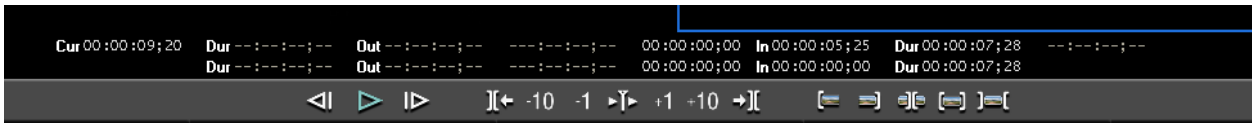
In point edit - Position the mouse over the right third of the monitor window, then click and drag left or right to adjust the clip's In point on the timeline.

Out point edit - Position the mouse over the left third of the monitor window, then click and drag left or right to adjust the clip's Out point on the timeline.

Slip edit - Position the mouse over the center of the monitor window, then click and drag left or right to adjust the Out point(s) of the first clip and the In point(s) of the second clip.

Trimming Mode Information

In Trimming mode, EDIUS displays additional information in the Monitor windows to aid in precise trimming.



Information display

On the left side, there are three time values. The timecode values refer to Sequence timecode, and you can type into any of these fields to manually enter values to apply a trim by timecode.

The **Dur** and **Out** values show the duration and Out point of the clip that is having its Out point trimmed when performing an Out point trim, Slide trim and Rolling trim.

The last value shows the offset, or amount of change being applied to the selected Out point(s) when performing an Out point trim, Slide trim, Slip trim and Rolling trim.

On the right side, there are also three time values. Remember that the timecode values refer to Sequence timecode, and you can type into any of these fields to manually enter values to apply.

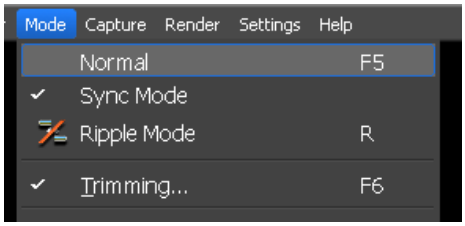
The first value shows the offset, or amount of change being applied to the selected In point(s) when performing an In point trim, Slide trim, Slip trim and Rolling trim.

The **In** and **Dur** values show the In point and duration of the clip that is having its In point trimmed when performing an In point trim, Slide trim and Rolling trim.

The combination of being able to enter time and timecode values directly and using the mouse for trimming provide very powerful and flexible trimming capabilities to EDIUS.

Exiting Trimming Mode

To exit Trimming mode, select **Normal** from the **Mode** menu.



Information about audio and video tracks is displayed as icons in the Timeline Window. A set of icon and label descriptors is to the left of each track. The row width of each track can be resized by dragging the track borders and pulling them to the desired place. Height can be set by right-clicking anywhere on the track panel and selecting **Track Height**.

To add more tracks, choose the **EDIUS** button located at the top left corner of the Timeline window. Choose **Add ExAudio Track** for audio, **Add VA Track** for video, or **Add Title Track** for titles. You can specify placement of the new track by choosing **Select Track > Add Track** followed by the **Front** or **Back** options. You can also add tracks simply by right-clicking anywhere within the left margin of the timeline window.

Once added to the Timeline, tracks are identified by track number and name as shown below. Initially tracks are created with generic name, but you can change them by double-clicking on the track's name and typing in a more appropriate label. The default settings for the track names are **V** for video track, **VA** for video/audio track, **A** for audio track, and **T** for title track.

Placing Clips

EDIUS offers several ways to place a clip into the Timeline. Three of the most common options are listed below. Most users choose a combination of methods depending on workflow and editing process.

1. Select a track and click the time scale on the position where you wish to place a clip and click the **Add to Timeline** button.
2. Place directly from the Bin by right-clicking on the clip in the Bin and selecting **Add to Timeline** from the menu. There is a button on the Bin Window that also performs this command, as well as a keyboard shortcut (SHIFT+ENTER by default.)
3. Directly drag and drop the clip onto the timeline.

The methods described above do not allow for separation of audio from a video track and vice versa, if placing

on a VA type of track. If you want to separate the audio and video, you can right click on the clip and choose the **Unlink** option. To reconnect audio with its video clip, select and highlight both portions of the clip, right click, and choose **Link**.

Multi-track Editing

EDIUS supports an unlimited number of video, audio and title tracks within the timeline window. Each track in the EDIUS timeline window has both a lock/unlock function, as well as an enable/disable function to assist in fine tuning an edit.

Both video and audio tracks within EDIUS feature the ability to view the associated audio waveform and perform keyframing control of volume, stereo channel panning and video transparency or keyer (on video tracks). Once the track that includes audio is expanded, a waveform cache is generated to improve performance when displaying the waveform, and extra keyframing controls appear. The waveform view may be switched off if required.

Adjusting the transparency of a video track is performed by clicking the **Mix** track button to enable the Mix track keyframer and then setting keyframe points within the Mix track (a blue line represents the keyframe.)

You can monitor the volume or transparency percentages while making adjustments in the status bar located in the bottom left corner of the Timeline window. The keyframe control (rubber band) points may be repositioned by clicking and dragging them appropriately and can be fine tuned using the following key combinations:

SHIFT + left mouse button (drag) — Adjusts a single point horizontally only (vertical adjustment disabled)

ALT + left mouse button (drag) — Adjusts all rubber band points up or down equally.

ALT + SHIFT + left mouse button (drag) — Adjusts all points up or down relative to each other

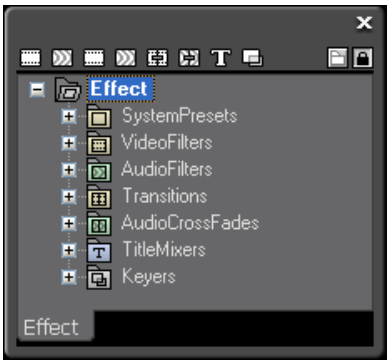
Holding down the CTRL key with any of these key combinations enables vertical fine tuning (i.e. slower) adjustment. Provided the SHIFT key is not held down, keyframe points will always "snap" horizontally to their original position, or to where the edit cursor is located.

The Right-Click Contextual Menu

Right-clicking on any clip opens a contextual menu that gives you access to additional controls, most notably **Duration** and **Speed**. Selecting either of these options allows for specific time-based values (though Speed control can also be adjusted by percentage). The new settings are applied instantly with the timeline altering clip placement depending on the edit mode currently in use.

Effects Editing

EDIUS software is designed to offer instant playback of all video and audio effects with a simple-to-use interface for quick customization. Effects are applied by selecting and dragging an effect from the Effect Palette (shown below) to a clip's appropriate track (video, audio or mix). Clips with effects applied to them are displayed with an aqua blue line along the top of the clip.



You can also place an effect in the Information Palette by selecting a clip's video, audio or mix track first. Effects are individually enabled by using the check boxes next to the effect. They can also be adjusted, changed or removed completely here.

EDIUS effects are broken into the following categories:

Video Filters Applied directly onto video clips and may be used in any combination and quantity. Color correction tools, such as Monotone tints and White Balance correction, are featured in a sub-category for quicker selection.

Audio Filters May be applied in any combination directly onto any audio clip or audio portion of a clip on a video/audio (VA) track.

Transitions Applied as same-track transitions and multi-track transitions (on the Mix track of any clip) on a video track. Transitions range from simple 2D effects, such as wipes and dissolves, to more complex 3D transitions. Xplode for EDIUS is a collection of stylish high-quality transitions that feature greater customization controls. All transitions feature the ability to save custom settings for later use.

Audio Crossfades These audio transitions apply to same-track transitions of audio clips.

Title Mixers These effects are applied to clips within the title tracks and provide quick control over bringing titles on and off the screen. Video clips may be placed onto title tracks and have title mixers placed on them, as well.

Keyers Keyers are applied to the mix track of any video clip contained on a video track. They control transparency settings based on properties, such as color and luminosity, as well as providing Picture-in-Picture settings.

System Presets A collection of pre-built video and audio effects combinations are kept in this folder. Their application is the same as any of the above effects, depending on the type of

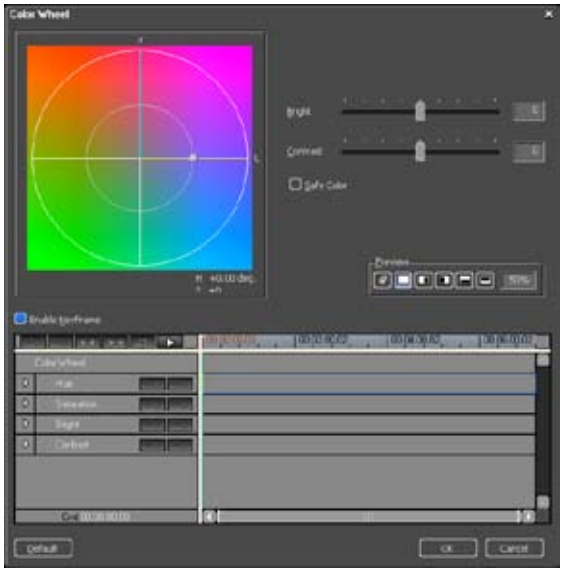
preset.

EDIUS is initially stored with base effects already programmed that you cannot delete from the Effect palette. You can also register newly customized effects in EDIUS, such as adjusting the parameters, combining multiple effects, renaming, and so on. These base effects are indicated by a film strip icon with an **S** at the lower right corner.

In EDIUS, the Timeline and Player windows serve as the preview controls. The same applies for any effects that feature a "picker" tool, such as White Balance. EDIUS can play back a project while making adjustments to a filter control panel at the same time. This is especially useful for color corrections and audio mixing.

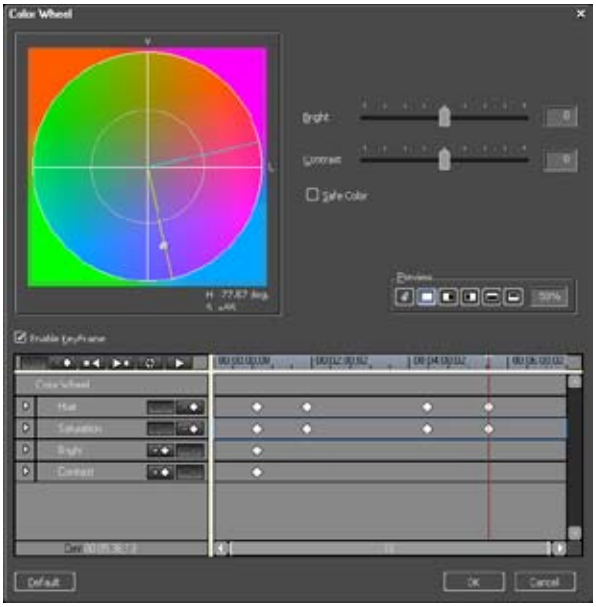
Keyframing Effects

For added flexibility and control, the Color Correction filters in EDIUS are keyframeable, allowing for different color adjustments to clips over time. This can be quite useful in situations when the environment changes, such as between afternoon and evening, when automatic camera adjustment does not work favorably, or simply to create unique artistic effects.



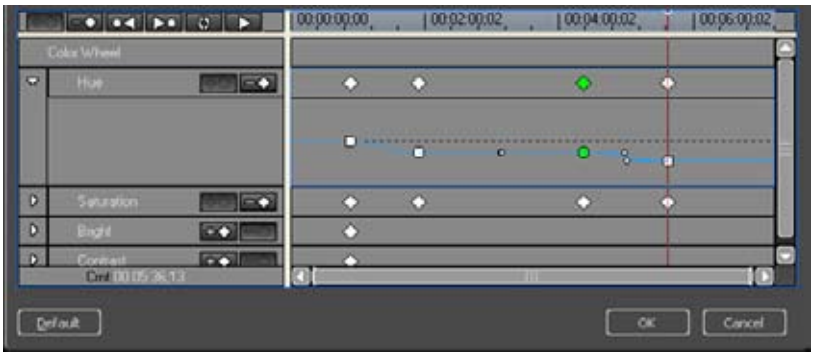
The keyframe area appears at the bottom of the settings for the filter. Different filter settings appear on different lines, providing the flexibility to change one filter setting without affecting others. To enable keyframes, make sure the **Enable KeyFrame** box is checked.

To add keyframes and have the filter settings change over time, move the timeline cursor to a time position, then change the filter settings - appropriate keyframes will be added automatically.



Keyframes appear in the keyframe area as diamonds. To manually add keyframes at a point without changing the current filter settings, click the **Add Keyframe** button.

The keyframing area also allows for control of the filter change from one keyframe to another. To adjust the change between keyframes, click the right-facing triangle to the left of the filter setting name in the keyframing area. The triangle will turn to face down and the area under the keyframes for that setting will expand to show the spline control.

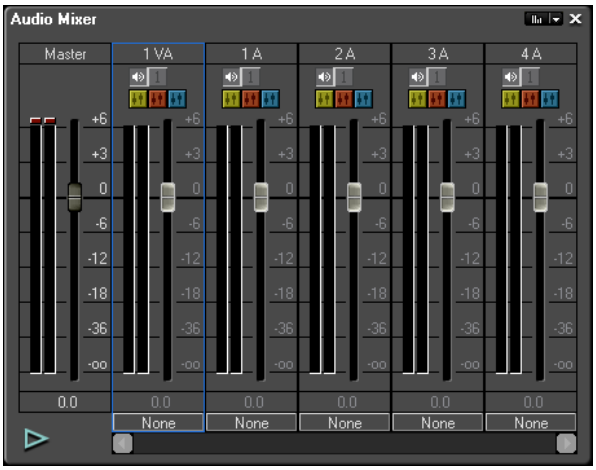


The lines extending from the keyframes (called splines) control how the setting changes between keyframes. To adjust the spline, click and drag the white handle at the end of the spline. This will change the line joining the keyframes and adjust how that particular setting is changed between this keyframe and the previous and next keyframes.

Use the spline adjustments to ease in and out of changes to produce a less abrupt change between keyframe positions.

Audio Mixer

EDIUS features a versatile Audio Mixer panel that controls the overall volume levels for each track, the overall output level and allows audio level-point setting on individual tracks. The Audio Mixer panel can also be used with supported audio fader hardware.



The colored buttons allow ganging (grouping) of tracks to adjust their volume levels together. Each track's overall volume can be adjusted by a constant value using the sliders. The overall volume of all tracks can be adjusted by a constant value using the **Master** slider.

Each track also has a mode selector at the bottom of the window under its slider. This slider controls the Audio Mixer panel's mode.

In Track mode, the sliders adjust the overall volume level of each track by a constant amount. This adjustment occurs in addition to any level-point adjustments done to audio clips themselves.

The other modes are used to make dynamic adjustments to the audio level for clips within each track:

None mode The audio mixer is disabled for this track.

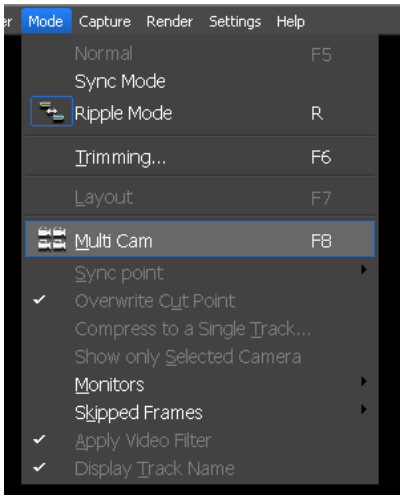
Latch mode The sliders move to follow existing level-points until the slider position is changed. Once the slider position is changed, new audio level-points are written to the clip(s) in the track corresponding to the position of the slider.

Touch mode The slider follows the level of each clip in the track, just as in Latch mode, but continues to follow the defined level-points even after a new adjustment is made.

Write mode EDIUS creates audio level-points in the clip(s) of the selected track corresponding to the position of the slider. Any existing level-points are removed.

Multi-Camera Editing

Another feature in EDIUS is the Multi Cam mode. Multi Cam mode makes editing of footage from multiple cameras quick and flexible. To enter Multi Cam mode, select **Multi Cam** from the **Mode** menu.

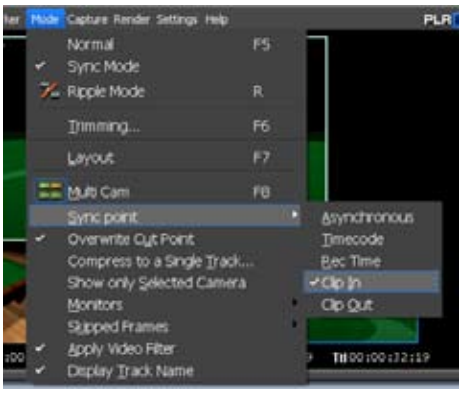


In Multi Cam mode, the footage on selected V and VA tracks become "virtual cameras" and you can see the footage from all cameras simultaneously along with the Master display, which shows the footage from the selected camera. EDIUS supports up to eight cameras in Multi Cam mode.

Each of the video tracks in Multi Cam mode gains a **C** drop-down menu in the track label area. This drop-down

menu controls the virtual camera assignment for each track. To assign a track to be a virtual camera, click the C drop-down and select a camera number to map. The example below makes track 1V become camera 5.

New footage placed on the timeline in Multi Cam mode will be automatically synchronized and placed on the assigned camera tracks depending on what Sync mode is selected. Async applies no synchronization and leaves synchronization of clips to the user, Timecode uses the clip timecode to synchronize clips, Rec Time uses the date/time stamp to synchronize clips, Clip In aligns the In points of the clips, and Clip Out aligns the Out points of the clips.



Drag a few clips from the Bin into the timeline so there is at least one clip on each of the assigned camera tracks. The Monitor window shows each of the camera views along with the selected view as the Master camera.

To start placing camera cuts, the easiest way is to simply start playback of the timeline. Click a camera image or use the corresponding number pad key to select a camera during playback. Don't worry if your cuts are off, you can make fine adjustments later.

After the initial cuts have been made, you will see that EDIUS has automatically cut all the camera tracks and disabled the video clips for the unused shots.

Making Adjustments

Notice the triangles above the timeline at each camera change.

Making adjustments is easy, simply drag the triangle to change the position of the cut - the view of all cameras is still available to help make frame-accurate adjustments.

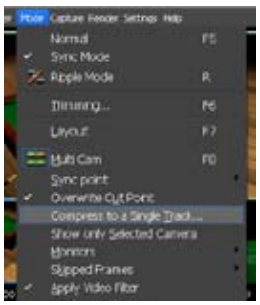
To switch the selected camera, scrub into the area you want to change, then click the camera you want to select, or use the number pad key corresponding to the desired camera.

To remove a cut point, right-click the triangle at the cut point and toggle it, or use the number pad 0 key.

You can also add a cut and camera change while scrubbing by holding down the CTRL key and pressing the number pad key of the camera to cut to, or by double-clicking the desired camera view. You can even do this during 2x or faster playback of the timeline for very quick, rough cuts.

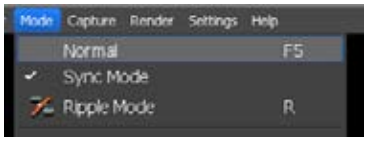
Adding Transitions

Once we have completed adjusting cuts and camera changes, it is useful to get all of the selected camera shots onto together on a single video track. Select Compress to Single Track from the Mode menu.



This option puts all of the selected camera shots onto a new V or VA track, or onto a V or VA track that is not mapped to be a camera.

Switch back to Normal mode by selecting **Normal** from the **Mode** menu.



The C drop-downs and cut-point triangles disappear, but don't worry, they're still there if you return to Multi Cam mode later.

As you can see, all the selected camera shots appear with cuts between them. Select all of the clips on the compressed track, and drag a transition over them. This adds a transition between all the clips to create a simple multi-camera switched sequence.

The video tracks used for the virtual camera footage can be muted for better performance, or they can be deleted entirely. However, if they are deleted, it is not possible to go back into Multi Cam mode to adjust the camera shots as the original camera and cut information will be lost.

Title Editing

Titling within EDIUS can either be performed using custom graphics files created in other titling and image programs that export to a compatible format, or by using the pre-installed titling software that comes with the EDIUS package. There are two applications that are included with EDIUS; Quick Titler, shown below left, which is automatically included during the installation process of the first disc, and TitleMotion Pro for EDIUS, below right, which is bundled with EDIUS and is included on the second CD.

Both products provide basic title creation and editing; however, while Quick Titler provides quick and easy title creation, TitleMotion Pro has several advanced features that make it worthwhile to learn about, too. There are several methods for creating new titles in EDIUS. Users can set the default setting for which application to use in the Application Settings menu by choosing **Settings > Application Settings** from the main menu, and then **Duration** from the left hand column listing.

As mentioned, there are several ways to launch the titling application. Titles can be created by either clicking the **Add Title** button in the Bin or by right-clicking in any empty area of a timeline video track and choosing **New Clip > Quick Titler/TitleMotion** from the contextual menu that appears. Once the title software is loaded, a canvas that matches the video format being used is created. To assist in title placement, the software will display a frame of the video on the timeline according to where the edit cursor is positioned. You can reposition the cursor appropriately, to alter your title's canvas image.

You can assign durations to titles and graphics by simply right-clicking on the title clip and selecting Duration in the contextual menu that appears.

Using Quick Titler

Quick Titler is a basic titling application that can create titles on existing tracks or new tracks. Once launched, it has its own window with toolbar, menu, property bar, and so on. Clicking the **Text** button on the tool bar produces a cursor that can be moved around on the screen for optimal positioning. Text can be oriented vertically or horizontally, and the font styles can be modified in the same way as popular word processing software. You can also drag to move and resize text objects once created. In addition, Quick Titler offers kerning, leading, transparency and gradient controls, roll and crawl, and other common titling features.

When completed, just click the **Save** button in the Quick Titler tool bar to place it on a track.

Using TitleMotion Pro for EDIUS

TitleMotion software, provided by Inscriber, comes standard with 200 title and text templates, which makes professional-looking title creation quick and easy. Creating rolling and crawling titles is done freely or may be

imported from a text file. Once the title has been created and saved and TitleMotion closes, the newly created title appears in the Bin. From there, the title can be placed onto either a title or video track in the Timeline.

Title Effects

Titles and graphics can either use the Title Mixers or Video Filters, depending the type of track on which they are placed. Title Mixers are designed to preserve Alpha Channel information, but certain video filters don't. If you are using Alpha Channels in your titles, then place the title in a title track for best results.

Exporting Video

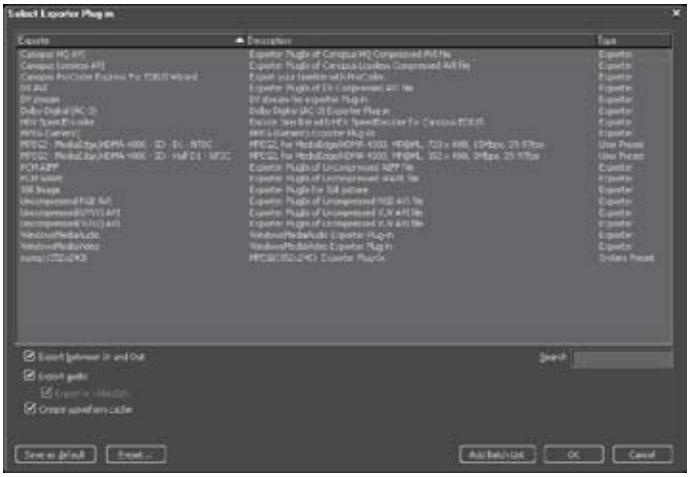
EDIUS can either output projects to directly to DV cameras and decks, or out to a selected file type. If you want to output back to an HDV deck, you will first need to export the timeline as an HDV MPEG-2 transport stream and then print the file to tape with the included TS Writer application. EDIUS Broadcast software can also support output to P2 and XDCAM devices.

File type options include the following:

- AVI
- AVI (DV)
- MPEG-1
- MPEG-2 (including HDV)
- QuickTime
- QuickTime Export File formats
- Windows Media
- Real Media
- Raw DV
- Still Image sequences
- Audio files, including PCM Wave, AIFF and Dolby Digital AC-3

To export a file, click the **Export** button in the lower right corner of the Recorder window and choose **Print to Tape** or **Print to File** in the drop-down menu.

This opens the Exporter dialog.



As you can see in the Exporter dialog, there are many built-in file exporters included with EDIUS, each with a brief description. You can also use the search box to filter down the listing. The EDIUS Export also allows you to make custom export presets based off the default exporters built into the software, with your own specified settings in use. Finally, EDIUS allows you to create Batch Export lists. A similar concept to Batch Capturing, batch exporting allows you to build a list of different target format settings, with the ability to specify the sequence(s) to export, and In/Out timecodes to use.

The initial list of Exporters includes:

Canopus HQ AVI
Use this option to create a video file in Canopus HQ format. The Canopus HQ format is a 4:2:2 variable-bitrate compression format. Canopus HQ AVIs are useful for rendering parts of a project for later use without taking up too much space.

Canopus Lossless AVI
Use this option to create a Canopus Lossless AVI file. The Canopus Lossless format is a 4:2:2 format with alpha channel. Since it is a mathematically lossless compression, there is no worry about losing quality, but file sizes can be very large. This format is most useful to preserve the image quality of high-quality or difficult-to-compress footage when a lot of disk space is available.

Canopus ProCoder Express For EDIUS Wizard
This option launches the ProCoder Express for EDIUS application and is responsible for handling any third-party export formats, such as Real Video, or QuickTime. It also performs video format transcoding between the NTSC and PAL video standards and aspect ratio conversions for built-in formats such as Canopus HQ, Canopus DV, MPEG, etc.

ProCoder Express can also be used as a standalone application to convert any previously completed video projects to any other desired format.

DV AVI
This option outputs a single, rendered DV AVI using the Canopus DV codec. The Microsoft DV codec can be used if desired by selecting the appropriate option, providing compatibility with non-Canopus editing systems. AVI2 files are created using this option, which removes the file size restriction that occurs with AVI1 files and enables the creation of a larger export file. Using this option requires that the video storage hard drive be formatted in Microsoft's NTFS format.

The DV AVI Exporter is also useful if you want to export your project to AVI1 files, including Reference AVI, because it ensures compatibility with older Canopus-based editing systems that do not support AVI2.

HDV SpeedEncoder
This exporter takes advantage of multi-core CPU-based systems, for high speed encoding of HDV-compliant MPEG-2 transport streams.

MPEG (Generic)
This exporter allows you to create MPEG-1/MPEG-2 elementary and program streams, complete with PCM, Layer 2 or AC-3 audio. This exporter is best used in conjunction with the Segment Encoding option. Segment Encoding (or smart rendering) will skip the reencoding of any pre-existing MPEG-2 footage on the timeline, that otherwise has had no alteration made to it and matches the target MPEG-2 bitrate, frame rate and resolutions. This can speed up the export process with simple MPEG-2 edits.

MPEG (HDV)
This exporter only appears with select projects. As with the previous exporter, this exporter is best used in conjunction with the Segment Encoding option for 1080i based projects.

Still Image
Use this option to create a single still image or for still image sequences. The single still image option exports the frame that is visible at the current location of the edit cursor.

Advanced options let you decide how the Still Image Exporter deals with fields and/or frames. Stills created from complete frames appear interlaced unless a rendered de-interlacing filter was applied to it. This may not be desirable if the image is going to be used in a non-video environment, such as print or Web. Field-based images are recommended in this scenario, and filtering assists in improving the quality of still frames that contain moving objects.

PCM WAVE Exporter
Use this option to convert the timeline to a PCM WAVE audio file.

Uncompressed AVI Exporters
If you need to export an uncompressed AVI so that the file can be used with a different editing system, EDIUS gives you three options – RGB AVI, UYVY AVI, or YUY2 AVI. Pick the one that is compatible with your other editing system and click the OK button to begin exporting the timeline.

Printing to DVD

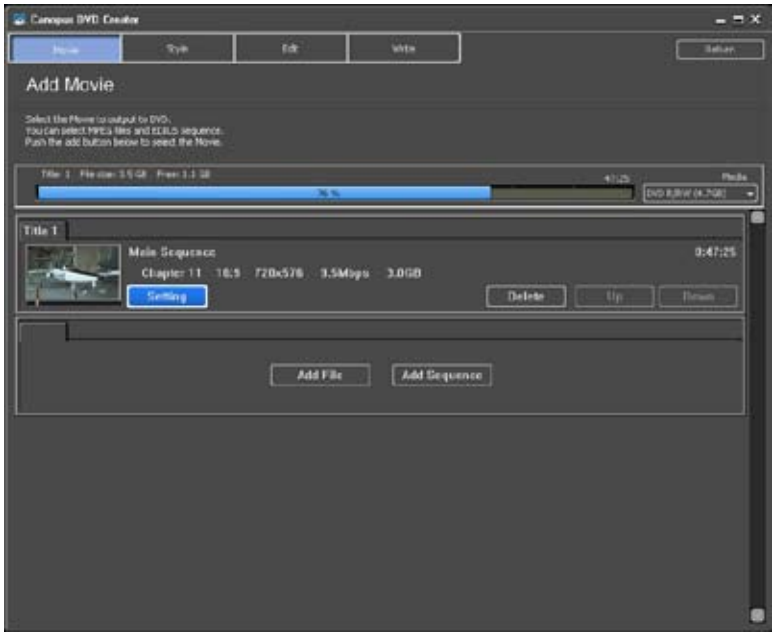
This section explains how to export your project to DVD, complete with a menu for chapter navigation.

The **DVD Creator** utility allows you to create a DVD based off the project you are currently working. It is handy to know that while DVD Creator appears to be a step-by-step wizard-based utility, you can jump back and forth between the different steps in order to fine-tune your DVD title.

Since DVD Creator supports multiple sequences, In/Out points and timeline markers, it's a good idea to first make sure that these are opened and set correctly within your EDIUS project.

To open DVD Creator, choose **Print to DVD** from the **Export** drop-down menu (the Export button is found in the bottom right corner of the Recorder window).

The DVD Creator utility will open, with the Movie page displayed.



This screen lets you add the Titles that you want included on your DVD, with each Title representing a sequence

within your EDIUS project. These Titles will be based off any In/Out points that you have set on each sequence and timeline markers will define the chapter points, so make sure you have set them correctly.

The file size bar is very useful for determining how much space is taken up by your choice of titles, and what you may have to do to fit your content onto a single disc. If you're burning to a dual-layer disc, make sure your change the **Media** drop-down option.

By default, DVD Creator will set the video and audio encoding format and bit rate settings automatically, in order to fit your selections onto the disc. If you want to change these options, choose the **Settings** button for the Title that you want to adjust.

Uncheck the **All Auto** check box, and then uncheck the **Video** and/or **Audio** check boxes to enable adjustment. Choose the settings you want to use and then click **OK**.

Once you are happy with the settings for your Disc, and have imported the sequences you want to use, choose the **Style** button at the top. Don't worry if you've forgotten to import something, as you can return to the **Movie** screen at any time to add and remove Titles.

The **Style** screen lets you choose a template from the inbuilt DVD menu gallery, and set up how your DVD menus will appear. The actual text and positioning can be adjusted in the next step, so for right now, we're just focusing on the general appearance.

Ideally, you want to ensure that the **Auto Layout** option **Auto** is always checked - this is bound to the style you have chosen from the gallery. You can adjust the position of buttons later.

Choose the **Screen Size** you wish to use for you DVD menus - the actual DVD video content will not be affected by this option.

Some style templates include graphical chapter buttons for each of your chapters. If you don't want to use these, check the **No Chapter Buttons** check box.

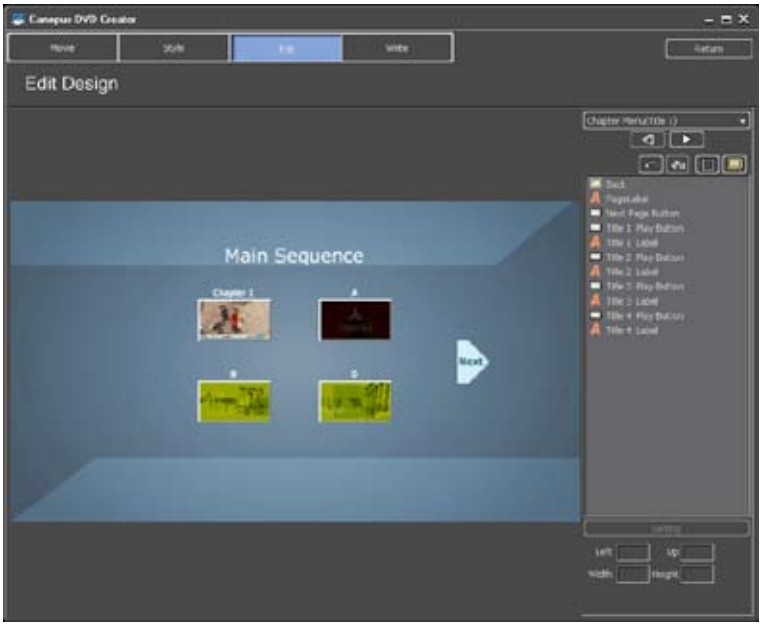
If your Titles have no chapter points, you can check the **No Chapter Menu (only one chapter)** check box.

If the DVD only has one Title (remember, Titles are sequences in your EDIUS project), check the **No Title Menu (only one title)** check box.

At the bottom of the **Style** screen is the gallery strip. The gallery is broken up further into categories, each with a selectable tab. To apply a different Style, simply choose one from the gallery it will be applied instantly.

Note: If you don't even want to use menus, you can uncheck the Use DVD Menu check box.

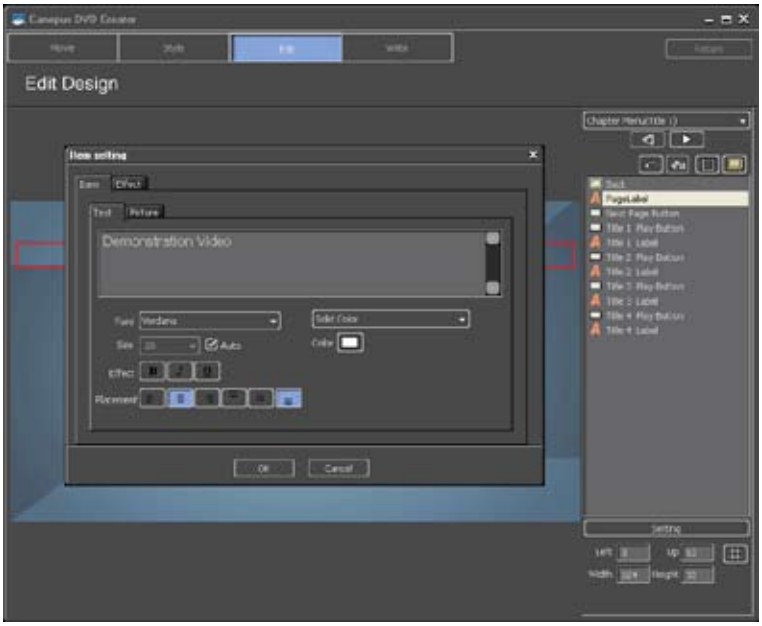
To fine tune your DVD pages, choose the **Edit** button at the top.



The **Edit** screen lets you customize the size, position, fonts and font formatting, and actual graphics and text for each of your DVD menus within the project.

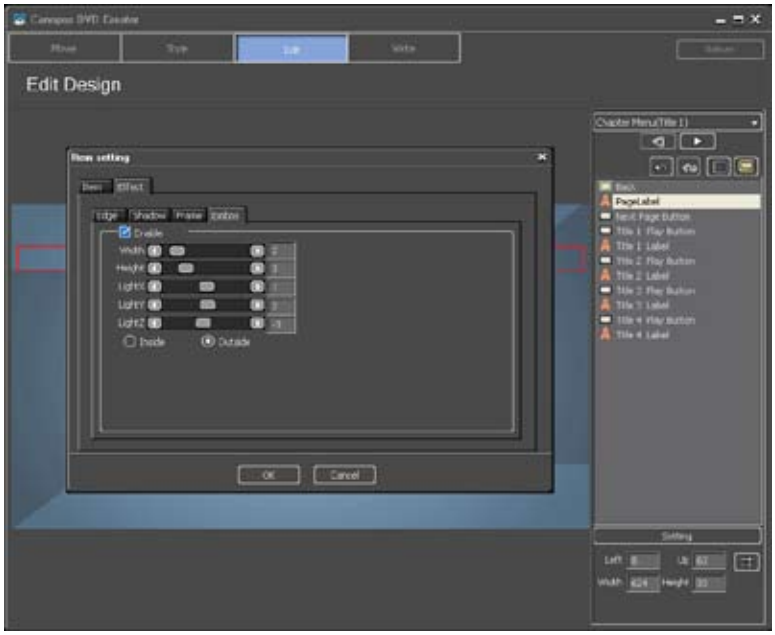
Changing any item on a page is just a case of double-clicking on that item to bring up the **Item setting** window. Alternatively, you can also use the item list on the right side of the **Edit** screen, which contains a list of all the elements on the current menu screen.

When you choose to edit an item, the following screen will appear.



You can choose to use the basic character generator as shown, or use a nominated picture file by choosing the **Picture** tab.

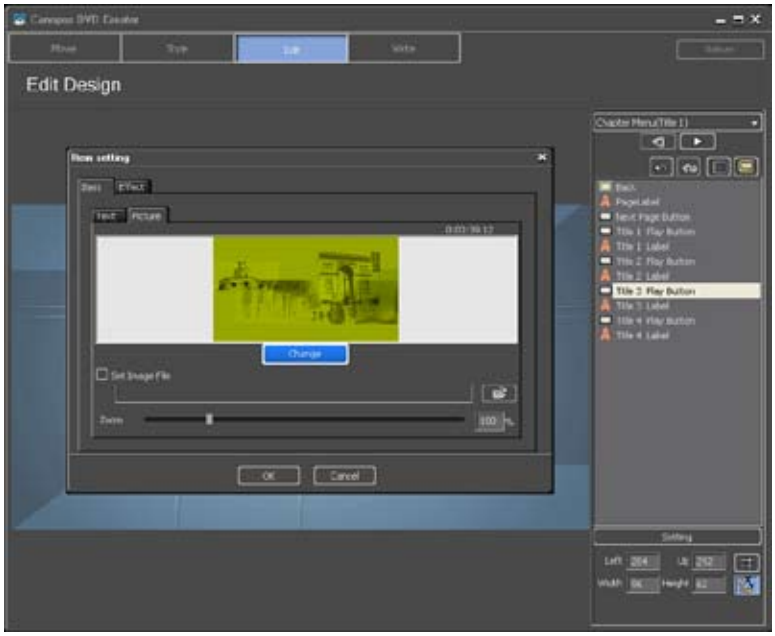
In this example, we've change the text, and gone through the **Effect** tabs to further alter the appearance.



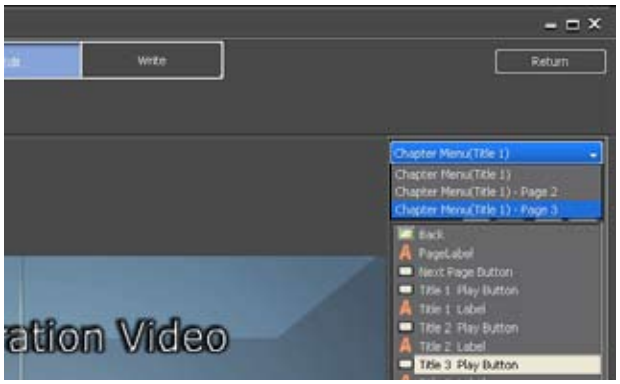
You can resize and reposition any item just by clicking on it and either dragging it to a new position, or clicking and dragging the handles (the white squares) to resize it. DVD Creator features a grid option (located at the bottom right corner) for you to snap your items to for accuracy.

You will notice that each chapter has a thumbnail image which is based off a frame of video contained within that section of the timeline. If you want to adjust that thumbnail's frame, simply choose to edit the **Item setting**, and then choose **Change**. You will be prompted to adjust the frame from within the EDIUS application itself. Just switch

back to EDIUS (ie. Alt+Tab), position the edit cursor on the frame of video you want to use, then switch back to DVD Creator and choose **Set**. The new thumbnail image will be applied.



To change the current menu screen to another screen within your DVD menu structure, choose another screen from the drop-down menu located at the right, above the item list.



Once you're completely satisfied with your DVD and are ready for authoring, choose the **Write** button at the top of the screen.