

User Manual



Profile Family

Printed in USA or UK

Tektronix, Inc.
P.O. Box 1000
Wilsonville, OR 97070-1000 USA

1-800-547-8949 (USA and Canada)
1-503-682-7300
<http://www.tek.com>

Copyright

Copyright © 1997 Tektronix, Inc., Wilsonville, Oregon.

Printed in the United States of America or the United Kingdom. All rights reserved. This document may not be copied, in whole or in part, or otherwise reproduced, except as specifically permitted under U.S. copyright law, without the prior written consent of Tektronix, Inc., P.O. Box 1000, Wilsonville, Oregon 97070-1000.

TEKTRONIX, TEK, and Profile are registered trademarks of Tektronix, Inc.

Windows NT is a registered trademark of Microsoft.

Other trade names used in this document are trademarks or registered trademarks of the manufacturers or vendors of the associated products.

Tektronix License Agreement

Profile system software contains intellectual property of Tektronix, Inc., i.e., software programs that are licensed for use by the end user consumer. The terms of the license are contained on the package containing the backup disks, or a copy may be obtained from your local licensed Tektronix dealer.

Revision Status

Profile Family User Manual revision status.

Rev Date	Description
APR 1997	Original issue for version 2.1. Part number 070-9955-00.
SEP 1997	Version 2.2. Part number rolled to 070-9955-01.

Contents

	Preface	
	About this Manual	xv
	Related Documentation	xvi
	Terminology and Conventions	xvii
Chapter 1	Introducing the Profile Family	
	A Profile System Overview	4
	Video Disk Subsystem	4
	Video Compression.....	5
	Video Interface Boards	6
	Profile Software Development	8
	What to Read First.....	9
	Starting Your Profile System.....	10
	Starting and Closing Profile Applications.....	11
	Starting an Application	12
	Viewing Help	12
	Closing an Application	12
	Profile Configuration Manager	13
	Media Manager.....	14
	VdrPanel.....	15
	Profile Disk Utility.....	16
	Tool Box Editor	17
	List Manager	18
	TimeDelay.....	19
	Profile Logs.....	20
	ProLink.....	20
	PortSever.....	20
	Fibre Channel Support.....	20
Chapter 2	Using the Profile Configuration Manager	
	Saving a Configuration File.....	22
	Loading a Configuration File.....	23
	Setting Master Timecode.....	24
	Setting the System Timing.....	27
	E to E Timed Outputs.....	29
	Adjusting the Timing when Upgrading to 2.2	30
	Setting the Reference Genlock.....	31
	Status Indicators	31
	VITC Reader Setting.....	31
	Internal Reference Timing.....	32
	Changing LTC Input and Output Names	33
	Video Input.....	34
	Analog Composite Video Input	34
	Analog Composite Video Input Advanced Control.....	37



Contents

Analog Composite Video Input Time Base Correction	39
Analog Composite Video Input for Preexisting Profile Units.....	40
Analog Composite Video Input Advanced Control	43
Analog Composite Video Input Vertical Interval	46
Component Analog Video Input.....	48
Serial Digital Component Video Input.....	51
Serial Digital Component Video Input Advanced.....	53
Video Output	54
Analog Composite Video Output	54
Analog Composite Video Output Vertical Interval	57
Analog Composite Monitor Output	58
Analog Composite Monitor Output Burn-in Timecode Tab.....	59
Serial Digital Component Video Output.....	60
Serial Digital Component Video Output Advanced.....	61
PDR100 Audio	62
Analog Audio Input	62
Digital Audio Input	63
Analog Audio Output	64
Digital Audio Output.....	65
PDR200 Audio	66
Analog Audio Input	66
Digital Audio Input	69
Analog Audio Output	71
Digital Audio Output.....	75
Audio Configuration for the PDR200.....	76
Input and Output Mapping.....	76
Input Clocking.....	79
Audio Configuration Other Tab.....	82
Chapter 3	
Using the Media Manager	
Starting and Exiting the Media Manager	86
Starting Other Applications from the Tools Menu.....	87
Viewing and Hiding the Toolbar and Status Bar.....	88
Viewing Help and Software Version Information	88
Connecting to a Remote Machine	89
Viewing the Media Hierarchy.....	93
Copying Media.....	96
Moving Media	96
Duplicating Media	98
Creating, Renaming and Deleting Bins	98
Renaming Clips and Masters	99
Deleting Clips and Masters.....	100
Emptying the Recycle Bin.....	100
Viewing Clip and Master Properties	101

Finding Clips and Masters	103
Using a Library System.....	105
Archiving a Clip	105
Restoring a Clip	106
Renaming an Archived Clip	107
Deleting an Archived Clip.....	108
Importing a Cartridge	109
Exporting a Cartridge	111
Updating and Inventorying Cartridges	112
Inventorying the Library	114
Formatting Cartridges	115
Viewing Library, Cartridge and Archived Clip Properties	118
Viewing Tape Transport Status.....	121
Viewing the Transfer Monitor.....	124

Chapter 4

Using VdrPanel

Opening a Panel	130
Making a Panel Active	131
Arranging Panels and Icons.....	131
Viewing Record Capacity.....	132
Viewing an Audio Monitor for a Panel.....	133
Selecting a Controller	134
Selecting a Communications Port	135
Selecting Clip Length (BVW Only)	136
Configuring a Controller	137
Setting Compression Presets	139
Setting up BVW [insert edit] Emulation	141
Selecting Video Crosspoints	143
Setting Timecode.....	145
Selecting How to Display Timecode on a Panel	145
Setting Timecode Crosspoints	147
Setting Drop-Frame Timecode.....	149
Panel Basics	150
Using Clips.....	154
Defining a New Clip	154
Loading and Playing a Clip	157
Renaming a Clip	159
Setting Clip Protection	160
Striping a Clip.....	161
Setting Long or Short Clip Names	161
Ejecting All Clips	162
Deleting a Clip.....	162
Clip Lists	163
Saving a Group of Clips in a Clip List	163



Contents

	Playing a Clip List.....	164
	Editing a Clip List.....	165
	Setting In and Out Marks in Clips.....	166
	Setting Marks.....	166
	Removing Marks.....	167
	Setting Field Dominance for Marks	167
Chapter 5	Using the Profile Disk Utility	
	Creating a File System	170
	Setting a Disk Label	171
	Formatting a Disk Volume	172
	Loading Microcode	173
	Relocating and Testing Bad Blocks.....	174
	The Detail Log.....	175
Chapter 6	Using Profile Utilities	
	Viewing Profile Logs.....	177
	ProLink	179
	PortServer	179
	PDR Access Control.....	180
Chapter 7	Video Networking	
	Configuring a Fibre Channel Hardware Address.....	184
	Configuring the Fibre Channel Board for TCP/IP	185
	Configuring Fibre Channel for Isolated Operation	185
	Configuring Fibre Channel for an Existing Network.....	186
	Checking Profile Communication	187
	The PDR Network Configuration Service	188
Chapter 8	Using the Tool Box Editor	
	Starting and Exiting the Tool Box Editor.....	190
	Using the Resource Manager.....	192
	Acquiring Resources	193
	Acquiring Profile Channels	194
	Configuring Video Resources.....	195
	Configuring Audio Resources.....	196
	Configuring Timecode Resources	197
	Project Files.....	199
	Connecting to a Remote Profile Machine.....	200
	Selecting a Current Bin	201
	Opening a Bin.....	203
	Creating a New Bin.....	203
	Record Time Remaining.....	203
	Renaming Media	203
	Viewing Media Properties.....	204

Deleting Media	205
Emptying the Recycle Bin	206
The Capture Timeline	206
Capturing a New Clip	208
Loop Recording.....	210
Playing a Clip	211
Trimming a Clip.....	211
Creating a Subclip.....	212
Creating Subclips on the Fly	214
The Edit Timeline.....	215
Creating a New Master	217
Adding Media to a Master	217
Playing a Master	218
Using the Audio Controls	219
Tool Box Editor Keyboard Shortcuts.....	221

Chapter 9

Using the List Manager

List Manager Overview	224
Starting List Manager.....	225
Configuring Resources	227
Acquiring Profile Channels.....	228
Configuring Video Resources	229
Configuring Audio Resources	231
Connecting to a Remote Profile Machine	232
Building a Playback List.....	233
Adding Media for Playback	233
Changing Event Settings	235
Monitoring a List as it Runs.....	238
Validating a List.....	238
Scheduling Recording Operations	239
Using a Live Feed.....	240
Scheduling a Transfer Event	241
Scheduling an Archive Event.....	242
Editing Event Lists	243
Changing the Order of Events	243
Inserting Events	243
Removing Events From a List.....	244
Using the Edit Window.....	245
Creating a New List.....	245
Saving a List	245
Reusing a List	246
Closing a List	246
Exporting a List	246
Importing a List	249



Chapter 10

Deleting an Entire List	249
Overriding Events in a List	250
Taking an Event.....	250
Stopping an Event	250
Customizing Your List Display.....	251
Using the Event Log.....	255
Using TimeDelay	
Getting Started with TimeDelay.....	259
Record Panel Controls	260
Playback Panel Controls	262
Censor Panel Controls	263
Exiting TimeDelay.....	265
Configuring the Panels	266
Selecting a Controller	266
Selecting a Communications Port for Remote Control	267
Configuring a Controller.....	268
Setting up the Signal Routing.....	270
Assigning Video Crosspoints.....	271
Setting up Timecode.....	272
Assigning Timecode Crosspoints	274
Setting a Delay Time	276
Starting Video Recording.....	277
Changing Playback Delay Time	278
Pausing the Playback Panel.....	278
Changing the Timecode	278
Locking the System	279
Recording a New Clip.....	280
Renaming a Clip.....	281
Deleting a Clip.....	281
Using Drop-Frame Timecode	281
Auto Restore	281
Auto Shuttle.....	282
Starting the Censor Channel.....	282
Understanding Segments.....	283
Marking Segments.....	284
Reviewing Segments.....	285
Editing Segments	285
Closing the Censor Channel.....	286
Using Remote Control	287
Packet Format	287
Arguments	288
Commands.....	288
Capacity.....	288

Censor	289
ClipSelect.....	289
Close.....	289
Cue	290
Drive.....	290
EE	290
EndClip	291
Frame.....	291
GotoTimecode	291
Jog	292
JoinBoth.....	292
JoinDelete	293
JoinNext.....	293
JoinPrevious	294
Lockout	294
MarkIn	294
MarkOut	295
NewChannel	295
Pause.....	295
Play	296
Record	296
RecordPair.....	296
Rename	297
SegmentReview.....	297
SetTime.....	297
Stop.....	298
SysPause.....	298
StartClip	298
Status.....	299
TimeSet.....	299
Timecode	299
TrimIn	299
TrimOut.....	300
System Control Returns.....	301
ACK.....	301
NAK.....	301
Status Responses.....	302
CapacityData	302
StatusData	302
TimeSetData	303
TimecodeData.....	303

Glossary



Tables

1	PDR100 and PDR200 features compared	2
2	Digital audio input channel indicators	70
3	Board representation key	80
4	Configuration example, two video input clocking sources	80
5	Configuration example, four video input clocking sources	81
6	Factory set values of the compression presets	139
7	VdrPanel shortcut keys	153
8	Tool Box Editor Keyboard Shortcuts	221
9	Event status indicators	235
10	Factory set values of the compression presets	269

Figures

1	Profile front panel	1
2	The PDR200 block diagram	7
3	PDR Application shortcuts on the Windows NT 4.0 desktop	11
4	Profile Configuration Manager window	13
5	Media Manager window	14
6	VdrPanel window	15
7	Profile Disk Utility window	16
8	Tool Box Editor window	17
9	List Manager window	18
10	TimeDelay window	19
11	Profile Configuration Manager window	21
12	Save As dialog box	22
13	Open dialog box for loading a configuration file	23
14	Master Timecode dialog box, genlock settings	24
15	System Timing dialog box, zero-timed	28
16	System Timing dialog box, E to E timed	29
17	Reference Genlock dialog box	31
18	LTC Inputs and Outputs dialog box	33
19	Analog Composite Video Input dialog box, Main tab	34
20	Analog Composite Video Input dialog box, Advanced Control tab	37
21	Analog Composite Video Input dialog box, Time Base Correction tab	39
22	Analog Composite Video Input dialog box, Main tab	40
23	Analog Composite Video Input dialog box, Advanced Control tab	43
24	Analog Composite Video Input dialog box, Vertical Interval tab	46
25	Component Analog Video Input dialog box (CAV)	48
26	Serial Digital Component Video Input dialog box	51
27	Serial Digital Component Video Input, Advanced tab	53
28	Analog Composite Video Output dialog box	54
29	Analog Composite Video Input Vertical Interval dialog box	57

30	Analog Composite Monitor Output dialog box, Main tab	58
31	Analog Composite Monitor Output dialog box, Burn-in Timecode tab	59
32	Serial Digital Component Video Output dialog box	60
33	Serial Digital Video Output dialog box, Advanced tab	61
34	Analog Audio Input dialog box	62
35	Digital Audio Input dialog box	63
36	Analog Audio Output dialog box	64
37	Digital Audio Output dialog box	65
38	Analog Audio Input dialog box, Main tab	67
39	Analog Audio Input dialog box, Line Level tab	68
40	Digital Audio Input dialog box, Main tab	69
41	Digital Audio Input dialog box, Status tab	70
42	Digital Audio Input dialog box, Sample Rate Converter tab	71
43	Analog Audio Output dialog box, Main tab	72
44	Analog Audio Output dialog box, Line Mode tab	73
45	Analog Audio Outputs dialog box, Line Level tab	74
46	Digital Audio Output dialog box	75
47	Audio Configuration dialog box, Input Mapping tab	76
48	Audio Configuration dialog box, Output Mapping tab	77
49	Audio Configuration dialog box, Input Clocking tab	81
50	Audio Configuration dialog box, Other tab	82
51	Media Manager window	86
52	Hardware Communication message box	87
53	Add/Remove Machine dialog box	91
54	Add Network Host dialog box	91
55	The Media Manager window	93
56	Properties dialog box for clips or masters	101
57	Find dialog box	103
58	Import Cartridge dialog box	109
59	Export Cartridge dialog box	111
60	Confirm Inventory dialog box	114
61	Format Cartridge dialog box	115
62	Format Cartridge dialog box	116
63	Properties dialog box for the library	118
64	Properties dialog box for a cartridge	119
65	Properties dialog box for an archived clip	120
66	Tape Transport Status dialog box	121
67	Transfer Monitor dialog box	124
68	VdrPanel window	129
69	Open Panel dialog box	130
70	Message box showing record capacity	132
71	Audio Monitor dialog box	133
72	Controller Setup dialog box	134
73	Comm Port dialog box	135



Contents

74	Set Clip Marks dialog box	136
75	Profile Options dialog box	137
76	Profile Options dialog box (BVW [insert-edit] only)	138
77	Edit Compression Presets dialog box	139
78	Video Crosspoint dialog box	143
79	Timecode Setup dialog box	145
80	Timecode Crosspoint dialog box	148
81	Panel dialog box	150
82	New Clip dialog box	155
83	Load Clip dialog box	157
84	Rename Video Clip dialog box	159
85	Set Clip Protection dialog box	160
86	Stripe Timecode dialog box	161
87	Delete Clip dialog box	162
88	Save Group of Clips dialog box	163
89	Load Group of Clips dialog box	164
90	Edit Clip List dialog box	165
91	Field Dominance dialog box	167
92	Profile Disk Utility window	169
93	Set Label dialog box	171
94	Format Disk(s) dialog box	172
95	Microcode Filename to Load dialog box	173
96	Detail Log dialog box	175
97	WinTail window	177
98	PortServer window	179
99	Services dialog box	181
100	Tool Box Editor window	190
101	Hardware Communication message box	191
102	Resource Manager dialog box	192
103	Channel tabs in Tool Box Editor	194
104	Custom Video Quality Settings dialog box	195
105	Resource Manager dialog box, Timecode	197
106	Remote Machine dialog box	200
107	Current bin display	202
108	Properties dialog box	204
109	Capture timeline	206
110	Timecode entry window	208
111	E to E button	208
112	Record buttons	208
113	Clip Name text box	209
114	Transport controls	209
115	Record Buffer dialog box	210
116	Create and User Mark buttons, plus event and frame controls	212
117	Edit timeline	215

118	Trim handles on the edit timeline	216
119	Audio controls	219
120	List Manager window	225
121	Resource Manager dialog box	227
122	Custom Video Quality Settings dialog box	230
123	Remote Machine dialog box	232
124	A basic playback list	234
125	Creating a record event	239
126	New Switch Event dialog box	240
127	New Transfer Event dialog box	241
128	New Transfer Event dialog box	242
129	New List dialog box	245
130	Font dialog box	251
131	Color dialog box, with custom color controls shown	252
132	Columns dialog box	253
133	An example of a log file	255
134	TimeDelay conceptual model	257
135	TimeDelay window with record/playback pair	259
136	Record panel controls	260
137	Playback panel controls	262
138	Censor panel controls	263
139	Controller Setup dialog box	266
140	Communication Port dialog box	267
141	Profile Options (controller configuration) dialog box	268
142	Edit Compression Presets dialog box	269
143	Video crosspoint dialog box	271
144	Timecode Setup dialog box	272
145	Timecode crosspoint dialog box	274
146	Go To Timecode dialog box	278
147	Panel Lockout dialog box	279
148	New Clip dialog box	280
149	Segments in the clip window	283
150	Censor channel	284



Contents

Preface

About this Manual

The *Profile® Family User Manual* supports Profile System Software 2.2 for the industry-standard Profile PDR 100 Video Disk Recorder and the PDR200 Profile Video File Server. Profile disk recorders use digital technology to store and produce broadcast-quality video and CD-quality audio. This manual documents the standard and optional software applications that run on the Profile disk recorder:

- The Profile Configuration Manager configures your hardware for input and output of video and audio, genlock, and system timing.
- The Media Manager manages clips and masters on disk and in a cartridge library system.
- VdrPanel lets you capture and use video and audio clips.
- The Profile Disk Utility lets you create a file system or load new microcode for a volume of disks.
- The optional Tool Box Editor logs material and performs simple, cuts-only edits. It also allows you to create a sequence of clips called a master.
- The optional List Manager allows you to set up simple station automation.
- TimeDelay, also optional, allows you to delay a video feed by a specific amount of time.
- Other Profile utilities include Profile Log (WinTail), PDR Service, ProLink, PortServer, plus **fcconfig**, a utility used for Fibre Channel networking.

NOTE: This manual assumes that you are familiar with basic Microsoft® Windows™ operation.



Related Documentation

Several manuals related to the *Profile Family User Manual* include:

- On-line manuals. You can access on-line help for an application at any time by choosing **Help | Help Topics**.
- *Profile System Version 2.2 Release Notes*.
- *Profile PDR200 Installation Manual*.
- *PLS200 Library System Manual*.
- *PRS200 RAID Storage Instruction Manual*.
- *PDX103 Disk Expansion Unit Installation Manual*.
- *PDX208 Disk Expansion Chassis Instruction Manual*.
- *PRC100 Profile Control Panel User Manual*.
- Microsoft Windows NT user documentation.

Terminology and Conventions

Button (graphical)	Buttons shown in bold (OK , for example) that you click with the mouse pointer.
Button (mouse)	The two or three buttons on the top of the mouse.
Choosing	Choosing menu items, File Exit , for example. (File Exit means <i>choose the Exit menu item under the File menu.</i>)
Commands	Commands (a:\setup , for example) are shown in bold.
Clicking	Pressing and releasing the mouse button without moving the pointer.
Ctrl key	Hold Ctrl down while pressing other keys in a sequence.
Double-clicking	Pressing and releasing the left mouse button twice without moving the pointer.
Dragging	Pressing and holding the mouse button while moving the pointer.
Moving	Changing the location of the pointer on the screen by moving the mouse.
Pointer	An arrow or other graphic on the screen indicating the current cursor position for selecting or clicking.
Pointing	Positioning the pointer on an object on the display by moving the mouse.
Right-click	Pressing and holding the right mouse button.



Preface

Introducing the Profile Family

The PDR100 Profile Video Disk Recorder and the PDR200 Profile Video File Server store broadcast-quality video and CD-quality audio on computer disk drives rather than on tape, allowing almost instant access to any location in your video and audio material.

A Profile system is more than just a one-for-one replacement of a VTR: it can have up to four video channels which is like having four independent VTRs in one unit. Clips are available to all channels at once, so you can play a clip on more than one channel at the same time without making a copy of it. Since each channel is independent of the others, each playback can start at a different time and at a different place in the clip.

You can even start playing a clip while it's still being recorded. Just start capturing the clip on one channel, wait about five seconds, and then play the clip back on another channel. This kind of control makes the Profile system an ideal solution if you want to go to air with a clip before you are finished recording it.

Table 1 on page 2 lists and compares other features of the PDR 100 and PDR 200 in detail.

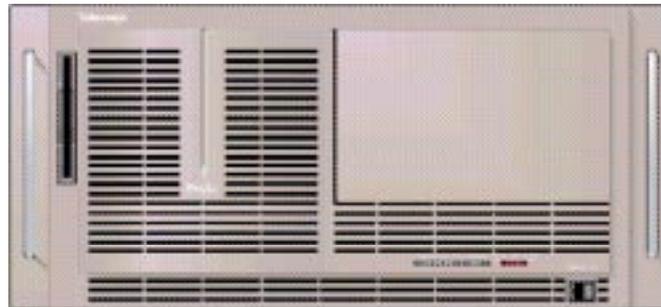


Figure 1. Profile front panel



Table 1. PDR 100 and PDR200 features compared

Feature	PDR100	PDR200
Video inputs	Analog composite, component analog (CAV), serial digital component	Analog composite, component analog (CAV), serial digital component
Video channels (CODECs)	2 or 4	2 or 4
Disk drives	Up to eight 4-GB SCSI	Up to eight 9-GB Ultra-SCSI
Audio	Up to 16 channels, 16-bit analog standard; digital embedded optional (625 only)	16 channels, digital standard (AES/EBU, embedded); analog optional
Digital audio interfaces	None	XLR216, BNC216
Analog audio interfaces	XLR100	PAC208 (8 channel), PAC216 (16 channel)
Internal storage at 24 Mb/s	3 hours	6 hours
Mainframe bandwidth	24 Mb/s	30 Mb/s
Ethernet	10/100 BaseT	10/100 BaseT
Video network	Fibre Channel upgradeable	Fibre Channel ready
RS-422 protocols	Profile, Louth, Odetics, BVW	Profile, Louth, Odetics, BVW
Reference signals	NTSC and PAL	NTSC and PAL
Line formats	525/60 and 625/50	525/60 and 625/50
Compression	Continuously variable motion JPEG	Continuously variable motion JPEG

NOTE: Profile System Software version 2.2 supports both the PDR100 and the PDR200. In addition, version 2.2 is runs on Windows® NT™ 3.51 and 4.0.

The PDR100 and PDR200 are supported by the following optional products:

- Fibre Channel interface card
- PDX103 and PDX208 Profile Disk Expansion Units
- PAC208 and PAC216 Analog/Digital Interface chassis (PDR200 only)
- XLR216 and BNC216 Digital Interface chassis (PDR200 only)
- PRS200 Profile RAID Storage System (3 to 96 hours of storage)
- PLS200 Profile Library System
- PRC 100 Profile Control Panel unit
- LVS 100 Live Controller
- PDRFCD CD-ROM Drive
- Profile Tool Box Editor software
- Profile Tool Box List Manager software
- Profile TimeDelay application software



A Profile System Overview

The PDR 100 and PDR 200 are multichannel digital disk recorders capable of supporting up to four channels with motion JPEG compression. In a four-channel Profile system, each channel can play back one video and four audio signals while using several different video formats. In other words, one Profile unit can replace up to four VTRs, with added benefit of random access to video and audio data stored on disk.

The Profile system has an EISA motherboard with an internal digital video routing system. There are sixteen EISA slots and one ISA slot used for interface cards and routing audio data.

The applications processor subsystem, which runs the Windows NT operating system, is based on an Intel Pentium 133 Mhz with 32 Mbytes of RAM. The subsystem also has a hard disk drive and a 3.5-inch floppy disk drive, plus a keyboard, mouse, and an SVGA card.

A video router chip set is integrated on the mother board. It routes video signals between the video disk system, video effects cards, and video I/O cards. The video router is a 32 x 32 crosspoint matrix capable of full bandwidth 4:2:2 CCIR 601 8-bit digital video. The video router allows real-time transfer of video throughout the system without impacting overall system performance. The video router also makes simultaneous record and playback possible on separate channels.

Video Disk Subsystem

In the video disk subsystem, video data is compressed and written to disk, or read from disk and decompressed. This video data is read from and written to the video router in 8-bit, parallel component digital video format. The video disk subsystem has disk recorder boards, a SCSI interface to the disks, and an Intel i960 real-time processor.

The video disk subsystem uses master and slave disk recorder boards with two SCSI channels on each board. The master disk recorder board comes standard with a two-channel Profile unit, and a four-channel system adds a slave disk recorder board. The master board has an Intel i960 real-time processor which controls compression and the data flows on SCSI channels and CODECs.

A two-channel Profile has two JPEG CODECs and an i960 processor located on the master disk recorder board. Bidirectional CODEC channels allow channels to be configured for recording or playback. In a four-channel Profile system, a slave disk recorder board adds two additional video disk recorder channels and another SCSI-2 interface to support more disk drives.

Video Compression

The i960 on the master board is used to control data flow and compression coefficient loading of the JPEG CODECs. The amount of video compression varies according to the setting of the compression coefficient. Higher compression ratios store more data, but the result is lower quality video. On the other hand, lower compression ratios result in higher quality video and less storage capacity. Audio is not compressed.

Since JPEG compression ratio can be varied to change the video quality given available storage time, the amount of storage depends on your choice of compression ratio. A quick rule of thumb is that five minutes of video—plus four channels of audio and two channels of timecode—is roughly equal to one gigabyte of disk storage at a 24 Mbps compressed video data rate. For example, a PDX208 Disk Expansion unit expands storage up to twelve hours and a PRS200 RAID Storage System can bring it up to approximately 96 hours.

In addition to video compression, the recorder boards also integrate the audio data, coming from the EISA bus, with compressed video data. With up to four channels of audio per channel of video. These recorder boards communicate with the SCSI-2 interface using a Direct Memory Access (DMA) interface.

Video data is written to and read from the disk over a fast/wide/differential or Ultra SCSI interface. A maximum of eight 9 gigabyte disk drives are used for storing the video and audio. Data is striped across disk drives for increased aggregate bandwidth. External disk drives may be added, such as the PDX208 Disk Expansion unit or the PRS200 RAID Storage system. A maximum of twelve drives can be supported on a single SCSI-2 bus. The master and slave recorder boards each have one SCSI-2 interface.



Video Interface Boards

Video and audio interface boards receive incoming and send outgoing video and audio data. These boards are responsible for converting the video and audio to internal formats used by the disk recorder.

There are several video boards that allow a Profile unit to be used with various standard video formats: Composite analog, serial digital component, or component analog video are all possible. All boards accept 525/625 (NTSC or PAL) video standards.

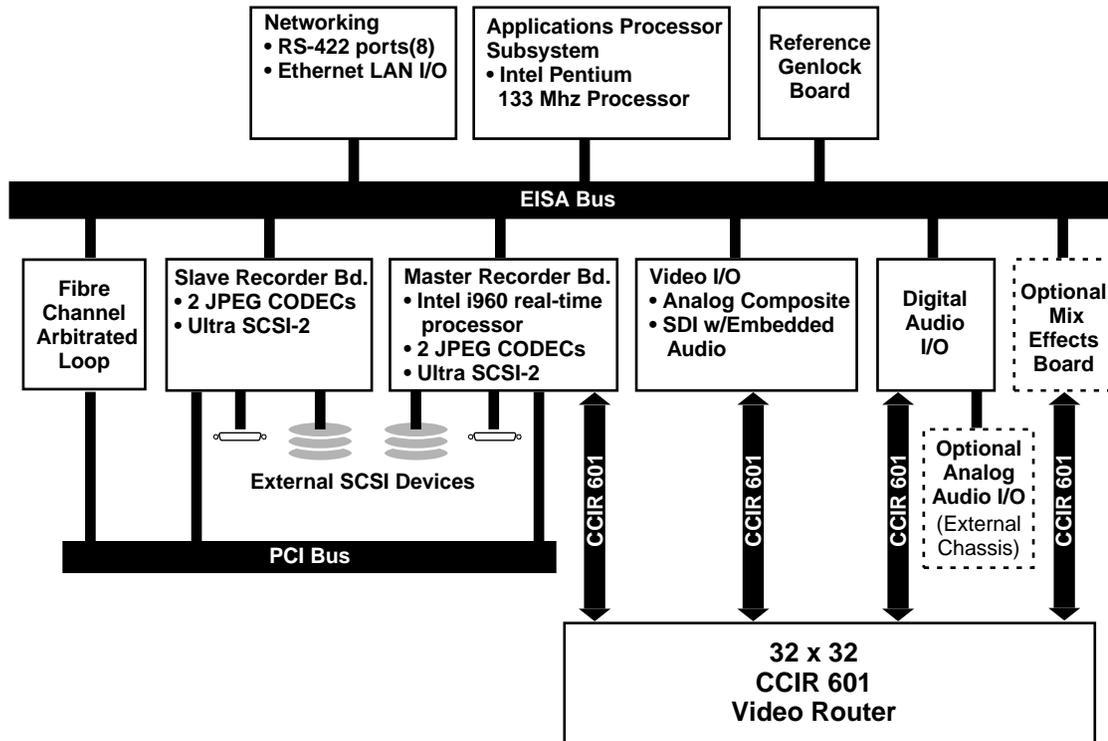
The latest analog composite input and output board offers two input and output channels per board. The two output channels for this board are similar to the output channels of the original analog composite board.

The monitor board allows you to display text and burn-in timecode on an output monitor.

Component analog input allows dithering, auto-timing, and vertical blanking. As with other inputs, you can automate VITC detection. You adjust input gain and also select an input format such as Betacam.

A serial digital component board handles both input and output. You can also enable dithering, auto-timing, and automate VITC detection. The board also has error detection and handling.

The standard reference genlock board allows you to time your Profile disk recorder to other devices in a broadcast facility. You can lock a Profile unit to a PAL or NTSC reference signal (house black). The genlock board also lets you have four LTC inputs and outputs, one input and one output for each for the four possible channel.



9955-1

Figure 2. The PDR200 block diagram



Profile Software Development

The Profile Software Development Kit (SDK) provides an application programming interface (API) for libraries of Profile functions. You can call these functions from any language that permits calls to C declared functions. Software developers can use the API to control the Profile from third-party hardware devices, for example. The API consisting of six libraries:

- The TekCfg library provides an interface to the Profile configuration.
- The TekPdr library furnishes calls that inventory and manage movies in Common Movie Format (CMF), an internal file format standard for video, audio, and timecode.
- The TekRem library makes it possible for a remote Windows NT system on an x86 processor to control a Profile disk recorder over an Ethernet LAN.
- The TekVdr library provides an interface for playing and recording video and audio clips.
- The TekVfs library supports low-level access to individual media files in the media file system.
- The TekVme library controls the optional video mix effects board.

Eight RS-422 serial ports come standard on a disk recorder. A disk recorder can issue serial commands or receive them from an external device via RS-422 communication lines. The Profile Protocol associates each API call with a specific number that can be sent over an RS-422 line. The ProLink application monitors Profile Protocol calls over an RS-422 link, allowing you to use compatible hardware devices, such as the PRC 100 Control Panel, to issue commands to a Profile unit.

Windows applications are also available to control the Profile system. Your disk recorder comes with several standard and optional applications. See “Starting and Closing Profile Applications” on page 11 for more information.

NOTE: Louth and Odetics RS-422 protocols are also supported, although there is not a one-to-one correspondence between these protocols and the Profile API. Louth and Odetics protocols do not allow you full access to the functionality of the

What to Read First

The order in which you should read the chapters of this manual depends on how you want to set up your Profile system.

- Before using your Profile unit, you must first configure your video and audio resources. Refer to Chapter 2, “Using the Profile Configuration Manager.”
- If you are upgrading a PDR 100 to version 2.2 of Profile system software from version 1.4.XX or earlier, you must rebuild your file system. Refer to Chapter 5, “Using the Profile Disk Utility.”
- Once you have configured your video and audio resources, and rebuilt your file system, if necessary, you are ready to capture and replay video and audio clips. Refer to Chapter 4, “Using VdrPanel.”
- To read Profile logs, access your Profile system from a remote PC, or attach a PRC 100 Profile Control Panel, refer to Chapter 6, “Using Profile Utilities.”
- To learn how to manage media on disk or over Fibre Channel on a Profile network, see “Using the Media Manager” on page 85.
- If want to use purchase and use optional software applications, see “Using the Tool Box Editor” on page 189, “Using the List Manager” on page 223, or “Using TimeDelay” on page 257.



Starting Your Profile System

Once the unit is properly installed, you are ready to log in. For instructions on how to install and power-on either a PDR 100 or PDR 200, see the unit's installation manual.

To log in automatically:

1. Power up the Profile unit, and the start up routine begins. During normal start up, you are logged in automatically and the VdrPanel application starts. You can hold down the Shift key during start up to interrupt the automatic log in process.

***NOTE:** If you stop the automatic log in, or if it fails, the Windows NT log in screen appears. When logging in, remember that Windows NT is case-sensitive.*

To manually log in:

1. At the Windows NT log in screen, enter the username: **profile**
2. Use the Tab key to advance to the **From** field. If your domain name or local computer name is not displayed in the box, click in the box to access a list of choices. Select your domain or local computer name from the list.
3. Use the Tab key to advance to the password field.
4. The password appears as asterisks (*) for password security. For the password, enter: **profile**
5. Click **OK** or press Enter.

***NOTE:** If a log in error message appears, and all the information is correct, try deleting the password and clicking **OK**.*

Starting and Closing Profile Applications

After logging into your Profile system, you see shortcuts for the Profile applications on the Windows NT desktop.

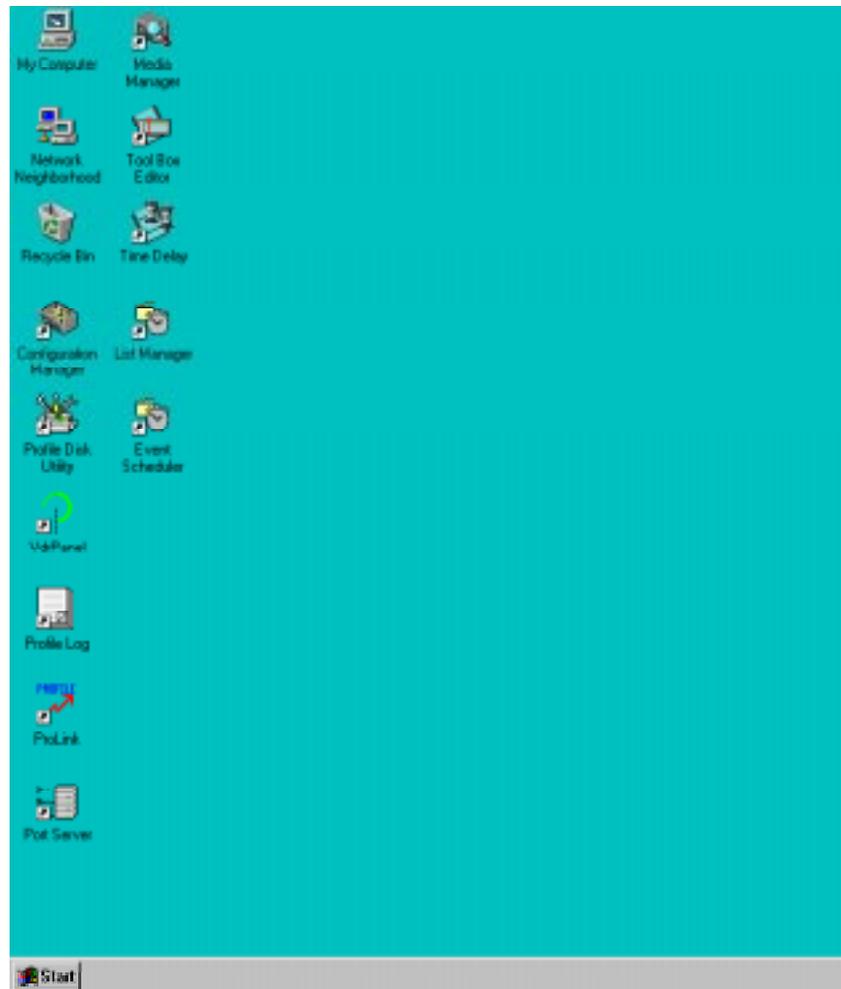


Figure 3. PDR Application shortcuts on the Windows NT 4.0 desktop



Starting an Application

To start a Profile application such as VdrPanel using Windows NT 4.0:

- Double-click the shortcut icon on the Windows NT desktop.

Or:

- Choose **Start | VdrPanel**.

Or:

- Choose **Start | Programs | PDR Applications | VdrPanel**.

To start a Profile application such as VdrPanel using Windows NT 3.51:

1. In Program Manager, double-click the **PDR Applications** program group icon.
2. Double-click the VdrPanel icon in the **PDR Applications** program group.

Viewing Help

To view the Help for an application:

- Choose **Help | Help Topics**.
- Click the **Help** button on a dialog box or a toolbar, if available.

To view version information (for VdrPanel in this example):

- Choose **Help | About VdrPanel**.

Closing an Application

To close Profile applications:

- Choose **File | Quit**, **File | Exit** or click the **Close** button.

Profile Configuration Manager

The Profile Configuration Manager shown in Figure 4 is an interface for configuring reference genlock, system timing, video and audio inputs and outputs. Refer to Chapter 2, “Using the Profile Configuration Manager.”

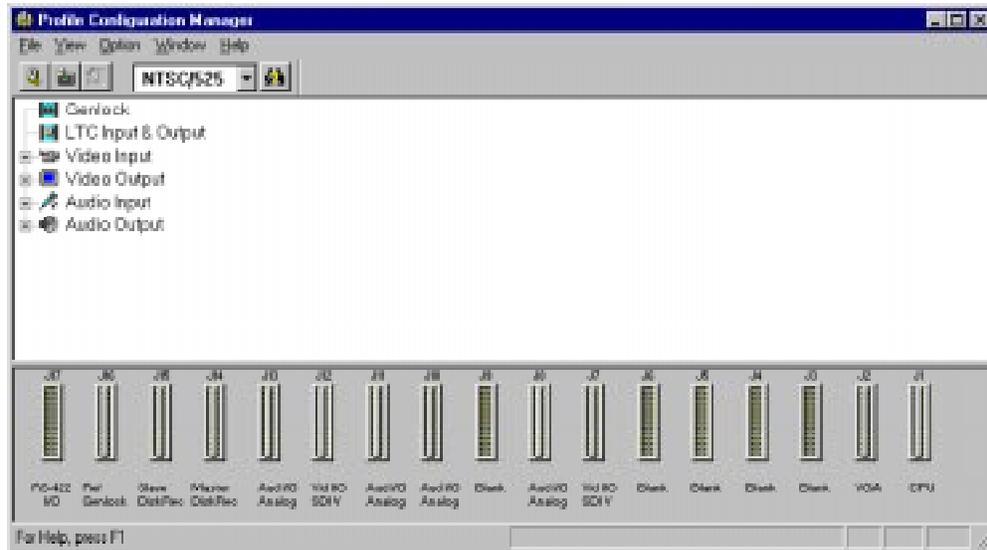


Figure 4. Profile Configuration Manager window

NOTE: You must configure your system resources with this application before you can use your Profile unit.



Media Manager

The Media Manager shown in Figure 5 allows you to manage clips and masters on disk and to archive and restore clips on a library system. Refer to Chapter 3, “Using the Media Manager.”

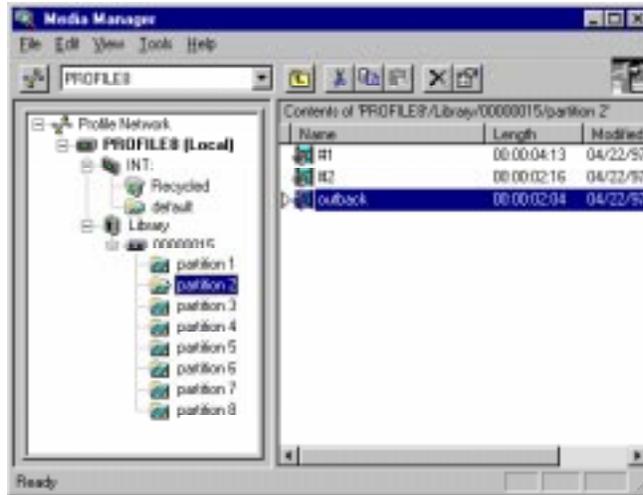


Figure 5. Media Manager window

VdrPanel

VdrPanel enables you to capture and trim video and audio clips and then play those clips back. VdrPanel appears in Figure 6. By default, VdrPanel starts automatically when you power-on your Profile system. For more information, refer to Chapter 4, “Using VdrPanel.”

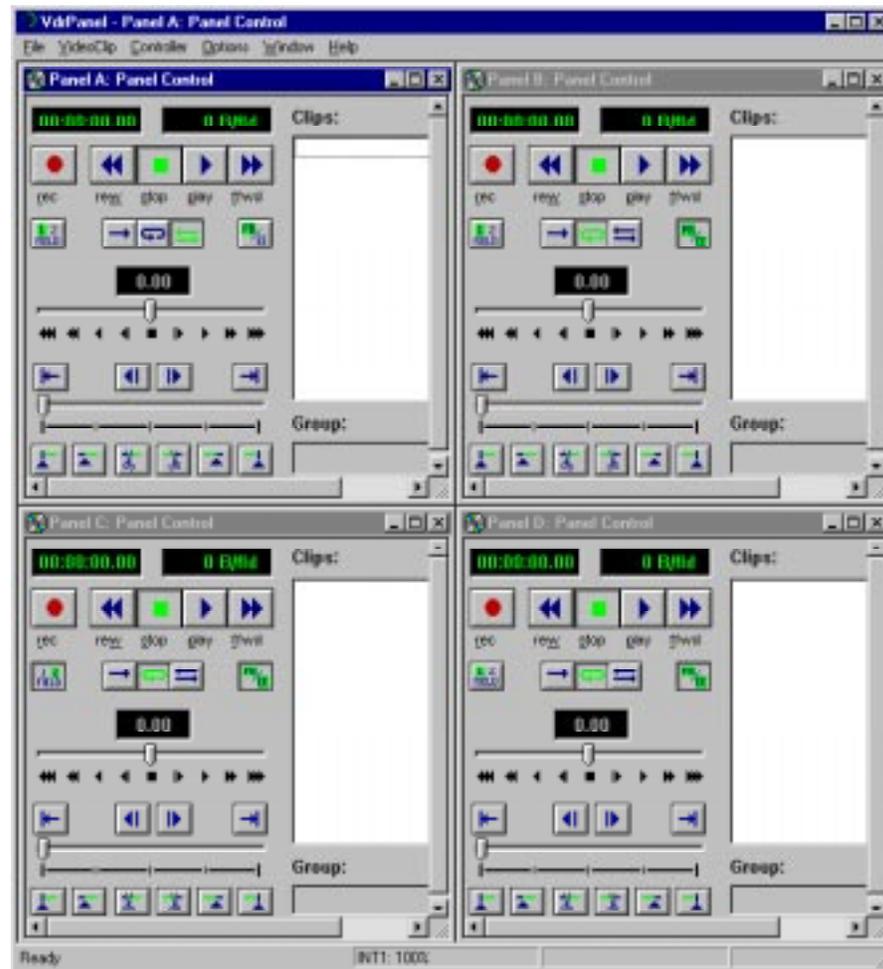


Figure 6. VdrPanel window



Profile Disk Utility

As shipped from the factory, Profile disks come preformatted and a file system is already created. Profile Disk Utility allows you to create new file systems, reformat disks, and change disk labels (see Figure 7). To find out more about how to use this utility, refer to Chapter 5, “Using the Profile Disk Utility.”

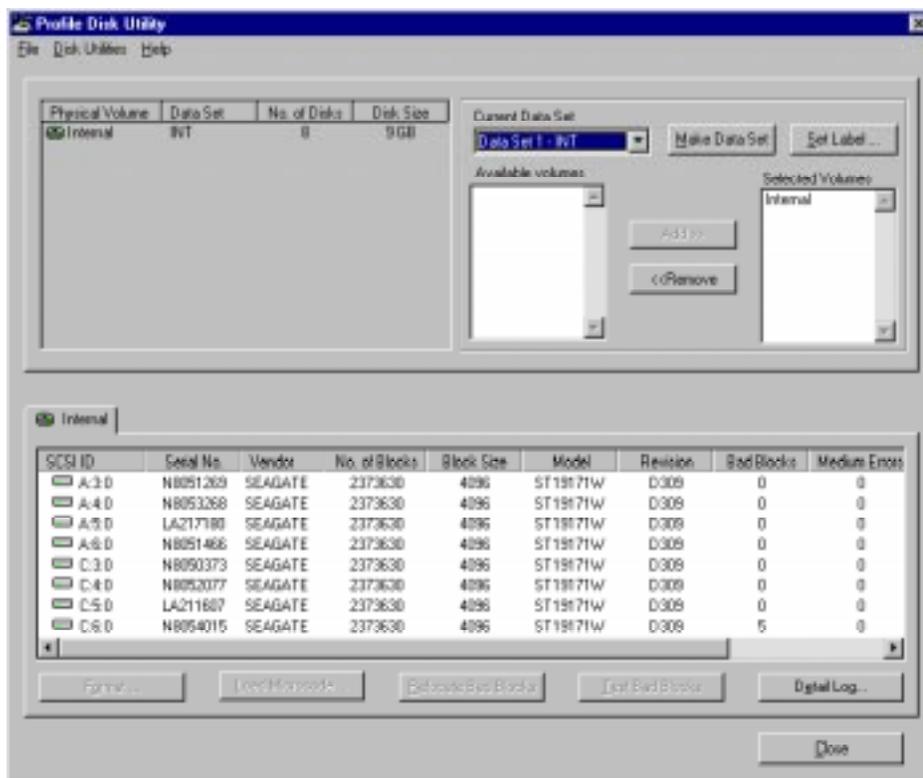


Figure 7. Profile Disk Utility window

Tool Box Editor

NOTE: A time-locked version of this optional software was shipped to you with version 2.2 system software. Unlocking this software requires an additional purchase. Click **Purchase** in the timelock dialog box for information on how to purchase this software.

The optional Tool Box Editor shown in Figure 8 lets you create new media by logging and capturing video and audio clips while also providing an inexpensive, cuts-only editing system. Refer to Chapter 8, “Using the Tool Box Editor.”



Figure 8. Tool Box Editor window



List Manager

NOTE: A time-locked version of this optional software was shipped to you with version 2.2 system software. Unlocking this software requires an additional purchase. Click **Purchase** in the timelock dialog box for information on how to purchase this software.

The optional List Manager shown in Figure 9 allows you to set up simple station automation. You can record incoming video at predetermined times, send incoming video directly to an output, or combine all of these functions to increase the automation level of you operations. Refer to Chapter 9, “Using the List Manager.”

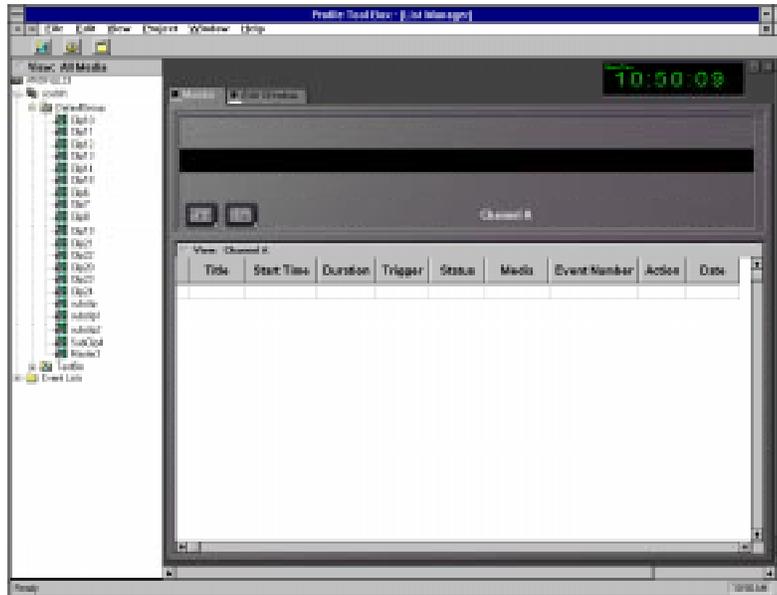


Figure 9. List Manager window

TimeDelay

NOTE: A time-locked version of this optional software was shipped to you with version 2.2 system software. Unlocking this software requires an additional purchase. Click **Purchase** in the timelock dialog box for information on how to purchase this software.

TimeDelay allows you to delay incoming video by a user-specified amount of time (see Figure 10). For more information, see Chapter 10, “Using TimeDelay.”

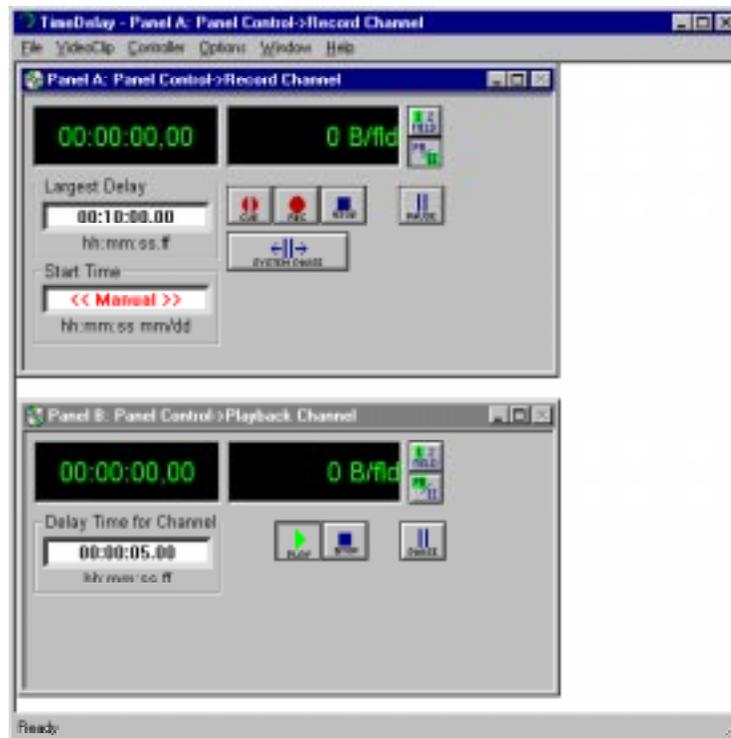


Figure 10. TimeDelay window



Profile Logs

You can view Profile system logs with the graphical log viewer, WinTail. This log viewer allows you to see the end of a log file. To learn more about how to view Profile logs, see Chapter 6, “Using Profile Utilities.”

ProLink

ProLink monitors Profile Protocol calls over RS-422 communication lines, allowing you to use a controller such as the PRC 100 Profile Control Panel to communicate with a Profile system. For more information on Profile Protocol, see the documentation that accompanies the Profile Software Development Kit.

PortSever

PortSever allows you to control a Profile unit remotely using Ethernet communications. For example, you can run PortServer on a remote Profile system so that you can control it over a LAN with it from another Profile. PortServer is used in conjunction with Fibre Channel operations.

Fibre Channel Support

You can use Fibre Channel video networking capabilities to move media from one Profile unit directly to another. You can Media Manager use the Fibre Channel connection to transfer media files between machines, as well as the **listnames** and **copymovie** commands (described in the *PDR200 Installation Manual* and the *PDR100 Fibre Channel Manual*). Ethernet LAN is required for transferring commands and status information. For more information, see Chapter 7, “Video Networking.”

Using the Profile Configuration Manager

The Profile Configuration Manager provides an easy-to-use interface to streamline setting up reference genlock, video and audio inputs and outputs, system timing, and timecode. You use the configuration tree to open the specific configuration dialog boxes. A graphic representation of the Profile rear panel shows which boards have been installed. The Configuration Manager window appears in Figure 11.

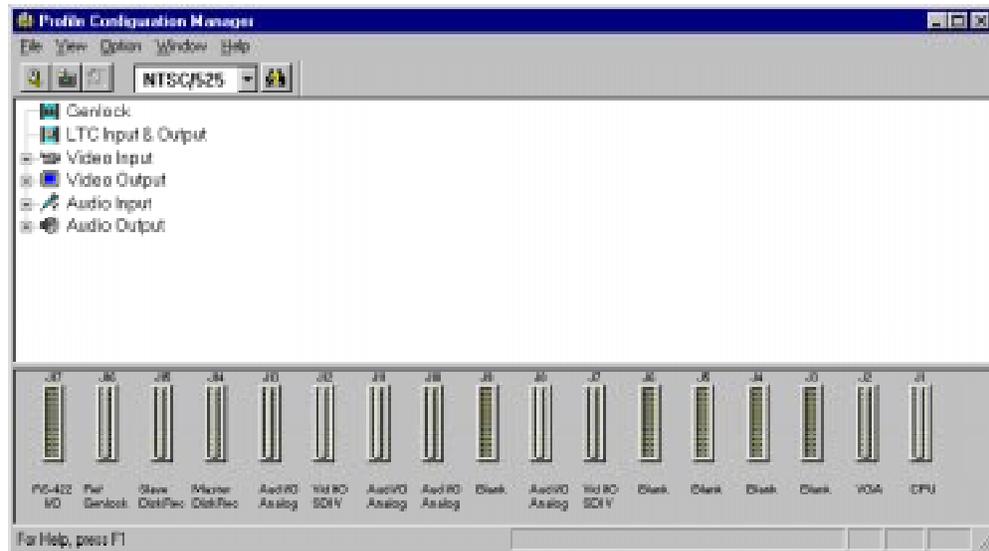


Figure 11. Profile Configuration Manager window

To select an item from the configuration tree:

- The configuration tree appears to the left of the display. Clicking on an entry, such as **Video Input**, expands the list of choices. Clicking on an expanded list of choices, such as if you click on **Video Input** a second time, collapses the list of choices.



Chapter 2 Using the Profile Configuration Manager

- A single click opens the specific dialog box, closing a previously opened box, if necessary. A double-click opens the specific dialog box but does not close any other open dialog boxes. To close all open dialog boxes at once, choose **Window | Close All**.

All changes in a dialog box take place immediately. The **Undo** button will undo changes from the time a dialog box was opened in the current tab of the dialog box. The **Undo** button is dimmed if there is nothing to undo. The **Help** button opens context-sensitive help related to the current dialog box.

By default, the toolbar and status bar are shown in the Configuration Manager window. To hide the toolbar or status bar:

- Choose **View | Toolbar** or **View | Status Bar**.

To view information about installed boards:

- Choose **Help | Installed Boards Information**.

Saving a Configuration File

It is possible to preserve a configuration for later use. You can save your current overall configuration in a file and then load it later. Configuration files have a *.cfg* extension. To save your current configuration in a file:

1. Choose **File | Save Current Configuration**. The Save As dialog box appears (Figure 12).



Figure 12. Save As dialog box

2. Enter a file name in the File Name box—*new.cfg* in this example.
3. Press Enter or click **Save**. The current configuration is saved.

Loading a Configuration File

To load a configuration file that has been saved previously:

1. Choose **File | Load Configuration File**. The Open dialog box appears (Figure 13).



Figure 13. Open dialog box for loading a configuration file

2. A message box warns you that if you load a configuration file, all open windows are closed. Click **Yes** to continue.
3. Double-click a file name in the tree or type the name of the file in the File Name box—*new.cfg* in this example.
4. Press Enter or click **Open**. The file is loaded as the current configuration.



Setting Master Timecode

From the Master VITC Setting dialog box, you can conveniently view and change VITC settings for genlock and all available inputs and outputs. To set the master timecode (VITC) settings:



1. Choose **Options | Master Timecode** or click the **Master Timecode** button on the toolbar. The Master VITC Setting dialog box appears (Figure 14).

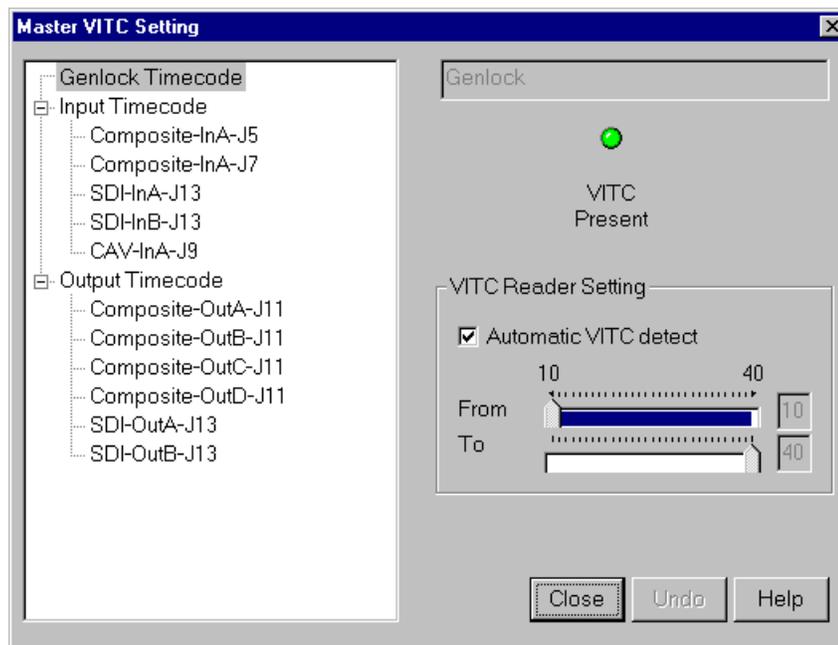


Figure 14. Master Timecode dialog box, genlock settings

2. The VITC Present status indicator should be on (green) if VITC is present. If VITC Present is not on, use one of the following options:
 - Manual VITC detection (four-channel LTC version of the reference genlock board):
 - Verify Automatic VITC detect is not selected. If it is, click to toggle it.
 - Set VITC Reader Line1 to the expected location of the first Reader Line

and VITC Reader Line2 to the second expected Reader Line. If you only have one VITC line, enter the same value on both Reader lines.

- Check VITC Present. If it is still not on, use a waveform monitor to check the genlock signal to make sure that VITC exists on these lines.
- Automatic VITC detection only:
 - Verify Automatic VITC detect is selected. If it is not, click to toggle it. The Search Lines are automatically established for NTSC/525 and PAL/625.
 - Check VITC Present. If it is still not on, check the genlock signal to make sure that VITC exists and is within the expected range.
- 3. For each video input that should have VITC, select it from the list:
 - For automatic VITC detection on analog composite and serial digital component signals:
 - Verify Automatic VITC detect is selected. If it is not, click to toggle it.
 - Set VITC Reader Line1 to the beginning of the search line. The minimum line number is 6 in PAL and 10 in NTSC.
 - Check for VITC Present.
 - For manual VITC detection on analog composite and serial digital component signals:
 - Verify Automatic VITC detect is not selected. If it is, click to toggle it.
 - Set VITC Reader Line1 and VITC Reader Line2 to the lines where VITC is located. If you only have one VITC line, enter the same value on both Reader lines.
 - Check VITC Present. If it is still not on, double check your line numbers and try again.
- 4. For each video output that should have VITC, select it from the list:
 - For analog composite on preexisting PDR100 and PDR200 units:
 - Verify VITC Generator Enable is checked. If not, click to toggle it.
 - Click on Vert. Interval to open the Vertical Interval Line Programming dialog box.



Chapter 2 *Using the Profile Configuration Manager*

- Select the desired VITC lines by checking in the VITC Enable column for the line. There is not a limit on the number of VITC lines.
- Click **Close** to close the Vertical Interval Line Programming dialog box.
- For serial digital component:
 - From the Serial Digital Component Video Output dialog box, set the lines where you want VITC in VITC Generator Line1 and VITC Generator Line2.
 - Verify VITC Generator Enable is checked. If not, click to toggle it.

Setting the System Timing

A new, factory-default PDR200 is configured so that:

- All outputs are zero-timed to the external reference (house black).
- Each input can lock to and record any stable video input, whether or not the source is genlocked to an external reference.

NOTE: Serial digital inputs (525 lines) on a PDR100 must be timed manually.

To adjust system timing:



1. Choose **Options | System Timing** or click the **System Timing** button on the toolbar. The System Timing dialog box appears (see Figure 15 which shows an example of how the dialog box looks when the outputs are zero-timed by default).
 - The red line represents the external reference, and the yellow line represents reference genlock.
 - A hashed box represents a timing window or, in other words, the range of lines within which the timing is adjusted.
 - The external reference, represented at the top of the dialog box, shows a range from -16 to +16 lines. You can scroll past this range by dragging the pointer on this line in either direction with the mouse.
2. Click any button to the left of the internal reference (genlock) or video output signal name and the timing edit box appears in the bottom left of the System Timing dialog box (see Figure 16 which shows the dialog box when the outputs are E to E timed).
3. In the timing edit box, you can adjust the number of fields (genlock only) or lines, and also tune these settings with course or fine adjustments. You can enter a number directly or click an arrow to adjust a setting. The adjustments and ranges available vary, depending on the type of output you have.
4. Click **Close** to accept the settings, **Undo** to return to the previous settings, **Default** to return to the default settings.

NOTE: You must restart your unit for the new system timing setting to take effect.



Chapter 2 Using the Profile Configuration Manager

You can also fine tune your system timing settings individually under Reference Genlock System Input Advanced Adjustment in the Reference Genlock dialog box. You can also tune individual output settings under Output Timing Adjustment in under Video Output.



Figure 15. System Timing dialog box, zero-timed

E to E Timed Outputs

In some applications, you may want to precisely switch an output from a live video feed to playback of recorded material. Since the live input will be delayed as it passes through the Profile unit, you must set a corresponding delay on the playback. The E to E Timed Output option sets a 16-line delay on all the system outputs, allowing a zero-timed input to be exactly timed with a play to air signal. To set all your Profile unit output for E to E operations:

1. Choose **Options | System Timing** or click the **System Timing** button on the toolbar. The System Timing dialog box appears.

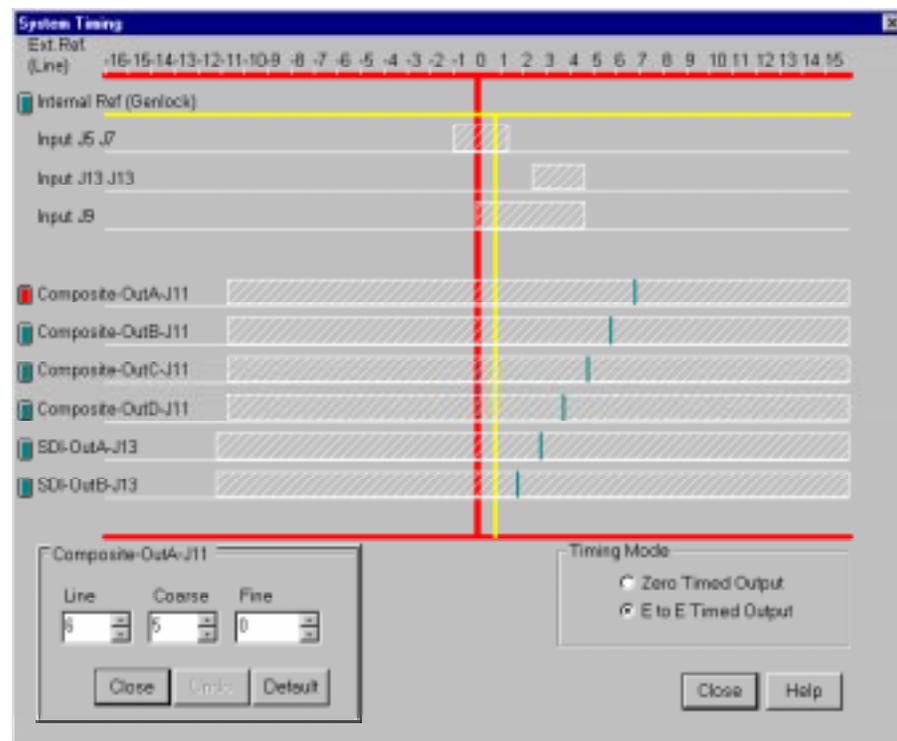


Figure 16. System Timing dialog box, E to E timed

2. Click **E to E Timed Output**.
3. Click **Close**.



Adjusting the Timing when Upgrading to 2.2

If you are upgrading an existing PDR 100 to system software version 2.2, your system timing will be left in E to E mode and no changes will be made to your system timing. The only difference you will see is a numeric offset of 7 lines in the Line setting under Reference Genlock System Input Advanced Adjustment in the Reference Genlock dialog box and an offset of nine lines in the Vertical Line Delay under Output Timing Adjustment under Video Output.

Setting the Reference Genlock

The Reference Genlock dialog box sets the genlock parameters. To open this dialog box, click or double-click **Genlock** from the configuration tree and the Reference Genlock dialog box appears.

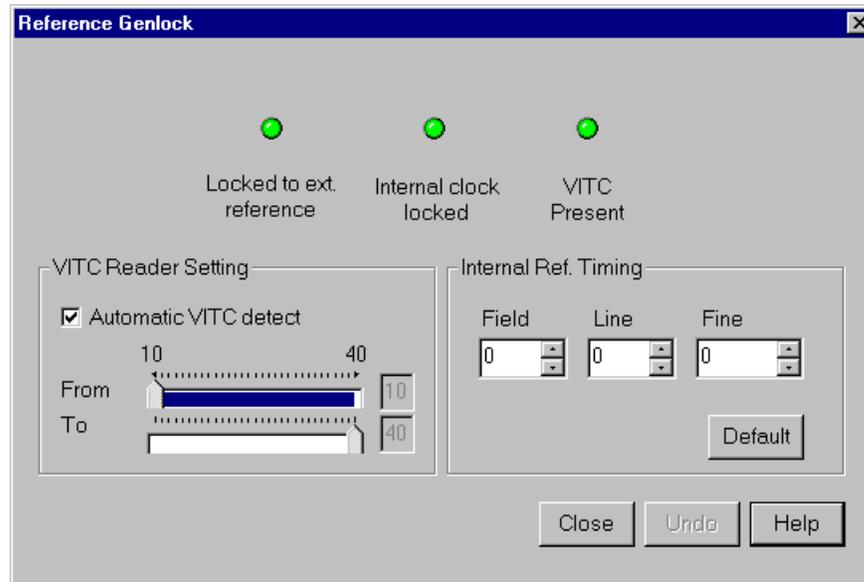


Figure 17. Reference Genlock dialog box

Status Indicators

At the top of the dialog box, the status indicators display the current status of the Genlock input: Locked to External Reference, Internal Clock Locked and VITC Present. A green light indicates that the particular status is on. These are indicators and cannot be edited.

VITC Reader Setting

If you use Automatic VITC detect, the Profile unit uses the range set in the From and To lines to look for the VITC signals. If Automatic VITC detect is not used, the unit expects to find the VITC signals on the VITC Reader Line 1 (default 10) or Line 2 (default 12).



Internal Reference Timing

Use the Field, Line, and Fine entries to adjust the internal timing relative to the reference input. Changing this setting affects all system timing, including all output timing and the input synchronized timing window. Click **Default** to return to the default values (0,0,0).

NOTE: In order to properly time the disk recorder into the system, the Internal Reference Timing should only be changed if the downstream timing requirements cannot be met using the Video Output Delay Adjustment. This should be done prior to setting individual output delay adjustments.

Changing LTC Input and Output Names

The **LTC Inputs & Outputs** renames the LTC inputs and outputs. To open this dialog box, click or double click **LTC Input & Output** in the configuration tree.

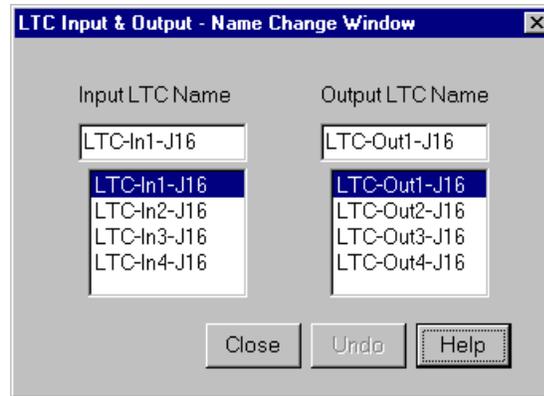


Figure 18. LTC Inputs and Outputs dialog box

1. Select an LTC input or output name.
2. Position the text edit cursor within the edit box.
3. Enter the new name or portion of name.
4. The new name appears in the name list.



Video Input

You may have analog composite, component analog (CAV), or serial digital component video inputs installed in your Profile system. The steps to configure video inputs follow.

Analog Composite Video Input

NOTE: *If you have received a new PDR200 video file server from the factory, you will have the new analog composite video input. If you have an existing system and are upgrading to Profile system software version 2.2, see “Analog Composite Video Input for Preexisting Profile Units” on page 40.*

To open the Analog Composite Video Input dialog box, select Video Input from the configuration tree, and then click or double-click an analog composite input from the list, such as *Composite-InA-J5*. This configuration has several dialog boxes, each opened by clicking the appropriate tab. The Main tab is displayed when the configuration is opened (see Figure 19). Click on the other tabs to open the other controls.

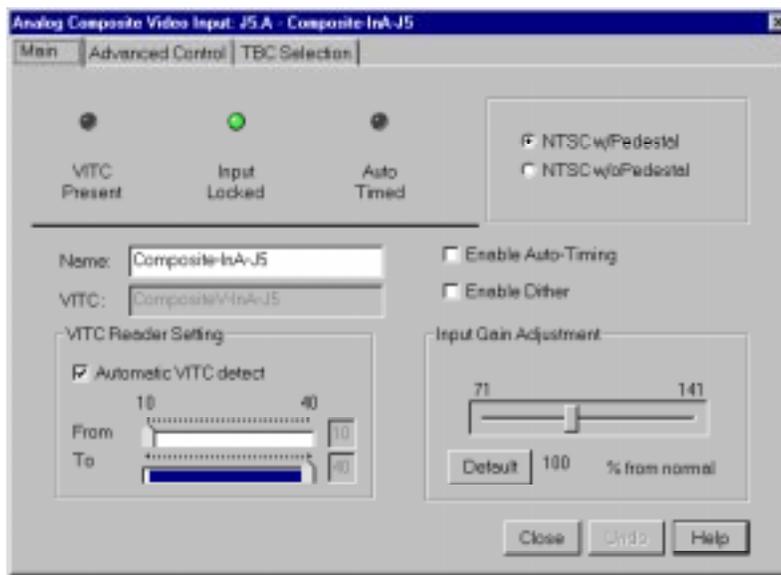


Figure 19. Analog Composite Video Input dialog box, Main tab

Status Indicators

These indicators show the current status of the analog composite video input: VITC Present, Input Locked, and Auto Timed. A green light indicates that a status is on. These are indicators and cannot be edited.

Video Standard

You have two choices for the video standard of this input board: NTSC with pedestal or NTSC without pedestal. If you change the standard, restart all tools that use this channel. The board can serve both standards, but the input can only accept one at a time.

Renaming the Input Signal

Enter a new name for the input signal in the **Name** box. For example, if the signal is a network feed, you could rename it to *Network_Feed*. The VITC name, the window title bar, and the configuration tree name change automatically as you enter the new name. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.

VITC Reader Setting

If you use Automatic VITC detect, the Profile system uses the range set in the From and To lines to look for the VITC signals. If Automatic VITC detect is not checked, the system expects to find the VITC signals on the VITC Reader Line 1 (default 10) or Line 2 (default 12). If the signal is found, the VITC Present status indicator is turned on.

NOTE: Input must be auto-timed to use automatic VITC detection.

Enable Auto-Timing

Auto-timing determines if the input is synchronized to the reference genlock signal. The Profile system records time-base corrected video, whether or not it is also locked to the reference. If auto-timing is enabled and the signal was able to be timed into the system, then the Auto Timed indicator is turned on.

If you want to use your Profile unit as a switcher and/or have the output video correctly timed when in E to E mode, the input video must be locked to the reference and properly timed to the Profile system. To aid in the timing setup, all video inputs have auto-timing circuits which synchronize input video to the



internal timing reference as long as the input video is within the auto-timing sync window (± 2 lines). To get to the auto-timing window, the input must be advanced seven and one-half lines.

The auto-timing circuit is always trying to lock to the signal. If you try to auto-time a signal outside of the window, the video signal appears to be broken-up as it cannot be timed into the system. If the input drifts out of range, it is retimed as soon as it drops back into range. The Profile unit can use untimed signals if auto-timing is not enabled, but they are not timed correctly and may cause jumping and skipping in E to E mode.

***NOTE:** If you select auto-timing for an input signal and it cannot auto time with the genlock reference signal, the input signal is not recorded accurately. If you must record an input that cannot lock, disable auto timing and record. There may be problems if you are operating in E to E mode, but the clip won't play back correctly timed.*

Enable Dither

Dithering smooths out roughness caused when a signal is digitized. The LSB artifacts on 10-bit video feeds are reduced. There is no effect on 8-bit video.

Input Gain Adjustment

You adjust the input gain on the syncs to compensate for any losses in the input. To adjust the gain, move the slider to the desired value. The range is from 71 to 141 percent (± 3 dB) of the input signal. When you click **Default**, the Input Gain Adjustment resets to the default value (100 percent).

Analog Composite Video Input Advanced Control

The Advanced Control tab allows you to select a decode mode, clamp speed, and vertical interval. Click or double-click on the Advanced Control tab to view it (see Figure 20).

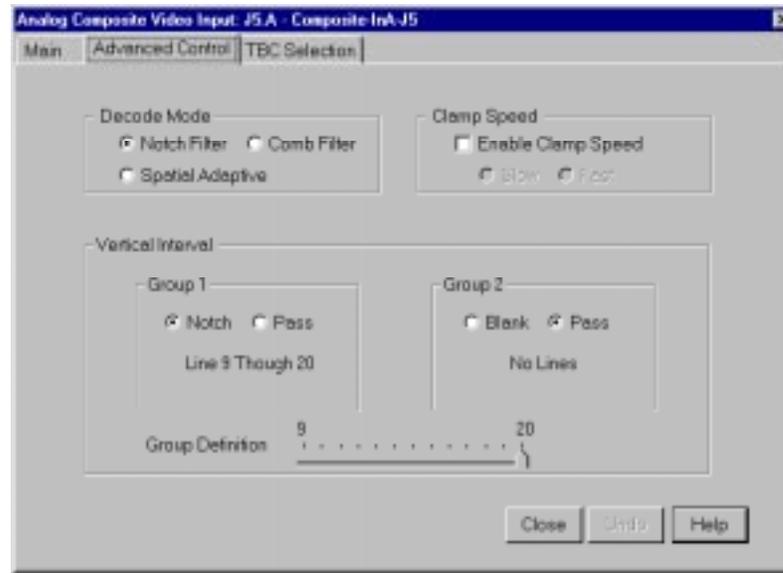


Figure 20. Analog Composite Video Input dialog box, Advanced Control tab

Decode mode determines how the chrominance and luminance information is separated for conversion for storage. There are three options:

- **Notch Filter.** Decode mode separates the chrominance by using a notch filter around the chrominance subcarrier. This leaves the high frequency luminance intertwined with the chrominance. A notch decoder readily determines horizontal lines are line-to-line luminance. Fine vertical lines can be more difficult.



- **Comb Filter.** Decode mode tries to separate high frequency luminance from the chrominance using the same notch filter as the notch decoder, but also takes information from the next line. It uses this information to determine if high frequency is luminance or chrominance. A comb decoder readily determines finely spaced vertical lines are luminance. A lack of line-to-line phase alteration causes difficulty with fine horizontal lines.
- **Spatial Adaptive.** Decoding uses either the comb or notch decoder, on a pixel by pixel basis, depending on which gives the best results. For horizontal lines, notch is used; for vertical lines, comb is used.

NOTE: Spatial adaptive decoding uses the high or low threshold setting.

Clamp Speed

Clamp speed sets the reaction to changing DC levels of the input signal. Click **Enable Clamp Speed** to enable it. Speed can be either slow or fast. The fast clamp speed is more reactive to small DC variations. The slow speed ignores short-term DC level changes but gradually changes the clamping level to track the input.

Vertical Interval

These controls set how vertical interval signals are handled. Move the Group Definition slider to set how many lines are in Groups 1 and 2. In Group 1, Notch and Pass are available while Blank and Pass are available in Group 2:

- **Notch** applies notch filtering to the vertical interval video line. This means that chrominance information and any luminance around the chroma subcarrier are removed.
- **Pass** indicates that the vertical video line is passed-through.
- **Blank** indicated that line the group are blank.

Analog Composite Video Input Time Base Correction

The TBC Selection tab allows you to select Time Base Correction (see Figure 21). When you select Time Base Correction, you can select either composite input or Super VHS (SVHS or S-video) input. There are two channels available on this video input board. If Time Base Correction is selected in channel A, channel B is unselected, and vice versa.

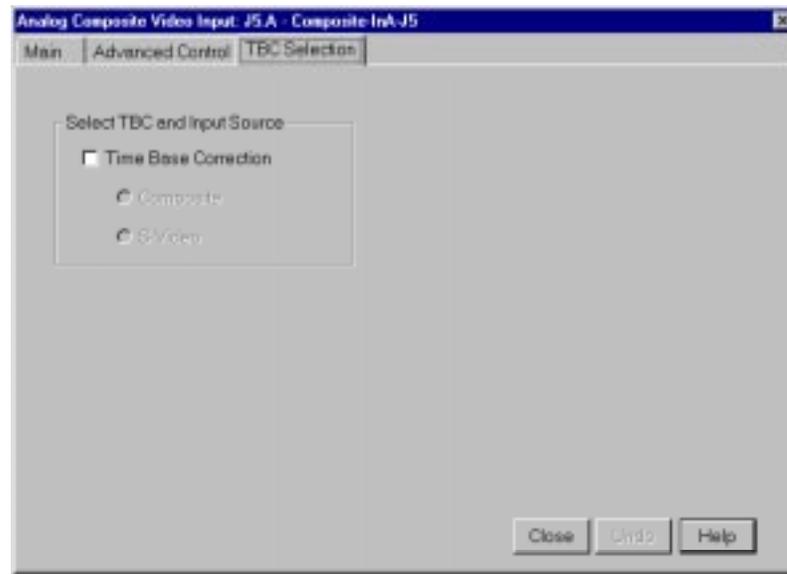


Figure 21. Analog Composite Video Input dialog box, Time Base Correction tab



Analog Composite Video Input for Preexisting Profile Units

NOTE: These instructions apply only if you are upgrading your disk recorder to Profile system software version 2.2. If you have a new disk recorder, follow the instructions in “Analog Composite Video Input” on page 34.

To open the Analog Composite Video Input dialog box, select Video Input from the configuration tree, and then click or double-click an analog composite input from the list, such as *Composite-InA-J5*. This configuration has several dialog boxes, each opened by clicking the appropriate tab. The Main tab is displayed when the configuration box is opened. Click on the other tabs to open the other controls.

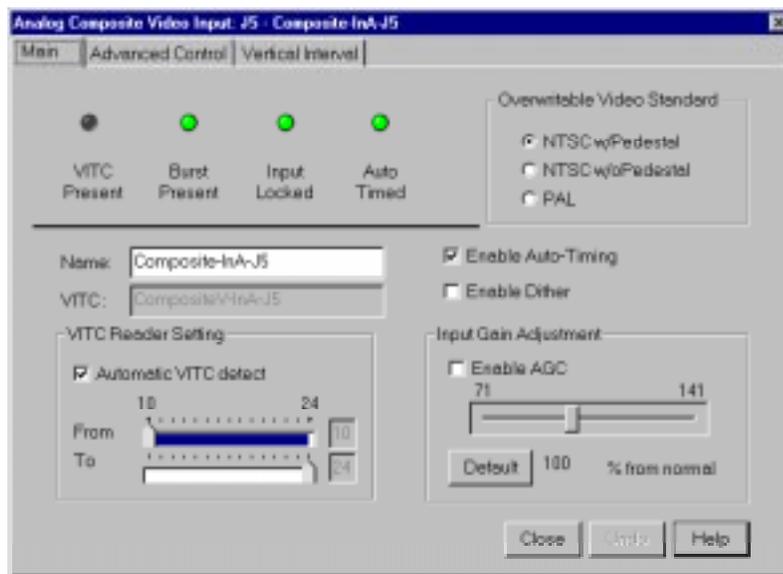


Figure 22. Analog Composite Video Input dialog box, Main tab

Status Indicators

Display the current status of this video input: VITC Present, Burst Present, Input Locked and Video Timed. The green light indicates a particular status is on. These indicators cannot be edited.

Overwritable Video Standard

This changes the video standard for this input board: NTSC with pedestal, NTSC without pedestal, or PAL. If you change this standard, restart all tools that use this channel. The board can serve both standards, but the input can only accept one at a time.

Renaming the Input Signal

Enter the new name in the **Name** box. For example, if it is a network feed, you could rename it to *Network_Feed*. The VITC name, the window title bar, and the configuration tree name change automatically as you enter the new name. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.

VITC Reader Setting

If you use Automatic VITC detect, the disk recorder uses the range set in the From and To lines to look for the VITC signals. If Automatic VITC detect is not used, the disk recorder expects to find the VITC signals on the VITC Reader Line 1 (default 10) or Line 2 (default 12). If the signal is found, the VITC Present indicator is turned on.

NOTE: Input must be auto-timed to use automatic VITC detection.

Enable Auto-Timing

Auto-timing determines if the input is synchronized to the reference genlock signal. The disk recorder records time-base corrected video whether or not it is also locked to the reference. If auto-timing is enabled and the signal was able to be timed into the system, then the Auto Timed indicator is turned on.

If you want to use the disk recorder as a switcher and/or have the output video correctly timed when in E to E mode, the input video must be locked to the reference and properly timed to the disk recorder. To aid in the timing setup, all video inputs have auto-timing circuits which synchronize input video to the internal timing reference as long as the input video is within the auto-timing sync window (± 1 lines). To get to the auto-timing window, the input must be advanced seven and one half lines.

The auto-timing circuit is always trying to lock to the signal. If you try to auto-time a signal outside of the window, the video signal appears to be broken-up as it cannot be timed into the system. If the input drifts out of range, it is retimed



as soon as it drops back into range. The disk recorder can use untimed signals if auto-timing is not enabled, but they are not timed correctly and may cause jumping and skipping in E to E mode.

***NOTE:** If you select auto-timing for an input signal and it cannot auto time with the genlock reference signal, the input signal is not recorded accurately. If you must record an input that cannot lock, disable auto timing and record. There may be problems if you are operating in E to E mode, but the clip won't play back correctly timed.*

Enable Dither

Dithering smooths out roughness caused when a signal is digitized. The LSB artifacts on 10-bit video feeds are reduced. There is no effect on 8-bit video.

Input Gain Adjustment

Adjust the input gain on the syncs to compensate for any losses in the input. You can adjust the gain manually or use the AGC (audio gain control). AGC enables the internal quality monitoring circuit to automatically adjust the gain to keep the sync level constant.

To manually adjust the gain, turn off AGC and move the slider to the desired value. The range is from 45 to 142 percent (± 3 dB) of the input signal for NTSC/525 and 82 to 142 percent for PAL/625. When you click **Default**, the Input Gain Adjustment resets to the default value (100 percent).

Analog Composite Video Input Advanced Control

The Advanced Control tab allows you to select a Decode mode. Decode mode determines how the chrominance and luminance information is separated for conversion for storage. Click or double-click on the Advanced Control tab (see Figure 23).

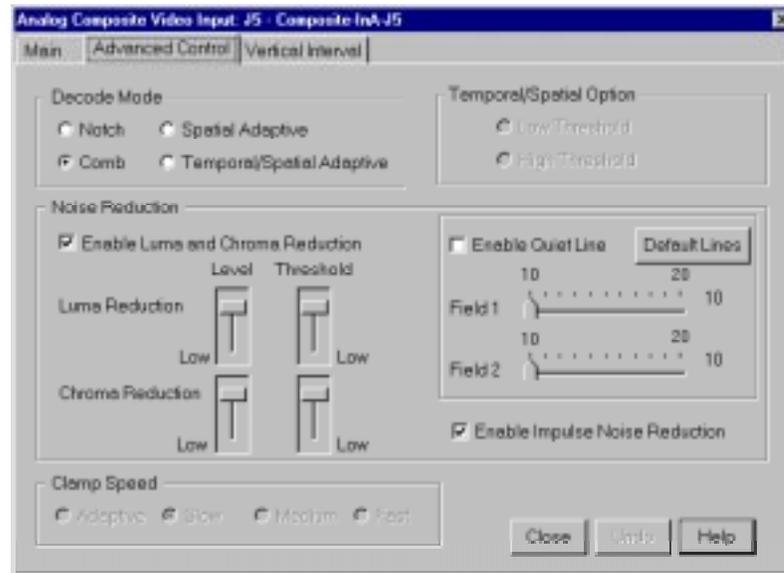


Figure 23. Analog Composite Video Input dialog box, Advanced Control tab

There are four options:

- **Notch.** Decoder mode separates the chrominance by using a notch filter around the chrominance subcarrier. This leaves the high frequency luminance intertwined with the chrominance. A notch decoder readily determines horizontal lines are line-to-line luminance. Fine vertical lines can be more difficult.



- **Comb.** Decoder mode tries to separate high frequency luminance from the chrominance using the same notch filter as the notch decoder, but also takes information from the next line. It uses this information to determine if high frequency is luminance or chrominance. A comb decoder readily determines finely spaced vertical lines are luminance. A lack of line to line phase alteration causes difficulty with fine horizontal lines.
- **Spatial Adaptive.** Decoding uses either the comb or notch decoder, on a pixel by pixel basis, depending on which gives the best results. For horizontal lines, Notch is used; for vertical lines, Comb is used.
- **Temporal/Spatial Adaptive.** Decoding uses both the next line and the same line in the alternate field in the calculations. This decoder uses all of the properties of the Spatial Adaptive decoder, plus it uses Temporal (interfield changes) information. The phase change (or lack of) from field to field helps determine whether high frequency should be decoded as chrominance or luminance.

NOTE: Spatial adaptive and temporal/spatial adaptive decoding use the high or low threshold setting.

Temporal/Spatial Option

This control is only used if the Decode Mode is set to Temporal/Spatial Adaptive. The threshold determines the amount of motion allowed between alternate fields to still have the Temporal decoder recognize the pixel. High allows more motion than Low.

Noise Reduction

These controls enable and set various noise reduction methods:

- **Enable Luma and Chroma Reduction** applies the Level and Threshold settings to use a feedback noise reduction scheme on the decoded input signals after they have been separated into chrominance and luminance. The Level and Threshold settings determine the amount of weight the feedback signal has in comparison to the input signal. The Threshold range takes into consideration the amount of motion in the picture. Use the sliders to adjust the ranges. Be sure Enable Luma and Chroma Reduction is checked for the reduction values to be applied.

- **Enable Quiet Line** acts as a noise reference. If the Quiet line is noise-free, the rest of the signal should also be noise-free. This allows the decoder to not mistake noise for motion. If the Quiet Line is enabled, the line values for Field 1 and Field 2 are used. Use the sliders to set the line values for each field. Click on **Default Lines** to return to the default values.
- **Enable Impulse Noise Reduction** automatically filters out noise spikes, such as amplifier crackling.

NOTE: If reduction of impulse noise is selected, the disk recorder automatically switches the clamp speed to slow. It is recommended that you use the spatial adaptive decode option, although it does not automatically switch.

Clamp Speed

Clamp speed sets the reaction to changing DC levels of the input signal. Speed can be Adaptive, Slow, Medium, or Fast. The faster the clamp the more reactive it is to small DC variations.

Slow ignores short-term DC level changes but gradually changes the clamping level to track the input. Adaptive uses the best clamp for the current video input. The Clamp Speed also helps with white noise reduction. Adaptive is the best choice for white noise reduction. Do not use Adaptive for impulse noise, use Slow and the Impulse Noise Detection option from the Noise Reduction group.

NOTE: If you set AGC (audio gain control) to automatic on the main screen, clamp speed cannot be selected.



Analog Composite Video Input Vertical Interval

The controls under the Vertical Interval tab sets how the vertical interval signals are handled. There are different vertical interval line numbers in the dialog boxes, depending on your video standard—NTSC/525 or PAL/625. Click or double-click on the Vertical Interval tab (see Figure 24).

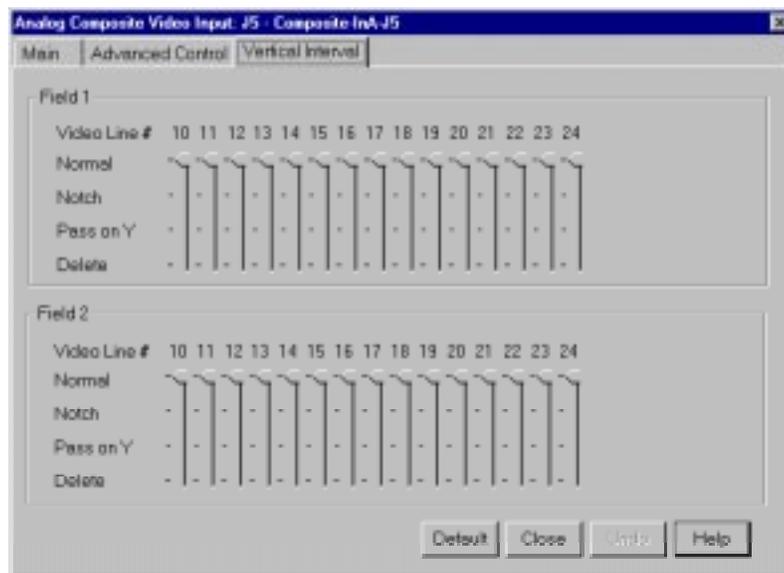


Figure 24. Analog Composite Video Input dialog box, Vertical Interval tab

For each Video Line, position the slider pointer to one of the following:

- **Normal** indicates the vertical interval video line is passed-through.
- **Notch** applies notch filtering to the vertical interval video line (chrominance information and any luminance around the chroma subcarrier are removed).
- **Pass On Y** passes luminance information straight through. This is useful for VITC and closed-caption or data filtering.
- **Delete** removes the vertical interval video line and replaces it with black.



Component Analog Video Input

To open the Analog Component Video Input (CAV) dialog box, select Video Input from the configuration tree, and then click or double-click an analog component input from the list, such as *CAV-InA-J9*.

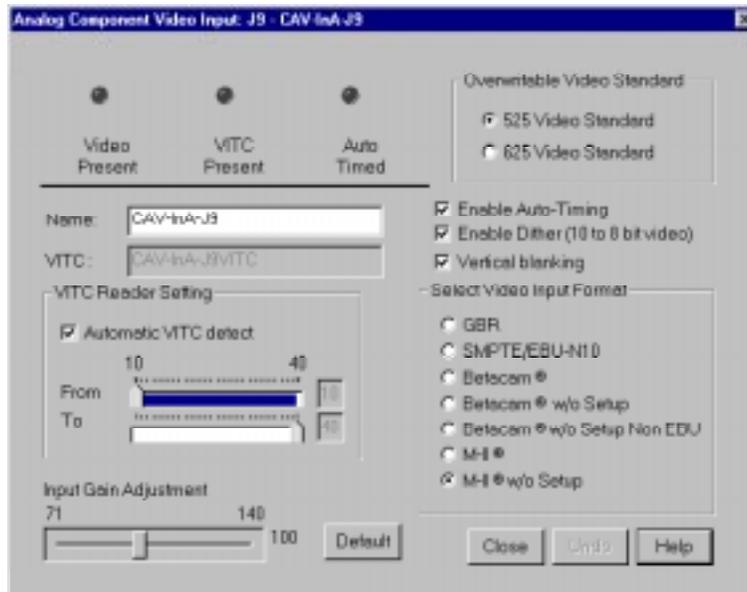


Figure 25. Component Analog Video Input dialog box (CAV)

Status Indicators

Display the current status of the Genlock input: Video Present, VITC Present, and Auto Timed. The green light indicates the particular status is on. These indicators cannot be edited.

Overwritable Video Standard

Changes the video standard for this input board: NTSC/525 or PAL/625. If you change this standard, you must restart all tools that use this channel. The board can serve both standards, but the input can only accept one at a time.

Renaming the Input Signal

Enter the new name in the Name field. For example, if the signal is a Betacam input, rename it *Betacam_1*. The VITC name, window title bar name, and the configuration tree name automatically change as you enter the new name. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.

VITC Reader Setting

If you to use Automatic VITC detect, the disk recorder uses the range set in the From and To lines to look for the VITC signals. If Automatic VITC detect is not used, the disk recorder expects to find the VITC signals on the VITC Reader Line 1 (default 10) or Line 2 (default 40). If the signal is found, the VITC Present indicator is turned on.

NOTE: Input must be auto-timed to use automatic VITC detection.

Input Gain Adjustment

Move the adjustment slider to the desired value. The range is from 70 percent to 140 percent (3 dB) for the input signal for both 525 and 625. When you click on **Default**, the Input Gain Adjustment resets to the default value (100 percent).

Enable Auto-Timing

Auto-timing determines if the input is synchronized to the reference genlock signal. The disk recorder records time-base corrected video whether or not it is also locked to the reference.

If you want to use the disk recorder as a switcher and/or have the output video correctly timed when in E to E mode, the input video must be locked to the reference and properly timed to the disk recorder. To aid in the timing setup, all video inputs have auto-timing circuits which synchronize input video to the internal timing reference as long as the input video is within the auto-timing sync window (± 1 lines). To get to the auto-timing window the input must be advanced seven and one half lines.

The auto-timing circuit is always trying to lock to the signal. If you try to auto-time a signal outside of the window, the video signal appears to be broken-up as it cannot be timed into the system. If the input drifts out of range, it is retimed



as soon as it drops back into range. The disk recorder can use untimed signals if auto-timing is not enabled, but they are not timed correctly and may cause jumping and skipping in E to E mode.

NOTE: If you select auto-timing for an input signal and it cannot auto time with the genlock reference signal, the input signal is not recorded accurately. If you must record an input that cannot lock, disable auto timing and record. There may be problems if you are operating in E to E mode, but the clip plays back correctly timed.

If auto-timing is enabled, and the signal was able to be timed into the system, the Auto Timed indicator is turned on.

Enable Dither

Dithering smooths out roughness caused when a signal is digitized. The LSB artifacts on 10-bit video feeds are reduced. There is no effect on 8-bit video.

Vertical Blanking

If you enable vertical blanking, for the 525 standard, lines 1 through 9 and 264 through 272 are blanked; for the 625 standard, lines 1 through 5, 311 through 317, 624, and 625 are blanked.

Serial Digital Component Video Input

To open the Serial Digital Component Video Input dialog box, click or double-click **Video Input** on the configuration tree, and then select a digital component input from the list, such as *SDI-InA-J13*.

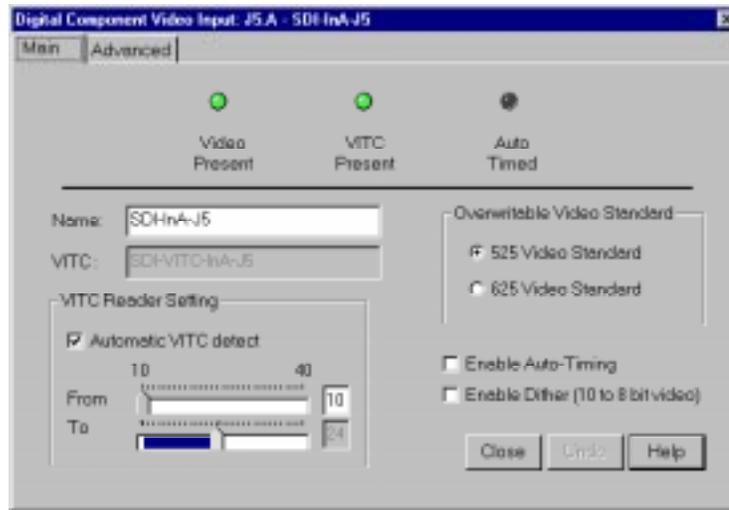


Figure 26. Serial Digital Component Video Input dialog box

Status Indicators

Display the current status of this video input: Video Present, VITC Present, and Auto Timed. The green light indicates that a particular status is on. These indicators cannot be edited.

Overwritable Video Standard

Changes the video standard for this input board: NTSC/525 or PAL/625. If you change this standard, you must restart all tools that use this channel. The board can serve both standards, but the input can only accept one at a time.



Renaming the Input Signal

Enter the new name in the Name field. For example, if *SDI-InA-J13* is a dedicated satellite feed, rename it *Satellite_1*. The VITC name, window title bar name, and the configuration tree name automatically change as you enter the new name. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.

VITC Reader Setting

If you to use Automatic VITC detect, the disk recorder uses the range set in the From and To lines to look for the VITC signals. If Automatic VITC detect is not used, the disk recorder expects to find the VITC signals on the VITC Reader Line 1 (default 10) or Line 2 (default 12). If the signal is found, the VITC Present indicator is turned on. Line 1 and Line 2 cannot be more than 14 apart.

NOTE: *Input must be auto-timed to use automatic VITC detection.*

Enable Auto-Timing

Auto-timing determines if the input is synchronized to the reference genlock signal. The disk recorder records time-base corrected video whether or not it is also locked to the reference.

If you want to use the disk recorder as a switcher and/or have the output video correctly timed when in E to E mode, the input video must be locked to the reference and properly timed to the disk recorder. To aid in the timing setup, all video inputs have auto-timing circuits which synchronize input video to the internal timing reference as long as the input video is within the auto-timing sync window (± 1 lines). To get to the auto-timing window the input must be advanced seven and one half lines.

The auto-timing circuit is always trying to lock to the signal. If you try to auto-time a signal outside of the window, the video signal appears to be broken-up as it cannot be timed into the system. If the input drifts out of range, it is retimed as soon as it drops back into range. The disk recorder can use untimed signals if auto-timing is not enabled, but they are not timed correctly and may cause jumping and skipping in E to E mode.

NOTE: If you select auto-timing for an input signal and it cannot auto time with the genlock reference signal, the input signal is not recorded accurately. If you must record an input that cannot lock, disable auto timing and record. There may be problems if you are operating in E to E mode, but the clip plays back correctly timed.

If auto-timing is enabled, and the signal was able to be timed into the system, the Auto Timed indicator is turned on. Also, Line 1 can still be adjusted, but Line 2 is always equal to Line 1 + 14.

Enable Dither

Dithering smooths out roughness caused when a signal is digitized. The LSB artifacts on 10-bit video feeds are reduced. There is no effect on 8-bit video.

Serial Digital Component Video Input Advanced

Click the Advanced tab to view the Serial Digital Component Video Input Advanced settings.

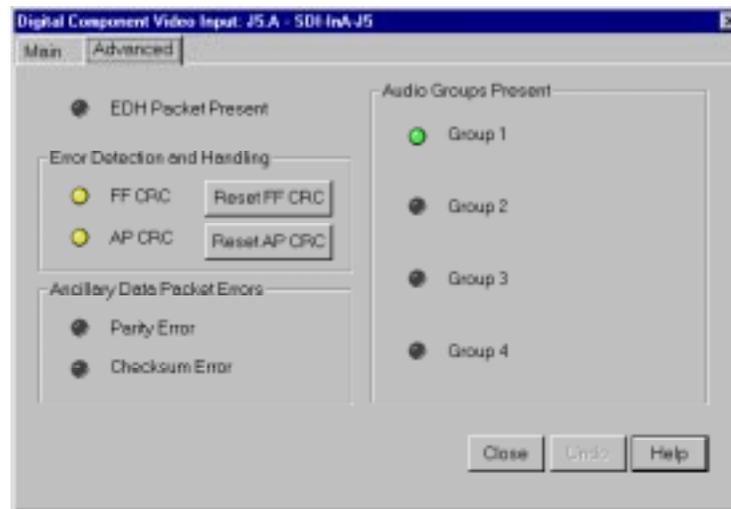


Figure 27. Serial Digital Component Video Input, Advanced tab

These advanced settings allow you to determine whether the EDH packet is present, which audio groups are present, and which errors are present: Full Field (FF) CRC or Active Picture (AP) CRC, plus parity and checksum errors.



Video Output

You can configure either analog composite or serial digital component video output on your Profile system, depending on which boards are installed.

Analog Composite Video Output

To open the Analog Composite Video Output dialog box, select Video Output from the configuration tree and click or double-click an analog composite output from the list, such as *Composite-OutA-J11*.

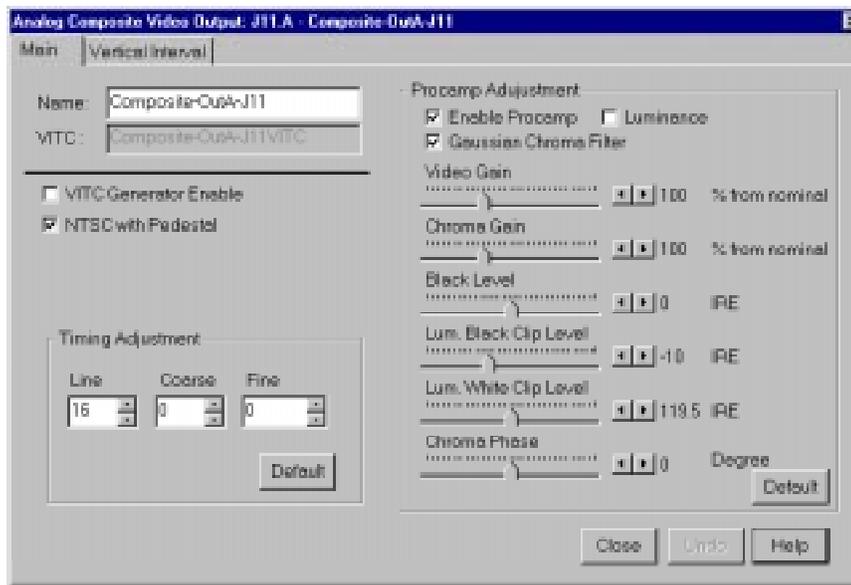


Figure 28. Analog Composite Video Output dialog box

Changing the Procamp Adjustments

The Procamp Adjustment group modifies the output signal to compensate for any irregularities in the signal path. All changes take place immediately.

- **Enable Procamp** must be checked before anything in this group can be adjusted. This enables you to setup the Procamp and then disable it without losing the setup.

- **Luminance** (enabled) specifies only the luminance portion of the signal is output. The signal is black and white.
- **Gaussian Chroma Filter** determines the type of filter used on the chrominance portion of the signal. If the Gaussian Chroma Filter is selected, the filter has a long slow roll-off to prevent ringing. If it is not selected, then a brickwall filter is used. Although this may introduce ringing into the signal, it maintains the integrity of the signal for multiple processing. Use the Gaussian Filter as a last step before transmission and if ringing suppression is required. Do not use this filter if you are doing multiple processes/passes on the signal or if the material is in component form.

The Procamp controls are adjusted with either the slider bars or arrow buttons. The corresponding numeric values are displayed in the text boxes.

- **Video Gain** raises or lowers the overall amplitude of the video signal. It has a range of 50 to 200 percent of nominal.
- **Chroma Gain** changes the amplitude of the chrominance portion of the signal to change the color intensity. It has a range of 50 to 200 percent of nominal.
- **Black Level** sets the voltage level of the reference black level. This is expressed in mV in the PAL video standard and in IRE units in NTSC. The range in the PAL standard is -140 to 140 mV. The range in the NTSC standard is -20 to +20 IRE.
- **Chroma Phase** sets the colors by varying the phase of the chrominance subcarrier. The range is -45 to +45.
- **Luminance Black Clip Level** is the point where the procamp clips the luminance portion of any video that drops below this level. For PAL, the range is -150 mV to 0 mV and -20 IRE to 7.5 IRE (or 0 IRE if pedestal is not selected) in the NTSC standard.
- **Luminance White Clip Level** follows the same logic, only it clips any luminance above the set threshold. Its range in the PAL standard is 700 to 909.5 mV and 100 to 139.5 IRE in the NTSC standard.
- **Default Procamp** resets the Procamp to the factory-defined levels.



Changing the Output Timing Adjustments

The Output Timing Adjustment group enables you to adjust the timing of the output signal to compensate for any additional delays in your system. Any changes you make in this group take place immediately. You can delay at the following levels, to get the exact amount of delay required:

- Vertical Line level (from -2 to +148 lines)
- Coarse Horizontal level (from -100 to +100 ms)
- Fine Horizontal level (from -100 to +100 ms)

Use the slider bars to set the delay amount. The timing adjustments are generally done with a waveform monitor, visually moving the signal so that it matches the reference. Click on **Default Timing** to reset the slider bars to 0, which is the point where the output signal timing is aligned with the reference genlock signal.

Changing Output Settings

- **Name** changes the signal name. For example, if this is a dedicated signal to a main switcher, rename it *Switcher_1*. The **VITC Name** automatically tracks the signal name. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.
- **VITC Generator Setting** places VITC on specified lines and/or erases lines in the vertical interval.
 - If VITC Generator Enable is selected, VITC is placed on the lines given in VITC Generator Line 1 and 2. If you only want one line, use the same number in both text boxes.
 - If VITC Erase Enable is selected, it replaces lines (mostly vertical interval, but into the active video) with black. The range of lines is given in the Start and End sliders.

Analog Composite Video Output Vertical Interval

The Vertical Interval tab brings up the Analog Composite Video Output Vertical Interval controls. The vertical interval line numbers change depending on the selected video standard.

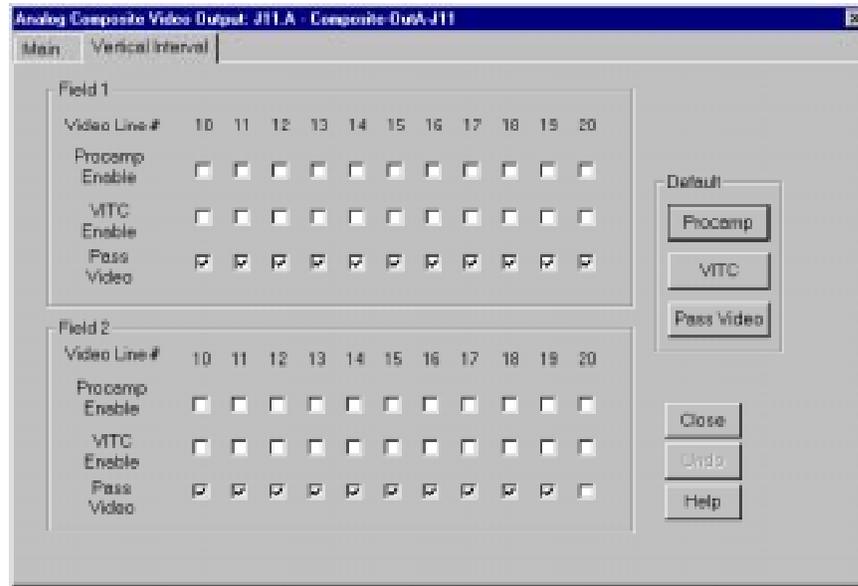


Figure 29. Analog Composite Video Input Vertical Interval dialog box

The settings determine how the Vertical Interval signals are handled. The video on these lines can have the Procamp Enabled (the settings are the same as the regular video), the VITC Enabled (if VITC Generator Enable from the Output Settings group is checked), or the input can Pass Video through. All or none of the options can be selected for each line. There are three default buttons: Default Procamp, Default VITC, and Default Pass Video; to reset these specified values back to the factory presets.

NOTE If the Pass Video box is not checked, the input video is replaced with black. Do not check Pass Video for VITC lines. Pass Video overrides VITC Insertion.



Analog Composite Monitor Output

To open the Analog Composite Monitor Output dialog box, select Video Output from the configuration tree, and then click or double-click a monitor output from the list, such as *Monitor-Out-J12*.

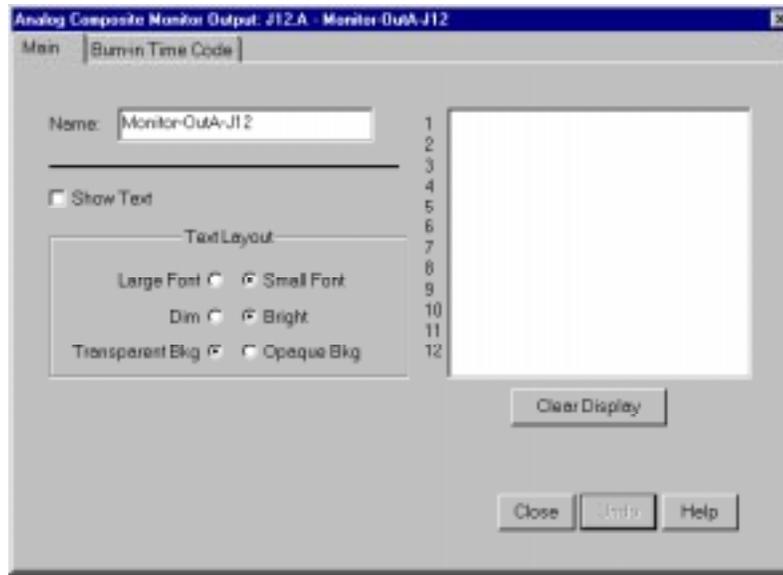


Figure 30. Analog Composite Monitor Output dialog box, Main tab

Displaying text on a monitor is good way to help identify where the output is coming from. To display text on an attached monitor, click **Show Text**.

Name changes the signal name. For example, you could rename it to *Monitor_1*. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.

Under **Text Layout**, you can select either a small or large font, a dim or bright white character display, and a transparent or opaque background for the lettering. With the small font, you get twelve lines and twenty-four columns; with the large, you get six lines and thirteen columns.

Analog Composite Monitor Output Burn-in Timecode Tab

To enter text, click in the text entry box and start typing where you want the text displayed on the monitor. Legal characters are: a-z A-Z 0-9 / ! ? + - = () < > ‘ “ . , . Use _ (underbar) for transparent space.

To clear entire monitor, click **Clear Display**. Click the button again to display text once more. Under Windows NT 3.51, this button appears as a check box.

Analog Composite Monitor Output Burn-in Timecode Tab

The Burn-in Timecode tab brings up the controls for displaying burn-in timecode on the monitor (see Figure 31).

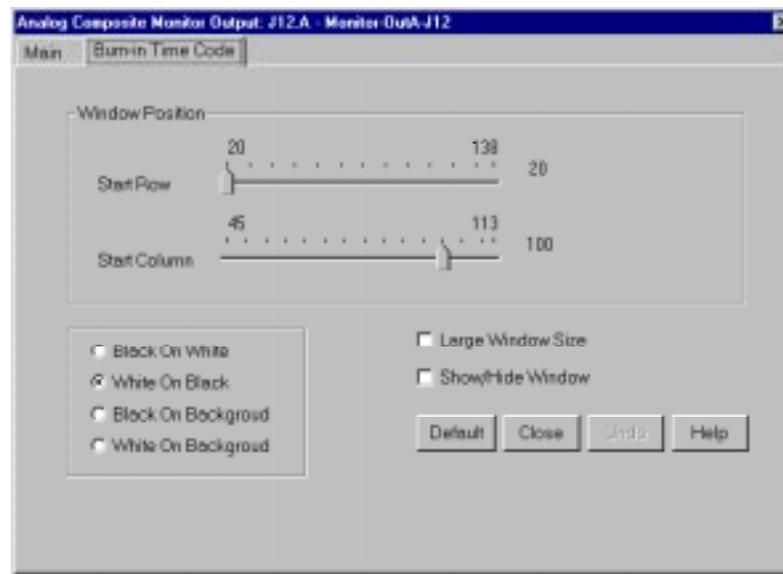


Figure 31. Analog Composite Monitor Output dialog box, Burn-in Timecode tab

To display timecode on an attached monitor, select **Show/Hide Window**.

To display a large timecode window, select **Large Window Size**.

Under **Window Position**, you can select the **Start Row** and **Start Column** for the timecode with the sliders. This determines where the timecode is displayed on the monitor screen. The current row and column are displayed on the right.



You can display the timecode in one of four formats: black on white, white on black, black on background, or white on background.

Serial Digital Component Video Output

To open the Serial Digital Component Video Output dialog box, select Video Output from the configuration tree, and then click or double-click a digital component output from the list, such as *SDI-OutA-J5*.

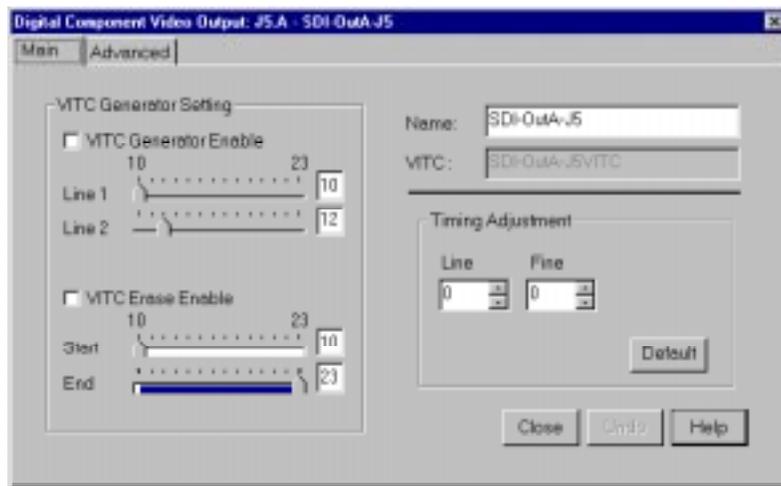


Figure 32. Serial Digital Component Video Output dialog box

- **Name** changes the signal name. For example, if the signal named *SDI-OutA-J13* is a dedicated signal to a main switcher, rename it *Switcher_1*. The VITC name automatically tracks the signal name. Names can be up to 30 characters, and can include spaces. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.
- **VITC Generator Setting** places VITC on specified lines and/or erase lines in the vertical interval.
 - If VITC Generator Enable is selected, VITC is placed on the lines given in VITC Generator Line 1 and 2. If you only want one line, use the same number in both text boxes.
 - If VITC Erase Enable is selected, it replaces lines (mostly vertical interval, but into the active video) with black. The range of lines is given in the Start and End sliders.

- **Timing Adjustment** sets the timing of each output with respect to the Reference Genlock System Input Advance which, in turn, is set with respect to the external reference input. With the Reference Genlock System Input Advance set to the factory default of 0, the outputs have an adjustment range of -2.5 lines to $+148$ lines of delay. The Fine delay is in nanoseconds and the Line delay is in lines.

Serial Digital Component Video Output Advanced

Click the Advanced tab to view the Serial Digital Component Video Output Advanced settings (Figure 33).

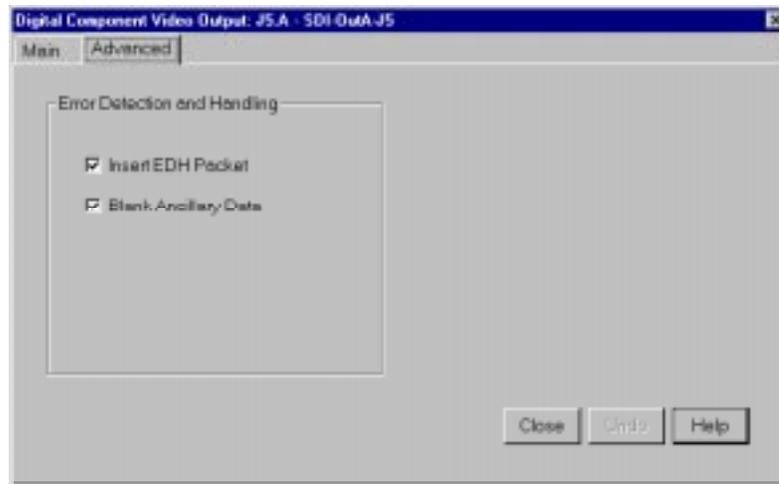


Figure 33. Serial Digital Video Output dialog box, Advanced tab

The Advanced tab allows you to set options for error detection and handling (EDH). If Insert EDH Packets is checked, Full Frame CRC and Active Picture CRC are inserted into the video stream. If Blank Ancillary Data is checked, ancillary data information is inserted into the video stream.



PDR 100 Audio

The PDR 100 supports both analog and serial digital embedded (625 only) audio inputs and outputs, depending on which boards are installed your the PDR 100 system. Audio in the PDR 100 is routed using the EISA bus with data flow controlled by a real time controller and the audio interface card. The analog audio card is capable of converting four channels of analog audio to digital audio (and vice versa) using 16-bit/48kHz conversion. The input and output data flow to the card via the EISA bus, with sample clocks coming from a video interface card, such as the analog composite board or the SDI board. However, the analog audio card can only have one clock operating at a time. If the card is used as an input device, it must have the clock that originates on the video board associated with the audio.

Analog Audio Input

To open the Analog Audio Input dialog box, select **Audio Input** from the configuration tree, and then click or double-click an analog audio name from the list, such as *Analog-InA-J8*. The dialog box appears, as shown in Figure 34.

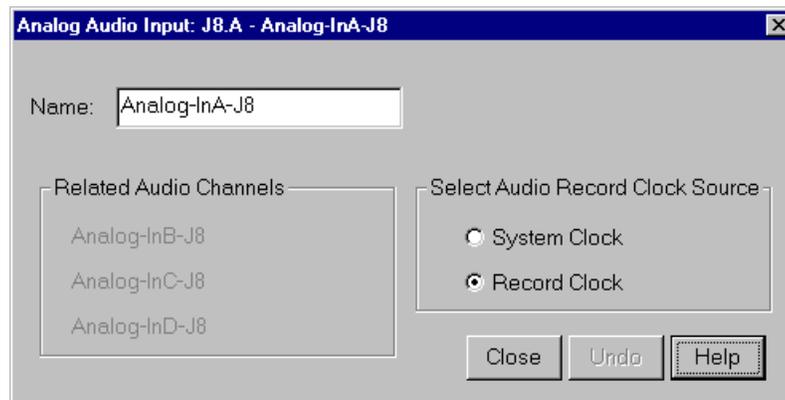


Figure 34. Analog Audio Input dialog box

- **Name** allows you to change the signal name—from *Analog-InA-J8* to *Audio One*, for example. Signal names can be up to 30 characters long, and can include spaces. The window title bar name and the configuration tree name automatically change as you enter the new name. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.

- **Related Audio Channels** lists the audio channels that are related to the signal name.
- **Select Audio Record Clock Source** allows you to select either the system clock or the record clock.

Digital Audio Input

To open the Digital Audio Input dialog box, select **Audio Input** from the configuration tree, and then click or double-click a digital audio name from the list.

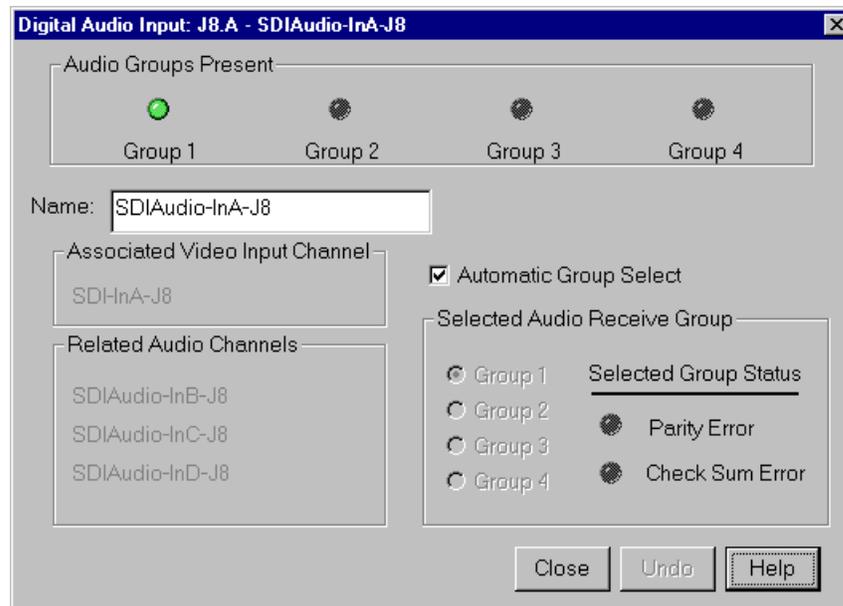


Figure 35. Digital Audio Input dialog box

- **Name** changes the signal name—*Audio_1*, for example. Names can be up to 30 characters, and can include spaces. The window title bar name and the configuration tree name automatically change as you enter the new name. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.
- **Audio Groups Present** is represented by four status indicators, one per audio group. The green light indicates that the particular status is on. These indicators cannot be edited.



- **Associated Video Input Channel** lists the name of the digital component video input channel associated with the audio signal.
- **Related Audio Channels** lists the audio channels that are related to the signal name.
- **Selected Audio Receive Group** is in the range 1–4. To change the group, click on the button associated with the group.
- **Selected Group Status** represents parity error and check sum error with a status indicator for each. The green light indicates an error condition. These indicators cannot be edited.

Analog Audio Output

To open the Analog Audio Output dialog box, select **Audio Output** from the configuration tree, and then click or double-click an analog audio name from the list.

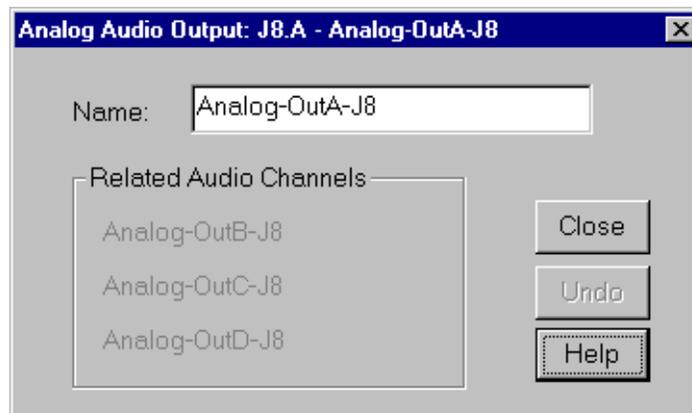


Figure 36. Analog Audio Output dialog box

- **Name** changes the signal name—*Audio_Out_1*, for example. Names can be up to 30 characters, and can include spaces. The window title bar name and the configuration tree name automatically change as you enter the new name. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.
- **Related Audio Channels** lists the audio channels that are related to the signal name.

Digital Audio Output

To open the Serial Digital Audio Output dialog box, select **Audio Output** from the configuration tree, and then click or double-click a digital audio name from the list.

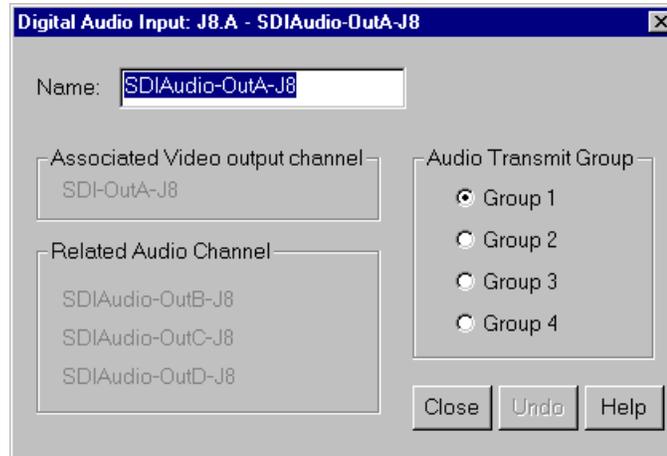


Figure 37. Digital Audio Output dialog box

- **Name** changes the signal name—*Audio_Out_1*, for example. Names can be up to 30 characters, and can include spaces. The window title bar name and the configuration tree name automatically change as you enter the new name. To return a renamed signal to the default, delete all the characters in the text field, and press Enter.
- **Associate Video Output Channel** lists the name of the associated video output channel.
- **Related Audio Channels** lists the audio channels that are related to the signal name.
- **Audio Transmit Group** changes the audio transmit group in the range 1–4. To change the group, click on the button associated with the group.



PDR200 Audio

The PDR200 audio architecture accepts and simultaneously processes sixteen audio inputs and outputs at up to four simultaneous clock rates. Internally, all audio is processed in floating point at 48kHz with a selectable storage resolution of 16 or 20 bits. Inputs may be individually clocked in groups of four, and any clock group may be referenced to the system reference (house black) or any one of four video inputs. Output clocking is synchronous to system reference. Sample rate conversion is available for all inputs (30 to 50kHz), providing uniform storage at 48kHz.

The PDR200 can be configured to operate with analog, AES/EBU digital, or embedded (SMPTE 272M Level A) audio, depending on which options are installed in your system. All three audio formats are supported without external conversion equipment. Analog audio is only available with an optional PAC208 or PAC216 Analog/Digital Interface chassis. You can expand the number of XLR or BNC connectors for AES/EBU audio with an optional XLR216 or BNC216 Digital Interface chassis. You can choose an audio format for each video channel. For example, you could enable analog audio on one channel, embedded audio on another, and AES/EBU on the rest.

NOTE: Do not turn off sample rate conversion or use AES/EBU as a reference unless you are certain that all inputs and outputs are synchronous.

Analog Audio Input

In analog audio input, you can change audio channel names, check the channel overload status, or adjust line levels in decibels. Click **Undo** to cancel changes, or click **Help** for context-sensitive Help. To configure analog audio input:

1. Expand **Audio Input**, and then click one of the Analog Channels. The Analog Audio Input dialog box appears (Figure 38). The channel numbers on the left refer to the physical input connectors on the audio input box. **Ch. 01** refers

to the first connector, and **Ch. 02** refers to the second connector, and so forth.

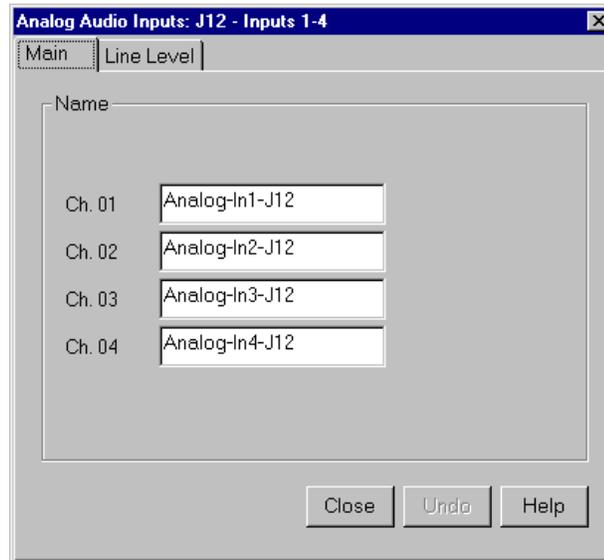


Figure 38. Analog Audio Input dialog box, Main tab

2. Click the Main tab, if it is not already visible.
3. Click in the box of the input channel whose name you want to change. A channel name can have up to 30 characters.
4. After you have changed the channel names, click **Close** or another tab.



Chapter 2 Using the Profile Configuration Manager

To trim the line level or view overload status:

1. In the Analog Audio Input dialog box, click the Line Level tab (Figure 39).

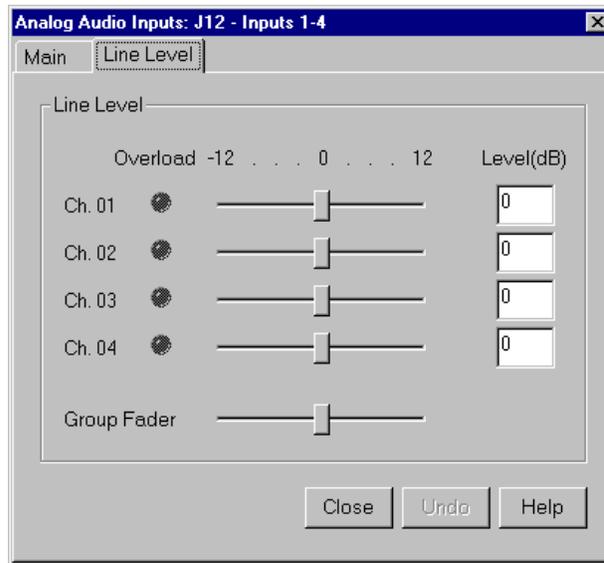


Figure 39. Analog Audio Input dialog box, Line Level tab

2. The line level range is -12 to $+12$ dB. If you trim the line level for an individual channel with the slider handle, the line level is incremented by 1 dB; clicking on either side of the slider handle increments the line level by 0.5 dB. The Level boxes show the current line level. If you enter a number directly into a Level box, the line level number is rounded to the nearest ± 0.5 dB.
3. To adjust the trim for all channels at once, use the **Group Fader** slider. While the **Group Fader** moves all channels at once, it maintains the individual channel differences.
4. If a channel is overloaded, the Overload indicator is on. This means that the incoming audio is clipping.
5. After you have adjusted the line levels, click **Close** or another tab.

Digital Audio Input

In digital audio input, you can change channel names, check the status of channel errors, and change the setting of the sample rate converter. Click **Undo** if you want to cancel any changes, or click **Help** for context-sensitive Help.

To configure digital audio input:

1. Expand Audio Input, and then click one of the Digital Channels to bring up the Digital Audio Input dialog box (Figure 40). The channel numbers on the left refer to the physical input connectors on the audio input box. **Ch. 01** and **Ch. 02** refer to the channel pair on the first connector, and **Ch. 03** and **Ch. 04** refer to the pair on the second connector, and so forth.

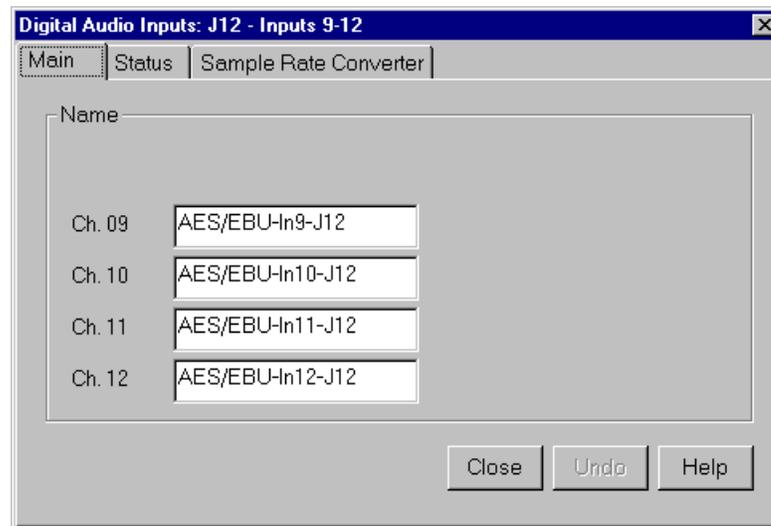


Figure 40. Digital Audio Input dialog box, Main tab

2. Click the Main tab, if it is not already visible.
3. Click in the box of the input channel whose name you want to change. A channel name can have up to 30 characters.
4. After you have changed the channel name or names, click **Close** or another tab.



To check the status of digital input channels:

1. In the Digital Audio Input dialog box, click the Status tab. Under Status Indicators, you see the error status of each channel. If a channel has an error, the indicator is on. See Table 2 for a description of each error indicator.

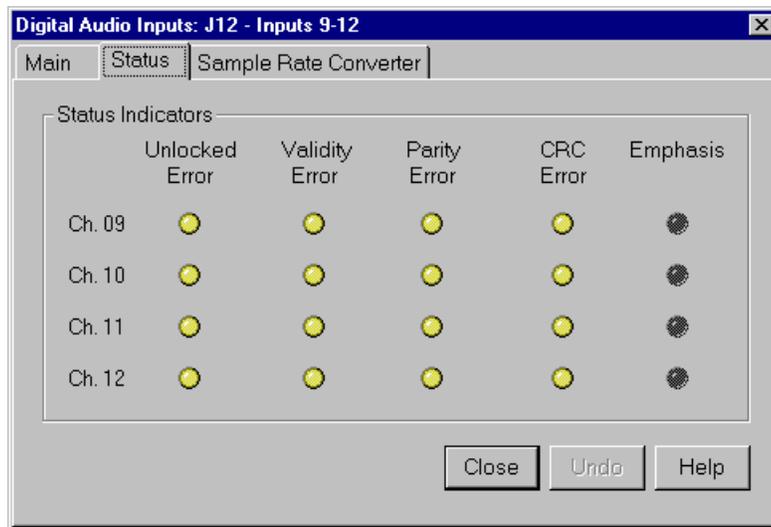


Figure 41. Digital Audio Input dialog box, Status tab

2. When you are done checking for errors, click **Close** or another tab.

Table 2. Digital audio input channel indicators

Indicator	Description
Unlocked Error	Receiver unlocked
Validity Error	AES receiver validity
Parity Error	Parity error
CRC Error	CRC subframe errors
Emphasis	Detected emphasis

If you want to bypass the sample rate converter:

1. In the Digital Audio Input dialog box, click the Sample Rate Converter tab (Figure 42). By default, the sample rate converter is enabled. The sample rate converter affects all four channel inputs.

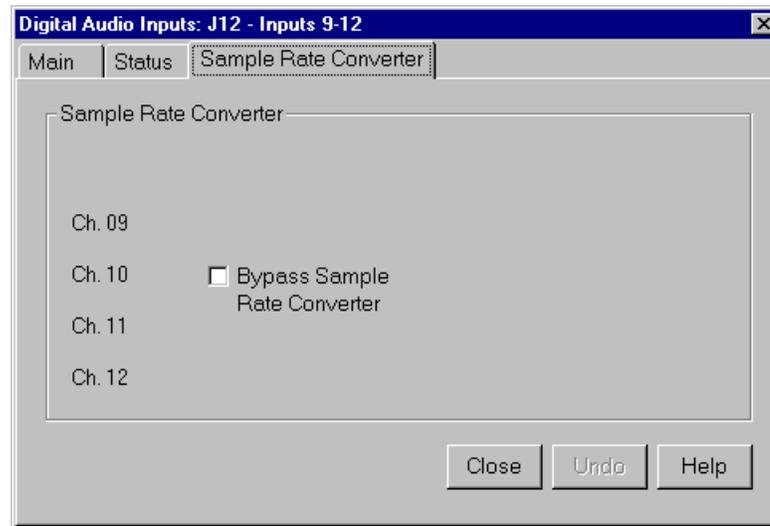


Figure 42. Digital Audio Input dialog box, Sample Rate Converter tab

2. Click **Bypass Sample Rate Converter**.

NOTE: *Do not bypass sample rate conversion unless you are certain that all inputs and outputs are synchronous.*

3. After you have disabled the sample rate converter, click **Close** or another tab.

Analog Audio Output

In analog audio output, you can change audio channel names, change line modes for XLR connectors, or adjust individual or group line levels in decibels. Click **Undo** if you want to cancel any changes, or click **Help** for context-sensitive Help.

To configure analog audio output:

1. Expand **Audio Output**, and then click one of the Analog Channels to bring up



Chapter 2 Using the Profile Configuration Manager

the Analog Audio Output dialog box. The channel numbers on the left refer to the physical output connectors on the audio output box. **Ch. 01** refers to the first connector, and **Ch. 02** refers to the second connector, and so forth.

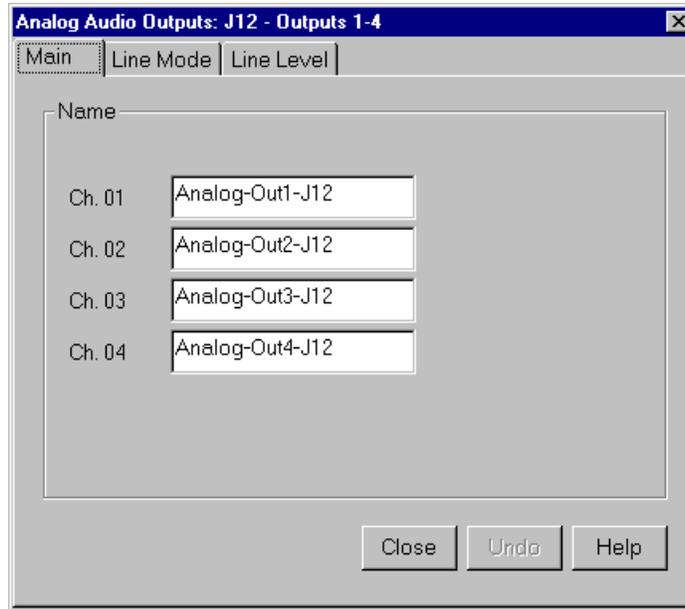


Figure 43. Analog Audio Output dialog box, Main tab

2. Click the Main tab, if it is not already visible.
3. Click in the box of the output channel whose name you want to change. A channel name can have up to 30 characters.
4. After you have changed channel name(s), click **Close** or another tab.

To change line modes for the XLR connectors:

1. In the Analog Audio Output dialog box, click the Line Mode tab (Figure 44).

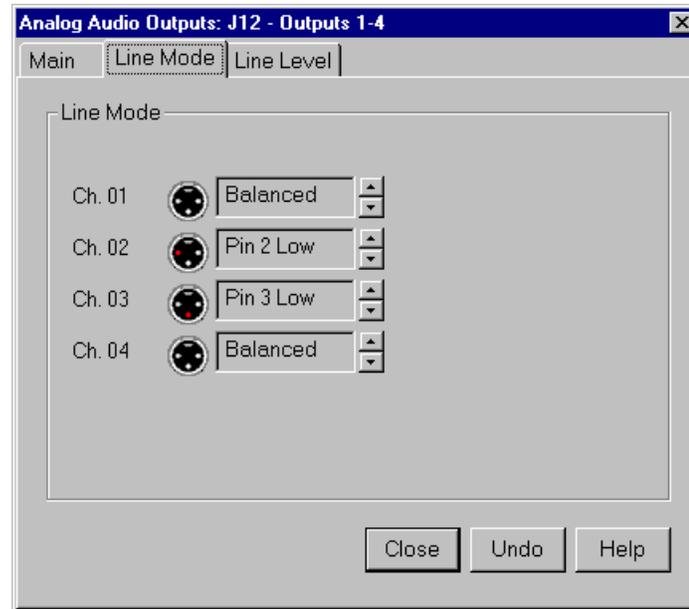


Figure 44. Analog Audio Output dialog box, Line Mode tab

2. In the Line Mode box, you have three options: Balanced (default), unbalanced Pin 2 Low, or unbalanced Pin 3 Low. The illustrations of the XLR connectors to the left of the box give visual cues of the selected mode.
3. After choosing a line mode or modes, click **Close** or another tab.



To trim the line level:

1. In the Analog Audio Output dialog box, click the Line Level tab (Figure 45).

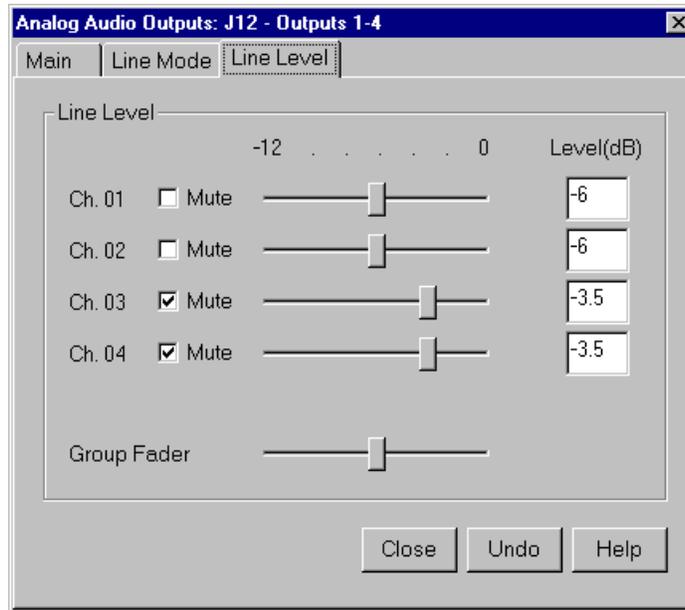


Figure 45. Analog Audio Outputs dialog box, Line Level tab

2. The line level range is -12 to 0 dB. If you trim the line level for an individual channel with the slider handle, the line level is incremented or decremented by 1 dB; clicking on either side of the slider handle changes the line level by 0.5 dB. The Level boxes show the current line level. If you enter a number directly into a Level box, the line level number is rounded to the nearest 0.5 dB.
3. To adjust the trim for all channels at once, use the **Group Fader** slider. While the **Group Fader** moves all channels at once, it maintains the individual channel differences.
4. To mute a channel, click the mute button next to the channel name.
5. After you have adjusted the line levels, click **Close** or another tab.

Digital Audio Output

You can change the names of the digital audio channels. Click **Undo** if you want to cancel any changes. Click **Help** for context-sensitive Help on digital audio output.

To change a channel name:

1. Expand Audio Output, and then click one of the Digital Channels to bring up the Digital Audio Output dialog box (Figure 46). The channel numbers on the left refer to the physical output connectors on the audio output box. **Ch. 01** and **Ch. 02** refer to the channel pair on the first connector, and **Ch. 03** and **Ch. 04** refer to the pair on the second connector, and so forth.

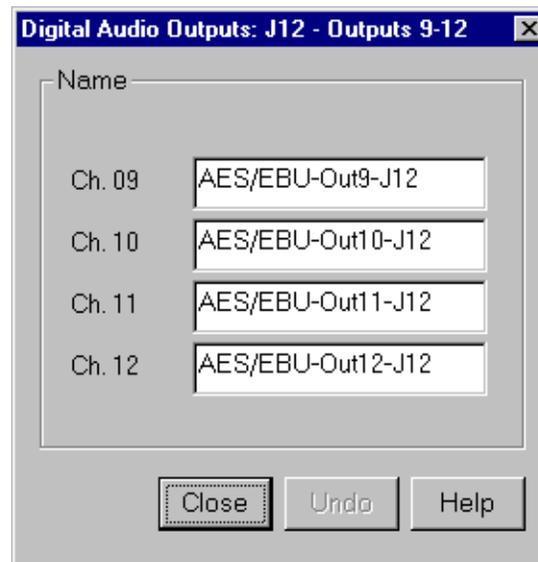


Figure 46. Digital Audio Output dialog box

2. Click in the box of the output channel whose name you want to change. A channel name can have up to 30 characters.
3. After you have changed the channel name or names, click **Close**.



Audio Configuration for the PDR 200

The Audio Configuration dialog box shown in Figure 47 allows you to configure input and output channels, input clocking, audio quality and monitor channels.

Input and Output Mapping

The Input Mapping tab is used for mapping input sources to Profile channels, while the Output Mapping tab is used for mapping Profile channels to output destinations. For example, you can map Profile Audio Chassis (PAC) input sources and serial digital audio input sources. Figure 47 and Figure 48 illustrate a sample configuration: a Profile unit with an audio signal processing board, a PAC 208 chassis (with A/D and D/A converters and connectors for eight channels), and two serial digital cards providing eight analog audio channels, eight digital audio channels, and four video channels with 16 embedded audio channels each.

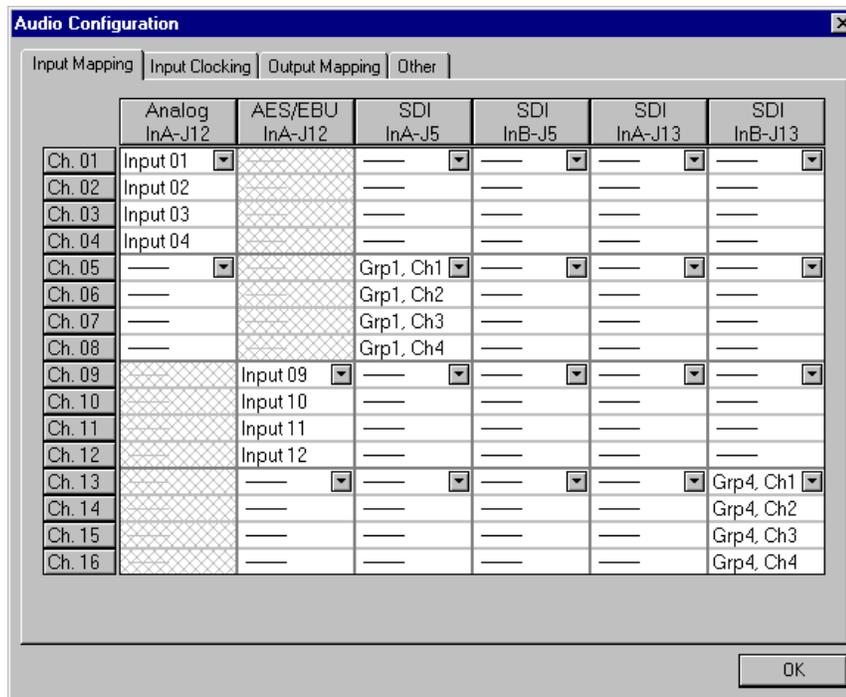


Figure 47. Audio Configuration dialog box, Input Mapping tab

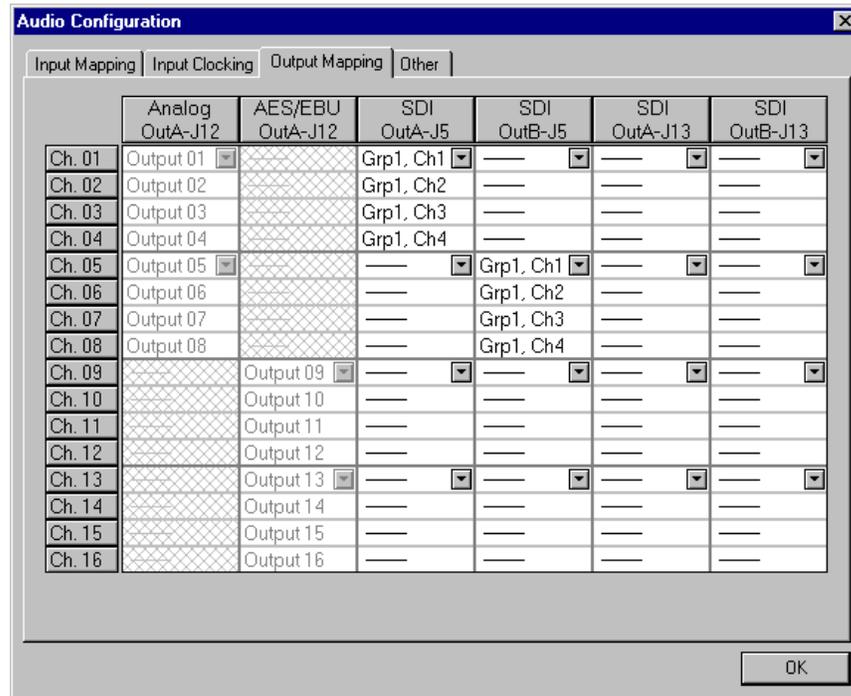


Figure 48. Audio Configuration dialog box, Output Mapping tab

The columns represent the sources to the sixteen channels on the input side and the destinations from the sixteen channels on the output side. The examples in Figure 47 and Figure 48 illustrate the system with a PAC 208 chassis allowing the selection of analog channels 1–8 and digital channels 9–16. A PAC 216 chassis, however, provides sixteen analog inputs and outputs or sixteen digital inputs and outputs. For the PAC 208, rows 9 through 16 of the analog channel column, and rows 1 through 8 of the AES/EBU channel column, are cross-hatched to indicate that these channels are not selectable. In Figure 48, in the column labeled AES/EBU, rows 9–16 appear dimmed, indicating that this audio type is always mapped and cannot be unmapped. Attempting to remap this section results in an error message.



The number of columns in the mapping grid depends on the number of possible input or output audio types that may be mapped to or from the disk recorder channels. The grid is used for selecting which of the possible input or output audio sources and destinations to map to the channels. Audio channels are mapped in groups of four channels only, and the four audio channels are always mapped to consecutive disk channels. For example, analog channels 1–4 (Input 01–Input 04) in the first column of Figure 47 are mapped to the first four disk recorder channels (Ch. 01–Ch. 04), while digital channels 9–12 (Input 09–Input 12) in Figure 48 are mapped to another four disk recorder channels (Ch. 09–Ch. 12).

In another example, channels 1–4 may be mapped to analog, channels 5–8 mapped to AES/EBU, and so forth. In addition, analog and AES/EBU audio types have an assigned one-to-one mapping to their respective channels, that is, input 1 always maps to channel 1, input 2 to channel 2, and so on.

Serial digital embedded audio contains sixteen audio channels grouped into four groups of four channels. Each group can be assigned to any group of four channels. For example, group 1 (Grp1) may be assigned to channels 1–4 (Ch1–Ch4), 5–8 (Ch5–Ch8), 9–12 (Ch9–Ch12), or 13–16 (Ch13–Ch16). However, a maximum of two of the four groups from a serial digital video source may be used simultaneously.

Input Mapping

The Input Mapping tab is used for mapping input channels to Profile disk channels. The channels must be mapped to an audio type (analog, SDI, or AES/EBU) at all times—there is no unmapped state for input mapping. However, channels may only be mapped to one audio type at a time. Analog and AES/EBU channels must always be mapped directly to the same physical channel numbers.

To map input channels:

1. Choose **Options | Audio Configuration**. The Audio Configuration dialog box appears (Figure 47).
2. Click the Input Mapping tab.
3. Click on a button in a column. This displays a list containing analog, AES/EBU, or SDI audio groups. Unavailable audio groups appear dimmed.

4. Click on the group of channels you want. Any single group of AES/EBU channels may be mapped to any group of disk channels.
5. Click **OK** to accept your changes or click another tab.

Output Mapping

The Output Mapping tab is used for mapping Profile disk channels to output destinations. If analog or AES/EBU audio types are present, they are always mapped to their associated channels. These audio types cannot be unmapped. Channels may be mapped to multiple audio types, but of these only one can be a serial digital embedded or SDI audio type.

To map output channels:

1. Choose **Options | Audio Configuration**. The Audio Configuration dialog box appears (Figure 48).
2. Click the Output Mapping tab.
3. Click on a button in a column. This displays a list containing analog, AES/EBU, or SDI audio groups. Unavailable audio groups appear dimmed.
4. Click on the group of channels you want. The audio channel may be mapped to any of the outputs in groups of four.
5. Click **OK** to accept your changes or click another tab.

Input Clocking

The Input Clocking tab is used for assigning video input clocking sources to input audio channels. The first column on the left side of the dialog box displays the disk recorder channel numbers. The last column shows the audio clock reference source selection (Figure 49).

You get one system reference by default from the Reference Genlock boards, and up to four video input references, depending on which video boards are installed in your Profile unit. Even if more than four video references are available, only the first four input clocking references are used. If you look at



Chapter 2 *Using the Profile Configuration Manager*

the bottom of the Configuration Manger window, you will see a graphic representation of the installed boards. A key to the board representations is shown in Table 3.

Table 3. Board representation key

Board Tag	Board Type	No. of Video References
Vid I/O SDI VA	Serial digital component video	2
Vid I CAV	Component analog video	1
Vid I Cmpst	Analog composite video	1

The video references shown in the Input Clocking tab—Video Input 1–4 — correspond to the actual video boards installed, from left to right, as represented at the bottom of the Configuration Manager window.

For example, a system that does not use all four available clock references might be configured like this. In this specific example, shown in Table 4, you have one analog composite board and one component analog board. The panel in the tab shows System, Video Input 1, and Video Input 2.

Table 4. Configuration example, two video input clocking sources

Board Tag	Board Type	Board Reference	Input Clock Reference
Vid I CAV	Component analog video	1	Video Input 1
Vid I Cmpst	Analog composite video	1	Video Input 2

In the next example, a system that uses all four available clock references might be configured with two serial digital component boards. In this specific example, shown in Table 5, the panel in the tab shows System, Video Input 1, Video Input 2, Video Input 3, and Video Input 4.

Table 5. Configuration example, four video input clocking sources

Board Tag	Board Type	Board Reference	Input Clock Reference
Vid I/O SDI VA	Serial digital component	1 and 2	Video Input 1, Video Input 2
Vid I/O SDI VA	Serial digital component	1 and 2	Video Input 3, Video Input 4

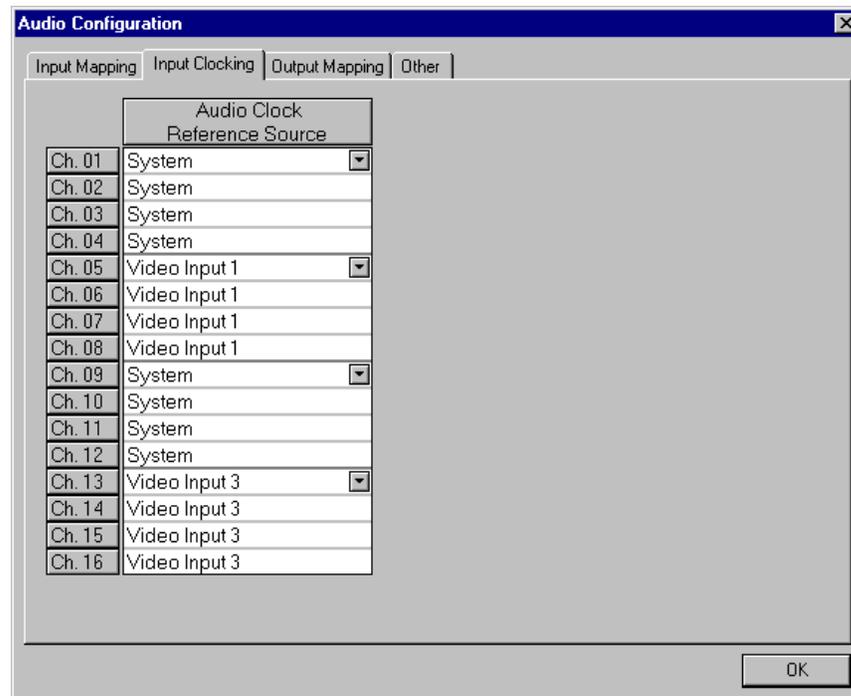


Figure 49. Audio Configuration dialog box, Input Clocking tab



To change the input clocking:

1. Choose **Options | Audio Configuration**. The Audio Configuration dialog box appears. Click the Input Clocking tab, if it isn't already displayed.
2. Click the button in the Audio Clock Reference Source column for the desired channels and select one of up to five choices: System (default) or Video Input. (The number of video inputs depends on the number of available video channels.) Selecting one of the video inputs sets the group of four channels to use the selected input as their audio clocking source.
3. Click **OK** to accept your changes or click another tab.

Audio Configuration Other Tab

Finally, under the Other tab, you can select recording and playback quality and adjust monitor channels.

1. Choose **Options | Audio Configuration**. The Audio Configuration dialog box appears (Figure 50).

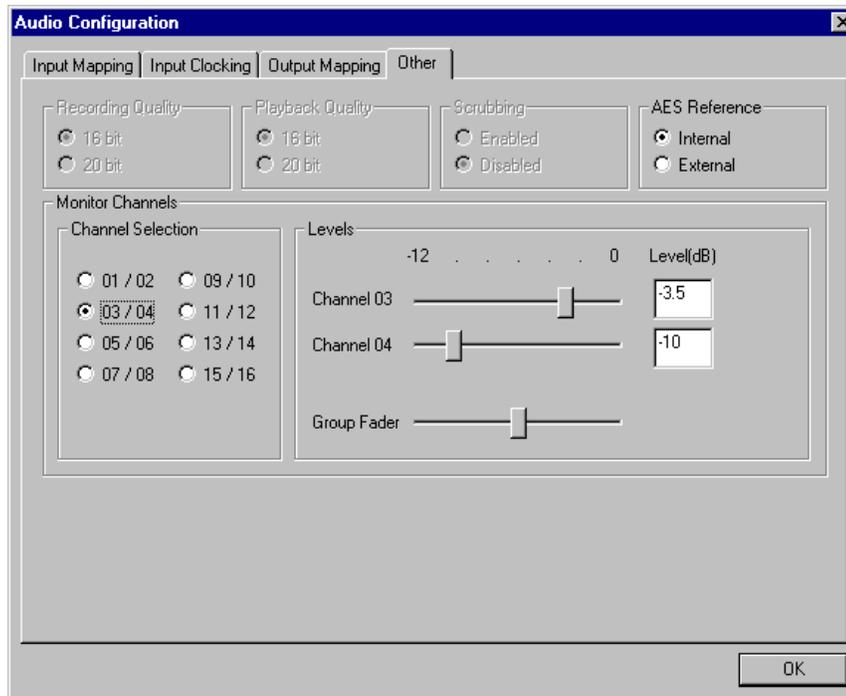


Figure 50. Audio Configuration dialog box, Other tab

2. Click the Other tab.
3. By default, recording and playback are set to 16-bit quality. To change the audio quality, click the 20-bit button for either recording, playback or both. Audio is played back at its recorded resolution, even if the system is configured for 20-bit playback quality. If 16-bit quality is enabled, all audio will be played back at 16-bit, regardless of what quality it was recorded in.
4. Scrubbing is currently disabled.
5. Under Monitor Channels, the Channel Selection box allows you to select which channels you want to monitor. Click next to a channel pair to select them. You can now adjust line levels for the pair.
6. The line level range is -12 to $+0$ dB. If you trim the line level for an individual channel with the slider handle, the line level is incremented by 1 dB; clicking on either side of the slider handle increments the line level by 0.5 dB. The **Level** boxes show the current line level. If you enter a number directly into a **Level** box, the line level number is rounded to the nearest ± 0.5 dB.
7. To adjust the trim for all channels at once, use the **Group Fader** slider. While the **Group Fader** moves all channels at once, it maintains the individual channel differences.

NOTE: If the audio interface box is not present, the Monitor group will not appear. If your system is configured with an XLR 216 digital-only chassis, channel selection is the only option available in the Monitor Channels group.

8. Click **OK** to accept your changes or click another tab.



Chapter 2 Using the Profile Configuration Manager

Using the Media Manager

The Profile Media Manager allows you to have access to digitally stored media and provides tools for managing that media—such as explore, cut, copy, paste, and delete. Media may be stored locally on disk on your Profile unit, or it may be on a disk expansion unit, RAID system, or library system attached to your Profile unit. You can also transfer media stored on any Profile system on your Profile network via a Fibre Channel connection.

Digital video and audio media may be stored in volumes. A volume is a disk set or file system on one of the following machines:

- PDR 100 Professional Video Disk Recorder
- PDR 200 Video File Server
- PRS 200 Profile RAID Storage system
- PLS 200 Profile Library System
- PDX 103 Profile Disk Expansion unit
- PDX 208 Profile Disk Expansion unit

With Media Manager, you view media in a tree structure. On disk, media may consist of video and audio clips and masters. Clips and masters are organized into bins that are kept on a volume. A bin is a container for clips and masters, similar to a directory on a computer. A clip refers to segments or portions of a media file or a media file in its entirety. A master is an edited sequence of clips. On a cartridge in a library system, media consists only of clips, not masters. Cartridges are divided into one or more partitions.

NOTE: Profile system software version 2.2 supports Media Manager version 1.1.



Starting and Exiting the Media Manager

To start the Media Manager application with Windows NT:

- Double-click the Media Manager shortcut icon.

Or:

- Choose **Start | PDR Applications | Media Manager**.

The Media Manger window appears (see Figure 51). The tree pane is on the left and the contents pane is on the right. What appears in the contents pane depends on what you select in the tree pane. For example, if you select the INT icon in the tree pane, the Recycled and default bins appear in the contents pane. If you select a bin, the masters and clips in that bin appear in the contents pane. Masters and clips will only appear in the contents pane.

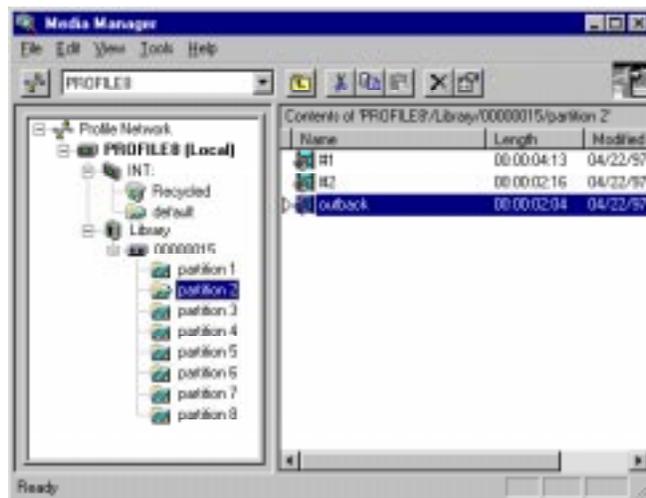


Figure 51. Media Manager window

Whenever you start the Media Manager, a Hardware Communication program is also started, if it is not already running. This program keeps track of the Profile host file (*profile.hst*) which lists Profile systems on the network, as well as remoting activities.



Figure 52. Hardware Communication message box

To exit the Media Manager:

1. Choose **File | Exit**.

A message box is displayed, asking you to confirm that you really want to exit the Media Manager application. Click on the **Yes** button to confirm the exit or the **No** button to cancel the quit command.

Starting Other Applications from the Tools Menu

You can start other tools and applications from Media Manager's **Tools** menu:

- Choose **Tools | Transfer Monitor** to start the Transfer Monitor tool.
- Choose **Tools | Media Manager** to start another instance of the Media Manager.
- Choose **Tools | Tool Box Editor** to start the optional Tool Box Editor, if available.
- Choose **Tools | List Manager** to start the optional List Manager, if available.

When an application is started from the Media Manager, it initially connects to the machine that was selected in the Media Manager's machine list box. If the application is not installed, an error occurs.



Viewing and Hiding the Toolbar and Status Bar

By default, the toolbar is visible. To hide it:

- Choose **View | Toolbar**.

To make it visible again, choose **View | Toolbar** again.

By default, the status bar is visible. To hide it:

- Choose **View | Status Bar**.

To make it visible again, choose **View | Status Bar** again.

To refresh the tree and contents panes:

- Choose **View | Refresh** or press **F5**.

Viewing Help and Software Version Information

To view Help topics on Media Manager:

- Choose **Help | Media Manager Help Topics**.

To view program and software version information and copyright:

- Choose **Help | About Media Manager**.

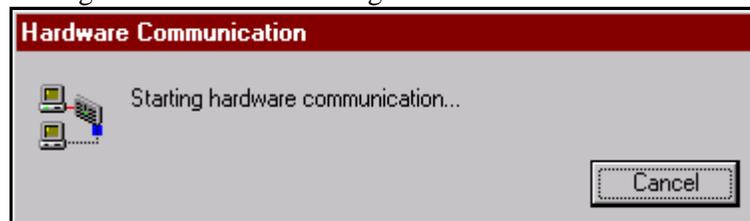
Connecting to a Remote Machine

You can connect from your local machine to any remote Profile machine. You can also connect remotely from any PC running Windows NT 4.0. A local Profile machine refers to a Profile system to which you are directly attached. A remote Profile machine refers to a Profile system that is connected to your local system via an Ethernet local area network (LAN).

The Hardware Communication process manages the contents of the Profile host file (*profile.hst*), owns connections to the machines listed in the host file, and passes on change notifications received from each of these machines such as when multiple Media Managers are running simultaneously.

At application initialization, the Media Manager will start Hardware Communication if it isn't already running, and will register itself. This process will terminate itself whenever its registered process list is empty or all registered processes have terminated.

While Hardware Communication is initializing, Media Manager shows the following connection status dialog:



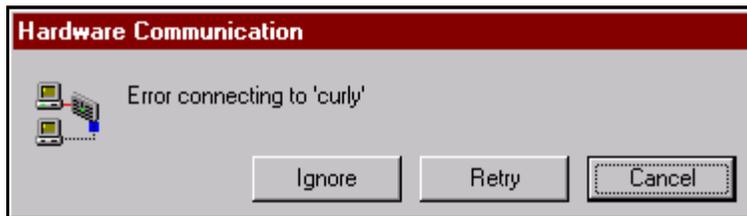
If the **Cancel** button is pressed before it has completed its initialization, the Media Manager will be closed.

After Hardware Communication is initialized, Media Manager instructs it to connect to each machine in the local machine's host file (*profile.hst*). As each connection is made, the machine's name appears in the connection status dialog shown here:



It may take from a few seconds to several minutes to connect to a machine (the Profile may have to wait for a library system to finish calibrating before it allows a connection). Pressing the connection status dialog's **Cancel** button leaves the current machine unconnected and goes on to the next machine in the host file.

If an error occurs while trying to connect to a machine (the most common error is that the PortServer application is not running on the Profile so that machine cannot be controlled remotely), the communication dialog gives you three options:



- Ignore** Leave this machine unconnected and go on to the next machine in the host file.
- Retry** Attempt to reconnect to the machine.
- Cancel** Cancel all connections for all remaining machines in the host file.

To connect to a remote Profile machine on your Profile network:

1. Choose **Add/Remove Machine** from the **File** menu or from the shortcut menu with a right-click on a machine, volume, or network icon in the tree pane. You can also click the **Add/Remove Machine** button on the toolbar. The Add/Remove Machine dialog box appears. The label *Local* appears after the name of the local Profile machine.

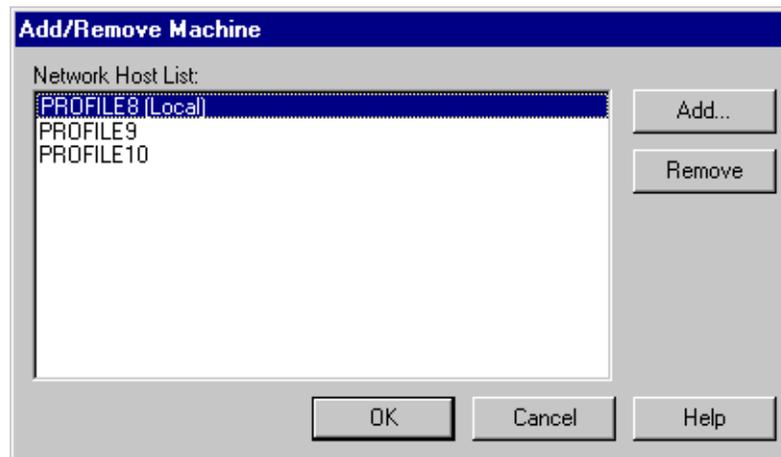


Figure 53. Add/Remove Machine dialog box

2. To add a remote Profile machine to the network host list, click **Add**. The Add Network Host dialog box appears.

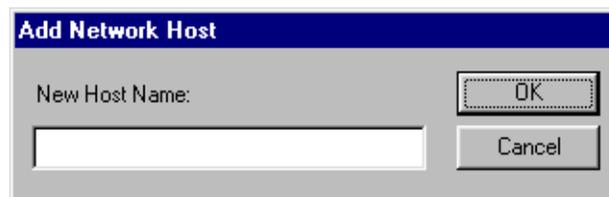


Figure 54. Add Network Host dialog box

3. Enter the name of the machine in the New Host Name box. This can be the host name or the machine's IP address (such as 128.161.37.138).



Chapter 3 *Using the Media Manager*

4. Click **OK**. The new host name is added to the network host list. You can click the **Add** button again to add as many machine names as you want.
5. Click **OK** again. The connection status message box appears to show the progress of new connections.

To remove a Profile machine from the network host list:

1. Choose **Add/Remove Machine** from the **File** menu or from the shortcut menu with a right-click on a machine, volume, or network icon in the tree pane. You can also click the **Add/Remove Machine** button on the toolbar. The Add/Remove Machine dialog box appears.
2. Select the name of the machine you want to remove in Network Host List box.
3. Click **Remove**.
4. Click **OK**.

Viewing the Media Hierarchy

The Media Manager window is divided into two main sections: the tree and contents panes. Clips and masters appear in the contents pane. Items are listed alphabetically.

You can expand or collapse the tree hierarchy by clicking on the + (plus) or – (minus) control buttons, as shown in Figure 55. If you click on a + button, the tree hierarchy is expanded or opened so you can see the branch. For example, under a volume, you see bins. Clicking on the – button collapses or closes the associated branch of the tree, hiding the bins under the volume.

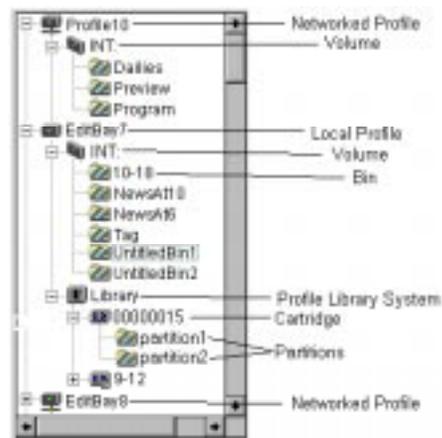


Figure 55. The Media Manager window

To explore the contents of an item, select the icon representing it and then choose **Explore** from the shortcut menu which is displayed with a right-click.

The icons shown in Media Manager are show here:

-  The Profile network icon is the root for all other items in the tree pane.
-  First icons in the tree pane are for Profile machines, and each is labeled with a name. A Profile can be a local machine or one connected via Ethernet alone (without bar) or a machine connected via Ethernet and Fibre Channel (with bar).
- 



Chapter 3 *Using the Media Manager*

-  An unconnected machine icon appears if no connection could be made or if you cancel the connection in the Hardware Communication dialog box. This icon cannot be expanded.
-  A non-Profile server that recognizes Media Manager connection requests. Media may be copied to this server from other machines on the Fibre Channel network.
-  The next icon is the volume. A machine's storage is divided into one or more volumes. The volume icon represents a physical set of disks—either an internal disk set, and external expansion box (such as the PDX208), or a RAID disk array (PRS200).
-  Below a volume icon are bin icons.
-  A Recycle bin appears below each volume.
-  A master.
-  Clips and archived clips with audio and video.
-  Clips and archived clips with no audio.
-  Clips and archived clips with no video.
-  The transit icon indicates a clip that is currently being copied to the bin from another Profile unit or is being restored from the library. The state is only shown for transactions initiated from the current Media Manager. The icon is updated when the transfer is complete.
-  This icon is used when Media Manager does not recognize an item in the Profile clip database, or if a transfer or archive operation is incomplete.
-  The library icon appears after volume icons. The library icon will only appear on machines connected to a Profile library system. After expanding a library icon,
-  The cartridge icon appears below the library icon.
-  The cleaning cartridge icon may appear anywhere in the list of cartridges.

-  The off-line cartridge icon represents an out-of-library cartridge.
-  The unknown cartridge icons represent cartridges that have not been formatted or that are in an unknown state. They may or may not actually be in the library.
-  The partition icons appear under cartridge icons.

Toolbar

The Media Manager toolbar provides one-button access to commands:

-  **Add/Remove Machine:** Opens the Add/Remove Machine dialog box.
-  **Select Current Machine** box: Expands the machine item in the tree.
-  **Up One Level:** Goes to the folder one level up.
-  **Cut:** Removes the selected items and copies them onto the clipboard. Use Paste to put them in the new location.
-  **Copy:** Copies the selected items to the clipboard. Use Paste to put them in the new location.
-  **Paste:** Inserts the items you have copied or cut into the selected location.
-  **Delete:** Deletes the selected items.
-  **Properties:** Displays the properties of the selected items.



Copying Media

To copy one or more clips or masters:

1. In the contents pane, select a clip or master. To extend the selection, press Shift-Up Arrow or Shift-Down Arrow. Choose **Edit | Select All** or Ctrl-A to select all the media in the contents pane.
2. Choose **Copy** from the **Edit** menu or from the shortcut menu with a right-click. You can also click the **Copy** button on the toolbar.
3. Select the location where you want to paste the item. This can be another bin or anywhere in the contents pane when a bin is selected. The selected location may even be in another Media Manager window. If both the source and the destination locations reside on machines connected to the Fibre Channel network, you may copy between machines.
4. Choose **Paste** from the **Edit** menu, or from the shortcut menu with a right-click. You can also click the **Paste** button on the toolbar. The media may be pasted into the same bin it was copied from. In this case the media is automatically renamed. Media Manager automatically suggests a new name that does not conflict with any other item at the selected location. The new name is based on the old name with the addition of a number: *source* becomes *source1*.

Moving Media

To move a clip or master to another bin:

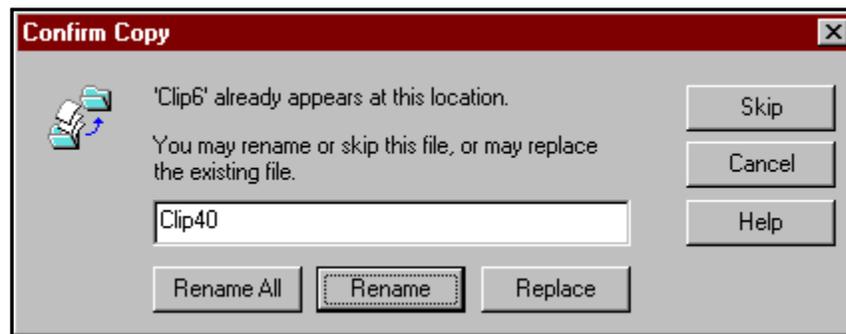
1. In the contents pane, select a clip or master. To extend the selection, press Shift-Up Arrow or Shift-Down Arrow. Choose **Edit | Select All** or Ctrl-A to select all the media in the contents pane.
2. Choose **Cut** from the **Edit** menu or from the shortcut menu with a right-click. You can also click the **Cut** button on the toolbar.
3. Select the location where you want to paste the media. This can be another bin or anywhere in the contents pane when a bin is selected. The selected location may even be in another Media Manager window. If both the source and the destination locations reside on machines connected to the Fibre Channel network, you may copy between machines.
4. Choose **Paste** from the **Edit** menu, or from the shortcut menu with a right-click. You can also click the **Paste** button on the toolbar. Pasting media into the same bin has no effect.

To move a clip or master using drag and drop:

1. In the contents window, select one or more clips or masters.
2. Drag the selection and drop it at the appropriate location. This can be a bin or anywhere in the contents pane when a bin is selected. The selected location may even be in another Media Manager window. The tree pane will automatically scroll when dragging a bin to the very top or bottom of the tree.

If the control key is held down when the item is dropped, it is copied to the new location, not moved. Dragging a clip or a master to a different machine or volume always results in a copy – the original clip is not deleted.

When copying or moving clips to a new location, if a clip or master with the same name already appears at that location, you will be prompted to change the name or cancel the operation.



When you confirm a copy, these operations apply:

Replacement clip name	Media Manager automatically suggests a new name that does not conflict with any other name at the selected location. The new name is based on the old name with the addition the next available number: <i>source</i> becomes <i>source1</i> , <i>clip_17</i> becomes <i>clip_18</i> , <i>17takes</i> becomes <i>17takes1</i> .
Skip	Skip copying this clip but continue any remaining copy operations.
Cancel	Cancel the copy operation.
Help	Opens the help topic for this dialog.



Rename All	Automatically changes the names of all clips being copied to avoid name conflicts at their new location.
Rename	Use the replacement clip name to change the name of the current clip at its new location.
Replace	Delete the clip currently at the destination to resolve the conflict.

Duplicating Media

To *duplicate* media means that you copy a clip or master and the underlying media files that the clip or master reference. A normal copy operation does not copy the associated media files, only references to those media files.

To duplicate a clip or master:

1. In the contents pane, select the clip or master you want to duplicate.
2. Choose **Duplicate** from the **Edit** menu or from the shortcut menu with a right-click. The Duplicate operation always automatically renames the new clip.

Creating, Renaming and Deleting Bins

A bin can have a name up to 32 characters long. Spaces are legal characters, but count for two characters. Colons (:) and slashes (/) are illegal. Tildes (~) are only illegal as a first character in a bin name.

To create a new bin:

1. In the tree pane, select the machine or volume where you want to create the new bin. When a volume icon is selected, the new bin is added to that volume. When a machine icon is selected, a new bin is created in the first volume in that machine.
2. Choose **New Bin** on the **File** menu or from the shortcut menu with a right-click.
3. A new bin called **NewBin** is placed in the tree. The bin name is highlighted so you can change it. Accept the new bin name by pressing Enter.

To rename a bin:

1. Select the bin in either the tree or contents pane.
2. Choose **Rename** on the **File** menu or from the shortcut menu with a right-click. You can also select the bin a second time.
3. The name of the bin is highlighted. Type a new name for the bin and press Enter.

NOTE: Renaming a bin involves modifying the path of every clip or master in the bin, to reflect the new name. If a clip or master cannot be renamed because it is locked or in use, you end up with two bins: one with the old name and one with the new one. The clip that could not be modified will still be in the bin with the old name.

To delete a bin:

1. Select the bin or bins in either the tree or contents pane.
2. Press **Delete**, **Backspace**, choose **Edit | Delete** or with a right-click, choose **Delete** from the shortcut menu.
3. The bin icon disappears from the tree and the contents of the bin are moved to the **Recycle** bin.

NOTE: Deleting a bin involves deleting every clip or master currently in the bin. If a clip or master cannot be deleted because it is locked or in use, the bin will not be deleted either—it will only contain those clips or masters that could not be deleted. The rest go to the Recycle bin.

Renaming Clips and Masters

A clip or master can have a name up to 32 characters long. Spaces are legal characters, but count for two characters. Colons (:) and slashes (/) are illegal in clip and master names. Tildes (~) are only illegal as first characters.

To rename a clip or master:

1. Select the clip or master in the contents pane.
2. Choose **Rename** on the **File** menu or with a right-click. You can also select the item a second time.



3. The name of the clip or master is highlighted. Type a new name for the clip or master and press Enter.

Deleting Clips and Masters

When a clip or master is deleted, it is just moved to the **Recycle** bin. It is permanently deleted when the **Recycle** bin is emptied.

To delete a clip or master:

1. Select the clip or master in the contents pane.
2. Press **Delete**, **Backspace**, or choose **Delete** on the **File** menu or from the shortcut menu with the right-click.
3. The clip or master icon disappears from the tree and is moved to the **Recycle** bin.

Emptying the Recycle Bin

When a clip or master is deleted, it is moved to the **Recycle** bin and is permanently deleted when the **Recycle** bin is emptied. If an item of the same name is in the **Recycle** bin, the new item is automatically renamed.

To empty the **Recycle** bin:

1. Select the bin labeled Recycled in the tree pane.
2. Choose **Empty Recycle Bin** with a right-click or from the **File** menu.

Viewing Clip and Master Properties

Media Manager lets you view the media properties for clips and masters as well as properties of the library system (see “Viewing Library, Cartridge and Archived Clip Properties” on page 118). To view properties (see Figure 56):

1. Select a clip or master in the contents bin.
2. Choose **Properties** from the **File** menu or from the shortcut menu with a right-click. You can also click the **Properties** button on the toolbar. The Properties dialog box for clips or masters appears (see Figure 56).

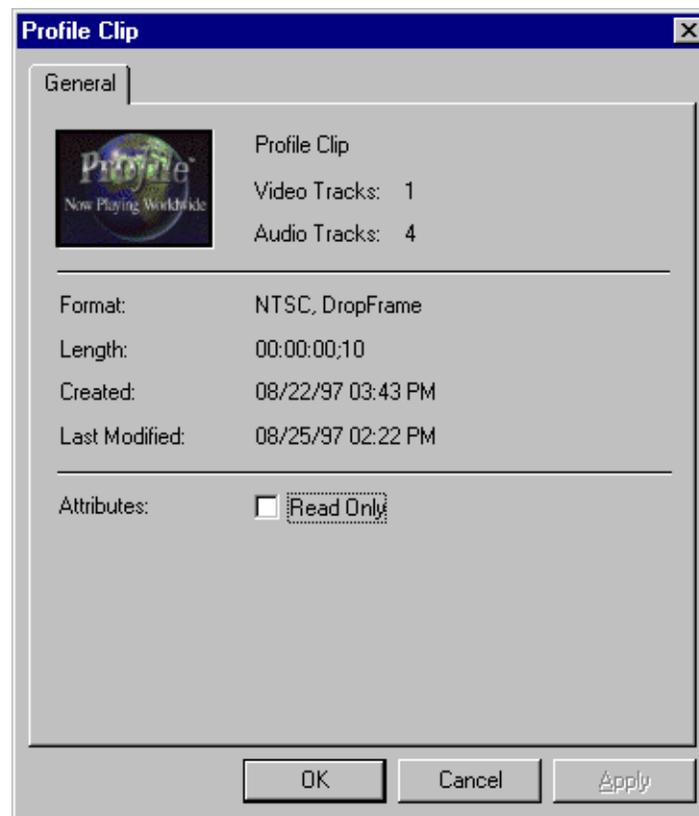


Figure 56. Properties dialog box for clips or masters



Chapter 3 *Using the Media Manager*

In this dialog box, you can view:

- A preview frame of the clip or master to help identify it.
- The name of the clip or master.
- How many tracks the clip or master uses for both audio and video.
- The media format, either NTSC or PAL. NTSC clips are recorded with either drop-frame or non-drop-frame timecode.
- The length of the clip or master. The length is shown in timecode format: **00:00:00:00** (Hours:Minutes:Seconds:Frames).
- The date and time that the media was created and the date and time it was last changed. The date and time the media was created or last changed is shown in the form: **12/2/94 9:40 PM**
- The read-only attribute, which you can change by clicking the Read Only box. Clips and masters with the read-only attribute cannot be renamed, deleted, or modified in any way.

Finding Clips and Masters

You can locate clips and masters anywhere on the Profile network. If you select the Profile Network icon, you will search all machines and libraries on the network. If you select a machine, your search will be limited to that machine's volumes and attached library. If you select a cartridge in a library, your search includes all partitions in the cartridge.

1. Select the item where you want to begin your search in either the tree or contents panes.
2. Choose **Find** on the **Edit** menu or from the shortcut menu with a right-click. The Find dialog box appears (see Figure 57).

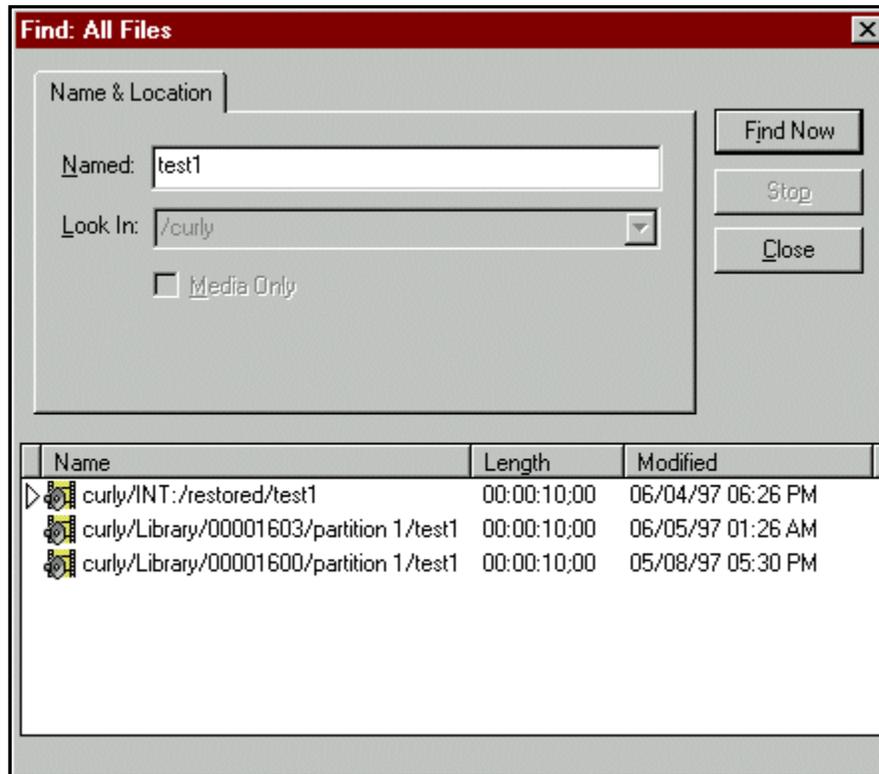


Figure 57. Find dialog box



Chapter 3 *Using the Media Manager*

3. Enter the name of the clip or master in the Named box. The Look In box indicates where the search will begin.

NOTE: Wildcards are not supported.

4. Click **Find Now**. Click **Stop** to abort the search. When a match is found, the result is displayed in the box at the bottom of the **Find** dialog box.
5. If you double-click an item in the list of found items, the tree pane is expanded and the item is selected in the contents pane.
6. You can copy an item from the found list by holding the **Control** key and dragging the item to the desired location, or you can move it by dragging it without the **Control** key.
7. Click **Close** when you have completed your search.

Using a Library System

The PLS200 Profile Library System is a robotic library that stores clips digitally on magnetic tape cartridges. The PLS 200 is a cost-effective mechanism for spot or news storage and management, plus a solution and method for the long-term archival of material. Storage is only limited by the number of tape cartridges available. A fully loaded, 80-cartridge library has the capacity to store approximately 130 hours of program material.

Archiving a Clip

To archive a clip means to copy it from disk to a cartridge in the library system. Clips are always copied into the library when archived: they are never moved.

NOTE: Clips can only be archived if they reside on a machine that is connected directly to a library system.

To archive a clip using a copy command:

1. In the contents pane, select the clip you want to archive. To extend the selection, press Shift-Up Arrow or Shift-Down Arrow. Choose **Edit | Select All** or Ctrl-A to select all the media in the contents pane.
2. Choose **Copy** on the **Edit** menu or from the shortcut menu with a right-click. You can also click the **Copy** button on the toolbar.
3. In the tree pane, select the partition icon where you want to archive the clip.
4. Choose **Paste** on the **Edit** menu or from the shortcut menu with a right-click. You can also click the **Paste** button on the toolbar.

If there is a clip with the same name in the partition where you want to archive it, you are prompted to change the name or cancel the operation. Also, a clip can only be added to a partition if there is enough space for it.



To archive a clip using drag and drop:

1. In the tree pane, click the cartridge icon where you want to archive a clip. This expands the tree pane to reveal the partition icon or icons.
2. Click on the bin where you want to copy a clip from. The clip icons from the bin appear in the contents pane.
3. In the contents pane, select the clip icon for the clip you want to archive, hold the left mouse button, and drag it to the partition icon in the tree pane where you want to archive the clip.
4. If you want to check on the progress of an archive operation, click on the Profile logo or choose **Tools | Transfer Monitor** to view the Transfer Monitor.

Restoring a Clip

To restore an archived clip means to copy it from a partition in a cartridge in the library system to disk. Clips are always copied out of the library when restored: they are never moved.

NOTE: An archived clip can only be restored to the machine that is connected directly to the library system.

To restore an archived clip using the copy method:

1. In the tree pane, click the cartridge icon you want to restore a clip from. This expands the tree pane to reveal the partition icon or icons.
2. Click the partition in the tree pane that you want to restore from to reveal the clips in the contents pane.
3. In the contents pane, select the archived clip you want to restore. To extend the selection, press Shift-Up Arrow or Shift-Down Arrow. Choose **Edit | Select All** or Ctrl-A to select all the media in the contents pane.
4. Choose **Copy** on the **Edit** menu or from the shortcut menu with the right-click. You can also click the **Copy** button on the toolbar.
5. Select the location where you want to restore the archived clip. This can be a bin or anywhere in the contents pane when a bin is selected. The selected location may also be in another Media Manager window.
6. Choose **Paste** on the **Edit** menu or from the shortcut menu with a right-click. You can also click the **Paste** button on the toolbar.

If there is a clip with the same name in the bin where you want to restore it, you are prompted to change the name or cancel the operation.

To restore a clip using the drag and drop method:

1. In the tree pane, click the cartridge icon you want to restore a clip from. This expands the tree pane to reveal the partition icon or icons.
2. Click the partition in the tree pane that you want to restore from to reveal the clips in the contents pane.
3. In the contents pane, click on the clip icon or icons you want to restore, hold the left mouse button, and drag it to the bin icon in the tree pane where you want to restore the clip. The bin must be on the Profile system that your library system is attached to.
4. If you want to check on the progress of a restore operation, click on the Profile logo or choose **Tools | Transfer Monitor** to view the Transfer Monitor.

Renaming an Archived Clip

A clip can have a name up to 32 characters long. Spaces are legal characters, but count for two characters. Colons (:) and slashes (/) are illegal in clip names. Tildes (~) are only illegal as a first character in a clip name.

To rename an archived clip:

1. In the tree pane, select the library, cartridge, and partition where the archived clip is stored.
2. In the contents pane, select the archived clip you want to rename.
3. Choose **Rename** from the **File** menu or from the shortcut menu with a right-click. You can also select the clip's name a second time.
4. Type the new name and press Enter.

NOTE: This operation does not take permanent effect until after an update operation.



Deleting an Archived Clip

To delete an archived clip:

1. In the tree pane, select the library, cartridge, and partition where the archived clip is stored.
2. In the contents pane, select the archived clip or clips you want to delete.
3. Press the **Delete** or **Backspace** key, or choose **Delete** from the **File** menu or from the shortcut menu with a right-click.

When an archived clip is deleted, it is not moved to the **Recycle** bin. It is removed from the library database's record of archived clips. Also, since tape is not a random access medium, the storage space is not reclaimed as it is on the disk drives, and the space cannot be reused until all clips in a partition have been deleted.

NOTE: *This operation does not take effect until after an Inventory operation.*

Importing a Cartridge

To *import* a cartridge is to insert or add it into the library system:

1. In the tree pane, select the library icon.
2. Choose **Import** from the **File** menu or from the shortcut menu with a right-click. The Import Cartridge dialog box appears.

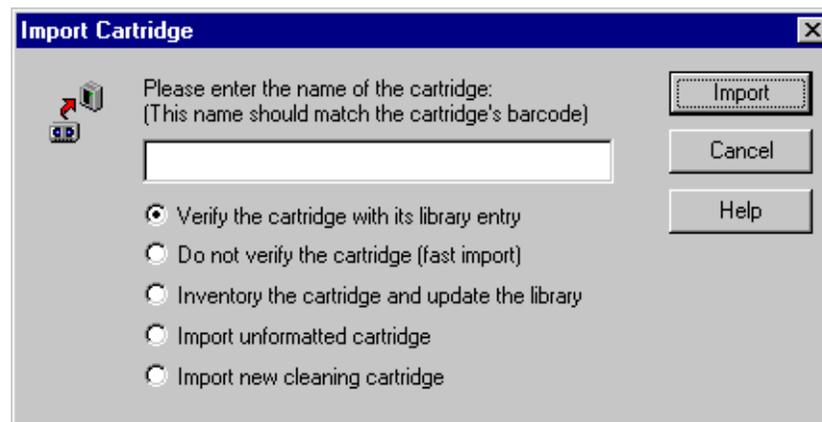


Figure 58. Import Cartridge dialog box

3. Enter a unique label name (number) for the cartridge. This name must match the barcode on the cartridge—for example, **00000015**. If the label is not unique or matches a label already in the library, the cartridge is rejected.
4. Click a button to tell Media Manager how you want to import the cartridge:
 - If you want to verify the contents of the cartridge, click **Verify the cartridge with its library entry**. If the label (barcode) matches the one in the library and the directory entries match, the cartridge is imported. If the label matches but the directory entries do not, the cartridge is rejected. If the library system can find no record of the barcode label, the cartridge is stored as an unknown cartridge.
 - For a fast import with no verification of the cartridge's contents, click **Do not verify the cartridge (fast import)**. As long as the label matches one in the library, the cartridge goes directly into an available slot. If the library system can find no record of the barcode label, the cartridge is stored as an unknown cartridge.



Chapter 3 *Using the Media Manager*

- To inventory the cartridge, click **Inventory the cartridge and update the library**. The cartridge is loaded into a transport and its contents are inventoried. The database is updated if it did not match what was inventoried.
 - To import an unformatted cartridge, click **Import unformatted cartridge**. The cartridge is put into the first available slot and appears in the media tree with an unformatted cartridge icon.
 - To import a new cleaning cartridge, click **Import new cleaning cartridge**. The library system cannot differentiate between a cleaning cartridge and an ordinary cartridge. It must be told when a cleaning cartridge is imported. If you provide a unique tape label, the cleaning cartridge is stored in a cleaning cartridge bin.
5. Click **Import**.
 6. A prompt appears requesting that you physically insert the cartridge into the library. Once the robot is in position and you insert the cartridge, press any button on the library's control panel.
 7. The Importing Cartridge dialog box remains on the screen until the robot puts the cartridge in the available slot. Since this is done in the background, click **OK** at any time.

When the robot retracts with the imported cartridge, it scans the cartridges's barcode. If the barcode does not match the name that was entered for the import, it is rejected.

Exporting a Cartridge

To *export* a cartridge is to eject or remove it from the library system:

1. In the tree pane, select the icon for the cartridge you want to export.
2. Choose **Export Cartridge** from the **File** menu, or from the shortcut menu with a right-click, and the Export Cartridge dialog box appears. By default, the cartridge location is *Out of library*.

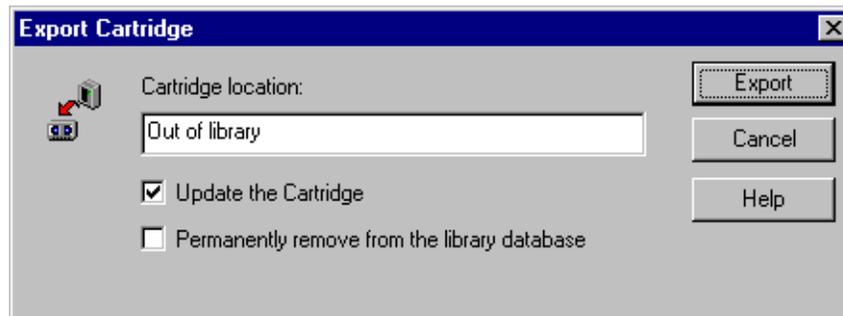


Figure 59. Export Cartridge dialog box

3. Select the appropriate box:
 - If you select **Update the cartridge**, the cartridge is loaded into a transport and its directory is updated to reflect clip name changes or deletions. Then the cartridge is ejected.
 - If you select **Permanently remove from the library database**, all references to the cartridge are deleted from the library database, then the cartridge is ejected.
 - If you select both boxes, the cartridge is loaded into a transport and its directory is updated to reflect clip name changes or deletions. This information is saved on the cartridge. Then all references to the cartridge are deleted from the library database and the cartridge is ejected.
4. Click **Export**.
5. A prompt appears requesting that you physically remove the cartridge from the library. Once the robot is in position and you remove the cartridge, press any button on the library's control panel.
6. The Exporting Cartridge dialog box remains on the screen until the robot ejects the cartridge. Since this is done in the background, click **OK** at any time.



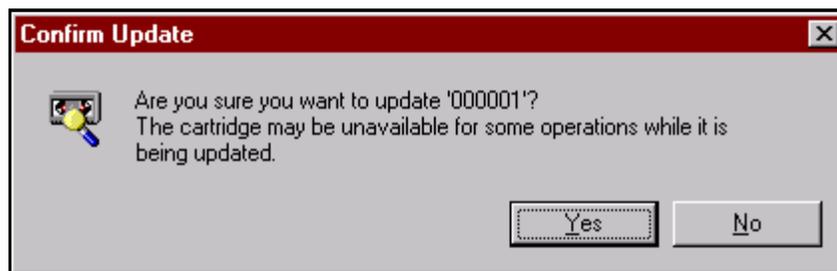
Updating and Inventorying Cartridges

Deleting and renaming archived clips from the Media Manager interface simply updates the library database—not the cartridge directory. This is why delete and rename operations are so fast: the cartridge is not loaded into a transport. Once a clip is deleted or renamed, the library database and the cartridge's physical directory are out of synch.

The update and inventory operations allow you to resynchronize the cartridge directory and library database. The update operation rewrites the cartridge directory with the library database's record of what should be on that cartridge. The inventory operation reads the cartridge directory and rewrites the library database's entry for that cartridge.

To update one or more cartridges:

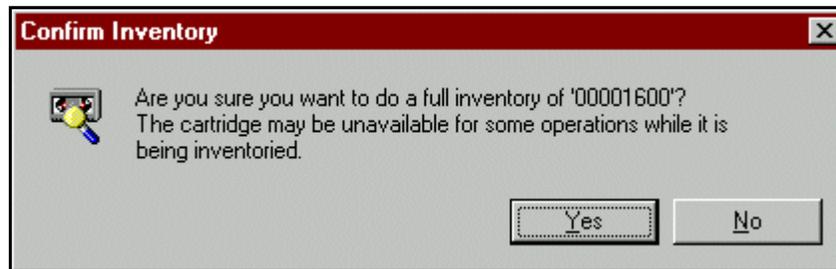
1. In the media tree or contents pane, select one or more cartridge icons.
2. On the **File** menu, or from the shortcut menu with a right-click, click **Update Cartridge**. Since the update takes several minutes to complete, you are asked to confirm the operation:



3. Click **Yes** to update the cartridge or cartridges.

To inventory one or more cartridges:

1. In the tree or contents pane, select one or more cartridge icons.
2. Choose **Inventory Cartridge** from the **File** menu or from the shortcut menu with a right-click. Since the inventory takes several minutes to complete, you are asked to confirm the operation.



3. Click **Yes** to inventory the cartridge.



Inventorying the Library

There are times when the contents of the library system do not match the record of those contents in the library database. This usually occurs when the cartridges have been added or removed by hand without appropriate inventories, which is not recommended. The inventory operation rescans the barcodes of the cartridges in the library and updates the database to the actual library contents.

To inventory the contents of the library:

1. Select a library icon in the tree pane.
2. Choose **Inventory** from the **File** menu or from the shortcut menu with a right-click. Since this operation may take several minutes, Media Manager asks you to confirm that you want to inventory the entire library.

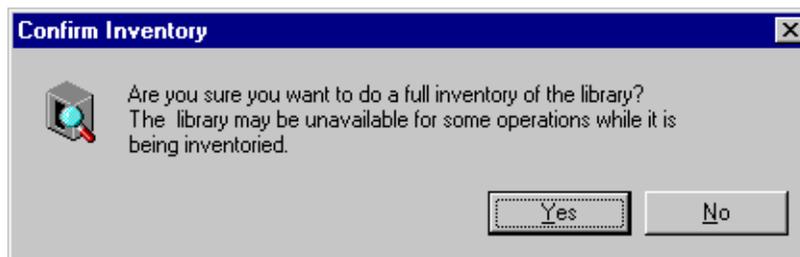


Figure 60. Confirm Inventory dialog box

3. Click **Yes** to inventory the entire library.

The inventory operation, like all library operations, is processed in the background. This allows you to continue working with the Media Manager while the operation is being performed. The Transfer Monitor tool is used to view background transactions. To view the Transfer Monitor, click the Profile logo or choose **Tools | Transfer Monitor**.

Formatting Cartridges

When you format one or more cartridges, all storage space is reallocated and the cartridge is prepared to accept new data.

To format one or more cartridges:

1. Select the cartridge icon or icons in the tree pane
2. Choose **Format** from the **File** menu or from the shortcut menu with a right-click. The Format dialog box appears (see Figure 61). The Name field shows the name or names of the cartridges to be formatted. If more than one cartridge is selected, the number of cartridges is shown (see Figure 62).

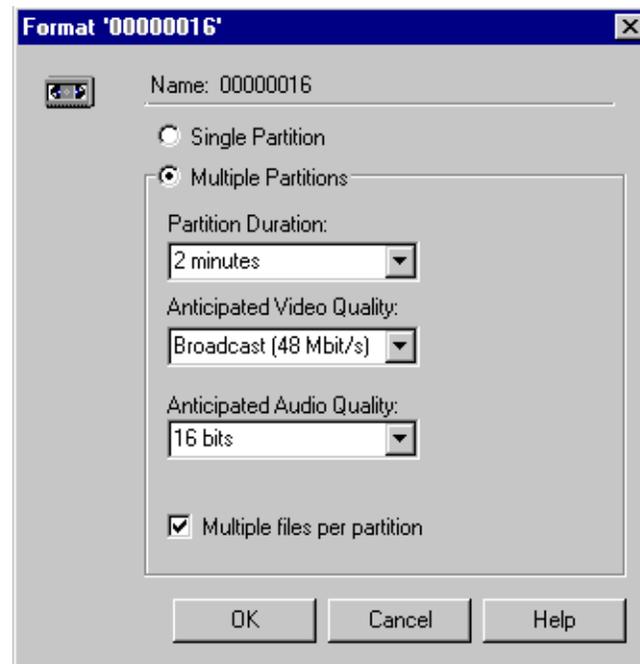


Figure 61. Format Cartridge dialog box

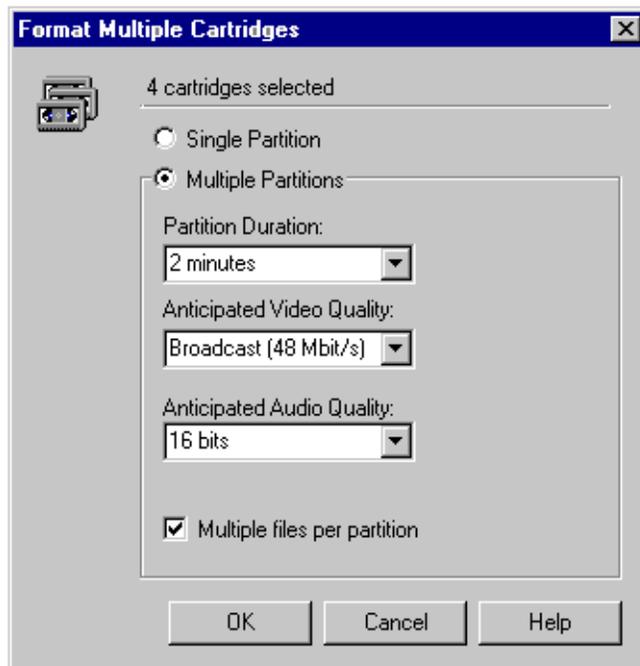


Figure 62. Format Cartridge dialog box

3. Click **Single Partition** or **Multiple Partitions**. With a **Single Partition**, the cartridge or cartridges will have one partition when formatted and all clips are archived to the same partition. With **Multiple Partitions**, the cartridge or cartridges will have two or more partitions, depending on other settings. You do not actually set the duration of clips, or video and audio quality: you simply approximate based on how you anticipate using the cartridges. You cannot set the number of partitions directly. If you choose **Multiple Partitions**:
 - To set the anticipated length (time duration) of clips under the partitions, select the number of seconds or minutes in the Partition Duration box. Selecting Custom opens the Custom Duration box. In the Custom box, enter the duration of seconds in the range 1 to 9999.

- To set the anticipated quality of the video that you will use with these cartridges, select a video quality from the Anticipated Video Quality box. If you anticipate using higher video quality, you will use more tape to store media. This causes the format operation to create larger and fewer partitions.
 - To set the anticipated audio resolution that you plan to use with these cartridges, select either 16 bits or 20 bits from the Anticipated Audio Quality box. Different audio qualities affect the amount of tape used and therefore the number of partitions that will be created.
 - To allow more than one file (clips) under a partition, click Multiple files per partition. If unselected, only a single clip may be archived per partition.
4. Click **OK**.



Viewing Library, Cartridge and Archived Clip Properties

To view the properties for the library:

1. Select the library icon in the tree pane.
2. Choose **Properties** from the **File** menu or from the shortcut menu with a right-click. You can also click the **Properties** button on the toolbar. The library properties dialog box appears.



Figure 63. Properties dialog box for the library

3. Click **OK** when you are done viewing the library properties.

To view the properties for a cartridge:

1. Select a cartridge icon in the tree pane.
2. Choose **Properties** from the **File** menu or from the shortcut menu with a right-click. You can also click the **Properties** button on the toolbar. The cartridge properties dialog box appears.

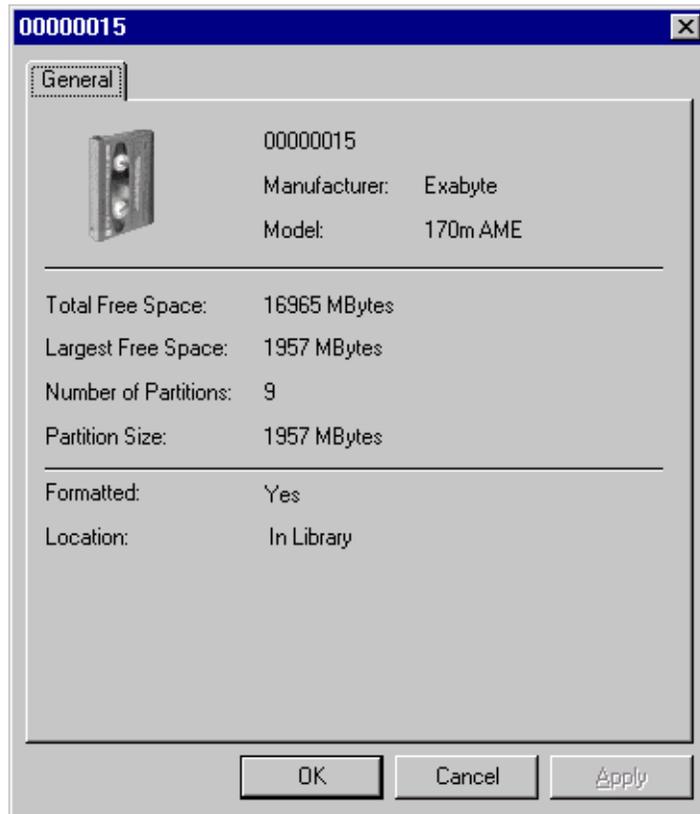


Figure 64. Properties dialog box for a cartridge

2. Click **OK** when you are done viewing the cartridge properties.



Chapter 3 Using the Media Manager

To view the properties for a archived clip on a cartridge:



1. Select a clip icon in the contents pane.
2. Choose **Properties** from the **File** menu or from the shortcut menu with a right-click. You can also click the **Properties** button on the toolbar. The clip properties dialog box appears.

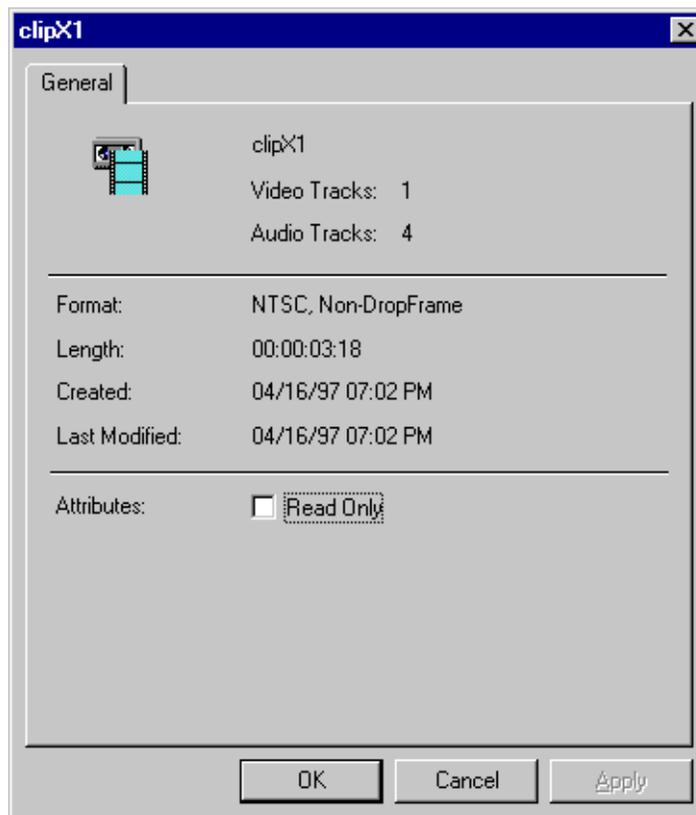


Figure 65. Properties dialog box for an archived clip

3. Click **Read-only** if you want to prevent modifying, renaming, or deleting the clip.
4. Click **OK** when you are done viewing the clip properties.

Viewing Tape Transport Status

To view the status of the tape transports in the library:

1. Choose **Tape Transport Status** from the **File** menu or from the shortcut menu with a right-click. The Tape Transport Status dialog box appears.

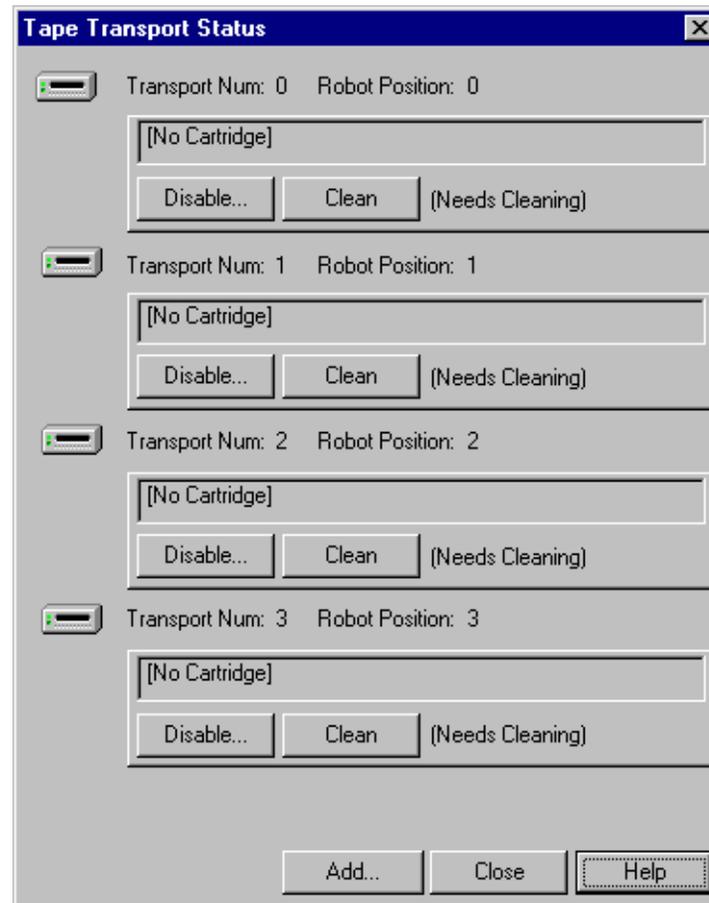


Figure 66. Tape Transport Status dialog box



The labels in the dialog box are explained here:

Transport Icon



A transport icon is shown for each active transport in the library. The order of transports in this dialog does not necessarily reflect the order they appear in the library system.

Transport Number

This is the logical identifier for the transport. It is a number from 0–255.

Robot Position

This is the physical transport identifier. It is a number from 0–3.

Cartridge Name

A cartridge name is shown if one is currently loaded into the transport.

Disable

Removes a transport from service. Click Add to re-enable the transport.

Clean

Loads a cleaning cartridge and cleans the transport

Cleaning Message

The message **Needs Cleaning** appears when the transport is due for cleaning.

Add

Adds a transport to the list of available transports.

Close

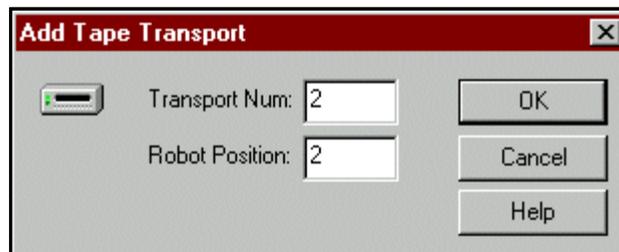
Close the Tape Transport Status dialog.

Help

Opens the help topic on the Tape Transport Status dialog.

To add a transport to the list of active transports:

1. In the tree pane, select the appropriate library icon.
2. Choose **Tape Transport Status** from the **File** menu, or from the shortcut menu with a right-click.
3. Click the **Add** button. The Add Tape Transport dialog box appears.



4. Enter the logical transport number (0–255).
5. Enter the physical robot position (0–3).
6. Click **OK**.
7. Click **Close** when you are done viewing the transport status.

To remove a tape transport from service:

- Click the appropriate **Disable** button.

To clean a tape transport:

- Click the appropriate **Clean** button. A tape transport does not need cleaning until the “Needs Cleaning” message appears beside the **Clean** button. The library system will find the first available cleaning cartridge in the system and use it to clean the selected transport. If the library system is unable to find the cleaning cartridge—that is, there is no cleaning cartridge in the library—you will get a message stating that no cleaning cartridge was found.



Viewing the Transfer Monitor

When clips are copied to a different machine, the media that is referenced by those clips is also copied. This is made possible by using a combination of Ethernet and Fibre Channel networks. Ethernet is used for lower-speed database transfers and queries. The high speed Fibre Channel network is used for transferring the actual media between machines.

Copying media is done in the background to allow you to continue with your work. Adding to and restoring from an archive also is done in the background. Since this may result in more than one transfer occurring at the same time, the Transfer Monitor is used to keep track of these background tasks. Each time a media transfer is started, a new entry appears in the Transfer Monitor.

The Transfer Monitor can be opened at any time. It consists of two tabs: the Network tab which shows all copies over Fibre Channel and Duplicates in progress; and the Library tab which shows any ongoing library transactions.

To track background operations with the Transfer Monitor:



- Choose **Tools | Transfer Monitor** or click the Profile logo on the toolbar. The Transfer Monitor dialog box appears.

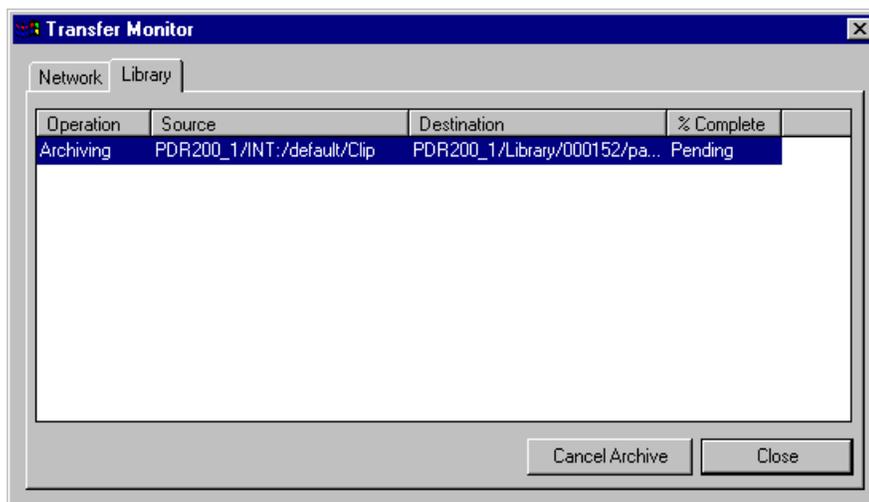


Figure 67. Transfer Monitor dialog box

The Profile logo on the Media Manager toolbar is animated whenever there is an item in the Transfer Monitor, whether the Transfer Monitor is open or not.

The **Network** tab divides entries into four columns: source, destination, % complete, and average megabytes per second. When copying, source and destination paths are constructed using the *machine/volume/bin/clip* names. A destination clip name may be different from the source clip name if the clip was renamed when pasted or moved to the new location (which has to be done when a clip with the same name already appears at the new location).

The **Library** tab divides entries into four columns: operation, source, destination, and % complete. Library operations that occur in the background include archive, restore, inventory, update, format, delete, import, clean, and export. The destination column is only filled in for the archive and restore operations. The % complete column will show *Pending* while a cartridge is being loaded into a transport and cued to the correct tape position.

To interrupt a transfer do the following:

1. Click the Network or Library tab depending on the type of transfer you wish to interrupt.
2. Select the transaction you wish to interrupt.
3. Click the **Cancel Transaction** button. (This button is unavailable unless the transaction is highlighted.)

The label for this button is context specific. If an archive transaction was selected, the button is labeled **Cancel Archive**. If a network copy was selected, the button is labeled **Cancel Transfer**.

NOTE: Only network, library archive, and library restore transactions can be cancelled.



Occasionally an error will occur while a transfer is in progress. The destination machine may have unexpectedly run out of storage, the network connection may have gone down, there may have been trouble reading an archive library cartridge. An error is indicated by a change in the Profile logo.

In the Transfer Monitor, entries that could not complete due to error are displayed in red and their % complete shows *Error*. When the entry is selected, a short description of the error is shown at the bottom of the window. To remove the entry, select it and then click the **Remove** button.



Chapter 3 Using the Media Manager

Using VdrPanel

Storing media on a Profile system rather than on tape opens the door to almost instant access to video and audio material. Media is available to all of Profile's channels at once, so you can play a video on more than one channel at the same time. Since each of the channels (up to four) is independent, playback can start at a different time and place in a clip. One of the best features of the Profile system is that you can start playing material while it's still being recorded.

The basic element of digitally stored video and audio is the *clip*. A clip is a reference to video, audio, and timecode material recorded in media files on Profile disks. A clip has a beginning and an end, and, when first recorded, the beginning and end correspond to the first and last frames stored in the media file. A clip may refer to the entire media file or just part of it. When you delete a clip, the media file that the clip referred to remains on disk—only the reference to the media file is deleted, not the media itself.

You can also mark in and mark out points in a clip. These marks change the effective beginning and end points of a clip, while not removing the associated material from the media file. On the other hand, you can trim media to remove material from either end of a clip, which also removes the information from the media file. Trimmed material is removed from disk and is no longer available for use.

The main tool for creating and playing clips on the Profile system is VdrPanel. VdrPanel provides you with a VTR-like interface, complete with transport controls, to directly manage media operations. Once created with VdrPanel, clips are available for use with optional Profile applications such as TimeDelay or the List Manager in Profile Tool Box.

VdrPanel also allows you to configure any or all of your channels for operation through a controller connected to an RS-422 serial port. These controllers either comply with Profile Protocol, such as the optional PRC 100 Profile Remote Control unit, or they comply with Louth, Odetics, BVW, or BVW [insert edit] protocols.



Before using VdrPanel to capture clips, you must complete a few steps:

1. You must decide whether you want to use the Windows NT interface called *Panel Control* to capture and play clips, or if you want to use an external device to control your Profile system. To select a controller, see “Selecting a Controller” on page 134.
2. You need to configure the playback and record JPEG channels, audio channels and the VITC timecodes for your selected controller. To configure the controller, see “Configuring a Controller” on page 137.
3. You must set video crosspoints or connections. This means that you can select video inputs, codecs, and outputs. You can also choose to bypass codecs. See “Selecting Video Crosspoints” on page 143
4. You can select timecode panel display, which timecode generators to use, select drop-frame timecode, and also set timecode crosspoints—inputs, generators, and outputs. See “Setting Timecode” on page 145

For information on how to start and close VdrPanel, see “Starting and Closing Profile Applications” on page 11.

The VdrPanel window is shown in Figure 68. By default, the VdrPanel window appears automatically at power-up, unless you log in manually. You can display up to four panels in the VdrPanel window—Panels A, B, C, and D. Each panel is dedicated to one of up to four available video channels.

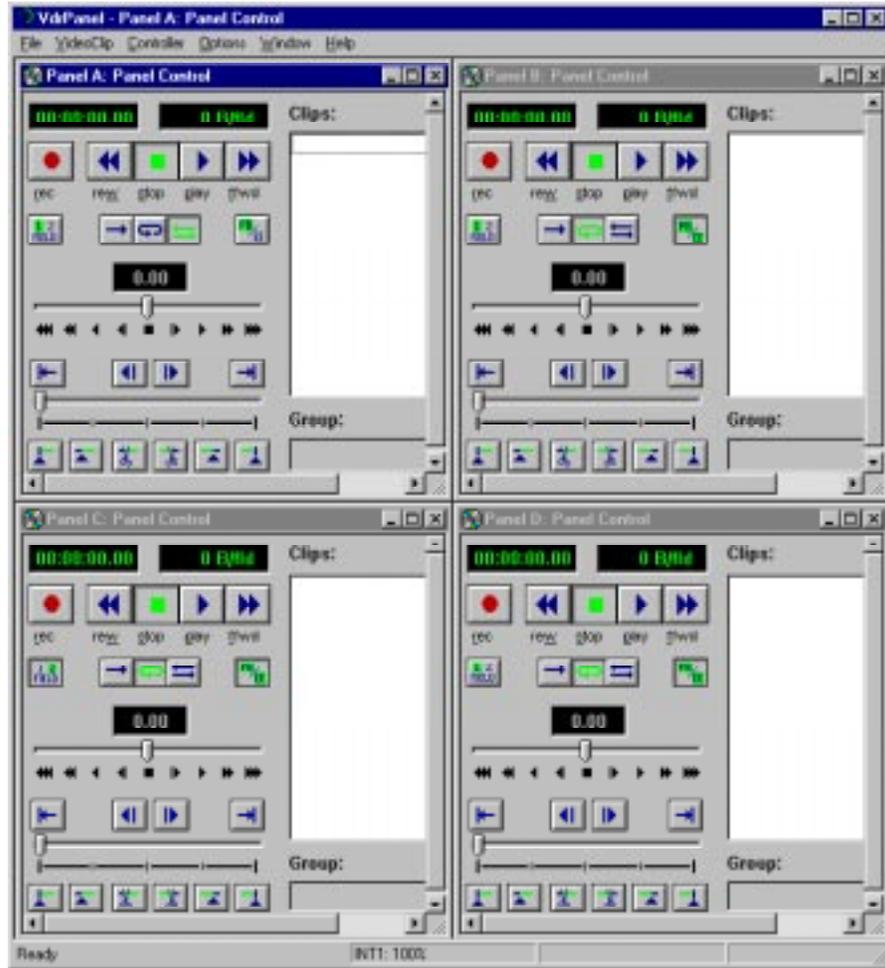


Figure 68. VdrPanel window



Opening a Panel

If none of the panels are visible, here are the steps to open a panel:

1. Choose **Window | Open Panel**. The Open a Panel dialog box appears (Figure 69).

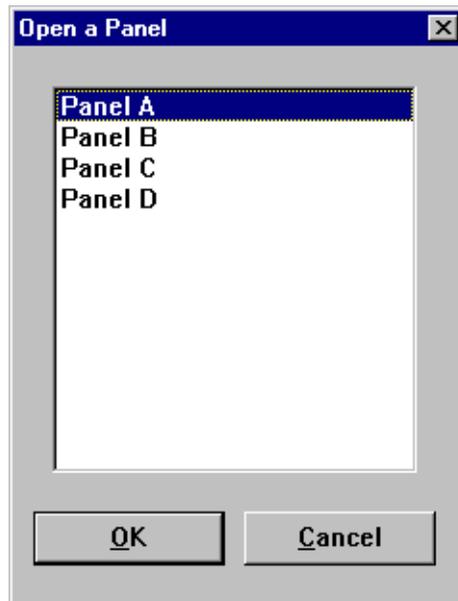


Figure 69. Open Panel dialog box

2. Select the panel you want to display, Panel A through D. Only panels that are not currently open appear in the dialog box.
3. Click **OK**.

Making a Panel Active

To make a panel active, such as Panel A, do either of the following:

- Click anywhere inside Panel A.

Or:

- Choose **Window | 1 Panel A: Panel Control**.

Arranging Panels and Icons

If a panel is obscured by another panel, you can arrange the panels so that they are all completely visible. To arrange the panels in this way:

- Choose **Window | Tile Panels**.

If you have minimized the panels, you can arrange the icons with:

- Choose **Window | Arrange Icons**.



Viewing Record Capacity

The Record Capacity dialog box shows the amount of recording time remaining on the current disk volume according to the current compression presets. To view the recording capacity:

1. Click a panel to select it.
2. Choose **Window | Record Capacity**. A message box appears (Figure 70). In this instance, the message box shows the internal disks labeled *INT:*. The recording time remaining is represented in *Hours:Minutes:Seconds*. For more information on compression presets, see “Setting Compression Presets” on page 139.



Figure 70. Message box showing record capacity

3. When you are done viewing the information, click **Close**.

Viewing an Audio Monitor for a Panel

The Audio Monitor allows you to monitor the level of an audio signal for a panel. To view a panel's audio monitor:

1. Choose **Window | Audio Monitor**. The Audio dialog box appears, as shown in Figure 71. There are only two channels in this example, but up to sixteen are possible.

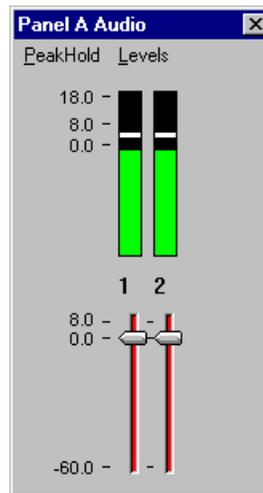


Figure 71. Audio Monitor dialog box

2. To turn peak hold on or off, choose **PeakHold | On** or **PeakHold | Off**. By default, peak hold is on.
3. To show the record level controls, choose **Levels | Show Record Level Controls**. To show play level controls, choose **Levels | Show Play Level Controls**. To hide the level controls, choose **Levels | Hide Level Controls**.
4. To work the controls independently, choose **Levels | Independent Controls**. To gang the controls, choose **Levels | Ganged Controls**.
5. Click the **Close** button when complete.



Selecting a Controller

Before you can use a video channel, you must first configure it to use a controller. **Panel Control** specifies control from the Windows NT user interface and no communication port selection or configuration is necessary. Other choices allow you to select serial control protocols and require an external device and additional setup, such as selection of a serial communications port or specifying clip length for BVW-type controllers. The **Comm Port** dialog box appears automatically the first time you select a Louth, Odetics, or BVW controller (see “Selecting a Communications Port” on page 135).

NOTE: Controller / Manage Archive is unavailable.

To select a controller:

1. Click a panel to select it.
2. Choose **Controller | Select** to open the Controller Setup dialog box (Figure 72).

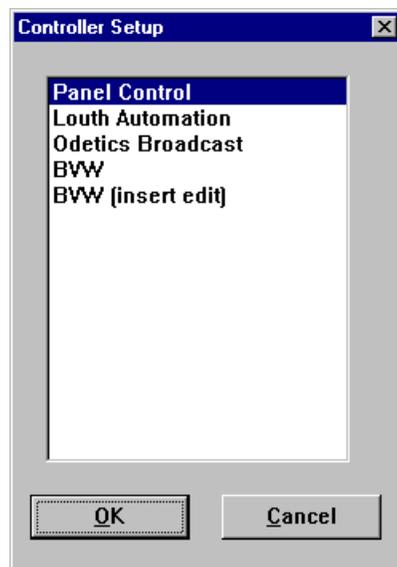


Figure 72. Controller Setup dialog box

3. Select the controller for the channel and click **OK**.

Selecting a Communications Port

To select a communications port for a controller:

1. Click a panel to select it.

NOTE: Other than Panel control, the **Comm Port** dialog box appears automatically the first time you select each type of controller.

2. Choose **Controller | Comm Port** to open the Controller Setup dialog box. An example of this dialog box is shown in Figure 73.

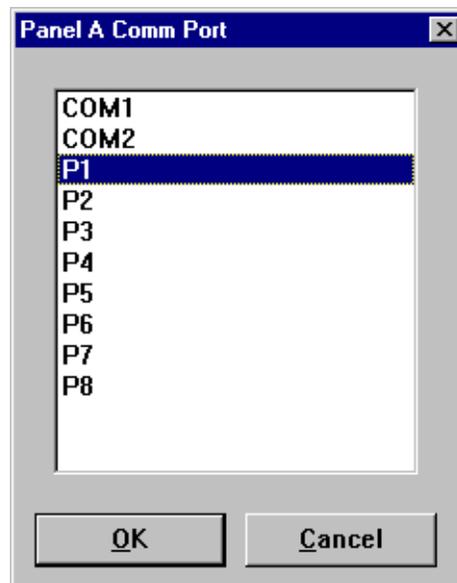


Figure 73. Comm Port dialog box

NOTE: Ports P1 through P8 are available on the RS-422 breakout panel. COM1 and COM2 are available on the unit's back panel (RS-232 DB-9 connectors). Any P ports used by VdrPanel should have the DIP switches set to Device. Refer to your Profile unit's installation manual for details.

3. Select the communications port and click **OK**.



Selecting Clip Length (BVW Only)

If you have chosen a BVW controller, you can specify clip length by setting mark in and mark out points:

NOTE: *The Set Clip Marks (clip length) dialog box shown here will not appear unless the panel controller is a BVW controller.*

1. Click a panel to select it.
2. Choose **Controller | Clip Length**. The Set Clip Marks dialog box appears (Figure 74).

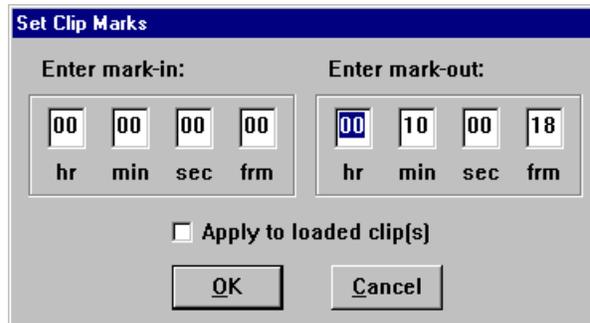


Figure 74. Set Clip Marks dialog box

3. Enter the mark-in and mark-out points by specifying the hour, minute, second, and frame settings. This applies to future clips only.
4. Click **Apply to Loaded Clip(s)** if you want the mark-in and mark-out points to apply to existing clips as well as future clips.
5. Click **OK** when complete.

Configuring a Controller

You can configure the playback and record JPEG channels, audio channels and the VITC timecodes for the selected controller.

1. Click the panel to select it.
2. Choose **Controller | Configure** to open the Profile Options dialog box for the selected panel. Figure 75 illustrates the standard Profile options with an example configuration selected; Figure 76 illustrates the Profile Options dialog box for BVW [insert-edit], also with appropriate selections shown in the example.

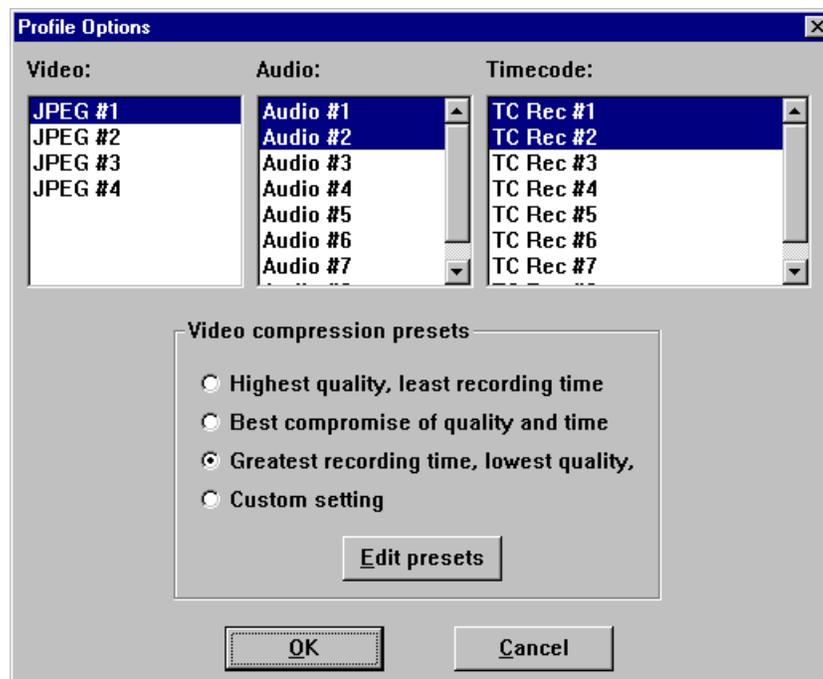


Figure 75. Profile Options dialog box

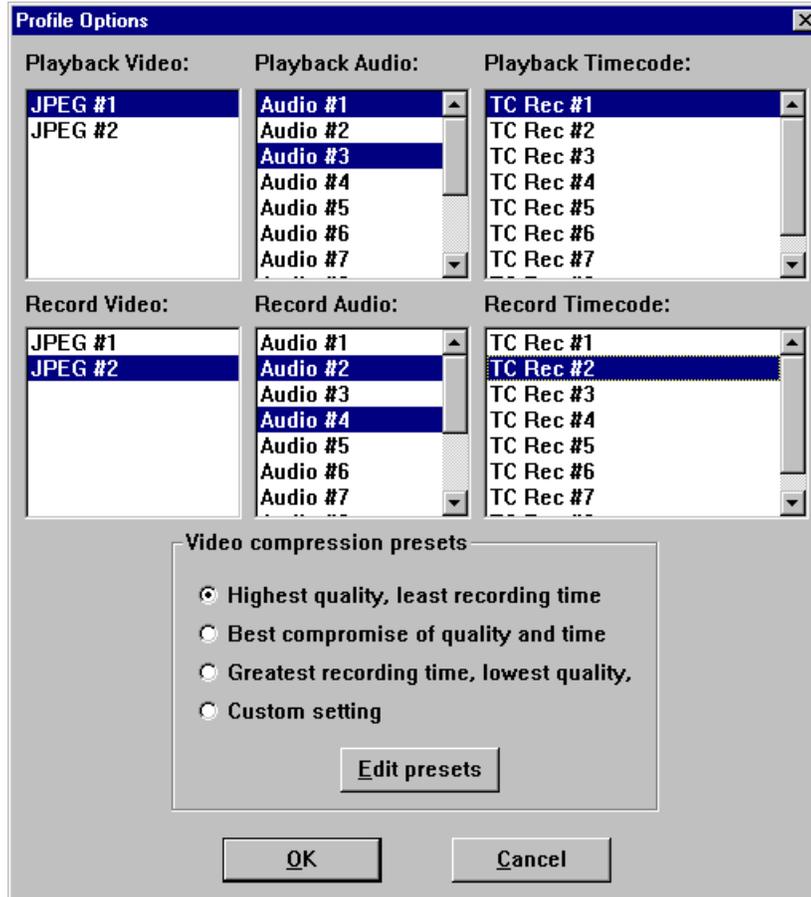


Figure 76. Profile Options dialog box (BVW [insert-edit] only)

3. Click on the appropriate video, audio, and timecode resources for your selected controller. Use the scroll bars, if necessary, to see more resources.

Setting Compression Presets

The Profile Options dialog box lets you select a video compression preset and edit the preset values.

1. Click the desired compression preset. The options range from highest quality which uses the most disk space and least material to the lowest quality which uses much less disk space but records more material. A custom setting using the current presets is also available.
2. Edit the preset values, if necessary. Refer to Table 6 for the factory-set preset values. If you need to change the values, click **Edit Presets** to open the Edit Compression Presets dialog box shown in Figure 77.

Table 6. Factory set values of the compression presets

Preset Name	525/60 Standard			625/50 Standard		
	Lum	Chroma	Byte Rate	Lum	Chroma	Byte Rate
Highest	0.75	60.00	100000	0.75	100.00	120000
Best	0.75	60.00	75000	0.75	100.00	90000
Lowest	0.75	60.00	50000	0.75	100.00	60000
Custom	5.00	5.00		5.00	5.00	

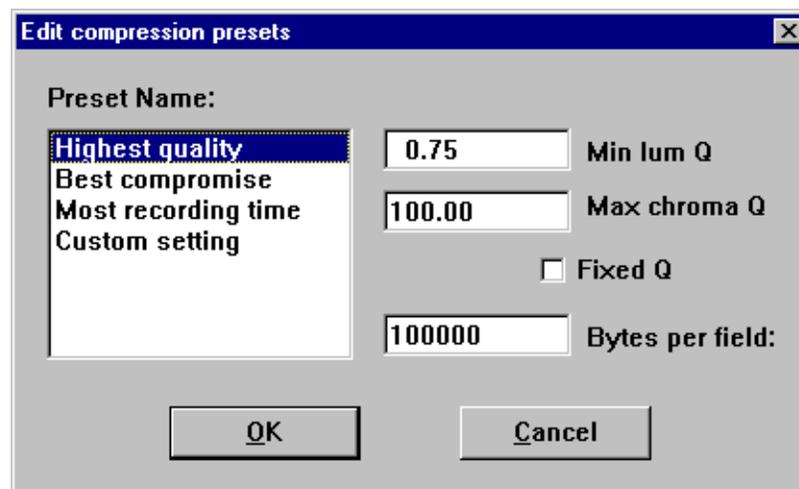


Figure 77. Edit Compression Presets dialog box



- **Min Lum Q** sets the minimum compression that can be applied to luminance in a field to meet the target data rate, typically 0.75, which is the lowest rate.
- **Max Chroma** sets the maximum compression that can be applied to chrominance in a video field to meet the target data rate (typically 60).
- **Fixed Q** sets a fixed picture quality and ignores variation in field size. Use this mode for critical multigeneration work. When **Fixed Q** is selected, the other fields become fixed as **Lum Q** (fixed luminance compression) and **Chroma Q** (fixed chrominance Q). Useful starting values for **Fixed Q** and **Chroma Q** are 5.00. Verify that there is sufficient available data rate headroom before using **Fixed Q** mode. The **Bytes/Field** target attempts to meet the Lum and Chroma goals. With **Fixed Q** mode, **Bytes/Field** can increase beyond the system bandwidth, causing interference with other channels.
- **Bytes per Field** is the target compression rate. Not every field requires the target rate, it is simply the average rate the disk recorder tries. The higher the rate, the better the picture detail. The actual **Bytes/Field** depends on the picture complexity, **Min Lum Q**, and **Max Chroma**. The algorithm dynamically changes **Min Lum Q** and **Max Chroma** to make the field size meet the target unless **Fixed Q** is selected.

3. Click **OK** when complete.

Setting up BVW [insert edit] Emulation

This procedure sets up a panel to emulate a Betacam. Refer to the manual for your controller to set up Super-Edits or BVEs.

NOTE: This procedure requires access to two control ports. Close a panel to free a control port for use with the BVW [insert edit] panel. For example, if Panel C is the BVW [insert edit] panel, close Panel A, B, or D. Reopen a panel with Window | Open Panel.

1. Click within a BVW [insert edit] panel to select the panel. Refer to “Selecting a Controller” on page 134 if you have not already selected BVW [insert edit] as the controller for this panel.

NOTE: If you do not select BVW [insert edit] for the panel, insert edit operations are not properly executed. The channel can be used as a source deck, or be acceptable for remote control systems, such as the Ash-Vale slow-motion controller, that do not use EditOn commands.

2. Choose **Controller | Configure** to open Profile Options (see Figure 75 on page 138).
3. Select two unused video codecs: one for **Playback Video**, and one for **Record Video**. For example, use **JPEG #3** for **Playback Video**, and **JPEG #4** for **Record Video**. Use **Controller | Configure** with the other panels to assure the codecs are not in use.
4. Select two pairs of audio codecs. For example, select **Chan #9** and **Chan #11** for the **Playback Audio** and **Chan #10** and **Chan #12** for the **Record Audio**. Audio codec pair selection must follow these rules:
 - The playback/record audio codec pair must be sequentially numbered. For example, **Chan #1** and **Chan #2** or **Chan #14** and **Chan #15**.
 - The playback/record pair must be with the same channel group. Channels are grouped as sets of four: **Chan #1** through **#4**, **Chan #5** through **#8**, **Chan #9** through **#12**, and **Chan #13** through **16**.
 - The playback is assigned to the first selected codec in the pair, record is assigned to the second selected codec in the pair. For example, playback assigned to **Chan #14** and record assigned to **Chan #15**.



NOTE: *There must be two audio codecs assigned for each audio track to be recorded.*

5. Select two pairs of timecode. For example, select **TCREC #5** and **TCREC #7** for the **Playback Timecode** and **TCREC #6** and **TCREC #8** for the **Record Timecode**.
6. If any other selections are highlighted, click to deselect them.
7. Select the video compression to be applied; see “Setting Compression Presets” on page 139 for more information on video compression and the presets.
8. Click **OK**.
9. Choose **Controller | Comm Port** to open the Communication Port dialog box (see Figure 73 on page 135).
10. Select the RS-422 communication port to be used for the edit controller—for example, **P3**. The **Port** name is the same as the name on the RS-422 breakout box.
11. Click **OK**.
12. Verify the external connections:
 - Source audio channels are connected to the inputs for the audio channels assigned as the **Record Audio**.
 - Audio outputs from the disk recorder are connected to the audio channels assigned as the **Playback Audio**.
 - Edit controller is connected to the assigned **Port**. Refer to the your system’s installation manual.
 - DIP switch on the breakout box is set to Device for the RS-422 Port. Refer to the unit’s installation manual.

Selecting Video Crosspoints

A video crosspoint shows the connection between a video input, a codec, and a video output.

- Video inputs (top-left corner) represent video input connectors on the back panel. Video inputs can be connected to JPEG codecs for recording onto disk, or connected to video output for display.
- Video outputs (top-right corner) represent video output connectors on the back panel. Video outputs can be connected to JPEG codecs for playback of recorded material from disk or to video inputs.

To specify video crosspoints:

1. Choose **Window | Video Crosspoint** to open the dialog box. The green boxes indicate current connections. For example, a green box at the intersection of a **SDI-InB-J8** serial digital video board in slot J8 and a **JPEG# 1** codec connects the video signal from the back panel input labeled **IN A** to JPEG video codec #1.

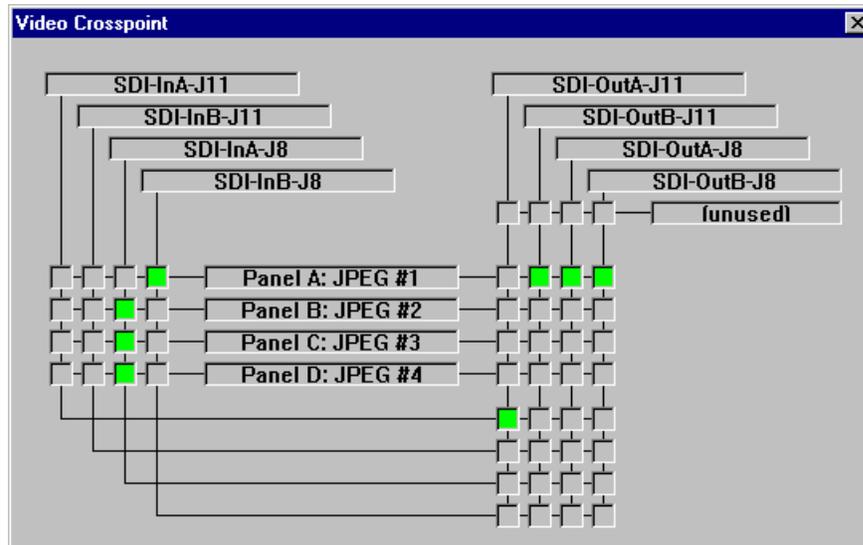


Figure 78. Video Crosspoint dialog box

2. To assign a crosspoint, click in the intersection between a video signal and a JPEG Channel. The selections turn green.



Chapter 4 *Using VdrPanel*

NOTE: Verify that you have the appropriate BNC connections on the rear panel.

3. Click the **Close** button when complete.

NOTE: To release a timecode output for use by another application, click the box at the intersection of the output with the **unused** box.

Setting Timecode

You can set timecode crosspoints, select drop-frame timecode, or select timecode panel display and generators.

Selecting How to Display Timecode on a Panel

The Timecode Setup dialog box enables you to set the timecode display and the source on a channel to the values required for your application.

1. Click in a panel to select it.
2. Choose **Options | Select Timecode** to open the Timecode Setup dialog box. The Timecode Setup dialog box is divided into two groups: **Display on Panel** and **Timecode Generator Settings**.

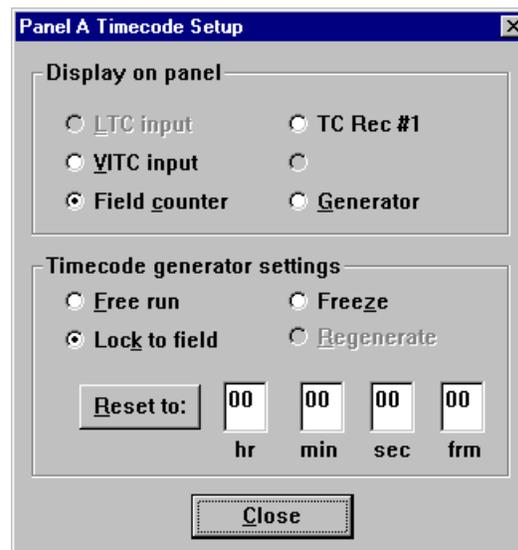


Figure 79. Timecode Setup dialog box

3. Select the timecode to be displayed on the panel from the **Display on Panel** group:
 - **LTC Input** is a separate signal input via the genlock card.
 - **VITC Input** is the timecode from the VITC input signal. It may be part of the video signal being recorded.



- **Compute from Field Number** calculates the timecode directly from the field number of the recorded video. New clips start at 00:00:00:00.
 - **TC Rec #** displays the recorded timecode.
 - **Generator** displays the timecode from the generator for the channel.
4. Set up the timecode generator used by the panel with the **Timecode Generator Settings** group:
- **Free Run** causes the timecode generator to continue to advance regardless of the current play or record mode of the panel.
 - **Freeze** locks the timecode at the current value. The value does not advance with time nor with changes in the play or record mode of the panel.
 - **Lock to Field Number** causes the generator to output a timecode locked to the current clip's timecode. When the panel is in stop, the value freezes. When the panel is in play or record, the timecode advances normally. During rewind or reverse shuttle, the timecode runs backward.
 - The **Reset To** button resets the timecode to the value entered in the box. The generator can be set to this value when **Free Run**, **Freeze**, or **Lock to Field Number** is selected.
5. Click **Close** when complete.

Setting Timecode Crosspoints

The Timecode Crosspoint dialog box controls the connections of timecode signals within the Profile system.

- Timecode inputs (top-left corner) represent either LTC input connectors on the back panel or VITC input signals. Timecode inputs can be connected to timecode recorders for recording onto disk.
 - Timecode generators (below timecode inputs) represent timecode generators used by the panels. Timecode generators can be connected to timecode recorders for recording onto disk or to timecode outputs.
 - Timecode outputs (top-right corner) represent either LTC output connectors on the back panel, or VITC output signals. Timecode outputs can be connected to timecode recorders for playback of recorded material from disk, to timecode inputs, or to timecode generators.
1. Select **Window | Timecode Crosspoint** to open the Timecode Crosspoint dialog box. The green boxes indicate the current connections. For example, a green box at the intersection of **TCRec#1** and **GenlockVITC-InA-J16** indicates the timecode signal from the back panel input is recorded by timecode recorder #1.

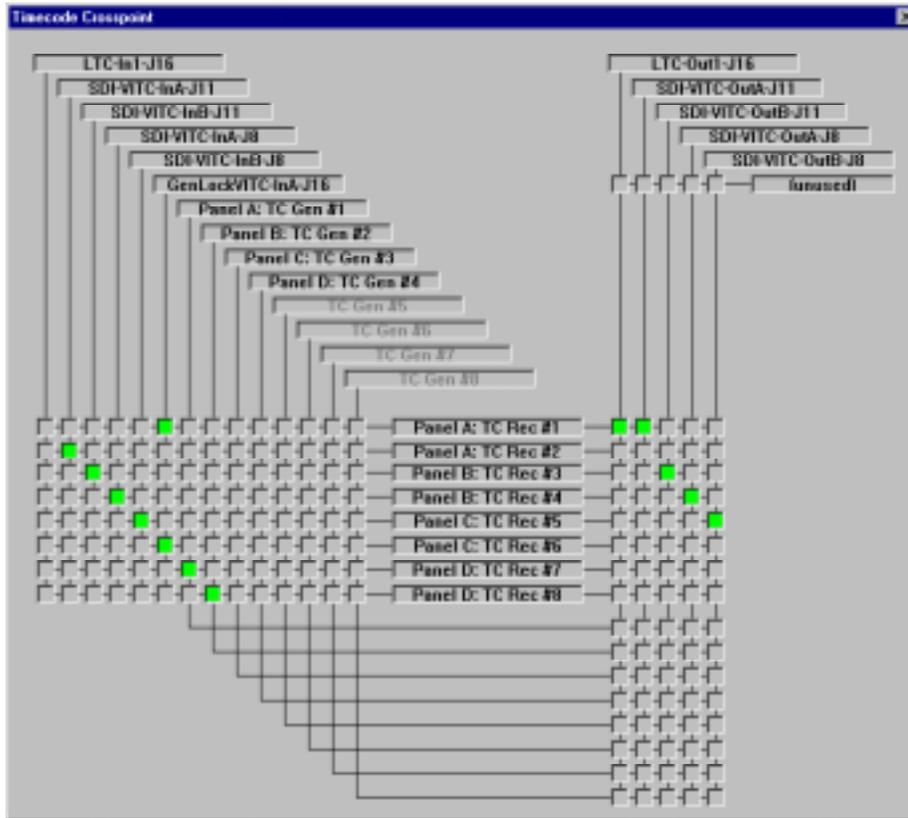


Figure 80. Timecode Crosspoint dialog box

2. To assign a crosspoint, click in the intersection between the signal and the recorder channel. The selections turn green.

NOTE: A timecode recorder must be used by a panel to be available as a timecode output.

3. Click the **Close** button when complete.

NOTE: To release a timecode output for use by another application, click the box at the intersection of the output with the unused box.

Setting Drop-Frame Timecode

In NTSC, you don't actually get 30 frames per second; the real number is about 29.97 fps. Timecode usually assumes 30 fps. To account for the discrepancy, drop-frame timecode skips or drops two timecode values at the beginning of every minute except every tenth minute. This allows timecode to exactly match a real-time clock on 525/60 systems. This correction is not needed on 625/50 systems because the frame rate is exactly 50 fps.

To set drop-frame timecode:

- Choose **Options | Drop-Frame** or **Options | Non-Drop-Frame**.

***NOTE:** This setting applies to all open panels (channels).*



Panel Basics

In the VdrPanel application, you can display up to four Panel dialog boxes at a time, one for each video channel. Each Panel dialog box has independent controls. A close-up view of a Panel dialog box is shown in Figure 81. A description of each Panel function follows.

NOTE: *If the panels are stacked, choose Window | Tile Panels.*

The VdrPanel interface follows the same conventions as other Windows NT applications: the control menu box, title bar, menu bar, minimize and maximize buttons, mouse and keyboard all perform as expected. Refer to specific operating information about these items in the Windows NT manuals.

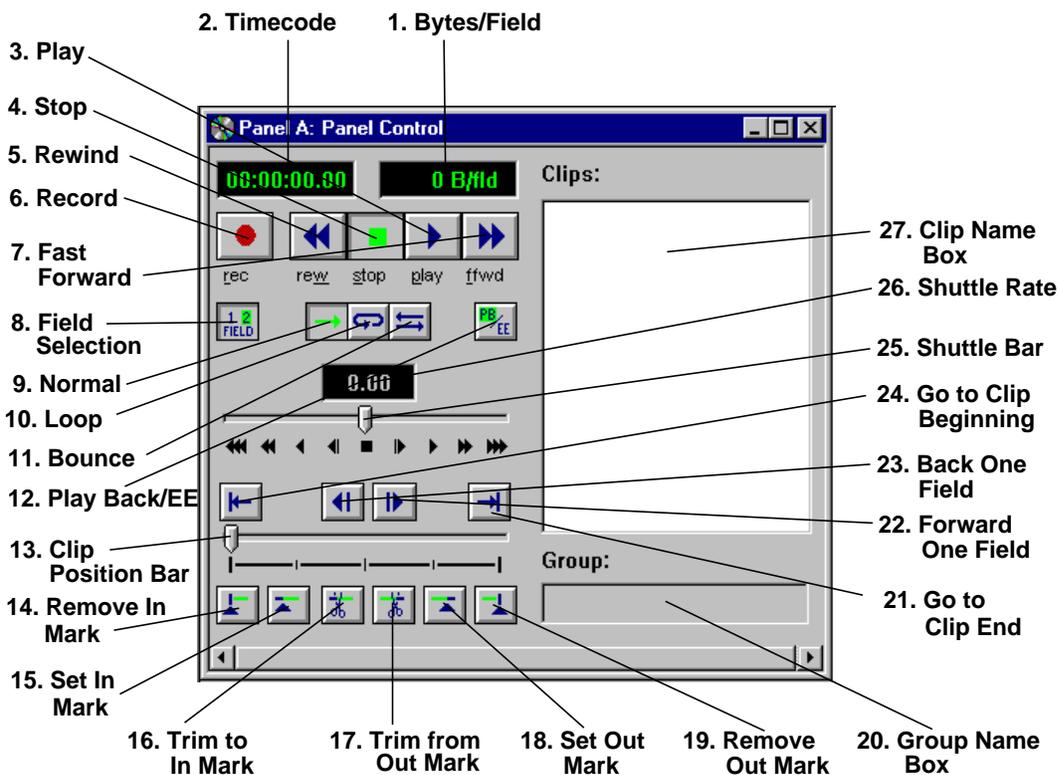


Figure 81. Panel dialog box

1. **Bytes/Field** is the number of bytes stored for the current field. The more detailed the picture, the higher the number of bytes. Target compression rate is set in the Edit Presets dialog box accessed from **Controller | Configure**.
2. **Timecode** is the current timecode of the selected clip. Refer to “Setting Timecode” on page 145. For example, when you use slow motion replays from several camera angles, the timecode can free run or freeze. Clicking on the Timecode display moves a clip to a specific timecode. If there is no recorded timecode, VdrPanel displays a timecode calculated from the current position (00:00:00:00 or above).
3. **Play** runs the selected clip at normal speed. If there are multiple clips in the clip list, **Play** starts with the first selected clip and proceeds through the list. The **Normal**, **Loop**, and **Bounce** functions determine what happens after the last selected clip is played.
4. **Stop** halts the current play, shuttle, or record function.
5. **Rewind** shuttles the clip backwards to the beginning (the first available field or in mark) of the selected clip. Use **Go To Clip Beginning**, or select a timecode value to move directly to the beginning without scrolling.
6. **Record** starts storing the incoming video and audio under the selected clip name. If no clip is selected, a default clip name (pound sign [#] followed by a number) is assigned. (See “Defining a New Clip” on page 154.) The record process continues until the disk decoder runs out of storage space or you select another command button. Recording does not start unless there is a video signal assigned to for the selected panel and there is disk storage available.
7. **Fast Forward** shuttles the clip forward to the end. Use **Go To Clip End** or select a timecode value to move directly to the end without scrolling.
8. **Field Selection** selects a one-field or two-field display during still mode. One-field display eliminates temporal artifacts, while two-field display provides the best vertical resolution.
9. **Normal** causes **Play** to play the entire selected clip list (in order), stopping at the end and freezing on the last field.
10. **Loop** causes **Play** to play the entire selected clip list (in order), looping back to the first clip when the last clip ends.
11. **Bounce** causes **Play** to play the entire selected clip list (in order). At the end of the last clip, it reverses the sequence playing all the clips in reverse order. When it reaches the first clip, the process repeats.



12. **Playback** or **E to E** determines the action during stop or record. If you select only **Playback**, the recorded image is displayed as a still during **Stop**, and audio is silenced. If **EE** is selected, the input signal is routed through to the output during stop or record.
13. **Clip Position Bar** displays the relative position of the current frame within the current clip. For example, if the **Clip Position Bar** is to the far left, the frame is at the beginning. If it is at the far right, the frame is at the end.
14. **Remove In Mark** removes the In Mark and restores the clip to its first available timecode.
15. **Set In Mark** sets the In Mark for the current clip at the current Timecode. When the clip is played, it starts at the In Mark instead of the clip beginning. The portion before the In Mark is not lost. Use **Remove In Mark** to remove the In Mark and start from the clip beginning. The In Mark only affects this copy of the clip. If the clip repeats in the clip list or is used by another panel, the In Mark is not automatically present.
16. **Trim to In Mark** removes the portion of the current clip preceding the In Mark. This action affects all copies of this clip on all panels. The cut is not retrievable. A warning message and verification prompt are displayed before the material is trimmed.
17. **Trim from Out Mark** removes the portion of the current clip following the Out Mark. This action affects all copies of this clip on all panels. The cut is not retrievable. A warning message and verification prompt are displayed before the material is trimmed.
18. **Set Out Mark** sets an out mark for the current clip at the current timecode. When the clip is played, it ends at the out mark. The portion after the out mark is not lost. Use **Remove Out Mark** to remove it and stop at the clip end. An out mark only affects this copy of the clip. If the clip repeats in the clip list or is used by another panel, the out mark is not automatically present.
19. **Remove Out Mark** removes the out mark and restores the clip to its last available timecode.
20. **Group Name Box** lists the name of the group that contains the clip list.
21. **Go to Clip End** jumps to the end of the current clip.
22. **Forward One Field** moves the current clip position forward one field.
23. **Back One Field** moves the current clip position back one field.

24. **Go to Clip Beginning** jumps to the beginning of the current clip.
25. **Shuttle Bar** sets the **Shuttle Rate**. Use the mouse to drag the pointer to the desired Shuttle Rate (displayed in the Shuttle Rate box). When you click on the shuttle bar, the disk recorder enters shuttle mode.
26. **Shuttle Rate** displays the current shuttle rate. This number ranges from -16.00 to +16.00, with the positive numbers indicating forward motion, negative numbers reverse, and 0.00 still. This number can be set by clicking on the **Shuttle Rate** to open the Shuttle Rate dialog box, or by dragging the **Shuttle Bar** to the desired position. If **Shuttle Rate** is set faster than the maximum rate for the controller, the maximum rate is displayed.
27. **Clip Name Box** lists the names of the clips in the current group or clip list.

The functions on the Panel dialog box can be accessed directly by clicking on the appropriate button with the mouse or by using the shortcut keys shown in Table 7. For example, pressing **r** starts recording in the active panel.

Table 7. VdrPanel shortcut keys

Shortcut Key	Function	Shortcut Key	Function
r	Record	Ctrl + →	Forward 100 Fields
w	Rewind	Ctrl + ←	Back 100 Fields
s	Stop	j or ↓	Jog controls
p or ↑	Play	e	Go to Clip End
f	Fast Forward	h	Shuttle controls
spacebar	Stop	t	Go to Clip Beginning
→	Forward 1 Field	i	Set Mark In
←	Back 1 Field	o	Set Mark Out (not zero)
Shift + →	Forward 10 Fields	c	Trim to Mark In
Shift + ←	Back 10 Fields	u	Trim to Mark Out



Using Clips

With VdrPanel, you can define, rename and delete a clip. You can load an existing clip or group of clips.

Defining a New Clip

There are two methods for defining clips:

- You can create and name an empty clip, then record to it (Name Clip First).
- You can start recording with an empty clip list, then rename the recorded clip to a meaningful name (Record Clip First).

Either method creates and stores a named clip. Use whichever method is most convenient for you. You can choose **VideoClip | Rename Clip** at any time to change a clip name.

Name Clips First

To define a clip by first naming the clip:

1. Click in a panel to select it.
2. Select **VideoClip | New Clip** to open the New Clip dialog box (Figure 82).



Figure 82. New Clip dialog box

3. Select a drive from the **Drive** list. The number of drives available depends on your hardware.
4. Enter a clip name, up to 32 characters long. Spaces and uppercase characters are acceptable; however, uppercase and lowercase characters will not distinguish clip names.
5. Click **OK**. The new clip is added to the clip list for the selected channel.
6. If the Loop or Bounce buttons are pressed in the Panel, a dialog appears asking you to specify the loop or bounce duration in the form *00:00:00:00*.
7. Click the **Record** button (in the selected Panel dialog box) to begin recording.



The timecode and compression rate fields are updated.

NOTE: *A video input signal must be present on the selected channel for recording to start.*

8. Click **Stop** to stop recording.

Record Clips First

To define a clip by recording and then naming the clip:

1. Click a panel to select it.
2. If any clips are listed in the **Clips** box, choose **VideoClip | Eject All Clips** to clear the clip list.
3. Click the **Record** button in the selected Panel dialog box to begin recording. A clip named **#1** (or other number for a unique clip name) appears in the clip list for the panel.
4. Click **Stop** to stop recording.

If you repeat these steps to record additional clips, they are named sequentially—one higher than the previous clip. For example, **#2**, **#3**, and so forth.

5. Choose **VideoClip | Rename Clip** to open the Rename Video Clip dialog box (see “Renaming a Clip” on page 159).
6. Click on the clip to be renamed (such as **#1**).
7. Enter the new name in the **To** field. Spaces and uppercase characters are acceptable; however, uppercase and lowercase characters will not distinguish clip names.
8. Click **OK**.

Loading and Playing a Clip

To load and play a clip:

1. Click in a panel to select it.
2. If the clip is already loaded, select it from the Clips box and go to step 7.
3. If the clip is not loaded, choose **VideoClip | Load Clip** to open the Load Clip dialog box.

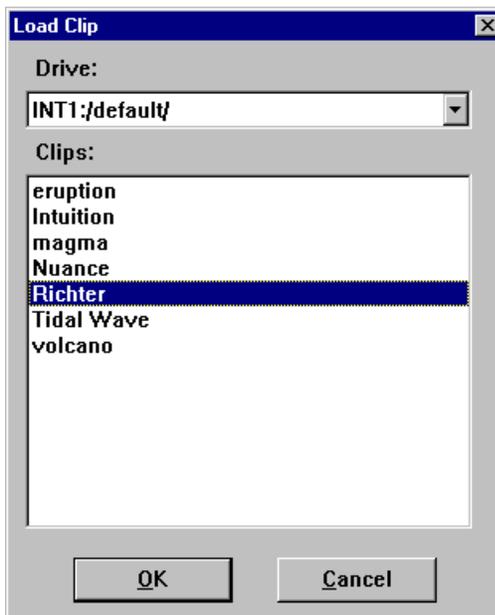


Figure 83. Load Clip dialog box

4. If the clip you want to load is on a different drive, select a different disk drive in the **Drive** box.
5. Select the clip to load—*Richter* in this example.
6. Click **OK**.
7. Click the **Play** button in the selected Panel dialog box to begin playing the clip.
8. The **Normal**, **Loop**, and **Bounce** functions determine how play back occurs:



- **Normal** causes **Play** to play the entire selected clip list (in order), stopping at the end and freezing on the last field.
- **Loop** causes **Play** to play the entire selected clip list (in order), looping back to the first clip when the last clip ends.
- **Bounce** causes **Play** to play the entire selected clip list (in order), then at the end of the last clip, it reverses the sequence, playing all the clips in reverse order. When it reaches the first clip, the process repeats.

Renaming a Clip

To rename a clip:

1. Choose **VideoClip | Rename Clip**. The Rename Video Clip dialog box appears.

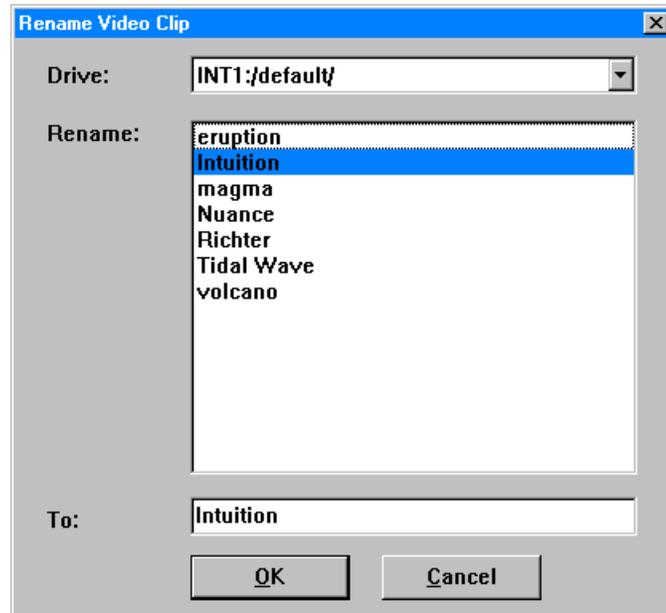


Figure 84. Rename Video Clip dialog box

2. Select a clip from the Rename box. The clip name appears in the **To** box.
3. Edit the current name or delete the name and enter a new one. Clip names can have up to 32 characters. Spaces and uppercase characters are acceptable; however, uppercase and lowercase characters will not distinguish clip names.
4. Click **OK** when complete.



Setting Clip Protection

To set clip read-only protection:

1. Choose **VideoClip | Set Clip Protection** and the Set Clip Protection dialog box appears.

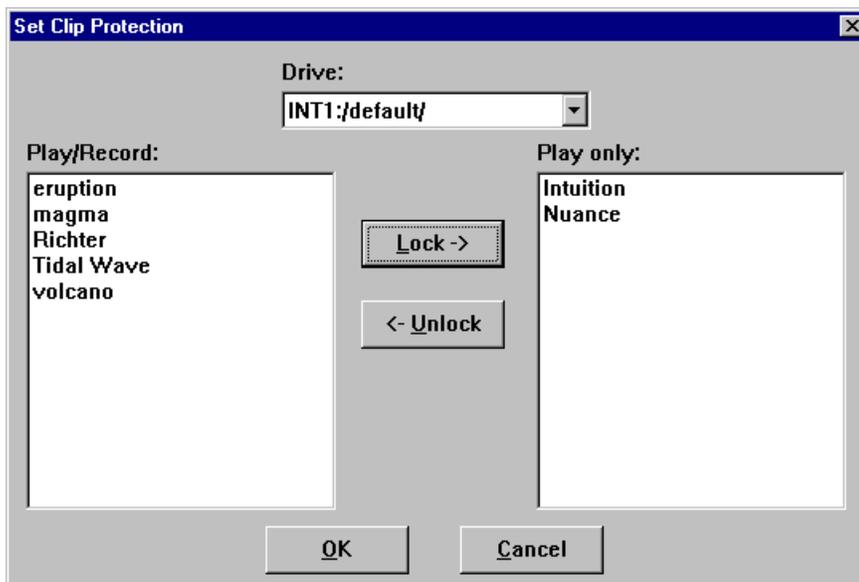


Figure 85. Set Clip Protection dialog box

2. If the clip you want to protect is on a different drive, select a different disk drive in the Drive box.
3. To protect or lock a clip, select a clip in the Play/Record box and then click **Lock**. The clip is now protected as read-only.
4. To unprotect or unlock a clip, select a clip in the Read only box and then click **Unlock**. The clip is no longer protected.
5. Click **OK** when complete.

Striping a Clip

Striping timecode with VdrPanel allows you to complete a striping process faster than real time. For example, on a traditional VTR, it might take you an hour to stripe a one-hour clip. But with VdrPanel, you can stripe a one-hour clip in a matter of minutes.

To stripe timecode on a clip:

1. Choose **VideoClip | Stripe Clip** and the Stripe Timecode dialog box appears.



Figure 86. Stripe Timecode dialog box

2. Enter the timecode you want to start the clip with, in the form *00:00:00:00*.
3. Enter up to eight digits to mark the clip with user bits.
4. Click **OK** when complete.

Setting Long or Short Clip Names

Long clip names display the full path name of the clip, for example, *INT1:\default\clipname*. Short clip names display only the clip name. Clip names are shown in Clip Name box in a **Panel**.

To set the clip name to short or long clip name:

- Choose **Options | Display Short Name** or **Options | Display Long Name**.

NOTE: *This setting only applies to the current panel. Each panel can have a different setting for clip name length.*



Ejecting All Clips

To eject all clips:

1. Choose **VideoClip | Eject All Clips**.
2. All clips in the **Clips** box in the **Panel** are ejected immediately.

Deleting a Clip

To delete a clip:

1. Choose **VideoClip | Delete Clip** to open the Delete Clip dialog box.

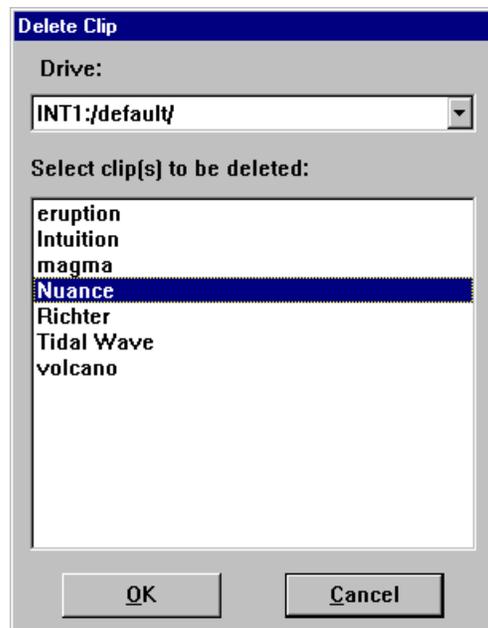


Figure 87. Delete Clip dialog box

2. If the clip you want to delete is on a different drive, select it in the **Drive** box.
3. Select the clip or clips you want to delete.
4. Click **OK** when complete. A message box appears telling you which file is being deleted.

Clip Lists

You can save and organize clips into lists (also called groups). You can load a saved group of clips. You can also save an existing group of clips under a different name. You can also create and later edit a list of clips.

Saving a Group of Clips in a Clip List

A clip list can be saved and loaded later. To save a clip list as a group:

1. Click within the specific Panel dialog box to select the panel where the clip list is currently displayed.
2. Choose **File | Save Group of Clips** and the current list of clips, as shown in the **Clips** box, is saved in the current group (.grp). If the clips have not been saved in a group previously, the Save Group of Clips dialog box appears.



Figure 88. Save Group of Clips dialog box

3. If you have not already saved the group, choose **File | Save Group of Clips As**. The **Save As** command enables you assign a different name to an already named group of clips, preserving the contents of the original group. The saved group can be loaded at any time with **VideoClip | Load Group**.



Playing a Clip List

To play a list of clips:

1. Click within the specific Panel dialog box to select the panel.
2. Choose **VideoClip | Load Group** if the clip list you want to play is not currently loaded.

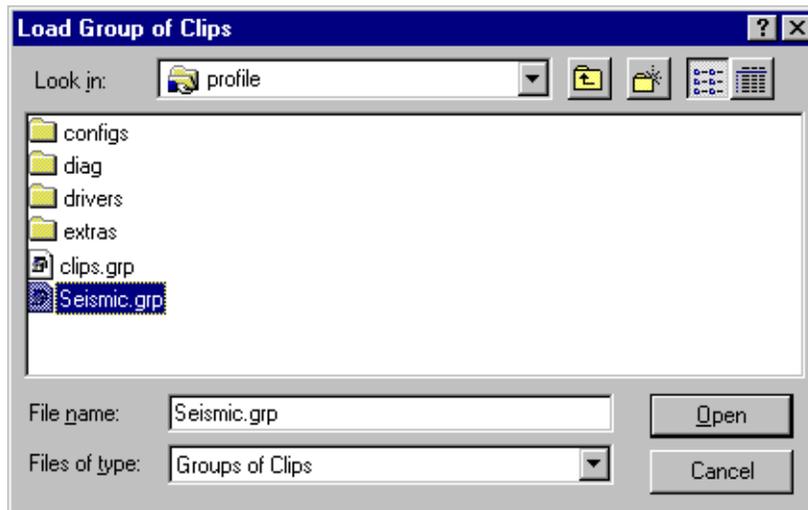


Figure 89. Load Group of Clips dialog box

3. Select the group and click **OK**. In this example, the group is *Seismic.grp*.
4. Click on the first clip in the clip list.
5. Click **Play** to start playing the clip list.

Editing a Clip List

To edit a clip list (group of clips):

1. Click a panel to select it.
2. Choose **Video Clip | Load Group** if the clip list to be edited was previously saved as a group. Select the group and click **OK**.
3. Choose **VideoClip | Edit Clip List** to open the Edit Clip List dialog box.

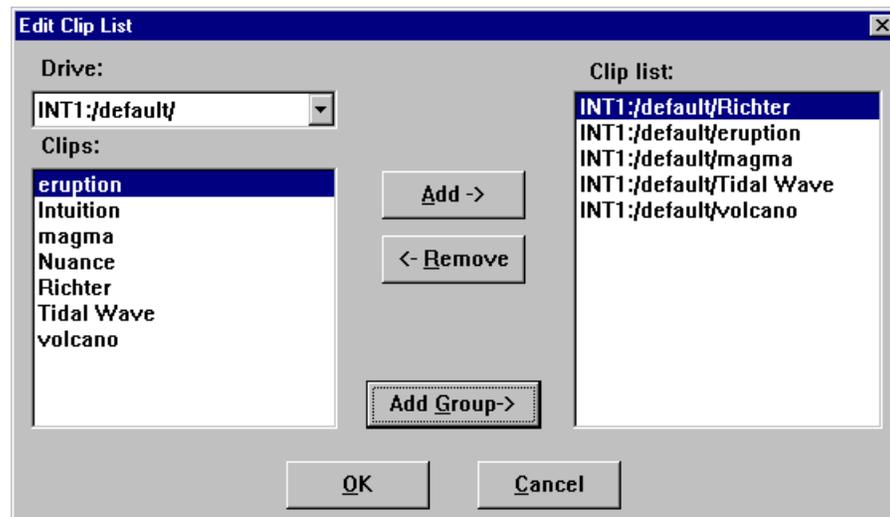


Figure 90. Edit Clip List dialog box

4. To add a clip to the current list loaded in step 1, select a clip in the Clips box and then click **Add**. It is added to the Clip List box (with a long clip name).
5. To remove a clip from the current list, select a clip from the **Clip List** box, and click **Remove** to remove the clip from the list. This does not delete the clip from disk—it simply removes a reference from the clip list.
6. To edit a different group, click **Add Group** to bring up the Load Group of Clips dialog box.
7. Click **OK** when complete.



Setting In and Out Marks in Clips

You can set a temporary beginning and ending to a clip by marking an in point, an out point or both. The video and audio data is not lost, however: it simply is not used when the clip is played. For example, if you set a mark-in point five seconds into a clip, it plays at the five second mark instead of at the beginning, but if you remove a mark-in, it returns the beginning of the clip to the actual clip start.

***NOTE:** Setting in and out marks applies to Panel Control only. It is not recommended for other protocols.*

Setting Marks

To set a new in mark and out mark in a clip:

1. Click a panel to select it.
2. Create a clip, load a clip, or load a clip list and then select a clip from the list. The **Clip Position Bar** is all the way to the left and the **Timecode** is 00:00:00:00.
3. Use the transport controls, drag the **Clip Position Bar**, or click on the **Timecode** display to enter a timecode to locate the frame where you want to set the in mark.
4. Click **Set In Mark**. The **Timecode** display remains the same, but the **Clip Position Bar** jumps to the far left, indicating the mark-in point on the clip.
5. Use the transport controls, drag the **Clip Position Bar**, or click on the **Timecode** display to enter a timecode to locate the frame where you want to set the out mark.
6. Click **Set Out Mark**. The **Timecode** display remains the same, but the **Clip Position Bar** jumps to the far right, indicating the mark-out point of the clip.
7. Drag the **Clip Position Bar** to the beginning of the clip.
8. Click **Play**. The clip starts at the in mark and stops at the out mark.

Removing Marks

To remove in and out marks from a clip:

1. Select a clip containing marks.
2. Click **Remove In Mark** to remove a mark-in point and reset the clip beginning to the actual start of the clip.
3. Click **Remove Out Mark** to remove the mark-out point and reset the clip ending to the actual end of the clip.

Setting Field Dominance for Marks

You can set field dominance so that a clip's mark-in and mark-out points occur at field 1 or field 2 of a given frame. By default, the field dominance is set so that either field 1 or field 2 can be a mark-in or mark-out point. To change field dominance:

1. Choose **Options | Field Dominance**. The Field Dominance dialog box appears (Figure 91).

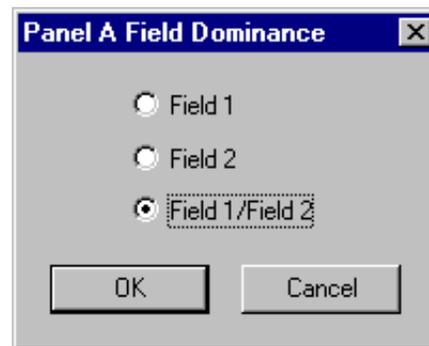


Figure 91. Field Dominance dialog box

2. Click **Field 1** or **Field 2**.
3. Click **OK**. The change takes effect immediately.

NOTE: *The latest field dominance setting applies to all open panels.*



Chapter 4 Using VdrPanel

Using the Profile Disk Utility

The Profile Disk Utility allows you to create new file systems on a Profile disk set (volume), format disks, set a new disk label, load the latest microcode from the disk manufacturer, or browse through the SCSI log. A Profile volume may consist of the internal disks in a PDR 100 or PDR 200, or it may be the external disks in a PDX 103 Disk Expansion Unit, PDX 208 Disk Expansion Unit, or a PRS 200 RAID Storage System.

After starting the application, the Profile Disk Utility window appears. Most of the disk utility functions can be performed from this dialog box, as shown in Figure 92.

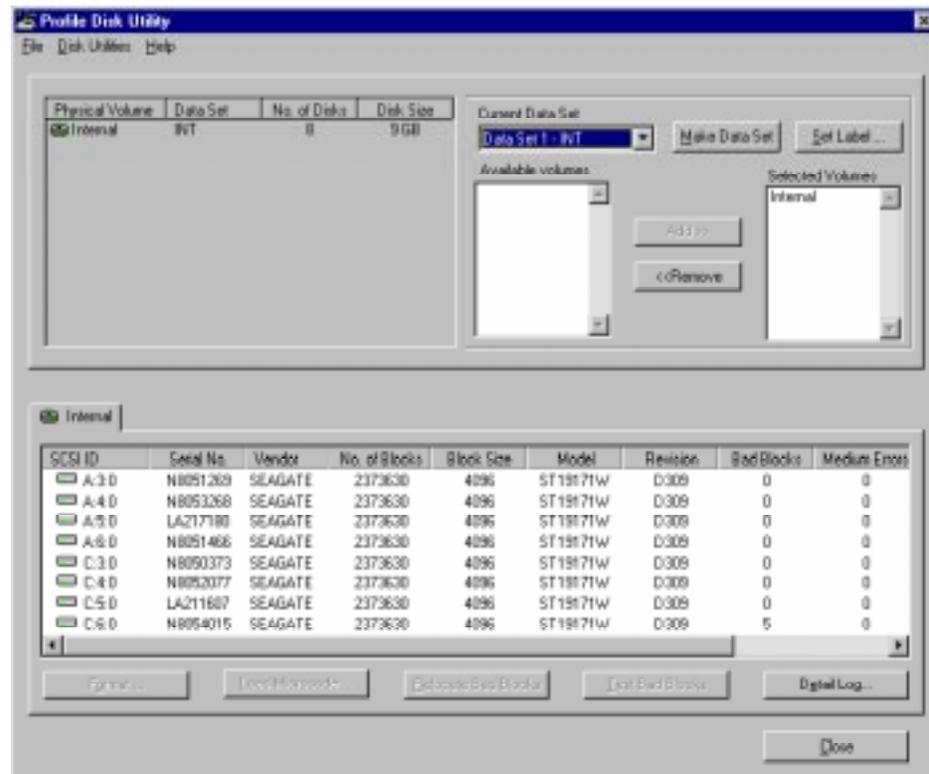


Figure 92. Profile Disk Utility window



NOTE: *If you use the PDX103 Disk Expansion Unit with a PDR200, the 9 gigabyte hard drives in the PDR200 are limited to the storage size of the 4 gigabyte hard drives in the PDX103.*

Creating a File System

A file system is created for all media disks before a Profile disk recorder is shipped from the factory. You can set up a file system any time you need to build or rebuild your system.

NOTE: *If you are upgrading a PDR100 to version 2.1 of system software from version 1.4.XX or earlier, you must rebuild your file system.*

Information on the disks is shown in the upper-left panel of the Profile Disk Utility window—information such as physical volumes, data sets, number of disks, and disk size. Additional information is shown in the lower pane: SCSI IDs of each disk, serial numbers, vendor names, number of blocks, block sizes, model numbers, revision numbers, bad blocks, and medium errors.

A *volume* consists of a set of physical disks, such as an array of eight internal disks in a Profile disk recorder or in a PDX 208 Disk Expansion Unit. A *data set* is a group of disks that can consist of one or more volumes. The data set name is the name that appears in VdrPanel. Media is striped across all disks in the data set.

To create a file system:

1. Select a data set from the **Current Data Set** box. For example, *Data Set 1 - int*.
2. Select the volumes to be included in the data set from the **Available Volumes** list and click **Add**. To remove volumes from the data set, select volumes from the **Selected Volumes** list and click **Remove**.
3. Choose **File | Make Data Set** or click **Make Data Set**.

Setting a Disk Label

To set a disk label:

1. Choose **File | Set Label** or click **Set Label**. The Set Label dialog box appears.

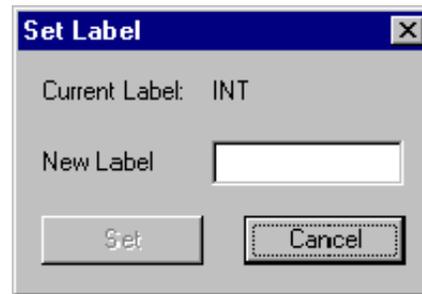


Figure 93. Set Label dialog box

2. Enter the new label name in the **New Label** box. The label name can have up to seven characters.
3. Click **Set** when complete.



Formatting a Disk Volume

Formatting disks organizes them so the Profile system can write data to and read data from them in an orderly way. All media disks come preformatted from the factory.

>>> **WARNING:** *Formatting disks removes all media and other data from the disks. Format disks only when absolutely necessary.*

To format a disk:

1. Select the desired physical volume with the tab.
2. Select the desired disks.
3. Choose **Disk Utilities | Format Disk(s)** or click **Format**. The Format Disk(s) dialog box appears. If disks are non-Seagate, you can select a block size.
4. Click **Format** on the dialog box to continue formatting the disks.

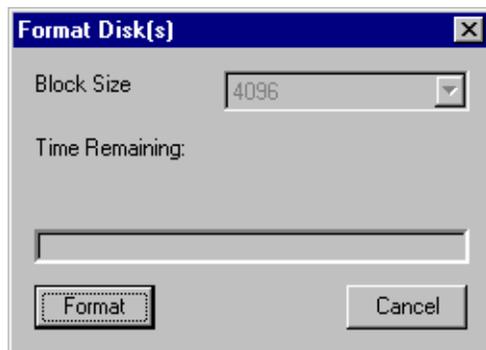


Figure 94. Format Disk(s) dialog box

Loading Microcode

To load microcode for your hard disks:

1. In the lower pane, select the drive or drives where you want to load microcode.
2. Choose **Disk Utilities | Load Microcode** or click the **Load Microcode** button to open this dialog box.

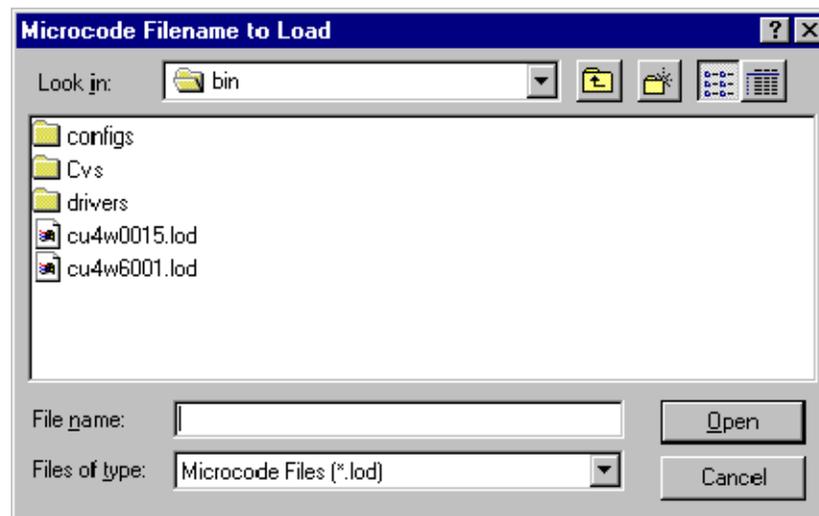


Figure 95. Microcode Filename to Load dialog box

3. Double-click on a filename or enter the name of the microcode (.*lod*) file in the Filename box and click **Open** to load the microcode.

NOTE: Currently, the microcode file **cu4w6001.lod** is the most up-to-date for 4 Gigabyte Seagate drives. The most up-to-date file for 9 Gigabyte Seagate drives is **cu9w6004.lod**. The file **ibm9G_51.lod** is the most up-to-date for IBM drives. Check what make of drive you have in the Vendor field of the lower pane in the Disk Utility window.



Relocating and Testing Bad Blocks

The reason why bad block errors are reported is usually not because the physical block (cluster) is damaged. Often the reason is because when the system attempts to read a media file and for any reason it cannot read a block, it does not retry but simply repeats the last field and moves on to the next block.

***NOTE:** The following tests are nondestructive.*

Testing bad blocks determines whether a bad block error is really a physical problem with the disk or just a nonrepeatable read error that can be ignored. If the error is nonrepeatable, the block may be removed from the bad blocks list. Otherwise, the block will be reallocated.

To test bad blocks:

- Choose **Disk Utilities | Test Bad Blocks** or click **Test Bad Blocks**.

To relocate bad blocks:

- Choose **Disk Utilities | Relocate Bad Blocks** or click **Relocate Bad Blocks**.

***NOTE:** You must read the detail log (SCSI log) to view the results of these tests. See “The Detail Log” on page 175.*

The Detail Log

The detail log (*scsi.log*) records the history of everything that happens on a disk and helps you track problems with disks. For example, when you relocate or test bad blocks, you must read the detail log to see the results.

To open and read the detail log:

1. Choose **Disk Utilities | Detail Log** or click **Detail Log**. The Detail Log dialog box appears.
2. Click **Close** when done checking the log information.

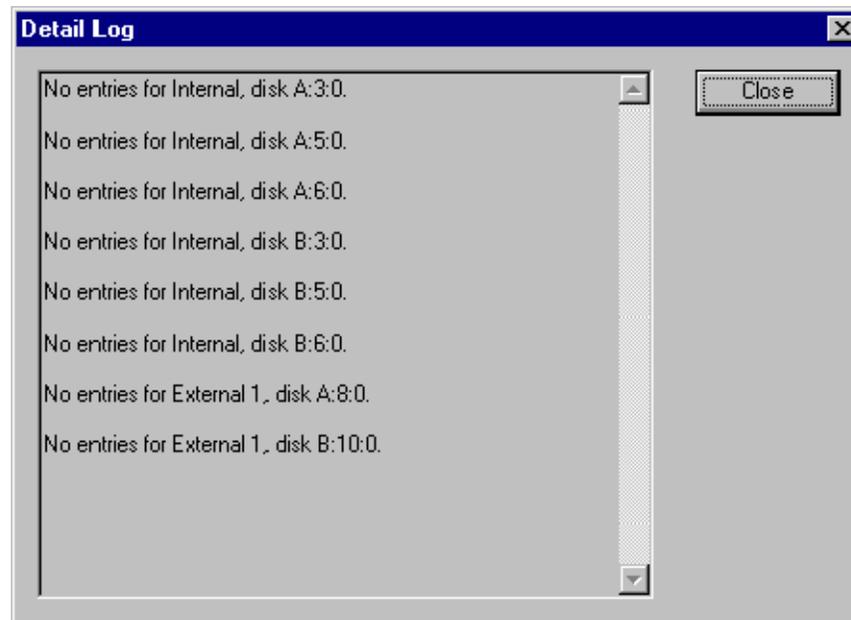


Figure 96. Detail Log dialog box

NOTE: *Scsi.log* is a binary file; you cannot view it with WinTail. See “Viewing Profile Logs” on page 177 for information about viewing other Profile logs.



Chapter 5 Using the Profile Disk Utility

Using Profile Utilities

This chapter shows you how to read Profile logs with WinTail, monitor an RS-422 port with ProLink, access a Profile system from a remote PC with PortServer, and how to manually stop and start the PDR Access Control service.

Viewing Profile Logs

You can view Profile system logs with the graphical log viewer WinTail. This log viewer allows you to see the end of a log file. To view any of the Profile system log files:

1. Double-click on the Profile Log shortcut icon on the Windows NT desktop or choose **Start | PDR Applications | Profile Log**. By default, the WinTail application views *profile.log*. WinTail automatically checks log files for updates every two seconds.

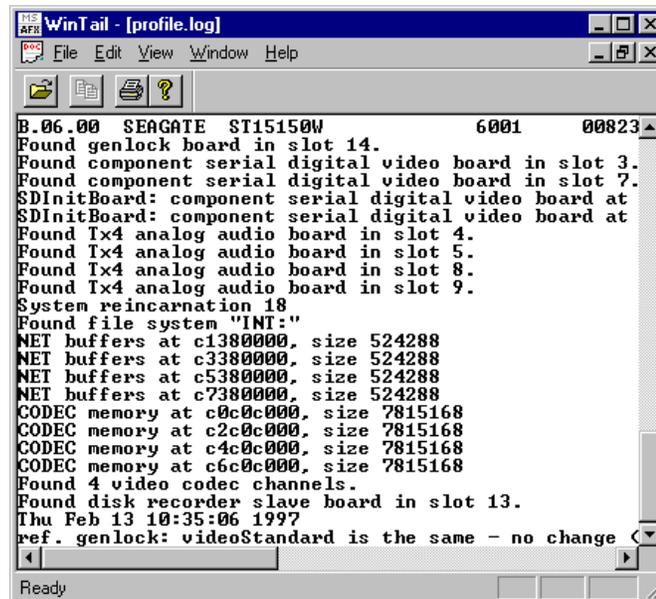


Figure 97. WinTail window



2. To view other logs, choose **File | Open**.

NOTE: Because it is a binary file, you cannot view `scsi.log` with WinTail. See “The Detail Log” on page 175 for instructions on how to view `scsi.log`.

You can view three sets of logs:

1. The PDR Access Control service records messages from the real-time processor into `profile.log`. As installed, the WinTail application reads this log file by default.
2. VdrPanel logs all RS-422 protocol messages for supported third-party protocols. Logging occurs to files `VdrPanel[ABCD].000` and `VdrPanel[ABCD].001` in the directory where VdrPanel is run. Logging has a timing resolution of 10 msec. Use a dedicated RS-422 logger for better resolution and accuracy.

Logging for each panel may be turned off by setting the value **MsgLogger** to **0** in these registry keys with the Windows NT registry editor **regedit**:

```
HKEY_LOCAL_MACHINE
  /SYSTEM
    /CurrentControlSet
      /Services
        /VtrService
          /Chan[ABCD]
```

NOTE: *Logger does not log duplicate replies for BVW, BVW [insert edit] and Odetics for 61.0c CurrentTimeSense for Timer1, LTC, and VITC, and 61.0c StatusSense, nor for Louth for 30.05 PortStatusRequest and 30.10 SystemStatusRequest.*

3. VdrPort logs record all messages passed between Windows NT and the real time processor. The following information is logged:
 - Direction:
 - > indicates NT-to-video-processor
 - < indicates video-processor-to-NT
 - VDR port number (0–3)
 - Tick count (msec since Windows NT booted)
 - Message

The start of the VdrPort log file contains the date and time (*year/month/day hours:min:sec.msec*), and the equivalent tick count. Events are logged to two files: *VdrPortLog.000* and *VdrPortLog.001*.

ProLink

ProLink monitors Profile Protocol calls over RS-422 communication lines, allowing you to use a device such as the PRC 100 Control Panel or other third-party device to communicate with a Profile system. The PRC 100 is a discrete control panel that provides conventional VTR-type control of Profile systems. Simply double-click the ProLink shortcut icon on the desktop to start it (or choose **Start | PDR Applications | ProLink**), then select the port that your device is connected to (P1 through P8).

PortServer

PortServer allows you to control a Profile unit remotely using Ethernet communications. For example, you can run PortServer on a remote Profile system so that you can access it from a local Profile using your LAN. Simply double-click the PortServer shortcut icon on the desktop to start it (or choose **Start | PDR Applications | PortServer**). The PortServer interface is shown in Figure 98.

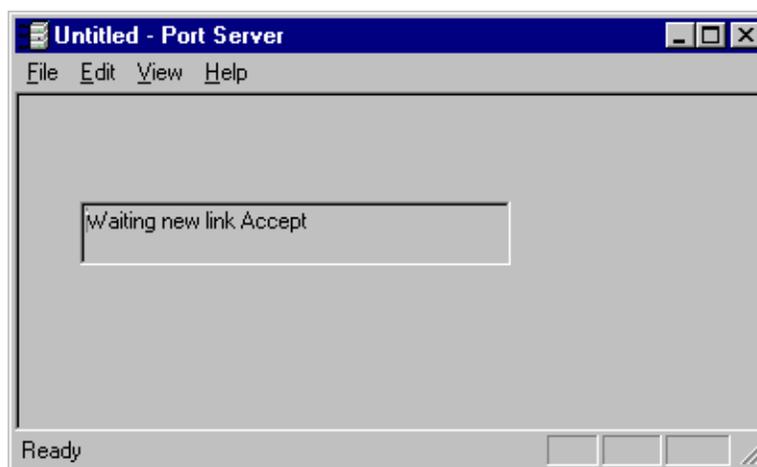


Figure 98. PortServer window



PDR Access Control

PDR Access Control is a Windows NT service that prevents one application from crashing another user's application by mistake. Though largely transparent to users, the service prevents applications from accidentally reloading the video processor while in use, essentially providing a controlled gateway to the processor. Applications attempting to load different video processor code than what is currently running are denied access and terminated; however, applications attempting to load the same code are given access to proceed.

The `c:\profile\profile.log` file tracks all messages from the video processor. The state of the video processor is periodically checked. If the processor does not respond, an administrator alert is generated. The event is logged to the Windows NT Event log. The Event log can be viewed with the Event Viewer application.

PDR Access Control is automatically installed and started as part of the installation process and is restarted every time the system is rebooted. This procedure is provided in the unlikely event that you need to start the service manually.

1. Log in as *administrator*.
2. Double-click **My Computer** on the desktop.
3. Double-click the **Control Panel** icon.
4. Double-click the **Services** icon. The Services dialog box appears (Figure 99).

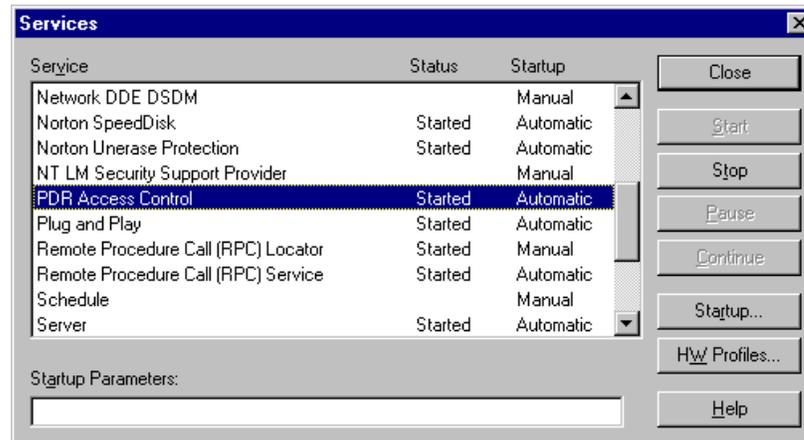


Figure 99. Services dialog box

5. Select **PDR Access Control** from the list of services. You may have to scroll the list box.
 6. Click **Start** to start the service. By default, the service is automatically restarted whenever the system is rebooted. It is unlikely that you will ever need to start the service manually.
 7. Click on **Stop** to stop the service, if desired.
 8. Click **Close** to close the Services dialog box.
- >>> **CAUTION:** *If the start-up option is changed from Automatic, the Profile applications are not able to run unless the service is started manually each time the system is rebooted.*



Chapter 6 Using Profile Utilities

Video Networking

With Fibre Channel, you can copy and move media between a network of Profile systems at faster than real time. You must configure your network, whether your Profile unit came from the factory with a Fibre Channel card installed or whether you have installed Fibre Channel as an F-kit (field installation kit).

Configuring your system for the Fibre Channel option requires that you first configure your Ethernet LAN. See *PDR200 Installation Manual* or *Profile Family Local Area Network Installation Manual* for details on installing and configuring the LAN.

Configuring the system involves completion of the tasks listed below.

- Configuring the Fibre Channel Board Hardware Address.
- Configuring the Fibre Channel Board for TCP/IP.

NOTE: All Fibre Channel systems should have Profile system software version 2.2 installed.



Configuring a Fibre Channel Hardware Address

Every Fibre Channel node (board) on a network must have a unique hardware address between 1 and 120. When setting up and adding a Fibre Channel board, you must insure that each hardware address is unique. The **fcconfig** command line utility is provided to allow you to retrieve, set, and change the hardware address of the Fibre Channel board.

The options available for **fcconfig** are:

- help** to display these options.
- i** <**fc_ip_address** | **clear** > to set or change a dotted decimal, Fibre Channel Internet Protocol address. Using **clear** clears the **fc_ip_address**.
- g** <**gateway**> to set or change a dotted decimal gateway address.
- n** <**netmask** | **clear** > to set or change a hexadecimal netmask, in the form **ffffff00**. Using **clear** clears the netmask.
- a** <**hardware_address**> to set a hardware address in the range 1–120. Enter **0** to autoconfig.
- t** <**on** | **off**> to enable (**on**) disable (**off**) TCP checksums.
- hta** <**on** | **off**> to enable (**on**) disable (**off**) auto host table administration.

Some examples:

- To retrieve the current Fibre Channel configuration settings, type: **fcconfig**
- To set or change the hardware address to 10, type: **fcconfig -a 10**
- To disable TCP checksums, type: **fcconfig -t off**

When initially installing a video network, you must assign unique hardware addresses for each node. When installing additional nodes to an existing video network, verify all current hardware addresses by typing **fcconfig** with no options. Then assign and set hardware addresses for any new nodes with **fcconfig -a <hardware address>**

Configuring the Fibre Channel Board for TCP/IP

NOTE: Please read the following carefully, even if you are an experienced administrator of TCP/IP networks.

If you have connected your Profile's Ethernet connection to an existing TCP/IP network, skip to the procedure "Configuring Fibre Channel for an Existing Net." If you *have not* connected your Profile's Ethernet connection to an existing network, go to the procedure "Configuring Fibre Channel for Isolated Network Operation."

NOTE: The Fibre Channel IP address must be different than the Ethernet IP address.

Configuring Fibre Channel for Isolated Operation

To configure a Fibre Channel board on a system that is isolated from a network:

1. Set the Fibre Channel IP address with **fcconfig -i XXX.XXX.XXX.XXX** (see "Configuring a Fibre Channel Hardware Address" on page 184). This IP address must be different than the Ethernet IP address.
2. Enter the Fibre Channel IP address in **c:\winnt\system32\drivers\etc\hosts** or you can use the **fcncs** Windows NT service to automatically update and maintain the **hosts** file. For more information on **fcncs**, see "The PDR Network Configuration Service" on page 188.

If you want to use **fcncs** to automatically update your hosts file, you must do the following:

1. Enable auto host table administration with **fcconfig -hta on**. Your **c:\winnt\system32\drivers\etc\hosts** file will be automatically administered by **fcncs**.
2. Verify all the IP addresses and FC_IP addresses.



Configuring Fibre Channel for an Existing Network

All Profile name resolution is performed by Windows NT. Therefore, as with the rest of your TCP/IP installation, all node names will need to be managed in host files or a DNS server. Profile system software 2.2 requires that:

- You set the Fibre Channel IP address using **fcconfig** (see step 1 on page 185).
- You enter your Fibre Channel IP address into your host file or DNS server for name lookup.
- Fibre Channel TCP/IP names must be the Ethernet TCP/IP names with a **_fc0** suffix. For example, if a Profile system name is **Profile1**, the Fibre Channel TCP/IP name for that Profile system must be **Profile1_fc0**.
- Based on the address you use, there is an implicit netmask, but you can override this with a larger mask. For example, **255.0.0.0** can be overridden by **255.255.0.0** or **255.255.255.0**.

After configuring all machines, verify name resolution using **ping** by typing:

```
ping Profile1_fc0
```

If this command returns:

```
Pinging Profile1_fc0 [128.181.1.1]
```

```
you have successfully resolved the name Profile1_fc0 to the IP address  
128.181.1.1
```

Keep in mind that although this verifies name resolution, it *does not* test Fibre Channel connectivity.

If the above **ping** returns:

```
Bad IP Address Profile1_fc0
```

the Fibre Channel IP is not resolved. (You may want to reboot to ensure changes take effect, or check your spelling, etc.)

Checking Profile Communication

After all Profiles have been rebooted and logged in, ensure that the PortServer program is running on all Profiles within the Fibre Channel network. Tektronix recommends that this icon be copied to the Startup group so that it will be started automatically.

Basic Fibre Channel communication can be verified with the **fcping** command. Start a command prompt window and type: **fcping profilex_fc0** where **profilex** is the name of the remote Profile. For example, to verify Fibre Channel connectivity to Profile3 you would type: **fcping profile3_fc0**. This command should return with a positive result. If it does, continue to the next step.

The **listnames** utility provides enumeration of PdrMovies on a remote Profile. This utility will list components of PdrMovies, based on a starting argument parameter, which specifies a valid PdrMovie component. Valid components are datasets, groups or movies as defined in the Profile API programming guide.

The **listnames** usage is:

```
listnames [-l start_arg] [-r remote_machine]
-l list names based on start_arg
-r remote_machine (local if not specified)
```

Examples:

```
listnames -r Profile5
```

(This will list all valid datasets on **Profile5**.)

```
listnames -r Profile5 -l INT: [or //]
```

(This will list all groups in the **INT:** dataset on **Profile5**.)

```
listnames -r Profile5 -l INT:/default/
```

(This will list all movies in the **INT:/default** group on **Profile5**.)

NOTE: *If the -r parameter is not specified, the utility will run on the local Profile. If the -l parameter is not specified, the utility will list all valid datasets. Dataset names are case sensitive. That means that **INT:** and **int:** would be considered different datasets.*

The **copymovie** movie utility copies a PdrMovie between two Profiles using the Fibre Channel network.



The **copymovie** usage is:

copymovie srcMachine srcName destMachine destName

(the local machine can be referred to as *)

Examples:

copymovie Profile3 INT:/default/movie1 Profile4 INT:/default/movie2

(This will copy a movie called **INT:/default/movie1** from Profile3 to Profile4, where it will be named **INT:/default/movie2**.)

copymovie Profile1 INT:/default/movie1 * INT:/default/movie7

(This will copy a movie called **INT:/default/movie1** from Profile1 to the local Profile where the command was run, where it will be named **INT:/default/movie7**.)

The parameters to this utility are case-sensitive.

The PDR Network Configuration Service

The PDR Network Configuration service (**fcncs.exe**) collects information about other PDRs on the network via multicast, and maintains a local table of the information. It also will update the **c:\winnt\system32\drivers\etc\hosts** file if the **fcconfig -hta** option is set to **on**, and only if it is set to **on**.

Fcncs.exe has the following standard command line options:

fcncs -install installs the service on the system. The service starts automatically when installed.

fcncs -remove removes the service from the system.

fcncs -start starts the service.

fcncs -stop stops the service.

Using the Tool Box Editor

NOTE: A time-locked version of this optional software was shipped to you with version 2.2 system software. Unlocking this software requires an additional purchase. Click Purchase in the timelock dialog box for information on how to purchase this software.

The Tool Box Editor is a graphical user interface that lets you create new, digital media by logging and capturing video and audio clips while also providing an inexpensive, cuts-only editing system. It lets you log video and audio material from a variety of sources, such as a satellite feed, live camera, VTR, CD player, or microphone. You can assemble material on disk and then send it back out to tape, broadcast, or archive.

After launching the Tool Box Editor (see Figure 100), the first step you must take is to acquire resources—such as codecs and audio channels—with the Resource Manager. Then you can capture a new clip or play an existing one. Other common tasks include creating new masters, playing masters, creating subclips, trimming clips, and deleting media.

NOTE: Profile system software version 2.2 supports Tool Box Editor version 1.1.



Starting and Exiting the Tool Box Editor

To start the Tool Box Editor:

- Double-click the Tool Box Editor shortcut icon on the desktop.
- Choose **Start | PDR Applications | Tool Box Editor**.

NOTE: The Tool Box Editor may be restarted at any time. Multiple instances are allowed.



Figure 100. Tool Box Editor window

You can start the Tool Box Editor from a command line, provided that `c:\profile` is in the path, by typing:

```
tbxedit.exe
```

You can also specify a project file name when you start the Tool Box Editor from a command line:

```
tbxedit.exe myproject.tbx
```

You can start Tool Box Editor while also connecting to a named Profile unit on the network:

```
tbxedit.exe -m profile7
```

NOTE: You cannot specify both a project file and a remote Profile machine in a command line at the same time.

Whenever you start the Tool Box Editor, a Hardware Communication program is also started, if it is not already running. This program keeps track of the Profile host file (*profile.hst*) which lists Profile systems on the network, as well as remoting activities.



Figure 101. Hardware Communication message box

The Hardware Communication program tries to connect to a machine in the project file (see "Project Files" on page 199). If there is no project file present, you will automatically connect to the local machine. Otherwise, you will go to the Connect to Machine dialog box (see Figure 106).



To exit the Tool Box Editor:

- Choose **File | Close**.

A message box is displayed, asking you to confirm that you really want to exit the application. Click on the **Yes** button to confirm the exit or the **No** button to cancel the quit command.

Using the Resource Manager

The Resource Manager lets you acquire system resources and configure operational settings for up to four Profile channels (see Figure 102). Channel resources are used by the Tool Box Editor, List Manager, and VdrPanel.

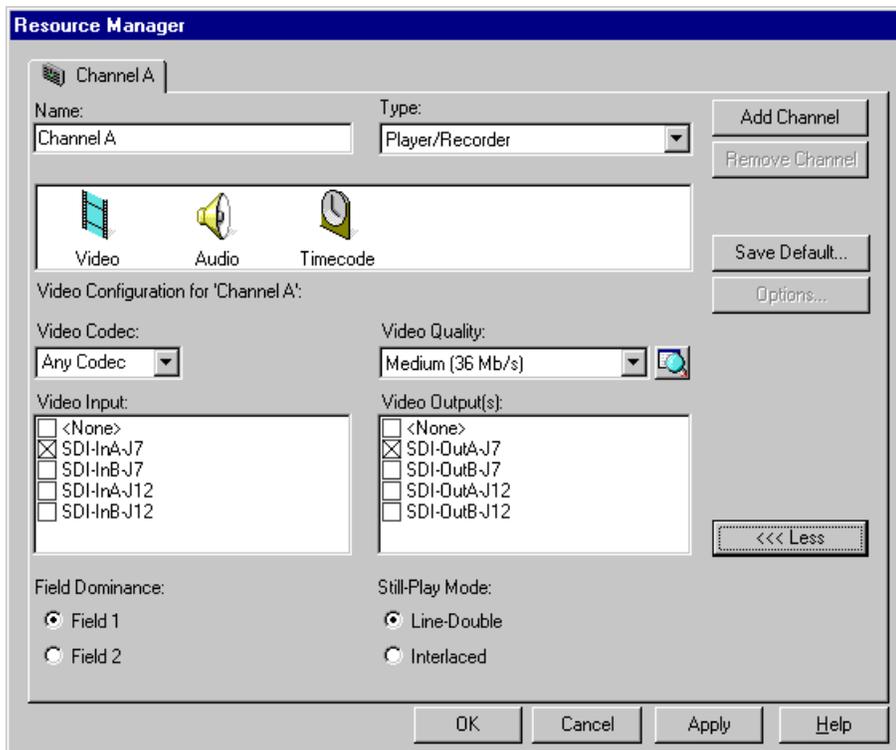


Figure 102. Resource Manager dialog box

Channel resources include:

- Video inputs and outputs
- Video codecs
- Audio channels
- Timecode sources (inputs and outputs)
- Timecode codecs

Operational settings include:

- Video compression quality
- Drop-frame and nondrop-frame timecode
- Field dominance
- Still-play mode
- Timecode generator settings

Whenever you make a change in this dialog box, you can click **Apply**. The changes are applied without leaving the dialog box.

To preserve a configuration as the default, use the **Save Default** button to save your current channel configuration as the default. Different defaults can be saved for each Profile machine in your network.

Acquiring Resources

The Resource Manager is available when the Tool Box Editor is running, unless media is loaded on a timeline. To bring up the Resource Manager dialog box:

- Choose **Config | Resources**.



Acquiring Profile Channels

First, you must acquire one or more Profile channels. The single channel tab labeled *Channel A* is the default. You can change the name of the channel by entering a new name in the Name text box. Channel names can have up to 32 characters, but a shorter name is recommended for readability.

Depending on your system, you can configure up to four channels; however, some systems only have two channels (ports). To add a channel, click the **Add Channel** button. To remove a channel, click the **Remove Channel** button. One channel is always visible.

If no resources are selected for a channel, the channel tab icon is dimmed. If no port is available, a red X appears in the channel tab.

If a resource such as a video input is available, the box next to its name is not checked and its name is *not* dimmed. If it is in use, its name is dimmed. If it is in conflict, that is, in use by another application or channel, its name is red. If it has been acquired, the box next to its name is checked.

NOTE: The default channel type is a JPEG player/recorder. This is the only choice available at this time.

The channel tabs in Tool Box Editor also show results from changes you make in Resource Manager, as shown in Figure 103.

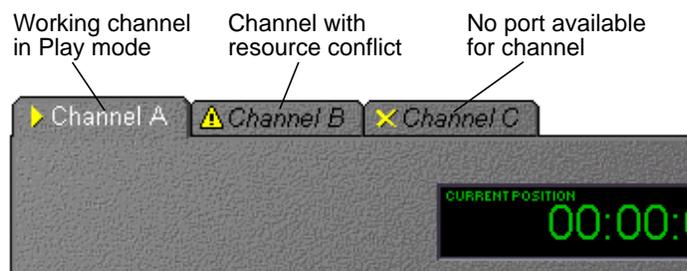


Figure 103. Channel tabs in Tool Box Editor

Configuring Video Resources

To configure video resources:

1. Choose the category of resources you want to allocate: Video, Audio, or Timecode. Video is the default. To configure another resource, click on the appropriate icon.
2. Choose a video codec. By default, a channel is allocated one logical codec (Any Codec). If you have selected the Any Codec option, this means that the first codec available is chosen from among the four physical codecs on the Profile. You can also choose a specific, physical codec (Codec 1–4) or no codec at all.
3. In descending order, the choices for video quality (compression) are High, Medium, Nominal, Draft, and two custom settings, Custom 1 and Custom 2. Medium is the default. The higher the quality, the more disk space is used. To change the video quality, choose another setting from the Video Quality box.



To change a custom setting, click the button next to the Video Quality box, and the Custom Video Quality Settings dialog box appears.

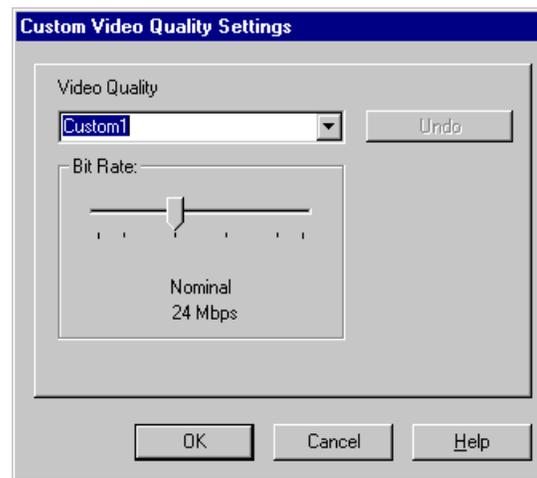


Figure 104. Custom Video Quality Settings dialog box

Select either Custom 1 or Custom 2 in the Video Quality box. With the slider, select a video quality. Click OK when done.



4. Choose a video input from the Video Input check boxes. The default is the first video input. The number and names of video inputs are determined by the system configuration created with Configuration Manager. You can choose only one video input at a time per channel.
5. Now choose a video output. The default is the first video output. The number and names of video outputs are determined by the system configuration created with Configuration Manager. You can choose one or more video outputs at a time. Each output corresponds to one of the video output connectors on the back of the Profile. Once allocated, other Profile channels cannot share assigned video outputs.
6. Click on the **More** button to set field dominance and still-play mode:
 - Field dominance determines which field is the mark-in or mark-out point for the frame. The default is Field 1. To set it to Field 2, click on the button.
 - Still-play mode determines whether your still frames are interlaced or line-doubled. Line-double is the default. With interlaced, you may get some flicker in still display. Line double reduces flicker.

Configuring Audio Resources

Click on the Audio icon to select audio channels. The default is the first two audio channels (Channels 1 and 2). To choose audio channels, click on the check box for the desired channels (1–16). Once allocated, other Profile channels cannot share the assigned audio channels. For example, if Channel A has all 16 audio channels, these audio channels cannot be shared with Channels B, C or D.

Configuring Timecode Resources

When you click the Timecode icon, the Resource Manager dialog box changes (see Figure 105).

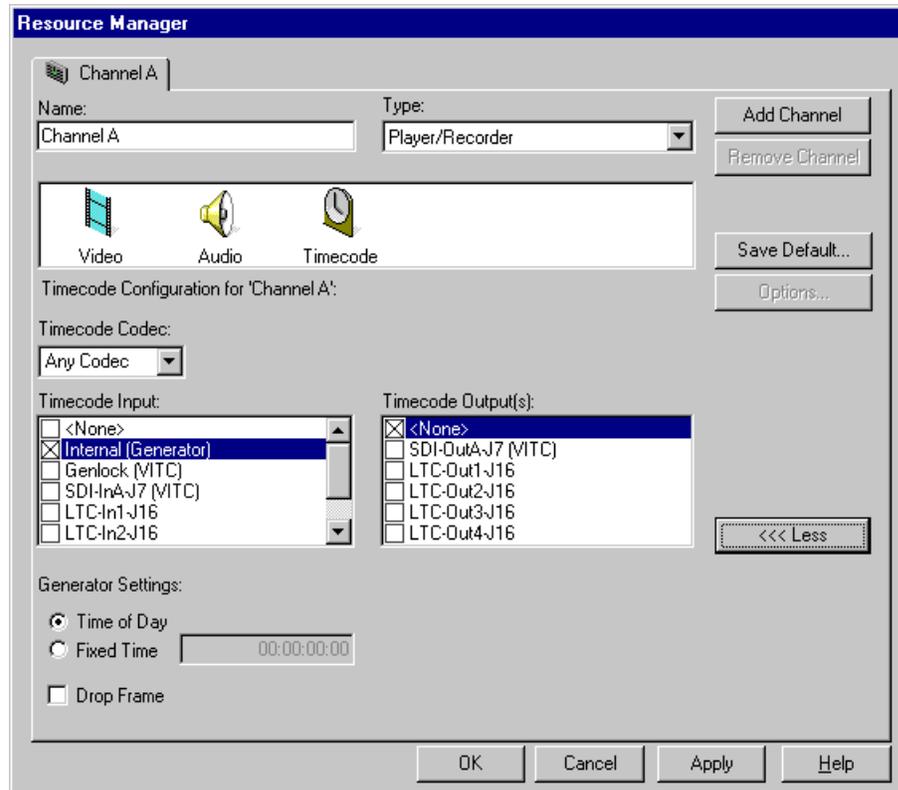


Figure 105. Resource Manager dialog box, Timecode

1. Click on the Timecode icon to choose a timecode codec input and output. The default timecode input is internal generator. You can record timecode from an internal generator, genlock VITC, LTC inputs, or VITC from a Profile channel video input.



2. Choose a timecode codec. By default, a channel is allocated one logical codec (Any Codec). If you have selected the Any Codec option, this means that the first codec available is chosen from among the physical timecode codecs. You can also choose a specific, physical codec (Codec 1–8) or no codec at all (None).
3. If you select internal generator, click the **More** button see the generator settings. The **More** button is dimmed unless you select internal generator.
4. When using an internal timecode generator, you can start timecode using the NT clock or with a fixed time. Click **Time of Day** to use the NT clock, or, click **Fixed Time**. With fixed time, you can use the default of **00:00:00:00** (Hours:Minutes:Seconds:Frames) or set a new fixed starting time. This setting takes effect when the **Record** button is pushed.
5. To choose drop frame, click on the **Drop Frame** button while configuring timecode. To compensate for the 29.97 frame rate in NTSC, drop-frame timecode synchronizes the rate with elapsed time. Drop-frame timecode drops two frames per minute, except on the tenth minute. PAL has a constant rate of 25 frames per second and never requires drop-frame timecode.
6. The system default automatically provides you with one timecode input (Internal Generator), a codec (Any Codec), and no timecode output (None). To preserve a different configuration, use the **Save Default** button to save your current channel configuration as the default. Different defaults can be saved for each machine in your network.

Project Files

You can save your work environment into a project file (.tbx). A project file stores allocated resources and the current bin. Saving your environment eases the transition of set-ups between users. A descriptive project title is displayed in the title bar of the Tool Box application, including the current machine name and channel.

A project file contains the following information for the last Profile machine connected to:

- What the last machine was.
- The Resource Manager configuration.
- The current bin.

If you connect to a new remote Profile machine during a session, the default settings for that Profile machine (saved by Resource Manager) are used for that machine. If no defaults have been saved, factory defaults are used.

To save the current work environment in a project file in the current working directory:

- Choose **File | Save**.

To open an existing project file:

- Choose **File | Open**.

You can also specify a project file name when you start the Tool Box Editor from a command line:

```
tbxedit.exe myproject.tbx
```

To create a new project file:

- Choose **File | New**.

You are asked to save the current project file (if necessary) and then if you are connected to a local machine, the Tool Box Editor caches media and is set up using a default configuration. If you are connected remotely, you are also asked which machine to connect to in the Connect to Machine dialog box.

To save an existing project file under a different name:

- Choose **File | Save As**.



Connecting to a Remote Profile Machine

You can connect from your local machine to any remote Profile machine in your network. A local Profile machine refers to a Profile system to which you are directly attached. A remote Profile machine refers to a Profile system that is connected to your local system via an Ethernet local area network (LAN).

To connect to a remote Profile machine:

1. Choose **File | Remote Machine**. The Connect to Machine dialog box appears. The label *Local* appears after the name of the local Profile machine.

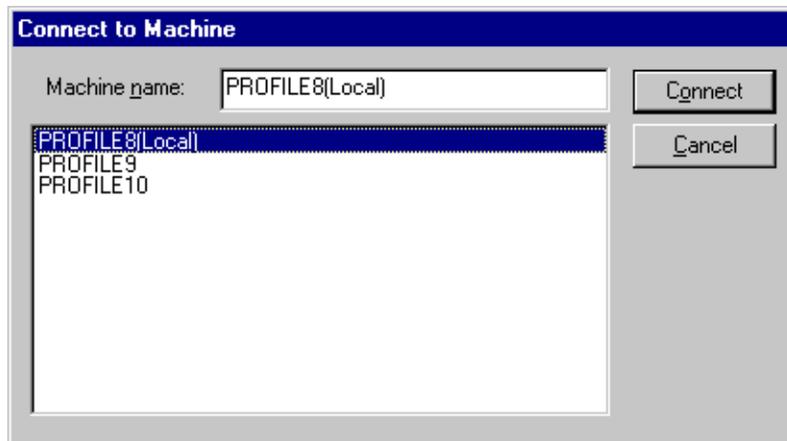


Figure 106. Remote Machine dialog box

To connect a Profile machine from the network host list:

1. Select the name of the machine in list box.
2. Click **Connect**.
3. The Connecting to Machine dialog box is displayed. If the connection is unsuccessful, you are given the opportunity to retry the connection or to cancel the operation.

NOTE: To add a Profile machine to the network host list, see “Connecting to a Remote Machine” on page 89.

Selecting a Current Bin

After you have acquired resources and chosen operational settings, you are ready to start editing. First, let's discuss some basics.

With the Tool Box Editor, you edit media such as clips and masters. The capture timeline lets you capture video and audio clips while the edit timeline allows you to sequence clips into masters.

A bin is simply a collection of masters and clips. The current bin is the set of media displayed in the current bin display. (See Figure 107) By default, the current bin is the first or top bin displayed in Media Manager.

The current bin display helps you focus on and work with a set of clips and masters. Above the display, the column headers are shown. Click on the column header bar by pointing the mouse pointer at the header and pressing the left mouse button. The media files are then sorted according the criteria of the columns.

You can also view (sort) media in the current display in several other ways—showing all media at once (default), clips only, or masters only.

To select a view, simply click on the view bar above the contents pane and choose a menu item. You can also customize how you sort the media by name, type, or date—or all three at once. Selecting and sorting views is useful when you have a lot of media on disk.

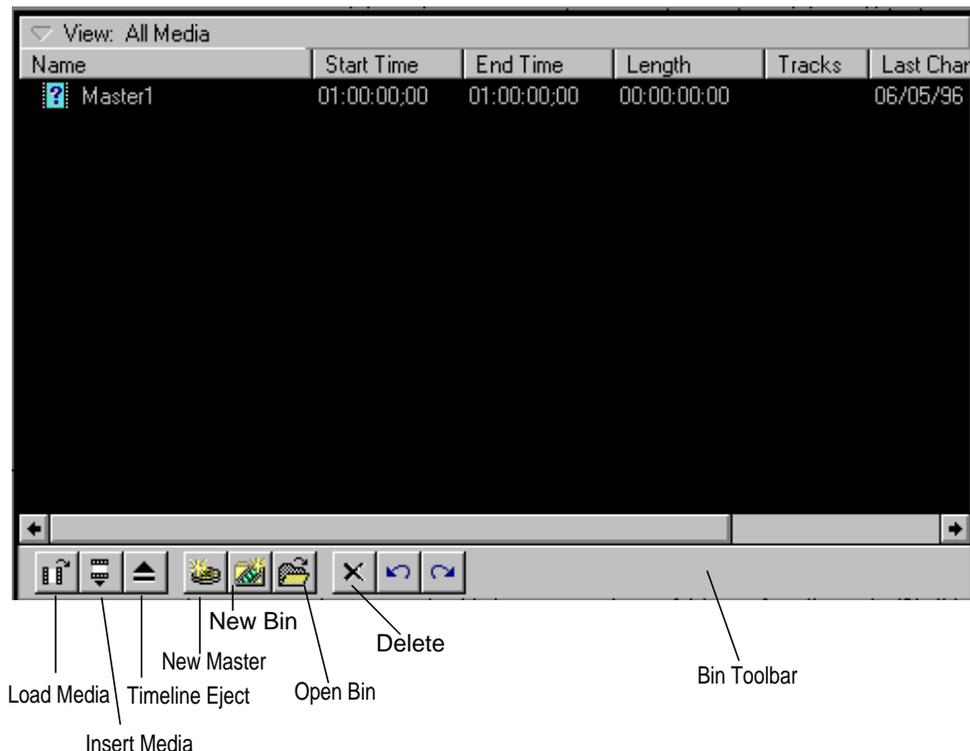


Figure 107. Current bin display

Below the current display is a set of buttons (from left to right):

- **Load Media:** Loads a selected master onto the edit timeline or a selected clip onto the capture timeline.
- **Insert Media:** Inserts a selected clip into the currently loaded master on the edit timeline near the location of the current timeline cursor.
- **Timeline Eject:** Ejects media from the active timeline.
- **Create New Master:** Creates a new, empty master, ready to receive clips.
- **New Bin:** Creates a new bin within a volume and displays it in the current bin display.
- **Open Bin:** Opens an existing bin and displays it on the current bin display.
- **Delete:** Deletes selected media.

Opening a Bin

To open or change the current bin:

1. Click the **Open Bin** button.
2. Enter the name in the text box or select the desired bin from the list box and press **OK**.
3. The selected bin is loaded into the current bin display.

Creating a New Bin

You will often want to create a new bin to store and organize new media. To create a new bin:

1. Click the **New Bin** button below the current bin display and the new bin dialog box is displayed.
2. Enter the name of new bin in the text box, or accept the default name.
3. Click **OK** to accept the new bin name.

The new bin automatically appears in the current bin display.

Record Time Remaining

Below the edit timeline (lower-left) is the record time remaining, in the form **00:00** (Hours:Minutes). This indicates the amount of storage remaining in the current Profile volume. The amount varies based on the current video quality. Generally, the higher the quality of video, the more disk space is used, thus leaving less time remaining.

Renaming Media

To rename a clip or master:

1. Select the clip or master in the current bin.
2. Choose **Rename** from the **Media** menu or from the shortcut menu with a right-click. You can also select the bin or master again in the current bin.
3. Type a new name, then press Enter.



Viewing Media Properties

You can view the media properties for clips and masters. To view these properties:

1. Select a clip or master in the current bin.
2. Choose **Properties** from the **Media** menu or from the shortcut menu with a right-click. You can also double-click the clip or master in the current bin. The Properties dialog box appears (see Figure 108).

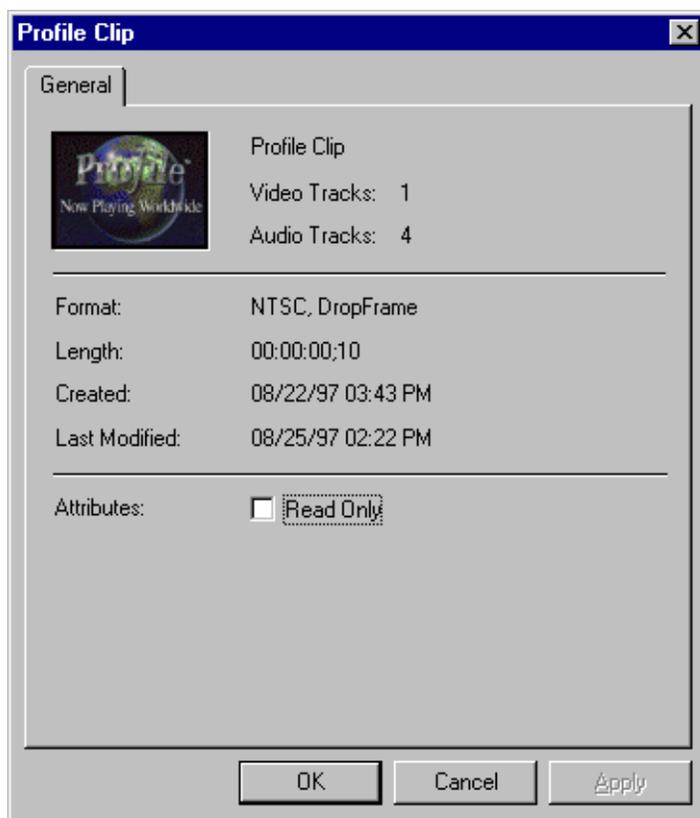


Figure 108. Properties dialog box

In this dialog box, you can view:

- A preview frame of the clip or master to help identify it.
- The name of the clip or master.
- How many tracks the clip or master uses for both audio and video.
- The media format, either NTSC or PAL. NTSC clips are recorded with either drop-frame or non-drop-frame timecode.
- The length of the clip or master. The length is shown in timecode format: **00:00:00:00** (Hours:Minutes:Seconds:Frames).
- The date and time that the media was created and the date and time it was last changed. The date and time the media was created or last changed is shown in the form: **12/2/94 9:40 PM**
- The read-only attribute, which you can change by clicking the Read Only box. Clips and masters with the read-only attribute cannot be renamed, deleted, or modified in any way.

Deleting Media

When the amount of remaining disk storage begins to get low (the time remaining is displayed below the edit timeline), you can free space by deleting unused media.

1. Select media from the current bin display. You can select either clips or masters; you can also select several clips or masters at a time.
2. Choose **Delete** from the **Media** menu or from the shortcut menu with a right-click. Press the **Delete** key or the **Delete** button on the bin toolbar.
3. A dialog box asks you to confirm that you want to delete the selection. If you click on **Yes**, the media is deleted; if you click on **No**, the operation is cancelled.
4. When media is deleted, it is moved to the Recycle bin until the Recycle bin is emptied.

NOTE: If a clip is locked, you cannot delete it. When a clip is deleted, its source material is not deleted if any other clips or masters reference that material. Only after the last clip is deleted is any disk storage freed.



Emptying the Recycle Bin

When a clip or master is deleted, it is moved to the **Recycle** bin and is permanently deleted when the **Recycle** bin is emptied. If an item of the same name is in the **Recycle** bin, the new item is automatically renamed.

To empty the **Recycle** bin:

- Choose **File | Empty Recycle Bin**.

***NOTE:** If the Recycle bin contains no deleted media, the Empty Recycle Bin menu item is dimmed.*

The Capture Timeline



The capture timeline allows you to capture and trim clips. You can set the current time position and adjust mark in or mark out points. Click on the **Capture** button below the audio controls to activate the Capture timeline without changing the current time position.

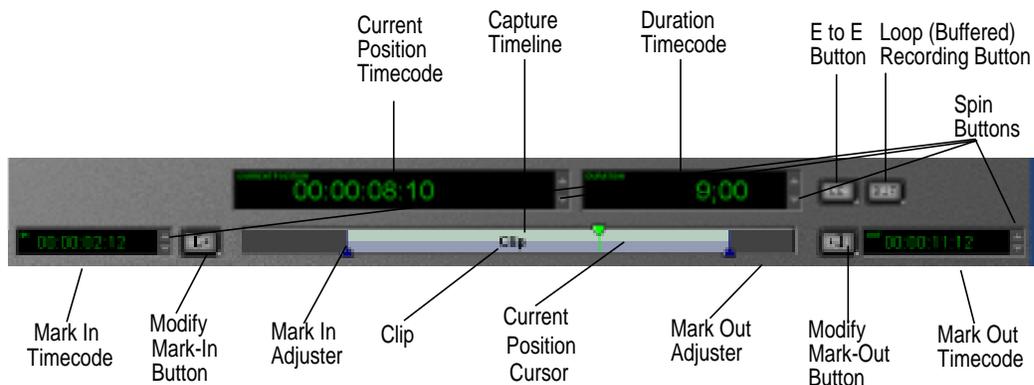


Figure 109. Capture timeline

When recording a clip on the capture timeline, you see the clip name and its record status. With normal recording, you see a **Recording** label. With loop recording, you see a **Buffer Recording** label. If a clip is being recorded on another channel simultaneously, the **Mark-in** and **Mark-out** buttons are disabled and the **Read Only** label is displayed.

The Tool Box Editor displays four timecode indicators: current position, duration, mark-in, and mark-out. The timecode indicators display hours, minutes, seconds, and frames in the form **00:00:00:00**. The duration displays the minimum number of digits. Drop-frame timecode is indicated by a semicolon (;) before the frame number.

Each part of the timecode—frames, seconds, etc.—can be selected by a click of the left mouse button and then changed separately. To the right of each indicator are the spin buttons with an arrow pointing up or down. Click on the up arrow and the time is increased, or decrease it by clicking the down arrow.

When a clip is loaded onto the capture timeline, the current position timecode indicator shows the frame-accurate cursor position in the clip. To move the current position cursor, click anywhere on the capture timeline. The updated timecode is displayed in the indicator as you move the cursor.

To adjust a clip's mark in or out point, move the current position cursor to the desired location and then click on the **Modify Mark-In** or **Modify Mark-Out** button. The mark in and mark out timecode indicators are displayed on either side of the capture timeline. The mark in and mark out markers on the capture timeline indicate where these marks lie on the clip. To move the mark in or mark out, grab the mark in or mark out marker on the capture timeline by clicking on it with the left mouse button and holding the button down while you move it.

To bring up the timecode entry window, click in a timecode indicator and then press + (plus sign), – (minus sign) on the keypad or = (equal sign) on the keyboard. To add to a timecode, click inside a timecode indicator, press + and the timecode entry window appears. Enter the desired value in the form **00:00:00:00** and press Enter. (Only numbers need to be typed.) The value is added to the timecode.

To subtract from a timecode, click inside a timecode indicator press – and the timecode entry window appears. Enter the desired value in the form **00:00:00:00** and press Enter. The value is subtracted from the timecode. To change the value of the timecode, click inside a timecode indicator press = and



the timecode entry window appears. Enter the desired value in the form **00:00:00:00** and press Enter. The value is changed to the desired timecode. If an entry in the timecode entry window is out of bounds, it is ignored.

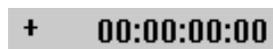


Figure 110. Timecode entry window

The **E to E** (Electronics to Electronics) button is to the right of the duration timecode indicator. By default, E to E is off. If you click on this button, E to E is activated. When E to E is off, the monitor shows the active timeline's current position. When it is on and no clips are playing or recording, the Profile channel's live video input bypasses the codec and is directly connected to the outputs.



Figure 111. E to E button

Capturing a New Clip

Now you are ready to capture or record a new clip.

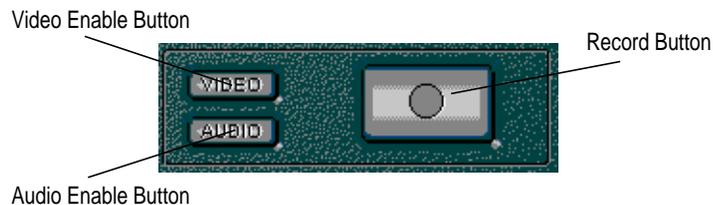


Figure 112. Record buttons

1. First, you need to enable video and/or audio for recording. To enable inputs for recording, you can click on video or audio buttons. The buttons are lit when activated.
2. All acquired audio channels may be used when recording new clips. However, you need to select a set of audio channels. To select a set of audio channels for recording:

- Click the **Audio Enable** button.
 - Enable audio channels by clicking on the channel selection button above the appropriate audio meter. (See Figure 119)
3. Enter the new clip name in the Clip Name text box, or simply accept the default. The default name automatically increments to a unique name. With a right-click in the text box, you can choose from several editing commands.



Figure 113. Clip Name text box

4. Click on the **Record** button. You can also choose **Record** from the **Media** menu or from the shortcut menu with a right-click.
5. When you are done recording, click on the **Stop** button. (See Figure 114)

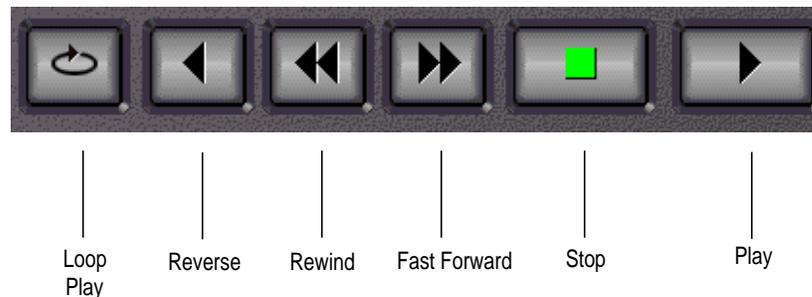


Figure 114. Transport controls



The transport controls are:

- **Loop Play:** Plays the active timeline at normal speed. When the end of the media is reached, play begins again at the beginning of the media.
- **Reverse:** Plays the active timeline in reverse.
- **Rewind:** Rewinds the active timeline or returns the current position to the beginning of the clip.
- **Play:** Plays the active timeline at normal speed.
- **Fast Forward:** Fast forwards the active timeline.
- **Stop:** Stops play on the active timeline.

Loop Recording

You can also loop record material. To loop record material, you set up a record buffer that will allow you to record for a length of time. When you reach the end of the record buffer, the current position moves back to the beginning of the buffer and previously recorded material is overwritten. The steps for loop recording are as follows:

1. Choose **Config | Record Buffer** and the Record Buffer dialog box appears. The maximum record time reflects time allocated to all activated buffers and time allocated to the channel and available record time on Profile.

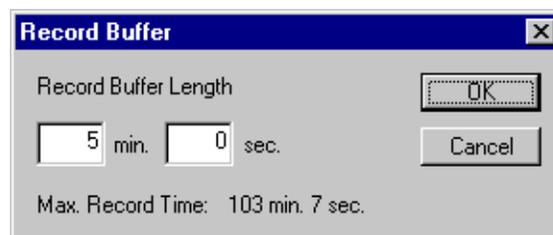


Figure 115. Record Buffer dialog box

2. Enter the length of the record buffer and click OK.
3. Click **BUF** in the upper-right corner of the screen to activate this feature. When activated, the button is lit.
4. Follow the steps in “Capturing a New Clip” on page 208.



Playing a Clip

Now that you have recorded a clip, you can play it back:

1. Select a clip in the current bin.
2. Choose **Load** from the **Media** menu or from the shortcut menu with a right-click. You can also click on the **Load** button on the current bin toolbar. The clip is loaded onto the capture timeline.
3. Click on the **Play** button.

You can also drag and drop a clip onto the capture timeline. To drag and drop a clip:

1. Select a clip by clicking the left mouse button while the mouse pointer is over the desired clip and hold the button down.
2. Drag the clip to the capture timeline and release the mouse button.

Trimming a Clip

Trimming a clip means changing the mark-in and/or mark-out points so that the clip duration becomes shorter. To trim a clip:

1. Select the clip you want to trim in the current bin.
2. Load the clip onto the capture timeline.
3. Do one of the following:
 - Drag the mark-in or mark-out cursors to a new position on the timeline (see the mark-in and mark-out cursors in Figure 109 on page 206).
 - Drag the current time cursor to a new location and click on the **Modify Mark-in** button or **Modify Mark-out** button. The current position is taken as the new mark position.
 - Adjust the in and out marks by entering the new timecodes in the boxes provided (see the timecode entry boxes in Figure 109 on page 206).

Even when trimmed, media remains on disk. Choose **Media | Cleanup** to remove excess media permanently from a trimmed clip. The trimmed portions are removed from disk, thus freeing space for more clips.

NOTE: *Media | Cleanup works only if no subclips have been created from a clip. If subclips have been created, or if the clip is referenced by a master, Cleanup will fail.*



Creating a Subclip

A subclip is a portion of an existing clip. Subclips can help you order your material when creating masters. The buttons that allow you to create subclips are the **Create Mark-in** and **Create Mark-out** buttons. With the **Create Mark-in** button, you mark where you want to start the subclip; with the **Create Mark-out** button, you specify where you want to end the subclip.

In addition, you can set user marks as points of interest that you can jump to at a later time.

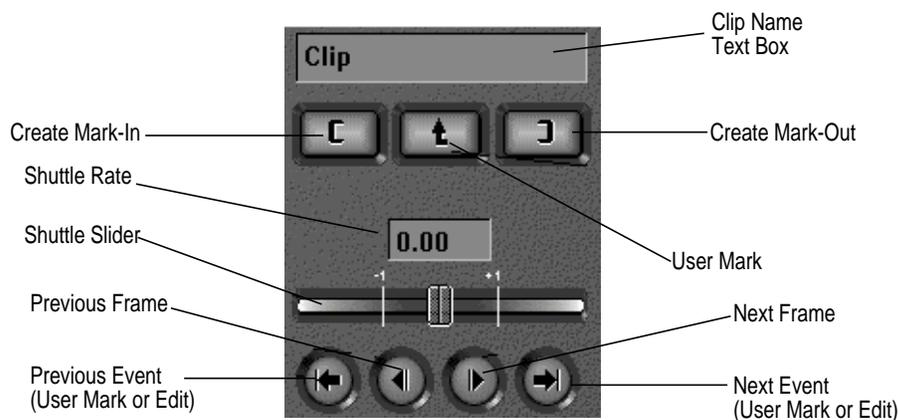


Figure 116. Create and User Mark buttons, plus event and frame controls

To create a subclip:

1. Select the clip in the current bin from which you want to create a subclip.
2. Choose **Load** from the **Media** menu or from the shortcut menu with a right click. You can also click the **Load** button on the current bin display toolbar. The clip is loaded onto the capture timeline.
3. Enter a name for the subclip in the Clip Name text box. This is optional as a default name is automatically generated.
4. Move the current position cursor to the desired starting location.
5. Click on the **Create Mark-in** button.
6. Move the current position cursor to the desired ending location.
7. Click on the **Create Mark-out** button. The subclip is added to the current bin.

User Marks

You can insert a user mark into a clip so that you can easily jump to that mark later in the editing process. You insert the mark by placing the current position cursor and then clicking on the **User Mark** button. A user mark is inserted at the current time cursor position. You can jump to user marks by clicking on the **Previous Event** and **Next Event** buttons.

To remove the current user mark:

1. With the clip loaded on the capture timeline, locate the exact frame where the user mark is located using the event and frame controls.
2. Choose **Media | Remove Current User Mark**.

To remove *all* user marks:

1. Load the clip onto the capture timeline.
2. Choose **Media | Remove All User Marks**.



Event and Frame Controls

The event and frame controls let you navigate the active timeline in forward or reverse direction (see Figure 116). The **Previous Frame** and **Next Frame** buttons display the last or next frame. The **Previous Event** and **Next Event** buttons move the current position to the next user mark, mark-in, or mark-out points.

Shuttle Controls

The shuttle rate slider sets the play speed in the range -16 to $+16$. The play speed increases as you move the slider to the right and decreases you as you move the slider to the left. You can also adjust the play speed with the shuttle rate input box. Simply type in the rate in the range -16 to $+16$ and press Enter. The selected clip begins playing automatically whenever you adjust the shuttle rate.

Creating Subclips on the Fly

To create a subclip on the fly, either while recording a new clip or by playing an existing clip:

1. To start recording, choose **Record** from the **Media** menu or from the shortcut menu with a right-click. You can also click the **Record** button. A new clip appears in the current bin display whose duration grows longer with each new frame recorded.
2. To play an existing clip, select a clip in the current bin display, choose **Load** from the **Media** menu or from the shortcut menu with a right-click. You can also click the **Load** button on the current bin toolbar. Then click the **Play** button.
3. Enter a new subclip name in the clip name field or accept the default name.
4. To create a clip on the fly, click **Create Mark-in**. This starts the new clip. A new clip name appears in the current bin display with a duration of only one frame.
5. Click **Create Mark-out**. The new clip's duration is updated.
6. Repeat steps 2–4.
7. Click the **Stop** button when done.

The Edit Timeline

The edit timeline lets you edit masters and their tracks of video and audio (up to sixteen tracks of audio). The current frame is indicated by the placement of the current position (time) cursor. The horizontal scroll bar allows you to scroll through time, and the vertical scroll bar allows you to scroll through tracks. Select the **Edit** button beneath the audio controls to activate the edit timeline without changing the current time position.

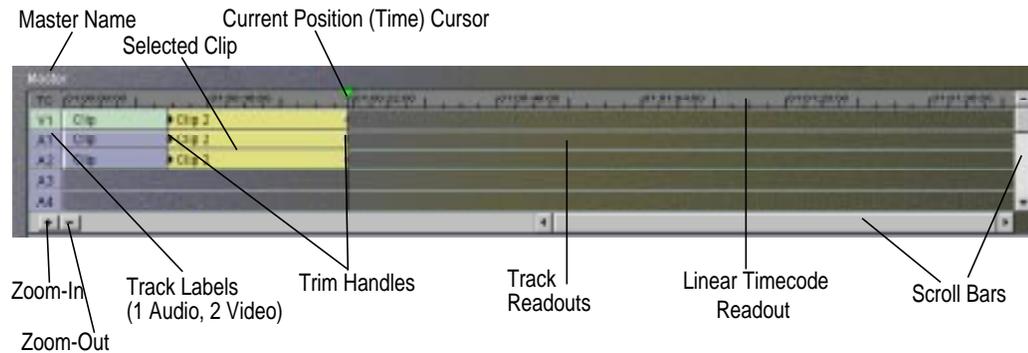


Figure 117. Edit timeline

Beneath the edit timeline is a toolbar displaying these buttons:

- **Zoom-in:** Zooms in the track scale.
- **Zoom-out:** Zooms out the track scale.

You can insert clips at the edit closest to the current time position by choosing **Insert** from the **Media** menu or from the shortcut menu with a right-click, or by clicking **Insert Media** on the current bin toolbar.



After you have inserted material onto the edit timeline, you can trim source material. You can trim clips directly with trim handles. To make the trim handles appear, select the clip while it is on the edit timeline (see Figure 118). You can drag the trim handles to the left or right to make the clips shorter or longer, to the limit of the beginning and ending of the source material.

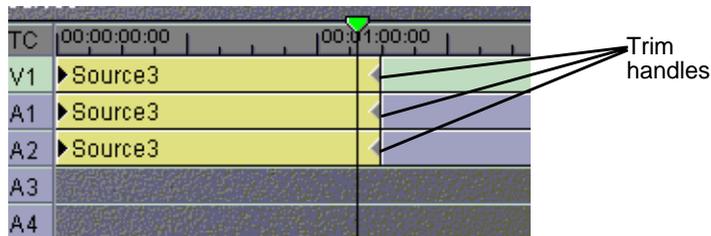


Figure 118. Trim handles on the edit timeline

As you trim a clip, the current channel output plays source material from the trim position rather than the current time position. Timecode for the trim position is shown at the bottom of the timeline, with the amount of time added or removed from the clip below that.

A few keyboard shortcuts are available for trimming:

- Select trim handle head: **Ctrl-h**
- Select trim handle tail: **Ctrl-t**
- Trim left 10 frames: **Shift-z**
- Trim left 1 frame: **z**
- Trim right 1 frame: **x**
- Trim right 10 frames: **Shift-x**

Creating a New Master

A master is a sequence of clips. To create a new master:

1. Click on the **New Master** button on the current bin toolbar. The New Master dialog box appears. (You can also drag clips to the empty edit timeline from the current bin.)
2. Enter the name of the new master in the New Master text box, or simply accept the default. The default name is always unique.
3. Click on the **OK** button. The name of the new, empty master appears above the edit timeline.

Adding Media to a Master

A newly created master is empty. You can assemble a master by inserting clips or even other masters into it:

1. Click in the edit timeline to make it active.
1. Select a clip or master in the current bin.
2. Choose **Insert** from the **Media** menu or from the shortcut menu with a right-click. You can also click the **Insert Media** button on the current bin toolbar.
3. The media is loaded onto the edit timeline.

You can also drag and drop a clip or master onto the edit timeline. To drag and drop media to the edit timeline:

1. Select a master or clip in the current bin by pressing the left mouse button while the mouse pointer is over the desired clip and hold the button down.
2. Drag the master to the edit timeline and release the mouse button.
3. Each is inserted into the new master at the closest cursor location. After insertion, the time cursor automatically moves to the last frame of the new material.



Playing a Master

Now that you have created a new master, you can play it or any other master using the edit timeline:

1. Select the master you want to play in the current bin.
2. Choose **Load** from the **Media** menu or from the shortcut menu with a right-click. You can also click on the **Load** button on the current bin toolbar. The master is loaded onto the edit timeline and the timeline is made active.
3. Click on the **Play** button.

You can also drag and drop a master onto the empty edit timeline. To drag and drop a master:

1. Select a master by pressing the left mouse button while the mouse pointer is over the desired clip and hold the button down.
2. Drag the master to the edit timeline and release the left mouse button.

NOTE: *Masters cannot be loaded onto the capture timeline.*

Using the Audio Controls

The Tool Box Editor lets you gain access to up to 16 channels of audio. Each audio channel consists of an audio channel record selector button and an audio metering section. The audio metering section contains an input indicator, an overload indicator and, from left to right, tick marks to indicate decibel levels, an input gain level indicator, an audio level bar meter, and an output gain level indicator.

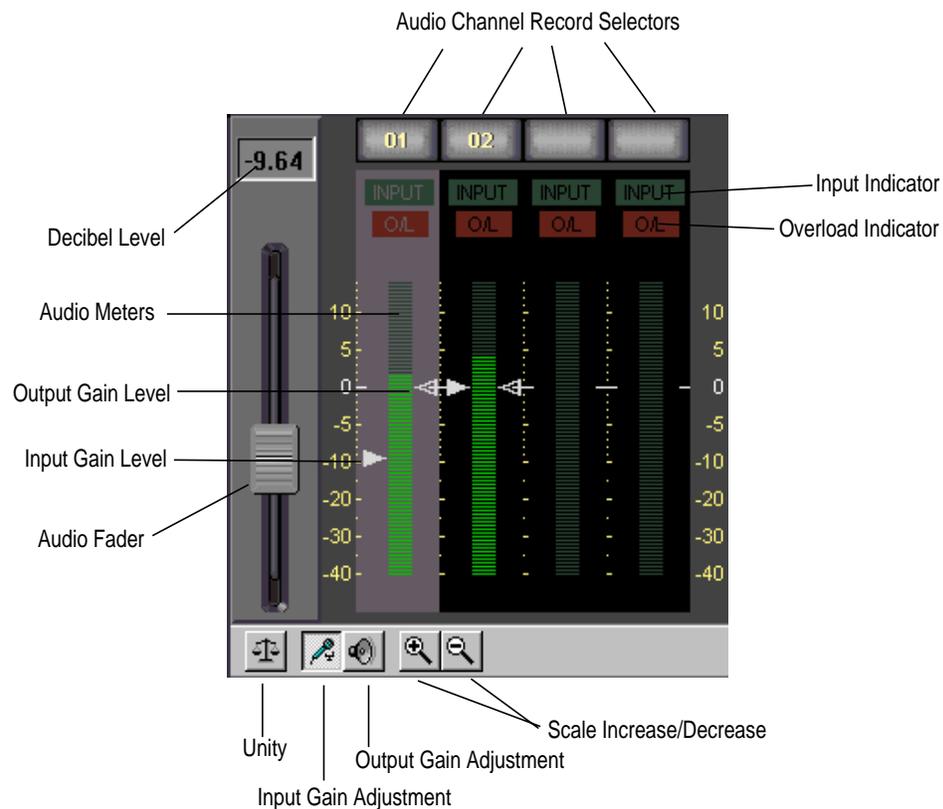


Figure 119. Audio controls



The overload indicator lights if the audio level is above the highest level of the meter. The input gain level, audio level, and output gain level use the same metering scale. The metering scale is a +4.0 dB meter scale (+0 corresponds to +4.0 dB) and ranges from +14 dB to -40 dB. (+18 dB to -56 dB full scale).

At the top of the four audio meters are the audio channel record selector buttons. Valid audio channels for the current channel will have record selector buttons containing a channel number. To enable a channel for recording, place the mouse pointer over the record selector button and click on it with the left mouse button.

The audio fader lets you adjust the audio input and output levels of the currently selected channel. If more than one audio channel is selected for gain adjustment, the fader level reflects the highest gain level of the selected audio channels. The decibel level window above the fader also displays the fader's current decibel level.

The input and output gain levels of each channel may be adjusted also. To select an audio channel for gain adjustment, place the mouse pointer over any part of the channel's meter section. Click the left button to select the channel. The meter section is highlighted.

Below the audio gain displays is the audio control toolbar which has the following buttons:

- **Unity:** Sets all audio levels to the unity level (0 dB[+4.0]). To set unity, the audio meter must be selected and the input or output gain adjustment button must be selected.
- **Input gain adjustment mode:** This button activates the input level arrow (left side) for fader adjustments.
- **Output gain adjustment mode:** This button activates the output level arrow (right side) for fader adjustments.
- **Scale adjustment increase/decrease:** These buttons zoom in or zoom out on the audio display scale in the range of +6 to -6 dB.

Tool Box Editor Keyboard Shortcuts

The Tool Box Editor automatically programs a number of keyboard shortcuts.

Table 8. Tool Box Editor Keyboard Shortcuts

Shortcut Key	Command
F1	Activate Channel 1
F2	Activate Channel 2
F3	Activate Channel 3
F4	Activate Channel 4
F9	Select video
F11	Select audio
F12	EE toggle
j	Reverse Play
h	Rewind
;	Fast Forward
l	Play
n	Record
SPACE or k	Stop
i	Create Mark-In
o	Create Mark-Out
q	Modify Mark-In
w	Modify Mark-Out
u	User Mark
, (comma)	Previous Frame (left)
. (period)	Next Frame (right)
Left Arrow	Previous Frame (left)
Shift Left Arrow	Jump Back 10 Frames
Right Arrow	Next Frame (right)
Shift Right Arrow	Jump Forward 10 Frames
a	Previous Event
s	Next Event
Ctrl-H	Select trim handle head
Ctrl-T	Select trim handle tail



Table 8. Tool Box Editor Keyboard Shortcuts

Shortcut Key	Command
x	Trim left 1 frame
z	Trim right 1 frame
Shift-z	Trim left 10 frames
Shift-x	Trim right 10 frames
1	Give focus to current position timecode
2	Give focus to Duration timecode
3	Give focus to Mark-in timecode
4	Give focus to Mark-out timecode
7	Give focus to Fader Level
8	Give focus to Shuttle Rate
9	Give focus to New Clip Name
Ctrl-M	Media Manager
Ctrl-N	New Project File
Ctrl-O	Open Project File
Ctrl-S	Save Project File

Using the List Manager

NOTE: A time-locked version of this optional software was shipped to you with version 2.2 system software. Unlocking this software requires an additional purchase. Click Purchase in the timelock dialog box for information on how to purchase this software.

The Profile List Manager lets you automate your use of the Profile video disk recorder. You'll probably want to use List Manager to schedule playback of clips or masters created in the Tool Box Editor on designated outputs. List Manager also lets you record incoming video at predetermined times, send incoming video directly to an output. You can also set up times to switch a live connection, transfer media between Profile systems connected via Fibre Channel, or even archive a clip on a library unit. You can combine these functions to increase the automation level of your station operations. (See Figure 120.)



List Manager Overview

List Manager lets you schedule playback, record, switch, transfer, and archive events. A playback event lets you play a clip or master at a designated time, while a record event allows you to record material at a given time. A switch event schedules a live connection, that is, input and output are connected directly in E to E mode at a predetermined time. A transfer event schedules the copying of media from one Profile video disk recorder to another Profile unit on the network (requires Ethernet and Fibre Channel connections). An archive event copies media to or from a Profile library system, such as the PLS 200.

NOTE: *Profile system software version 2.2 supports List Manager version 1.1.*

All of these capabilities are available on all Profile channels. For example, if you have four video channels, you might choose to dedicate two channels to recording incoming material, one for on-air playback, and the other for preview.

Each event can be scheduled to occur at an exact time, on demand, or it can follow other events. You can override or stop a list at any time.

List Manager provides you with two ways of scheduling lists:

- **Monitor.** You can drag and drop events into the list in Monitor view to schedule them immediately. Monitor displays the Master List, which is the name of the list that is controlling activities on your Profile. The Event Scheduler Engine always reads the Master List, and will perform the events you see in the Monitor view at their appointed times unless you delete events. The Master List can't be saved for future use.
- **Edit Window.** You can build several lists in the Edit window to use at a later date or to store for repeated use. Lists you build in the Edit window are not scheduled immediately. When you choose the Schedule List command from the Edit menu, the list is integrated into the Master list and its events are performed with other events which were already on the Master List.

List Manager validates the master list to make sure that you haven't scheduled conflicting events using the same Profile resources. You can then schedule the list and let List Manager control your Profile. You can follow the operation of a list by using the Monitor view on any or all of your Profile's channels.

Starting List Manager

To start the List Manager in Windows NT 4.0:

- Double-click the List Manager shortcut icon on the desktop.

Or:

- Choose **Start | Programs | PDR Applications | List Manager**.

List Manager uses a software “engine,” called the Event Scheduler Engine, to schedule your lists. This low-level software starts automatically when you start the List Manager. It runs behind the scenes and does all the actual work of playing and recording clips at the appointed times, even if List Manager isn’t running.

When you start List Manager for the first time, your screen should look similar to the one shown in Figure 120.

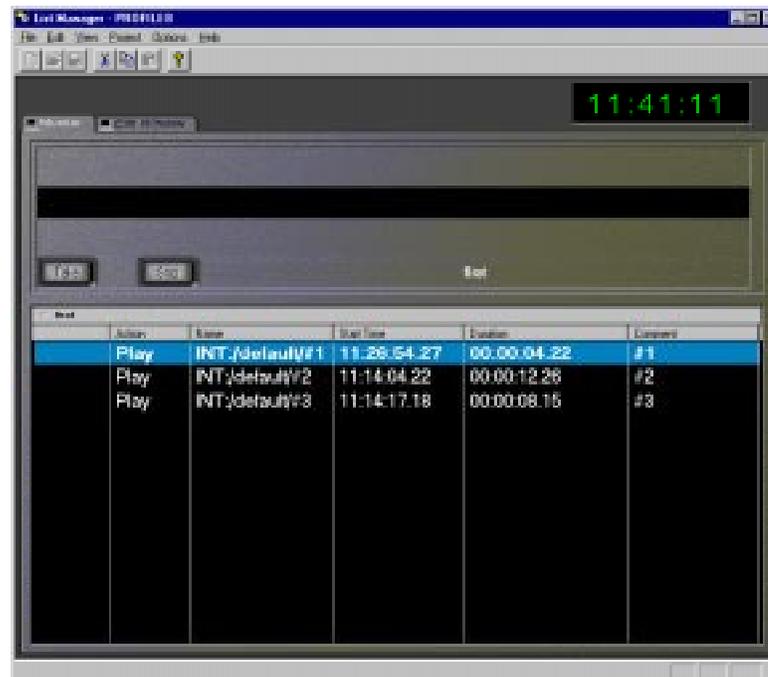


Figure 120. List Manager window



The scheduler engine will run for the rest of that Windows NT session. If you need to stop the engine for any reason, click the minimized Event Scheduler Engine icon, then type *exit* on the command line and press Enter.

The engine needs system resources such as JPEG codecs and video outputs to operate. System resources used by the engine are not available to other applications, whether or not a list is scheduled. If you try to start an application that requires the resources being used by the engine, you'll be warned that those resources are not available.

You can free up those resources for use by other applications by choosing **Project | Configure** in List Manager, then setting the desired resources to None.

The Toolbar and Status Bar

By default, both the toolbar and the status bar are visible in the List Manager, as shown by the check mark (✓). To hide the toolbar and or status bar:

- Choose **View | Toolbar** or **View | Status Bar**.

Viewing Help

To view Help topics:

- Choose **Help | Help Topics**.

Closing List Manager

To close List Manager:

- Choose **File | Exit**.

Configuring Resources

Before you can use List Manager, you must allocate Profile resources such as video inputs and outputs for its use. These resources are assigned to channels for use by List Manager. Once the resources are allocated to List Manager, they are unavailable for other applications such as the Tool Box Editor. You must manage Profile resources to ensure that each application is able to use the required resources when it needs them.

To manage Profile resources used by List Manager:

- Choose **Project | Configure** and the Resource Manager dialog box appears (see Figure 121).

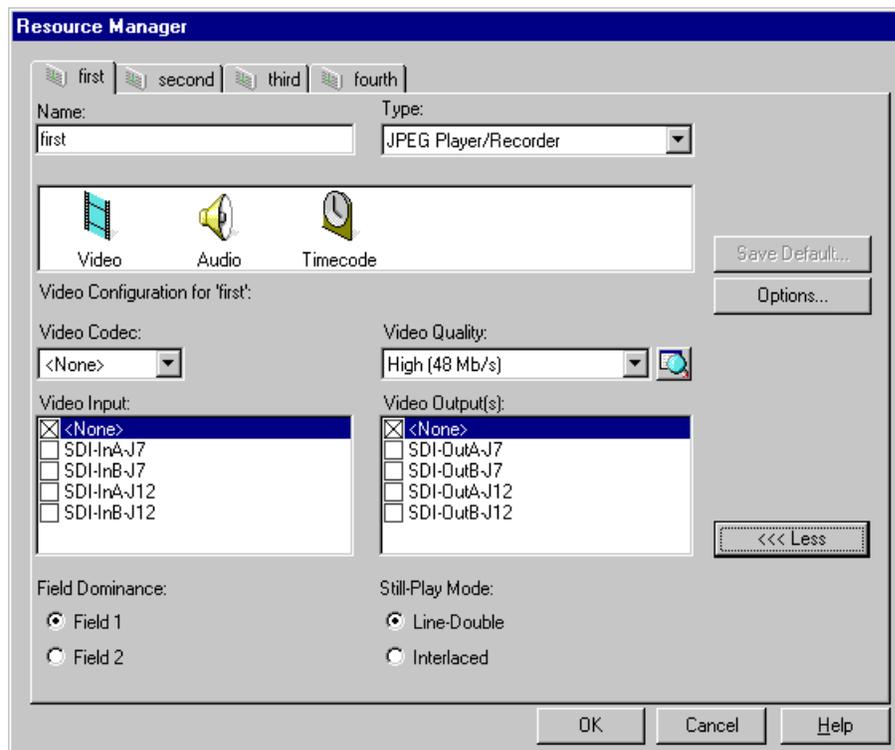


Figure 121. Resource Manager dialog box



The Resource Manager lets you acquire system resources and configure operational settings for up to four Profile channels. Channel resources are used by the List Manager, the Tool Box Editor, and VdrPanel.

Channel resources include:

- Video inputs and outputs
- Video codecs
- Audio channels
- Timecode sources (inputs and outputs)
- Timecode codecs

Operational settings include:

- Video quality (compression)
- Drop-frame and nondrop-frame timecode
- Field dominance
- Still-play mode
- Timecode generator settings

Whenever you make a change in this dialog box, you can click **Apply**. The changes are applied without leaving the dialog box.

To preserve a configuration as the default, use the Save Default button to save your current channel configuration as the default. Different defaults can be saved for each Profile machine in your network.

Acquiring Profile Channels

First, you must acquire one or more Profile channels. The single channel tab labeled *first channel* is the default. You can change the name of the channel by entering a new name in the Name text box. Channel names can have up to 32 characters, but a shorter name is recommended for readability.

Depending on your system, you can configure up to four channels; however, some systems only have two channels (codecs). To add a channel, click the **Add Channel** button. To remove a channel, click the **Remove Channel** button. One channel is always visible.

If no resources are selected for a channel, the channel tab icon is dimmed. If there is a conflict over resources, a red X appears in the channel tab. A resource is in conflict if it is in use by another channel or application.

If a resource such as a video input is available, the box next to its name is not checked and its name is *not* dimmed. If it is in use, its name is dimmed. If it is in conflict, that is, in use by another application or channel, its name is red. If it has been acquired, the box next to its name is checked.

NOTE: The default channel type is a JPEG player/recorder. This is the only choice available at this time.

Configuring Video Resources

To configure video resources:

1. Choose the category of resources you want to allocate: Video, Audio, or Timecode. Video is the default. To configure another resource, click on the appropriate icon.
2. Choose a video codec. The default is none. If you select the Any Codec option, this means that the first available codec is chosen from among the four physical codecs on the Profile. You can also choose a specific, physical codec (Codec 1–4) or no codec at all.
3. In descending order, the choices for video quality (compression) are High, Medium, Nominal, Draft, and two custom settings, Custom 1 and 2. Medium is the default. The higher the quality, the more disk space is used. To change the video quality, choose another setting from the Video Quality box.



-  To change a custom setting, click the button next to the Video Quality box, and the Custom Video Quality Settings dialog box appears.

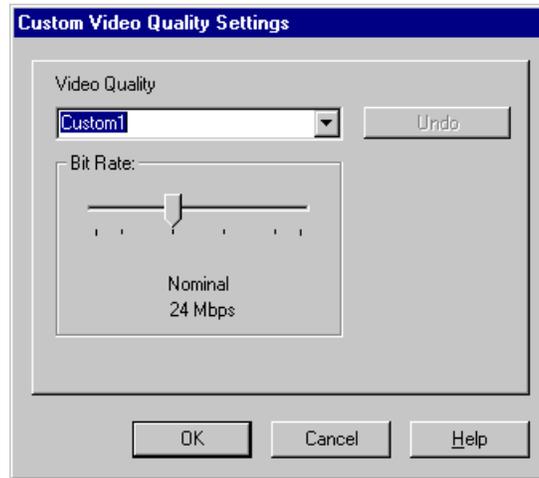


Figure 122. Custom Video Quality Settings dialog box

- Select either Custom 1 or Custom 2 in the Video Quality box. With the slider, select a video quality. Click **OK** when done.
4. Choose a video input from the Video Input check boxes. The default is none. The number and names of video inputs are determined by the system configuration created with Configuration Manager. You can choose only one video input at a time per channel.
 5. Now choose a video output. The default is none. The number and names of video outputs are determined by the system configuration created with Configuration Manager. You can choose one or more video outputs at a time. Each output corresponds to one of the video output connectors on the back of the Profile. Once allocated, other Profile channels cannot share assigned video outputs.
 6. Click on the **More** button to set field dominance and still-play mode:
 - Field dominance determines which field is the mark-in or mark-out point for the frame. The default is Field 1. To set it to Field 2, click on the button.
 - Still-play mode determines whether your still frames are interlaced or line-doubled. Line-double is the default. With interlaced, you may get some flicker in still display. Line double reduces flicker.

Configuring Audio Resources

Click on the Audio icon to select audio channels. The default is none. To choose audio channels, click on the check box for the desired channels (1–16). Once allocated, other Profile channels cannot share the assigned audio channels. For example, if Channel A has all 16 audio channels, these audio channels cannot be shared with Channels B, C or D.

NOTE: The List Manager does not use timecode resources. If you request a timecode resource in List Manager, the request is ignored and the selection is reset to none the next time you display the Resource Manager dialog box.



Connecting to a Remote Profile Machine

You can connect from your local machine to any remote Profile machine in your network. A local Profile machine refers to a Profile system to which you are directly attached. A remote Profile machine refers to a Profile system that is connected to your local system via an Ethernet local area network (LAN).

To connect to a remote Profile machine:

1. Choose **File | Remote Machine**. The Connect to Machine dialog box appears. The label *Local* appears after the name of the local Profile machine.

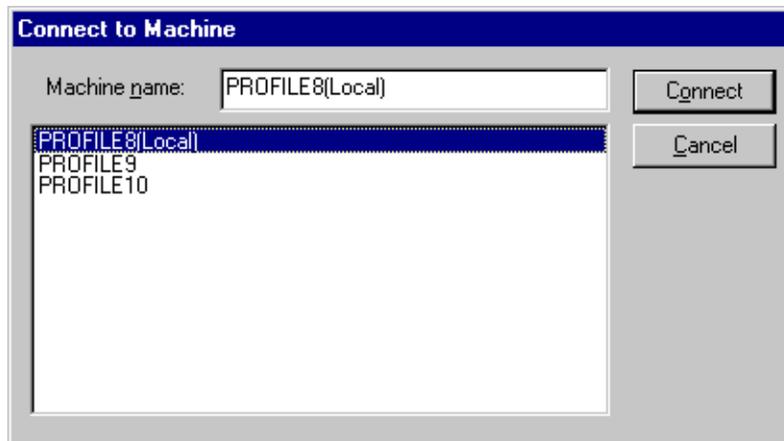


Figure 123. Remote Machine dialog box

To connect a Profile machine from the network host list:

1. Select the name of the machine in list box.
2. Click **Connect**.
3. The Connecting to Machine dialog box is displayed. If the connection is unsuccessful, you are given the opportunity to retry the connection or to cancel the operation.

NOTE: To add a Profile machine to the network host list, see “Connecting to a Remote Machine” on page 89.

Building a Playback List

List Manager lets you use a simple graphical interface to build lists that automate your operations. You can drag media from the Media Manager into your list, then define things like when to play the material, and what channel and output to use.

Adding Media for Playback

Creating a playback list is the simplest of all List Manager operations. To build a playback-only list:

1. Click the **Monitor** tab. This shows you a view of the Master List, the list that the Event Scheduler Engine is currently running. The first time you use List Manager, this list should be empty.
2. Scroll through the Media Manager tree to locate the first clip or master that you wish to include in your list.
3. Drag the material into the List Manager window and drop it at the desired location in the list.
4. Change the event settings to meet your needs. The settings are described in “Changing Event Settings” on page 235.
5. Continue adding clips or masters by dragging them onto the list. List Manager will perform the events at the scheduled time.
6. You can add clips or masters between two existing events by dropping an event on the line separating the two events. The item is inserted below the event.



Chapter 9 Using the List Manager

After adding a few events, your list should look similar to the one shown in Figure 124.

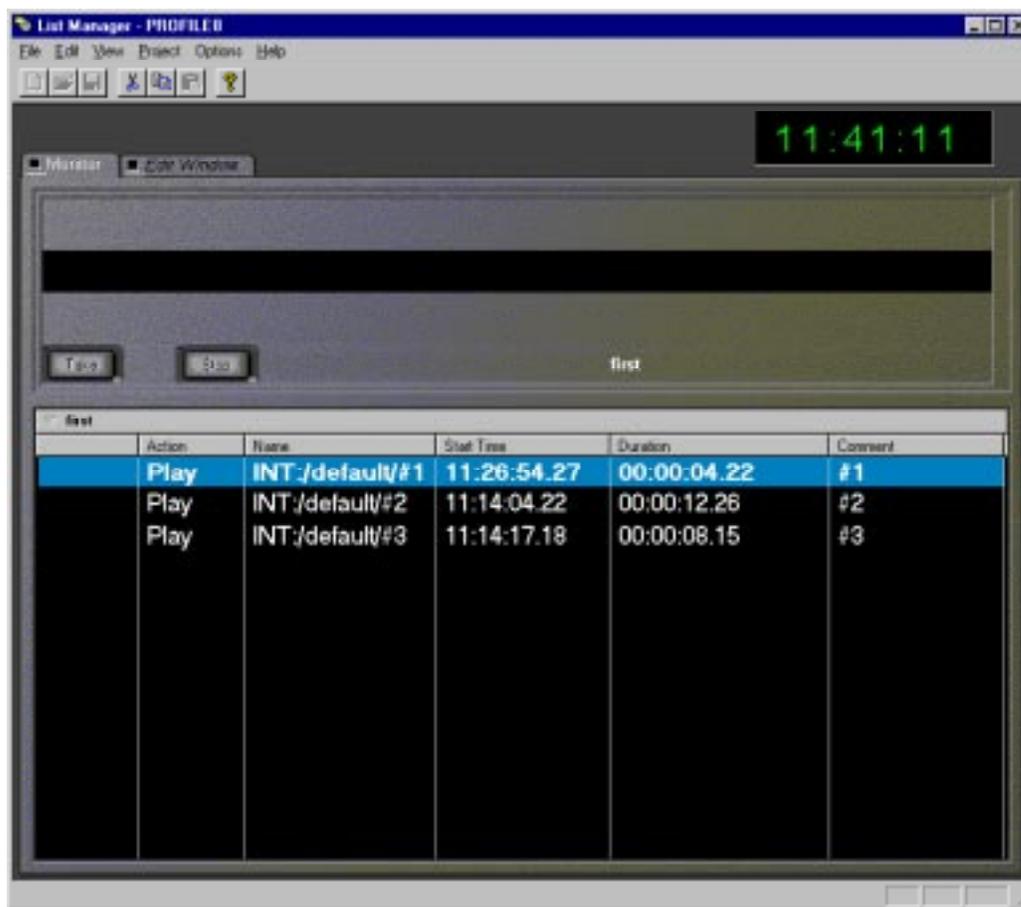


Figure 124. A basic playback list

Changing Event Settings

List Manager establishes default settings for each event as you drop material into the window. You can customize the event by changing the settings in each cell. The type of setting is identified at the top of each column. You can move from event to event in the list with the up and down arrow keys. You can change which columns are displayed with **View | Columns**. (See “Customizing Your List Display” on page 251).

By default, the list displays five columns:

- **Status.** This cell displays the current status of the event. The word *status* does not appear in the header. The Status column is active only in the master list (in the Monitor view). If there is a conflict between an event and any other event in the current list or another event on the Master list, the Status cell displays *Error*. You can identify the conflict by right-clicking on the cell and reading the error message in the Event Property dialog box. Table 9 shows all the event status indicators.

Table 9. Event status indicators

Status	Color	Description
Play	Green	The event is currently being performed.
Record	White	The audio and video from the specified input is currently being recorded as the Destination clip name.
Done	White	The event has been performed. Events with the Done status are listed in the <i>eventsch.log</i> file for billing or record-keeping purposes.
Error	Red	The signal is in conflict with another event, or the material is not available.
Stop	White	The event is stopped.
Cued	Yellow	Approximately five seconds before Start Time, the required resources are prepared for instant playback or recording.
Take	White	Event is in a schedule state.



Chapter 9 *Using the List Manager*

- **Name.** This cell identifies the clip or master name of the clip being played or recorded.
- **Start Time.** You can enter the time at which you wish to play the specified material. Enter the time in standard timecode format (HH:MM:SS:FF). If the time entered consists of one or two digits not separated by colons, List Manager displays the entry as a number of seconds, not frames. For example, if the time entered is 25, List Manager displays 00:00:25:00. (Leading zeros are ignored—that is, 0025 is interpreted as 00:00:25:00.)
- **Duration.** The duration of the playback event is set by the duration of the media. If you change the duration to one shorter than the media's duration, List Manager will play the material from the mark in point for the specified duration. If you enter a longer duration, List Manager plays the material from the mark in point to the last mark out point, then freezes on the last frame for the rest of the duration.
- **Comment.** The Comment cell displays the name of the master or clip which you dragged into the window. You can change this to a title more meaningful to you. However, this will not change what clip or master is used, nor will it change its name.

The other optional columns are:

- **Action.** When you drag material into the List Manager window, Action is set to Play. The possible actions are: Play, Record, Switch, Transfer, and Archive. These options are described in later sections of this chapter.
- **Event Number.** Events are numbered as they are added to the current list. The event number can't be changed because it provides a unique identifier for this event in the current list. The event number does not determine the playback order.
- **Parent.** A parent event may have a child event, that is, one of type Follow that plays the event immediately after the preceding event in the list. Currently, there is one-to-one relationship only between parent and child events.

- **Type.** The event types are:
 - The Absolute event type plays the material at the time specified in the Start Time. An Absolute event is always displayed in bold face in the list.
 - The Follow event type plays the event immediately after the preceding event in the list. A Follow event is always displayed in regular face in the list.
 - The Approx event type is queued but will not play unless you select the event from the list and then issue a Take command. An Approx event is always displayed in bold face in the list.
- **Date.** Enter the date on which you wish the event to take place. Dates must be in the format used in your current Windows NT session, usually MM/DD/YYYY. The current date is entered by default.

Video input applies to switch events only:

- **Video Input.** A switch (live feed) event requires a video input. The video inputs available are determined by your hardware configuration and the resources allocated by Resource Manager (see “Configuring Resources” on page 227).

The following four settings are for transfer events only:

- **Source Media.** The name of the source media.
- **Source Profile.** The name of the Profile unit where the media is stored.
- **Destination Media.** The name of the destination media.
- **Destination Profile.** The name of the Profile unit where the media will be copied.

Five settings apply to archive events only:

- **Media.** The name of the media (clip) that is to be archived or restored.
- **Path.** The name of the directory path for the media.
- **Action.** Click either **Archive** or **Restore**.
- **Cartridge.** Enter the barcode number for the cartridge—**00000015**, for example. This is an optional setting.
- **Partition.** Enter the partition number where the media is archived. This also is an optional setting.



Monitoring a List as it Runs

Events you enter in the Monitor view are performed at their appointed times. The current House Time is displayed at the top of the window. You can monitor the progress of events on each channel in the channel panels. Each panel shows:

- **Air Time.** The timecode of the current frame of material.
- **Duration.** The duration of the current material.
- **Time Till Next Event.** This clock counts down the time until the next scheduled event.

The current event is highlighted in green for easy identification; a cued event, it is highlighted in yellow.

Validating a List

The master list is validated automatically every few minutes. You should manually check any other list to make sure that you haven't scheduled conflicting events using the same Profile resources. To validate a list:

- Choose **Validate List** from the **Options** menu or from the shortcut menu with a right-click.

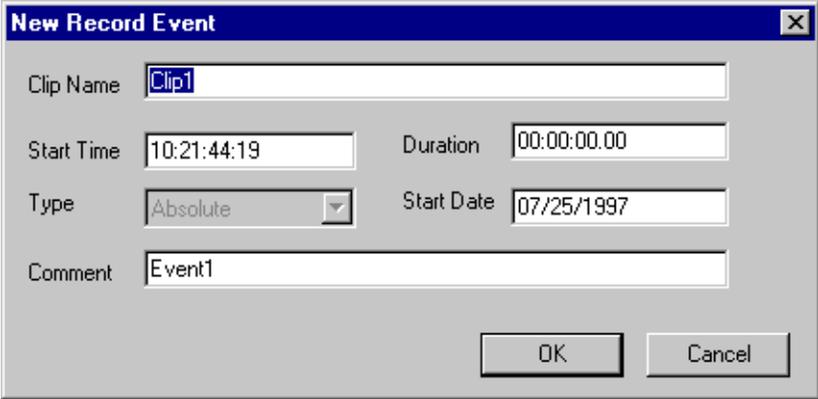
If a conflict arises, the word *Error* appears in the Status (left-most) column next to an invalid event. Three errors are at the root:

1. The media does not exist. As a solution, bring in the correct media or verify that the name is correct.
2. There is a conflict for a channel resource. For example, a channel resource would generate an error if it is scheduled for use at the same time by two or more events. To solve this problem, change the events so that they don't attempt to use the resource at the same time.
3. The media is not long enough, that is, the media is shorter than the duration of the event. To fix this, shorten the duration of the event to match the media.

Scheduling Recording Operations

You can schedule recording operations to take place automatically at predetermined times. For example, you may want to record a satellite feed during off-hours. Scheduling a recording operation is just as simple as a playback.

1. Open the list to which you wish to add the recording event.
2. Choose **Edit | New Event | Record** to open the New Record Event dialog box as shown in Figure 125



The screenshot shows a dialog box titled "New Record Event". It contains the following fields and values:

Field	Value
Clip Name	Clip1
Start Time	10:21:44:19
Duration	00:00:00.00
Type	Absolute
Start Date	07/25/1997
Comment	Event1

Buttons: OK, Cancel

Figure 125. Creating a record event

3. In the New Record Event dialog box, enter all the event information as described in “Changing Event Settings” on page 235. The clip is stored in the default bin and has the name you enter in the Comment box.
4. Click **OK**.

Note: *Be sure to leave at least five seconds delay between the scheduled start of a record operation and the scheduled start of a playback of the same clip. This ensures that the material is ready to play.*



Using a Live Feed

To further automate station operation, you can integrate live feeds into your lists. For example, you may want to broadcast a live event, inserting stored commercials at appropriate times.

1. Open the list to which you wish to add the live event.
2. Choose **Edit | New Event | Switch** and the New Switch Event dialog box appears, as shown in Figure 126.

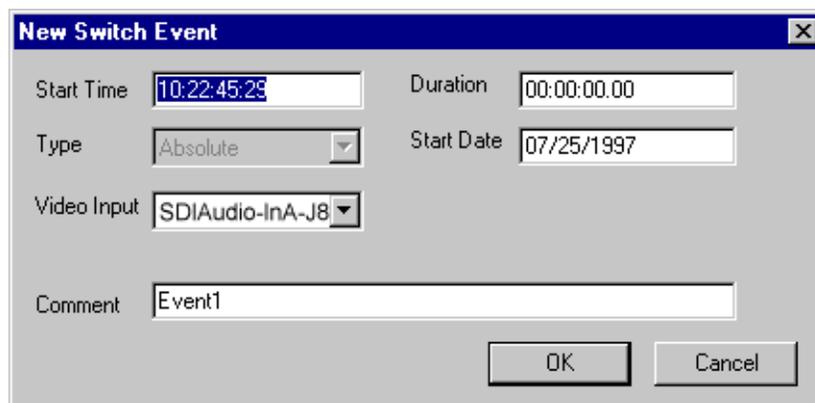


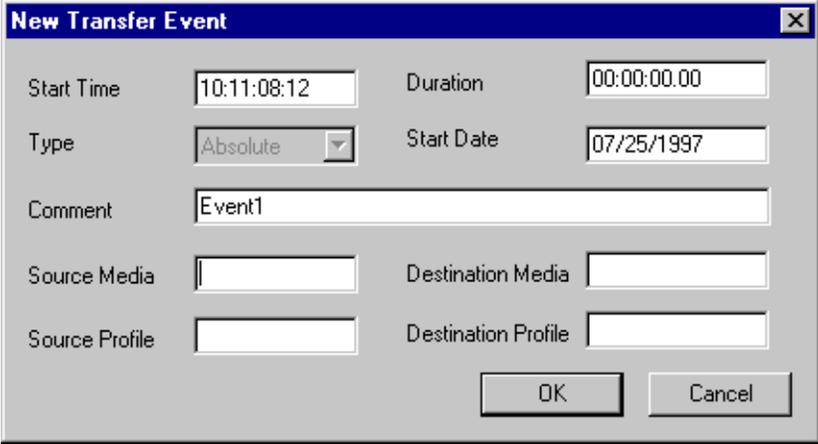
Figure 126. New Switch Event dialog box

3. In the New Switch Event dialog box, enter all the event information as described in “Changing Event Settings” on page 235. This will set the cross-point switch for the channel so that your video input is routed directly to the output. In a PDR 100, audio inputs are **not** routed to audio outputs for switch events; however, they are routed to audio outputs in the PDR200.
4. Click **OK**.

Scheduling a Transfer Event

You can schedule transfer events in your lists. A transfer event schedules the copying of media from one Profile video disk recorder to another Profile unit on the network (requires Ethernet and Fibre Channel connections). Only one Transfer event may be scheduled at one time.

1. Open the list to which you wish to add the live event.
2. Choose **Edit | New Event | Transfer** and the New Transfer Event dialog box appears, as shown in Figure 127.



The image shows a dialog box titled "New Transfer Event". It has a blue title bar with a close button (X) on the right. The dialog contains the following fields and controls:

- Start Time:** A text box containing "10:11:08:12".
- Duration:** A text box containing "00:00:00.00".
- Type:** A dropdown menu with "Absolute" selected.
- Start Date:** A text box containing "07/25/1997".
- Comment:** A text box containing "Event1".
- Source Media:** An empty text box.
- Destination Media:** An empty text box.
- Source Profile:** An empty text box.
- Destination Profile:** An empty text box.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Figure 127. New Transfer Event dialog box

3. In the New Transfer Event dialog box, enter all the event information as described in “Changing Event Settings” on page 235.
4. Click **OK**.



Scheduling an Archive Event

You can schedule archive events in your lists. An archive event copies media to or from a Profile library system, such as the PLS200. The PLS200 must be attached to a Profile system running the Event Scheduler engine.

1. Open the list to which you wish to add the live event.
2. Choose **Edit | New Event | Archive** and the New Archive Event dialog box appears, as shown in Figure 128.

The dialog box is titled "New Archive Event" and contains the following fields and controls:

- Start Time: 10:13:04:05
- Duration: 00:00:00.00
- Type: Absolute (dropdown menu)
- Start Date: 07/25/1997
- Comment: Event1
- Media: (empty text box)
- Path: (empty text box)
- Action: Archive, Restore
- Advanced << (button)
- OK (button)
- Cancel (button)
- Cartridge: (empty text box)
- Partition: 0

Figure 128. New Transfer Event dialog box

3. In the New Archive Event dialog box, enter all the event information as described in “Changing Event Settings” on page 235.
4. Click **OK**.

Editing Event Lists

You can reorganize your event lists at any time. While you can change the settings for each event in a list, sometimes you'll want to change the order of events, or add, replace, or delete events from the list. The following sections describe how to organize your lists to meet your needs.

Changing the Order of Events

You may want to change the order of events in your list. There are two ways to do this:

- If an event's type is set to Absolute, you must:
 - Change the Start Time of the event so that it starts at the desired time.
- If an event's type is set to Follow, you can:
 - Select the event by clicking on the event in the left-most column of the window, then drag the event to its new position to the list. You can move several events by using the standard Windows operations to select a range of events (Shift-click to select a range or extend it), then drag the selection.

Inserting Events

To insert an event in a list from a Media Manager window:

1. Select a clip or master in the Media Manager contents pane.
2. Drag the material to the List Manager window.
3. Drop the material in the list where you want to place the new event. The new material is dropped below the highlighted event.

To insert an event elsewhere in a list:

1. Select the event that you want to insert elsewhere.
2. Drag the desired event and drop it on the event. The event is placed below the selected event.



Removing Events From a List

The Master List grows as you add events. You may want to reduce the size of the Master List by deleting events that have been performed and whose status is now Done. To remove unwanted events from a list:

1. Select the unwanted event. You can select several events by using the standard Windows operations to select more than one event (Ctrl-click to add an event to the selection, Shift-click to select a range of events).
2. Delete the event or events using **Ctrl-X**, or **Edit | Cut**, or the **Delete** key. You can also choose **Delete** from the shortcut menu with a right-click.
3. Click **Yes** to confirm that you want to delete the event.

Using the Edit Window

You can use the Edit window to build lists in exactly the same way as you did in the Monitor view. The lists you build in the Edit window will not be scheduled until you choose the **Edit | Schedule List** command from the Edit menu.

The Edit window allows you to create and store lists that you want to reuse. By saving your lists, you can use them on a daily or weekly basis without having to rebuild the list each time. For example, you may want to use this for inserting commercials in network feeds.

Creating a New List

To create a new list:

1. Choose **File | New** and the New List dialog box appears.

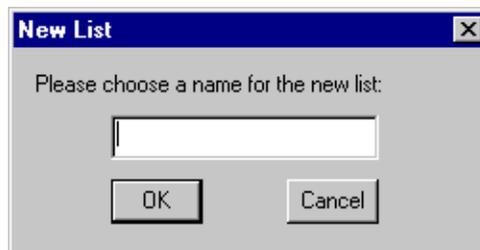


Figure 129. New List dialog box

2. Enter a name for the list. Click **OK** to save the new list.

Saving a List

You must save a list to your system's hard disk if you want to use it at a later date. To save the list:

1. Choose **File | Save As**.
2. Enter a different name for the list. Click **OK** to save the list.



Reusing a List

There are two ways to reuse a list that you created earlier:

1. In the Edit window, choose **File | Open** and select the desired list. When the list opens, choose **Edit | Schedule List** to integrate the list into the Master List.
2. In the Monitor view, drag the list from a Media Manager window to the Master List. The dragged events are added to the bottom of the Master List. Make sure you select the appropriate channel before dragging in the list, then change the Channel settings to match.

In either case, List Manager checks for conflicts with events already in the Master List. If it finds any conflicts, such as events using the same channel or output at the same time, it will report these errors so that you can take corrective action. The word *Error* will appear in the status cell of the event causing the conflict. Right-click on the event, choose Event Property (Alt-Enter), and read the error information in the Event Properties dialog box. You can also double-click the event to get properties.

Closing a List

To close a list:

- Choose **File | Close List**.

Exporting a List

To export a list into an ASCII text file (*.lst*):

1. Click the Edit window tab.
2. Choose **File | Export**. A dialog box appears.
3. Enter the a name of the file you want to save in the File Name box.
4. Click **OK**. The *.lst* extension is added to the file name automatically.

List File ASCII Text Format

The file format for an ASCII text list file follows these rules:

- A line beginning with pound sign (#) is treated as a comment.
- Each event is saved on a single line in the text file.
- Individual fields of an event are separated by a comma (,).
- White spaces are allowed before and after field delimiters.
- Fields are case insensitive.

The format for each event is: Action, Clip Name, Start Time, Duration, Type, Start Date, Comment [, other required fields depending on the action].

There are several other rules for list files saved as text:

- The first event in the list file has to be an absolute event, otherwise it is an error.
- A follow event will be on the line following the parent event in the list file.
- Each event can have only one follow event.
- Empty lines will be ignored while parsing.
- An error occurs if all the fields for a particular type of event are not present.
- If an error is detected in any event while parsing the list file, the event list will not be created for that file.
- The date field will be of the format **mm/dd/yyyy**.
- Time field (both start time and the duration) will be in the format Hour:Min:Sec:Frames or Hour:Min:Sec.Frames.
- Allowed event actions are: Play, Record, Switch, Archive or Transfer.
- For play and record events, the Clip Name, Start Time, Start Date, Duration, Comment will be saved in the list text file.
- For a switch event, Start Time, Start Date, Duration, Comment will be stored in the list text file.



- For Transfer event source Profile (Machine Name or IP address), destination Profile (Machine Name or IP address), source media and the destination media will be stored in the text file.
- For Archive event Cart Label, Clip Name, Partition Number and the Option (Keep/Delete clip after archiving) will be saved.

Here is a sample list file in ASCII text format:

```
# Play event.
# The format is Action, Clip Name, Start Time, Duration, Type,
# Start Date, Comment
Play, INT:/Default/River Rafting, 05:10:20:00, 00:01:30:00,
Absolute, 02/02/1997, River Rafting
# Record event.
# The format is Action, Clip Name, Start Time, Duration, Type,
# Start Date, Comment
Record, INT:/Default/Pepsi commercial, 05:10:20:00,
00:01:30:00, Absolute, 02/02/1997, Commercial1
# Switch event.
# The format is Action, Start Time, Duration, Type, Start Date,
# Comment
Switch, 05:10:20:00, 00:01:30:00 Absolute, 02/02/1997, Coke
# Archive event.
# The format is Action, Start Time, Duration, Type, Start Date,
# Comment, Clip, Name, Cart Label, Path, Partition Number
Archive, 05:10:20:00, 00:01:30:00, Absolute, 02/02/1997, Ad1,
Surf Soap, Labell, INT:/Default, 1
# Transfer event.
# The format is Action, Start Time, Duration, Type, Start Date,
# Source Profile, Destination Profile, Source Media,
# Destination Media, Comment
Transfer, 05:10:20:00, 00:01:30:00, Absolute, 02/02/1997,
Profile1, Profile2, Soap, Surf Soap Ad, New Surf Ad
```

Importing a List

You can import a list that has been previously exported to an ASCII text file (.*lst*). To import a file:

1. Click the Edit window tab.
2. Choose **File | Import**. An Open dialog box appears, displaying files of type *.lst* in the path *c:\profile*.
3. Select the name of the file you want to import. Double-click the file name or click **OK**.

Deleting an Entire List

To remove an entire list:

- Choose **Edit | Delete List**.



Overriding Events in a List

Not every operation in your environment can be predicted to the second. In some instances, you'll want to be able to interrupt an event as it's playing, or stop a list completely. List Manager provides you with the tools you need to meet these challenges.

Taking an Event

As your list performs, you may want to manually choose a particular event and start playing it immediately. For example, you may have inserted a very long Switch event to use a live feed, but you now want to run a commercial. List Manager lets you immediately use any event in your list.

1. Schedule your list normally.
2. Monitor the list by clicking the **Monitor** tab. Make sure you can see the channel which will perform the event you wish to take.
3. Highlight the event that you will want to use immediately.
4. Click the **Take** button. The event will begin five seconds later.
5. The list will continue running all the events which would normally be performed after the Take event. It will not return to the event that was interrupted, unless you highlight that event and use the **Take** button again.

***NOTE:** An Approx event type is not a scheduled event. You must take an event of type Approx to run it.*

Stopping an Event

List Manager provides a way to stop an event at any time. You can use the Stop button to interrupt the event on the current channel. To stop an event:

1. Locate the event which is currently being performed (highlighted in green) and select the event.
2. Click the **Stop** button to stop the event.
3. After a few seconds, the event will stop and the video output will display black.
4. The event will remain stopped until:
 - An Absolute event reaches its appointed time.
 - You highlight an event and click the **Take** button.

Customizing Your List Display

You may find that the default list display does not meet your needs. For example, you may have long input names that are not visible because the Source column is not wide enough. If you never use List Manager to schedule Record events, you might not want to see the Source column at all.

You can change fonts, text color, and highlight color in a list display. To change a font:

1. Choose **View | Font** and the Font dialog box appears (Figure 130).

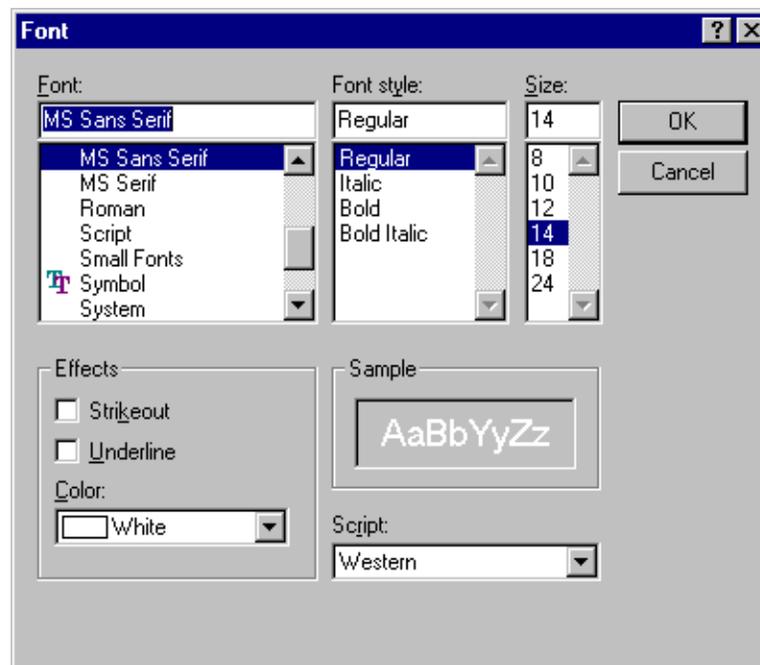


Figure 130. Font dialog box

2. Enter your changes. You can change the font, font style, font size, and color. You can also underline and strike out the text.
3. Click **OK**.

NOTE: *Absolute events are always shown in bold face and Follow events are displayed in regular face.*



You can change the text color another way besides the Font dialog box, as well as the text highlight (background) color. The Color dialog box allows you a much broader range of colors than the Font dialog box. To change the text's color or highlight color:

1. Choose **View | Color | Text** or **View | Color | Highlight** and the Color dialog box appears (Figure 131).

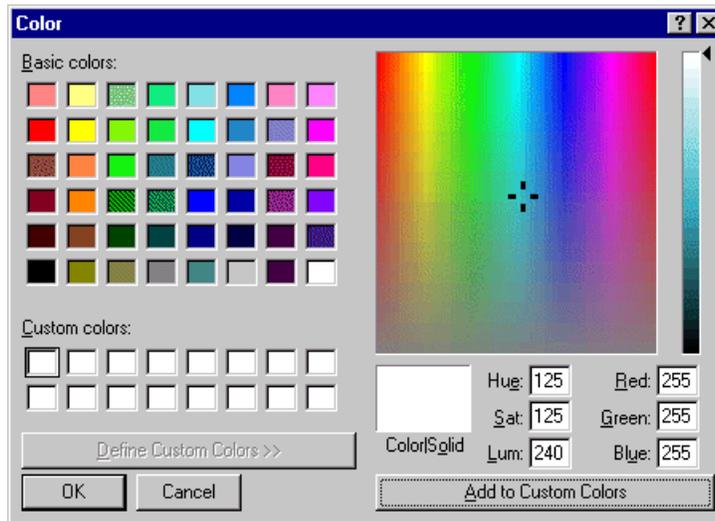


Figure 131. Color dialog box, with custom color controls shown

2. To select a preset color, click one of the basic 48 colors and then **OK**.
3. To create a custom color, move the cursor in the rainbow window until you find the color you want, then click **Add to Custom Colors**. The color is added to the array of custom color boxes.
4. To select a custom color, click on one of the custom color boxes that contains a custom color, then click **OK**.

You can change which columns to display, the size of the columns and order of the columns in the list display. You display up to 10 columns in a list. By default, the Name, Start Time, Duration, and Comment columns are displayed. You can add columns for Action, Event Number, Parent Event, Type, and Date. You can also make a column as wide or as narrow as you want, or make it disappear completely. You can move one or several columns to the left or right to arrange them in an order that you find more convenient.

To add a column to a list display:

1. Choose **View | Columns** and Columns dialog box (Figure 132).

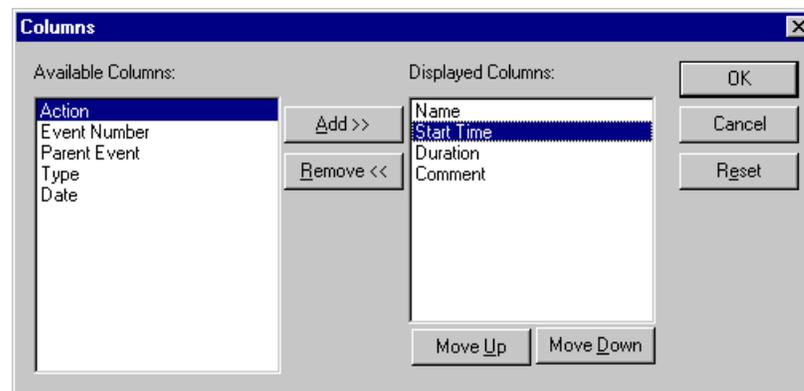


Figure 132. Columns dialog box

2. Click on a column label in the Available Columns box.
3. Click **Add**. The column label moves to the Displayed Columns box.
4. To change the order of the columns, click a column label in the Displayed Columns box, then click **Move Up** or **Move Down**.
5. To return the columns to their original settings, click **Reset**.
6. Click **OK** when done.



Chapter 9 *Using the List Manager*

To adjust the size of a column:



1. Position the mouse pointer over the right border of the column title of the column you wish to adjust. The pointer changes to a sizing shape.
2. Drag the border to the right to widen the column, to the left to make the column narrower.
3. Drop the border at the desired column width.
4. Drag the right border completely to the left to reduce the column width to nothing, removing the column from the display. To make the column visible again, double-click on the border you dragged.

To change column order:

1. Select the column you wish to move by clicking on its title. You can select more than one column by clicking in one column title, then dragging the mouse pointer through the adjacent titles you wish to select.
2. Drag the selected column or columns to the desired destination.

Using the Event Log

As events are performed in the Master List, a record of those operations is kept in a file called *c:\profile\evntsch.log*. You can extract information from this log file for record-keeping, billing, or any other purpose where accurate records are required.

The information in the log file is stored as ASCII text in tabular form, separated by commas. You can use a text editor to read the file, but be careful not to save any changes you may make. You can see an example of a section of a log file in Figure 133.

Channel	Status	Event Type	Type	Date	Start Time	Scheduled Duration	End Time	Reserved	User Name	List Name	Event Title
00	Play	Play	Absolute	07/22/1996	08:41:20:11	00:00:07:00	08:41:20:11		profile		Clip
00	Play	Play	Absolute	07/22/1996	08:42:04:06	00:00:07:00	08:42:11:06		profile		Clip

Figure 133. An example of a log file

The Scheduled Duration field shows the value entered in the Master List. It does not show the actual duration of the event. The times shown in the Start Time and End Time fields are actual times which can be used to calculate the event duration.

The List Name field shows the name of the original list containing that event, which subsequently was Scheduled and became part of the Master List

When the log file reaches about four megabytes in length, the information in the file is moved to a new file called *evntsch1.log* and kept as an archive. This ensures that *evntsch.log* always contains current information, but keeps its size manageable. Subsequent archived information will be stored in *evntsch2.log*, *evntsch3.log*, and so on.



Chapter 9 Using the List Manager

Using TimeDelay

NOTE: A time-locked version of this optional software was shipped to you with version 2.2 system software. Unlocking this software requires an additional purchase. Click **Purchase** in the timelock dialog box for information on how to purchase this software.

TimeDelay enables a Profile disk recorder to record incoming video and delay the playback a user-specified amount of time. Figure 134 illustrates the conceptual model for TimeDelay. Video enters the system at timecode 00:00:00:00. Record begins at a given time (according to the clock on the NT server) or is manually started. Playback is started based on the specified delay time for the playback channel. When the record channel reaches the specified delay time, playback begins. You can also start playback manually.

The maximum delay length for the Largest Delay field depends on the current available disk capacity of the disk recorder. Once the Largest Delay has been reached, playback occurs in a continuous loop.

If the censor channel is used, it can edit recorded clips that have not yet been played back. Referring to Figure 134, this means the censor channel would be positioned within the specified delay time limits.

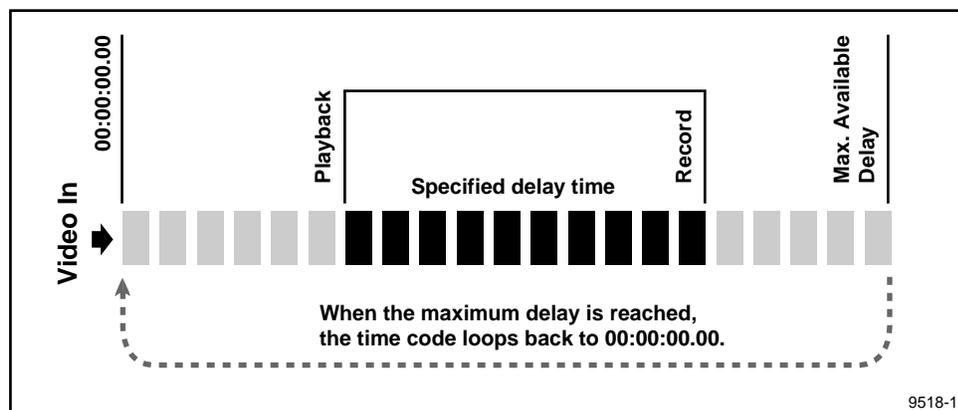


Figure 134. TimeDelay conceptual model



TimeDelay can be run in several different configurations:

- One record/playback pair. Video is recorded on the record channel (assigned to Panel A) and played back on the playback channel (assigned to Panel B) according to the time delay specified.
- Two record/playback pairs. Video is recorded on the record channel (assigned to Panel A) and played back on the playback channel (assigned to Panel B) according to the time delay specified on Panel B. A second video stream is recorded on the record channel (assigned to Panel C) and played back on the playback channel (assigned to Panel D) according to the time delay specified on Panel D. This configuration requires a disk recorder with four channels.
- One record/playback pair with a censor panel. Video is recorded on the record channel (assigned to Panel A). Within the delay time, the video can be edited with the censor panel on Panel C. The edited clip is played back on the playback channel (assigned to Panel B) according to the time delay specified on Panel B. This configuration requires a disk recorder with four channels.
- One record/playback pair with one or two additional playback panels. Video is recorded on the record channel (assigned to Panel A) and played back on one or more of the playback channels: Panel B, Panel C, and Panel D. The delay is set on each of the playback panels. This configuration requires a disk recorder with four channels.

NOTE: Profile system software version 2.2 supports TimeDelay version 1.1.

Getting Started with TimeDelay

NOTE: Close VdrPanel if it is running. TimeDelay and VdrPanel use some of the same resources. Running both applications simultaneously is not recommended.

To start the TimeDelay application:

1. Double click on the TimeDelay shortcut icon on the desktop to start the application. Figure 135 illustrates the TimeDelay panels. TimeDelay starts in the same panel configuration as it was last saved.

NOTE: TimeDelay uses the standard Windows NT interface. For help with Windows NT interaction, refer to Microsoft NT manuals.

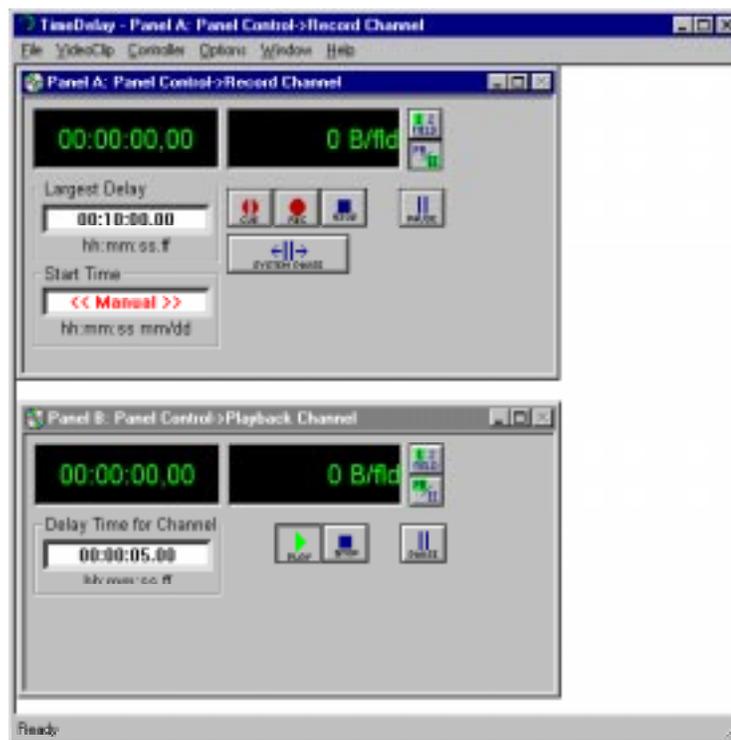


Figure 135. TimeDelay window with record/playback pair



Record Panel Controls

Figure 136 illustrates the controls on a Record panel.

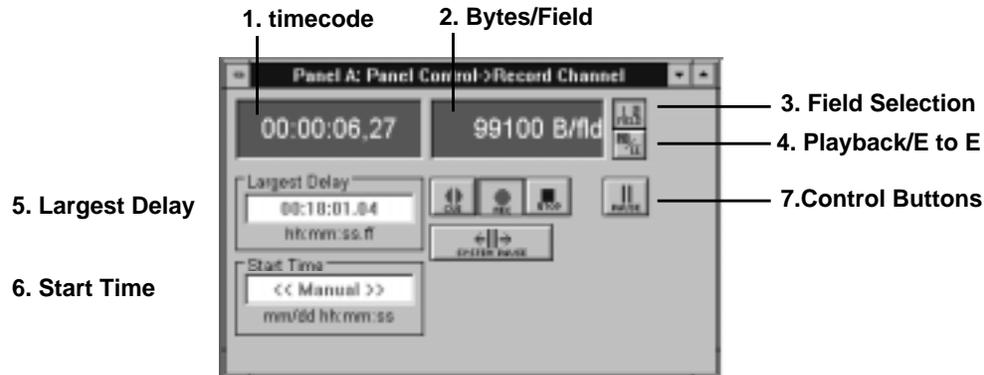


Figure 136. Record panel controls

1. **Timecode** displays the current timecode of the clip being recorded.
2. **Bytes/Field** displays the current compression rate applied to the frames in the clip. The target compression rate is set through **Controller | Configure**. If this number does not change when **Rec** is clicked, no video signal is present. Verify the cables and connections are correct on the disk recorder. Verify the Video Crosspoints are set correctly. Refer to See “Setting up the Signal Routing” on page 270.
3. **Field Selection** toggles between one field or two fields when playing back still frames. For one field, each line in field is duplicated to form a frame.
4. **Playback or E to E** toggles between **Playback** (viewing the video input after it is recorded) and **E to E** (viewing the video input directly).

5. **Largest Delay** displays the maximum amount of delay time configured for this panel. The default value (displayed in red) shows the maximum amount available on the disk recorder. A user-specified value appears in black.
6. **Start Time** sets the start time for the clip, entered as the month, day, and time (based on the clock in the NT computer). If << *Manual* >> is displayed, the **Rec** button must be clicked to start recording.
7. Control buttons for the record channel are shown here:



Cue places the system in record standby mode.

With **Cue**, the system starts recording nearly instantaneously when **Rec** is clicked or the **Start Time** is reached. Otherwise, there is an up to five second delay before recording begins.



Record begins recording the video input stream.



Stop stops recording the video input stream on the record channel, and stops playback on all of the channels using the record channel.



Pause pauses the record channel without affecting the current playback operation of the associated playback channels. Click on **Pause** to toggle it off and resume recording.

NOTE: *If the record channel is paused longer than the delay time for the playback channel, the playback channel can catch up or even pass the recorder. If there is material stored in the clip it could be replayed.*



System Pause pauses all channels on the system. Click on **System Pause** to resume panel operations.



Playback Panel Controls

Figure 137 illustrates the playback panel controls.

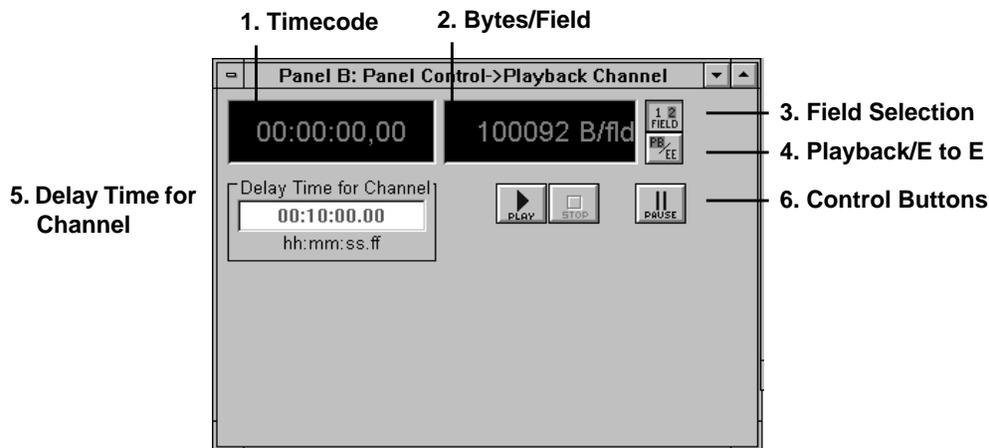


Figure 137. Playback panel controls.

The playback channel controls are explained here:

1. **Timecode** displays the current timecode of the clip being played.
2. **Bytes/Field** displays the compression rate applied to the frames. The target compression rate is set through **Controller | Configure**.
3. **Field Selection** toggles between one field or two fields when playing back still frames. For one field, each line in field is duplicated to form a frame.
4. **Playback or E to E** toggles between **Playback** (showing a still frame if the panel is stopped) and **E to E** (loops the input signal through to the output while the panel is stopped).
5. **Delay Time for Channel** sets the amount of time to delay playback of the recorded video from the record channel. Playback channel delay times cannot exceed the Largest Delay time specified on the record channel.
6. Control buttons for the playback channel are:



Play starts playback on the channel.



Stop stops playback on the channel.



Pause pauses the playback channel. Click on **Pause** to toggle it off, recalculate the new delay time, and resume playback.

***NOTE:** If playback is paused longer than the Largest Delay time, the record channel can loop around and overtake the playback.*

Censor Panel Controls

Figure 138 illustrates the controls on a censor panel.

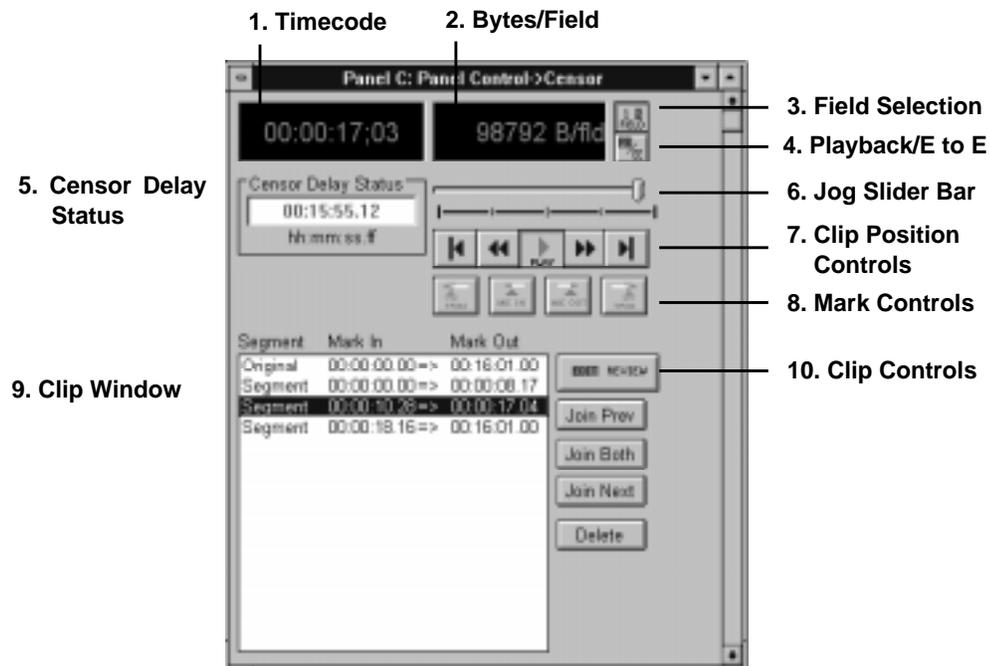


Figure 138. Censor panel controls

Censor panel controls are described here:

1. **Timecode** displays the current timecode of the clip.
2. **Bytes/Field** displays the current compression rate applied to the clip. The target compression rate is set through **Controller | Configure**.



3. **Field Selection** toggles between one field or two fields when playing back still frames. For one field, each line in field is duplicated to form a frame.
4. **Playback or E to E** toggles between **Playback** (showing a still frame if the panel is stopped) and **E to E** (loops the input signal through to the output while the panel is stopped).
5. **Censor Delay Status** sets the delay time for the censor channel.
6. **Jog Slider Bar** indicates the current position relative to the entire clip. Click and drag the bar to change the position within a clip, or use the **Clip Position Controls**.
7. **Clip Position Controls** control the current clip position:



Start Clip jumps to the start of the clip.



Jog Backward moves the clip back one frame.



Play plays the clip from the current position.



Jog Forward advances the clip one frame.



End Clip jumps to the end of the clip.

8. **Mark Controls** place in marks and out marks, and trim clip information.



Set In Mark adds an in mark at the current clip position. Use the Jog Slider bar or Jog controls to set the desired clip position.



Set Out Mark adds an out mark at the current clip position. Use the Jog Slider bar or Jog controls to set the desired clip position.



Trim to In Mark modifies the previously set in mark. Use the Jog Slider bar or Jog controls to set the desired clip position.



Trim to Out Mark modifies the previously set out mark. Use the Jog Slider bar or Jog controls to set the desired clip position.

9. **Clip Window** displays the in marks, and out marks of the segments in the current clip. As the segments are played back, they are removed from the clip window.
10. **Clip Controls** perform operations on the available segments shown in the clip window:



Edit/Review toggles the viewing mode. **Edit** enables the Clip Control. **Review** continuously plays the segments.



Join Prev joins the current segment with the previous segment.



Join Both joins the current segment with the previous and *Next* segment.



Join Next joins the current segment with the next segment.



Delete deletes the current segment.

NOTE: *The Join buttons are used to add censored material back into the playback stream.*

Exiting TimeDelay

To exit TimeDelay:

- Choose **File | Quit**.



Configuring the Panels

Click anywhere within the specific Panel dialog box to select the panel. The title bar is highlighted when a panel is selected. The following options are available from the Controller menu:

- **Select** sets up the panel as **Panel Control** or **Remote Control**.
- **Configure** sets the playback and record JPEG channels, audio channels and the VITC timecodes.
- **Comm Port** assigns the communications port to use if remote control is selected.

Selecting a Controller

To select a controller:

1. Click anywhere within the specific Panel dialog box to select the panel.
2. Select **Controller | Select** to access a Controller Setup dialog box.



Figure 139. Controller Setup dialog box

3. Select the type of control for the channel and click **OK**.
 - **Panel Control** specifies control from the Windows NT user interface. No communication port selection or configuration is necessary.
 - **Remote Control** specifies control via the RS-422 interface. This option requires the additional configuration and communication port set up.

Selecting a Communications Port for Remote Control

To select a communications port:

1. Click anywhere within the specific Panel dialog box to select the panel.

NOTE: *The Communication Port dialog box is accessed automatically the first time Remote Control is selected.*

2. Select **Controller | Comm Port** to access a Controller Setup dialog box. An example of this dialog box is illustrated in Figure 140.

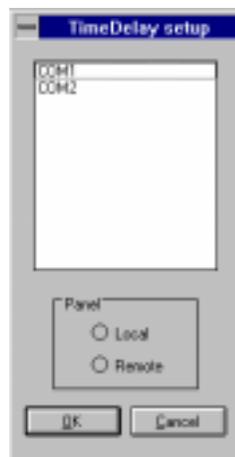


Figure 140. Communication Port dialog box

NOTE: *COM1 and COM2 are available on the disk recorder back panel (RS-232 DB-9 connectors). Ports P1 through P8 are available on the RS-422 breakout panel. Any P ports used by VdrPanel should have the DIP switches set to Device. Refer to your disk recorder's installation manual for details.*

3. Select the communications port and click **OK**.



Configuring a Controller

This command sets the playback and record JPEG channels, audio channels and the VITC timecodes for the selected controller.

1. Click anywhere within the specific Panel dialog box to select the panel.
2. Choose **Controller | Configure** to access the Profile Options dialog box for the selected panel. Figure 141 illustrates the standard Profile Options dialog box.

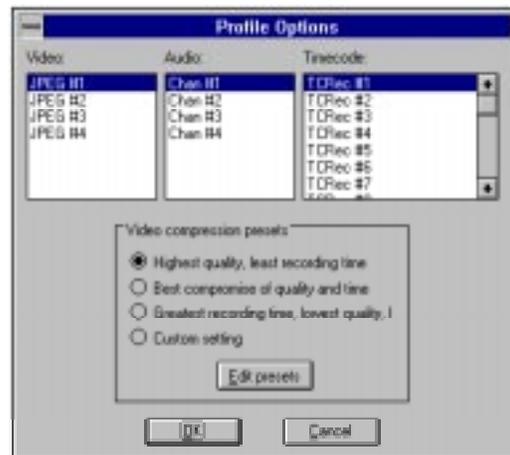


Figure 141. Profile Options (controller configuration) dialog box

3. Click on the appropriate options for your selected controller. Use the scroll bars to see more options if necessary. Typically, you assign four audio and four timecode channels to each JPEG channel.
4. Select a video compression preset. The options range from highest quality (but use the most recording time) to lowest quality (using the minimum of recording time). Custom setting (using the current presets) is also available.
5. Edit the preset values if necessary. Refer to Table 10 for the factory set Preset values. If you need to change the values, click **Edit resets** to access the Edit Compression Presets dialog box illustrated in Figure 142. Click **OK**.

Table 10. Factory set values of the compression presets

Preset Name	525/60 Standard			625/50 Standard		
	Lum	Chroma	Byte Rate	Lum	Chroma	Byte Rate
Highest	0.75	60.00	100000	0.75	100.00	120000
Best	0.75	60.00	75000	0.75	100.00	90000
Lowest	0.75	60.00	50000	0.75	100.00	60000
Custom	5.00	5.00		5.00	5.00	

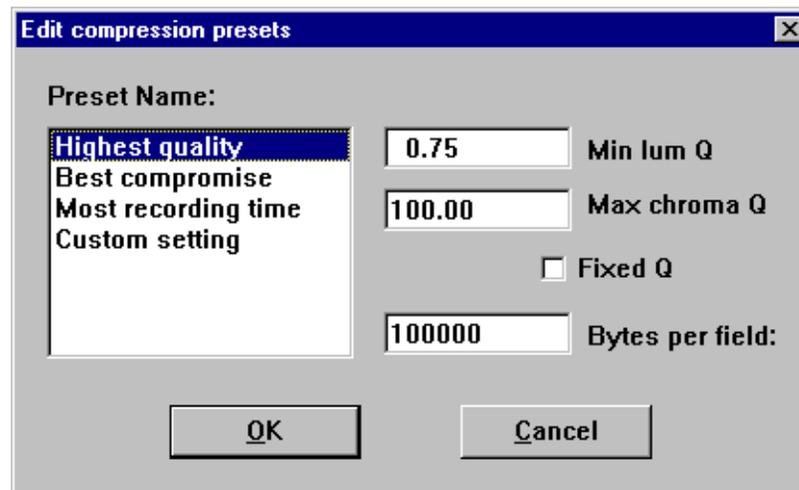


Figure 142. Edit Compression Presets dialog box

- **Min Lum Q** sets the minimum compression that can be applied to luminance in a field to meet the target data rate (typically 0.75). The lowest rate is 0.75.
- **Max Chroma** sets the maximum compression that can be applied to chrominance in a video field to meet the target data rate (typically 60).
- **Fixed Q** sets a fixed picture quality and ignores variation in field size. Use this mode for critical multi-generation work. When **Fixed Q** is selected, the other fields become fixed as **Lum Q** (fixed luminance compression) and **Chroma Q** (fixed chrominance Q). Useful starting values for **Fixed Q** and **Chroma Q** are 5.00. Verify there is sufficient available data rate headroom before using **Fixed Q** mode. The **bytes/field** target attempts to



meet the Lum and Chroma goals. With **Fixed Q** mode, **bytes/field** can increase beyond the system bandwidth, causing interference with other channels.

- **Bytes per Field** is the target compression rate. Not every field requires the target rate, it is simply the average rate the Disk Recorder tries. The higher the rate, the better the picture detail. The actual **bytes/field** depends on the picture complexity, **Min Lum Q**, and **Max Chroma**. The algorithm dynamically changes **Min Lum Q** and **Max Chroma** to make the field size meet the target unless **Fixed Q** is selected.

6. Click **OK** when all options are set.

Setting up the Signal Routing

Signal routing determines which physical input and output connections are used by a panel. A crosspoint method is used to assign the physical connections to the TimeDelay software panels.

Signal routing must be set up to obtain video input and output.

NOTE: The Controller for each channel must be set up before assigning the crosspoints. Follow the instructions for “Configuring a Controller” on page 268.

There are three steps:

- Setting video crosspoints.
- Setting up timecode.
- Assigning timecode crosspoints.

Assigning Video Crosspoints

Video crosspoints allow you to assign the video signal connections within the disk recorder.

- Video inputs (upper left) represent video input connectors on the back panel. Video inputs can be connected to JPEG codecs for recording onto disk, or connected to video output for display.
 - Video outputs (upper right) represent video output connectors on the back panel. Video outputs can be connected to JPEG codecs for playback of recorded material from disk or direct to video inputs.
1. Select **Window| Video Crosspoint** to access the dialog box. The green boxes indicate current connections. For example, a green box at the intersection of *DComponentVideo1InA* and *JPEG# 1* connects the video signal from the back panel input labeled *IN A* to JPEG video codec #1.

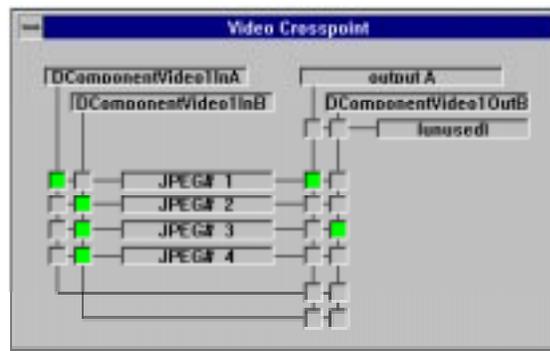


Figure 143. Video crosspoint dialog box

1. Assign each input to a JPEG channel by clicking in the intersection between the video signal and the JPEG channel. The selections turn green.

NOTE: Verify that you have the appropriate video signals connected to the appropriate BNC on the rear panel.

1. Assign each output either to a JPEG channel for recording or direct to output. The direct crosspoints are those connected to the inputs by the line running beneath the JPEG selections.
1. Select **Close** from the control menu box in the upper-left corner of the panel, or press Alt-F4.

NOTE: To release an output for use by another application, click the box at the intersection of the output with the [unused] box.



Setting up Timecode

The Set Timecode dialog box enables you to set the timecode display and the source on a channel to the values required for your application.

1. Click anywhere within the specific Panel dialog box to select the panel.
2. Select **Options | Select Timecode** to access the Timecode Setup dialog box. The Timecode Setup dialog box is divided into two groups: **Display on Panel** and **Timecode Generator Settings**.



Figure 144. Timecode Setup dialog box

3. Select the timecode to be displayed on the panel from the **Display on Panel** group:
 - **LTC Input** is a separate signal input to the disk recorder via the genlock card.
 - **VITC Input** is the timecode from the VITC input signal. It may be part of the video signal being recorded.
 - **Compute from Field Number** calculates the timecode directly from the field number of the recorded video. New clips start at 00:00:00:00.
 - **TC Rec #** displays the recorded timecode.
 - **Generator** displays the timecode from the generator for the channel.

4. Set up the timecode generator used by the panel with the **Timecode Generator Settings** group:
 - **Free Run** causes the timecode generator to continue to advance regardless of the current play or record mode of the panel.
 - **Freeze** locks the timecode at the current value. The value does not advance with time or changes in the play or record mode of the panel.
 - **Lock to Field Number** causes the generator to output a timecode locked to the current position of the panel. When the panel is in stop, the value freezes. When the panel is in play or record, the timecode advances normally. During Rewind or reverse Shuttle, the timecode runs backward.
 - The **Reset To** button resets the timecode to the value entered in the box. The generator can be set to this value when Free Run, Freeze, or Lock to Field Number is selected.
5. Click **Close** when complete.



Assigning Timecode Crosspoints

The Timecode Crosspoint dialog box controls the connections of timecode signals within the disk recorder.

- Timecode inputs (top-left corner) represent either LTC input connectors on the back panel or VITC input signals (carried in the vertical interval of the associated video signal on a video input connector). timecode inputs can be connected to timecode recorders for recording onto disk.
- Timecode generators (below timecode inputs) represent timecode generators used by the panels. timecode generators can be connected to timecode recorders for recording onto disk or to timecode outputs.
- Timecode outputs (top-right corner) represent either LTC output connectors on the back panel, or VITC output signals (inserted into the vertical interval of the associated video signal on a video output connector). timecode outputs can be connected to timecode recorders for playback of recorded material from disk, to timecode inputs, or to timecode generators.

1. Choose **Window | Timecode Crosspoint** to access the Timecode Crosspoint dialog box. The green boxes indicate the current connections. For example, a green box at the intersection of *TCRec#1* and *LTCIn1* indicates the timecode signal from the back panel input *LTCIn1* is recorded by timecode recorder #1.

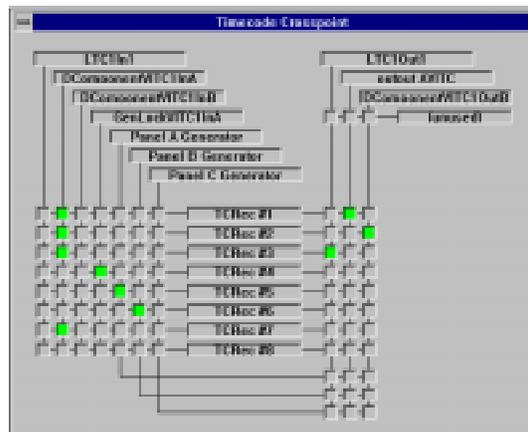


Figure 145. Timecode crosspoint dialog box

2. To assign a crosspoint, click in the intersection between the signal and the recorder channel. The selections turn green.

NOTE: A timecode recorder must be used by a panel to be available as a timecode output.

3. Select **Close** from the *Control Menu Box* in the upper-left corner of the panel, or press Alt-F4.

NOTE: To release a timecode output for use by another application, click the box at the intersection of the output with the unused box.



Setting a Delay Time

To set a delay time:

1. Select the record panel. You can use **Window | Record Capacity** to verify the maximum amount of delay time available on the system.

NOTE: *If you have two Record Pairs (File | New Record Pair) remember that Panel A and Panel B form one pair, and Panel C and Panel D form the other pair. The combined Largest Delay values for Panel A and Panel C cannot exceed the maximum available time.*

2. Click in the **Largest Delay** box.

NOTE: *As a precaution, add extra time to the largest delay value, in case you need to censor or pause the playback channel. For example, if you want a 1 hour and 30 minute delay, enter 01:35:00.00.*



When the editing cursor appears, enter the time as *hh:mm:ss.ff* (hours:minutes:seconds.frame). Press Enter with no value to insert the default delay time (record capacity is the default delay). The minimum delay time is 5 minutes (00:05:00.00).



You can use the mouse or arrow keys to highlight the information to be changed, and then type the new value, or use Delete or Backspace to erase any existing information before typing the new value.



When the information is correct, press Enter.

3. Select the playback panel.
4. Click in the Delay Time for Channel box. This value is the delay between when recording starts and when playback starts.
5. Enter the amount of delay (*hh:mm:ss.ff*) for the playback channel. Editing is performed the same as on the record panel. The minimum delay is 5 seconds (00:00:05.00). The default delay time for the playback channel is 5 seconds less than the **Largest Delay** set for the record channel.

NOTE: You can open up to three Playback channels (on a four-channel disk recorder) with **File | New Channel**. Each channel can be delayed a different amount of time. Repeat steps 3. through 5. for each Playback panel.

Starting Video Recording

There are two methods to begin recording:

- *Manual* is performed by an operator clicking the **Rec** button.
- *Automatic* is performed if a time is entered in the Start Time box and the system is Cued.

Manual Recording

1. Click on **Cue** to prepare the system for recording. This step is not necessary. Cueing the system eliminates the five second delay that occurs when you click **Rec**.

The timecode and bytes/field displays change color. Timecode starts at 00:00:00.00, the bytes/field display should be rapidly changing, indicating the JPEG codec is receiving and compressing a video stream. If bytes/field is 0, verify the cables and connections are correct on the disk recorder. Verify the Video Crosspoints are set correctly. See “Setting up the Signal Routing” on page 270.

2. Click **Rec** in the record panel. The timecode counter should start counting. A still frame appears on the playback channel.
3. At the **Delay Time** specified on the playback channel, playback begins. Once playback is complete, click **Stop** to end the recording.

Automatic Recording

1. Select the record panel.
2. Click in the Start Time box. This value is the time to automatically start recording on the channel. For example, if you want to start recording at 2:00 pm, enter the hours as 14:00.
3. Enter start time as *mm/dd hh:mm:ss (month/date hours:minutes:seconds)*, using a 24 hour clock. For example, to start recording on November 20 at 5:20 pm, enter the time as: **11/20 17:20:00**
4. Click on **Cue** to prepare the system.



5. Playback begins at the **Delay Time** specified. Once playback is complete, click **Stop** (on the record panel) to end the recording.

NOTE: After recording, remove or update the start time.

Changing Playback Delay Time

Once playback begins, the **Delay Time for Channel** value cannot be edited directly. There are two methods to add more playback delay time:

Pausing the Playback Panel

1. Click on **Pause** in the playback panel to freeze the video. TimeDelay increases the delay time by the amount of time playback is paused.
2. Click **Pause** again to continue playback.

Changing the Timecode

1. Click within the timecode display counter in the playback panel. This accesses the Go to Timecode dialog box.

NOTE: When using this feature, the jump to the new timecode may not be clean. There may be some momentary still video.

2. Click in the Enter Timecode box. The Go To Timecode dialog box is displayed.

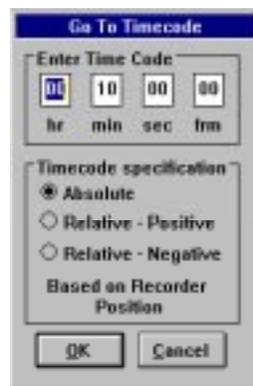


Figure 146. Go To Timecode dialog box

3. Enter a timecode value. Use the mouse or tab to move between the fields.
4. Select a **Timecode Specification**:
 - **Absolute** moves the Playback channel to the specified timecode, and computes a new **Delay Time for Channel** value relative to the record channel. Be sure to select a value lower than the current record channel timecode. Otherwise, you move playback ahead of record. Leave a minimum of five seconds delay.
 - **Relative - Positive** is not typically used, as it moves the playback channel ahead of the record channel.
 - **Relative - Negative** moves the playback channel to the record timecode minus the **Enter Timecode** value. This value is used as the new **Delay Time for Channel**.

Locking the System

When a time delay is set, the system can be locked to prevent accidental changes or playback interruptions.

1. Choose **File | Lockout Panel**. The Panel Lockout dialog box appears.



Figure 147. Panel Lockout dialog box

2. Enter a password in the box.
 3. Click **OK**. This locks the system.
- To unlock the system, enter the password and click **OK**.



Recording a New Clip

This sets the clip used by the recorder. If you select an existing clip, it reuses it. The default clip name for Panel A is #TIMEDELAY#0#, the default clip name for Panel C is #TIMEDELAY#2#.

1. Select a record panel.
2. Choose **VideoClip | New Clip** to access the New Clip dialog box (Figure 148).

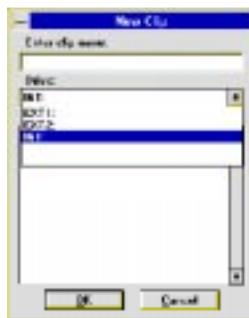


Figure 148. New Clip dialog box

3. Enter a meaningful clip name (such as *11-20delay.1*).
4. Select a drive from the **Drive** list. The number of drives available depends on your hardware.
5. Click **OK**.
6. Click the **Record** button to begin recording. The timecode and compression rate fields are updated.

NOTE: A video input signal must be present on the selected Channel for recording to start.

7. Click **Stop** to stop recording.

Renaming a Clip

To rename a clip:

1. Choose **VideoClip | Rename Clip**. The Rename Video Clip dialog box appears.
2. Click on the clip to be renamed (such as *#TIMEDELAY#0#*).
3. Enter the new name in the **To** field.
4. Click **OK**.

Deleting a Clip

To delete a clip:

1. Choose **VideoClip | Delete Clip** to open the Delete Clip dialog box.
2. If the clip you want to delete is on a different drive, select it in the **Drive** box.
3. Select the clip or clips you want to delete.
4. Click **OK** when complete. A message box appears telling you which file is being deleted.

Using Drop-Frame Timecode

In NTSC, you don't actually get 30 frames per second (fps); the real number is about 29.97 fps. Timecode usually assumes 30 fps. To account for the discrepancy, drop-frame timecode skips or drops two timecode values at the beginning of every minute except every tenth minute. This allows timecode to exactly match a real-time clock on 525/60 systems. This correction is not needed on 625/50 systems because the frame rate is exactly 50 fps.

To set drop-frame timecode:

- Choose **Options | Drop-Frame** or **Options | Non-Drop-Frame**.

Auto Restore

Auto restore mode automatically restores operations to their state previous to a hardware or software crash. To invoke auto restore:

- Choose **Options | Auto Restore**.



Auto Shuttle

Auto shuttle synchronizes the play back play speed with the Record panel. To set auto shuttle to on:

- Choose **Options | Auto Shuttle Control**.

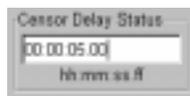
Starting the Censor Channel

The Censor channel enables you to mark and review video segments between the time they are recorded and the time they are played back. Basic editing can be performed on the segments.

The Censor channel always appears on Panel C. Panel D is disabled when the Censor channel is opened. The Censor channel window is longer than the other panels. You may have to increase the panel length to see all of the options.

To start the censor channel:

1. Choose **File | New Censor Channel**.
2. Click in Censor Delay Status box if you want to increase the delay time between the record channel and the censor channel. Five seconds is the default (and minimum) delay time.



When the editing cursor appears, enter the time as *hh:mm:ss.ff* (hours:minutes:seconds.frame). Press enter with no specified time to use the default value. The minimum delay time is 5 seconds (00:00:05.00).



You can use the mouse or arrow keys to highlight the information to be changed, and then type the new value, or use Delete or Backspace to erase any existing information before typing the new value.



When the information is correct, press Enter.

Understanding Segments

Segments are the portions of information to be played. The original clip is the uncensored material available to be marked. When you set an out mark, you are indicating information to be edited out of the segment, when you set an in mark, you indicate information to be included in the segment.

For example, Figure 149 illustrates the *original* clip and three marked segments.

Segment	Mark In	Mark Out
Original	00:00:00.00=>	00:16:01.00
Segment	00:00:00.00=>	00:00:08.17
Segment	00:00:10.28=>	00:00:17.04
Segment	00:00:18.16=>	00:16:01.00

Figure 149. Segments in the clip window

- The *Original* clip is 00:16:01.00 in length.

NOTE: The Trim operations are not valid for the original clip. The Mark operations are not valid for the segments.

- The first segment includes everything from the start of the clip to the frame at 00:00:08.17. All of these frames are included in the playback.
- The frames between 00:00:08.17 and 00:00:10.28 have been censored. They are not included in the playback. Likewise, the frames between 00:00:17.04 and 00:00:18.16.
- The **Join** buttons are used to reinsert censored material back into the playback stream. For example, if Join Prev was clicked for Segment 2, the material between 00:00:08.17 and 00:00:10.28 would be reinserted. Segment 1 would change to reflect 00:00:00.00 ⇒ 00:00:17.04, the former Mark Out for Segment 2.



Marking Segments

To make a segment:

1. Start recording. On the censor channel, a clip name *Original* is added to the clip window (Figure 150). The starting timecode is 00:00:00.00 and the ending timecode is set to the **Largest Delay** value.

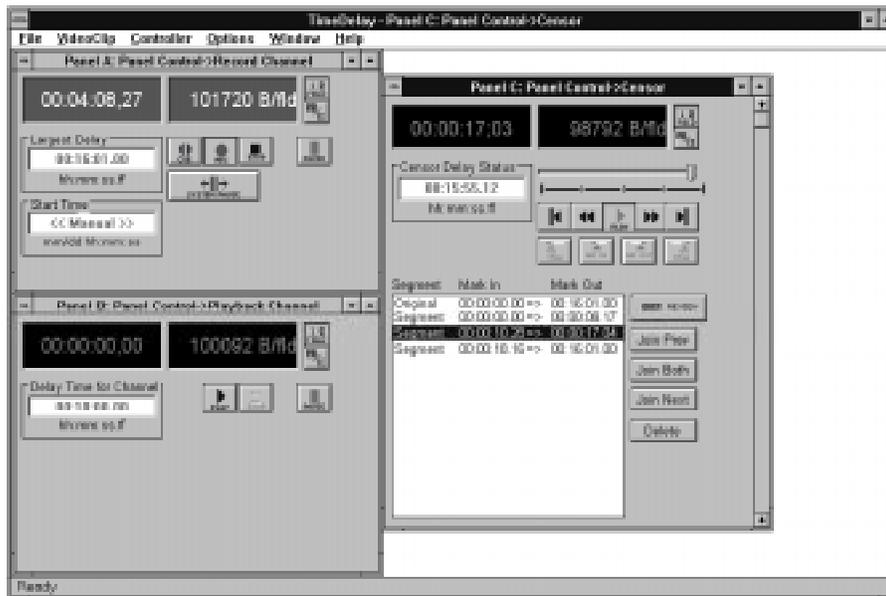


Figure 150. Censor channel

2. Watch the video input on Panel A and note reference points to facilitate marking segments when they appear on the censor channel after the **Censor Delay Status** time.
3. When the reference point is reached on the censor, click **Set Out Mark**.
 - **Set In Mark** is activated
4. To end the current censor segment, click **Set In Mark** at the next reference point.
 - **Set In Mark** is inactivated
 - a new segment is added in the clip window (starting at the **Set In Mark** timecode)
5. Continue marking segments as needed.

Reviewing Segments

Segments can be played back for review.

1. Click on a segment in the clip window. The segment plays from start to finish. The Jog Slider bar moves along the clip.
2. For review of all segments, click **Review**.

Editing Segments

Basic editing capabilities are available for the segments (not the original clip):

- Trimming segments
- Deleting segments
- Combining segments

***NOTE:** When you return to the original clip, the timecode display reflects the playback at the time you began editing. The Censor Delay time increases so you do not miss reviewing any of the information. Use the Jog slider to move to the appropriate time.*

Marking and Trimming Segments

To mark or trim segments:

1. Click on a segment in the clip window.
2. Use **Start Clip**, **End Clip**, **Play**, **Jog Backward**, **Jog Forward**, or the **Jog Slider** bar to locate the edit points.
3. From the original clip, use **Set In Mark** and **Set Out Mark** to set beginning or ending points to create segments.
4. From a segment, use the **Trim to In Mark** and **Trim to Out Mark** buttons to modify the in and out marks for the segment.

Deleting Segments

To delete a segment:

1. Click on a segment in the clip window.
2. Click **Delete**.



Combining Segments

To combine segments:

1. Click on a segment in the clip window.
2. Click on a combining option:
 - **Join Prev** combines the selected segment with the **Previous** segment. The starting timecode of the **Previous** segment becomes the start, the ending timecode of the selected segment becomes the end.
 - **Join Both** combines the selected segment with the **Previous** and **Next** segments. The starting timecode of the **Previous** segment becomes the start, the ending timecode of the **Next** segment becomes the end.
 - **Join Next** combines the selected segment with the **Next** segment. The starting timecode of the selected segment becomes the start, the ending timecode of the **Next** segment becomes the end.

***NOTE:** The Join buttons are used to add censored material back into the playback stream.*

Closing the Censor Channel

Select **Close** from the control menu in the upper-left corner of the panel, or press Alt-F4.

Using Remote Control

The TimeDelay protocol commands provide TimeDelay control from a remote application via an RS-422 connection to the disk recorder. The panel must be set up for remote control. See “Selecting a Controller” on page 266.

Packet Format

The Controller sends a packet containing a command to TimeDelay and receives a packet containing one of the following:

- An **ACK**, or acknowledgment.
- A **NAK**, or negative acknowledgment.
- A TimeDelay response.

ACK, NAK and TimeDelay responses are detailed later, in the section, **Commands Returned from TimeDelay**.

TimeDelay commands use the same packet format as VTR Emulation protocol:

CMD1	Data Count	CMD2	Data_1		Data_n	Checksum
------	------------	------	--------	--	--------	----------

<u>Byte</u>	<u>Contents</u>
CMD1/DataCount	CMD1 is in high-order four bits of the byte and identifies the category of command. DataCount is in low-order four bits and specifies how many Data bytes follow.
CMD2	CMD2 identifies a command within the group identified by CMD1.
Data_1-Data_n	Data_1 through Data_n contain the arguments for the command. Each command may have a unique set of Data_n arguments.
Checksum	The sum of the contents of the bytes in the packet from CMD1/DataCount to Data_n, inclusive. This checksum is used to verify correct transmission of the packet.



Arguments

Most of the TimeDelay Protocol commands require a panel argument. This argument is coded in the packet as a single byte whose value is ASCII and takes on one of the following values:

- A* Panel A
- B* Panel B
- C* Panel C
- D* Panel D

Some of the commands require a *timecode* argument. This argument is coded in the packet as a four-byte BCD sequence of: *frames seconds minutes hours*

In text and on screen displays timecode always appears as *hh:mm:ss:ff* where:

- hh* hours (on a 24-hour clock)
- mm* minutes
- ss* seconds
- ff* frames

Several of the commands require an *on/off* argument. This argument is coded in the packet as a single byte whose value is ASCII:

- 1* ON
- 0* OFF

Commands

Capacity

Capacity *drive*

Requests the remaining recording time available for the specified file partition.

Packet format: 51 30 dr cs

where: dr = *drive*
 cs = checksum

Censor

Censor

Opens a Censor Channel.

UI equivalent: **File | New Censor Channel**

Packet format: 60 33 cs

where: cs = checksum

ClipSelect

ClipSelect *panel segment#*

Moves selection highlight bar to the specified segment in the censor channel. Ignored for record and playback channels.

UI equivalent: Clicking on one of the names displayed in the censor channel's list of segments.

Packet format: 42 36 pa sn cs

where: pa = *panel*
sn = *segment#* (one-byte numeric value)
cs = checksum

Close

Close *panel*

Closes a record, playback or censor channel. If one of a record/playback pair is closed, both are closed (unless it is the only pair active).

UI equivalent: Choosing **Close** from the control menu.

Packet format: 61 35 pa cs

where: pa = panel
cs = checksum



Cue

Cue *panel*

Prepares the Record Channel for recording. Valid for Record Channel only; ignored for Playback and Censor Channels.

UI equivalent: Clicking on the **CUE** button.

Packet format: 31 32 pa cs

where: pa = *panel*
 cs = checksum

Drive

Drive *drive*

Specifies the disk partition where the recorded material is to be recorded.

UI equivalent: Changing the drive in the New Clip or Rename Clip dialog boxes.

Packet format: 41 30 dr cs

where: dr = *drive* (one-byte ASCII numeric digit: 0, 1, etc.)
 cs = checksum

EE

EE *panel on/off*

Switches between end-to-end (EE on) and playback (EE off) modes.

UI equivalent: Clicking on the **PB/EE** button.

Packet format: 42 34 pa oo cs

where: pa = *panel*
 oo = *on/off*
 cs = checksum

EndClip

EndClip *panel*

Position to end of clip. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the  button.

Packet format: 41 38 pa cs

where: pa = *panel*
cs = checksum

Frame

Frame *panel on/off*

Switches between play-by-frame (Frame on) and play-by-field (Frame off) modes.

UI equivalent: Clicking on the **1 / 2 FIELD** button.

Packet format: 42 35 pa oo cs

where: pa = *panel*
oo = *on/off*
cs = checksum

GotoTimecode

GotoTimecode *panel type timecode*

Sets the timecode value in the timecode box in the record, playback or censor channel.

UI equivalent: Clicking in the timecode box and changing the value there.

Packet format: 46 33 pa ty ff ss mm hh cs

where: pa = *panel*



ty = *type* (a four-bit bitmap with the following bit assignments)

bit 0: 0 = Cancel.
1 = Perform operation.

bit 1: 0 = Set timecode for just this panel.
1 = Set timecode for all panels.

bit2: 0 = Timecode value is absolute.
1 = Timecode value is relative.

bit3: 0 = Timecode value is positive.
1 = Timecode value is negative (only valid for relative timecodes).

ff ss mm hh = *timecode*
cs = checksum

Jog

Jog *panel #fields*

Positions the current clip *#fields* forward (if positive) or backward (if negative) from the current position. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Manipulating the jog slider in the censor channel.

Packet format: 21 39 pa nf cs

where: pa = *panel*
nf = *#fields* (signed one-byte numeric value)
cs = checksum

JoinBoth

JoinBoth *panel*

Combines the selected segment with both the previous and next segments in the list of segments. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the **Join Both** button.

Packet format: 41 42 pa cs

where: pa = *panel*
cs = checksum

JoinDelete

JoinDelete *panel*

Deletes the selected segment from the list of segments. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the **Delete** button.

Packet format: 41 44 pa cs

where: pa = *panel*
cs = checksum

JoinNext

JoinNext *panel*

Combines the selected segment with the next segment in the list of segments. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the **Join Next** button.

Packet format: 41 43 pa cs

where: pa = *panel*
cs = checksum



JoinPrevious

JoinPrevious *panel*

Combines the selected segment with the previous one in the list of segments. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the **Join Prev** button.

Packet format: 41 41 pa cs

where: pa = *panel*
cs = checksum

Lockout

Lockout

The first time this command is sent, it activates the Lockout dialog box in the TimeDelay UI, which prevents using the UI. The next time the command is sent, it removes the dialog box, thereby removing the lock.

UI equivalent: **File | Lockout Panel**

Packet format: 60 36 cs

where: cs = checksum

***NOTE:** No password is required for remote control, however, the command to disengage the lock must be sent from the same port as the original lockout command.*

MarkIn

MarkIn *panel*

Sets the in point for the current clip. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the  button.

Packet format: 31 36 pa cs

where: pa = *panel*
cs = checksum

MarkOut

MarkOut *panel*

Sets the out point for the current clip. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the  button.

Packet format: 31 37 pa cs

where: pa = *panel*
cs = checksum

NewChannel

NewChannel

Opens a new playback channel.

UI equivalent: **File | New Channel**

Packet format: 60 31 cs

where: cs = checksum

Pause

Pause *panel on/off*

For record channel, Pause *on* pauses recording until a Pause *off* command is sent. For playback channel, Pause *on* pauses playback until a Pause *off* command is sent. Ignored for censor channel.

UI equivalent: Clicking on the **PAUSE** button.

Packet format: 42 31 pa oo cs

where: pa = *panel*
oo = *on/off*
cs = checksum



Play

Play *panel*

Starts playing the video/audio recorded by the associated record channel. Valid for playback and censor channels only; ignored for record channel.

UI equivalent: Clicking on the **PLAY** button.

Packet format: 31 35 pa cs

where: pa = *panel*
 cs = checksum

Record

Record *panel*

Starts recording. Valid for record channel only; ignored for playback and censor channels.

UI equivalent: Clicking on the **Rec** button.

Packet format: 31 33 pa cs

where: pa = *panel*
 cs = checksum

RecordPair

RecordPair

Opens a new record/playback pair of channels.

UI equivalent: **File | New Record Pair**

Packet format: 60 32 cs

where: cs = checksum

Rename

Rename *name*

Renames the clip currently being used by the record panel.

UI equivalent: **VideoClip | Rename Clip**

Packet format: 6x 30 fn...fn cs

where: x = byte count for filename
fn...fn = filename characters

SegmentReview

SegmentReview

Toggles between Edit and Segment Review in the censor channel. Valid only for censor channel; ignored for record and playback channels.

UI equivalent: Clicking on the **Edit/Review** button.

Packet format: 60 34 cs

where: cs = checksum

SetTime

SetTime *panel timecode*

For record channel, sets the **Largest Delay** value to *timecode*. For playback channel, sets the **Delay Time for Channel** value to *timecode*. For censor channel, sets the **Censor Delay Status** value to *timecode*.

UI equivalent: Typing in a new time.

Packet format: 35 31 pa ff ss mm hh cs

where: pa = *panel*
ff ss mm hh = *timecode*
cs = checksum



Stop

Stop *panel*

For record channel, stops recording. For playback channel, stops playing. Ignored for sensor channel.

UI equivalent: Clicking on the **STOP** button.

Packet format: 31 34 pa cs

where: pa = *panel*
cs = checksum

SysPause

SysPause *panel on/off*

Pauses both record and playback channels at their current timecodes. *panel* must be a recorder channel; otherwise the command is ignored.

UI equivalent: Clicking on the **System Pause** button.

Packet format: 41 32 pa oo cs

where: pa = *panel*
oo = *on/off*
cs = checksum

StartClip

StartClip *panel*

Position to start of clip. Valid for sensor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the  button.

Packet format: 41 37 pa cs

where: pa = *panel*
cs = checksum

Status

Status

Requests status information for all channels.

Packet format: 50 31 cs

where: cs = checksum

TimeSet

TimeSet *panel*

Requests current time delay setting for specified panel.

Packet format: 51 32 pa cs

where: pa = *panel*
cs = checksum

Timecode

Timecode *panel*

Requests current timecode for specified panel.

Packet format: 51 33 pa cs

where: pa = *panel*
cs = checksum

TrimIn

TrimIn *panel*

Modifies the previously set MarkIn for the current clip. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the  button.

Packet format: 31 38 pa cs

where: pa = *panel*
cs = checksum



TrimOut

TrimOut *panel*

Modifies the previously set MarkOut for the current clip. Valid for censor channel only; ignored for record and playback channels.

UI equivalent: Clicking on the  button.

Packet format: 31 39 pa cs

where: pa = *panel*
 cs = checksum

System Control Returns

ACK

ACK

Acknowledgment.

Packet format: 20 41 cs

where: cs = checksum

NAK

NAK; {Time Out, Frame Error, Overrun, Parity Error, Checksum Error, Undefined Command}

Negative acknowledgment. Any or all errors may be returned.

Packet format: 21 4E er cs

where: er = error bits (one-byte value)
 cs = checksum

The error bits are defined as:

bit0:	Undefined command
bit1:	(Unused)
bit2:	Checksum error
bit3:	(Unused)
bit4:	Parity error
bit5:	Overrun
bit6:	Frame error
bit7:	Timeout



Status Responses

CapacityData

CapacityData

Response to a **Capacity** command. Returns the approximate remaining record time available for the file partition specified in the **Capacity** command.

Packet format: 74 30 ff ss mm hh cs

where: ff ss mm hh = remaining recording time
 cs = checksum

StatusData

StatusData *statusA statusB statusC statusD*

Response to a **Status** command. Returns a status byte for each of the four possible channels. Each status byte consists of two parts: a two-bit state indicator (bit 0 and bit1) and a six-bit status bitmap (bit3 through bit7).

bit0/bit1: 0 = channel is reset.
 1 = channel is set.
 2 = channel is cued.
 3 = channel is active.

bit2: 0 = is not paused.
 1 = is paused.

bit3: 0 = EE is not set.
 1 = EE is set.

bit4: 0 = Fields is set to 1.
 1 = Fields is set to 2.

bit5: 0 = video is not valid.
 1 = video is valid.

bit6: 0 = is not Recorder Channel
 1 = is Recorder Channel

bit7: 0 = channel is not configured.
 1 = channel is configured.

Packet format: 74 31 sA sB sC sD cs

where: sA = status byte for panel A
 sB = status byte for panel B
 sC = status byte for panel C
 sD = status byte for panel D
 cs = checksum

TimeSetData

TimeSetData *panel timecode*

For record channel, returns the panel identifier and the **Largest Delay** value.
For playback channel, returns the panel identifier and the **Delay Time for Channel** value.

Packet format: 74 32 ff ss mm hh cs

where: ff ss mm hh = the time set in the display
 cs = checksum

TimecodeData

TimecodeData *panel timecode*

Returns timecode of the panel.

Packet format: 74 33 ff ss mm hh cs

where: ff ss mm hh = the current timecode
 cs = checksum



Chapter 10 Using TimeDelay

Glossary

Access Time

The time it takes to find and retrieve digital information, generally from hard disk storage.

AES/EBU

Acronym for Audio Engineering Society/European Broadcasting Union, an industry standard for the transmission of serial digital audio information. The standard specifies the physical attributes of the link, as well as how the information is transmitted along it.

A to D

Analog-to-digital converter. An electronic component that converts incoming analog signals into its digital representation.

Analog video

Video represented as a continuously variable electrical signal. Consumer TV and domestic VCR are analog video devices. Analog video can be converted to digital format to be stored and manipulated by computer or other digital devices.

Archive library

The archive library is an automated tape storage device used to supplement a machine's disk storage. The library consists of digital tape cartridges and, in some cases, robot that moves cartridges to and from tape transports.

Assemble record mode

Video and all audio tracks assigned to a machine are recorded simultaneously, along with timecode, and any previous contents are overwritten. Traditionally this mode is used when appending to a master tape that has not had black, timecode, and control track previously recorded before editing.

Audio I/O

The audio path through the Profile video disk recorder, especially the crosspoint circuitry that routes the audio within the Profile system.



BNC

Connector used in professional A/V components. The BNC connection provides optimum shielding between the video input signal lines to provide the best possible performance. BNC was recently adopted as an alternate AES signal connector.

Button (on the display)

A small display box that has a raised appearance and contains text. Generally, clicking on a button activates a function or performs some action. *See* Clicking.

Button (on the mouse)

The two or three buttons on the top of the mouse.

Capture

Generally, the act of storing digital audio and video in memory or on a disk. The process may involve converting an analog signal to a digital one. Some compression of the digital data may be involved.

Cartridge tape

A tape used in the library that stores video and audio in digital form.

CD-ROM

Compact Disc-Read-Only Memory, the preferred medium for multimedia storage because of its large capacity, high quality, ease of use, and low cost.

Chroma

A term that describes the saturation or vividness of a color. A chroma of 0 describes a neutral, gray color. Chroma ranges to the most vivid color a screen or printer generates for a specific hue and value. *See* Hue.

Cleaning cartridge

A special tape cartridge that cleans tape transports on demand.

Clicking

Quickly pressing and releasing the left mouse button (usually) without moving the pointer.

Clip

A clip is a reference to recorded video or audio tracks from a single source, and may include timecode. If a clip includes both video and audio, they must be synchronous. A reference to several clips edited together is called a master. Deleting a clip will delete its associated material only if that material is not used by another clip or master.

CODEC

CODEC is an acronym for Coder/Decoder, the link between component parallel digital video and the SCSI-2 channel. The CODEC compresses the video data to a rate that is commensurate with the available disk bandwidth. Conversely, the CODEC decompresses the video data coming from the SCSI-2 channel back to 8-bit component parallel digital video.

The Profile video disk recorder translates digital video data between CCIR 601 digital component and compressed motion JPEG for storage on hard disk.

Command line

The line that you type to invoke a program or initiate an action. A command line usually contains the application program name, along with optional arguments known as command-line options.

Composite video

A single video signal composed of combined luminance and chrominance information.

Component video

Typically the transmission or storage of video as a separate luminance and chrominance information, such as Y, B-Y, R-Y

Compression, video

A technique for reducing the amount of space needed to store images or sequences of images. JPEG, Motion-JPEG (M-JPEG) and MPEG are examples of video compression techniques.

Data cartridge

A digital tape cartridge that is capable of storing media in large quantities.



dB

Decibel. In theory, the minimum change in sound intensity that the human ear can distinguish; also, a relative unit used to compare the strength of acoustic signals.

Default

A value that is automatically assigned or used in the absence of any other input. For example, a new Profile system shipped from the factory is zero-timed by default while E to E mode is the nondefault setting.

Dialog box

A box displayed in a computer application's graphical user interface where you choose options and enter information. Use the mouse or keyboard to move from field to field, click on buttons and position the text insertion point. Enter information with the keyboard.

Digital

In digital audio/video systems, sounds and images are converted into a series of binary values (ones and zeros).

D to A

Digital-to-analog converter. A device used to convert digital signals into an analog form. For example, compact disc players use D to A converters to convert the digital information on the CD into analog audio suitable for amplification.

Disk expansion unit

A product (PDX 103 and PDX 208) that adds disk storage to a Profile video disk recorder.

Disk Utility

The Profile Disk Utility tool is used to maintain Profile hard drives. This includes formatting and labeling disk volumes, eliminating bad blocks, and updating hard drives with new microcode.

Display

A device that receives video output from a display adapter such as VGA card and displays the video output on a screen.

Dragging

Pressing and holding down the left mouse button while moving the pointer. The mouse pointer must be over an object such as a file.

Drop-frame

In NTSC, you don't actually get 30 frames per second; the real number is about 29.97 fps. Timecode usually assumes 30 fps. To account for the discrepancy, drop-frame timecode skips or drops two timecode values at the beginning of every minute except every tenth minute. This allows timecode to exactly match a real-time clock on 525/60 systems. This correction is not needed on 625/50 systems because the frame rate is exactly 50 fps.

E to E (EE)

Electronics to Electronics mode routes audio and video input directly to output.

Edit

The process of creating or refining a sequence of media (clips) in a specific order.

EDL

An Edit Decision List is a list of events that include the source to be recorded, and where to record it. In addition, an EDL can include information about transitions (cuts, dissolves, wipes), transition durations, effects, etc.

Factory default

The value assigned to a parameter as delivered from the factory. *See* Default.

Field

A part of the total number of lines that represent a video image, scanned in two passes. For example, an NTSC 525-line frame is divided into 262.5-line fields. *See* Frame.

Firmware

Software instructions that are permanently stored in the memory of a computer and are not lost when you turn the power off.



fps

The abbreviation for frames per second, the standard way of measuring the speed of video playback. Thirty fps is considered real-time playback in NTSC, 25 fps in PAL. 24 fps is standard for film and is considered animation speed playback. In the range of 12 to 15 fps, the human eye can detect the difference between one frame and the next; visually this appears as a jerky motion, or flicker.

Frame

The standard unit of measure for film and video. One frame represents one complete still image, divided into two fields.

Frequency response

The frequency range which an electronic component can accurately reproduce. Humans (some) can hear from 20 Hz to 20,000 Hz (20 KHz). An ideal audio component would have a frequency response, totally flat and without any deviation, from 20 Hz to 20 KHz. Frequency response specifications are measured in decibels (dB), based on how closely an output's response resembles that of the input.

Genlock

This term defines the relationship between video paths. Two video signals that are exactly synchronized are said to be genlocked.

GUI

A Graphical User Interface provides a visual way to interact with computer software. GUIs allow people to control an application by using a pointing device such as a mouse to perform operations. The usual alternative to a GUI is a command-line interface, which requires people to type in application-specific commands following precise rules of syntax. GUIs are considered easier to use than command-line interfaces.

Group

In audio terms, this provides the ability to group tracks to perform functions across several tracks at the same time, such as gain, mute, etc.

Hard disk

Computer systems use hard disks as permanent storage devices. Information is magnetically recorded on spinning platters for quick access.

Hardware

The physical parts of a system, such as a computer, display monitor, or keyboard.

Help

Profile software applications come with on-line help manuals that include examples, demonstrations, and reference information about using the application. The manual, and the Help window it is displayed in, follow the Microsoft standard.

Hertz (Hz)

Hertz is the unit of frequency named after the physicist Heinrich Hertz (1857–1894). One hertz (Hz) is equal to 1 cycle/second.

Hue

A term that describes a color family (for example, red or yellow). Hue is a polar coordinate—that is, it moves in a circular motion around the color spectrum—and ranges from 0 to 360, with 0 being red. Hue is measured in degrees. *See* Chroma.

Input device

A device that allows you to send information to a software application. Typical input devices include keyboards, mice, tablets, and trackballs. *See* Pointer and Pointing Device.

Insert record mode

In insert record mode, audio and video material can be recorded independently. New material can replace existing material anywhere in the program. Insert record mode requires timecode on the destination.

Interface

A common connection that is used for sending or accepting information and control between programs and machines.



Keyboard

An alphanumeric input device that allows communication with software applications.

Library system

The Profile Library System (PLS200) is a robotic tape library that provides affordable mass storage for the Profile video disk recorder.

LTC

Longitudinal Time Code is typically an analog audio track or a dedicated address channel on a tape. LTC can't be read in still mode, and may not be reliable during low-speed shuttle operations.

Media files

Audio, video, and timecode sources that have been captured by the Profile disk recorder are considered media. Media is stored on disk as media files. Audio and video clips do not contain media, but instead reference positions in a media file.

Memory

A component of a computer system used for virtually instantaneous temporary storage and retrieval of information (data) or instructions (programs). Information in memory is volatile, and is lost when the computer is shut down. Storing information on a permanent storage device such as a hard disk or a tape allows for retrieval during another work session.

Menu

A list of commands or functions that you select with a pointer. A menu is normally displayed in a small window.

Monitor

Two-channel audio output of selected machine tracks. Generally, audio systems or video displays used in a studio environment to control quality. Also, a video display device, without audio capabilities.

Mouse

An input device that, when moved across a flat surface, causes the pointer to move across a screen. The mouse usually has buttons that you press to send signals. These signals, in turn, accomplish certain functions. The representation of the mouse on the screen is called the pointer. *See* Pointer.

NTSC

The standard composite color format used in North America and Japan that was developed by the National Television Standards Committee.

Off-line cartridge

The archive library has immediate access of up to 80 cartridges. However the library database can contain information about any number of cartridges. A cartridge is considered off-line when it has been ejected from the library storage device, but remains in the library database.

PAL

The Phase Alternate Line standard is used to encode color information in Western European composite video.

Partitions

To give the archive tape transports some degree of random access, a data cartridge is divided into an number of partitions. Media may be added to a partition until that partition is full. Deleting media from one partition does not affect any other partition.

Parameter

A variable that is given a specific value. This value is passed to a program before execution.

Pixel

The smallest part of a display memory that can be addressed.

Playback

Playback is the act of playing a clip, track or master loaded on a machine at any rate.



Pointer

The pointer allows you to make selections in menus, to size and position windows and icons, and to select the window where you want to send the input. The window manager, such as Windows NT, determines the shape of the pointer. *See* Pointing Device.

Pointing device

Typically a mouse, tablet, or some other device with effective dimensional motion. *See* Pointer.

Port

A physical connection (such as a multi-pin connector or coaxial connector) and its associated firmware, that permits one computing device to communicate data and control information with another computing or peripheral device.

Protocol

A set of rules that allows computers to transfer information across a network to other computers.

Read-only memory (ROM)

Memory that is not erased when power is turned off. It is also called firmware. The firmware in a computing device allows it to boot without being connected to a host computer.

Real-time

Generally considered to be 30 fps in NTSC, 25 fps in PAL, 24 fps for film. In computer terms, processing information as it becomes available, rather than storing for processing at a later time.

Resource

A resource is a Profile input, JPEG codec, or output. You allocate resources for exclusive use by any application, such as Tool Box Editor, List Manager, and VDRPanel. You should free up (deallocate) unneeded Profile resources whenever possible so that they can be used by other applications.

RGB

An additive method of combining percentages of red, green, and blue primary colors to form other colors.

ROM

See Read-Only Memory.

RS-232-C

A standard serial communications interface for data communications, commonly used for communications between a computer and modem, or to control automated devices which don't have a conventional computer operating system.

RS-422

A standard serial communications interface for data communications, similar to RS-232-C, but good for longer distance cabling. It is typically used for communications in a broadcast or post-production environment between devices such as VTRs, mixers, and controllers.

SCSI Channel (Small Computer System Interface)

The interface between the Profile processor and the disk array or library system. It is fast and wide and provides for speeds up to 20 Mbytes/second on a 16-bit bus.

SDI

An acronym for Serial Digital Interface, a standard for transmitting CCIR 601 digital video over a pair of conductors (coaxial cable).

SECAM

France and Russia use the *Séquence Couleur À Mémoire* standard color format.

Serial port

Usually, the standard RS-232-C of a personal computer. Attach a serial cable to communicate with a peripheral device such as a modem or printer.



S/N Ratio

The Signal-to-Noise Ratio, measured in decibels, is the ratio between the maximum signal level and the noise level with no signal present. The higher the value, the better the sound reproduction.

Source

In Profile operations, a source is any signal (video, audio, or timecode) presented to the machine inputs. A VTR output, a satellite downlink, a camera output, and a facility router output are all examples of sources.

Status bar

The status bar at the bottom of most windows provides status information, short explanations of commands and errors.

Tape

See Cartridge Tape.

Text insertion point

The I-shaped pointer which appears in a text input area. Clicking the mouse in a text input area causes the text cursor to appear in that area. Whatever information you type on the keyboard appears in the text input area displaying the text cursor.

Tool Tips

A tool tip is a small pop-up window that displays a single line of text describing the purpose of a control in a window. A tool tip is hidden most of the time, appearing only when the user puts the cursor on a tool and leaves it there for approximately one-half second. The tool tip appears near the cursor and disappears when the user clicks a mouse button or moves the pointer off of the tool.

Tracks

Clips and masters are made up of individual tracks. A clip may consist of any combination of a video track, timecode track, and up to 16 audio tracks. A master may consist of any combination of a timecode track, 0-4 video tracks, and 0-16 audio tracks.

Trimming

Shortening an originally recorded media file to a desired duration using the In and Out marks. Material beyond the In and Out points is removed from the volume unless it is used in another clip or master.

Video interface

The link to or from the internal video router and the external video signal. An example is a composite analog input channel. This path takes a composite analog video signal and converts it to 8-bit component parallel digital and places it on the video router. Another example is the component serial digital output. This path takes component parallel digital video from the video router and converts to serial digital component format.

Video disk recorder/ server

A device such as the PDR200 Video File Server that stores audio and video as digital information on disks.

VITC

Vertical Interval Time Code is encoded into the video lines at the start of field. VITC can be read during still frames, but becomes unreliable at frame rates faster than normal play speed, such as fast shuttle operations.

Video router

The video path through a system. The crosspoint circuitry that routes the video within the Profile video disk recorder is a router.

Volume

A volume is a logical set of disks, such as the disks in a PDR 100 or a PDR 200, which are used as a grouping of disks for the storage of audio and video information.



Glossary

Index

A

- A to D 305
- Absolute event type 237, 243
- Access Control 180
- Access Time 305
- ACK 301
- Actions in List Manager 236
- Adding a Profile machine 91
- Adjusting column width 254
- Advanced 37, 43, 53
- AES/EBU 66, 305
- Air Time 238
- Analog Audio Input, PDR 100 62
- Analog Audio Input, PDR 200 66
- Analog audio interfaces 2
- Analog Audio Output, PDR 100 64
- Analog Audio Output, PDR 200 71
- Analog Composite Video Input Advanced Control 37, 43
- Analog Composite Video Input Vertical Interval 46
- Analog Composite Video Output 54
- Analog video 305
- Application programming interface 8
- Applications, starting 259
- Archive event 242
- Archive library 305
- Archived clip properties 118
- Archiving a clip 105
- Assemble record mode 305
- Audio channels 193, 196, 219, 228, 231
- Audio Configuration 76
- Audio controls 219

- Audio gain levels 219
- Audio I/O 305
- Audio input mapping 76
- Audio meters 219
- Audio monitor in VdrPanel 133
- Audio, output mapping 79
- Audio, PDR 100 2, 62
- Audio, PDR 200 2, 66
- Auto restore 281
- Auto shuttle 282
- Automatic recording 277
- Auto-Timing 35, 41, 49, 52

B

- Back One Field 152
- Bad blocks 174
- Betacam 141
- Bin 85
 - cleaning up 211
 - creating a new 98
 - deleting 99
 - renaming 99
- Black level 55
- BNC 216 Digital Interface chassis 66
- BNC connections 144, 306
- Boards, information on 22
- Bounce 151
- Building a list 233
- Burn-in timecode 59
- Burst 40
- Button
 - Create Mark-In 213
 - Create Mark-Out 213



Index

- cue 210
- E to E 208
- fast forward 210
- loop mode 210
- play 210
- reverse 210
- rewind 210
- Save Default 193, 198, 228
- stop 210
- user mark 212
- BVW 134, 141
- BVW clip length 136
- Bytes/Field 140, 151, 260, 262, 263, 270
- C**
- Camera 189
- Capacity 288
- CapacityData 302
- Capture 306
- Capture timeline 206
- Capturing clips 189
- Cartridge properties 118
- Cartridge Tape 306
- CCIR 601 4
- CD player 189
- CD-ROM 306
- Censor 289
- Censor channel 282
- Censor Delay Status 264
- Censor panel controls 263
- Changing column order 254
- Changing playback delay 278
- Changing time code 278
- Channel type 194, 229
- Channels 192, 228
- Channels, audio 193, 196, 219, 228, 231
- Chroma 306
- Chroma Gain 55
- Chroma Phase 55
- Chroma Reduction 44
- Clamp Speed 38, 45
- Cleaning Cartridge 306
- Cleanup Media 211
- Clip 307
 - capture 208
 - clip list 163
 - define 154
 - delete 100, 162
 - drag and drop 211
 - edit a list 165
 - eject 162
 - group 163
 - load 157
 - lock 160
 - long names 161
 - new 155
 - play 157, 211
 - protect 160
 - record 208
 - renaming 99, 159
 - short names 161
 - striping 161
 - subclip 212
 - trimming 211
 - unlock 160
- Clip length (BVW) 136
- Clip list 163
- Clip marks 136

- Clip Name box 153
 - Clip position bar 152
 - Clip window 265
 - Closing an application 12
 - Closing panels 286
 - Cluster 174
 - CODEC 2, 141, 143, 193, 228, 307
 - logical 195, 229
 - physical 195, 229
 - Column
 - order 254
 - restoring 254
 - width 254
 - COM1 and COM2 135
 - Comb 38, 44
 - Combining segments 286
 - Command Line 307
 - Commands, remote 287
 - Comment column 236
 - Communications port 135
 - Component Analog Video Input 48
 - Component video 307
 - Composite video 307
 - Compression 2, 139, 140, 307
 - Compression Presets factory values 269
 - Compression 195, 229, 270
 - Compute from field number 146, 272
 - Configuration files 22
 - Configuration Manager 21
 - Configuration tree 21
 - Configuring resources 192, 227
 - Controller 134, 136
 - Comm Port 267
 - Configure 268
 - configuring 268
 - Select 266
 - Controller Configuration dialog box 268
 - Controls, audio 219
 - Copying media in Media Manager 96
 - Copymovie command 20, 187
 - Crosspoints
 - timecode 147, 274
 - video 143
 - Ctrl key xvii
 - Cue 261, 290
- ## D
- D to A 308
 - Data cartridge 307
 - Data set 170
 - Date 237
 - Decibels (dB) 220, 308
 - Default Procamp 55
 - Defining clips 154
 - Delay time
 - changing playback delay 278
 - channel 262
 - setting censor 282
 - Delay time, setting 276
 - Delete, vertical interval 47
 - dDeleting an archived clip 108
 - Deleting clips 162
 - Deleting media in Media Manager 100
 - Deleting segments 285
 - Desktop, Windows NT 11
 - Detail log file 175
 - Dialog box 308
 - Digital Audio Input, PDR 100 63



- Digital audio interfaces 2
- Digital Audio Output, PDR 100 65
- Digital Audio Output, PDR 200 75
- Disk drives 2
- Disk Expansion Unit 308
- Disk label 171
- Disk Utility 16, 169, 308
- Display 308
- Dither 36, 42, 50
- DNS server 186
- Dominance, field 167
- Double-clicking xvii
- Dragging
 - clips and masters 233
 - lists 246
- Drive 290
- Drop-frame timecode 149, 193, 197, 207, 228, 281, 309
- Duplicating media in Media Manager 98
- Duration 236, 238
- E**
- E to E 27, 30, 35, 36, 41, 42, 49, 50, 52, 53, 152, 309
 - auto timing 35, 41, 49, 52
 - system timing 27
 - timed outputs 29
- E to E button 208, 260, 262, 264
- Edit compression presets 139, 268, 269
- Edit timeline 215
- Edit view in List Manager 224
- Edit window 245
- Edit/Review 265
- Editing a clip list 165
- Editing lists 243
- Editing segments 285
- EDL 309
- EE 290
- EISA 4
- EISA bus 62
- Ejecting clips 162
- Emptying the Recycle Bin 100
- Enable Impulse Noise Reduction 45
- Enable Luma 44
- Enable Procamp 54
- Enable Quiet Line 45
- End Clip 264, 291
- Error 246
- Ethernet 2, 20, 179, 183
- Event
 - Action 236
 - Archive 241
 - Date 237
 - Duration 236
 - inserting 243
 - Play 233
 - Record 239
 - removing 244
 - settings 235
 - Start Time 236
 - Switch 240
 - taking 250
 - Transfer 241
- Event log 180
- Event Number column 236
- Event Scheduler Engine 225, 226, 233
- Explore in Media Manager 93
- Exporting a cartridge 111

F

Factory default 309
Fast Forward 151, 210
FC_IP addresses 185
fcconfig 184
fcncs 188
fcping 187
Fibre Channel 20, 183
Field 309
Field dominance 167, 193, 196, 228, 230
Field Selection 151, 260, 262, 264
File
 Lockout Panel 279
 New Censor Channel 282
 Open 246
 Save 245
File systems 170
Finding media in Media Manager 103
Firmware 309
Fixed Q 140, 269
Follow event type 243
Formatting cartridges 115
Forward One Field 152
fps 310
Frame 291, 310
Free Run timecode 146, 273
Freeze timecode 146, 273
Frequency response 310

G

Gain levels 219
Gaussian Chroma Filte 55
Generator timecode 272
Generator, timecode 146

Genlock 310
Go to Clip Beginning 153
Go to Clip End 152
Go To Timecode 278, 291
Graphical user interface 310
Group 310
Group Fader 68, 83
Group Name Box 152
Group, of clips 163
GUI 310

H

Hard disk 311
Hardware Communication program 87
Help xvi, 12, 311
Hertz (Hz) 311
House Time 238
Hue 311

I

Importing a cartridge 109
In marks 152, 166
Input Clocking 79
Input device 311
Input Gain Adjustment 36, 42, 49
Input mapping 76
Insert record mode 311
Inserting events 243
Installed boards information 22
Intel i960 real-time processor 4
Intel Pentium 133 Mhz processor 4
Internal generator 197
Internal Reference Timing 32
Internal storage 2



Index

Inventorizing a cartridge 112
Inventorizing the library 114
IP addresses 185
ISA 4

J

Jog 292
 Backward 264
 Forward 264
 Slider Bar 264
Join
 Both 265, 292
 Delete 293
 Next 265, 293
 Prev 265, 294
JPEG 143, 271

K

Keyboard 312
Keys, shortcut 153

L

Labeling a disk 171
LAN 20, 179
Largest Delay 261
Library properties 118
Library system 312
Line formats 2
Line level 68
List
 building 233
 editing 243
 event order 243

 validate 238
 opening 246
 saving 245
List Manager 18, 127
 Edit view 224
 engine, *See* Event Scheduler Engine
 225
 live events 240
 Monitor 224
 monitoring a list 238
 overview 223
 recording 239
 using 223
List, inserting events 243
Listnames command 20, 187
Live events 240
Loading clips 157
Loading microcode 173
Lock to Field Number 146
Lock to Field Number, time code 273
Locking clips 160
Locking the system 279
Log file 177
Logging in 10
Logs, viewing Profile 177
Long clip names 161
Loop 151
Loop mode 210
Louth 8, 134
LTC 33, 145, 147, 197, 312
LTC input 272
Luminance Black Clip Level 55
Luminance Only 55
Luminance White Clip Level 55

M

Mainframe bandwidth 2
Manual conventions xvii
Manual recording 277
Manually logging in 10
MarkIn 294
Marking and trimming segments 285
Marking segments 284
Marks 166
Marks, setting and trimming 264
Master
 adding media to 217
 creating 217
 delete 100
 playing 218
 renaming 99
Master List 233
Master timecode 24
Master VITC 24
Max Chroma 140, 269
Media, copying 96
Media files 312
Media Manager 14, 85
Media, moving 96
Media properties 101
Media tree, expanding and collapsing 93
Memory 312
Menu xvii, 312
Meters, audio 219
Microcode 173
Microphone 189
Min Lum Q 140, 269
Monitor 312
 selecting 233

 using 224

Monitor Channels 83
Monitor output 58
Monitoring a list 238
Mouse xvii, 313
Moving media in Media Manager 96
Multiple playback channels 277
Multiple record pairs 276

N

NAK 301
Name column 236
Networking, video 183
New Clip dialog box 280
New clips 155
NewChannel 295
Noise Reduction 44
Non-drop-frame 281
Normal 151
Normal, vertical interval 47
Notch 37, 43, 47
NTSC 313

O

Odetics 8, 134
Off-line cartridge 313
opening a list 246
operational settings 192, 228
Out marks 152, 166
Output mapping 79
Output Timing Adjustments 56
Overload status 68



P

P1 through P8 135

Packet format 287

PAL 102, 205, 313

Panel

Back One Field 152

Bounce 151

Clip Name Box 153

Clip Position Bar 152

Fast Forward 151

Field Selection 151

Forward One Field 152

Go to Clip Beginning 153

Go to Clip End 152

Group Name Box 152

Loop 151

making active 131

Normal 151

PB/EE 152

Play 151

Playback 152

Record 151

Remove In Mark 152

Remove Out Mark 152

Rewind 151

Set In Mark 152

Set Out Mark 152

Shuttle Bar 153

Shuttle Rate 153

Stop 151

tiling 131

Timecode 151

Trim from Out Mark 152

Trim to In Mark 152

Panel control 134, 266

Panel Lockout dialog box 279

Parameter 313

Parent Event column 236

Partitions 313

Pass On Y 47

Pause 261, 263, 295

PB button 260, 262, 264

PB/EE 152

PDR 100 Audio 62

PDR 200 Audio 66

PDR 200 installation manual xvi

PDR Access Control 180

PDR Network Configuration Service
188

PDX 103 Disk Expansion Unit Installa-
tion Manual xvi

PDX 103 Profile Disk Expansion unit 85

PDX 208 Disk Expansion Chassis In-
struction Manual xvi

PDX 208 Disk Expansion Unit 170

Peak hold 133

Physical volumes 170

ping 186

Pixel 313

Play 151, 262, 264, 296

Play 210

Playback 152, 313, 277

Playback delay, changing 278

Playback or E to E 260, 262, 264

Playback panel controls 262

Playing clips 157

PLS 200 Library System Manual xvi

PLS 200 Profile Library System 105

- Pointer 314
- Pointing device 314
- Port 135, 314
- PortSever 20, 179
- Powering on 10
- PRC 100 Control Panel 179
- PRC 100 Profile Control Panel User Manual xvi
- PRC 100 Profile Remote Control unit 127
- Presets 139
- Procamp Adjustments 54
- Profile Configuration Manager 13, 21
- Profile Disk Utility 16, 169
- Profile logs 20, 177
- Profile Options dialog box 268
- Profile PDR 200 Installation Manual xvi
- Profile Protocol 8, 20, 127, 179
- Profile System Version 2.2 Release Notes xvi
- profile.log 177
- Project menu 193
- ProLink 20, 179
- Properties 101, 118, 204
- Protecting clips 160
- Protocol 314
- PRS 200 RAID Storage Instruction Manual xvi

- Q**
- Quality, video 195, 229

- R**
- Read-only memory 314
- Real-time 314
- Record 151, 155, 261, 296
- Record Capacity 132
- Record pairs 276
- Record panel controls 260
- Recording 239, 277
- Recording a clip 280
- RecordPair 296
- Reference Genlock 31
- Reference signals 2
- Regedit registry editor 178
- Relocating a bad block 174
- Remote Commands
 - arguments 288
 - Capacity 288
 - Censor 289
 - ClipSelect 289
 - Close 289
 - Cue 290
 - Drive 290
 - EE 290
 - EndClip 291
 - Frame 291
 - GotoTimecode 291
 - Jog 292
 - JoinBoth 292
 - JoinDelete 293
 - JoinNext 293
 - JoinPrevious 294
 - MarkIn 294
 - NewChannel 295
 - packet format 287
 - Pause 295
 - Play 296



- Record 296
- RecordPair 296
- Remane 297
- SegmentReview 297
- SetTome 297
- StartClip 298
- Status 299
- Stop 298
- SysPause 298
- Timecode 299
- TimeSet 299
- TrimIn 299
- TrimOut 300
- Remote Control Commands
 - TimeSetData 303
- Remote Control Responses
 - ACK 301
 - CapacityData 302
 - NAK 301
 - StatusData 302
 - TimecodeData 303
- Remote panel control 266
- Remote Profile machine 89
- Remove In Mark 152
- Remove Out Mark 152
- Removing a Profile machine 91
- Rename 297
- Renaming a clip 281
- Renaming an archived clip 107
- Renaming clips 159
- Renaming media in Media Manager 99
- Resource 314
- Resource Manager 192, 228
- Resources, allocating 192, 228
- Restoring a clip 106
- Reverse 210
- Reviewing segments 285
- Rewind 151, 210
- RGB 315
- Right-click xvii
- ROM 314
- Router, video 317
- RS-232-C 315
- RS-422 2, 178, 315
- S**
 - S/N Ratio 316
 - Satellite feed 189
 - Save Default button 193, 198, 228
 - Save Group of Clips 163
 - Saving a list 245
 - Scrubbing 83
 - SCSI 315
 - SCSI IDs 170
 - SCSI log file 175
 - SDI 315
 - SECAM 315
 - SegmentReview 297
 - Segments 285
 - combining 286
 - editing 285
 - marking 284
 - reviewing 285
 - Select timecode 145
 - Serial Digital Component Video Input
 - 51
 - Serial Digital Component Video Output
 - 60

Serial port 135, 315
Service, PDR Access Control 180
Set delay time 276
Set In Mark 152, 264
Set Out Mark 152, 264
SetTime 297
Setting censor delay 282
Short clip names 161
Shortcut keys 153
Shuttle Bar 153
Shuttle Rate 153
Signal routing 270
SMPTE 272M Level A 66
Software Development Kit 8, 20
Sorting media 201
Source 316
Spatial Adaptive 38, 44
Start Clip 264
Start Time 236, 261
StartClip 298
Starting an application 12
Status 299
Status bar 22, 316
Status column 235
StatusData 302
still-play mode 196, 230
Stop 151, 210, 261, 262, 298
Striping a clip 161
Subclip 212
Switch event 240
SysPause 298
System Pause 261
System timing 27
System, locking 279

T

Take button 250
Target compression rate 140, 270
TC Recorder 146, 272
TCP/IP 183
TCREC 142
TekCfg 8
TekPdr 8
TekRem 8
TekVdr 8
TekVfs 8
TekVme 8
Temporal/Spatial Adaptive 44
Testing a bad block 174
Text insertion point 316
Timecode 145, 151, 197, 299
 changing 147, 278
 crosspoint 147, 274
 display 260, 262, 263
 entry window 207
 free run 273
 freeze 273
 lock to field number 273
 setting 272
 sources 193, 228
Time Till Next Event 238
Timecode Setup dialog box 272
TimecodeData 303
TimeDelay 19, 127, 259
 configurations 258
 locking 279
Timeline
 capture 206
 edit 215



Index

- TimeSet 299
- TimeSetData 303
- Timing Adjustment 61
- Tool Box 127
- Tool Box Editor 17, 189, 192, 228
 - exiting 190
 - launching 190
- Tool Tips 316
- Toolbar 22
- Tracks 316
- Transfer Event 241
- Transfer Monitor 124
- Transport controls
 - cue 210
 - fast forward 210
 - loop 210
 - mode 210
 - play 210
 - reverse 210
 - rewind 210
 - stop 210
- Transport status 121
- Tree hierarchy 93
- Trim from Out Mark 152
- Trim to In Mark 152, 264
- Trim to Out Mark 264
- TrimIn 299
- Trimming 317
- TrimOut 300

U

- Undo button 22
- Unity, audio 220
- Unlocking clips 160

- Unlocking the system 279
- Updating a cartridge 112

V

- Validating a list 238
- VdrPanel 15, 127
- VdrPort logs 178
- Vertical Blanking 50
- Vertical Interval 46, 57
- Video 183
 - input 195, 229
 - input and output 196, 230
 - inputs 193, 228
 - outputs 193, 228
 - quality 195, 229
- Video channels 2
- Video Crosspoint dialog box 271
- Video crosspoints 143
- Video disk recorder/server 1, 317
- Video Gain 55
- Video inputs 2
- Video interface 317
- Video network 2
- Video networking 183
- Video router 317
- VideoClip 154
 - Delete Clip 281
 - Edit Clip List 165
 - Eject All Clips 156
 - Load Clip 157
 - Load Group 163
 - New Clip 155, 280
 - Rename Clip 156, 281
- VITC 24, 137, 145, 197, 272, 317

VITC Generator Setting 60
VITC Reader Setting 31, 49, 52
Volume 85, 94, 170, 317
VTR 1, 189

W

Window
 Open Panel 141
 Record Capacity 276
 Timecode Crosspoint 147, 274
 Video Crosspoint 143, 271
Windows NT 3.51 12
Windows NT 4.0 12
Windows NT desktop 11
WinTail 20, 175, 177

X

XLR 216 Digital Interface chassis 66

Z

Zooming 215



Index