



Pyramix
DIGITAL AUDIO WORKSTATION

5

User Manual



HD DVD DSD DXD
100% Analog
100% Digital
100% Analog
100% Digital
100% Analog
100% Digital

MERGING

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Contents

1 Introduction	1
Thank you!	2
Contacting Merging	2
International Office:	2
USA Office:	2
Installation	2
About This Manual	2
Important Note:	3
Commands Reference	3
Pyramix Guides	3
Other Pyramix Guides	3
Assumptions	4
Conventions	4
Pyramix Virtual Studio Overview	5
Program Window	5
Project Window	6
Status Bar	6
Dual Monitors	7
Project Editing Panel	7
Project Management Panel	7
TimeCode Entry	8
2 Tracks and Track Groups	9
Tracks	10
Adding Tracks	10
Creating tracks via paste	10
Track Types	12
Tracks Grouping	13
Deleting Tracks	14
Routing Tracks to / from the Mixer	14
Virtual Tracks	14
Track Header Panel	15
Track Record Modes	18
Tracks Tab Window	18
Track Column Fields	19
Track Groups	21
Track Group Column Fields	21
3 Media Management	24
Housekeeping	25
Audition Play	25

Media Folders	25
Media Target Settings	25
Libraries	25
Shelves	26
Project Libraries	26
Global Libraries	26
User Libraries	26
Library Maintenance	27
Practical Media Management	27
The Media Menu	27
Media Management and Libraries Tab Windows	29
Tools and Menus	30
The Trimmer	30
Library Menus	31
Quick Convert Process Properties Dialogs	38
Managing Media Folders	45
Quick Mount	46
Mounting Rules	46
Offline / Reference Libraries	47
Creating Offline/Reference Libraries	48
4 Transport and Navigation	50
Navigation	51
Time Scale Bars	51
Fixed or Moving Playhead Cursor	57
Markers	58
Markers Tab Window	59
Jog / Shuttle	60
Jog Settings	60
Mouse Scrubbing Settings	60
Transport Controls	61
Synchronizer	62
Transport Control Panel	63
Zooming and Panning	70
Time Scale Zoom and Pan	70
Track Height Zoom	70
Scroll Wheel	70
The Overview	71
5 Recording and Acquisition	72
Getting Audio into Pyramix Virtual Studio	73
Check Sync	73

File Format and Disk Limitations	74
Pyramix audio file format	74
Recording Audio into a Pyramix Virtual Studio Project	74
Track Record Modes	74
After Recording	75
AutoPunch Mode	75
Importing Audio Files into Pyramix Virtual Studio	76
Mounting Media Folders	76
Sample Rate Conversion	76
Digitizing Sessions	78
Manual Digitizing	79
Autoconforming	79
6 Editing	81
Editing in the Timeline	82
Clips and Compositions	82
Clips in a Composition	82
Anatomy of a Clip	82
Locking Clips	83
Grouping Clips	84
Gain Window	84
Clip and Selection Editing	84
Clip Properties	85
Renaming Clips	85
Selection Tab Window	86
Selections and Region Selections	89
Dragging Clips into a Composition	89
Copy and Paste	90
Auto-Crossfade By Default	91
Clip Fade Commands	91
Editing Modes	92
Splitting Clips and Regions	94
Jog-Wheel Editing	94
Playlists	95
Edit Command highlights:	96
Auto Silence Removal	100
EDL Tab Window	101
The Placement Tool	102
Source - Destination Editing	103
Concept	103
Setting up a Source - Destination Environment	103

2,3 and 4 Point Edits	106
	107
7 Fade Editor	108
Fade Editor Tab Window	109
Toolbar	109
The Graphical Display	111
The Faders & Control Section	111
Parameters & Options Section	112
Save X Fade	114
Save Fade	115
8 Mixer	116
Overview	117
Mixer Pages	117
Configure Page	117
Effect Management	120
Organize Page	122
Route Page	124
Automate Page	125
Mix !	126
Mixer Components	128
Input Strips	128
Mixing/Monitoring/Aux Busses	129
Groups	131
Channel Direct Outputs	132
Strip & Bus Channel Types	132
Basic Strip	138
Creating and Configuring Mixers	139
Mixer Configuration Wizard	140
I/O Busses Explained	141
Input Strip Types	141
Internal Return Busses	142
Mixer Delay Compensation	142
Configuring a Blank or Existing Mixer	144
Adding Strips	145
Mixer I/O Assignments	145
Plug-ins	145
Further Mixer Configuration Options	146
Dithering Options	147
Mixer Presets	149
Mixer Surround Components	149

Surround Control window	150
9 Monitor	153
Monitor ! Window	154
Monitor ! page	155
Speaker Sets	156
Configure page	157
10 Effects	160
Plug-Ins	161
Adding and Managing Effects	161
Common Components	161
Parametric EQ	163
10 Bands EQ	164
Three Band Tone Control	164
Dynamics Processing	165
Delay	168
Flanger	169
MS Encoder	169
AnguDion	170
Mastering Peak/Vu Meters	171
Peak-Meter	172
Global settings and presets	174
Phase-Oscillo	177
Surround Meter	179
DC Meter	180
Modulometer	180
Function Generator	182
Wordlength Meter	182
Plug-in Automation	183
Effects Snapshots	183
Optional Plug-ins	183
Merging Technologies	184
Algorithmix	187
Arkamys	188
Vincent Burel	188
Cedar Audio Restoration Suite for Pyramix	188
Prosoniq	189
PureNotes	191
Scopein	191
VST / DirectX support	191

Direct X Plug-ins	191
VST Plug-ins	191
External Effects	193
11 Strip and Bus Tools	194
Strip and Bus Tools	195
Eq, Comp/Limiter/Expander	195
Sections	198
Common Features	198
Bus Tools	205
Delay Compensation	207
Delay Compensation / Pre-Anticipation	210
12 Automation	211
Automation Modes	212
Automation Settings	213
Selecting Automation Modes	214
Master Automation Controls	215
Display and Editing of Automation Data	215
View Several Parameters	218
Undo/Redo	219
Editing Automation data	219
Automation in editing and libraries	220
Auto-Write And Release Modes	220
Mixer and Plug-in Snapshots	220
13 Project Processes	222
Dither	223
Mixing Down Projects	223
Archiving Projects	224
Consolidating Projects	224
Converting Projects	225
Changing Project Length / Pitch	225
Reconforming a Project	226
Surround Post-Processing Projects	226
Rendering Projects	226
Process Plug-ins	227
Cleaning Up Project media	228
Project Notes	228

14 CD/SACD Mastering	229
Mastering a Composition to CD-R	230
CD Markers	230
CD/SACD Tab Window	231
Album:	231
All Markers...	232
Track Inspector	232
Right section	233
CD/SACD Tab Window Menus	234
Discs	234
Markers	234
Offsets	235
ISRC	235
CD-Text	235
View	236
Default Settings	236
Show CD Player	238
Ghost Track	239
Multiple CDs or versions in one Project	239
Red-Book Validation	239
DDP Import	239
SACD Functions	239
Exporting Projects to CD Image Files	240
DiscWrite	243
Optical Drives - Important Note:	247
CD Text	247
Burning a CD-R	247
DDP Masters	248
Red Book Compatible Masters	248
CD Copy	248
TOCs	248
15 File and Project Interchange	249
Project Interchange	250
File Interchange with Apple Macintosh	250
AAF	252
AKAI disk import	254
CD Import	256
CMX EDL	259
OMF	259
ProTools	260

AES-31	261
DDP	261
Edited Master	261
Sonic Solutions	261
Tascam Open TL	261
XML	262
SACD EDL Export	262
Report Printer	262
Cue Sheet Printer	262
16 Conforming and Reconforming	265
Conforming	266
Importing a CMX EDL	266
CMX EDL Format	268
CMX Autoconform	270
Reconform	270
CMX Reconform	270
17 Customizing Pyramix	274
Customizing the User Interface	275
Workspaces	275
Customizing Keyboard Shortcuts	275
User Macros	276
18 Applications	278
Project Templates	279
Virtual Multi-track	279
Player/Recorder Mode	281
Multitrack Editing	281
LTC sync	282
Dubbing Mode	282
Virtual Tape Mode	283
Discontinuous TimeCode	285
Metronome / Click Track	285
Reconforming to Original Media from Avid &/or OMF	288
Broadcast WAV file Tips.	289
Digitizing a Tape with Discontinuous TimeCode	289
Loop Recording with simultaneous Playlist Creation	290
TimeCode Midnight	290
Editing Multitrack Recordings	290

Film 24 to NTSC Sync	290
Checking AC3 encoded files in Pyramix	291
Working with External Machines	292
Use Auto-chase	292
Using Freeze Mode	292
Creating tracks via paste	292
19 Remote Control	293
Control of External Device	294
External Machines	294
9-pin (Sony P2 protocol)	294
Setting up an external machine	294
Chase Synchronizer	294
Practical Machine Control	295
Hardware Control Surfaces	295
Control by External Device	296
9-pin Control of Pyramix by an External Machine	296
GPI / GPO Support	296
GPI/O Remote types	297
GPI/O Input and Output Pin Configuration	297
20 Productivity	299
Optimizing Pyramix	300
Use Templates	300
Pyramix File Format .PMF	300
One File Per Track option	300
Reducing Unnecessary Disk Access	300
DSP optimization	301
DSP Allocation	301
Use Work Spaces	303
21 Settings	304
Configuration - The Settings Dialog Window	305
Settings Buttons	306
Hardware	307
I/O Interfaces	310
XDTDM / HDTDM Routing	311
TimeCode	314
Project	317
Mixer	323
Level Meter	323

Application	326
Time Stretch	343
Remote Control	346
	354
22 Menus	355
Pyramix Default Menus	356
Project	356
Edit	359
View Menu	364
Clips	368
Tracks	373
Cursors & Marks	375
Selection	379
Fade Editor	380
Media	384
Automation	385
Workspaces	386
Machines	387
Macros	393
Settings	393
Window	393
Help	394
23 Troubleshooting	395
Keeping Up To Date	396
Error Messages	396
Multi-channel Audio Files	397
No Sound on Live Inputs	398
Clip Display Problems	399
Relaunch After Improper Exit	400
The I/O Status window	400
Input sources	400
Debug Menu	401
ADAT Daughterboard and XDTDM	403
24 Appendices	404
Appendix I - Mouse Modifier Keys	405
Main Editor	405
Overview	407

Notes	407
Media Folder	407
Appendix II I/O Daughter-card Options	408
Appendix III Optional Features	410
Pyramix DSD / SACD	410
Time-code Sync	411
Cue Sequencer	411
Appendix IV 9 - Pin connection	413
PC RS-232 Serial Port to External Sony P2 RS-422 Controller	413
Connecting an RS422 device using a direct cable	413
Appendix V Mykerinos Latencies	415
Appendix VI - HDTDM v XDTDM	416
Internal Bussing & I/O Capabilities	416
Appendix VII - Network Connections	418
Ethernet Connection & Settings	418
Synchronization with Virtual Transport	420
25 Index	421

1

Introduction



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Thank you!

Congratulations on your purchase of **Pyramix Virtual Studio**. More than just a product, this is a gateway to the future of sound recording, editing, mixing and mastering. You have joined a worldwide community of users who have already discovered the Pyramix advantage.

Note: IMPORTANT! - The first thing you need to do is register your software to acquire your Pyramix key(s) and to be included in our user support list.

Please also subscribe to the User Forum at:

<http://www.merging.com/forum/>

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Installation

Please see the **Quickstart Guide** and/or **Installation Guide**.

About This Manual

Automatically installed with Pyramix and available under the **Help** menu or **[F1]**, this manual is intended to be a comprehensive reference source for all the standard features and functions in Pyramix 5.0.

Navigation

In electronic form, all the **Contents** and **Index** entries and **Cross-references** are hyperlinks. I.e. clicking on them will jump to the relevant item.

VERY IMPORTANT!

We strongly recommend you consult the other Pyramix guides for a more complete understanding of all the features and functions of Pyramix.

HOWEVER,

recognizing that most people do not read manuals until they have to, the **Quickstart Guide** will enable you to achieve (almost) instant gratification! The Quickstart Guide will introduce you to Pyramix Virtual Studio Version 5.0 and lead you through a simple set-up, recording and importing audio, simple editing, mixing, adding effects, and CD recording.

Important Note:

Pyramix is not only a very powerful workstation, it is also a highly configurable one, especially the user interface. Screenshots in this manual are shown with the default interface. If you cannot find something in a Pyramix menu or toolbar that is discussed or shown in the manual, or something appears differently, please go to:

Settings > All Settings > Desktop Layout and examine the relevant tab window.

Commands Reference

Automatically installed with Pyramix and available under the **Help** menu, this document lists all the commands available in Pyramix together with the default Keyboard Shortcuts.

Pyramix Guides

Quickstart Guide

Automatically installed with Pyramix and available under the **Help** menu, this document is intended to enable new users to achieve good results quickly. It also aims to introduce existing Pyramix users to the new features in Pyramix 5.0.

Other Pyramix Guides

The other guides listed here are installed along with the Pyramix software and / or may be freely downloaded from the Merging Technologies website.

<http://www.merging.com>

Installation Guide

An expanded version of the Installation chapter in the **Quickstart Guide**

Virtual Transport Guide

This is the reference guide for Virtual Transport.

Pyramix Applications Guides

These guides aim to be a useful resource for Pyramix users. They contain set-up examples and practical hints and tips for using Pyramix for specific applications such as;

Music Recording, Editing and Mastering (in development)

SACD Production Guide

Sound for Picture (in development)

Radio Production (in development)

Theatre Playout (in development)

Guides for Pyramix Optional Features

Documentation for optional features is provided in PDF format. Some are automatically installed with the Pyramix software. Others may be freely downloaded from:

<http://www.merging.com>

Assumptions

This **User Manual** and the other Pyramix guides assume you are thoroughly familiar with PCs and Windows terms and concepts. If the PC is new, please ensure the machine is working correctly before attempting to install Pyramix Virtual Studio.

Conventions

Conventions used in this manual:

Names found on Pyramix screens and menus are shown in bold. E.g. **Information & Settings**

Menu and sub-menu selections are shown like this:

View > Tracks > Show all Tracks

Which means:

Go to the **View** pull-down menu, mouse down to the **Tracks** sub-menu and choose **Show all Tracks**.

All Pyramix settings have been gathered together in a hierarchical structure. **Selecting Settings > All Settings** opens the **Pyramix Settings** window with a folder and file tree in the left hand pane.

Where a dialog box has several Pages, Tabs are used to 'turn' the pages. Tab page selection is shown thus:

Settings > Keyboard Shortcut Editor : Clips

Which means:

Go to the **Settings** pull down menu, choose **Keyboard Shortcut Editor** then click on the **Clips** Tab.

Keyboard Shortcuts are shown thus: **[Shift Alt R]** means hold down the Shift and Alt keys then press R

Important Information

Important information is shown thus:

Note: When producing a CD image the mixer output **MUST** be stereo not two monos.

Pyramix Virtual Studio Overview

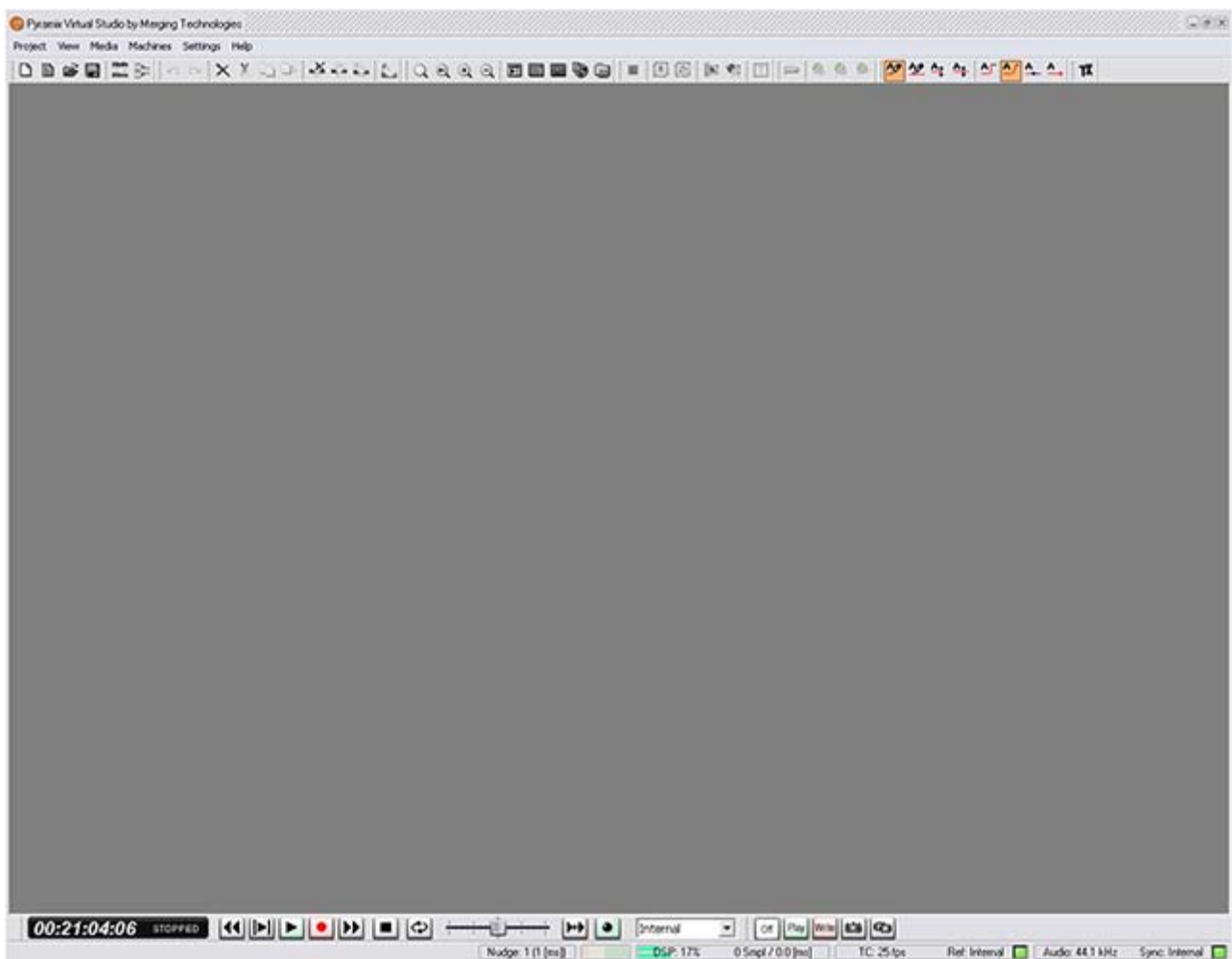
Pyramix Virtual Studio is a powerful and flexible Digital Audio Workstation (DAW) integrating hard disk recording and editing, digital audio mixing, effects processing, machine control, video, and CD-R mastering.

The **Pyramix** software runs on the **Merging Technologies Mykerinos** hardware platform. Each **Mykerinos** board is capable of up to 128 channels of 24-bit digital audio, 64 recording and 64 playback. External access to these 128 channels is determined by your choice of physical inputs and outputs to the **Mykerinos** board.

With multiple boards the Pyramix workstations is capable of up to 128 channels of 24-bit digital audio, 64 recording and 64 playback. External access to these inputs and outputs is determined by your choice of daughterboard(s). Note that whilst the ADAT daughterboard continues to function normally in HDTDM (64 bus) mode it cannot be used for input when in XDTDM (128 bus) mode and is only capable of 8 outputs via Optical Output A with the same 8 duplicated on Optical Output B.

WARNING! The **ADAT** Daughterboard requires modification before use with XDTDM mode. Failure to do this may result in data loss. Please contact your Merging Technologies Sales Partner to arrange a mod.

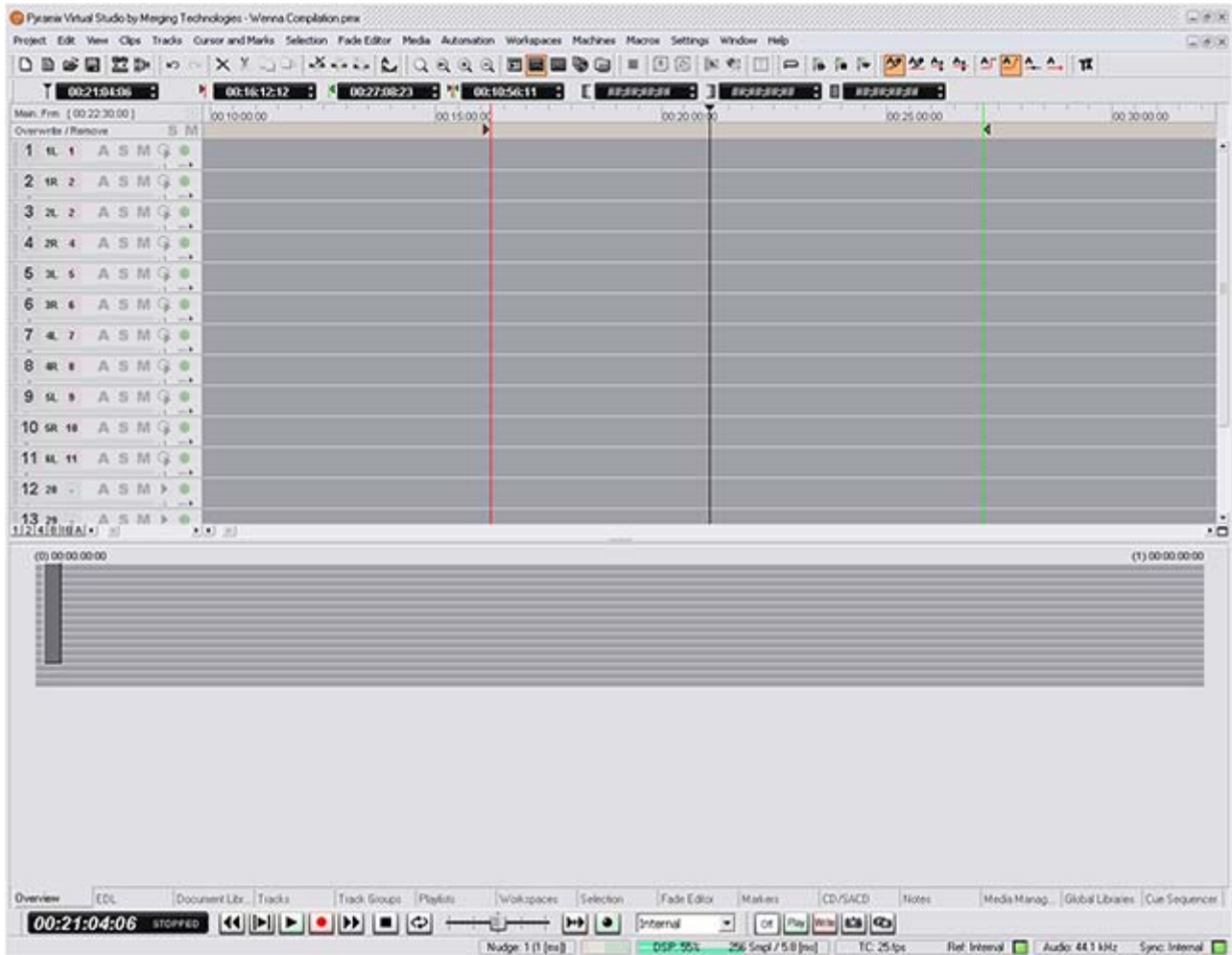
Program Window



Pyramix Program Window

The main **Pyramix Virtual Studio by Merging Technologies** program window appears when the program is launched. It has dockable Toolbars across the top with a Transport bar and status information at the bottom. This main window can be resized, moved, minimized or maximized with the conventional Windows control boxes.

Project Window



Pyramix Project Window

The **Pyramix Project** window is always completely enclosed by the main window. A **Project** window only exists if a **Project** is open, and appears automatically when a new **Project** is started. A **Project** window can be resized, moved, minimized or maximized within the main window. If the **Project** window is made large enough, two separate panels are visible: the **Project Editing Panel** at the top, contains the **Timeline** which shows a graphic representation of the **Composition**. The lower section of the screen is the **Project Management Panel**. The dividing line between these panels may be grabbed with the mouse and moved up or down, thereby varying the space allocated to each panel.

Status Bar

At the very bottom of the Pyramix Window the **Status bar** shows:

Free Disk

Remaining disk time on selected disk for recording

Nudge

Currently selected nudge setting

Playback Buffer Meter

Graphic representation of the current state of the Playback buffers.

DSP

DSP (or CPU) Load and Input to Output Latency in Samples and Millisecond

TimeCode

Current Frame Rate and Reference Source.

- If the selected Reference Source is available the Led lights in Green
- If the selected Reference Source is not available then the Led flashes in Red.
- If a Pull-Up, Pull-Down or Varispeed setting produces an invalid Frame Rat, it's then displayed in Red

Audio

Current Sample Rate and Sync Source.

- If the selected Sync Source is available and locked on the Led lights in Green
- If the selected Sync Source is not available and the system defaulted to Internal then the Led lights in Red
- If the selected Sync Source is available but with a different Sample Rate then the Led flashes in Red.

Dual Monitors

By default the screen is horizontally divided with the Tab Windows below the Timeline. When using Dual Monitor setups, you may wish to divide the main project window vertically. With the Timeline displayed on the left screen and the Tab Windows on the right, more tracks can be viewed simultaneously. This can be achieved by checking the **Display Timeline on the Left of Tab Windows** radio button in the **Settings > All Settings > Application > Timeline Layout** page. This change will take effect the next time a Project is opened.

Project Editing Panel

By default the **Project Editing Panel** has a number of dockable toolbars at the top, a row of TimeCode register boxes and below this the Timescale bar and Timeline tracks display. This is where much of the audio editing is accomplished. Audio **Tracks** may be created, added or deleted, and audio **clips** can be edited, moved, copied or pasted. Note that the **Project Editing Panel** automatically starts with the same number of audio **Tracks** as the number of **Input Channels** configured in the **Mixer** of a new **Project**.

Project Management Panel

The **Project Management Panel** has a number of tools for managing, navigating and modifying a **Project**. A single click on one of the tool **Tabs** at the bottom of this Panel, opens its window in the Panel. Double-

clicking a **Tab** opens it as a floating window. Double-clicking the Tab of a floating window or its Caption Bar returns the window to the panel.

Tab window functions can also be accessed from pull-down menus.

Any or all of the Tab windows can be shown or hidden for a Project, and moved independently and outside of the main Program window.

TimeCode Entry

TimeCode values in Pyramix can be changed by using Increment Decrement buttons, by using the on screen numeric keys or by direct entry from the numeric keypad. an **OK** button or the **ENTER** key finalizes the entry. In Pyramix numbers are entered in time code fields from right to left, a block at a time, progressively overwriting existing numbers.

This makes the most common TimeCode changes easy, I.e frames or seconds, without having to re-enter the minutes or hours.

Clicking in a register inserts a red I-beam cursor and outlines the register in green. Entries must be made in Hours : Minutes : Seconds : Frames order. So, to enter 10 Hours and 9 seconds and 15 frames, key: **1 0 0 0 9 1 5**. BUT if you only want to change the seconds then you only have to enter the seconds and frames E.g. to enter 9 seconds and 15 frames, key: **9 1 5** followed by **ENTER**. However, to change 10:27:10:15 frames to 10:27:09:15 you would need to key, **0 9 1 5** followed by **ENTER**. In practice most operators always enter the leading zero even when it is not required, to avoid errors.



TimeCode Register

Arithmetic TimeCode Entry

An existing TimeCode value can have time added to or subtracted from it. I.e. a relative entry. Type the number to be added or subtracted then, instead of pressing the Numeric Key Pad **Enter**, press - (Minus) or + (Plus) on the main keyboard or CONTROL + Minus or CONTROL + Plus on the Numeric Key Pad.

2

Tracks and Track Groups



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Tracks

Each **Project** has a user defined number of audio **Tracks** on which audio **Clips** can be placed, or audio inputs can be recorded. Blocks representing placed or recorded **Clips** will appear on the **Track** as soon as a **Clip** has been placed or recorded onto it. The **Track** itself extends horizontally beneath the **Time Scale** bar, and multiple **Tracks** are stacked vertically.

On the left side of each **Track** is a **Header** panel with various controls and information displays. **Please see: Track Header Panel on page 15**

Some operations only apply to a selected track. A **Track** can be selected by left-clicking anywhere on the **Header** which will then appear in a darker shade of gray. However, when selecting a **Track**, be careful **NOT** to inadvertently click on any of the **Track** buttons, thereby changing a **Track** function: the **Track Name** is a good place to click in order to select it.

Adding Tracks

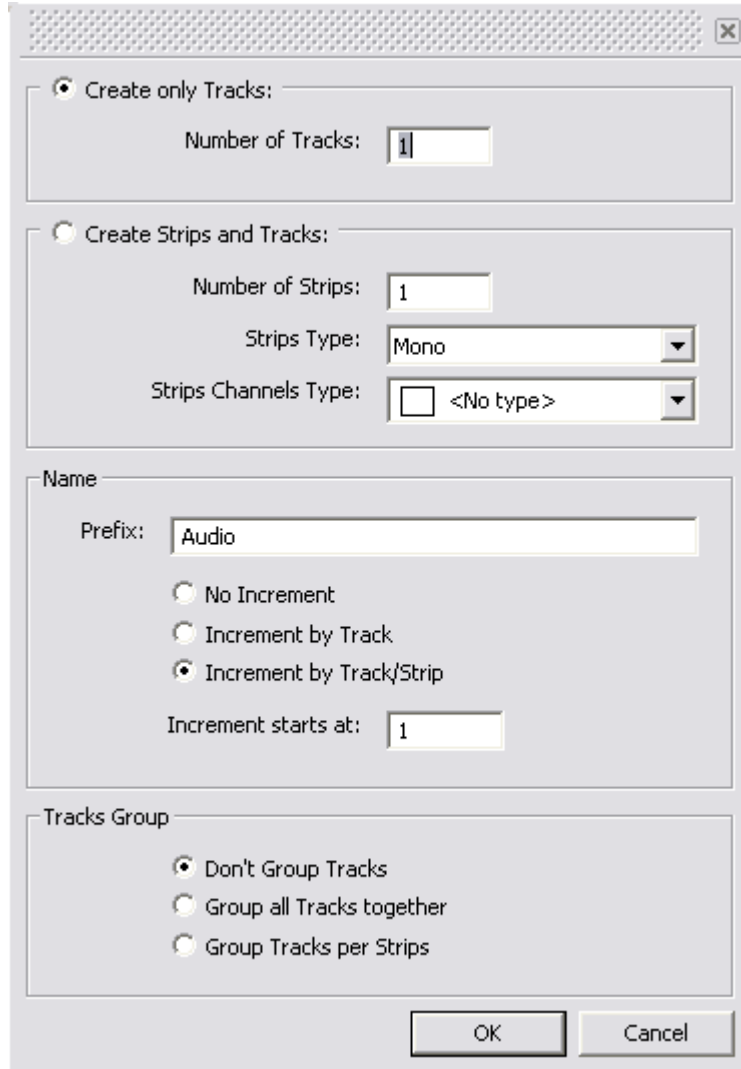
By default, a new **Project** opens with the same number of **Tracks** as there are **Input Channels** defined in the **Mixer** for the **Project**. However, **Tracks** can easily be added or deleted.

Creating tracks via paste

If a clip is dragged and dropped or copied and pasted from Media Management or a Library onto a blank area of the TimeLine where no tracks exist, sufficient tracks will be created below the last existing track to accommodate the number of channels in the clip.

Create New Tracks

New tracks are inserted below the currently selected track or, if no track is selected, at the bottom after the last existing track. To add **Tracks** to the **Timeline**, select **Tracks > New Audio Track** (or right-click in a blank area of the track header and choose **New Audio Track** from the context menu).



The dialog box is titled "Create New Tracks" and contains the following sections:

- Create only Tracks:** (Selected radio button)
 - Number of Tracks:
- Create Strips and Tracks:** (Unselected radio button)
 - Number of Strips:
 - Strips Type:
 - Strips Channels Type: ☐ <No type>
- Name:**
 - Prefix:
 - ☐ No Increment
 - ☐ Increment by Track
 - ☒ Increment by Track/Strip
 - Increment starts at:
- Tracks Group:**
 - ☒ Don't Group Tracks
 - ☐ Group all Tracks together
 - ☐ Group Tracks per Strips

Buttons: OK, Cancel

Create New Tracks dialog

Create only Tracks: / Create Strips and Tracks:

To simply create Mono tracks only, check the **Create only Tracks** radio button, enter the number of tracks required into the **Number of Tracks** data entry box and click **OK**. The Track(s) will be created with the default name **Audio** numbered in ascending order from **1**.

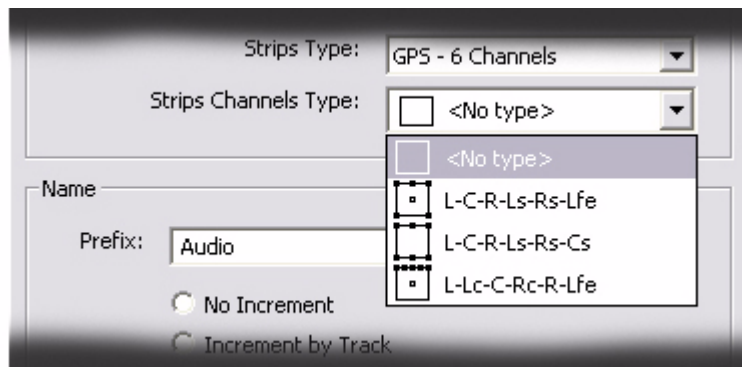
If you wish to create Mixer strips at the same time, check the **Create Strips and Tracks** radio button. Enter the number of Strips required into the **Number of Strips** data entry box. Pyramix currently supports four categories of Strip. The default is **Mono**.

Other types of strip can be selected from the **Strips Type** drop-down list.



Create New Tracks dialog - Strips Type

If you choose anything other than **Mono** the appropriate number of tracks will be created to suit the chosen strip type. The strip inputs and outputs will be 'tagged' with a letter or letters indicating channel assignments depending on the choice made in the **Strips Channels Type** drop-down list.



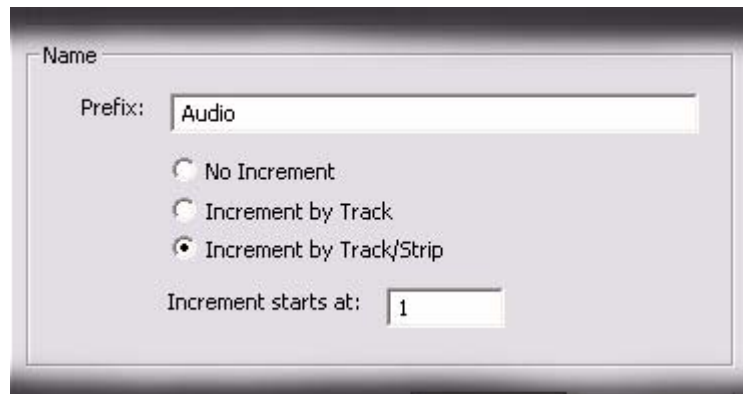
Create New Tracks dialog - Strips Channels Type

The formats on offer vary according to the Strip Type chosen. A six channel example is shown above. As a further example, if you choose **MS**, **<No Type>** is the only available choice and the strip I/O is tagged **C** and **W** for **C**entre and **W**idth since this is the logical format.

Track Types

All tracks are single channel but, when created with a Strip Channels Type format, certain functions are automatically linked, namely: Automation, Solo, Mute, Monitor mode, Record mode, Waveform display.

Naming and Numbering



Create New Tracks dialog - Name

However many Tracks and Strips you decide to create, they can be automatically named and incrementally numbered.

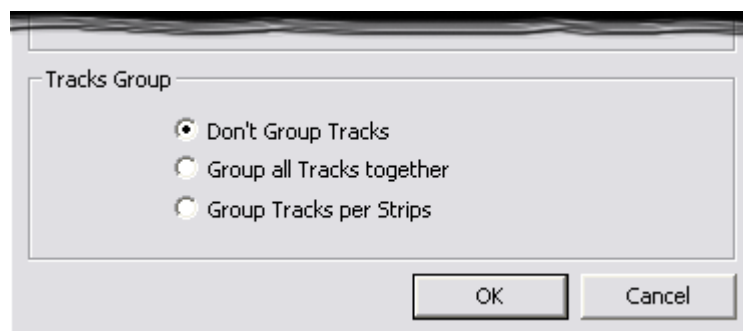
If the **No Increment** option is chosen all tracks created will have the same name. I.e. whatever is entered in the **Prefix:** text entry box and no number.

If the **Increment by Track** option is chosen, each individual track will be named using the text entered in the **Prefix:** text entry box and numbered incrementally. E.g. If you enter say, **Atom** and add a 5.1 GP strip in L-C-R-Ls-Rs-Lfe format, six tracks are added. If the **Increment starts at:** number is set to, say **33** then all the track names will all be **Atom 33** as will the Strip name.

If the **Increment by Track/Strip** option is chosen in the above example then the tracks will be named **Atom 33**, **Atom 34** to **Atom 38** and the Strip will be named **Atom**.

Tracks Grouping

There are three options:



Create New Tracks dialog - Grouping

Don't Group Tracks leaves the new tracks ungrouped.

Group all Tracks together groups all the new tracks in a single group.

Group Tracks per Strips groups the tracks as they are assigned to strips. E.g. 12 Tracks assigned to two 5.1 strips would be grouped as two six tracks.

Deleting Tracks

Single Track

To delete a **Track**, first select the **Track** to delete. Then choose **Tracks > Delete** from the Project window pull-down menu. The **Track** and all **clips** placed on it will be deleted. Note that only the **clip** or pointer will be deleted, not the original **Media File**.

Multiple tracks

You can also delete all tracks from the selected track to the last (highest number) by selecting **Delete to Last** instead of **Delete**.

You can also right-click in the **Track Header** to add or delete **Tracks**.

Routing Tracks to / from the Mixer

When you create a **Mixer**, Pyramix will automatically create the same number of **Tracks** as **Mixer Input Strips** (channels).

If **Connect automatically as many inputs and outputs as possible** is checked, Pyramix will attempt to automatically route the output of each **Track** to a corresponding **Mixer** channel input, so that **Track 1** output routes to **Mixer** channel 1 input, **Track 2** to **Mixer** channel 2, etc.

Similarly, Pyramix will attempt to automatically route each **Mixer** channel output to a corresponding **Track** input, so that **Mixer** channel 1 output routes to **Track 1** input, **Mixer** channel 2 to **Track 2**, etc.

These default **Track I/O** assignments can easily be changed by the user. See also: **Adding Strips** on page 145

Virtual Tracks

A virtual track is a "mirror" of another existing track. It has the same output routing and contains the same clips as an existing track, but it appears in the Project Editor as a separate track.

Note: Virtual tracks contain non-overlapping clips - that is, each clip on a virtual track is not allowed to overlap with clips on a related virtual track. However, clips on the exact same track can still be crossfaded. Virtual tracks can be used for the purpose of visualizing clips that may have a logical reason to appear on separate tracks of the editor, even though they will be routed to the same mixer channel. An example of typical use is to create virtual tracks to allow the display of several automation curves for a single track.



View Automation Off - Automation data overlay is not displayed on the track.



View Automation On - Automation data overlay is displayed on the track.

Right clicking the automation icon pops up the Automation Overlay context menu with options as to what is displayed.



The **Mute** icon toggles the **Track Output** between **Un-Muted**, as shown here;



and **Track Output Muted**, as shown here.



The **Solo** icon toggles the **Track Output** between **Solo off**, as shown here and;



Solo on as shown here.

The Record icon has three possible states.

Record Safe and **Record Ready** are toggled by left-clicking the icon. **AutoPunch Ready** is enabled / disabled by holding down the **ALT key** while left-clicking the icon.



Record Safe - no recording possible.



Record Ready - Recording commences when the transport **Master Record** button is pressed and finishes either when the **Stop** button is pressed, or when the **Play** button is pressed.



Autopunch Ready - Recording commences when the previously set **Record In** point is reached and finishes when the previously set **Record Out** point is reached.

Right-clicking the Record icon opens the **Settings** Window with the **Project > Record** page selected.

The Monitor icon also has three possible states.

Note: These icons are only active when both an input and output connected.

These are toggled by left clicking the icon.



Auto - monitoring switches the associated **Mixer channel** input automatically between input and repro. Behavior depends on the **Auto-monitoring** section setting in the **Settings > All Settings > Application > Playback/Record** page. **European Monitoring** (All tracks turn to **INPUT** on stop) **OR US Monitoring** (Only Record Ready tracks turn to **INPUT** on stop)



Repro - The associated **Mixer channel** is always fed from the track replay.



Input - The associated **Mixer channel** is always fed from the track's selected **Input** source.



Expand Track Group - Grayed out unless track is member of a Group.



Collapse Track Group - Alternate state of **Expand Track Group** Only visible when the track is a member of a Group.

The Waveform icon has three possible states.



Display Waveform - by default shows **clips** as orange blocks with white waveform superimposed.



Display Blocks - by default shows **clips** as orange blocks without waveform.



Display Envelope - by default shows **clips** as orange blocks with white waveform and adds a black line which allows the gain to be adjusted using the mouse by simply clicking and dragging. Pressing the **Ctrl** key enables the drawing tool for envelopes. This also applies to **Automation curves**.



Peak Meter - If the **Peak Meter** is visible on the far right of the Track Header, clicking on it hides it. If not visible, clicking in the space where it should be unhides it.



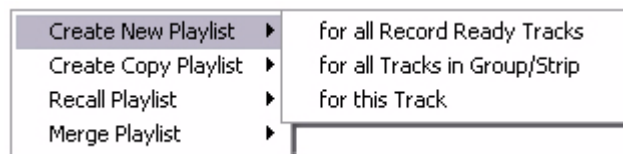
Always Visible off



Always Visible on. When this button is pressed the track will be kept in view on the Timeline whenever possible.



Playlist opens this menu



Playlist popup menu

Please see:

In each **Track Header**, you will find a **pale green box** with a number (and assignment Tag where applicable) superimposed on it; and a **pale red box** with a number superimposed on it. The **pale green box** shows the mixer channel number (and Tag if applicable) the **Track** output is assigned to. The **pale red box** shows the number of the physical input or Internal Return Bus feeding the mixer channel and routed to the Track input.

To change a **Track Input** or **Output** assignment, just click on the corresponding **Track** input or output box, then select the appropriate **Mixer** channel or **Input** number from the corresponding pop-up list. **Note:** changing an output assignment to a different **Mixer channel** will also change the **Input** to the input selected on the strip. If the Input assignment is changed in the Track Header, this change is reflected in the strip and vice-versa.

When **Track** inputs and outputs are not assigned, the corresponding boxes for that **Track** will have dashes in them instead of numbers.

Many tracks can be assigned to the same **Mixer** channel. They are therefore sub-mixed before entering the **Mixer**. This allows more tracks to be played than the number of **Mixer** channels.

Many tracks can be fed from the same physical input.

Track Record Modes

Each **Track** has a tri-state **Record Ready** toggle button, located to the left of the **Track** itself in the **Track Information and Setup Area**.

Tip: Right-clicking on a track arming button opens the **Settings > All Settings** window immediately on the **Project > Record** page.

Play

The **Green Dot** in the **Track Header** indicates **Record Safe** mode, the default when **Tracks** are newly created. When in this state, the **Track** cannot be recorded to.

Record Ready (Manual)

Click on the **Green Dot** once to toggle to **Record Ready** mode. This is indicated by the dot turning into the **Red Dot**. The **Track** will now go into **Record** mode immediately when the **Master Record** button is pressed in the **Transport Strip** or **Transport window**.

Record Punch In (Auto)

Alt-Click on the **Red Dot** to toggle to **Record Punch In** mode. This is indicated by a **Red Dot flanked by 2 red vertical lines**. In this mode, when the **Master Record** button is pressed in the **Transport Strip** or **Transport window**, the **Track** will stay in **Play** mode until the current **Mark In** point is reached, then the **Track** will go into **Record** mode. It will stay in **Record** mode until the current **Mark Out** point is reached.

Tracks Tab Window

The **Track** Tab Window shows a table where each row contains information about a single track and each column contains information and function selection fields. New tracks can be created or existing ones deleted and the order of tracks changed. All track parameters are accessible and modifiable.

Name	Repro Connection	Input Connection Group	Solo	Mute	Record Ready	Monitoring	Hidden	Always Visible	Collapsed Display	Show Automation	Show Peak Meter	Background Color	Waveform Color	Media Folder
Click here to add a new Track or S...														
Surround Mix Music	1 (Mono)	25			Safe	Auto			Waveform		32			<Project Default Folder>
ADR	3 (Audio 1)	4			Safe	Repro			Waveform		32			<Project Default Folder>
Foley	4 (Audio 2)	5			Safe	Repro			Waveform		32			<Project Default Folder>
Foley	5 (Audio 3)	6			Safe	Repro			Waveform		32			<Project Default Folder>
Backgrounds	6 - L (Backgrou...	7			Safe	Repro			Waveform		79			<Project Default Folder>
Backgrounds	6 - R (Backgrou...	8			Safe	Repro			Waveform		32			<Project Default Folder>
Source Music	7 - L (Audio 2)	9			Safe	Repro			Waveform		32			<Project Default Folder>
Source Music	7 - R (Audio 2)	10			Safe	Repro			Waveform		32			<Project Default Folder>
Surround Mix Music	8 - L (Music)	11			Safe	Repro			Waveform		32			<Project Default Folder>
Surround Mix Music	8 - C (Music)	12			Safe	Repro			Waveform		32			<Project Default Folder>
Surround Mix Music	8 - R (Music)	13			Safe	Repro			Waveform		32			<Project Default Folder>
Surround Mix Music	8 - Ls (Music)	14			Safe	Repro			Waveform		32			<Project Default Folder>
Surround Mix Music	8 - Rs (Music)	15			Safe	Repro			Waveform		32			<Project Default Folder>
Surround Mix Music	8 - Lfe (Music)	16			Safe	Repro			Waveform		32			<Project Default Folder>

Tracks Tab floating Window

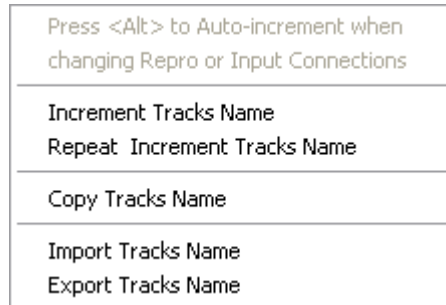
New tracks can be added by clicking on the first line of the Tab Window and typing a suitable name then pressing **Enter**.

Tracks can be deleted by selecting them and pressing the **Delete** key.

The order of the Tracks can be changed by selecting and dragging tracks. Click on the symbol at the far left of the **Name** field and drag to the desired row.

Tracks Tab pop-up

Right-clicking on a selection of tracks or on all tracks (no selection) displays this context menu:



Tracks Tab pop-up

Increment Tracks Name : Adds an incremental number after each selected tracks name, taking into account an already existing number

Repeat & Increment Tracks Name : Copies the first selected tracks name to the rest of the selection and adds an incremental number

Copy Tracks Name : Copy the selected tracks name or all if no selection

Paste Tracks Name : Paste the previously selected tracks name to the currently selected tracks

Import Tracks Name : Rename the selected tracks or all tracks if no selection with names coming from a text file

Export Tracks Name : Saving the selected tracks or all if no selection to a text file

Making Settings Changes to Multiple Tracks

Changes to Tracks settings can be made on a multiple selection of tracks. Press **Ctrl** and Click on a track to add or subtract it or press **Shift** to select a contiguous range of tracks.

Changing Repro or Input connections

Clicking in the column field to drops down a list of available connections. Highlight the required connection to select it.

With a range of tracks selected, choosing a connection from the list assigns all selected tracks to the same connection. If **Alt** is held down while choosing the selected tracks are connected in ascending order.

Track Column Fields

Name

The name of the **Track**. Up to 29 characters are visible in this field but longer names are accepted. Click in the field or use **F2** to enter a new name.

Repro Connection

Shows which Mixer Input Strip (and Channel if applicable) the track is connected to. Clicking in this column field drops down a list box with all available Mixer Input strips (and Channels). Strip number on the left followed by Channel Tag with the Strip Name in brackets.

Input Connection

Shows which Input is feeding the track. Clicking in this column field drops down a list box with all available physical inputs and Internal Return Busses.

Group

Shows which **Track Group** (if any) the track belongs to. (see below) **Clicking in this column field** drops down a list box with all available Track Groups.

Solo

If **YES** track is soloed. Clicking in this column field toggles between **YES** and blank.

Mute

If **YES** track is muted. Clicking in this column field toggles between **YES** and blank.

Record Ready

Shows the current record ready state. Clicking in this column field drops down a list box with the three possible states, **Safe**, **Record Ready** and **Auto-Punch**.

Monitoring

Shows the current monitor mode. Clicking in this column field drops down a list box with the three possible modes, **Auto**, **Input** and **Repro**.

Hidden

If **YES** the track is not visible in the Timeline but continues to operate normally. Clicking in this column field toggles between **YES** and blank.

Always Visible

If **YES** the Track will always appear on screen (if there is sufficient room) even when scrolling other tracks.

Collapsed

If **YES** the track is a member of a **Track Group** currently collapsed. (see below)

Display Mode

Shows the current Clip Display Mode mode. Clicking in this column field drops down a list box with the three possible modes, **Block**, **Waveform** or **Envelope**

Show Automation

If **YES** the automation envelope is displayed. Clicking in this column field toggles between **YES** and blank.

Show Peak-Meter

If **YES** a Peak Meter is displayed in the **Track Header**. Clicking in this column field toggles between **YES** and blank.

Size

Shows the current track display **Height**. (in pixels) Clicking in this field allows a numeric value between 24 and 511 to be entered.

Background Color

Shows clip background color. If blank, color is set to the default. Clicking in this column field pops-up a color picker. Choosing **Standard** restores to default.

Waveform Color

Shows clip Waveform color. If blank color, color is set to the default. Clicking in this column field pops-up a color picker. Choosing **Standard** restores to default.

Recording Media Folder

Shows the **Media Folder** where new recordings will be stored. Clicking in this column field pops-up a list of all mounted Media Folders.

Track Groups

Track Groups, as the name implies, enable a number of logical function linkages between tracks and several other useful methods of improving efficiency. Track groups can be created and manipulated by the user. Track Groups are also created by default when Recording or Rendering operations occur on more than one track at the same time.

Track Groups Tab Window

Opens a table where each row contains information about a single track group and each column contains Information and function selection fields.

Track Groups																									
Name	Type	Collapsed	Collapsed Display	Keep Center	Free Zoom	Free Markers	Markers Locked	No Selection	Auto Solo	Auto Mute	Auto Rec	Auto Solo	Auto Hide	Exclusive Show	Show Scale	Solo	Mute	Record	Monitoring	Display	Show-Mute	Size	Color	Sync	Automation Selection
Click here to add a new Track Group																									
Click here to duplicate a Track Group																									
CD Master	Destination	Yes	CD Master L													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Originals	Source		Original Record...			Yes										Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Overdubs	Source		Overdub													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scratch	Free		Scratch 1													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Tracks Groups Tab floating Window

The first two rows enable new Track Groups to be created and existing ones to be duplicated by clicking on the **Name** field.

To create a new Track Group, click on **Click here to add a new Track Group**. A text entry box replaces the **Name**. Enter a suitable name and press **Enter**. A new track group will appear at the bottom of the list.

To duplicate an existing track group, click on the Track Group you wish to duplicate then click on **Click here to duplicate a Track Group**. A text entry box replaces the **Click here to duplicate a Track Group**. Type a suitable name and press **Enter**. The duplicate **Track Group** appears in the row below the **Track Group** you have just copied. Subsequent rows are moved down the table. The **Track Group** entries can be re-ordered by clicking on the symbol at the far left of the **Name** field and dragging to the desired row.

When tracks are assigned to a **Track Group** a small group track is shown in the **Timeline** immediately above the first assigned track.

Track Groups can be collapsed/expanded by clicking the little [-] or [+] on the Track Group track header.

Track Group Column Fields

Name

The name of the **Track Group**. Up to 29 characters are visible in this field but longer names are accepted. Click in the field or **F2** to edit the name.

Type

Clicking in this column field drops down a list box with current choices of **Free**, **Source**, or **Destination**.

Free is used to create General purpose Track Groups

Source is used for grouping Tracks to be Sources in the Source/Destination model.

Destination is used for grouping Tracks to be Destinations in the Source/Destination model.

Collapsed

Track Groups can be collapsed, so only one of the tracks of the group is displayed. When set to **Yes**, only the track chosen and shown in the **Collapsed Display** field is displayed in the Timeline. This field has the same function as the little [-] or [+] on the Track Group header.

If the single visible track is selected the group is expanded.

Collapsed Display

Clicking in this column field drops down a list box which contains the names of all the tracks in the group. The selected name determines which track will be displayed when the display is collapsed.

The rest of the fields

All the other column fields toggle when clicked, either displaying **Yes** or a blank. The functions described below apply when the fields are set to **Yes**.

Keep Cursor

The Group 'remembers' the position of the cursor and restores it each time one of its tracks is selected.

Free Zoom

The group has its own zooming factor, independent of the general zoom factor.

Free Markers

Track Groups can have their own list of markers that are displayed on the Track Group Scale or on the main TimeCode Scale if the Track Group Scale is hidden (see below).

Markers Locked

Locks the Markers. For the particular **Group**. **Free Markers** must be **ON**

No Selection

Clicking on clips placed on tracks of the group does not select anything, the cursor is simply placed at the position where the mouse is clicked. Clicking with the **Q** key held down allows clips to be selected on these tracks.

Auto Solo

If any track of this group is selected, the whole group is automatically Soloed.

Auto Mute

The whole group is automatically muted unless one of its tracks is selected.

Auto Record Ready

When a track of this group is selected, the whole group goes into Record Ready mode.

Auto Collapse

When none of the tracks of this group is selected, the group is automatically collapsed to display a single track. When this track is selected, the whole group is expanded.

Auto Hide

When none of the tracks of this group is selected, all tracks of the group are automatically hidden. When any track of the group is selected, the whole group is shown.

Exclusive Show

When any track of this group is selected, all tracks that are not part of this group are hidden. This is the equivalent of a Solo for the Display.

Show Scale

Toggles show/hide an independent scale for TimeCode if the Track Group is on Free Zoom and Markers if it is in **Free Markers** mode. If **OFF** then the Scale and Markers are displayed in the main Scale of the Time-line when any of the Tracks of this Group is selected.

Selection

When set to **Yes** this option ensures that any selection made within a Track Group is extended to all tracks in the group. **Selection** is disabled by default for backwards compatibility.

All other columns of the Tab Window (**Solo**, **Mute**, **Record**, **Monitoring**, **Display**, **Show/Hide**, **Size**, **Color**, **Sync**, **Automation Display**) define which of the parameters set in the Track Header or in the **Tracks** Tab window are affected by the group, i.e. which of these parameters are changed in the whole group when a change is made to an individual track of the group.

3

Media Management



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Housekeeping

The Windows hierarchical filing system can easily become confusing and cluttered. Complex audio projects generate thousands of more or less enigmatically named files. Keeping track of all the files used in a Project can become a nightmare even if the user is meticulous.

Pyramix uses the concepts of **Media Drives/Folders** and **Libraries** to reduce the clutter and provides management tools specifically designed for audio. This Media Management helps users to work in a structured and simple manner whilst keeping track of all the project components.

Audition Play

Master Clips in the Media Management window and all audio objects in the Library windows can be auditioned through the **Monitor** as a MONO downmix. The toolbar Play (**Space**) and Stop (**Esc**) buttons starts and stop playback of a selected object. Double-clicking an object begins playback at the start.

Media Folders

Media Folders are Windows folders or drives which contain **Media Files**. Pyramix needs to specifically mount these **Media Folders** in order to access the **Media Files** contained therein. Once mounted, suitable files are displayed as **Master Clips**. I.e. pointers to the underlying audio files. Mono and interleaved Stereo and Multichannel Media files are all displayed and manipulated as single Master Clips

These can be dragged and dropped or copied and pasted directly into the **Timeline** or into a **User library** from the **Media Management** Window regardless of format, sampling rate or bit depth.

Media Target Settings

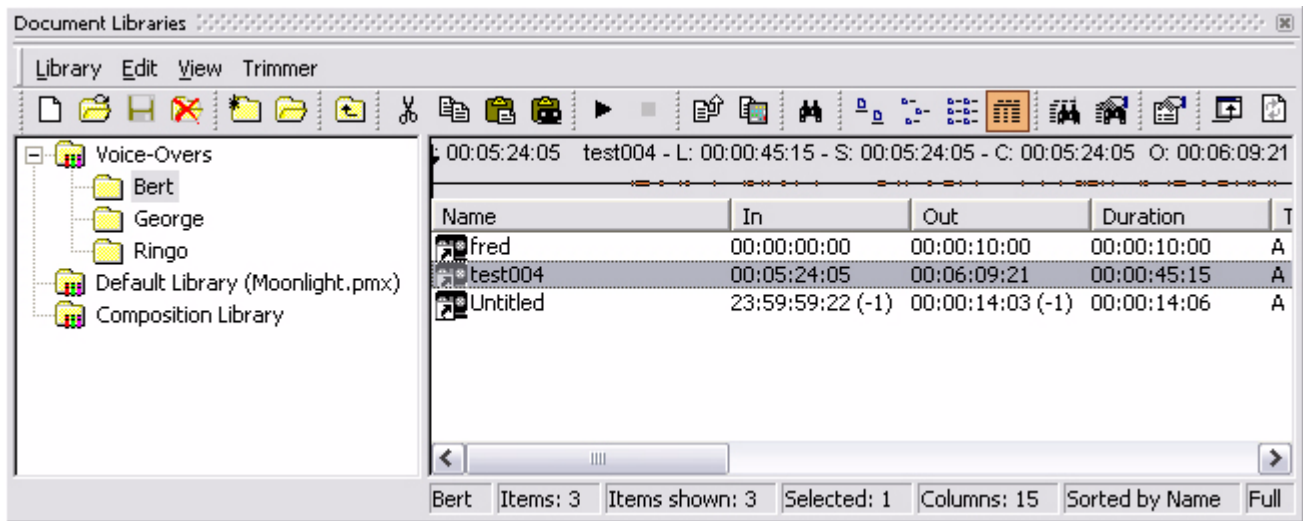
When a Project is created, either with **Project > New** or **Project > New From Template** and a Media Folder is created or selected, the **Project Information : Project Media Folder**, the **Record : Target settings** Media Folder, the **Project > Render : Target Settings** Media Folder and the **Project > Mix Down : Target Settings** Media Folder all point to the same folder. These target settings can be changed later and each can point to a different folder.

Libraries

Pyramix uses libraries to help make project organization tidier. **Libraries** are used to organize project material into logical groupings. However, **Libraries** are not the same as Windows directories or folders. They are only meaningful within the Pyramix environment. A **Library** is a database, containing a collection of pointers to different types of media objects with tools designed to enable you to work quickly and intuitively.

Shelves

A library **Shelf** is a sub-folder. You can create many **Shelves** in a Library and **Shelves** can also contain further **Shelves**.



Libraries - Shelves

Project Libraries

When a new **Project** is created two **Project Libraries** are also created.

Composition Library

Each Project has a unique, read-only **Composition Library**. This contains short-cuts to every **Master Clip** placed on the **Timeline** (present in the **EDL**) in the current **Project**. Note that the **Composition Library** may be empty, i.e. nothing is placed on the **Timeline** but the user library(s) may contain **Master Clips** and **Compositions** which all form part of the **Project**.

Default Library

Each new Project also creates an empty **User Library** named **Default Library** ('project name'.pmx). This is provided to aid housekeeping and is kept with the project.

Global Libraries

Project Libraries are kept with the Project, **Global Libraries** are available to all projects and users of the system. This can be helpful for sound effects or where several users need access to the same source material to produce different end products.

User Libraries

Master Clips can simply be dragged from **Media Folders** to **User Libraries** for purposes of clip organization, grouping, etc. just as they are dragged into **Compositions**

Clips or **Selections** can be copied and pasted into User and Global libraries. Library items can be dragged and dropped onto other libraries, shelves or the Timeline or you can use the familiar **Cut**, **Copy** and **Paste** commands.

User Libraries are not restricted to storing individual **clips**. Whole **Compositions** or selected **Regions** of **Compositions**, including all the **clips** in a **Composition** in relation to each other on multiple **Tracks** may be placed in a library. To do this, select one or more **clips** in a **Composition**, hold down the **Shift-Alt** keys

and drag the selection from the **Timeline** to the **Library**, or hold down the **Shift-Alt** keys and drag the whole **Composition** from the **Overview** panel to the **User Library**.Media Folders

User Libraries can contain **Master Clips**, **Compositions**, **Mixer Snapshots**, **Plug-in Snapshots**, **Fade Settings**, etc.... Each **Project** can have an unlimited number of User Libraries open, each with an unlimited number and mixture of contents.

N.B. In Pyramix **User Libraries**, there is no practical distinction between a **Clip**, a section of a **Composition (Region)** and a complete **Composition**. Either can be added to a **User Library** or to an existing **Composition**. This is an extremely powerful feature. Any item copied to a **User Library** from the **Timeline** appears there as a **Composition** automatically labelled **Part of 'composition name'**.

Automation in libraries

If the menu item **Edit > Enable Automation Cut/Copy/Paste** is enabled then any operation (Cut/Copy/Paste etc...) brings all automation data with it.

Library Maintenance

If media is moved or the path to it is changed (E.g. by copy, backup or moving folders etc.) Libraries referencing the 'orphaned' media can have their paths updated by simply mounting all the media folders involved and selecting **Drive > Update Media Paths** in the **Global Libraries** tab window

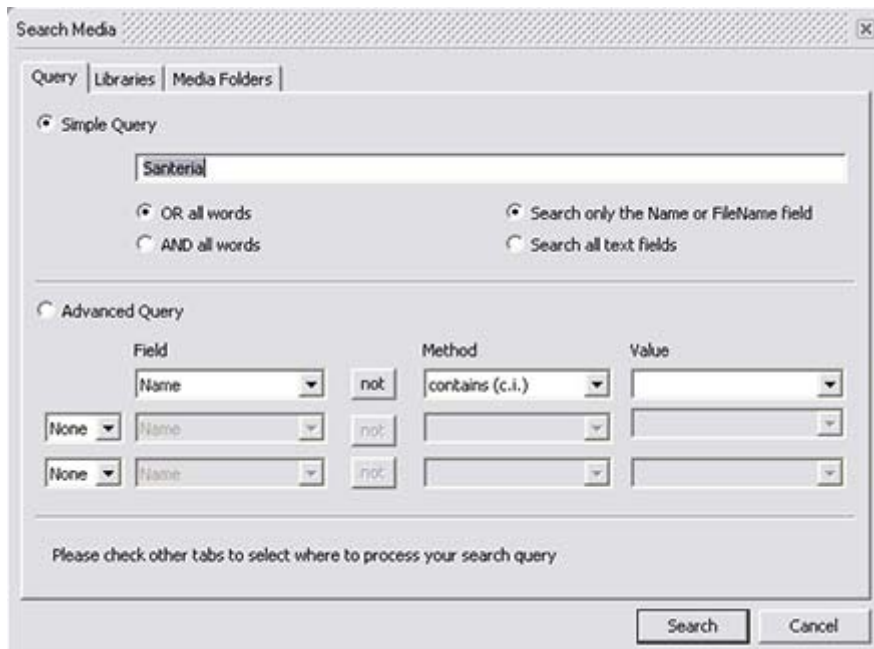
Practical Media Management

The Media Menu

This menu gathers together the most significant Media related commands for the current Project.

Search Media

Opens the Media Search Tool with the **Query** page displayed.



Media Search Tool - Query page

Before a search can begin, a Library or Libraries, Media Folder or Folders to search must be selected in the Libraries or Media Folders pages.

Query Page

The **Query** page offers a choice of **Simple** or **Advanced Queries**.

Simple Query

A simple search uses a word or words and does not consider case. Radio buttons offer a choice of **Search only the Name or FileName field** or **Search all text fields**. If more than one word is entered two further radio buttons give a choice of **Or all words** or **AND all words**. E.g. If you type **Car Mercedes Door** with **OR all words** selected, the search will return all Media Files with any of the three words. If **AND all words** is chosen the search will only return files with all three words in the selected field(s). The words can appear in any order.

Advanced Query

An advanced search has the same options as a search initiated from the Media Management or Library Tab windows. **Please see: Search on page 34**

Libraries Page

This is where you can choose which Library(s) to search in.

- All Open Libraries
- A list of Pyramix Projects and/or Libraries
- A list of folders in which all Pyramix Projects and Libraries present will be searched.

Libraries do not have to be opened in order to search them.

Media Folders Page

Similar to the **Libraries** page, the **Media Folders** page allows you to choose which Media Folders to search in.

- All Mounted Folders
- A list of folders containing media files.
All folders in the list will be searched using the **QuickMount Library**. If there is no QuickMount present, there is choice of **Open each file and search all metadata** within it or **Search only file names**, which is quicker.

Search Results

Search results appear in a floating Library window. The contents can be manipulated in the same ways as any other User Library.

Mount Referenced Media	Mounts all media not already mounted and used in the current Project
Auto-Mount Media	When selected, whenever a reference from an Offline library is placed in the current Project, the Media will automatically be mounted.
Select Online Clips	Selects all Clips in the Timeline whose Media files are currently mounted
Select Offline Clips	Selects all Clips in the Timeline whose Media files are not currently mounted
Select Used Media	Opens a floating Media Manager window containing all media used by the current Project.
Select Media present on Project Default Folder	Opens a floating Composition Library window with all Media present in the Project Default folder selected (highlighted)

Select Media NOT present on Project Default Folder Opens a floating Composition Library window with all Media NOT present in the Project Default folder selected (highlighted)

Collect Media to current Project Default Folder Copies all media files used in the current project (as shown when the previous **Select Media not present** ... is invoked to the current Project Default Folder. This function is especially useful if moving a machine or disk to another studio or where network resources may not be available.

Clean-Up Media

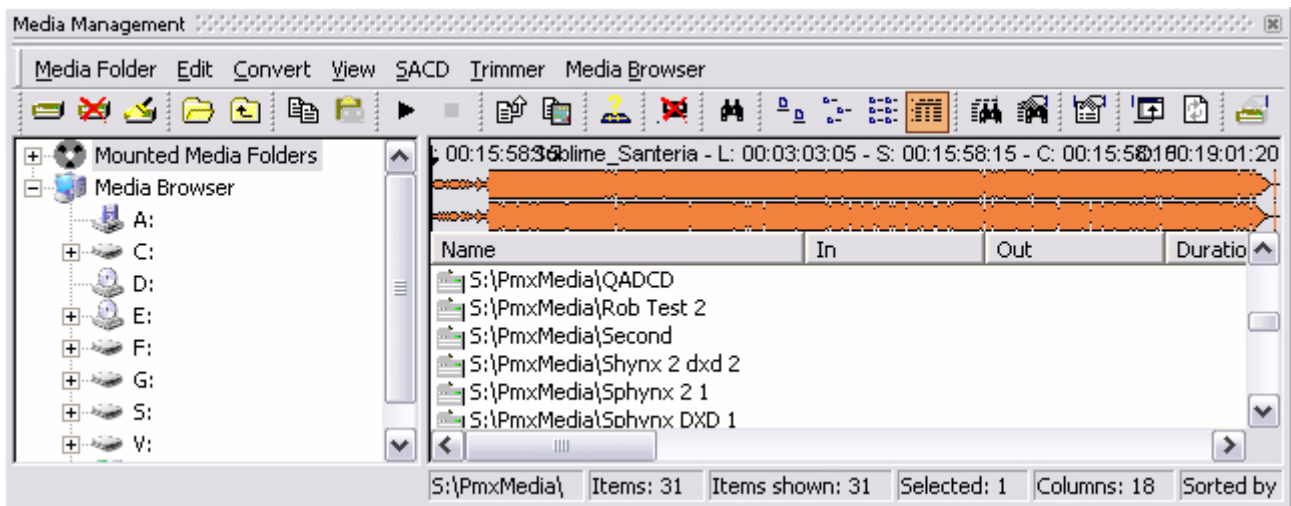
Opens the **Choose a Media Folder to Clean-Up** window. Choose the Media Folder you wish to clean-up and click **OK**. All media not referenced by the current Project will be permanently removed from the selected folder.

Media Management and Libraries Tab Windows

The **Media Management** Tab Window is very similar in appearance and operation to the **Document** and **Global** library Tab Windows. However, the Menus and Toolbars differ reflecting their different capabilities.

Media Browser

The **Media Management** window can operate on **Mounted Media Folders** and act as a **Media Browser** for any local or network storage locations.



Media Management Tab floating Window

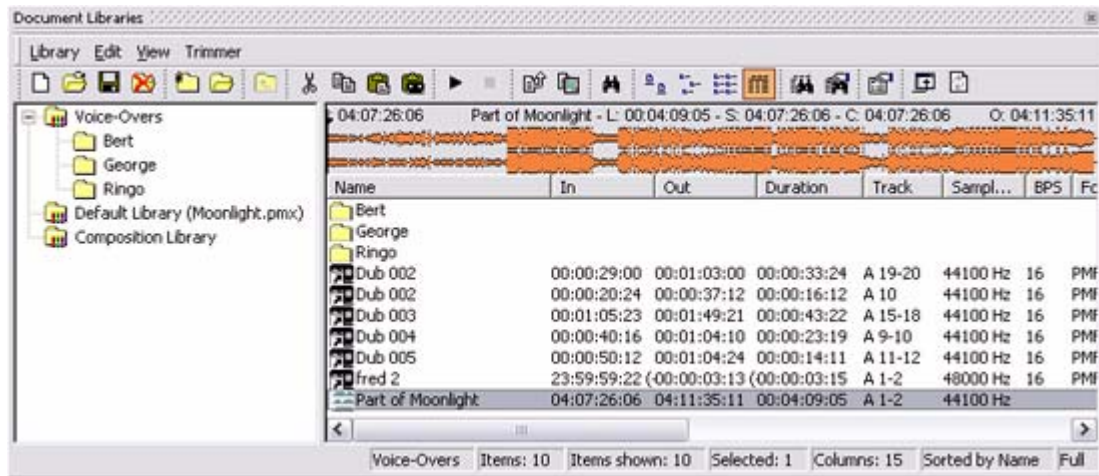
Below all **Mounted Media Folders** an "Explorer like" Tree allows Media Folders to be browsed without formally Mounting them.

When displayed in the Media Browser all recognized Media are temporarily mounted and can be auditioned and placed in the timeline.

Document and Global Libraries

There is no real difference between Document libraries and Global Libraries. The distinction is an organizational one, made to help keep complex projects manageable and to provide security features for larger facilities. Libraries designated as **Global** are available to all projects but can be opened and manipulated from the **Document Library** window. Equally, libraries created in the **Document Libraries** window can be opened in the **Global Libraries** window. The default Project library created with every Project is stored with

the Project. It can still be opened in the **Global Libraries** window by locating the **.PMX** project file in the Project's **Media Files** sub-folder.



Document Libraries Tab floating Window

The left hand pane shows **Libraries** and **Shelves** associated with the project. The contents of the selected **Library** or **Shelf** is shown in the right-hand pane with information about the objects in columns. Shelves are displayed at the top with individual library items below. Clicking on the + or - signs in the left-hand pane expands or collapses Libraries and Shelves.

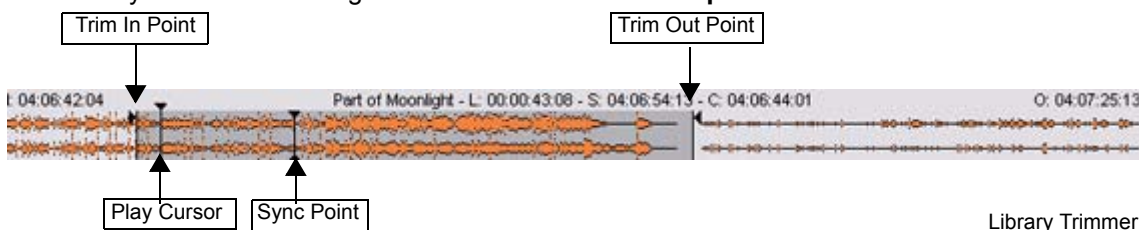
Libraries allow Drag & Drop operations from the Library content (right side window) to the Library/Shelf tree hierarchy (left side window).

Tools and Menus

The Library and Media Management Window menus give access to all available functions. Many have keyboard short-cuts and a selection of functions are directly available from the Library Window Toolbar with ToolTips indicating their function.

The Trimmer

All Library and Media Management Windows have a **Composition/Media Trimmer**:



Library Trimmer

The **Trimmer** can be shown/hidden with the menu item **Trimmer > Show**. An object highlighted (selected) in the list view is automatically opened in the trimmer. A small square to the left of each track displayed allows tracks to be de-selected/selected for playback in the Trimmer.

Media, Clips or Compositions can be trimmed in the following ways:

- **Double-click:** Plays the object through the Monitoring Section from the point where you double-click.
- **Click & Drag:** Drag the object to the timeline or to an other library properly trimmed (from the In point to the Out point. Dragging it from the list view takes it untrimmed).
- **Shift + Click:** Sets the **Trim In** point. The point can be modified later by simply clicking on it.

- **Control + Click:** Sets the **Trim Out** point. The point can be modified later by simply clicking on it.
- **Control + Shift + Click:** Sets a **Sync Point**. The point can be modified later by simply clicking on it.
- **Shift + Alt + Click:** Sets the **Trim In** point and plays from it.
- **Control + Alt + Click:** Sets the **Trim Out** point and plays from it.
- **Control + Shift + Alt + Click:** Sets the **Sync Point** and plays from it.
- **Control + Double-Click:** Resets the **Trim In** and **Trim Out** and **Sync Points**.

Trim In, Trim Out and Sync Points

The **Trim In**, **Trim Out** and **Sync** Points are permanently preserved for Compositions and MasterClips stored in a Library (Project or Global), but only until the next Mount or Refresh for mounted Media in the Media Management Window.

Compatibility

Because the Media Trimmer allows Trim In, Trim Out and Sync Points to be set and saved in current libraries a menu option: **Library > Save Library As 4.x** allows libraries to be saved in a format compatible with version 4.x. for maximum compatibility.

Library Menus

The **Edit**, **View** and **Trimmer** menus are almost identical in Library and Media Management windows and details can be found in **Tools and Menus** below. Exceptions are noted where they arise.

Library Menu

The **Library** menu allows new **Libraries** and **Shelves** to be created and existing ones to be opened and saved. When a library is opened the media used by **Masterclips/Compositions** may not be mounted, (E.g. on a removable drive). **Mount Referenced Media** automatically mounts the most recent location where these media were found

New Library	Create new user library
Open Library	Open existing user library
Save Library As	Save a copy of the current library with a new name or in a new location
Save Library as 4.x	Save a copy of the current library in Pyramix 4.x format for maximum compatibility
Close Library	Close current library
Mount Referenced Media	Automatically mounts the most recent location where media in the current project were found
Update Referenced Media Paths	To update a library, mount all the media folders involved then select this menu item
Import OMF library (Avid Bin)	Opens a File Browser to locate the library you wish to import
Export to Akai DD Series	Opens the Export to Akai DD Series window
New Shelf	Adds a new Shelf (folder) in the current Library or Shelf
Open Shelf	Opens selected/highlighted Shelf
Up One Level	Moves right-hand pane display up one level in the hierarchy

Properties

Pops up a box with properties of the currently selected object

Edit Menu

Cut

(Not in **Media Management** Tab for safety) Cuts Object from pane. Object will be deleted unless pasted elsewhere.

Copy

Copy object

Paste

Paste object (Not in **Media Management** Tab)

Paste with Media

Pastes object complete with associated Media files to wherever the target object is stored

Rename

Rename object

Open/Audition/View

(Libraries only) Opens highlighted (selected) Clip or Composition in the Trimmer and begins audition play. Opens highlighted (selected) Shelf

Audition

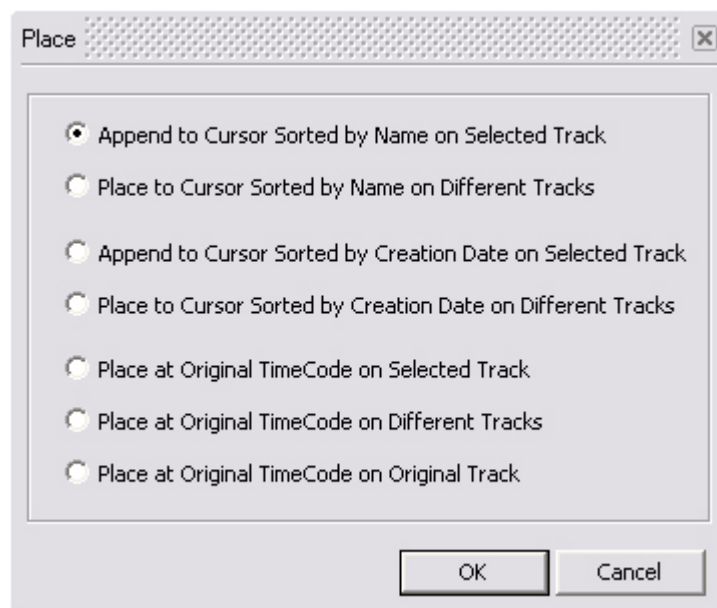
(Media Management only) Opens highlighted (selected) master Clip in the trimmer and begins audition play.

Stop Audition

Stop audition play and return cursor to beginning

Place

Opens the **Place** dialog:



Edit menu Place dialog

The selected object(s) will be placed in the Timeline according to the rule chosen here.

The selected object will be placed in the timeline on the selected track and Playhead Cursor position at its **Sync Point** or, if no Sync Point has been set, at its **In Point**

Placement Tool

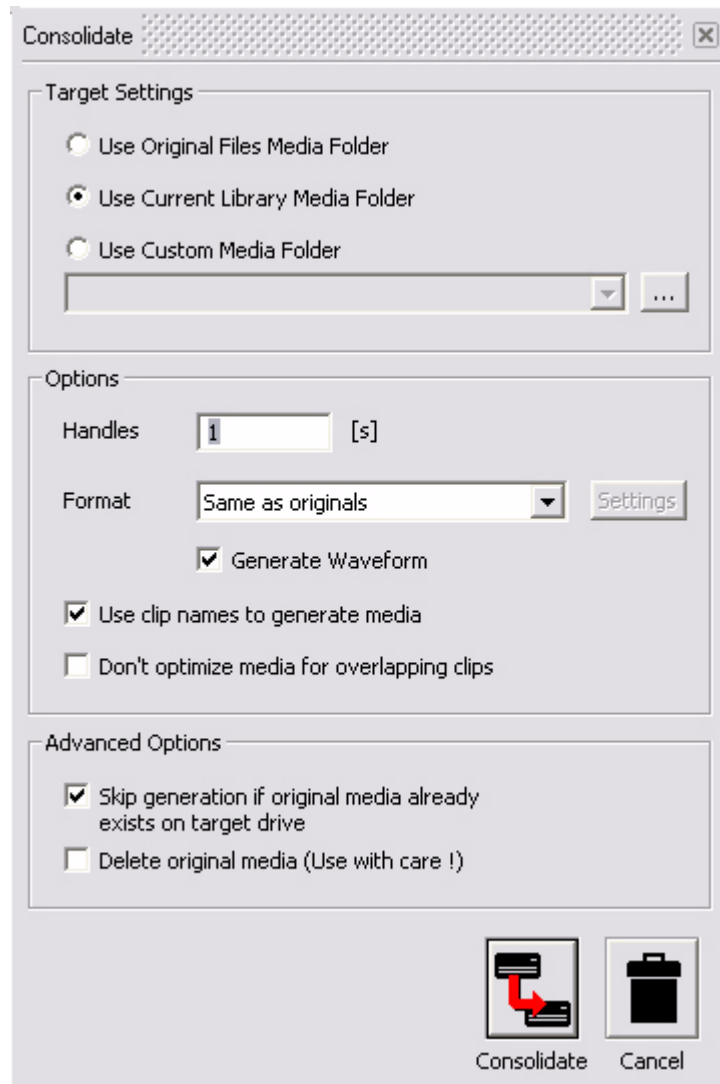
Opens the **Placement Tool** for placing the object

Send

(Libraries only) Sends selected object(s) as e-mail attachment

Consolidate

(Libraries only) Opens the **Consolidate** dialog.



Libraries Edit menu Consolidate dialog

The **Consolidate** function makes a selective backup of the media segments in the selected object. I.e. instead of backing up the whole of every media file referenced by the clips in a composition, **Consolidate** backs up only those parts of the media files that are referenced by the clip segments in the **Composition**. Extra media, beyond the clip boundaries can be added using the **Handles** option. This allows further manipulation of the Composition within the limits of the handle length.

Please see also: Consolidating Projects on page 224

Delete Media

(**Media Management only**) Deletes the selected Master Clip and Associated Media Files

Important! **Delete Media** does what it says. This command:

PERMANENTLY REMOVES AUDIO (and its associated Waveform file(s) from the drive.

Select All

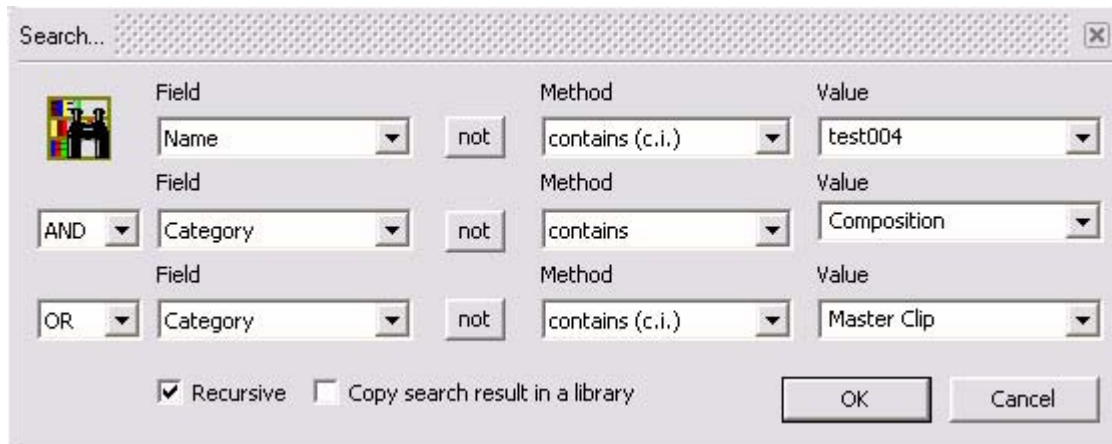
Selects all objects in the right-hand pane (**Ctrl Click** toggles selection of individual objects)

Invert Selection

Selected objects are de-selected, unselected objects are selected

Search

Search Opens the **Search** dialog



Library Search dialog

This dialog searching for specific entries using filters.

Field	This combo box shows a list of all fields which may be used as the basis for the search.
Not	When this button is pressed the query will find every entry in the library that does not conform to the query parameters.
Method	Gives a choice of filter parameters:
Value	A value can be typed in or chosen from the list. The list displays all values present in the library for the selected Field
Recursive	When checked, the search will encompass all sub-folders in the library
Copy search result in library	When checked, all items matching the search criteria will be added to a new library named Search Results in a shelf named as per the query itself. E.g. Name contains 'D' in D:\Pyramix\Media

The two combo boxes on the left-hand side allow two further filters to be added with a choice of **AND / OR**

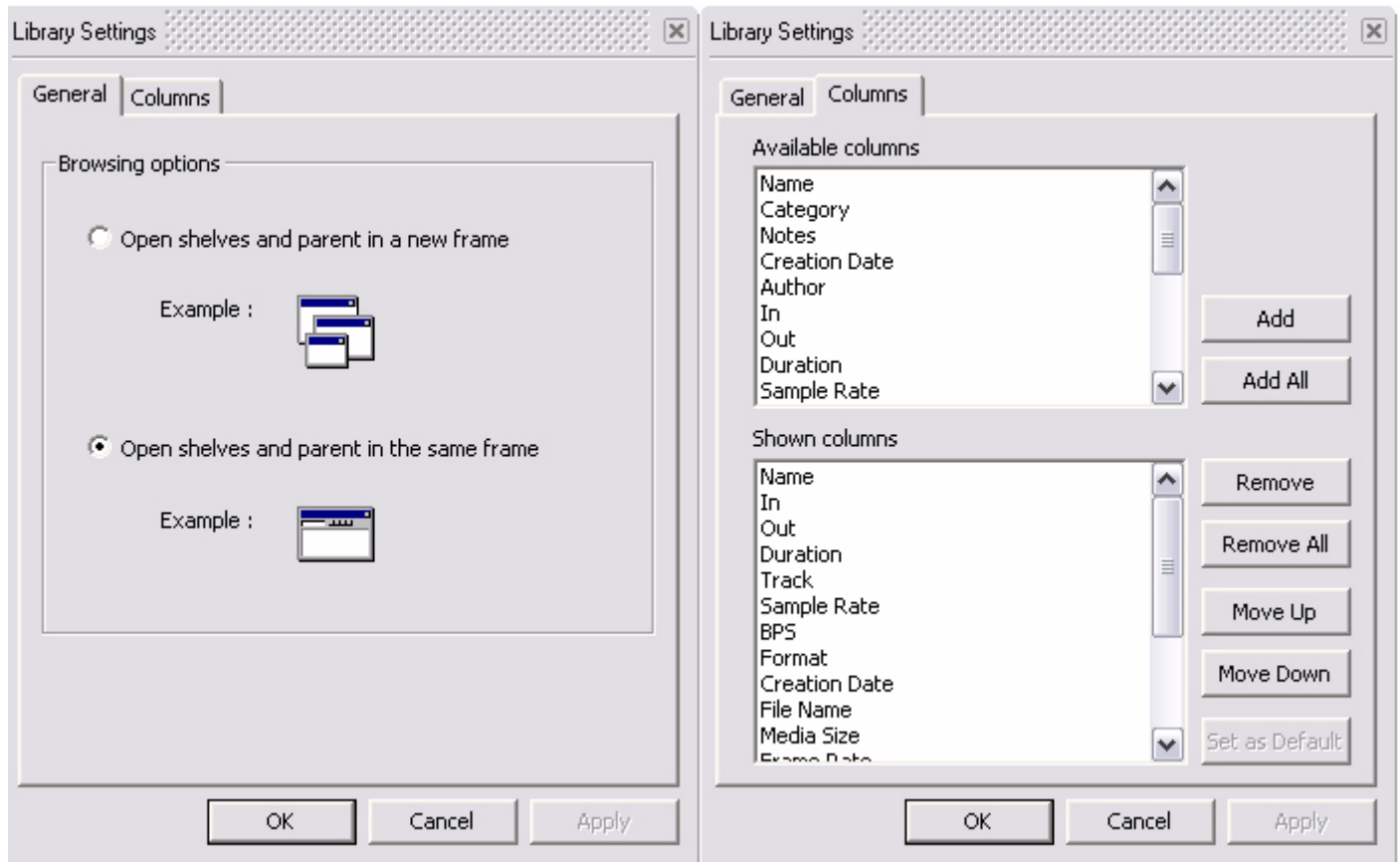
View Menu

The **V**iew menu determines how information is displayed.

Toolbar	Turns the Toolbar on and off
Status Bar	Turns the Status bar on and off
Large	Show large Icons
Small	Show small Icons
List	Show as list
Detail	Show as list with details
Filter	When ticked, filters the items displayed in the right-hand pane of the Window according to the filter parameters set under:
Filter Options	(this dialog offers the same options as Edit > Search)

Options

Opens the **Library Settings** dialog box with two Tabs, **General** and **Columns**.



Document Libraries View menu Options General and Columns panes

The default **General** tab offers a choice of opening shelves and parent in a new frame or Opening shelves and parent in the same frame and the **Columns** tab controls what is displayed in the right-hand pane of the **Library** Tab Window. The columns displayed and their order are all customizable

New Window

Opens another instance of the Library or Media Management Window

Refresh

Forces a refresh

Trimmer Menu

Show

Show/Hide the **Trimmer**

Show 1 Track

Show only the first track of the object displayed in the **Trimmer**. When this option is selected **Up** and **down** arrows appear at the left of the Trimmer track display which enable any track to be displayed.

Show Track Details

The following information is displayed for each track of the selected Media file:

- Track Name
- Track Number
- Track Type (left, Right, Center etc.)
- Track File Name (If the Media is recorded in **One File Per Track** mode)

Auto-Show

Trimmer is automatically Shown when an appropriate object type is highlighted (selected)

Auto-Generate Waveform

Waveforms are automatically created for objects without them.

Media Folder Menu

Mount Media Folder	Make visible to the Pyramix media filing system
Unmount Media Folder	Remove from the Pyramix filing system
Refresh Media Folder	Refresh works in the same way as Explorer Windows and makes visible files which have been added since the Media Management Window was opened
Create Offline/Reference Library	Please see: Creating Offline/Reference Libraries on page 48
Create Quick Mount Libraries	Please see: Quick Mount on page 46
Open Folder	Opens the Media Management Library for the selected drive and directory. Double clicking on the name of the media directory has the same effect
Up One Level	Moves up one level in the file hierarchy
Mounting Rules	Opens the Mounting Rules dialog. This allows the user to apply special rules when attempting to mount files that contain the same 'unique' identifier. (See below)
Properties	Pops up an info box showing properties of the selected Media Folder

Edit, View and Trimmer Menus

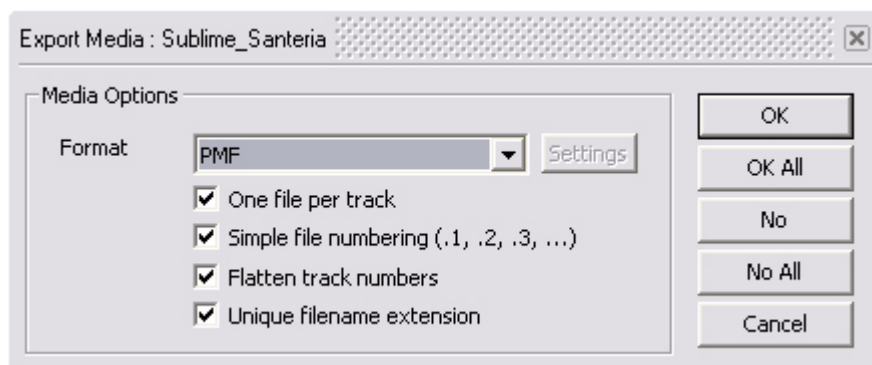
The **Edit**, **View** and **Trimmer** menus are almost identical in Library and Media Management windows and details can be found in **Tools and Menus** above. Exceptions are noted where they arise.

Convert Menu

Quick Import	Enables sound files in any supported format to be imported into a Pyramix Media Drive or Folder in either their original format or converted to the Pyramix native PMF format.
---------------------	--

Note: Files in supported formats do not need to be converted to be used in Pyramix, a big time-saver.

Quick Export	Enables Pyramix Master Clips to be exported in any of the supported file formats with a number of options.
---------------------	--



Quick Export - Export Media: Dialog

One file per track	When checked, multi-channel Master Clips are exported with a single file for each channel in the clip.
---------------------------	--

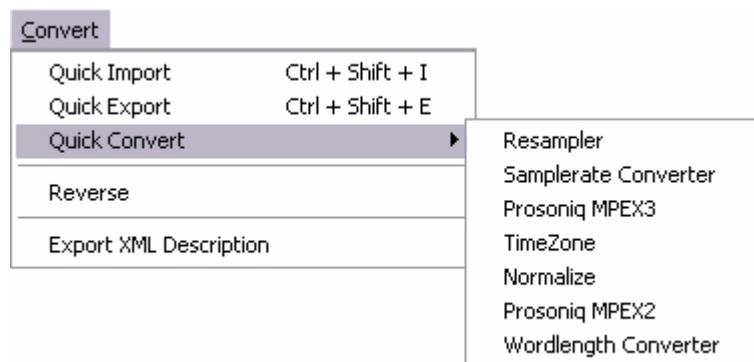
Simple file numbering (.1, .2, .3, ...) When checked resultant files are numbered (.1, .2, .3, ... instead of _##001##_, _##002##_, ...)

Flatten track numbers When checked, tracks are numbered 1, 2, 3, 4 instead of, for example 1, 2, 7, 8

Unique filename extension When checked, adds a unique filename extension.

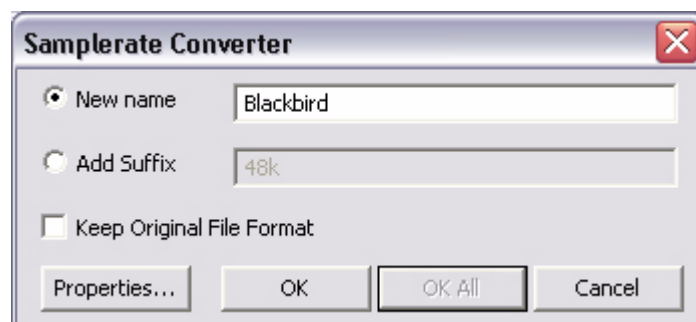
- Quick Convert >** Enables one or more Media files to be converted in a variety of ways (see below)
- Reverse** Reverses the selection so it plays backwards
- Export XML Description** Exports Media Descriptions as an XML file Select a range of media and select **Convert > Export XML Description**.

Convert - Quick Convert sub-menu



Media Management Convert - Quick Convert sub- menu

Output Dialog

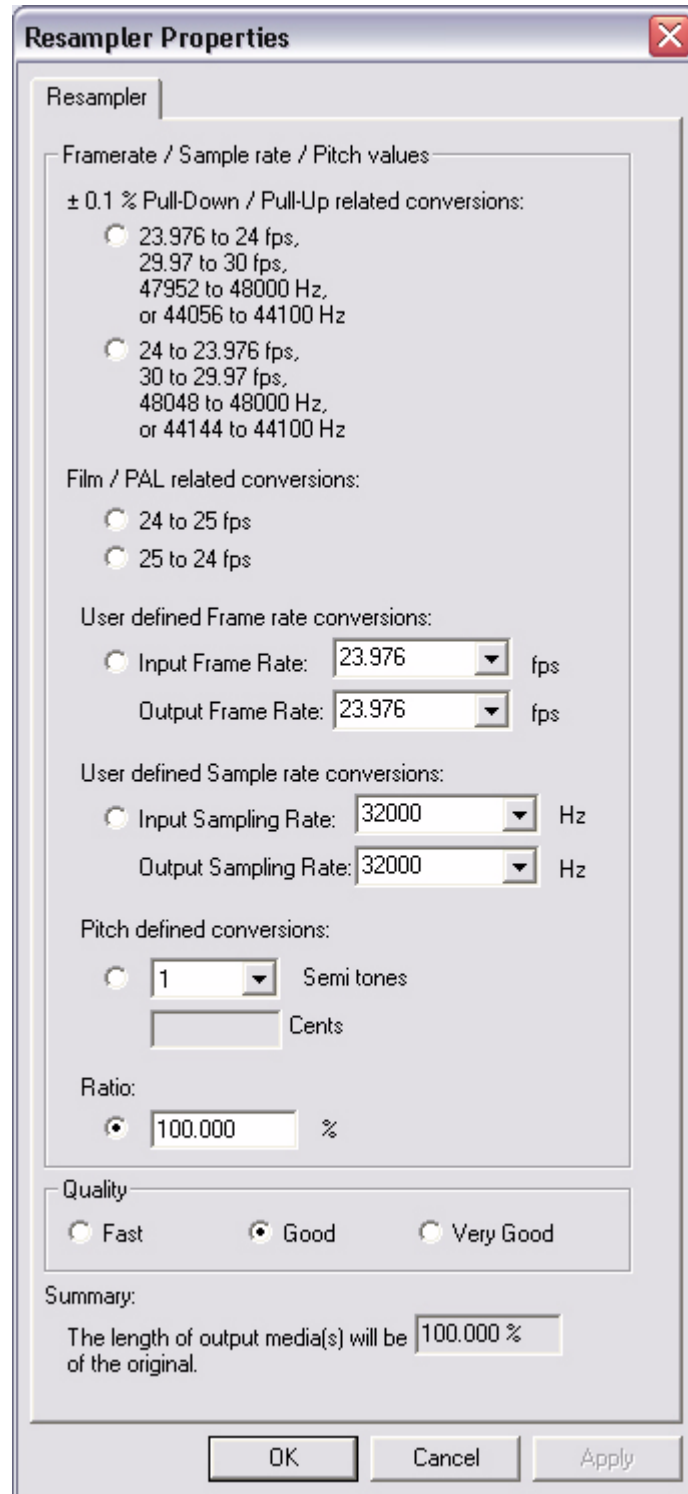


Samplerate Converter dialog

All these options produce new media files on disk. Whichever conversion option is chosen, this dialog box will pop-up with a title reflecting the selected process. Either a new name may be chosen or the existing one kept with a new suffix. If you wish to process multiple files in one operation the **Add Suffix** button must be selected. When multiple files are selected and this option chosen the **OK All** button is available. The **Keep Original File Format** checkbox does what it says. The **Properties...** button opens a dialog box specific to each conversion type. (See below)

Quick Convert Process Properties Dialogs

Resampler Properties



Resampler Properties

Resampler

Frame rate / Sample rate / Pitch values

± 0.1 % Pull-Down / Pull-Up related conversions:

☐ 23.976 to 24 fps,
29.97 to 30 fps,
47952 to 48000 Hz,
or 44056 to 44100 Hz

☐ 24 to 23.976 fps,
30 to 29.97 fps,
48048 to 48000 Hz,
or 44144 to 44100 Hz

Film / PAL related conversions:

☐ 24 to 25 fps

☐ 25 to 24 fps

User defined Frame rate conversions:

☐ Input Frame Rate: 23.976 fps

Output Frame Rate: 23.976 fps

User defined Sample rate conversions:

☐ Input Sampling Rate: 32000 Hz

Output Sampling Rate: 32000 Hz

Pitch defined conversions:

☐ 1 Semi tones

Cents

Ratio:

☒ 100.000 %

Quality

☐ Fast ☒ Good ☐ Very Good

Summary:

The length of output media(s) will be 100.000 % of the original.

OK Cancel Apply

Resampler Properties dialog

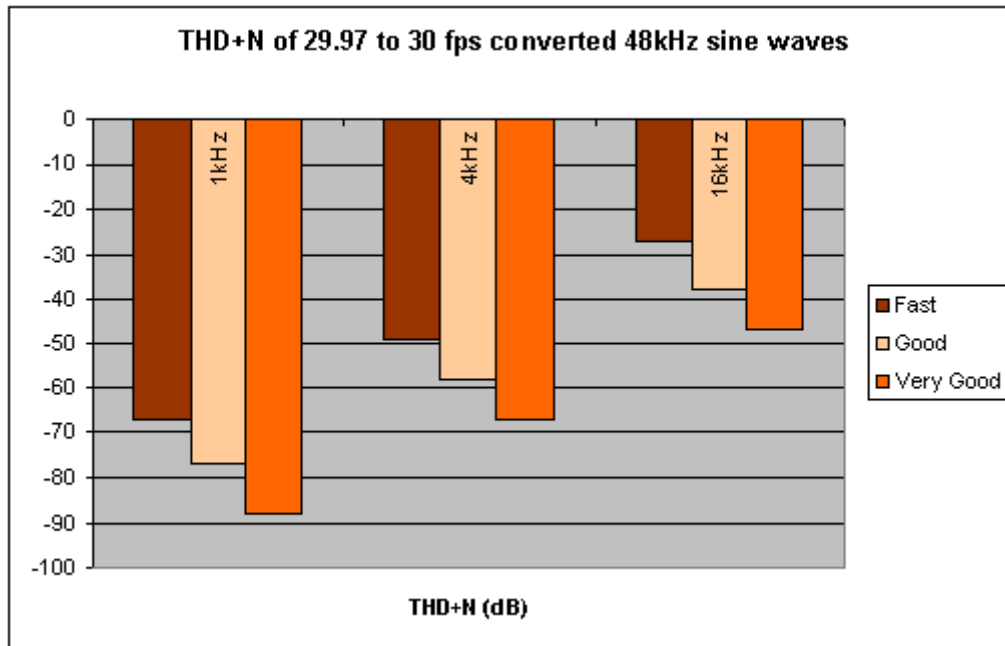
This module is initially aimed at performing ± 0.1 % pull-up / pull-down audio conversions, but there are several possible ways of defining the ratio between the destination length and the final length (frame rates, sample rates, pitch and ratio in percent).

The process differs from a **Time Stretch** operation since the pitch is modified. The Input and Output files have the same sampling rate but the length of the output files will be: (initial length) x (displayed ratio).

Another setting, **Quality**, has an effect on the resolution of the oversampling process of the treatment.

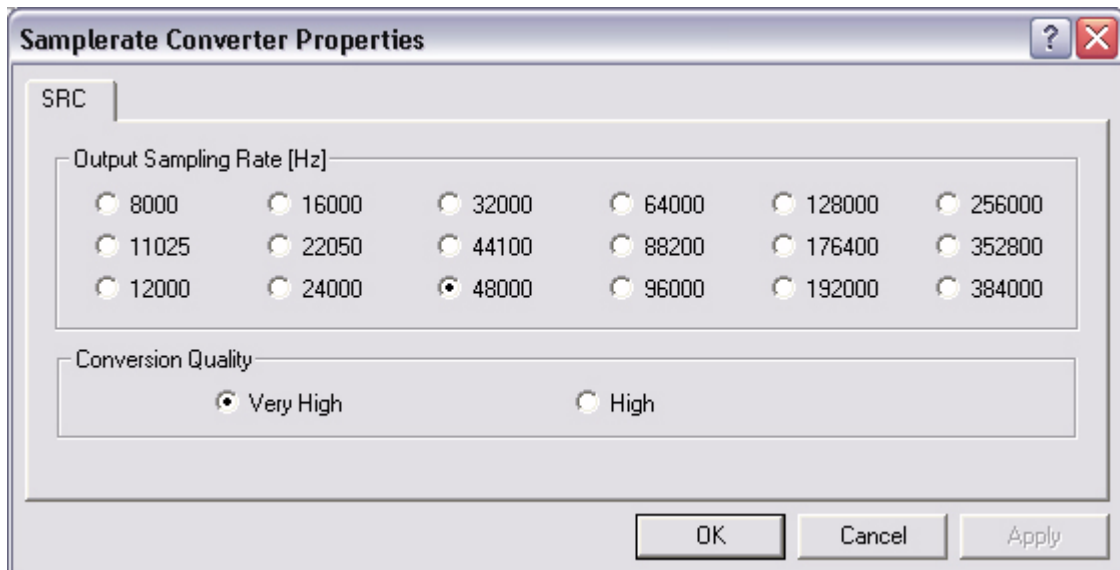
This module is available, like **MPEX**, in the '**Quick convert**' list of the Media Manager, the **Project** menu (to process all the media in a project), and as a '**Surround Encoder**' (**Project > Surround Processing**).

The following graph gives an indication of the effect of the three **Quality** settings on **THD & Noise**.



Resampler quality setting effect on THD & Noise

:Samplerate Converter Properties

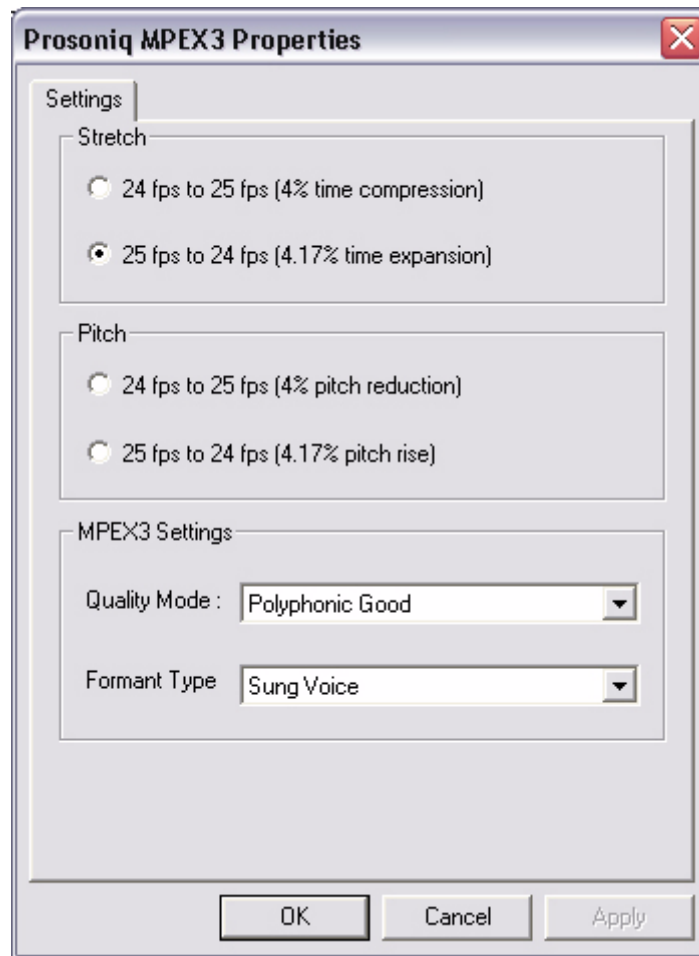


Samplerate Converter Properties dialog

Output Sampling Rate [Hz] select the desired sampling rate by clicking the relevant radio button.

Conversion Quality Select the desired quality. **Very high** offers better conversion but takes longer.

Prosoniq MPEX3 Properties



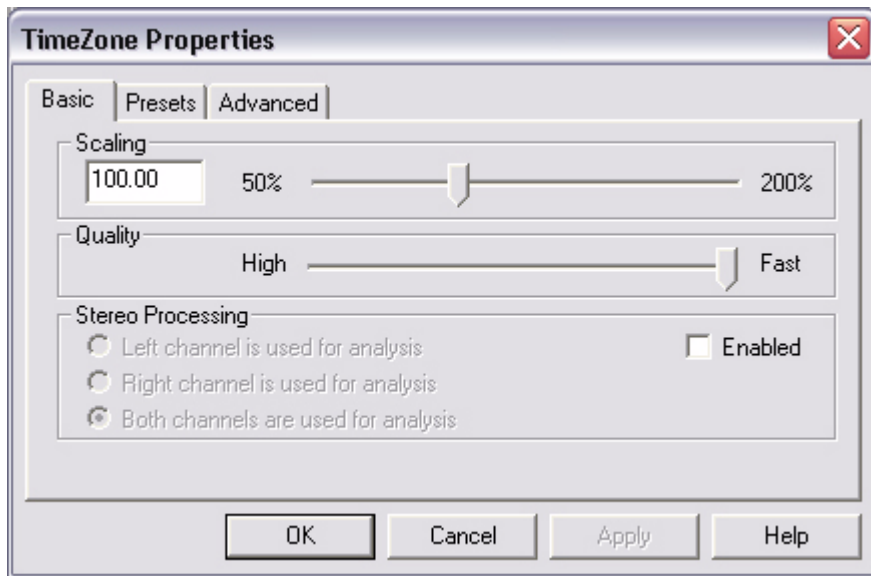
Prosoniq MPEX3 Properties dialog

Select the required conversion factor from the four **Stretch** and **Pitch** options.

Optimize **MPEX3 Settings** by making appropriate choices from the **Quality Mode** and **Formant Type** combo boxes.

Quality Mode	Single Instrument Fast
	Single Instrument Best
	Polyphonic Fast
	Polyphonic Good
	Polyphonic Best
Formant Type	Sung Voice
	Spoken Voice

TimeZone Properties - Basic



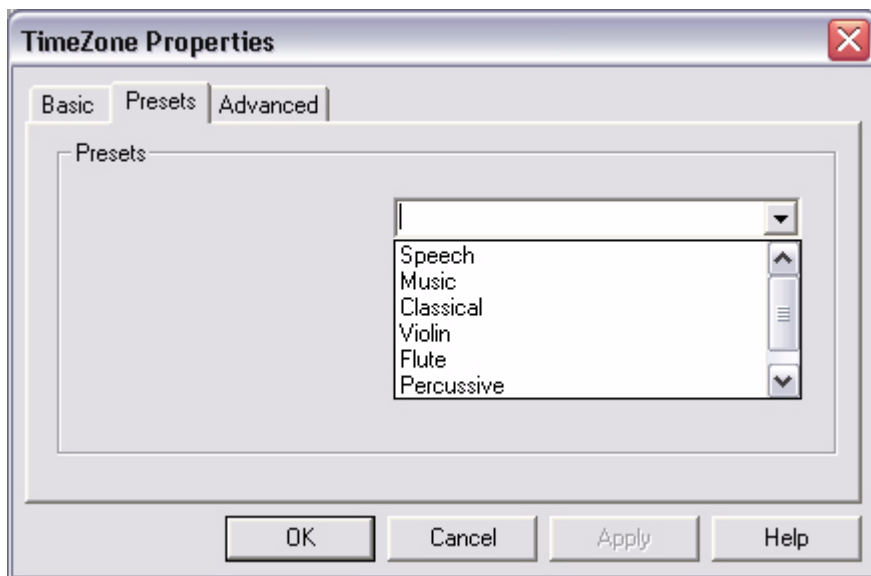
TimeZone Basic Properties dialog

Scaling Select the desired change in length in percentage by typing in the box or positioning the slider.

Quality The slider offers a choice between High Quality and Fast processing.

Stereo Processing When the **Enabled** box is checked offers a choice of which channel(s) of a stereo media will be used for analysis.

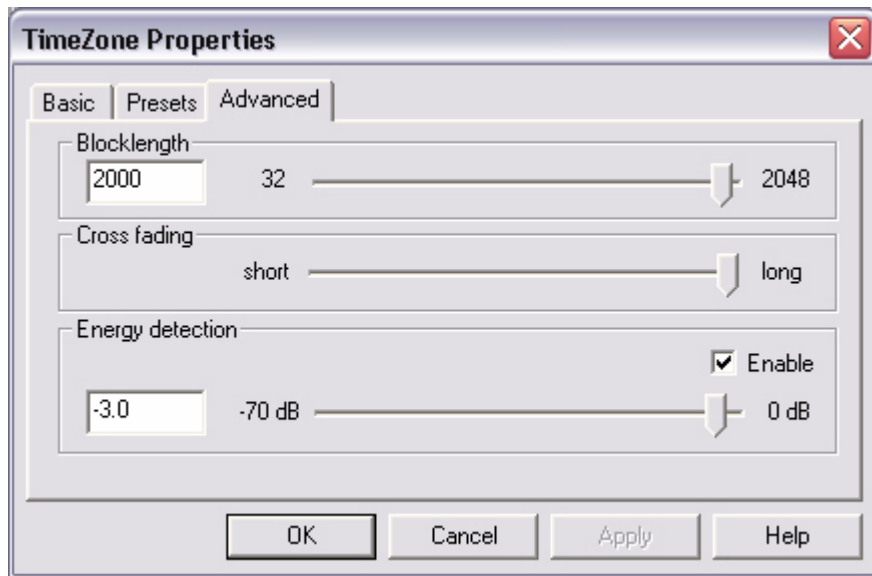
TimeZone Properties - Presets



TimeZone Presets Properties dialog

The drop-down list offers a choice of algorithm presets for various sound types.

TimeZone Properties - Advanced



TimeZone Advanced Properties dialog

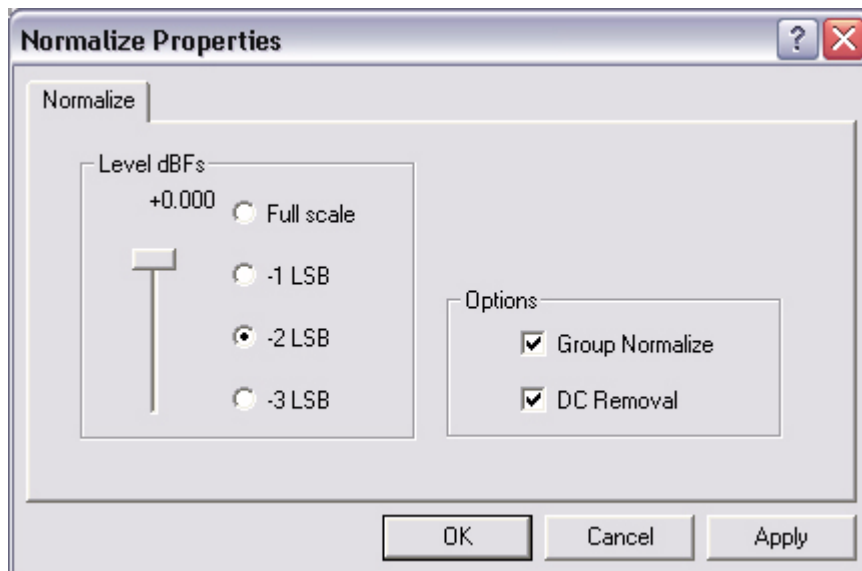
Blocklength Allows the user to determine the length of the blocks used for processing by entering a value between 32 and 2048 in the text box or by positioning the slider.

Crossfading Allows the user to vary the length of the crossfades between blocks by positioning the slider

Energy Detection When the **Enable** box is checked the user can set the threshold level by entering a value between -70dB and 0dB in the text box or by positioning the slider.

These parameters affect the quantity and character of audible artifacts and allow fine tuning of the process to suit specific material.

Normalize Properties



Normalize Properties dialog

Level dBfs

Here you can select from four preset values, or use the slider to specify the maximum level for the new file.

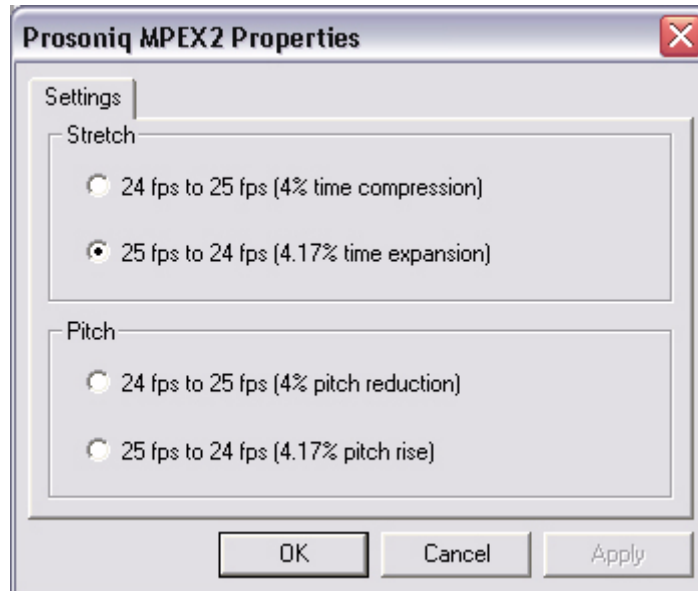
Group Normalize

When checked, the level of the highest peak in any group of clips is raised to maximum and level of the other clips is increase proportionally.

DC Removal

When checked, D.C. offsets will be removed.

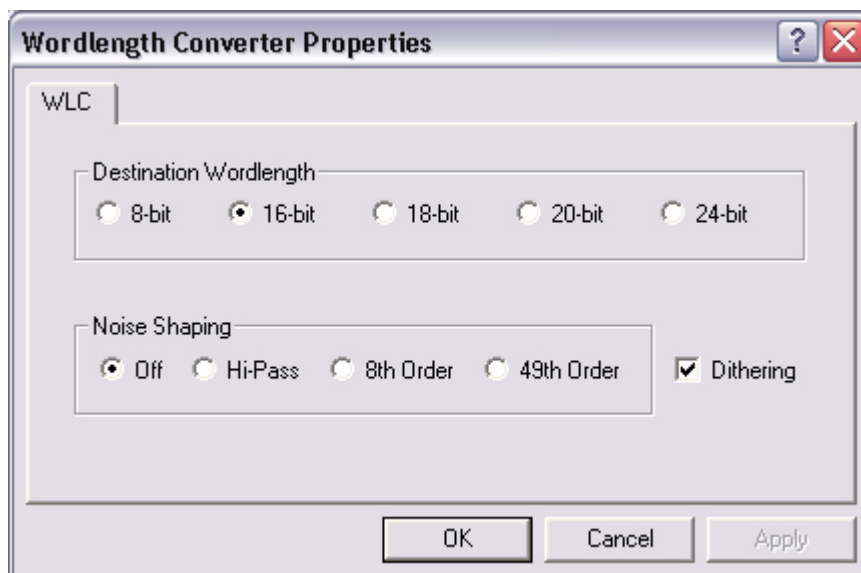
Prosoniq MPEX2 Properties



Prosoniq MPEX2 Properties dialog

Select the required conversion factor from the four **Stretch** and **Pitch** options.

Wordlength Converter Properties



Wordlength Converter Properties dialog

Destination Wordlength

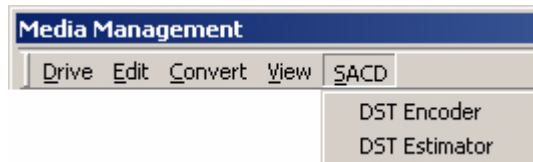
Select the desired wordlength using the radio buttons.

Noise Shaping

Select the require quality of Noise Shaping. A higher quality setting will produce better results, but the processing time will also increase.

Dithering When checked, If dithering is required, dithering will be applied.

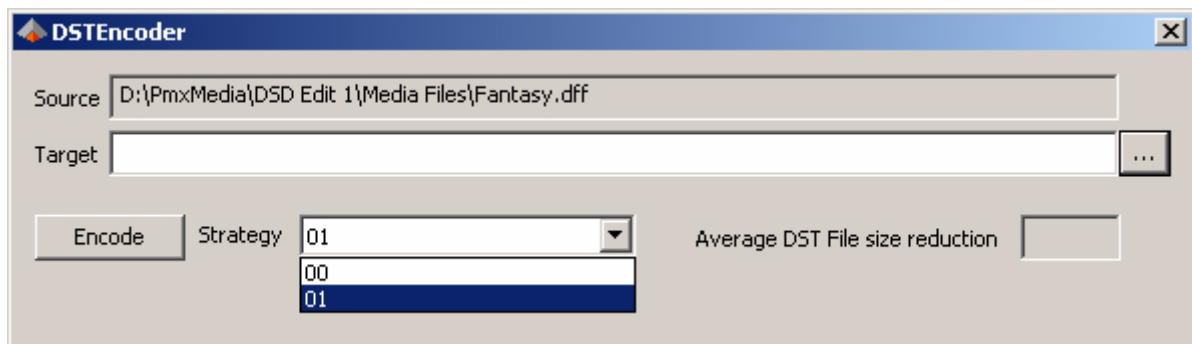
SACD Menu



Media Management SACD menu

DST Encoder

Encode an Edited Master in DST.



DST Encoder dialog

DST Estimator Estimate the DST encoding of an Edited Master with a graph to show the file reduction rate as a function of the audio material.

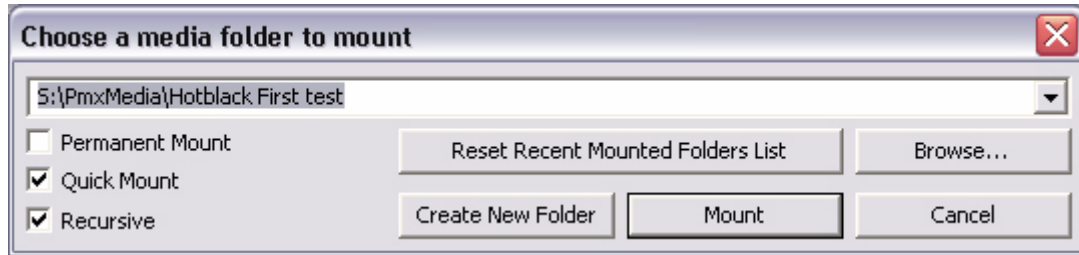
Media Browser Menu

Reconnect Media references while browsing allows Pyramix to attempt to automatically relink missing media in any open projects while browsing for easy searching. This option can be disabled for quicker browsing.

Mount Currently Displayed Media Folder allows easy mounting of the Media Folder currently displayed in the Media Browser. (Typically when the proper folder is found).

The Media Browser uses **Quick Mount** libraries whenever it can to increase browsing speed. Creating Quick Mount libraries for frequently browsed folders is therefore recommended. **Please see: Quick Mount on page 46**

Managing Media Folders



Choose a media folder to mount dialog

This dialog can be opened in several ways. From the **Media Management** Tab Window **Media Folder > Mount Media Folder** or by right-clicking a Media Drive or Media Folder entry in the right-hand pane, and from the **New** entry in **Media Folder** combo boxes in various Pyramix Windows.

The text box allows a complete path to be entered or a Media Folder or Drive can be chosen from the drop down list. Alternatively, a new Media Folder can be created by typing its name in the text box. The new folder will be created below the current one in the tree.

Permanent Mount

When checked, the chosen folder will be mounted at start up for all future Projects. (Can be useful for sound effects libraries etc.)

Quick Mount

If you check this **Quick Mount** box the system will load the 'QuickMount' library instead of parsing all the media files in the folder. (See below)

Recursive

When checked, all sub-folders of the chosen folder will also be mounted.

Reset Recent Mounted Folders List

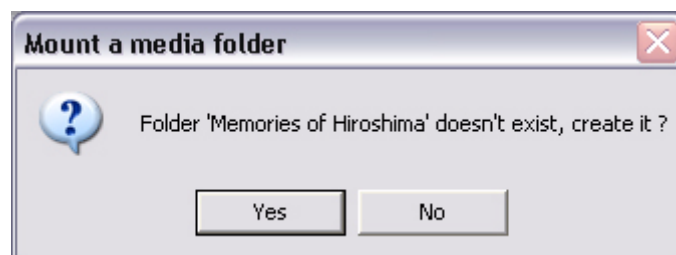
Clears the drop-down list. The list contains all folders that have been mounted since the list was last cleared.

Browse...

Opens the **Browse for Folder** dialog box which enables any Windows drive or folder on the local machine or across a network to be selected for mounting.

Mount

Mounts the selected Media Drive or Folder. To create a new Folder, simply type a name in the text entry box and click on **Mount**. (If you want the new folder to be created somewhere other than the current path tree, either type the full path or use the drop-down list or browser to navigate to the desired directory, then add the new name in the text entry box after the path) The **Mount a media folder** info box appears:



Mount a media folder info box

Click **Yes** to create the new folder, or **No** to cancel the operation.

Quick Mount

Quick Mount mode is on by default.

When a folder is mounted normally, a library called '**QuickMount.pml**' is created and stored in the original folder. This can dramatically reduce the time taken to mount media files when a project is opened.

Note: The double underline is an integral part of the filename

If the QuickMount library is not found then a standard mount is performed and a QuickMount library is created to enable future Quick Mounts to take place.

Quick Mount libraries automatically regenerate when next mounted if anything changes in the Media Folder.

Quick Mount libraries are not regenerated if Media Folders move, are renamed or change Drive letters.

The menu option **Media Folder > Create Quick Mount libraries** creates all required Quick Mount libraries for a given drive, folder or network path, recursively. (Typically this will be carried out overnight on the whole server)

If new media files are added (or removed) to or from a previously 'Quick Mounted' folder, the Quick Mount library can be manually updated by selecting **Media Manager > Refresh**.

If the **Use Quick Mount whenever possible** check box in the **Settings > All Settings Application > Location** page is checked, permanently mounted folders are automatically 'Quick Mounted' when the application is started

Mounting Rules

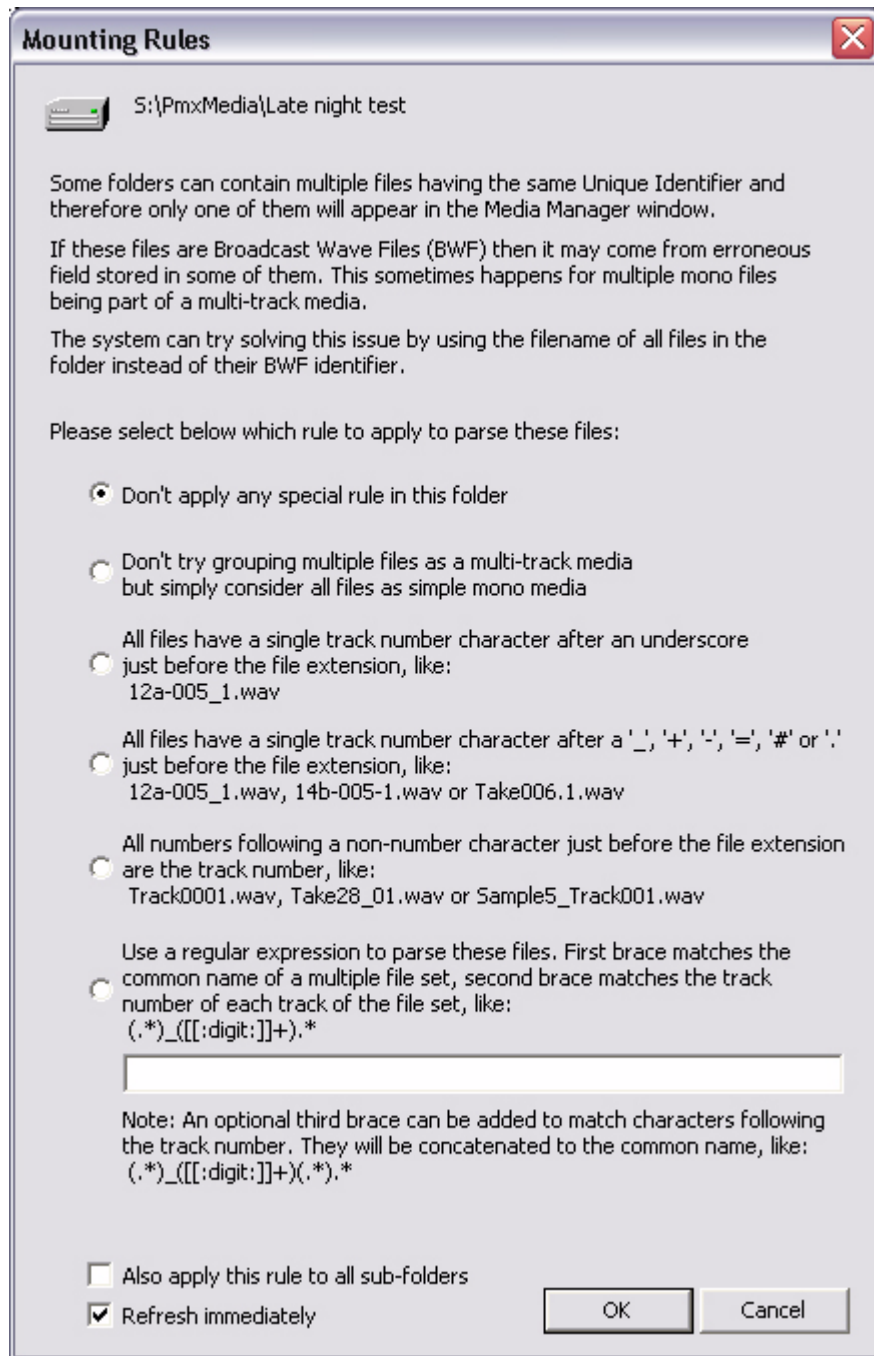
This dialog allows various rules to be applied when parsing **BWF** or **Wave** files in a given folder. Pyramix always tries to group multiple mono files that are part of a single multi-track media when viewed in the Media Manager so the multiple mono files appear as a single item with multiple tracks numbered in the form A 1-2 or A 1-8, or A 1-2, 7-8, etc. Otherwise, you would see a separate entry for each mono file whether or not it is part of a multi-track 'set'. In order to achieve this in the case of **BWF** files Pyramix looks at the **BWF** header and uses the **Originator Reference** field as a **Unique Identifier** with some rules as defined by the EBU organization and some conventions adopted between various manufacturers.

It may happen that some files do not follow these rules and therefore sometimes the Pyramix Media Manager fails to properly mount these files. Sometimes some files are missing, or some tracks within a multi-track media are missing. The Pyramix Media Manager detects these conflicts at the time the folder is mounted and informs the user of such a problem, prompting him to go to the **Media Manager > Drive > Mounting Rules** menu item. The **Mounting Rules** dialog allows a variety of different rules to be applied for this or these Media Folders so all files are properly mounted.

Folders where a conflict has been detected appear in **Red**.

Folders where a special Mounting Rule has been applied appear in **Dark Green**.

The **Mounting Rules** dialog can be found in the **Media Management** Tab window in the **Media Folder** menu : **Media Folder > Mounting Rules**



Mounting Rules dialog

The description of the Rules that can be applied appears in the Mounting Rules dialog as above.

Offline / Reference Libraries

As the name implies **Offline/Reference Libraries** are useful for keeping track of very large projects and material on media that may not be permanently on-line.

Offline libraries are created in the **Media Management** Tab Window by selecting **Media Folder > Create Offline/Reference Library**.



Create Offline/Reference Library dialog

The new library references all currently mounted media according to the choices made under

Original Media

Only selected Media Drives/Folders

or

All mounted Media folders

and

Offline Library

The new library can contain references to either all media present in the location(s) chosen in **Original Media**:

Add all Media

Or there is the option of filtering out media already present in other libraries by selecting:

Filter Media already present in other libraries

Creating Offline/Reference Libraries

When used in the following manner Offline Libraries provide an extremely powerful organizational tool for managing very large project libraries and, for example, sound effects libraries.

Mount The Media

In the **Media Management** Tab Window, Mount all folders or disks containing your audio files (as ripped with LibraryLoader, mTools or any other source). We strongly suggest these files be in either PMF or BWF (Broadcast Wave Format) as they both have a long description field, a unique identifier and a timestamp.

Note: There may well be Copyright implications when working with ripped files. Please ensure you comply with any restrictions on copying other people's material.

Create An Initial Library

Select the **Media Management** Tab Window Menu item **Media Folder > Create Offline/Reference Library** and choose **All mounted Media folders** and **Add all Media**. This will create an initial library referencing all your audio files. All the media files / disks may then be unmounted.

The library can now be re-organized, folders created, items duplicated etc. etc.

You can make searches (queries) or apply filters to your Offline / Reference library(ies) and, if **Project > Auto-mount Media** is on, each time an item is dragged onto the Timeline the appropriate audio file will automatically mount. Or this can be done this manually by calling **Project > Mount Referenced Media**.

Updating Libraries - Orphaned Entries

If the original audio files are moved or reorganized, just mount all the folders once again, load all your libraries and call the Library menu command **Update Referenced Media Paths**.

Updating Libraries - Adding new files

If new audio files are added to your media disk(s), simply mount these folders, load all your libraries and proceed as in “**Create An Initial Library**” above, **but** select the option, **Filter Media already present in other libraries**. This will create a new library containing only references to the freshly added audio files. These new items can then be copied/moved to any (or many) already existing Offline library(ies).

4

Transport and Navigation



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Navigation

Pyramix Virtual Studio offers a number of ways of navigating around a Project.

Time Scale Bars

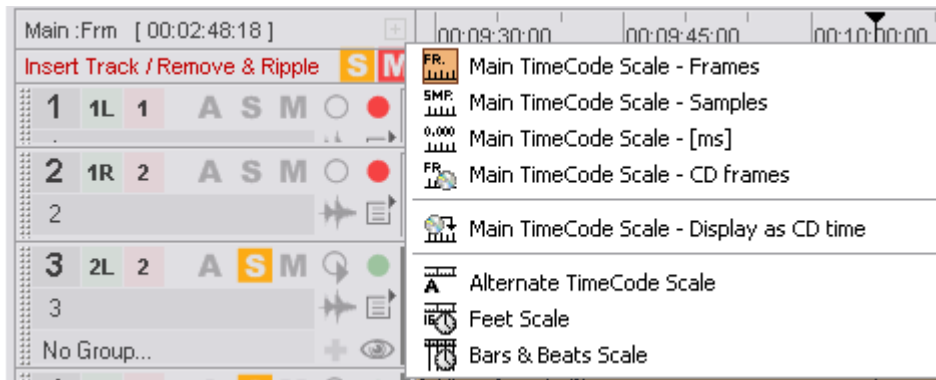
Main TimeCode Scale Bar

Near the top of the **Project Editing Panel** is a horizontal gray area with time code numbers. This is the **Main TimeCode Scale Bar**. On the left, above the track headers, the time range, or length of the visible Timeline window is indicated.

The simplest way to move the **Playhead Cursor** within the **Project Editing Panel** is to position the mouse anywhere along the **Time Scale Bar** and left-click. The **Playhead** will immediately move to the new position. You can also left-click the **Playhead Cursor** and drag it along this bar.

Context Menu

Clicking in the left hand, Header, area of a Time Scale Bar (a small plus + sign indicates there is something worth clicking on) pops up a context menu.



Main TimeCode Scale context menu

The first five entries offer a choice of display modes for the Main TimeCode Scale:

- Frames
- Samples
- [ms]
- CD frames
- Display as CD Time

The remaining three entries add new Scale bars beneath the Main TimeCode Scale

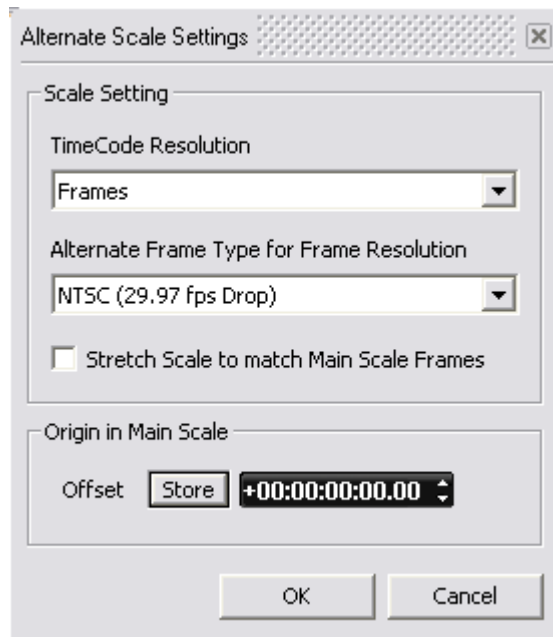
- Alternate TimeCode Scale
- Feet Scale
- Bars & Beats Scale

Alternate Time Scale Bar

You can set up an alternate Time Scale Bar via the context menu or **View > Scales / Toolbars > Alternate TimeCode Scale**. Again, there is a context menu. This has the same entries as the Main TimeCode Scale context menu with one extra entry:

- Alternate TimeCode Scale Settings

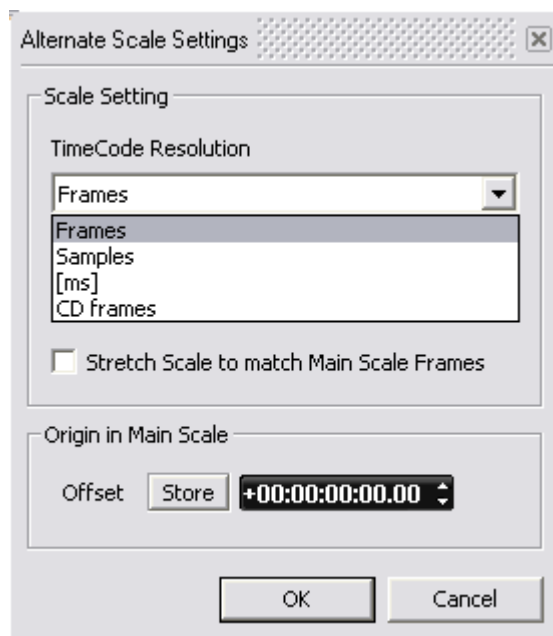
Choosing this pops up the Alternate Scales dialog:



Alternate Scale Settings dialog

Scale Setting

The **Scale Setting** combo box offers a choice of resolution to display:



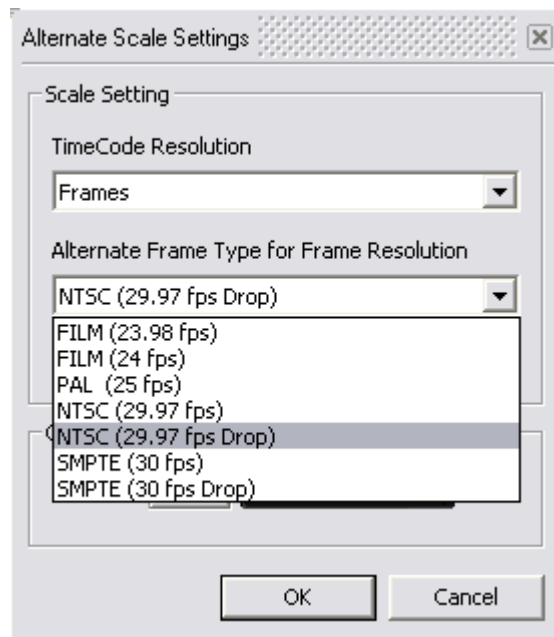
Alternate Scale Settings TimeCode Resolution combo box

Stretch Scale to match Main Scale Frames (see below)

Origin in Main Scale

An Offset can set and stored. E.g when versioning. I.e. making several sound versions for the same picture.

The **Alternate Frame Type for Frame Resolution** combo box offers a choice of frame types appropriate to the chosen resolution. E.g.



Alternate Frame Type for Frame Resolution combo box

View > Scales / Toolbars > Alternate TimeCode Scale Settings also enables selection of The TimeCode Resolution for the Alternate Scale from a choice of:

- **Frames**
- **Samples**
- **[ms]**
- **CD Frames**

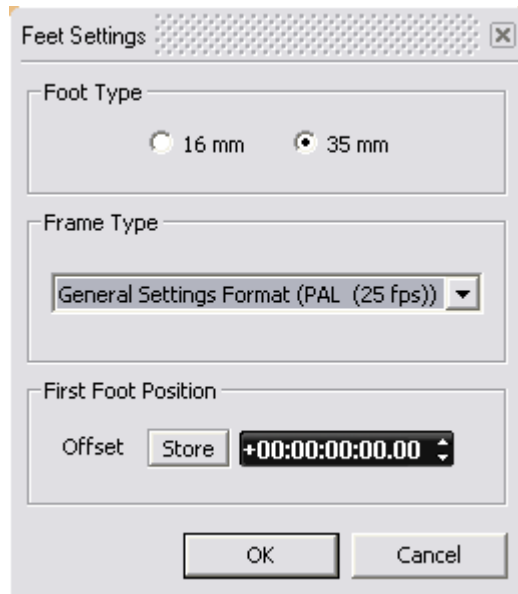
When the Resolution is set to **Frames**, an **Alternate Frame Rate** can be chosen.

When **Alternate Frame Rate** is chosen, the check box **Stretch Scale to match Main Scale Frames** allows the Alternate Scale to no longer display the same time flow as the Main Scale (1 Second = 1 Second). Instead it matches the length of individual Frames (1 Frame = 1 Frame). In this case the time is not the same in both scales and this allows making comparisons between, for example, 24 frames events and 25 frames events.

The **Origin in Main Scale** option allows an offset to be set between the Main Scale and the Alternate Scale.

Film Feet Scale Bar

Like the other scale bars, clicking in the header area pops up a context menu with the extra option **Feet Settings** selecting this pops up the **Feet Settings** dialog:



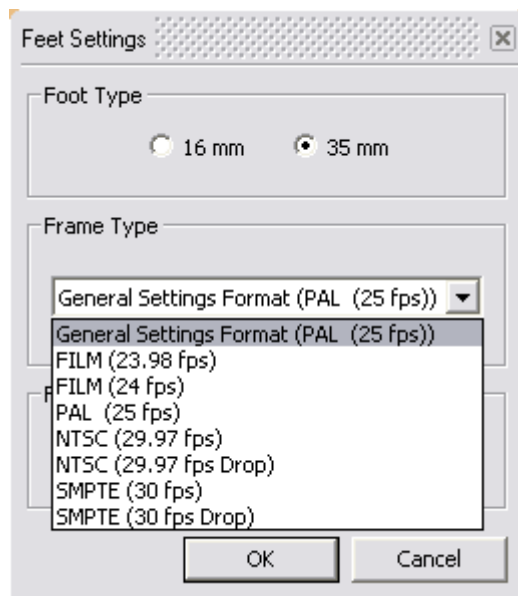
Feet Settings dialog

Foot Type

The radio buttons offer a choice of **16mm** feet (units of 40 frames) and **35mm** feet (units of 16 frames).

Frame Type

The combo box offers a choice of frame rates:

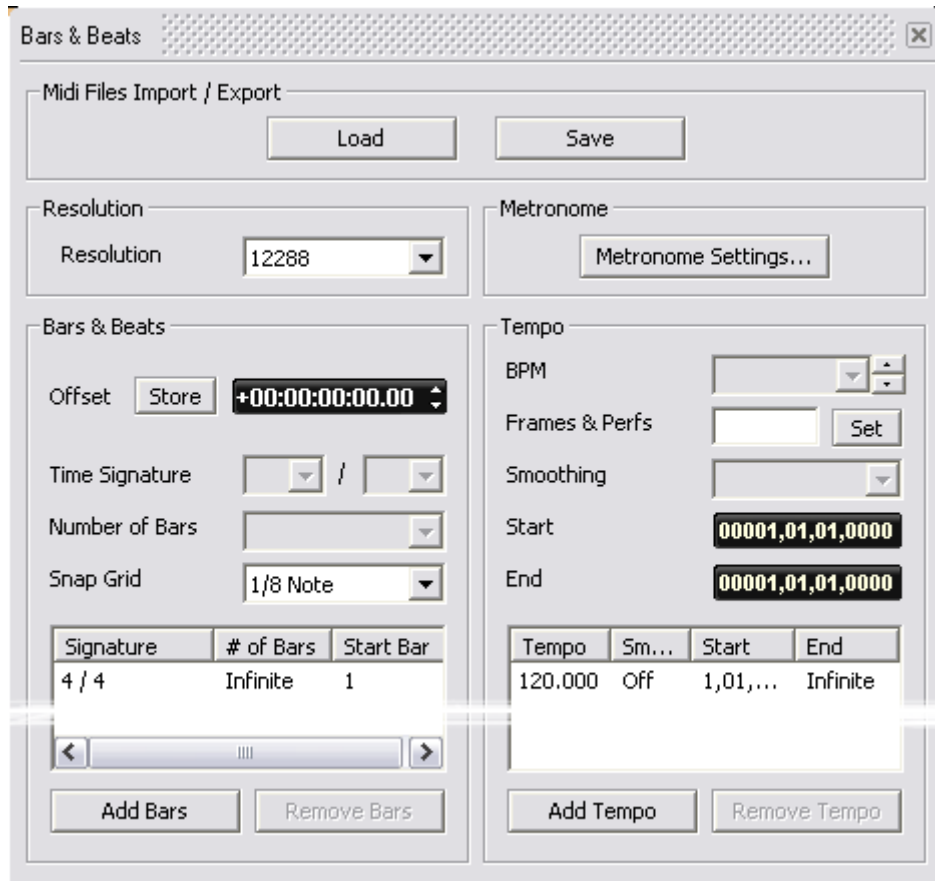


Frame Type combo box

Default is the format selected in **All Settings > Formats & Sync > Frequencies**. You may need one of the others in the context of non-linear editing workflows.

Bars & Beats Scale Bar

As with the other Scale Bars clicking in the header area pops up a context menu with show/hide for the Alternate, Feet and Bars & Beats Scale bars plus two extra options, **Bars & Beats Settings** and **Tempo Map**. The **Tempo Map** option shows the current Tempo Map below the **Bars & Beats Scale Bar**.



Bars & Beats Settings dialog

Midi Files Import / Export

Load

Save

Both buttons open a Browser Window to enable navigation to a file to load or a location to save to.

Note: Currently, when MIDI files of type 2 are imported, only the tempo map and signature of track 1 is imported.

Resolution

Sets the clock resolution in Pulses Per Quarter Note, **PPQ**. The combo box offers a choice of values between 192 and 49152

Bars & Beats

Offset

Offsets the **Bars & Beats** scale start from the main Time Scale. Value can be typed in the TimeCode register and or nudged up or down with the increment, decrement buttons.

Store

Offsets the **Bars & Beats** scale start to the current Playhead Cursor position.

Note: Offsets can be negative or positive.

Time Signature and Bars

The bottom left panel displays a list of blocks of bars in the order they appear in the 'song'. The following settings apply to the currently selected entry in the list.

- Time Signature** Use the combo boxes to set the Time Signature
- Number of Bars** Type a value or choose **Infinite** from the combo box dropdown list.
- Snap Grid** Combo box offers a choice of **Off** or values between **Note** and **1/64 Note**.
- Add Bars**

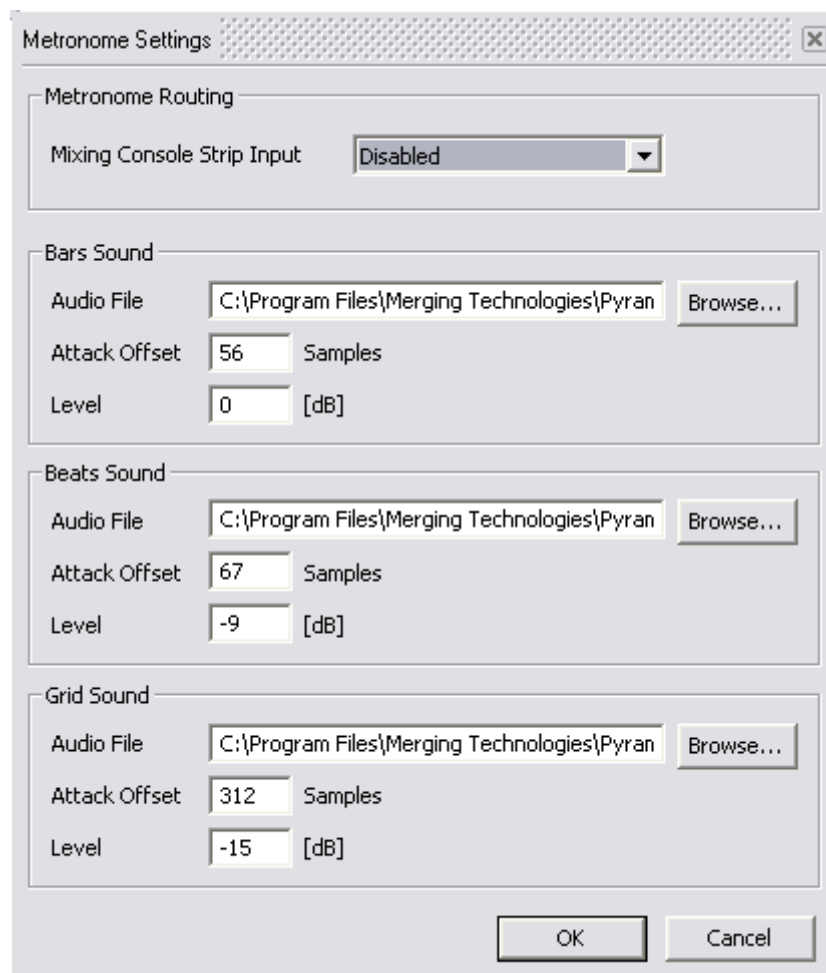
Click to add a new block of bars to the list above.

Remove Bars

Deletes the selected entry from the list above.

Metronome

Metronome Settings...



The Metronome Settings dialog box contains the following sections and controls:

- Metronome Routing**: A dropdown menu for 'Mixing Console Strip Input' currently set to 'Disabled'.
- Bars Sound**:
 - Audio File: C:\Program Files\Merging Technologies\Pyran (with a 'Browse...' button)
 - Attack Offset: 56 Samples
 - Level: 0 [dB]
- Beats Sound**:
 - Audio File: C:\Program Files\Merging Technologies\Pyran (with a 'Browse...' button)
 - Attack Offset: 67 Samples
 - Level: -9 [dB]
- Grid Sound**:
 - Audio File: C:\Program Files\Merging Technologies\Pyran (with a 'Browse...' button)
 - Attack Offset: 312 Samples
 - Level: -15 [dB]

At the bottom are 'OK' and 'Cancel' buttons.

Metronome Settings dialog

Tempo

The bottom right panel displays a list of currently defined Tempos in the order they appear in the 'song'. The following **BPM**, **Frames & Perfs**, **Smoothing**, **Start** and **End** fields reflect the values for the highlighted (selected) Tempo.

BPM	Allows you to pick a tempo from the common values in the drop-down list, to increment or decrement in 1BPM steps with the up and down buttons or to directly type a value in the box.
Frames & Perfs	An alternative method of defining a Tempo used by film composers. It is based on 24 frames per second, each frame subdivided into 8 perfs, or perforations. Thus a value of 24.0 results in a Tempo of 60BPM. Perfs are entered as decimals. E.g. 12.7. Illegal entries are rounded.
Smoothing	Enables values between Note and 1/64 . to be chosen. (or OFF)
Start	The starting point for the Tempo can be entered by typing.
End	The end point for the Tempo can be entered by typing.
The Information pane shows all currently defined Tempos.	
Add Tempo	Adds a new Tempo
Remove Tempo	Removes the highlighted (selected Tempo) from the list.

Fixed or Moving Playhead Cursor

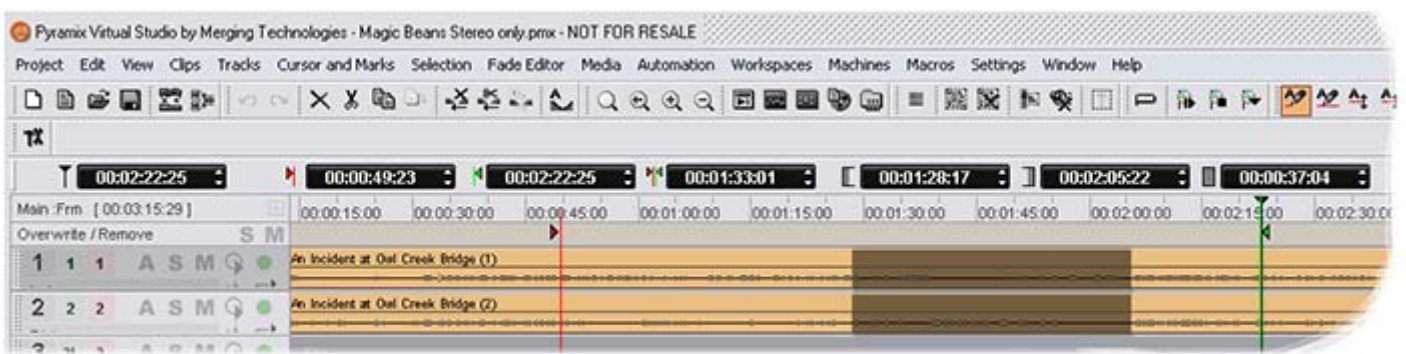
The **Playhead Cursor** can be static with the **Timeline** moving (choose: **View > Fixed Cursor while playing**) or the **Playhead Cursor** can move while the **Timeline** remains static, 'Paging' when the **Playhead Cursor** hits the screen edge. (Choose: **View > Free Cursor while playing**).

The third option is **Cursor Auto-Return after playing**. When this is selected with either of the other options, the **Playhead Cursor** will return to the point at which **Play** began when **Stop** is selected.

Playhead Position

When **View > Fixed Cursor while playing** is selected, the Playhead position can be set in **Settings > All Settings > Application > Playback/Record** in the **Fixed Cursor Settings** section. The **Place of Cursor in Screen** combo box offers a range of choices between 1/10th and 1/2 of Screen.

Composition Information and Settings Toolbar.









Composition Information and Settings Toolbar

Above the **Time Scale Bar(s)** and below the **Project Editing Panel Toolbar(s)** is the **TimeCode Toolbar**. This contains a number of Icons and TimeCode register boxes with increment / decrement arrows. From left to right these are;



Playhead Cursor - current position

-  Mark In
-  Mark Out
-  Mark In to Mark Out
-  Selection In
-  Selection Out
-  Selection In to Out

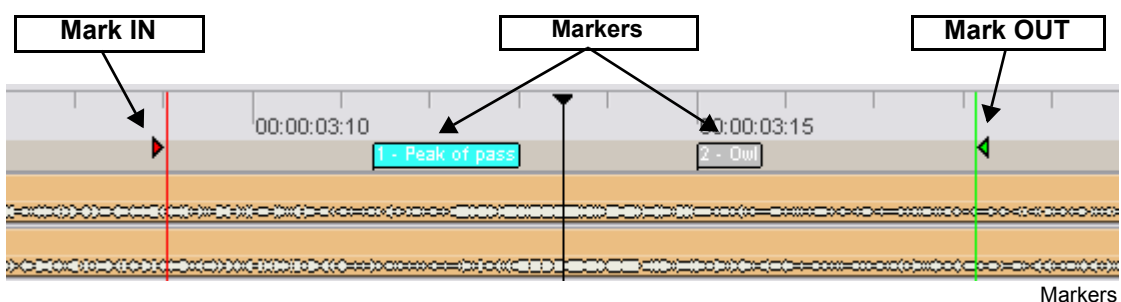
All the registers accept direct keyboard entry of TimeCode.

When values are typed into the **Mark In to Mark Out** or **Selection In to Selection Out** registers, the **In** value remains fixed while the **Out** is adjusted.

Clicking on the icons beside the registers changes the view of the **Composition** in the **Timeline** as follows; Clicking **Cursor** moves the view of the **Timeline** to the current **Cursor** position with the **Cursor** in the center of the track display. Similarly, clicking on the **Mark In**, **Mark Out**, **Selection In** or **Selection Out** buttons centres the display on the current **Mark In**, **Mark Out**, **Selection In** or **Selection Out** marker positions. Clicking on the **Mark In to Mark Out** or **Selection In to Selection Out** icons centres the display on the area between the **Mark In** and **Mark Out** or the selected area, changing the zoom factor to make the area almost fill the track display.

Markers

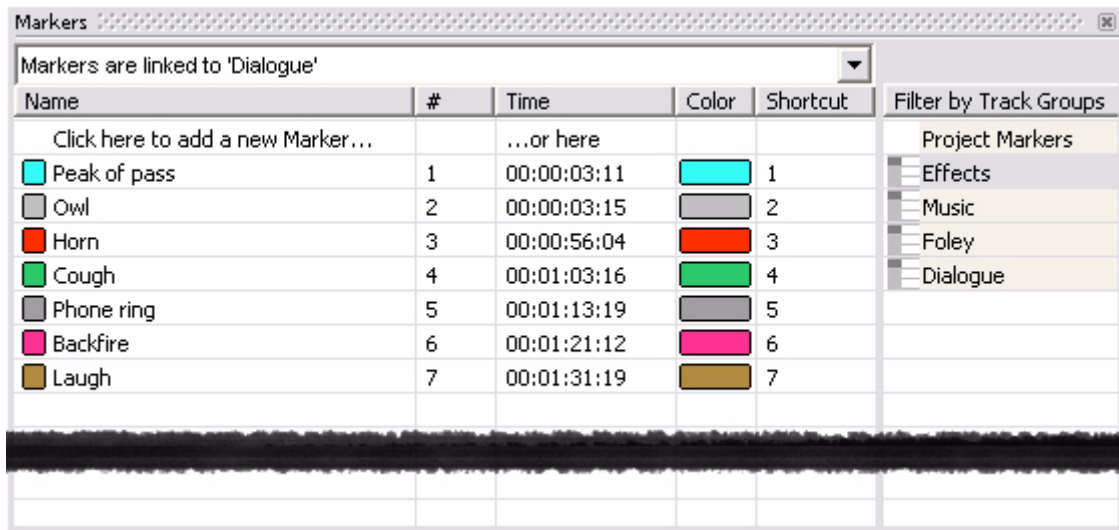
Markers are shown in a **Markers Track** just above the TimeLine tracks display. Pyramix has several types of Marker. For information about CD and SACD Markers **please see: CD Markers on page 230** and the SACD Production Guide.



The **Cursor & Markers** menu, Toolbar and keyboard shortcuts all offer methods of placing Markers and using them for locating etc. The menu entries should be self explanatory. **Please see: Cursors & Marks on page 375**

Markers Tab Window

Markers can also be added and managed from within the **Markers Tab Window**.



Name	#	Time	Color	Shortcut
Click here to add a new Marker...		...or here		
Peak of pass	1	00:00:03:11		1
Owl	2	00:00:03:15		2
Horn	3	00:00:56:04		3
Cough	4	00:01:03:16		4
Phone ring	5	00:01:13:19		5
Backfire	6	00:01:21:12		6
Laugh	7	00:01:31:19		7

Markers Tab Window

Up to 48 Markers can be attached to shortcut keys and/or mapped to a hardware controller. Different lists of Markers can be edited by selecting the desired **Track Group** or the main **Project Markers List** in the **Markers** Tab Window. Markers are numbered in ascending order by their position in time. If a Marker is moved before or after another Marker, the affected markers are automatically re-numbered.

Clicking on the first entry in the **Name** Field '**Click here to add a new Marker**' Adds a new Marker at 00:00:00:00 This value can be edited in the usual way.

The color of Markers is user selectable. Clicking in the **Color** field drops down a list box with all the available colors.

Double-clicking on a Marker's Name Field jumps the Playhead Cursor to the Marker.

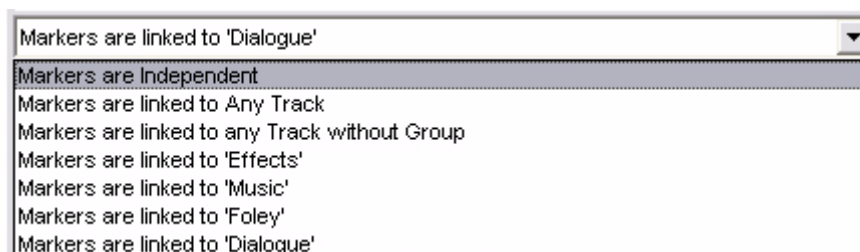
Double-click with CTRL pressed plays from the marker TimeCode

Double-click with SHIFT pressed plays from the marker TimeCode with the first Preroll. This also applies to CD markers

Right-click to open a menu that enables Markers to be **Cut / Copy / Pasted** between Groups or Projects.

Markers Linking

The **Markers Linking** drop-down list menu is at the top of the **Markers Tab Window**.



Markers are linked to 'Dialogue'
Markers are Independent
Markers are linked to Any Track
Markers are linked to any Track without Group
Markers are linked to 'Effects'
Markers are linked to 'Music'
Markers are linked to 'Foley'
Markers are linked to 'Dialogue'

The selection made here determines the behavior of markers when tracks are edited.

Markers Independent (markers are locked to the scale)

Linked to Any Track (markers follow any track operation)

Linked to Tracks without Group (markers follow any track that is not a member of a group)

Linked to 'Effects', 'Music', 'Foley' etc. (markers follow any track of groups listed here)

Jog / Shuttle

Scrub Using the Middle Mouse Button

Audio can be scrubbed by holding down the middle mouse button while the cursor is in the Timescale area and moving the cursor left to scrub in reverse or right to scrub forward. The distance moved away from the current play cursor position will determine the relative playback speed. When the play cursor reaches the current mouse pointer position, or the middle mouse button is released, playback will stop.

Shuttle

The transport can be shuttled with audio output at up to 8 times speed.

Jog Settings

Jog / Scrub parameters are set in **Settings > All Settings > Application > Jog / Chase**.

Auto Jog on move

If a physical controller with a Jog/Shuttle wheel is available and this box is checked, then moving the jog wheel will automatically enter Jog mode.

Auto-Solo Selection

When checked the selected track or tracks are automatically soloed when in Jog mode.

Speed ceiling

Four Radio Buttons offer the choice of **1X**, **2X**, **4X** or **8X** nominal play speed.

Sensitivity

The value typed in the box (in seconds) determines the number of seconds the transport will move per revolution of an attached physical jog wheel.

Smoothing Filter

The value typed in the box (in video frames) determines the degree of smoothing that will be applied.

Flywheel Inertia

The slider varies the flywheel effect when jogging.

Transient response accelerator

The slider varies the jog response between the smoothest possible audio at one extreme and the greatest positional accuracy, i.e. sync, at the other.

Mouse Scrubbing Settings

There are two scrub modes, **Analog Tape Mode** and **Repeat Loop Mode**. Check the appropriate box for the required mode. The length of the loop in **Repeat Loop Mode** is related to the base sampling frequency so the loop will be 116ms long at 44.1, 88.2 and 176.4 kHz or 106ms at 48, 96 and 192 kHz.

If **Limit to speed ceiling** is selected, Mouse scrubbing will be limited to the **Speed Ceiling** set in the **Jog Settings** section.

If **Silent locate** is selected no audio will be heard when scrubbing or jogging.

Scrub Settings

Audio Quality

Two Radio Buttons offer a choice between **Standard** and **Improved** quality of scrubbed audio. **Improved** is the default. High quality scrubbing is very processor intensive so **Improved** mode is provided with a **Max simultaneous tracks** data entry box. The default setting is **6**. When more than the specified maximum number of simultaneous tracks are playing, scrub will automatically revert back to standard mode to preserve playback integrity.

Transport Controls

The **Transport Bar** brings together the most commonly used Transport Controls, Chase and Capture Off-set buttons, and a Counter / transport status display.



Transport Bar

From left to right, the controls are as follows:

The counter shows the current **Active Machine** position and transport mode.



Counter in **Record** mode.



The **Rewind** button moves the **Active Machine** at an accelerated speed backwards.



The **Play Selection** button plays the current highlighted selection area when the **Active Machine** is the **Internal Machine** (Pyramix).



The **Play** button plays the **Active Machine** at normal speed forward. A subsequent press **Pauses** playback and another **Restarts**.



The **Record** button puts the **Active Machine** into **Record** mode.



The **Fast Forward** button moves the **Active Machine** at an accelerated speed forwards.



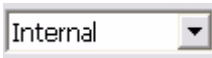
The **Stop** button stops playback.



The **Loop Play** toggle button puts the **Active Machine** into a Loop Play Mode, which continuously plays between the current **In** and **Out** points.



The **Shuttle Control** slider shuttles the **Play Head** forward (right) or backward (left) at up to 2 X play speed. It **Scrubs** the audio on all Tracks as it shuttles through the **Composition**.



The combo-box selects which machine is currently controlled. Select **Internal** from the list to ensure you are directly controlling the **Pyramix Composition Play Head** and not some external device (I.e.RS-422 Sony 9-pin P2 controlled machine)



When the **Chase** toggle button is active, the **Active Machine** will only play back when valid time code is detected on the chosen TimeCode input port.



The **Controllers Online / Offline** button. (Green = Online Red = Offline) Toggles external hardware controllers **On** and **Off** line.

To the right of this is an area where any of the Floating Tool Palettes can be 'Docked'. By default this will have the **Automation** Toolbar docked.

Synchronizer

Pyramix will chase an external TimeCode source as a slave and external machines, capable of chasing TimeCode, can follow Pyramix as slaves. However, a far more satisfactory way to work is with Pyramix as the master.

Synchronizer Option

External machines can be synchronized by Pyramix if you have the **Chase Synchronizer** option. Each machine panel has a Chase button and, when this is active, Pyramix will control the external machine to synchronize it with the internal TimeCode by sending transport commands and comparing the TimeCode it receives with the internal TimeCode. (Taking into account any offset)

Transport Control Panel

- Pressing the Transport Control Panel button or **[Alt T]**, or selecting **View > Windows / Tools > Transport** opens a floating **Transport Window** displaying all available machines with individual sets of buttons and status indicators.



Transport Control Panel floating Window

Note: This Window contains a set of transport controls for each machine installed and enabled with the Internal Transport (Pyramix) at the top. At the bottom of the panel there are controls which affect hardware Remote Controllers.

Important! For details of machine installation and settings. **Please see: Machine** on page 346

Internal / External Machine panels - Common Features

Main Counter

In each machine panel the main counter shows the machine's current position and status of Transport and Record.



If an offset is applied the status display and TimeCode registers are purple:

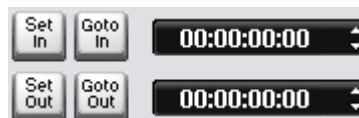


The main counter turns red when recording.



Edit/Record In/Out

Set In and **Set Out** enter the current machine position in the adjacent registers.



TimeCode values can also be typed directly or adjusted using the increment/decrement buttons in the Panel Registers.

GoTo in and **GoTo out** locate the machine to the **In** and **Out** points respectively.

The **In** and **Out** points set for the Internal Machine are the main, red **In** and green **Out**, marker positions in the Pyramix TimeLine.

Chase, Offset register, Capture Offset and Delta



When the  button is lit the machine is in Chase Mode (see below)

The Offset Register shows the current Offset value.


An Offset can be captured with the  **Offset Capture** button. The button lights when an Offset is set.

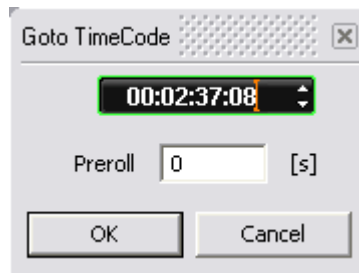
Offset values can also be typed directly into the register and trimmed with the increment/decrement buttons.

Note: A positive Offset Value makes the machine with the Offset later and a negative Offset value makes it earlier. E.g. If you are sourcing picture from an external VCR and the picture is arriving 3 seconds before the sound, enter a 3 second positive offset in the video machine's External Transport control panel.

Delta shows the current difference (error) value between where the machine should be and where it actually is.

Locate

Pressing the  **Locate** button pops up the **Goto Timecode** dialog:



The register shows the machine's current TimeCode position value and is highlighted, ready for typed input. The value can also be adjusted with the increment/decrement buttons. Clicking the **OK** button sends the machine to the TimeCode value in the register and closes the dialog.

A **Preroll** value can also be set. This value is retained and will be present when the dialog is next opened from any Machine control panel.

Note: Goto TimeCode has no effect if it is invoked from a machine in **Chase Mode**.

Internal Machine panel - Specific Features

Transport Controls



The Internal Machine panel has the same transport controls as the Transport Control Bar:



The **Rewind** button moves the **Play Head** at an accelerated speed backward through the **Composition**.



The **Play Selection** button plays the current highlighted selection area.



The **Play** button plays the **Composition** at normal speed forward from the current position of the **Play Head**. A subsequent press **Pauses** playback and another **Restarts**.



The **Record** button puts **Pyramix** into **Record** mode, and creates a new recording to the disk on the **Tracks** previously armed for recording. The **Play Head** moves forward at normal **Play** speed during the recording.



The **Fast Forward** button moves the **Play Head** at an accelerated speed forward through the **Composition** while it is being pressed.



The **Stop** button stops playback.



Pops up the **Goto Timecode** dialog. See above in **Internal / External Machine panels - Common Features**



The **Loop Play** toggle button puts **Pyramix** into a loop play mode, which continuously plays through from beginning to end of the current selection.



The **Freeze** button stops all External Machines where they are. See **Freeze Mode** below.



Sets the **Internal Machine** (Pyramix) as the **Active Machine**. See **Active Machine** below.

TimeCode Registers



L register shows the current External TimeCode value received from the LTC physical input.

V register shows the current External TimeCode value received from the Composite Video physical Input

X Register shows the current External TimeCode value from the source set in the **Settings > All Settings > Hardware > TimeCode** page in the **External TC Reader** section.

External Machine panel - Specific Features

Transport Controls



The **Rewind** button moves the **External Machine** at an accelerated speed backwards.



The **- 1 Frame** button nudges the **External Machine** backwards one frame per press.



The **Play** button starts the **External Machine** in Play mode.



The **+ 1 Frame** button nudges the **External Machine** forwards one frame per press.



The **Fast Forward** button moves the **External Machine** at an accelerated speed forwards.



The **Stop** button sends a Stop command to the **External Machine**.



Pops up the **Goto Timecode** dialog. See above in **Internal / External Machine panels - Common Features**



Sets the **External Machine** as the **Active Machine**. See **Active Machine** below.

Record and Edit controls



The first nine buttons are arm audio tracks 1-8 and the video for recording.



The Record button initiates and indicates recording on the **External Machine**



Inhibits recording on the **External Machine**



Preview Edit Initiates a preview of an edit. The **External Machine** (and any chasing machines) go into play from the **In** point minus preroll and the output on all tracks armed for record switches from replay to direct at the **In** point and back to replay at the **Out** point. The machine Stops at the **Out** point plus post roll.



Auto Edit Initiates an edit. The **External Machine** (and any chasing machines) go into play from the **In** point plus preroll and all tracks armed for record are punched into record at the **In** point and back to replay at the **Out** point with the machine monitor outputs following. The machine Stops at the **Out** point plus post roll.



Review Edit Initiates a review of the **Auto Edit** just performed. The **External Machine** (and any chasing machines) go into play from the **In** point minus preroll and plays to the **Out** point plus post roll.

Note: **Pre** and **Post roll** for the machine in question are set up in the dialog. This can be found in the **Settings > All Settings > Remote Control > Machine** page by selecting the machine and clicking on **Properties**. Further settings are to be found in the **Sony 9-Pin Protocol Configuration (Machine)** dialog, accessed by clicking on the **Properties** button in the **Machine properties** dialog.

Please see also: **Machine Properties** on page 347

Chase Mode



Each Machine has a Chase button. The choice of **Hard**, **Soft** and **Vari Chase** is available in the **Settings > All Settings > Application > Jog/Chase** page. When Chase Mode is engaged the Internal Machine can chase LTC, VITC, the selected **External Machine** or **Virtual Transport** inputs selected in the **Settings > All Settings > Hardware > TimeCode** page in the **TimeCode Source** and **Ext. TC Source** combo boxes.

Hard

When **Hard Chase** is active, Pyramix will only playback when valid TimeCode is detected on the chosen TimeCode input port. If there is a jump in the incoming TimeCode, Pyramix will adjust to the new TimeCode, re-synchronize and begin playback from the new TimeCode position. Pyramix will run on its own internal TimeCode for up to 1 frame if there is a drop out in the time code. If no valid TimeCode is detected after that time, playback will stop.


Soft

When **Soft Chase** is active, Pyramix will only playback when valid TimeCode is detected on the chosen TimeCode input port. If there is a jump in the incoming TimeCode, Pyramix will not adjust to the new TimeCode, but will continue playback with an offset from the incoming TimeCode position. Pyramix will continue to run on its own internal TimeCode for up to 1 frame if there is a drop out in the TimeCode. If no valid TimeCode is detected after that time, playback will stop.

Vari


When the **Vari Chase** is active, Pyramix will Varispeed, i.e. alter its sampling rate to follow fluctuations in an external TimeCode. (going back and forth, slowing down, accelerating, playing normally or backwards, up to 8x nominal speed) while in playback (not in record)

Freeze Mode

The **Internal Machine** also has a **Freeze** button.  When active, as shown here, all External Machines remain where they are and the point in time at which **Freeze** was activated is kept in memory. Pyramix can be freely used and moved while **Freeze** is active. When the **Freeze** button is cancelled, the Pyramix **Play-head Cursor** jumps to the point where **Freeze** was activated and full control is restored.

This function has many uses. For example, it can be used to position an out of sync effect, say a car-door slam. For detailed instructions **please see: Using Freeze Mode on page 292**

Active Machine

Each Machine's Panel has a **Ctrl** button  which sets it as the **Active Machine**. The Active Machine receives the full input of the **Active Machine** mapped keyboard shortcuts, the **Transport Control Bar** and input from all available Remote Controllers.

The **Machine** combo-box in the Transport Control Bar shows the active machine and can be used to switch between the installed and enabled machines. Alternatively you can toggle through the currently enabled machines. **Machines > Active Machine > Toggle machines**

Auto-chase

If all enabled machines are set to **Auto-Chase**, when **Ctrl** is switched between machines the **Active Machine** is automatically taken out of **Chase** mode and the previously **Active Machine** automatically enters **Chase** mode. To activate **Auto-Chase** for all external machines, enable the menu setting:

Machines > External Machine > Auto-Chase


And, to activate **Auto-Chase** for the internal machine, enable the menu setting:

Machines > Internal machine > Auto-Chase

Controllers Section

Controllers Online/Offline

When the **Controllers** button  is lit red all connected Controllers are set **Offline**

Press the button again to toggle to  **Online**.

Offline ensures no **External Commands** can be sent to Pyramix while a maintenance or housekeeping operation is in progress.

When performing a **Mix-down**, **Generating a CD image**, or during any **Surround encoding** operation, Pyramix automatically sets all controllers offline to ensure the operation is not inadvertently interrupted and to prevent exaggerated motor fader movements during non real-time processes.

Jog Wheel Mode

The buttons select the hardware Jog Wheel Mode from a choice of **Jog**, **Shtl**, **Loop**, **Nav** or **Off**. Many controllers will have buttons either corresponding to these functions or mappable to them.

The **Shuttle** slider is provided for convenience when using the Transport Control Panel

Zooming and Panning

The **Project Editing Panel** allows two kinds of zoom: horizontal or **Time Scale** zooming; and vertical or **Track Height** zooming.

Time Scale Zoom and Pan

Icons on the **View Toolbar** zoom in or out at the current Play Head location.



The **Fit in window [Alt 1]** icon on the Toolbar automatically adjusts the horizontal scale to fit the selected area inside the Project Editing Panel with a small margin.



The **Previous zoom [Alt 2]** icon restores the horizontal scale to the previous size.



Zoom In [Alt 3] and



Zoom Out [Alt 4]

Holding down the **Alt** key, then selecting an area of the **Composition** by clicking and dragging the mouse to the left or right zooms in horizontally on the selected area.

Similarly, an area of the **Composition** can be selected by clicking and dragging.

The **Scrollbar** beneath the **Tracks** Pans the view of the Timeline horizontally left or right.

Track Height Zoom



1, 2, 4, 8, 16, and **A** buttons at the bottom left of the **Project Editing Panel** automatically scale the vertical Track size so that 1, 2, 4, 8, 16 or All (as many as possible given the vertical space) **Tracks** fit in the vertical space allocated to the **Project Editing Panel**.

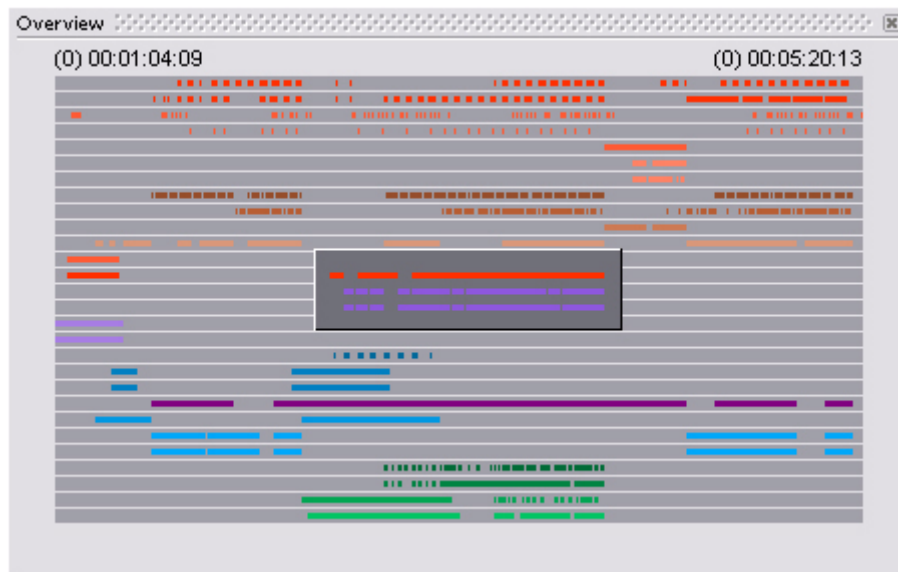
The horizontal Scrollbar adjacent to these buttons enables continuous adjustment of the Track height.

Scroll Wheel

It is well worth while using a three button mouse with a scroll wheel.

Scroll	Scrolls vertically through the tracks shown in the Project Editing Panel
Scroll + Ctrl	Scrolls the Timeline
Scroll + Alt	Zooms the Timeline timescale

The Overview



Overview Tab page

The Project Management Panel **Overview Tab** offers a powerful and simple means of navigating around the Project Editing Panel.

Overview displays a graphic representation of the entire current **Composition**, showing the location of all **clips**. A shaded gray box indicates the location and zoom range of the part of the **Composition** which is currently displayed in the **Project Editing Panel**. **clips** are shown as rectangles in the same color as their background on the Timeline.

Click anywhere in the **Overview** to center the Project Editing Panel display on that point. Click and drag on the shaded gray box to move the section of the Composition shown in the Project Editing Panel without changing the current horizontal zoom. The zoom range of the Project Editing Panel can be adjusted by dragging the edges of the shaded gray box in the **Overview**. An alternative method for adjusting horizontal zoom is to press the **Alt** key while clicking and dragging across the desired range for the zoom, just as you can do directly in the Project Editing Panel itself.

5

Recording and Acquisition



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Getting Audio into Pyramix Virtual Studio

There are two basic methods of getting audio into Pyramix initially: you can record audio directly into the program, or you can import previously existing audio files.

Please see also: **Digitizing Sessions** on page 78

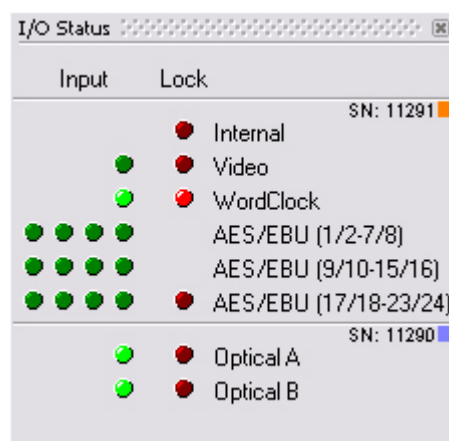
Check Sync

Before attempting to record any audio please check Pyramix and the audio source(s) are synchronized as you intend.

I/O Status Window

The I/O status window can be opened by clicking in the **Sync: xxxxx** section of the Status bar (bottom right of the main Pyramix window. (the **XXX**'s are the current sync source)

This window shows useful information about the input and synchronization status of Pyramix.



I/O Status window

Input sources

All the possible input sources are shown, each with an associated red and a green light. The green lights show the presence of a valid digital signal (This does not necessarily mean, that the sampling rate of this input matches the current clock source of Pyramix). When the red light is on and steady, Pyramix is using this input as it's clock reference and is successfully locked up.

Default Clock Source

If Pyramix is set up to lock to an external clock source but cannot get a valid signal from this source, it will switch to Internal clock. In this case the red light associated with **Internal** will be on, and the red light associated with the intended clock source will be blinking.

Sampling Rate Mismatch

If Pyramix is set up to lock to an external clock source and the sampling rate set in the Virtual Studio Mixer does not match the sampling rate of the clock source, the green light associated with the clock source will be on, but the red light will be blinking showing the sampling rate mismatch.

File Format and Disk Limitations

File Size Limitations

By design SD2, WAV or BWF files are limited to a maximum of 2GB due to their 32bit signed addressing (thus 31 available bits) formats, while 32bits unsigned addressing AIF files are limited to 4GB. Please keep this in mind when recording and/or exporting to any of these formats, the 2GB/4GB limit might in fact be quite close, particularly when working with high sample rate multitrack files.

As a comparison, Pyramix, thanks to its own PMF 64bit addressing file format can generate PMF files of virtually limitless size. This makes it the file type of choice for creating single file, large multitrack projects at high sampling rates.

Hard Drive Limitations

A very similar 2GB/4GB* limit can also be encountered the hard way when attempting to write large files, even in PMF format, onto storage units (hard drives, memory cards etc.) formatted using an old 32bit file system such as FAT32 or HFS.

Yet another, higher, limitation also exists with IDE ATA/ATAPI drives. This will show up at around 137GB. This may be caused by part of a system (drivers, controllers and/or old Windows version) only recognizing the 28bit addressing of the original ATA specifications, and not the enhanced 48bits available on newer equipment. This is usually solved by installing fresh and or updated Bios/Drivers/OS.

*The official limit is 4GB, but serious trouble can start at around 2GB.

Pyramix audio file format

Unless there is a good reason for using another file format for recordings we strongly recommend using the default **.PMF** file format. This will give the best performance in a number of key areas. For further information please see: **Optimizing Pyramix** on page 300

Recording Audio into a Pyramix Virtual Studio Project

Start a new Project, or open an existing one. Make certain the **Mixer** sample rate and sync source is set as desired. You will need to configure at least the same number of **Mixer** channels as **Tracks** you wish to record.

Before beginning audio capture, check or select appropriate record settings. Open the **Settings > All Settings > Project > Record** page (alternatively use the keyboard short-cut **Ctrl - f** and click the **Record Tab**) There are many settings in this dialog page, but for now you need only be concerned with; **Destination Drive (Media File folder)**, **Resolution** (bit depth or word length) and **Format** (file type). As previously mentioned, unless you have a specific reason for using a different format we recommend using the default **PMF** format.

Note: These settings are completely independent of the settings for **Mix-down** and **Render**.

Track Record Modes

Each **Track** has a tri-state **Record Ready** toggle button, located to the left of the **Track** itself in the **Track Information and Setup Area**.

Tip: Right clicking on a track arming button opens the **Settings > Project** page immediately on the **Record** page.

Play



The **Green Dot** in the **Track Header** indicates **Record Safe** mode, the default when **Tracks** are newly created. When in this state, the **Track** cannot be recorded to.

Record Ready (Manual)



Click on the **Green Dot** once to toggle to **Record Ready** mode. This is indicated by the dot turning into the **Red Dot**. The **Track** will now go into **Record** mode immediately when the **Master Record** button is pressed in the **Transport Strip** or **Transport window**.

Record Punch In (Auto)

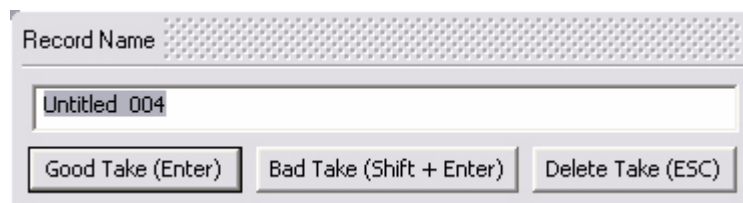


Alt-Click on the **Red Dot** to toggle to **Record Punch In** mode. This is indicated by a **Red Dot flanked by 2 red vertical lines**. In this mode, when the **Master Record** button is pressed in the **Transport Strip** or **Transport window**, the **Track** will stay in **Play** mode until the current **Mark In** point is reached, then the **Track** will go into **Record** mode. It will stay in **Record** mode until the current **Mark Out** point is reached.

After Recording

New recordings will be processed according to the settings made in the **Settings > All Settings > Project > Record** page. **Please see: Record on page 318**

If the **Prompt for name after recording** box is checked the **Record Name** dialog appears when the recording is finished and the transport stopped.



Record Name dialog

Type a name for the recording (or leave the default) then select one of the button options.

AutoPunch Mode

AutoPunch when Chasing TimeCode

If tracks are set to **Auto-Punch** mode (Alt+Click on Rec Ready button) then the system will start recording (after locking to TC) when it reaches the **Mark In** point and punch out when it reaches the **Mark Out** point.

If the **Mark In** is located before the current location (and the **Mark Out** far after) then the system will immediately record once locked and stop recording when unlocking.

Recording from a tape with Discontinuous TimeCode

Pyramix AutoPunch Mode makes this a simple operation.

Place the **Mark In** at 00:00:00:00 and **Mark Out** at 23:59:59:24 (default values for a new project)

Connect LTC Out from the tape machine into Pyramix

Set Chase mode to **HARD CHASE**

Rewind the tape

Press Play on the tape machine

Each time a valid TC is encountered Pyramix will lock and start recording a new clip, then stop when the timecode stops or jumps. A separate media will be created for each continuous section of timecode on the tape.

Importing Audio Files into Pyramix Virtual Studio

Different file types with different bit depths (word lengths) can be freely combined in a Composition. Simply **Mount** the **Media Drive** or **Media Folder** and drag-and-drop the required material into the Timeline.

Files with different sample rates can also be freely combined.

Note: If a clip has a different sample rate to the current project the clip will play at the 'wrong' speed! E.g. in a 48kHz project a 96kHz clip will play at half speed. With most material this will be glaringly obvious, however with sound effects, smaller differences in rate (E.g. 44.1kHz - 48kHz) may well go unnoticed.

Mounting Media Folders

If many audio files already exist in a single Windows directory or folder, it is easy to mount that Windows folder as a Pyramix **Media Folder**. Once mounted, the supported files become available for use in a Project.

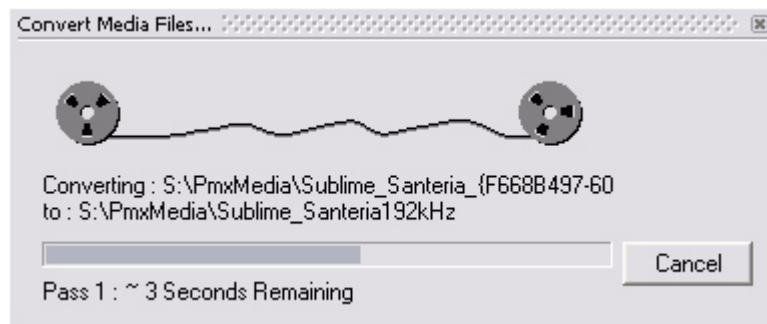
1. Start a **New Project** or **Open** an existing one.
2. Click the **Media Management** Tab in the Project Management Panel to open the **Media** window, or double-click to open it as a floating window.
3. Select **Media Folder > Mount Media Folder**. This opens the **Choose a media folder to mount** dialog box.
4. Click the **Browse...** button, then navigate to the Windows directory containing the audio files you wish to import.
5. Click the **OK** button to mount that Windows directory as a **Media Folder**. All supported audio file types will be seen by Pyramix, and be available for use in the Project. A check in the **Recursive** box means Pyramix will look in sub-directories of the chosen folder as well as the root. A check in the **Permanent mount** box means Pyramix will attempt to mount the folder whenever the application is launched. I.e. make it available to all **Projects**. A check in the **Quick Mount** box will create a special library called '**__QuickMountLocal.pml**' (or '**__QuickMountRemote.pml**' depending on whether you access this folder locally or through the network) and store it the original folder. This can dramatically reduce the time taken to mount media files when a project is opened.

Sample Rate Conversion

Where the sampling rate of a **Media File** is different to the current **Project**, Pyramix offers a simple means of converting the **Media File**'s sample rate.

1. Select a **Master Clip** file or files in the main **Media Management** window.

2. Choose **Convert > Quick Convert > Samplerate Converter**. A **Samplerate Converter** dialogue box appears. Radio buttons offer the choice of two text entry fields, **New name** for the file or **Add Suffix** to the existing filename. A checkbox selects **Keep Original File Format** otherwise the file will be converted to **PMF** format as well as sample rate converted.
3. Selecting **Properties** opens the **Samplerate Converter Properties** dialog box. Choose the required target sample rate by clicking on one of the **Output Sampling Rate [Hz]** radio buttons. **Conversion Quality** defaults to **High** with the option of **Very High**. Click **OK** to close the dialog
4. Choose **OK** in the **Samplerate Converter** dialogue box to begin the conversion. When converting multiple files, choose **OK** to convert the files one at a time with the possibility of changing parameters on each file or, if **Add Suffix** was chosen in **step 2**, you can choose **OK all** to convert all the selected files in one operation.

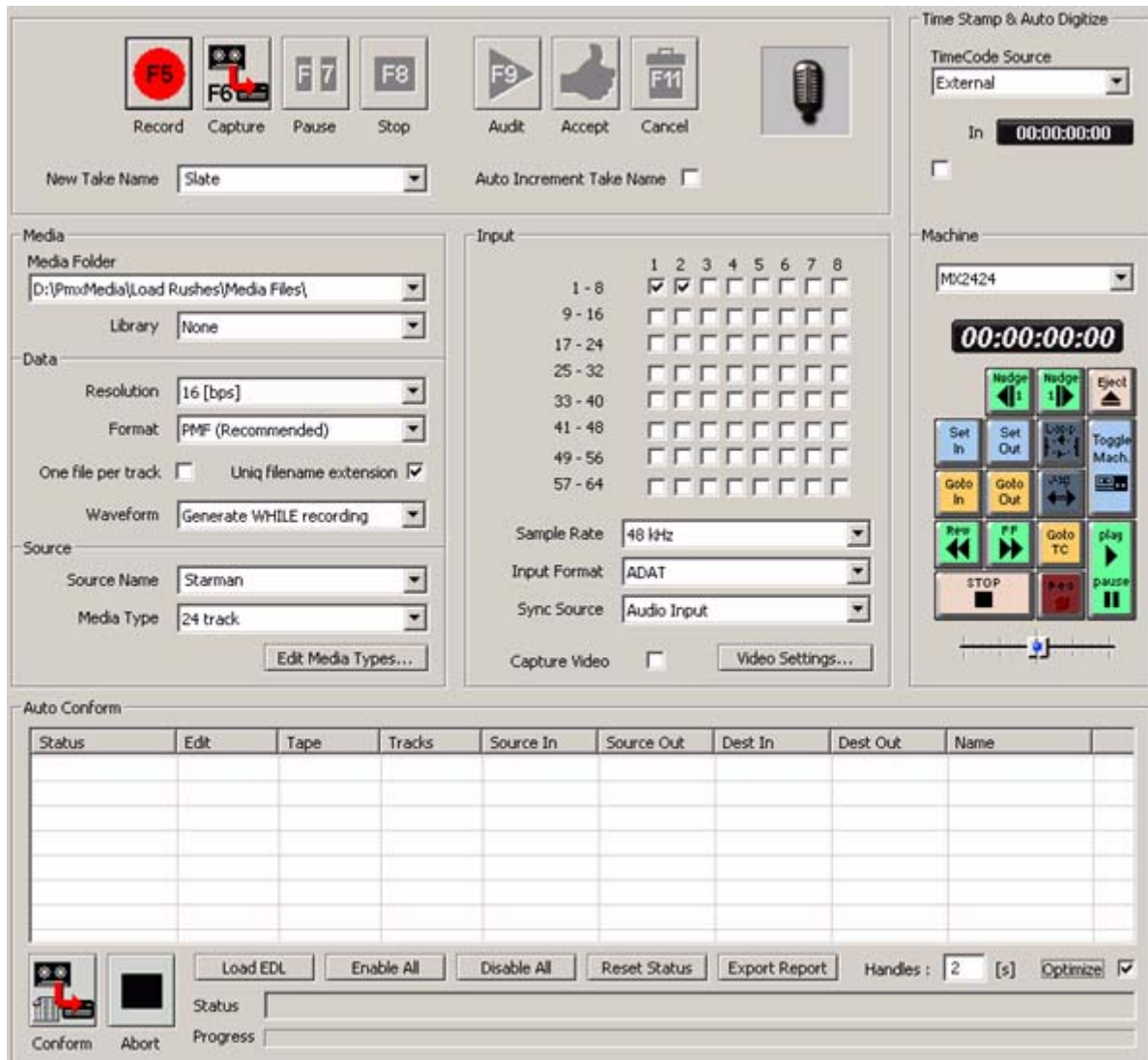


Convert Media Files dialog

Note: Bit depth (word length) is not changed with a sample rate conversion. Options for converting bit depth or normalizing can be accessed via the **Convert > Quick Convert >** sub-menus.

Digitizing Sessions

A **Digitizing Session** is a special type of Pyramix **Project** which is intended for efficiently loading audio material into **Pyramix**. One advantage to using a **Digitizing Session** for capture is that **Master Clips** referencing the audio **Media Files** can be generated and saved directly into a specified **Library** for later placement.



Digitizing Session Project Window

Manual Digitizing

1. In the **Media** section, choose an appropriate **Media Folder** to which to your captured files will be saved. If you wish to simultaneously save **Master Clip** references to these **Media Files** into a previously created **Library**, select that **Library** from the **Library** drop-down list.
2. In the **Data** section, choose the appropriate **Resolution** (bit depth or word length) and **Format** (file type) for the saved audio files. Check **One File per track ON** to generate a separate file for each **Track** recorded. I.e. two files for a stereo source, six for a discrete 5.1 source and so on.
3. In the **Input** radio button matrix, check **ON** for each **Input** you wish to record from. Also set the **Sample Rate**, **Input Format** and **Sync Source** as appropriate.
4. Type in a **New Take Name** to name the captured files. If the **Auto Increment Take Name** box is checked all subsequent takes will use the name typed in the **New Take Name** field as a 'seed' with a numerical suffix to denote the individual takes. E.g. Enter 'Vocal' as the New Take Name, check the **Auto Increment Take Name** box and record a few seconds, stop then record another few seconds. The first take will be called 'Vocal' and the second 'Vocal 2'
5. You can monitor incoming audio through the **Mixer**. Click on the **Show/Hide Mixer** icon to display the **Mixer**, and set levels as appropriate.
6. Any external machine can be used as the source. However, it is much more convenient to use a machine which can be controlled by Pyramix. A machine can be selected from the **Machine** drop-down list. It's control panel appears below the list.
7. Locate the required material on the source tape.
8. Click on the red **Record** button to begin recording. The system will remain in record until the **Stop**, **Pause** or **Cancel** button is pressed.
9. Press the **Stop** button to stop recording.
10. You can press the **Audit** button to audition the recording just made.
11. Press the **Accept** button to save the recording to the destination Media Folder, or press the **Cancel** button to delete the recording without saving it.

Autoconforming

1. Pyramix can record audio selectively according to an EDL (Edit Decision List) in the CMX format.
2. Follow the set-up suggestions above and ensure the source machine is working correctly under 9-pin control.
3. Click the **Load EDL** button, navigate to the directory containing the EDL you wish to load the audio for.
4. If the list is not already in **Reel** order, click the **Optimize** button. This will sort the list so that audio is digitized with the minimum of reel changing and spooling. All overlapping edits will be merged.
5. Load the first reel in the list, click the **Capture** button and Pyramix will automatically control the source machine. All the required audio in the reel will be digitized.
6. Change the reel when prompted until all the required audio has been digitized.

If you know the audio is not available for certain edits in the list, or you wish to digitize only certain edits, uncheck the box(es) in the **Status field** for the relevant entries before clicking **Capture**. The **Status** field will show when clips have been captured which match the edits.

Enable All

Checks all the boxes in the **Status Field** for capture.

Disable All

Un-checks all the boxes in the **Status Field**. I.e. no edits are selected for capture.

Reset Status

Restores the **Status Field** check boxes to their previous state.

Export Report

Exports an **.rtf** file detailing the edits which were captured and those which were not.

Handles

Sets an extra amount of audio to be captured at each end of the edits. This allows greater freedom in editing but may cause problems in some circumstances.

6

Editing



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Editing in the Timeline

The **Timeline** is the place in Pyramix where audio **clips** can be edited, faded up and down and otherwise arranged into a mono, stereo or multi-channel digital audio **Composition**.

A **Project Editing Panel** containing the **Timeline** will be visible as soon as you open a **Project**.

The **Fade Editor** provides elegant alternative methods of viewing and adjusting the parameters of edits in the Timeline.

Clips and Compositions

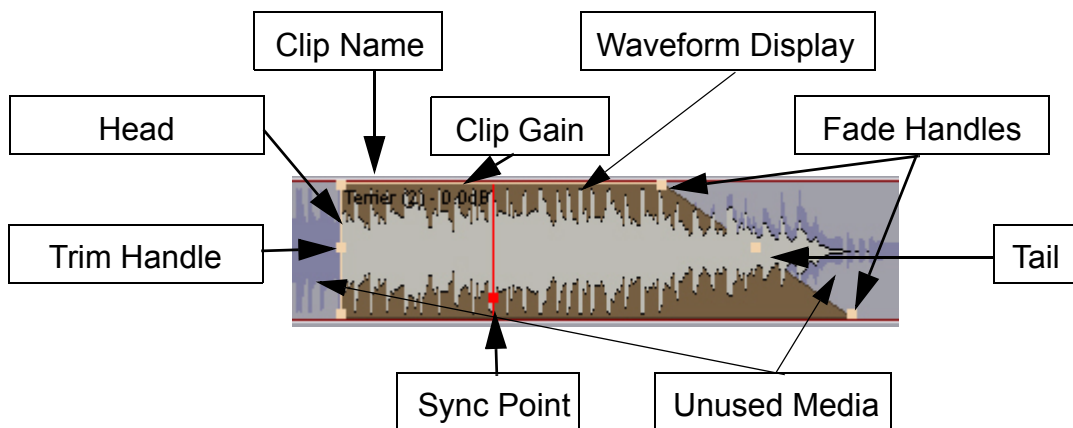
Clips in a Composition

As with **clips** in a **Media Drive** or **Library**, **clips** in a **Composition** are just pointers to the original audio **Media File**. Any actions performed on a **clip** in a **Composition** will affect neither the original audio **Media File**, nor the **Master Clip** in the **Media Folder** or **Library** it came from. In the **Project Editing Panel**, a **clip** can be edited, shortened, split into 2 **clips**, moved, level controlled, deleted, etc., and all actions will **ONLY** affect the **Composition**.

Once placed in the Composition, each clip by default displays a Waveform of the Media file to which it points. This Waveform display can be enabled or disabled by the user.

Anatomy of a Clip

Many Edit Commands refer to parts of a clip rather than the entire clip.



Features of a Clip in the Timeline

Once a **clip** is selected, **Trim Handles** appear at each end which are used to manipulate the **clip**. If these are difficult to see or get hold of, zoom in on both axes until they are accessible. Each **Trim Handle** consists of 3 **Control Points**. The **Control Points** on the left side of the **clip** allows adjustment of the beginning of the **clip**, and the **Control Points** on the right side allows adjustment of the end. Click and drag on the middle **Control Point** to move the head or tail of the **clip** as desired to shorten or lengthen the **clip**. These can be moved out to the full extent of the original audio **Media File** to which the **clip** is pointing. Select **View > Show Media** to view the unused audio (if any) as a grayed out waveform.

Head

The beginning of a clip on a Track is referred to as the **Head**. The Head may or may not represent the actual beginning of the Media File for the clip, since the clip is just a set of pointers to an area of the whole media file.

Tail

The end of a clip on a Track is referred to as the **Tail**. The Tail may or may not represent the actual end of the media file for the clip, since the clip is just a set of pointers to an area of the whole Media File.

Sync Point

The Sync Point is an internal reference point inside the clip. This defaults to the start of a clip until moved. The Sync Point may be moved by dragging its handle within the clip. If the Play cursor is positioned over some part of the clip, the Sync Point may be snapped within the clip to the position of the Play Cursor by choosing **Clips > Set Sync Point to Cursor**.

Trim Handle

The Trim Handle is the middle handle available at either end of the clip when the clip is selected. This handle is used to shorten or lengthen the clip (trim the clip in or out) up to the limit of the available media. To trim the clip, drag the handle.

Fade Handles

The Fade Handles are the top and bottom handles available at either end of the clip when the clip is selected. The handles are used to create a fade in at the beginning of the clip, or a fade out at the end of the clip. To create or adjust a fade, drag one of the trim handles to create the desired fade in or fade out. The top handle adjusts the fade within the clip and the bottom handle trims the clip in or out as you adjust the fade. If the Top Handle is used with the CTRL key modifier, a symmetrical crossfade is created with any adjacent clips, centered at the original end point of the selected clip. If no adjacent clip exists, then it extends or shrinks the duration of the fade while maintaining the duration of the selected clip.

Waveform Display

Clips can appear either as a block with the clip name inside, or can show the audio waveform of the media referenced by the clip.

Clip Name

The name of the clip is shown unless suppressed. **View > Waveform Display > Hide Clip Name when Waveform Shown**.

Clip Gain

The overall **Gain** applied to the clip is shown. This value is displayed in decibels.

Gain can be adjusted by selecting **Clips > Clip Gain**. The **Gain** window appears. If a **Region** is selected the Gain will be changed on all clips in the selection.

Locking Clips

Clips can be protected from being displaced during editing by selecting **Clips > Lock**. A locked clip cannot be moved in time or to another track until it is unlocked. **Clips > Unlock**. If you simply wish to prevent loss of sync select **Clips > Lock Horizontal Drag**.

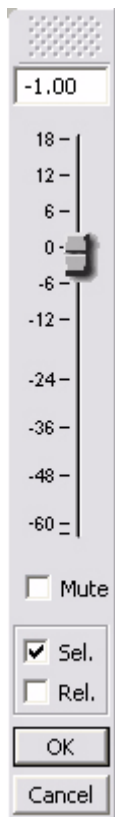
Grouping Clips

To **Group** multiple **clips**, whether they are on the same or different **Tracks**, select the **clips** you wish to **Group** together. Now choose **Clips > Group**. When any **clip** in a **Group** is selected, copied, deleted or moved, all **clips** in its **Group** will be similarly selected, copied, deleted or moved.

To ungroup previously **Grouped clips** to treat them separately, select the **Group** and choose **Clips > Ungroup**.

Groups can be nested. I.e. one group may be inside another group. For example a stereo or multi-channel **clip** is simply a group of mono **clips**. Stereo or Multi-channel **clips** may be ungrouped into individual mono ones in the same way as any other group.

Gain Window



Gain Window

The Gain window allows the gain to be set for the current selection. The gain value can be typed into the box at the top of the strip or set by clicking and dragging the fader

Mute when checked, mutes the selection but retains the gain value

Sel. box (Selection). When checked, the gain change will be applied to the whole selection (default is checked)

Rel. box (Relative) When checked **and** a series of clips are grouped, the gain change is relative to pre-existing levels

When neither box is checked any gain change is only applied to the clip which was last right clicked (even if others are selected)

OK button makes any changes selected in the Gain window and closes it

Cancel button cancels any changes selected in the Gain window and closes it

Clip and Selection Editing

Master Clips appear in the Timeline as blocks which can be edited on a track (or tracks, depending on how many tracks the Master Clip contains) The clip can be trimmed, split, crossfaded, and have many other operations performed on it without ever affecting the underlying media file. Each instance of a clip references the entire media file, and can always be "opened up" by using the Trim Handles to reveal more of the clip until the complete underlying Media File is visible. Clips can be dragged in the Timeline while the transport is playing.

Clip Properties

Clips > Properties opens the Properties window for the selected clip. If multiple clips are selected, opens the Properties window for the first clip selected.

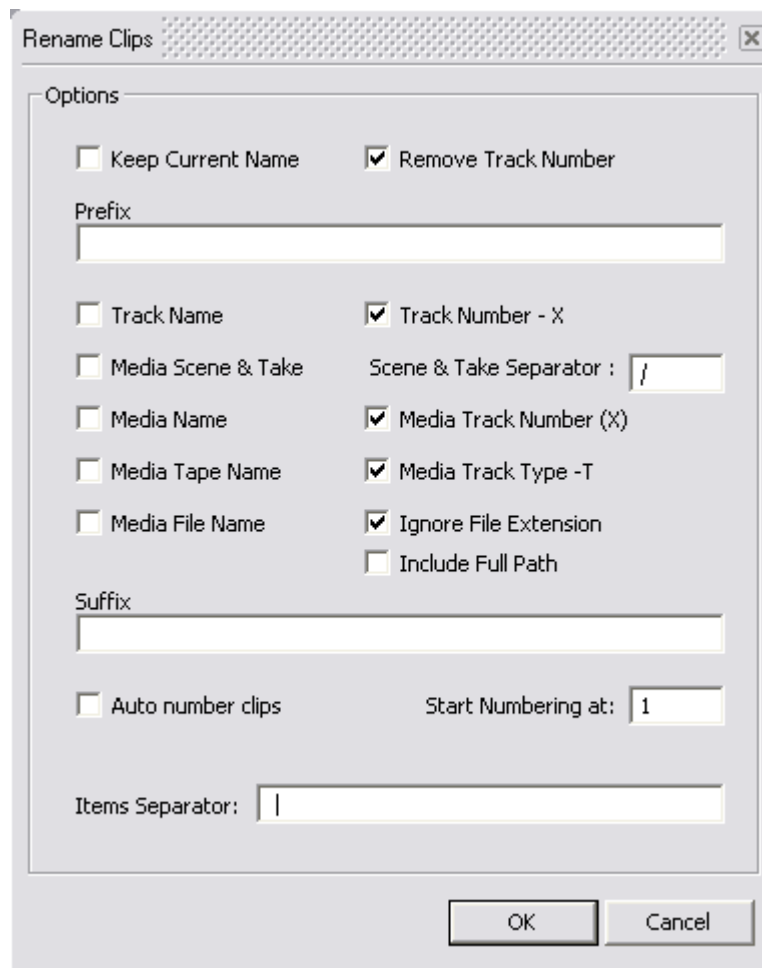
Selection	
Selection	
Name	> CD Import_3
Comment	>
Level	> 0.000
Phase Invert	> No
Mute	> No
Auto Deglitching	> Follow General Settings
Clip	
Name	> CD Import_3 (2)
Comment	>
Level	> 0.000
Phase Invert	> No
Mute	> No
Auto Deglitching	> Follow General Settings
Length	00:03:43:21156
Media Offset	00:00:00:06480
Original TimeCode	00:06:55:41760
Peak Level	-0.0 [dB]
Media	
Name	CD Import_3
Format	PMF
Sample Rate	44100 Hz
Word Length	16 [bps]
Length	00:03:43:15
Original TimeCode	00:06:55:20
Tracks	A 1-2
Peak	-0.0 [dB]
Author	
File Name	CD Import_3_{F7FDE2D1-B6AC-4853-9B9C-7C7A9E8C95DD}.pmf
File Location	F:\Pyramix from old machine\PmxMedia\White Stripes\
File Size	39'779'272 bytes
File Creation Date	05/08/2004 18:55:32
Scene	
Take	
Tape	
Notes	
UBITS	
Media Track	
Track Number	A 2
File Name	CD Import_3_{F7FDE2D1-B6AC-4853-9B9C-7C7A9E8C95DD}.pmf

Selection Window

Renaming Clips

Although Clips can be renamed in the **Clips > Properties** Selection Window, Pyramix offers a more convenient method of renaming clips in a logical and orderly manner.

Clips Rename open the **Rename Clips** dialog:



Rename Clips Dialog

The Clip Name can be composed out of user text, automatically generated data or a combination of both. The dialog box is largely self explanatory. Auto numbering is relevant where a number of clips are selected when the Rename Clips dialog is opened.

Selection Tab Window

The Selection Tab Window groups together **Selection Properties**, **Clip Properties** and **Media Properties** fields in a table.

When choosing **Selection Properties** or a **Properties** Menu item, this Tab Window is displayed. If the Tab Windows section is hidden, then the Selection Tab Window is undocked to ensure it is visible. Parameters that can be modified are marked with a '>' sign. Click on the '>' sign or on the parameter itself to change/edit it.

Selection and Clip Modifiable Fields

Name

This field shows the name of clip as it appears in the composition. This name will also be displayed in the clip block when the clip is set to Show Text.

Comment

This field shows a user comment concerning the clip. The information displayed here will also be shown in the Comment field in the EDL Tab window

Level

Available in both

Pops up a window with a fader and numerical entry box for level, and two check boxes, **Selection** and **Relative**. When neither box is checked any gain change is only applied to the clip on which you last right clicked (even if others are selected). If **Selection** is checked, the gain will be applied to the whole selection (selected by default). If **Relative** is checked and you have a grouped series of clips the gain change is relative to pre-existing levels.

If you click on the > in the "selection" part gain is applied to the whole selection, and if you click in the "clip" part, the gain is applied only to the clip which was under the mouse when you clicked.

E.g: Three clips are selected, the first at -1 dB, the second at -2 dB and the third at -3 dB. You wish to increase the gain of all the selected clips by 1dB. Check the **Rel.** box and add 1 dB either with the fader or in the numeric box. This will result in the first track at 0 dB, second at -1, third at -2.

Phase Invert

Toggles between **No** and **Yes** (Phase inverted)

Mute

Toggles between **No** and **Yes** (Muted)

Auto Deglitching

Drops down a list box with choice of **None**, **Follow General Settings** or fade settings between **1.0 [mS]** and **5.0 [mS]** in 0.5[mS] increments. This feature avoids the necessity to manually make short fades when quickly making cut edits. On any clips that do not already have a fade a small ramp is automatically applied to avoid clicks at the beginning and end. Any clips with fades previously applied bypass the Auto-Deglitching feature.

Note: the global Automatic -Deglitching value is set in the **Settings > All Settings > Application > Playback/Record** page in the **Automatic Deglitching** section.

Clip Information Only Fields

Apart from the modifiable fields listed above, **clip** also shows the following information fields:

Length

This shows the total length of the selected clip segment.

Media Offset

This field shows the amount by which the start of the selected clip segment is offset from the beginning of the entire Master Clip.

Original TimeCode

This field shows the original TimeCode stamp at the head of the clip.

Peak Level

This field shows the highest level (in Decibels Full Scale) reached by any sample within a clip. This is only shown for clips which have had a Waveform display generated.

Media Information Only Fields

Name

Shows the original short name of the audio media.

Format

Shows the media format as PMF, Wave etc.

Sample Rate

Word Length

Length

Shows the total length of the media file referenced by the clip.

Original TimeCode

Tracks

Shows the tracks the media was originally recorded to.

Peak

This field shows the highest level (in Decibels Full Scale) reached by any sample within a media file.

Author

Shows the user who was logged in when the file was created.

File Name

Shows the full media filename including the unique identifier and extension.

File Location

Shows the full Windows path to the media file

File Size

Shows file size in bytes.

File Creation Date

Scene

Take

Tape

Notes

UBITS

Media Track Information Only Fields

Track Number

Shows the track number within the media file. I.e. a stereo file will have A1 and A2 for the two tracks.

File Name

Shows the full media filename including the unique identifier and extension.

Note: The values shown in the **Clip**, **Media** and **Media Track** sections reflect the track clicked on in the Timeline. Where a selection contains several, possibly multi-channel,

clips, clicking on the individual items in the Timeline updates the information to reflect the last item clicked.

The **Selection** Tab Window is automatically updated when the selection changes and can therefore remain floating.

Selections and Region Selections

Selection Operations

Many Pyramix editing operations can only be carried out if a clip or region is selected.

There are two ways of selecting material in the Timeline. Whole **Clips** and **Regions**.

Clip Selection

Clicking in a clip selects it (the color becomes darker and **Handles** appear). The whole clip is ready for editing. Clicking on other clips while holding down the **Shift** key adds them to the selection. If the clip is grouped with other clips, this will select the entire group. To select a single clip in a group, first ungroup the clips, then select the desired clip.

Region Selection

A **Region Selection** is a selected area of the **Composition**. A Region can include many clips on many tracks or only a portion of a single clip. It is indicated as a darker gray rectangular area over one or more **Tracks**. When selecting a clip within a group, the **Region** is automatically extended to the whole group. This can be avoided by pressing the Shift key while selecting. A **Region** can be made by clicking and dragging the mouse across one or more **Tracks**.

Of course, keyboard shortcuts exist for making **Regions**, and this is one of the most useful ways to mark a region. The **Pyramix** default method of marking a **Region** in point is to press **[** on the keyboard: this selects everything to the right of the current **Play Head Cursor location** on the currently selected track. **]** marks a region out point: this selects everything to the left of the current **Play Head Cursor** location, up to a previously marked in point. Once a **Region** has been defined in this manner it can be extended or 'grown' across more tracks by using **Ctrl +Shift +Cursor UP** or **DOWN arrows**. **Ctrl +Alt +Shift +Cursor UP** or **DOWN** shrinks. (Assuming the standard Pyramix keyboard shortcut assignments are in use.)

Using the keyboard short-cuts, **Regions** can be easily made on-the-fly while playing or scrubbing the **Timeline**. This is particularly efficient when used in conjunction with the **Numerical Keypad** transport control short-cuts.

Dragging Clips into a Composition

The simplest way to place an audio **clip** into your **Composition** is by dragging it from a **Media Folder** or **Library**.

To drag from a **Media Folder**:

1. Click on the **Media Management** Tab to open the **Media Management** tab window.
2. Double-click on a mounted **Media Folder** or subfolder to open it. The **Master Clips** will all be listed on the right side of that window.
3. Select a **Master Clip** by left-clicking and holding. Drag the **Master Clip** into a **Track**. You can place it into any **Track**, at any point on the **Track**.

The procedure for dragging an object from a **Library** is virtually identical to that outlined above for **Media Drives**. However, access the required **Library** using the **Global Libraries** or **Document Libraries** Tabs in the **Project Management Panel**.

Copy and Paste

Another way to get objects into a **Composition** is by copying and pasting them.

1. Select an object in a **Media Folder** or **Library**.
2. Right-click on the **Master Clip**, and choose **Copy** from the pop-up.
3. Place the **Play Head Cursor** where you want to paste the beginning of the **Master Clip**.
4. Right-click on the **Track** to which you wish to place the **clip**, and choose **Paste to Cursor** from the pop-up. The beginning of the object will be placed at the **Play Head** in the **Track** on which you right-clicked. Alternatively, simply click the mouse on the track and at the time you want the **clip** to start, right-click and choose **Paste** to insert the **clip** where you placed the mouse cursor.

Selecting a Clip

Click on any clip in the Composition to select it. It will change color to indicate selection. Shift-click to select multiple clips at the same time.

Simple Copy and Paste

1. Left-click a **clip** to select it.
2. Right-click and choose **Copy** from the pop-up. (or use menu **Edit > Copy** or use **Ctrl + C**)
3. Place the **Play Head Cursor** where you want to paste the beginning of the **Master Clip**.
4. Right-click on the **Track** to which you wish to place the **clip**, and choose **Paste to Cursor** from the pop-up. (or use menu **Edit > Paste to Cursor** or use **Ctrl + V**). The beginning of the **clip** will be placed at the **Play Head** in the **Track** on which you right-clicked. Alternatively, simply place the mouse cursor on the track and at the time you want the **clip** to start, right-click and choose **Paste** to insert the **clip** where you placed the mouse cursor.

Selecting a Region

To select a region, click the mouse at one end of the region you wish to select, and drag the cursor to the other end of the region you wish to select. A region can include more than one clip, and may extend across multiple tracks. The selected region may also include the area on a track where a clip may not be present. Discontinuous regions cannot be selected.

Clip Selection Behavior

The following lists the various behaviors for a selected clip depending on different modifier keys.

When a Clip is selected:

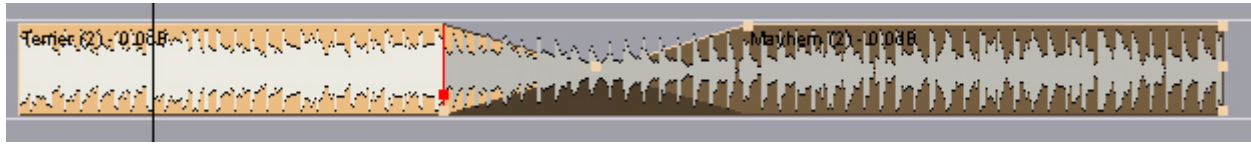
No Modifier Key

With no key modifier, the clip can be manipulated in standard **Edit Mode**.

CTRL Key Modifier (Auto Crossfade Mode)

While a clip is selected, pressing and holding the CTRL key before clicking and dragging automatically creates a cross-fade when the clip is moved to overlap any adjacent clip. The mouse cursor changes to a hand

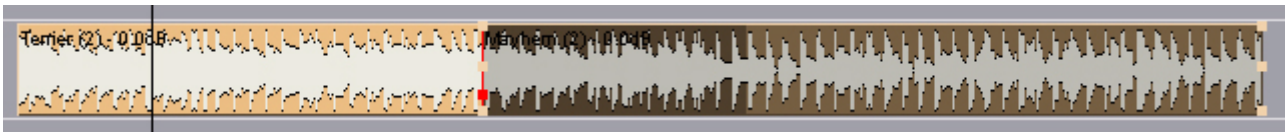
with an X over it to indicate Auto Crossfade Mode is engaged. While in Auto-Crossfade Mode selected clips can only be moved in time, not to other Tracks.



Auto Crossfade Mode

CTRL Key Modifier Option (Layering Mode)

When in the **CTRL** Crossfade mode, if the CTRL Key is released (while still holding the left mouse button) **Layering Mode** is entered. This mode allows clips to be overlapped. (Technically, the result is a crossfade with zero length fades.)



Layering Mode

CTRL SHIFT Key Modifier (Slip Media Mode)

While a clip is selected, pressing the **CTRL** and **SHIFT** keys will allow the audio contents of the clip to be slipped in time. The Media can be slipped to the extent of its availability.

CTRL ALT Key Modifier (Slip Clip Mode)

While a clip is selected, pressing the **CTRL** and **ALT** keys will allow the In and Out point of the clip to be slipped together in time while the Media remains where it is in time. Think of this as moving a "window" within the media.

ALT SHIFT Key Modifier

While a clip is selected, pressing the **ALT** and **SHIFT** keys will allow the clip to be dropped into a **Library** as a new Composition.

Note: When a clip is moved over another in either within the TimeLine in Layering or Auto-Crossfade Modes or from a Library or Media Management, the clip color temporarily changes to red. This is particularly helpful where there are hidden clips on the right side of the screen that may be erased by the new clip or move.

Auto-Crossfade By Default

Auto Crossfade / Layering can be set as the default editing mode. This reverses the functionality described above. When this mode is engaged, pressing the **CTRL** key enables the Edit mode.

This mode can be engaged by selecting **Edit > Auto-Crossfade** or by checking the **Auto-Crossfade by Default - Control key for Drag & Drop** box in **Settings > All Settings > Editing**.

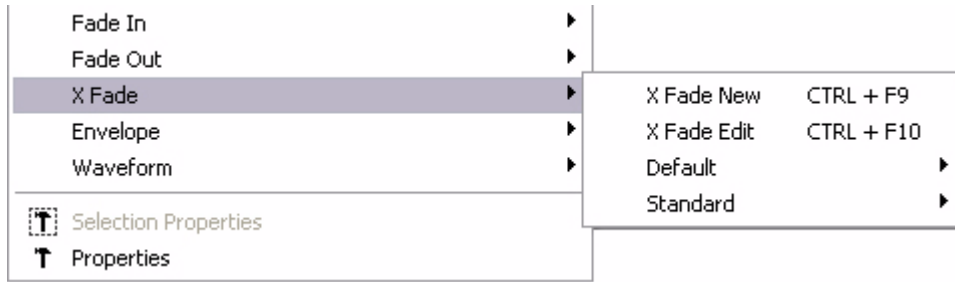
Clip Fade Commands

Fade In

Fade Out

X Fade

Each of these three entries on the **Clips** menu lead to sub-menus which all look like this:



Crossfade sub-menu

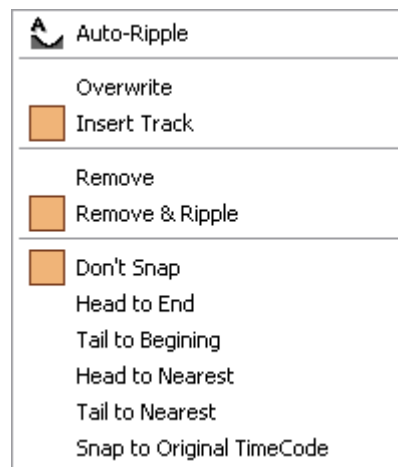
New	Creates a fade when a region is defined at the beginning (Fade In) the end (Fade Out) or across overlapping clips (X Fade)
Edit	When chosen from either the Fade In or Fade Out sub-menus, opens the Fade Editor with the current fade. From the Cross Fade sub-menu opens the Fade Editor only when a region is defined across an existing cross fade. (Please see: Fade Editor Tab Window on page 109)
Default	When a clip is selected or a Region is defined which includes the clip start or end, Fade In or Out > Default > Complete recalls the length and shape of the Default Fade In or Out and applies it to the selection. Default > Curve Only recalls only the curve shape. When a region is defined on a clip or clips which are cross-faded X Fade > Default Complete or Curve Only recalls and applies the Default Crossfade length and shape or shape only respectively.
Standard	Sub-menu offers a choice of fade types Power Linear Tension Linear dB Linear Cosine Root Cosine

Editing Modes

The current **Editing Modes** are shown in the Markers Header. If either **Remove**, **Insert** or **Snap** modes will result in rippling of other clips. I.e. loss of sync, the **Editing Modes** are shown in **Red** Some of the editing commands which delete clips from, or paste clips into the Timeline behave differently depending on the current settings of the **Insert** mode and the **Remove** mode.

Edit Modes Context Menu

Clicking on the **Markers** header pops up the **Edit Modes** context menu:



Edit Modes Context Menu

Auto-Ripple	When this option is checked (enabled) all Insert or Remove operations ripple the rest of the track
Overwrite	When checked, any clip placed so that it overlaps an existing clip will overwrite the part of that clip where the two overlap.
Insert Track	When checked, any clip placed on a track will be inserted into the track and will ripple all other material on the track later in time (to the right) by the length of the clip being inserted.
Remove	When checked any selected material will simply be removed from the Timeline. Everything else will be left intact and in the same place.
Remove and Ripple	When checked any selected material will be removed from the Timeline. Everything else to the right (after) the removed material will be Rippled (moved) to the left (earlier) to take up the space left by the removed material.
Don't Snap	No snap mode set. This mode doesn't affect the behavior of objects placed on a track. Behavior follows the existing Insert and Remove modes.
Head to End	This mode will cause the beginning of any clip placed on a track to snap to the end of the last clip on the track, abutting the head of the new clip to the end (tail) of the last clip.
Tail to Beginning	This mode will cause any clip placed on a track to snap to the beginning of the first clip on the track, abutting the tail of the new clip to the head of the first clip.
Head to Nearest	This mode will cause any clip placed on a track to snap the head of the clip to the nearest edit point or mark on the track. This includes the head or tail of existing clips on the track, as well as the Play Head Cursor, Mark In, Mark Out, Named Markers, or CD Marks. The clip will interact with existing clips according to the Insert Mode setting.
Tail to Nearest	This mode will cause any clip placed on a track to snap the tail of the clip to the nearest edit point or mark on the track. This include the head or tail of existing clips on the track, as well as the Play Head Cursor, Mark In, Mark Out, Named Markers, or CD Marks. The clip will interact with existing clips according to the Insert Mode setting.
Snap to Original TimeCode	This mode will cause any clip placed on a track to snap the head of the clip to the time location represented by the clips original TimeCode. The clip will interact with existing clips according to the Insert Mode setting.

Splitting Clips and Regions

Splitting a Selection

Splitting Clips

Edit > Split (or **Ctrl + T**) makes an edit on the selected clip(s) at the cursor position splitting it (them). If a region is defined within a clip or clips then this region is Split (edited) by using this command. Each split portion of the original **clip**(s) now becomes a new, independent **clip** in its own right.

Splitting Regions

If the Play Cursor is positioned over a selected Region rather than a whole clip or clips, then choosing the **Edit > Split** command will split the selected Region from the surrounding material at the edges of the selection area, not under the Playhead Cursor.

Once a **Region** is marked on a **clip**, simply clicking on the **Region** makes an edit. (same effect as the **Edit > Split** menu command.) This will split the **clip** or **clips** at the region boundaries. If a **Region** is across several **Tracks**, Edits will be made on all **Tracks** within the **Region**.

Cutter

Holding down the **C** key changes the mouse pointer to a cutter. Edits (cuts) are made wherever the user clicks. To make an edit with the cutter on a range of clips at the same position, just select them before cutting.

Duplicate Selection

Holding down the **D** key while clicking on the selection then dragging to a new location duplicates the selected material and moves the copy.

Holding down the **F** key while clicking on the selection then dragging to another track (or tracks if the selection covers more than one track) duplicates the selected material and moves the copy locked in time.

Moving a Selection

Simply drag a selected clip move or reposition it to another location on the same track or a different track. If a Region is selected, clicking on it will split it from the surrounding material. The resulting separate clip can then be dragged to a different location or track. To constrain a clip in time when moving it to another track, hold down the Alt, Shift and Ctrl keys at the same time while dragging the clip to the new track.

Adjusting a Region Selection

Simply position the Arrow Cursor at the edge (beginning or ending) of the region. The cursor will change shape to indicate the Region can now be adjusted by clicking and dragging. You may drag the edge beyond the other end of the region. Doing so ensures that the new selection region begins (or ends) exactly where the original region ended (or began). This also applies to the top and bottom edges of the region. For example, you can extend the selected region on one track up or down to include additional tracks.

Jog-Wheel Editing

A number of editing actions may be undertaken on a selected clip or group of clips using a jog-wheel on an external hardware controller.

First select the Clip or group of Clips, then select the desired Jog-Wheel Editing Mode from:

Edit > Jog-Wheel Editing > Move

Trim In
Trim Out
Trim Fade Out
Tim Fade In
Trim Fade In Symmetrically
Trim Fade Out Symmetrically
Trim Sync Point
Slip In
Slip Out
Slide Media

Now simply move the jog wheel to **Move**, **Trim**, **Slip** or **Slide** the clip(s)

Pressing the **Spacebar** or **Enter** confirms the change(s), **Esc** cancels.

Playlists

Playlists enable different versions of the content of a selection of tracks to be easily stored and any stored version to be recalled.

Playlists have a name (and can be renamed). A Playlist shows the list of tracks it keeps versions of. By selecting a Track Group or one or more Tracks in the **Playlist Tab Window**, you can:

- Create a new empty playlist for these tracks
- Create a new Playlist for these tracks containing a copy of their current content

You can also:

- Create a new empty Playlist for all tracks in Record Ready mode
- Create a new playlist for all tracks in Record Ready containing a copy of their current content

Double-clicking on a Playlist icon replaces the content of the tracks it references with the version it contains.

Modifications made on the tracks referenced by a Playlist are updated in the last recalled Playlist when another one is recalled. A new Playlist can be automatically created for each recording for every recorded track by checking this option in **Playlists** section of **Settings > All Settings > Project > Record**.

The Playlist icon displayed on each Track header enables:

- The creation of an empty Playlist for each track in Record Ready Mode, all Tracks in Group or Strip, or the selected Track
- Creating a copy Playlist for each track in Record Ready Mode, all Tracks in Group or Strip, or the selected Track
- Recalling a Playlist. A list of Playlists that reference the selected track is presented for recalling.
- Merging a Playlist with the current content of the tracks. A list of Playlists that reference the selected track is presented for recalling.

Edit Command highlights:

Further **Editing** commands are to be found on the main **Edit** menu. **Please see: Edit on page 359**

Undo	Pyramix keeps track of all edit decisions and operations so they can be undone if necessary. This menu item shows the name of the last operation. To undo this operation, simply click on the Undo (operation) menu item and the listed operation will be undone. Whenever an item is undone, it immediately shows up as the most recent item in the Redo list.
Undo History	Pyramix keeps track of the most recent edit decisions and operations and shows them here in a sub-menu. These are listed from the most recent at the top, to the oldest at the bottom of the list. To undo a whole block of operations, click on the name of the oldest operation and everything since that time (from that point in the list to the top of the list) will be undone. The name of the next operation in the list will be shown as the next Undo item, and all the items that have been undone are immediately added to the Redo History list. The size of the undo history is set to 32 steps by default, but it can be adjusted in the All Settings > Settings > Application > General page.
Redo	If an operation has been undone using the Undo commands in this menu, the most recently undone operation will be shown here. To Redo the operation, simply click on Edit > Redo and the operation will be Redone. Whenever an item is Redone, it immediately shows up as the most recent item in the Undo list in this menu. The next edit operation carried out in Pyramix will then purge this item since the operation could cause a conflict with previous operations and therefore renders the Redo invalid.
Redo History	Pyramix keeps track of the most recent operations that have been undone, and shows them here in the Redo History sub-menu. To Redo a whole block of operations, click on the name of the oldest operation and everything since that time (from that point in the list to the top of the list) will be Redone. The name of the next operation in the list will be shown as the next Redo menu item, and all the items that have been Redone are immediately added to the Undo History list. The next edit operation carried out in Pyramix will then purge this list since the operation could cause a conflict with previous operations and therefore renders the Redo list invalid.
Delete	This command deletes the selected clip or region. When a selection is deleted, other material on the track behaves according to the current Remove mode setting.
Cut	Cuts the current selection from the project and places it on the Clipboard. When a Selection is Cut , other material on the track behaves according to the current Remove mode setting.
Copy	Copies the current selection from the project and places it on the Clipboard
Paste>	
Paste to Cursor	Inserts the contents of the Clipboard starting at the current Playhead Cursor position. When the contents of the Clipboard is Pasted, other material on the track behaves according to the current Insert mode setting.
Paste Tail to Cursor	Inserts the contents of the Clipboard ending at i.e. before, the current Playhead Cursor position. When the contents of the Clipboard is Pasted, other material on the track behaves according to the current Insert mode setting.
Paste Sync Point to Cursor	Inserts the contents of the Clipboard with the first sync point in the Clipboard contents at the current Playhead Cursor position. Depending on where the first sync point is, the material pasted may start, end or straddle the current Playhead Cursor Position. When the contents of the Clipboard is Pasted,

other material on the track behaves according to the current **Insert** mode setting.

Paste & Place

Opens the Placement Tool with extensive placement options. **Please see: The Placement Tool on page 102**

Paste to Original TC

If the Clipboard contains a single clip, insert this at its original TimeCode *

Paste to original TimeCode

Works differently with clips and Range Selections. If the Clipboard contains a single clip this will be pasted to its original time code. If the Clipboard contains more than one clip or a selection of a clip or clips this will be pasted to the time code at the beginning of where the selection was made on the next track(s) where there are no clips which would be overwritten.

Paste to End of Selection

Inserts beginning of contents of Clipboard to end of current selection

Fill Selection

This command will substitute the Clipboard contents for the selected clip or region

Replace Selection

This command will substitute the Clipboard contents for the selected clip or region and ripple following clips if there's a length difference

Loop Selection

This command will substitute a loop of the Clipboard contents for the selected clip or region without changing sync on the track. Very useful for extending effects to fit a given space.

Fit Selection

This command allows inserted clips to be fit into specified regions on the Timeline. This requires the Timezone Time compression/Expansion plug-in

Delete and Ripple

Deletes the current Selection forcing a Ripple to occur on all affected tracks.

Cut and Ripple

Cuts the current Selection and places it on the Clipboard forcing a Ripple to occur on all affected tracks.

Paste and Ripple

Inserts the contents of the Clipboard to the current Playhead Cursor position forcing a Ripple on all affected tracks.

Insert Silence

Inserts silence (blank space) into the current selection, forcing a ripple on all selected tracks.

Delete and Join

Deletes the currently selected Clip/Selection and ripples the end of the clip.

Cut and Join

Cuts and saves to the Clipboard the currently selected Clip/Selection and ripples the end of the Clip.

Delete and Ripple to Black

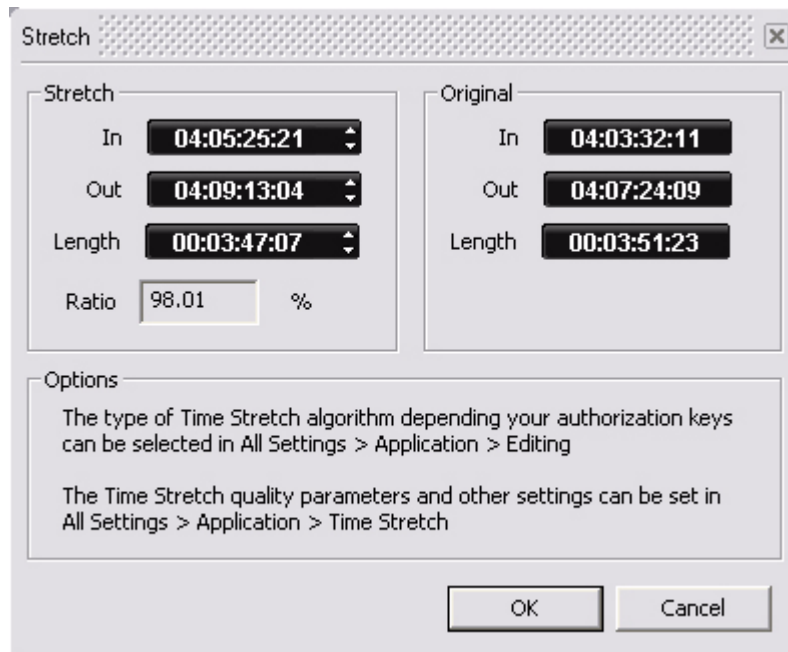
Deletes the currently selected clip/selection and ripples all following butted or cross-faded clips.

Cut and Ripple to Black

Cuts and saves to the clipboard the currently selected Clip/Selection and ripples all following butted or crossfaded Clips.

Stretch

Opens the Stretch plug-in dialog.



Stretch dialog

The Increment and Decrement buttons allow the In point, Out point or Length of the selection to be adjusted. The **Ratio** of stretch or squeeze is shown as a percentage. Clicking the **OK** button starts the process. **Cancel** aborts.

Depending on the available authorization keys, the Time Stretch algorithm can be selected in:

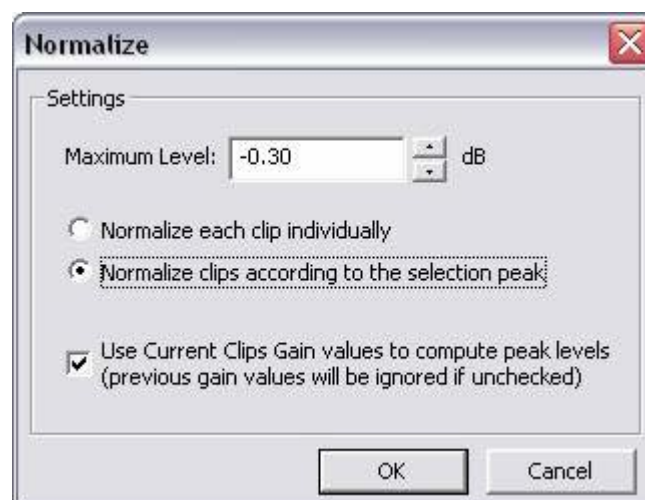
All Settings > Application > Editing : Time Stretch Tool : Selected combo box

Settings for the chosen algorithm can be made in:

All Settings > Application > Time Stretch > 'Plug-in name' Settings

Normalize

Opens the **Normalize** dialog.



Normalize dialog

The **Maximum Level** can be set by typing or using the increment / decrement buttons. The process can be applied to:

- **Normalize each clip individually**
- **Normalize clips according to the selection peak**

Clicking on **OK** starts the process. The selected **Clip** or **Clips** are examined to locate the highest peak, then the overall gain of the clip(s) is increased so that this reaches the maximum level specified. All other selected Clips are either treated individually or raised in level by the same amount.

When in **Normalize clips according to the selection peak** mode, if the following box is checked:

- **Use Current Clips Gain values to compute peak levels (previous gain values will be ignored if unchecked)**

Then:

MaxPeak of the selection will be computed using the level of clips:

MaxPeak = Max(peak + Level)

DeltaGainToApply = DesiredMaximumLevel - MaxPeak

And then for each clip, of the selection:

Level = Level + DeltaGainToApply

Note: this check-box is grayed out when **Normalize each clip individually** is selected.

Normalize Example:

In this case with Maximum Level = -0.3 dB and “**Use Current Clips Gain values to compute peak levels (previous gain values will be ignored if unchecked)**” selected:

	Peak Level	Original Gain Value	New Gain Value
Clip 1	-18.0	4.0	3.8
Clip 2	-16.0	4.5	4.3
Clip 3	-12.0	-1.0	-1.2
Clip 4	-9.0	-2.6	-2.8
Clip 5	-3.0	1.0	0.8
Clip 6	0.0	-0.1	-0.3
Clip 7	-40.0	2.0	1.8
Clip 8	-20.0	4.2	4.0

Consolidate

Opens the **Consolidate** Project dialog box. **Please see: Consolidating Projects on page 224**

Waveform

Leads to the **Waveform** sub-menu:



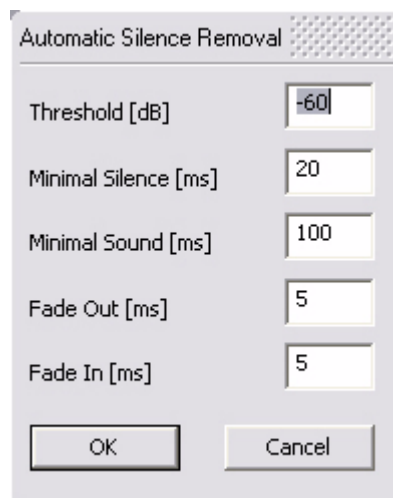
Waveform sub-menu

Follow Track	Clip displays whatever is selected for the entire Track .
Force Waveform	Clip displays Waveform regardless of the overall Track setting
Force Name	Clip displays Clip Name regardless of the overall Track setting

Auto Silence Removal

Edit > Automatic Silence Removal

Automatic Silence Removal operates by scanning the Selection and then automatically editing it into smaller clips by removing regions which fall below the threshold level and meet the 'Minimal Sound' and 'Silence' criteria set in the **Automatic Silence Removal dialog**.



Automatic Silence Removal dialog

Note: This function is non-destructive of the Media file - it edits the Clip by breaking it up into smaller Clips, not by deleting any actual audio from the hard drive.

Threshold [dB]

This field determines the threshold level in dB below which material in the clip will be removed.

Minimal Silence [ms] / Minimal Sound [ms]

Sets the shortest periods of silence and sound which can be created by removing material that drops below the threshold. Some audio material (E.g. speech) contains very short gaps. If all of these were removed, the audio would become too "chopped up". On speech the object of the exercise is usually to break it into areas where speech is present not remove small gaps between words or sentences. Some audio material may have very short transient peaks in the midst of a segment that falls below the threshold. If all of these short transients were created as clips the end result might well sound worse than the original.

The minimum setting is 10 ms and the maximum is 5000ms (5 seconds).

Fade Out [ms] / Fade In [ms]

Sets the length of the automatic **Fade Out** and **Fade In** that will be applied to all new clips created by the **Automatic Silence Removal** operation. The range for this setting is between 5 ms and 500ms (1/2 second).

Once the parameters have been set, click **OK**.

This process takes into account the current **Remove Mode** to determine whether to leave gaps between the newly created clips, or to join or ripple the clips on the track together.

Automatic Silence Removal cannot be executed on cross-faded Clips.

EDL Tab Window

The EDL (Edit Decision List) Window, is a textual and numeric representation of the same information shown graphically in the Timeline and Fade Editor. Changes made here are reflected in the Timeline and vice-versa. The list shows information concerning the clips in the form of a list of text or TimeCode fields, most of which can be edited. This provides an alternate way of viewing and editing the composition. To edit a field, click in it to produce a cursor, or drag across the text in the field to select it, then type the desired information using normal text entry procedures. Fields available in the Edit Decision List Panel are:

Field	Description	Editable
Name	Clip Name	Yes
Type	Type of Clip(e.g. audio, video, midi etc.)	No
Dest In	Clip's In time in the Timeline	Yes
Dest Out	Clip's out time in the Timeline	Yes
Fade In	Clip's Fade In length	Yes
Fade Out	Clip's Fade Out length	Yes
Length	Length of Clip in the Timeline	Yes
Source In	Media TimeCode value at Clip's Head	Yes
Source Out	Media TimeCode value at Clip's Tail	Yes
Sync Source	Media TimeCode value at the Clip's sync point	Yes
Track	Name of Track Clip is assigned to	No
Comment	Comments about the Clip from the properties page	Yes

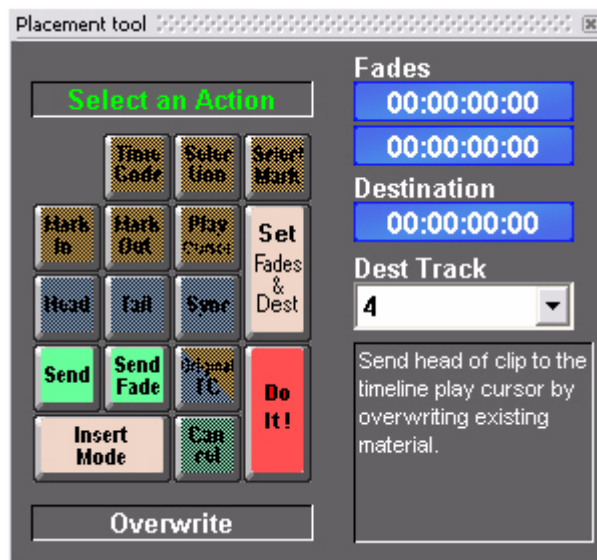
Absolute Sources in EDL View

When **View Sources in EDL View** is checked in the **Settings > All Settings > Application > TimeLine Layout** page, the original **Source In**, **Source Out** and **Sync Point** times are shown in **Absolute Time** in the **EDL View**. Absolute time is the incoming TimeCode recorded at the audio capture. When this mode is disabled, the default start time of TimeCode for the captured clip is 00:00:00:00.

The Placement Tool

Although the **Placement Tool** remains an extremely flexible paste option most important operations are directly available as single commands in the **Edit** menu. All these commands can be mapped to a keyboard key or included in a macro. In most cases, this is a far more efficient way to work.

Several different placement options for a Paste action can be chosen from the **Edit** menu or from the pop-up menu which appears if there is something to be pasted and the cursor is over a track when you right-click E.g. **Paste to Cursor**.



Placement tool floating Window

Open the **Placement Tool** window by selecting **Paste & Place...** from the right-click Paste options above, or choose **Edit > Paste Place** from the **Edit** menu.

The **Placement Tool** window allows the user to customize the placement of a **clip** in extremely powerful and flexible ways.

The button layout corresponds to the numeric pad on a standard keyboard.

.Select a **Paste Place** action by choosing amongst the sequence of lit buttons in the window.

For example, you could choose to **Send** the **Sync Point** of a clip to a typed **Time Code** location on a **Destination Track** chosen from a pop-up list; or you could **Send** the **Tail** of a clip to the **Play Cursor**. Nearly every permutation of placement is possible. Whatever action you choose, the results of your choices will be displayed as text in the lower-right corner of the window before you choose to **Do It!**

Remember to choose an **Insert Mode** to determine how the surrounding **clips** will be adjusted when the new **clip** is placed in the **Track**.

Source - Destination Editing

Concept

Source - Destination Editing is a powerful method of viewing and editing material especially applicable to editing multiple, multi-track, takes into one, 'ideal' take. Special Source and Destination Track Groups allow multiple Timelines to be visible simultaneously. Each Source and destination Timeline has its own zoom level and Playhead cursor. By taking advantage of the 'Collapse' feature, editing 48 track source material becomes almost as simple as editing mono or stereo.

Source - Destination editing can also be extremely useful in broadcast and tracklaying applications. Pyramix can have as many clip editors as you wish. Just create some tracks, group them, set the group as a Source. Set the Clip Editor track or tracks as '**always visible**' (in the **Tracks** Tab Window, so each Clip Editor always stays on top of the composition and that's it.

If there is no Destination group in your composition then the section between the Gates in the Source Group/Clip Editor is sent to the positions delineated by the **Mark In/Mark Out** on the selected track(s) in the composition.

Setting up a Source - Destination Environment

Templates

The quickest and easiest way to get started with Source - Destination editing is to use one of the supplied **Templates**. Choose the one which most closely matches your requirements, modify to taste and save as a **Template** for future use.

Starting from Scratch

In the Track Groups window, Create as many Source groups as there are alternate versions of the material you are editing and select their type as **Source**.

Tip: Create a Group, select its type as **Source** then choose **Tracks > Duplicate Selected Track Group** repeatedly until you have the required number of **Source** groups.

Create as many Destination groups you want to edit to (generally only one) and select its (their) type as **Destination**.

Create as many **Tracks** for each source take as you need for your editing and associate a **Group** to each of them.

Set these groups as Keep Cursor, Free Zoom, Auto-Solo and No Selection.

Select the option "Auto Select Tracks" in the Tracks menu. **Tracks > Auto Select Tracks**

Show the Source - Destination Toolbar, **View > Scales > Toolbars > Source - Destination**.

You are now ready to proceed with the Source - Destination Editing the following manner:

Source and Destination Groups have special markers called **Gate In** and **Gate Out** which can be set, nudged and auditioned:

Set the selected Track Group Gate In/Out of the selected Track Group to Cursor with the menu **Cursor & Marks > Gate In/Out to Cursor**

To remove a Gate set it again in the same position

Gates can be dragged with the mouse by clicking on them and moving.

Gate colors:

By default, **Gates** are displayed in **Grey**.

The **Source Gates** currently selected for the next edit operation are displayed in **White**.

The **Destination Gates** currently selected for the next edit operation are displayed in **Black**.

The current Source and Destination Gates for the next edit operation are the selected group Gates or if no groups are selected the last group where Gates have been set/removed/modified.

In 3 point editing, the “virtual” missing gate of the group that has only one gate set is displayed in Grey.

Set the Cursor to the selected Track Group Gate In/Out

Cursor & Marks > Cursor to Gate In/Out

Zoom to the selected Track Group Gate In/Out.

Cursor & Marks > Show Gate In/Out

Nudge the selected Track Group Gate In/Out with the menu selection

Cursor & Marks > Nudge Gates > Nudge Gate In/Out to Left/Right.

Each nudge operation can be auditioned automatically by setting '**Audition**

after Nudge' in the **Settings > All Settings > Application > Editing** page

Audition the selected **Track Group Gate In/Out Pre/Through/Post** with the

menu selection: **Machines > Internal Machine > Audition > Audition Gate In/Out**

Pre/Audition/Post.

The space between **Gate In** and **Gate Out** can be selected with the menu

Selection > Select between Gates.

Positions of **Gate In** and **Gate Out** for each selected groups can be displayed and manually modified with the **Source-Destination Toolbar** (If not already visible show with **View > Scales > Toolbars > Source-Destination**)

Once Gates In and Out have been set, Source - Destination operations can be applied FROM either the selected Source Track Group or the last Source Track Group whose Gates have been set TO either the selected Destination Track Group or the last Destination Track Group whose Gates have been set.

Both Source and Destination Gate In and Gate Out can be set or removed

(by setting them twice at the same position) to perform any combination of Source - Destination editing operation described in the table below.

When Gates are set the following Source-Destination operations available in the Edit menu can be applied:

- Auto-Edit Source to Destination
- Overwrite Source to Destination

- Insert Source to Destination
- Replace Source to Destination
- Fit Source to Destination

When the Source has only 1 Gate then the region to edit can be automatically adjusted to the end (or beginning in case of a single Gate Out) of the clip under the Gate when the edit operation is performed. This is available by choosing the menu item:

Edit > Source – Destination Settings > Limit 1 Gate Sources to End/Beginning of clip.

When the Source has 2 Gates set and the Destination has 1 Gate set, then the behavior of the Auto-Edit Source to Destination operation can be chosen between Overwrite or Insert by choosing the menu item:

Edit > Source- Destination Settings > 3 Gates Auto-Edit does Overwrite/Insert

The menu item:

Edit > Source - Destination Settings > Auto Set Destination Gate In after Edit

allows the Destination Gate In to be set to the previous Destination Out point after any Source-Destination operation. This automatically prepares the Destination for the next operation. The Destination is also automatically centered around the new Gate In.

The menu item **Edit > Source - Destination Settings > Auto Set Destination Gate In after Edit** allows the Destination Track Group to be automatically selected after any Source-Destination operation.

All these operations works independently of the Auto-Ripple mode (they have their own overwrite/ripple modes described in the table on the next page) but follow the Auto-Crossfade settings accessible in the menu **Edit > Auto-Crossfade**.

Keyboard Shortcuts

Most **Source Destination** operations are available as **Keyboard Shortcuts**.

2,3 and 4 Point Edits

Source-Destination operations	Source Gate In OR Gate Out Only	Source Gate In & Gate Out
Destination Gate In OR Gate Out Only	<p>Auto-Edit: Performs 2 points editing by doing the following Overwrite operation.</p> <p>Overwrite: Copies material FROM Source Gate In to the end of the Track or from start of Track to Gate Out TO Destination Gate In or Destination Gate Out by overwriting Destination material</p>	<p>Auto-Edit: Performs 3 point editing by doing the following Overwrite or Insert operation depending which one is selected in the menu Edit > Source-Destination Settings.</p> <p>Overwrite: Copies material between Source Gate In and Source Gate Out to Destination Gate In or Destination Gate Out by overwriting Destination material</p> <p>Insert: Copies material between Source Gate In and Source Gate Out to Destination Gate In or Destination Gate Out by rippling Destination material</p>
Destination Gate In & Gate Out	<p>Auto-Edit: Performs 3 points editing by doing the following Overwrite operation.</p> <p>Overwrite: Copies material from Source Gate In or Source Gate Out to Destination Gate In and Gate Out by overwriting Destination material</p>	<p>Auto-Edit: Performs 4 point editing by doing the following Replace operation.</p> <p>Overwrite: Copies material between Source Gate In and Source Gate Out to Destination Gate In by overwriting Destination material.</p> <p>Insert: Copies material between Source Gate In and Source Gate Out to Destination gate In by rippling Destination material</p> <p>Replace: Replaces material between Destination Gate In and Gate Out by material between Source Gate In and Source Gate Out by rippling the Destination material</p> <p>Fit: Replaces material between Destination Gate In and Gate Out by material between Source Gate In and Source Gate Out by stretching or squeezing the Source material</p>

7

Fade Editor



Pyramix 5.0

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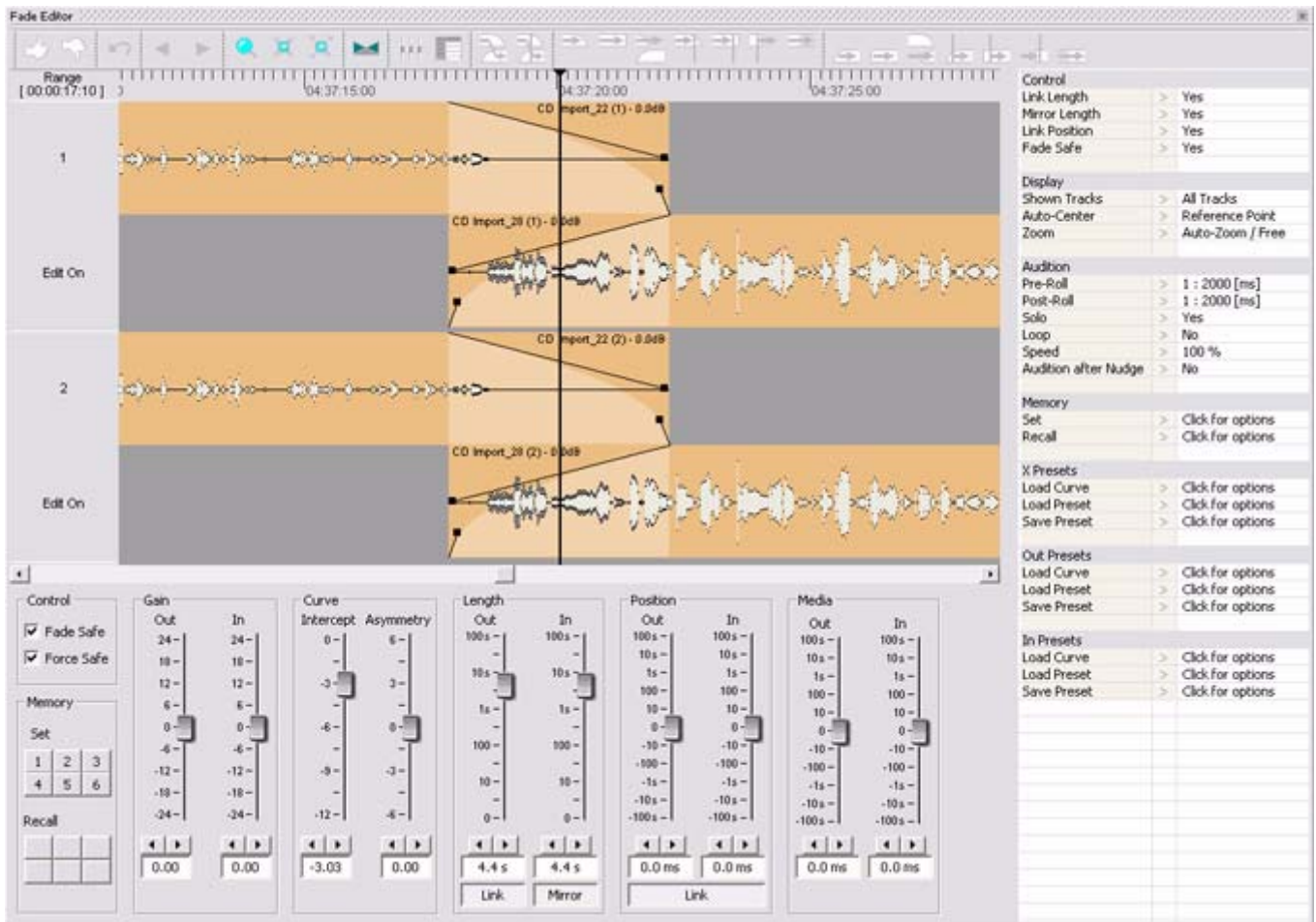


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Fade Editor Tab Window

The Pyramix Fade Editor offers several methods for creating fades and cross-fades. Fades can be made graphically by simply clicking and dragging appropriate points on the display or by using a specialized set of faders and buttons or by directly entering numeric data. A comprehensive set of auditioning options is provided together with libraries for user defined fade shapes and fades.

The Fade Editor always displays the fades for the current selection in the main Editor. The nearest fade to the click point is automatically selected.:



Fade Editor Tab floating Window

Toolbar




















Contains these buttons:

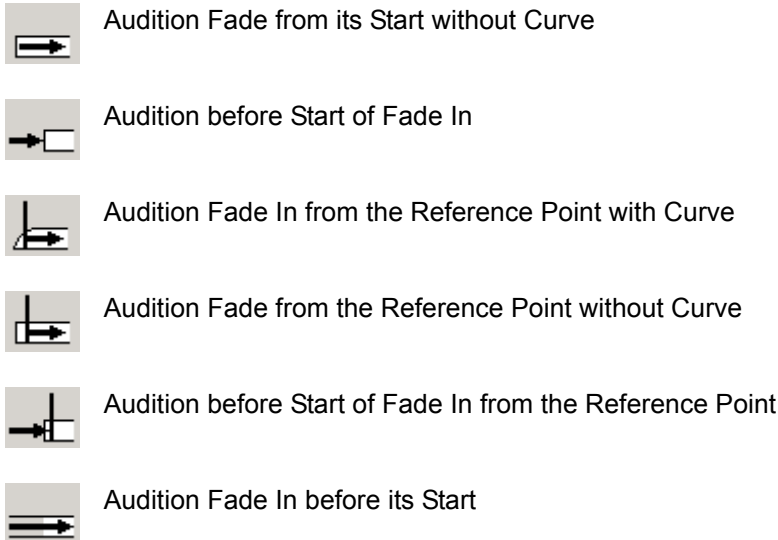


Accept & Close Editor (Close the Fade Editor and keep the changes, in effect an 'OK' button)



Restore & Close Editor (Restore the fade to its state prior to opening the Fade Editor or selecting a new fade, effectively a Cancel button)

	Undo last fade change
	Select/Edit Previous Fade
	Select/Edit Next Fade
	Zoom around the current Fade (Reset Zoom)
	Zoom In
	Zoom Out
	Xify (Reset the current fade to a standard Power X fade)
	Show/Hide Faders & Control Section
	Show/Hide Parameters & Options Section
	Audition whole X Fade with Pre-Roll and Post-Roll set before and after the X Fade boundaries
	Audition whole X Fade with Pre-Roll and Post-Roll set around the Reference Point
	Audition Fade Out up to its End with Curve
	Audition Fade Out up to its End without Curve
	Audition after the End of Fade Out
	Audition Fade Out up to the Reference Point with Curve
	Audition Fade Out up to the Reference Point without Curve
	Audition after the End of Fade Out from the Reference Point
	Audition Fade Out without stopping at its End
	Audition Fade In from its Start with Curve



The Graphical Display

Consists of the following elements:

- The TimeCode scale displaying the Zoom range on its left.
- A Reference Point which is set by default at the edit point or in the middle of the (X) Fade. This marker can be moved by clicking in the TimeCode Scale and is just a Reference Point for Auditioning (see above) or for Auto-Center (see below)
- All tracks or a selection can be displayed (see Parameters & Options below)
- At the left of each track display The Track name of each clip is shown, with a toggling **Edit On/Off** selector. This allows one or more Clip's/Fades to be excluded from further modification.
- A Vertical Scrollbar navigates through hidden tracks if any
- An Horizontal Scrollbar navigates before and after the Fade position
- The outgoing and incoming clip fades are displayed with curves
 - The Fade Position can be moved by clicking and dragging within the Fade area (Cursor changes to hand)
 - The Fade Length can be changed by clicking and dragging on the left or right side of the Fade area. (cursor changes to <|>)
 - The Media of the clips can be moved by clicking and dragging outside the Fade area. (Cursor changes to hand with tape reel)
- The Fade Curves can be modified by clicking and dragging on the Bezier Control Point Handles in the Fade black box

The Faders & Control Section

Has the following controls and displays:

- The **Fade Safe** check box in the Fader section ensures (when checked) that all following fades to the right of the one being edited are left intact while editing the current fade. This enables Auto-Ripple to be used without **Auto-Ripple** while keeping Fade synchronization clean.
- When the **Force Safe** box is checked the Fade Editor forces **Fade Safe** to enabled after each edit change.
- Six **Memory Set** and six **Memory Recall** buttons store and recall all the settings in the **Fade Editor**. The recall buttons are only numbered when there are stored parameters to recall.
- **Gain** Faders, Nudge buttons and Manual Entry Value Box (in dB) for both **Fade Out & Fade In**
- **Intercept** and **Asymmetry** Faders, Nudge buttons and Manual Entry Value Box (in dB)
- **Length** Faders, Nudge buttons and Manual Entry Value Box (in milliseconds. Type an **s** after any numeric entry to obtain a value in seconds) for both Fade Out & In
 - Length of Fade Out & In can be linked by clicking the **Link** button
 - Length of Fade Out and In can be changed symmetrically (centered) by clicking the **Mirror** button.
- **Position** Faders, Nudge buttons and Manual Entry Value Box (in milliseconds, type an **s** after any number entry for a value in seconds) for both Fade Out & In
 - Position of Fade Out & In can be linked by clicking the **Link** button
- **Media Position** Faders, Nudge buttons and Manual Entry
- **Value** Box (in millisecond, type an **s** after any number entry for a value in seconds) for **Fade In**

Parameters & Options Section

In this table parameters and options may be modified by clicking on >.

There are these sections and fields:

Control

- Link Length (see above)
- Mirror Length (see above)
- Link Position (see above)
- Fade Safe (see above)

Display

- **Shown Tracks** offers these choices:
 - **All tracks**
 - **Follow TimeLine Display**
 - **Choice of tracks**. The number of tracks selected in the TimeLine controls the available choices. So, if 4 tracks are selected, there will be the option of 1, 2, 3, or 4 tracks
- **Auto-Center**, enables automatic re-centering of the display around the Fade or Reference Point after certain operations
 - **None**

- **Fade**
- **Reference Point**
- **Zoom**, can be one of the following:
 - **Free**, follows only Zoom Reset, In and Out
 - **Auto-Zoom**, automatically Zooms around the current Fade after some operations
 - **Auto-Zoom / Free**, automatically Zooms around the current Fade but only when it enters the Fade Editor, thereafter, the Zoom is Free
 - **Timeline**, follows the Timeline Zoom factor
 - Choice of User defined Zoom Presets (see menu **View > Zoom**)

Audition

- **Pre-Roll** from the choices defined in the **Settings > All Settings Application Playback/Record** Page
- **Post-Roll** from the choices defined in the **Settings > All Settings Application Playback/Record** Page
- **Solo**, when **On** only the edited tracks are auditioned, when **Off** all tracks of the composition are auditioned as well
- **Loop**, any audition operation is repeated until Stop is pressed
- **Speed**, allows choice between 100%, 50% and 25% of normal play speed for auditioning
- **Audition after Nudge**, to automatically audition the Fade after nudging any parameter

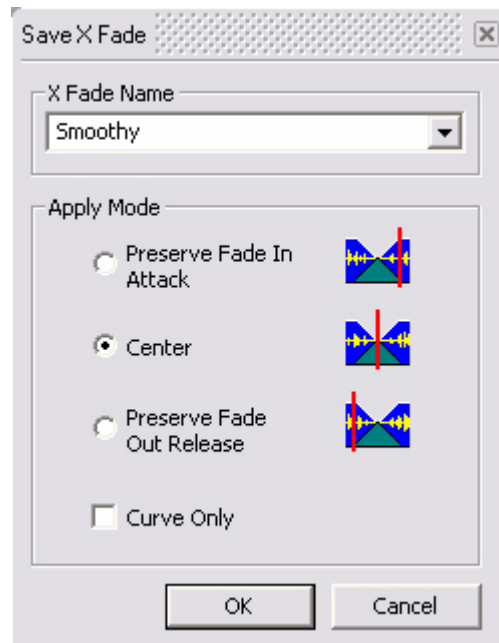
Memory

- **Set**, allows saving up to 6 temporary Fades for comparison
- **Recall**, allows recall of one of the 6 temporary saved Fades

X Presets / Out Presets / In Presets

- **Load Curve**, allows loading the Curve **SHAPE** only from a choice of:
 - **Default**
 - **Power**
 - **Linear**
 - **dB**
 - **Cosine**
 - **Root-Cosine**
 - Any **User-defined** curves
- **Load Preset**, allows loading a Fade from a choice of:
 - **Default** Fade
 - Any user defined Fades
- **Save Preset**,
- **Default** Fade
- New opens the Save X Fade or Save Fade pop-up dialog box (See below)

Save X Fade



Save X Fade dialog

The dialog box opens with the cursor in the **X Fade Name box**. Simply type a name for the new preset or choose an existing one to over-write using the dropdown list. Choose appropriate options and click **OK** or hit the **Enter** key to save the preset.

Apply Mode Options

A number of options are provided which affect the way the Fade will be applied when recalled.

Curve Only

When this box is checked only the curve shape will be recalled and applied to the overlapping tracks for the duration of the existing cross-fade. If left unchecked, the original duration and positions of the start, end and reference point will also be applied to the existing cross-fade.

Preserve Fade In Attack

Fade will be aligned to the left, relative to the edge of the clip, when recalled.

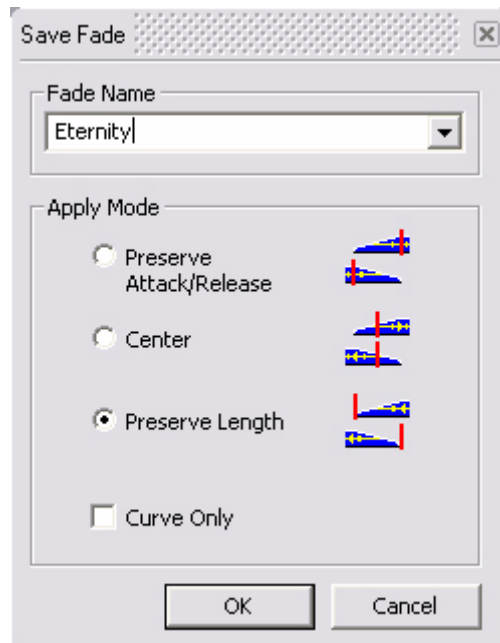
Center

Fade will be centered, relative to the edge of the clip, when recalled

Preserve Fade Out Release

Fade will be aligned to the right, relative to the edge of the clip, when recalled.

Save Fade



Save Fade dialog

The dialog box opens with the cursor in the **Fade Name box**. Simply type a name for the new preset or choose an existing one to over-write using the dropdown list. Choose appropriate options and click **OK** or hit the **Enter** key to save the preset.

Apply Mode Options

A number of options are provided which affect the way the Fade will be applied when recalled.

Preserve Attack or Release

Center

Preserve Length

8

Mixer



Pyramix 5.0

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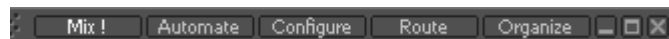
Overview

The Pyramix Mixer has evolved into an extremely powerful tool kit. The extensive range of components and the routing and automation possibilities can be a potential source of confusion. However, the basic principles are simple and logical. Signals enter mixer strips at the bottom, go through various controls and processing to the top of the strip where they are routed to a bus or busses. The busses run horizontally and the sum of the bus signals enters the bus master strip at the top and moves down through a master fader and other controls to the output(s).

If you are new to Pyramix, use one of the simpler mixer templates to familiarize. E.g. **Mix 08 X 02 (Stereo)**

Mixer Pages

The Mixer user interface is arranged in five pages grouping functions in a logical manner. Most time will be spent working in the main **Mix !** page. The other pages, **Automation**, **Configure**, **Route** and **Organize**, toggle with the **Mix !** screen and are accessed from buttons at top right of the screen...



Configure Page



Mixer Configure Page

In the **Configure** page multiple changes may be made to the mixer without it rebuilding after each change. The rebuild only occurs when you exit the page.

Note: Rebuilding a large mixer with many effects can take a considerable time.

Click and drag the separator bar between Strips and Busses to show more or less busses. The scroll bars give access to strips currently off screen.

Direct Outputs

The **Direct Out** connection is disabled by default. It can be enabled in the **Configuration** Page by selecting the strip and clicking on the **DO: Off** box or disabled if the box shows **DO: On**. Alternatively Direct Out can be set in the **Route** Page by clicking on the Strip Header.

The **Direct Out** can be routed by Channel to any output of the HDTDM or XDTDM bus. The Direct Out can be sent Pre or Post Fader. Click on the **DO: Post** box in the Mixer I/O section to toggle. The Direct Out is currently always **Post Effects**. For multi-channel strips clicking in the box above the **DO:** box pops-up a **Set Direct Out** list:



Highlight the required channel. This will be fed to the logical output assigned in the **Mixer Route** page or by clicking on the **DO XLR** icon in the **Mix** page.

Selecting Strips

Strips can be selected by clicking on the label at the top of the strip which turns orange to show it is selected. Selection uses the conventional modifier logic: Clicking a second strip while holding **SHIFT** selects all strips in between and strips can be individually added or subtracted from a selection by clicking with the **Ctrl** key held down. **Ctrl + A** selects all strips. Strips can be selected by type using the **Select** context menu.

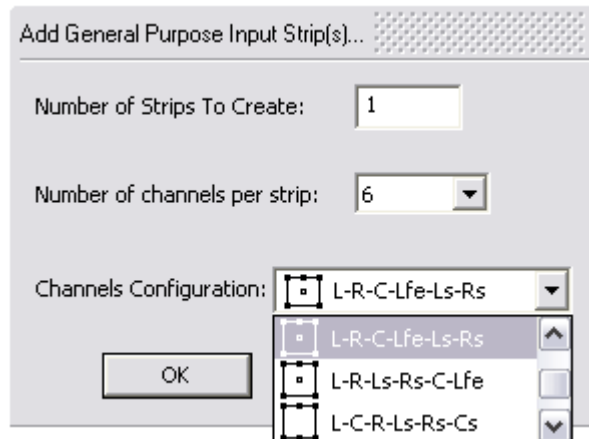
Strip and Bus operations

Once selected, strips can be dragged and dropped to reorganize. Other strip operations make use of the **Topology** and **Display** context menu buttons. Each button pops up a list of options:



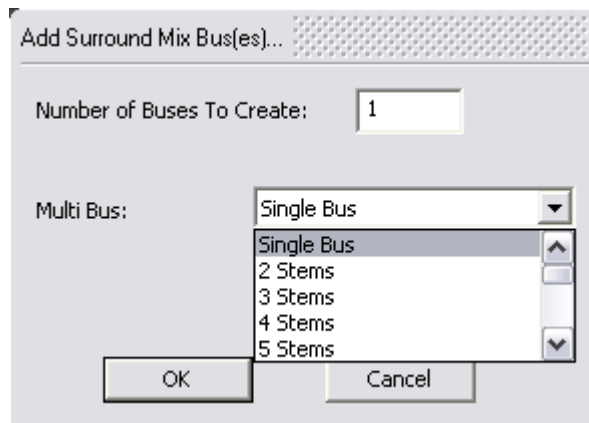
+ - Context menus

Add Strip - Mono, Stereo, MS, GPS and Group pops up a dialog with appropriate options:



Add General Purpose Input Strip(s) dialog

Add Bus - Mono Mix Stereo Mix Surround Mix and **Aux** is similar:



Add Surround Mix Bus(es) dialog

Duplicate Strip(s) adds a copy of the selected strip(s) to the right of the selected strip(s) including settings (pan, gain etc.) and effects.

Select Offers selection choices to speed up configuration.

All Strips

All Buses

All Mono Strips

All Stereo Strips

All GPS Strips

All Group Strips

Productivity Shortcuts

Ctrl + A selects All Strips, **DELe**te, deletes all selected strips.

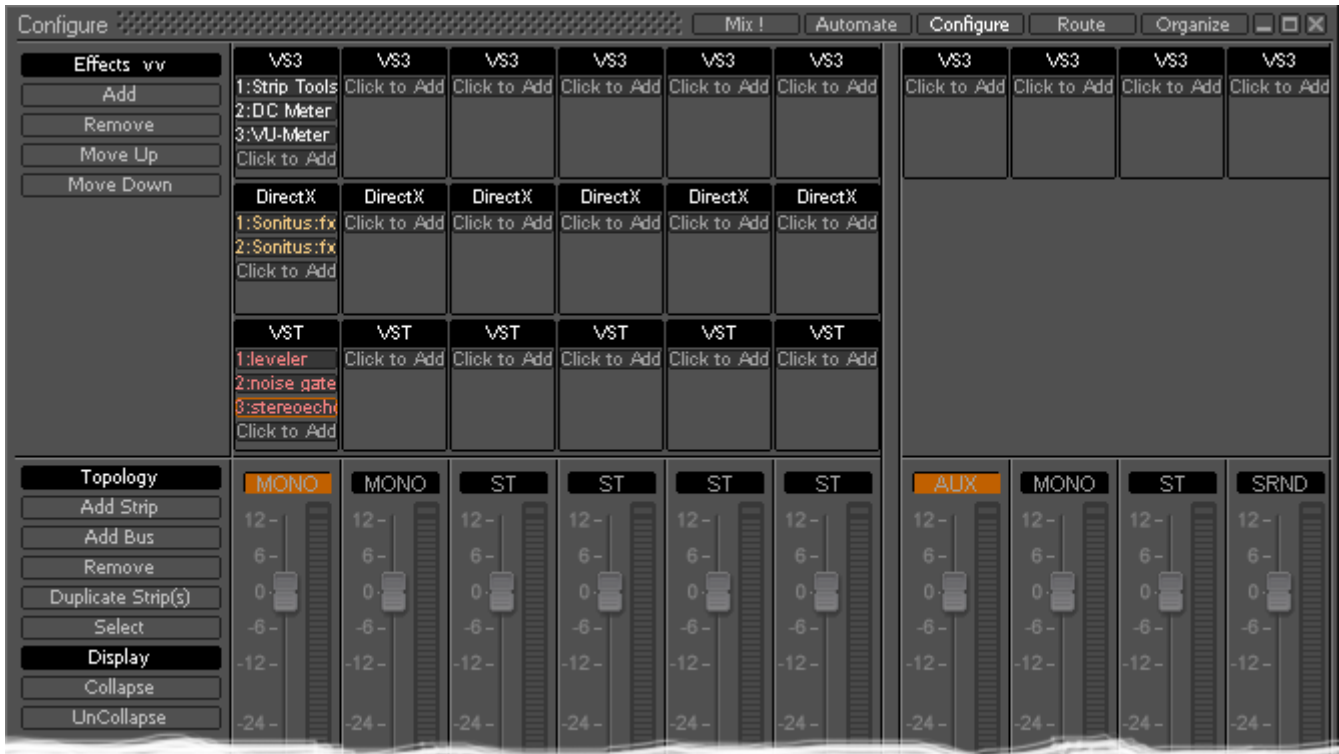
Selected Strips can be dragged to a new location in the mixer. The screen scrolls horizontally when you hit the edges of the Strip panel.

Double-clicking a Strip toggles it's collapsed/uncollapsed states.

Strip names can be edited by clicking in the name box and typing. **Tab** moves to the name box of the next strip to the right, **SHIFT + Tab** moves to the name box of the next Strip on the left.

Effect Management

Clicking on **Effects >>** expands the Effects section.

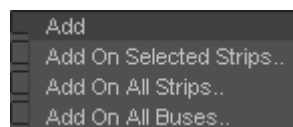


Configure Page - Effects section

This offers several methods of managing effects on strips and busses.

Configure: Effects Buttons

Add Pops up a sub-menu with options

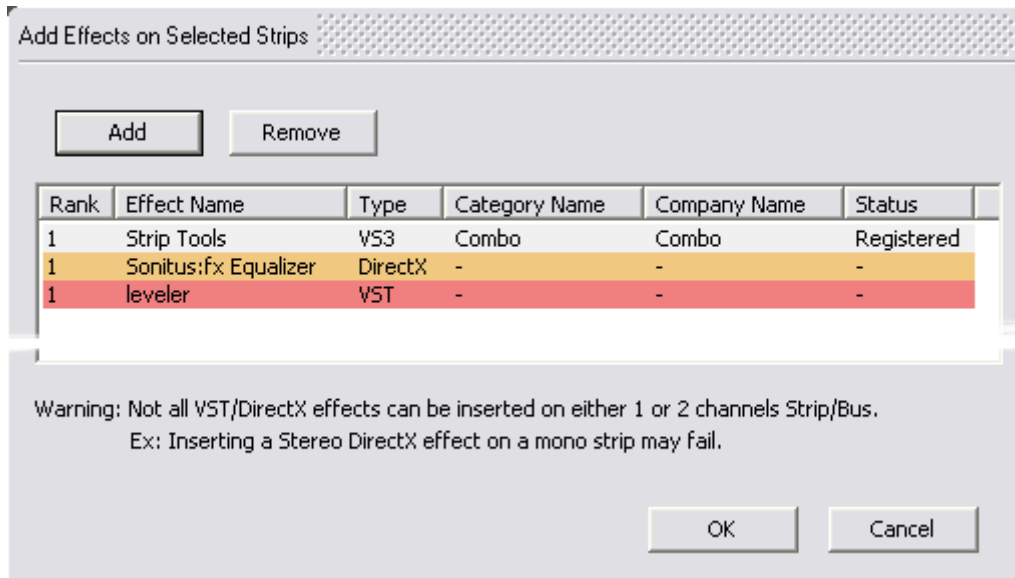


Add On Selected Strips..

Add On All Strips..

Add On All Buses..

Each of these three options opens an **Add Effect On XXX** dialog, identical apart from the title

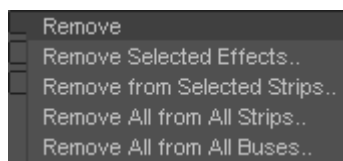


Add Effects On Selected Strips dialog

Note: That the different types of effect are shown by color. Gray for VS3, orange for DirectX and Red for VST. These colors are also used when effects are shown in containers in the Strips display.

Remove

Pops up a sub-menu with options:



Remove Selected Effects..

Remove From Selected Strips..

Remove All From All Strips..

Remove All From All Buses..

Move Up

Moves the selected effect(s) up in the list.

Move Down

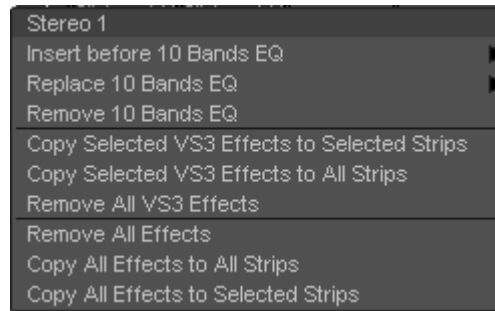
Moves the selected effect(s) down in the list.

Effects Section Containers

The Effects section of each strip is divided into three container areas by plug-in type, **VS3** at the top, **DirectX** and **VST** below. Clicking on the **Click to Add** buttons in each container pops-up a list of available plug-ins in the relevant format sub-grouped by type. E.g. Dynamics, Restoration etc. Simply select from the list by clicking on an entry to install the plug-in in the Strip. When a Strip or Bus has many effects, the container expands to accommodate them.

You can select an installed effect with a **left-Click** then **drag and drop** to move or **Ctrl + drag and drop** to copy effects of the same type to a Strip or Bus of the same dimensions or change the order of effects within the effect type container of the strip. **SHIFT + Clicking** a second effect with an effect already selected, selects all effects between the first and last selected. **Ctrl + Click** adds to selection.

Right-clicking on an installed plug-in pops-up a context menu, for example:

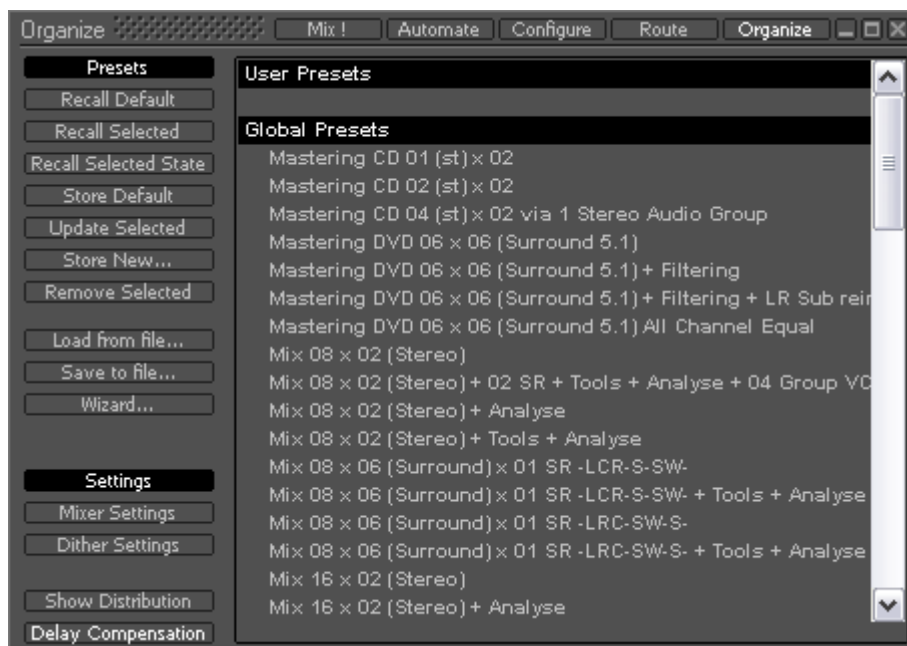


Effect context popup

- Insert before (effect clicked on)** > drops down a list of effects of the same type that can be inserted before current the effect.
- Replace (effect clicked on)** > drops down a list of effects of the same type that can replace the current effect.
Double-Clicking an installed effect does the same thing.
- Remove (effect clicked on)** Uninstalls the current effect from the Strip or Bus
- Copy Selected (Effect type) Effects to selected strips** As it says. Target strips can be selected before or after selecting the effect(s)
- Copy Selected (Effect type) to All Strips** As it says.
- Remove All (Effect type) Effects** Removes all effect of the current type from the Strip.
- Remove All Effects** Removes all effects of all types from the current Strip.
- Copy All Effects to All Strips** Copies all the effects installed in the current Strip to all other Strips.
- Copy All Effects to Selected Strips** Copies all the effects installed in the current Strip to all selected Strips.

Organize Page

Here Mixer Presets and Settings can be managed:



Mixer Organize Page

Presets

Storing and Recalling Mixer Presets

Mixer Presets can be saved in a user folder or added to the main Mixer Preset list either for the current user or all users.

Default Mixer

To Save the current Mixer setup as the default Mixer, select **Store Default**.

Storing New Mixer Presets

To add a preset to the main list of available Mixer presets I.e. the list which appears when starting a new project, **Store New...** and enter a name for your Mixer Preset. If the **Global** box is checked then the preset will be available for any user logged on the current machine, if not the preset will be available only for the user that created the new preset.

Removing Mixer Presets

To remove a preset from the main list, select it and click on **Remove Selected**. The **Remove Preset** dialog box appears with OK and Cancel options.

Updating Mixer Presets

To update a Preset with the current settings, highlight it in the list and select **Update Selected...** the **Update Preset** dialog appears asking if you wish to replace the 'current preset'. Choose **OK** or **Cancel**.

Recall Selected State

Saving / Loading Mixer Presets to / from files

Mixer Presets can also be stored in Windows folders. Select **Load from file...** or **Save to file...** as appropriate. A Windows Explorer window opens enabling a previously saved Mixer Preset to be loaded or the current Mixer Preset to be named and saved to any Windows folder.

Settings

Mixer Settings Opens the **Mixer Settings** window at the **All Settings > Hardware > Hardware > Formats & Sync** page.

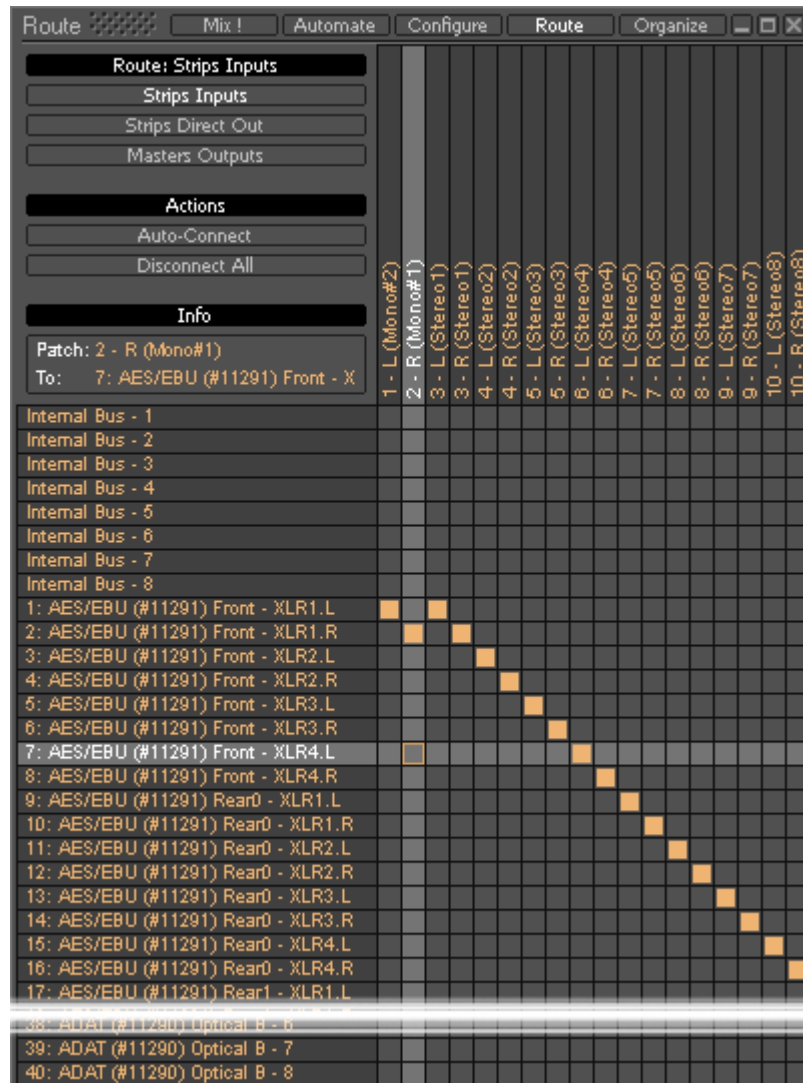
Dither Settings opens the **ReDithering** dialog. **Please see: Dithering Options on page 147**

Show Distribution When on, a narrow colored bar is inserted at the bottom of each input strip. This indicates which card (in a multi-board system) is providing the DSP for the strip.

Delay Compensation When on, Enables Delay Compensation for the mixer.

Route Page

Route brings together all routing to and from physical I/O in an intuitive matrix routing grid environment. It opens in the **Strips Input** page:



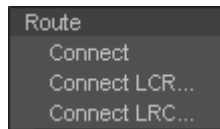
Mixer Configure Page

Strips Direct Out and **Masters Outputs** are similar.

Making Connections

When the cursor is hovering over a destination crosspoint the column and row are highlighted for ease of viewing. If the cursor is over a crosspoint which is part of a multichannel strip or bus the other channels in the group are also dimly highlighted. In **Strips Inputs** clicking on a crosspoint routes the source in the left hand column to the destination in the top row. In **Strips Direct Out** and **Masters Outputs** sources are horizontal and destinations vertical. Clicking and dragging allow multiple assignments to be made rapidly.

Right-clicking a crosspoint pops-up a context menu with options appropriate to the destination.:



Auto-Connect

Connects all the **Strip Input Channels** to physical inputs in ascending order.

Disconnect All

Removes all crosspoint assignments.

Info

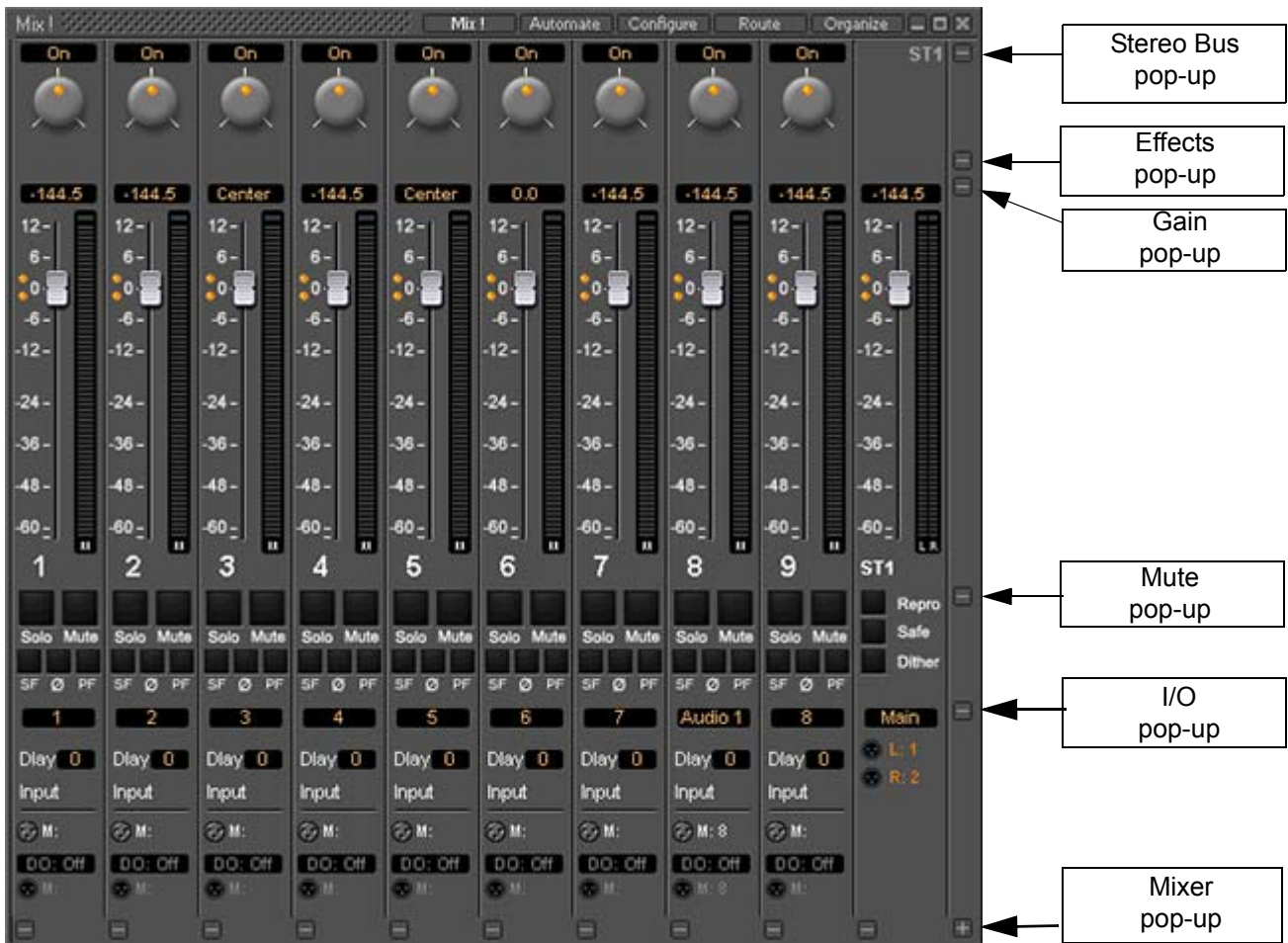
The **Info** box shows detail about the currently highlighted crosspoint.

Automate Page

UNDER CONSTRUCTION

Mix !

Basic Mixer



Simple 8 X 2 stereo mixer Window with all areas visible

Expand / Collapse

The small, grey + - boxes on the right of the mixer surface toggle horizontal areas of the mixers surface shown full size or collapsed. They also pop-up context menus when the cursor is above them. (see below) Expand / Collapse and Hide can reduce clutter by concealing unused controls. This is the same mixer with all areas Collapsed:



Simple 8 X 2 stereo mixer Window with all areas hidden

Each + - box also pops-up a menu relevant to the area of the mixer it deals with when the cursor is above it. E.g. :



Simple 8 X 2 stereo mixer + - pop-up menus

Collapse/Hide

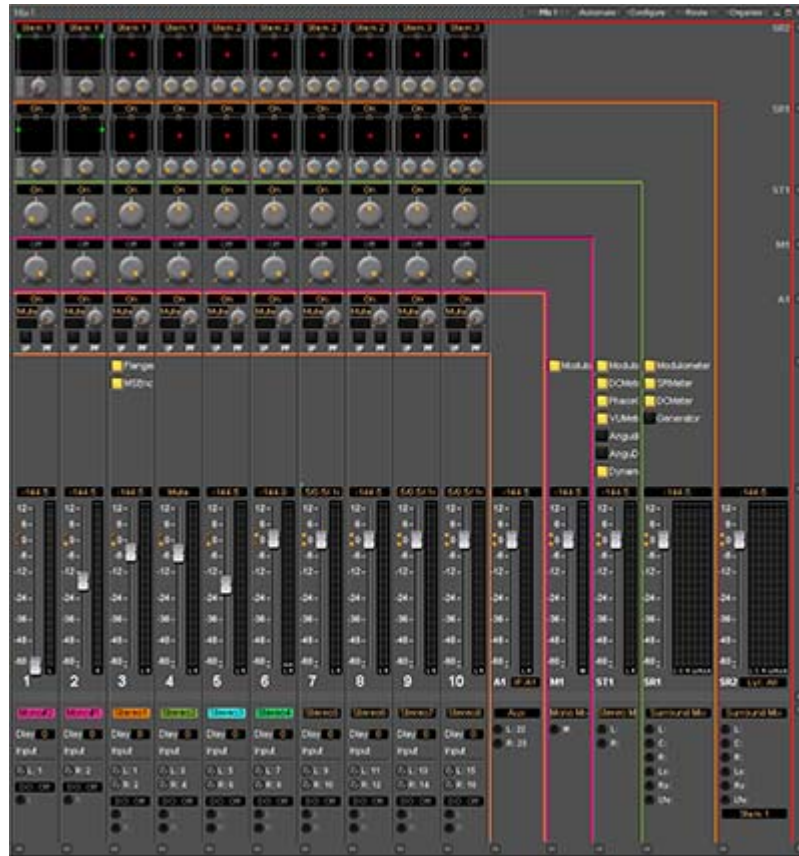
Choosing **Collapse** leaves a small artefact of the mixer area visible, a gray horizontal bar with a + box at the right-hand side. **Hide** completely removes the area from view. Choosing **Show All** in the **Mixer** + - pop-up will restore.

Resets

These context menus also provide a convenient way to restore all controls of specific types or, in the relevant sections, the entire strip or mixer to the default condition.

Colors

Bus paths can be colored to aid comprehension.



Mixer with colored bus paths

Hide or **Show Colors** hides or restores the colored lines. **Change color** allows the color of an individual bus to be altered. **Reset color** restores the color to its previous state.

Mixer Components

Input Strips

Mixer Input Strips associated with tracks (the pale green box in the track header) are fed by and control the monitor output of the tracks. The Mixer Strip Channel **Live** (physical) or **Internal Return Bus** Input goes direct to the associated Track. When a strip has no associated track it is fed by and controls the **Live** (physical) or **Internal Return Bus** input assigned to it.

When the strip has an associated track, the track output is automatically switched between input and playback output depending on transport mode, the monitoring setting in the track header and the setting of the **Settings > All Settings > Application > Playback/Record : Auto-monitoring** option, **European Monitoring** (all tracks turn to INPUT on stop) or **US Monitoring** (only Record Ready tracks turn to INPUT on stop)

Note: When strip channels have an associated track **NONE** of the strip controls, fader, mute, eq etc. affect the signal fed to the track input.

Mixer Input Strips have the same functions as the input strips of any standard mixing console providing level control, pan, mute, etc.

The following types of input strips are available:

- Mono input Strips
- Stereo input Strips
- MS decoder Strips - decode a Sum and Difference signal to standard stereo format
- GPS (General Purpose Strip)

Mixing/Monitoring/Aux Busses

These are the summing busses where mixer strip signals are routed to. Each bus type (Mix or Aux) has a **Repro** button in the Master section to allow this bus to output signal only when the system is playing back. No signal will be output in **Stop** or **Record** modes, for example to avoid audio feedback (howl round) in the Studio main speakers when Tracks auto switch to input when **Recording** or **Stopped**.

Mix Bus

A mix bus is the destination for the final product of your mix. The outputs of a mix bus are usually routed to a master machine to record the final mix. They can also be routed via **Internal Return Busses**. Apart from their other uses, these enable the final mix to be recorded in Pyramix. Main **Mixing** and **Aux Busses** also appear in the **Monitor**.

Mix Busses are available in several formats:

Mono Mix

Provides a single mono output. Any input strip can be routed to it.

Multiple Mono Mix

Provides several mono outputs. Any input strip can be routed to any or all of them

Stereo Mix

Provides a single stereo output. Any input strip can be routed to it

Multiple Stereo Mix

Provides several stereo outputs and allows any input strip to be routed to any or all of them

Surround Mix - 5.1 format

Multiple Surround Mix - provides several surround outputs and allows to route any mixer strip onto any of them.

Note: Unlike mono and stereo multiple busses, input strips can only be routed to ONE 5.1 destination stem of a multiple surround bus. This reflects their normal use. E.g. a common set-up will have three surround bus stems for Dialogue, Effects and Music. Each Input strip is routed to the appropriate surround bus by clicking on the **Stem 'X'** button.

All surround bus stems can be summed for monitoring in the **Monitor**.

Multiple Mix Busses

Mono / Stereo

When a mono or stereo multiple mix bus is added to the mixer a routing matrix box appears in the input strips with a send level control (mono) or pan control (stereo).



Mix bus matrix

The 8 by 8 matrix gives access to up to 64 output busses. Routing is shown by lit crosspoints.

Double-clicking the matrix in the strip opens the routing matrix window.



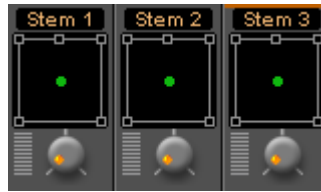
Mix bus routing matrix

Valid choices are shown in gray. Once the window is open, other input channels can be route by either selecting them from the drop-down list or using the < and > arrows to step across the mixer surface.

Surround

Up to 16 surround busses each with from six to nine channels may be added as a single **Multiple Surround Mix** output strip. The principle use of these is for stem mixing where, for example, dialog, background effects, spot effects, foley and music are recorded as separate recordings but monitored as a

complete mix. Each surround bus is identified by number. In this illustration, a **Multiple Surround Mix** strip has been added to the mixer with three surround busses.



Clicking on the label above the Surround Panner pops up a list of the available stems. Simultaneously selecting more than one on a strip is not possible.

The associated **Surround Mix** output strip routing is shown below:



Multiple Surround Mix Output Routing

The top (SR1) box shows what the meters are displaying. Clicking on it cycles through each Stem and **Lvl: All** which meters the sum of all the **Stems**. The bottom box shows and selects which Stem the XLR icons refer to. Routing to physical outputs or Internal Return Busses is accomplished in the same way as other busses. I.e. right-click the relevant XLR icon and select **Connect >** etc. from the menu.

Groups

Master Group Strips - allow the grouping of faders of several mixer strips. Analogous to VCA grouping. When a group or groups are added (from the mixer contextual menu **Settings > Add Strip > Group**) A group button for each group created will appear below the strip name box on each input strip. When selected, the associated Group strip will control the grouped input strips if the **On** button is lit on the Group strip.

Channel Direct Outputs

All input strips can have **Direct Outputs**. The **Direct Out** connection is disabled by default. It can be enabled in the **Configuration** Page by selecting the strip and clicking on the **DO: Off** box or disabled if the box shows **DO: On**. Alternatively Direct Out can be set in the **Route** Page by clicking on the Strip Header.

The **Direct Out** can be routed by Channel to any output of the HDTDM or XDTDM bus. The Direct Out can be sent Pre or Post Fader. Click on the **DO: Post** box in the Mixer I/O section to toggle. The Direct Out is currently always **Post Effects**. For multi-channel strips clicking in the box above the **DO:** box pops-up a **Set Direct Out** list:



Highlight the required channel. This will be fed to the logical output assigned in the **Mixer Route** page or by clicking on the **DO XLR** icon in the **Mix** page.

Although there can be any number of Input Strips and Busses from 1 to 64 in **HDTDM** or 1 to 128 in **XDTDM**, there is a limitation on the number of Direct Out connections: The sum of the **Direct Out** connections **PLUS** all Busses channels can not exceed **64** in **HDTDM** or **128** in **XDTDM**.

Strip & Bus Channel Types

All Strips and Busses Channels have a custom type that can be manually set in the **Configuration Page** to:

- Left (L)
- Center (C)
- Right (R)
- Surround Left (Ls)
- Surround Right (Rs)
- LFE (Lfe)
- Left Center (Lc)
- Right Center (Rc)
- Surround Center (Cs)
- No particular type

Mono Strips are tagged by default to no particular type

Stereo Strips are tagged by default to **L-R**

MS strips are tagged by default to **C-W**

GPS Strip (General Purpose Strip):

GPS Strips can have from 1 to 8 channels

They can be used as Aux returns or for any kind of direct Input usage e.g. premixes or multi-channel recordings.(LCR, LCRS, etc...) By default a 2 channel GPS Strip is initialized to L-R and a 6 channel GPS Strip is initialized to LCRLsRsLfe 5.1. This can be changed/customized in the Configuration Page.

GPS Strips feeding any busses (Aux or Mix) are routed by default by Channel Type (like any other strip) but this routing can be manually changed by clicking on the Channel Routing grid (like any other strip).

Aux Busses:

General Purpose **Aux busses** provide a way to create 'auxiliary' mixes which are normally used to provide headphone or cue mixes for musicians, or to send signals to effects such as reverbs, delays, choruses, etc.


Aux Busses can have from 1 to 8 channels. Channels have a custom type that can be manually set in the Configuration Page to:

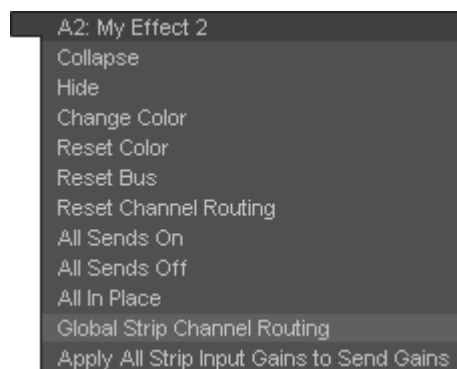
- Left (L)
- Center (C)
- Right (R)
- Surround Left (Ls)
- Surround Right (Rs)
- LFE (Lfe)
- Left Center (Lc)
- Right Center (Rc)
- Surround Center (Cs)

By Default a 2 channel **Aux Bus** is initialized to **L-R** and a 6 channel **Aux Bus** is initialized to 5.1. This can be changed/customized in the Configuration Page.

Note: When an Aux bus is added it is important to ensure that the Type for each channel of the Aux bus is set correctly.

Context Menu

As with other buses, Clicking on an Aux bus's small gray  box on the right-hand edge of the mixer window Expands / Collapses the send display. When the cursor is above the box the Aux Bus pop-up context menu opens:

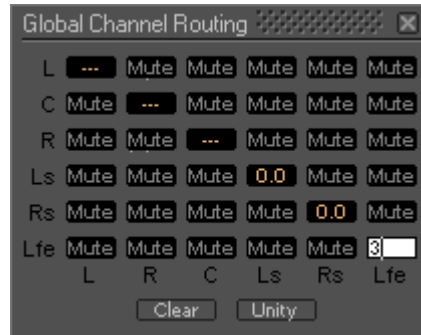


Aux bus pop-up context menu

Most of the entries are the same as other buses, but the last two entries are specific to Aux buses.

Global Strip Channel Routing

Opens the **Global Channel Routing** window for the Aux bus



Global Channel Routing window

This routing grid groups together the Channel Types of all the input Strips present in the current mixer, shown horizontally (L, R, C, ...). The vertical channels are the Channel Types of this Aux bus. When a node's value is edited, the static aux send gain of all strips having this channel type is updated with the new value for this aux bus. When some strips are already set to different values for a specific node "---" is displayed.

Clear Sets the entire grid to Mute

Unity Sets the entire grid to Mute

Note: Invoking either **Clear** or **Unity** will affect all Strips Aux Sends to this Aux Bus.

Apply All Strip Input Gains to Send Gain

The current input gain value of every strip in the mixer will be applied to all the Aux sends feeding this Aux bus.

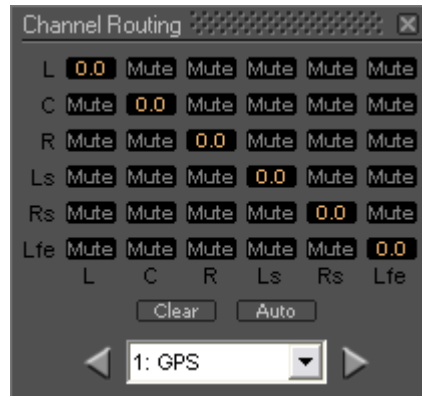
Aux Send Routing

When a Strip feeding an Aux Bus is of the same type as the Aux bus E.g. Stereo strip feeding stereo Aux bus 5.1, Strip feeding a 5.1 Bus the sending Strip's Channels are automatically routed to the corresponding Aux bus Channel Type. (Left to Left, Right to Right, etc...).

Where the sending Strip differs in Type to the Aux Bus E.g. a Stereo Strip feeding a 5.1 Aux Bus, the routing must be made manually. The same method is used if you wish to alter auto-routed values.

Static Channel Routing

Aux Send Channel Routing is set by clicking on the little grid icon adjacent to the knob on the Aux Bus send in the channel strip. This opens a **Channel Routing** window:



Channel Routing window

Shown here with a 5.1 channel feeding a 5.1 Aux Bus. Gain values can be entered for each node of the Strip/Bus crossing. Just click on any node and enter a dB value. Enter nothing (no character) or -144.5 to reset the node to Mute.

- Clear** Clears all nodes to **Mute**
- Auto** Sets a **1 : 1** flat routing as shown above

Aux Buses In-Place Panning

In-Place panning for each Aux bus is turned on with the **IP** button in Aux Send section(s) of each Input Strip. **In-Place** Aux Sends take the output(s) of the appropriate panner at the same level(s) the panner is feeding its output bus.

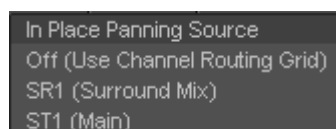
Note: Only corresponding Bus **Types** are fed in this way. Thus if you feed a Mono Aux Bus typed **Center** from a 5.1 panner and there is no signal on the centre channel no signal will be fed to the Aux Bus even if the signal on the left and right outputs is identical creating a 'phantom center'.



In-Place Panning Indicator/Selector

In-Place Panning Source

When an **IP** button is lit (yellow) on an Input Strip, the way in which the aux send channels are routed to an Aux bus is determined in the Aux return strip. For example, in a mixer configuration with an Aux bus, a Surround bus and a Stereo bus. Clicking on the highlighted box below the Aux master fader pops up a list of options:



In-Place Panning Source pop-up

These determine whether the Aux send will follow one of the output bus panners or the Static Channel Assignment set in the Input Strip. E.g. for Aux bus 1:

Off (Use Channel Routing Grid) Aux pan follows Static Channel Routing assignment

SR1 (Surround Mix) Aux pan follows Surround Mix bus panners

ST1 (Stereo Mix) Aux pan follows Stereo Mix bus panners

To make all the Aux 1 sends follow the Mixer Strip Surround Panners, click on the box below the fader and select **SR1 (Surround Mix)**

Note: When **IP:Off** is displayed in the Aux master strip I.e. no In-Place source is selected, then the **IP** buttons in the input strips will be grayed out. Similarly, when an In-Place source **IS** selected and the yellow **IP** button in the input strip is lit then the static routing grid is grayed out and unavailable as in this illustration.

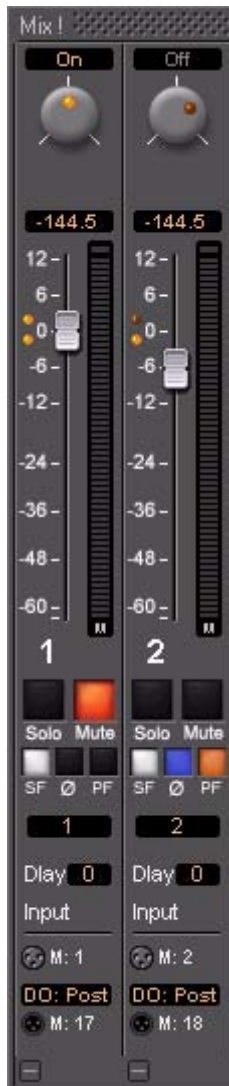


Strip Aux sends and Channel Routing dialog

The three strips shown are **10**, **11**, and **12**. Since the **IP** button is selected (Yellow) on strips **10** and **11** the static routing grid is grayed out and thus unavailable. On strip **12** the **IP** button is deselected (dark) and the Static **Channel Routing** grid can be opened by clicking on the grid button next to the knob.

Note: The **IP** button defaults to **On** when the aux send is first turned on. If the send is subsequently turned Off (muted) then the current setting of the **IP** button is remembered when it is unmuted.

Basic Strip



Basic Strip

A basic mono channel strip contains:

On /Off toggle switch

Pan pot to Main output bus. In this case there is just a single stereo mix bus.

Numeric display of fader output level value, if cursor is over a fader knob shows fader gain. If cursor is over pan-pot, shows current pan position. May be clicked to directly enter a fader gain value.

Level Bargraph Rotary Controls and Faders

Rotary Controls and Faders may be adjusted by grabbing them with the mouse and dragging. Rotary controls are adjusted by dragging left or right and faders by dragging up or down. Double-clicking a Fader or Rotary knob returns the value to the default. E.g. unity gain on a channel strip fader. Bargraph shows peak level

Buttons

Buttons on the main mixer surface are black when inactive. When active they 'light up'.

Solo solos the strip, **Mute** mutes the strip **Ctrl + Solo** cancels all other Solos

SAFE prevents the strip being muted by solo operations elsewhere. **Ø** reverses the channel phase. **PF** changes the metering position to Pre-Fader.

Delay A delay value (in samples) can be set in this box.

Input Clicking on **Input** pops-up a box with the choice of the strip taking its input from a physical connection or any output bus.

Logical Input and Direct Output Assignment

Right-click on the XLR icons to pop-up a drop down list of valid assignments.

Note: Direct Outputs must first be enabled in the **Configure** page. **Please see: Channel Direct Outputs** on page 132

Stereo Strips

In a Stereo Strip feeding a stereo bus the pan pot is replaced by a balance control and the single bargraph meter is replaced by a pair.

Stereo Strips can reverse the **Phase** of both the Left and Right channels. The single button has four possible states:

Black:	No phase inversion
White:	Left channel inverted
Red:	Right channel inverted
Blue:	Both channels inverted

M&S Stereo Strips



What is M&S?

M&S stands for **Middle** and **Side**. **M&S** is a microphone technique which outputs **Sum** and **Difference** signals instead of **Left** and **Right** (also known as **LR**, **AB** or **XY**). These Sum and Difference signals are often known as **M&S** although this nomenclature is often a source of confusion...

Sum and Difference signals can be created from a conventional Left, Right source. For example, by using the Pyramix **MS Encoder** plug-in. (Please see: **MS Encoder** on page 169).

Decoding M&S

A **Sum and Difference** or **M&S** decoder reconstitutes Left and Right by adding the **Difference (S)** signal to the **Sum (M)** signal to produce Left and adding the **phase-reversed Difference (S)** signal to the **Sum (M)** signal to produce Right. This is often represented as:

$$L = M + S \text{ and } R = M - S$$

Benefit of M&S

In mixing as opposed to recording, the main practical benefit of manipulating a signal in the Sum and Difference domain is true control over the **width** of the image. Pyramix can handle these signals directly thanks to the provision of **M&S Stereo** strips.

M&S Strip controls

An **M&S** strip stereo bus send has three controls. The center knob determines the **Sum (M)** contribution to the Left and Right outputs. The **L** knob determines the in-phase **Difference (S)** contribution to the Left output and the **R** knob determines the out-of-phase **Difference (S)** contribution to the Right output. The **L&R** knobs are ganged by default. To move them independently click and drag with the **Ctrl** key held down.

The **Phase** of both the Sum and Difference channels can be reversed. The single **Ø** button has four possible states:

Black:	No phase inversion
White:	Sum (M) channel inverted
Red:	Difference (S) channel inverted
Blue:	Both channels inverted

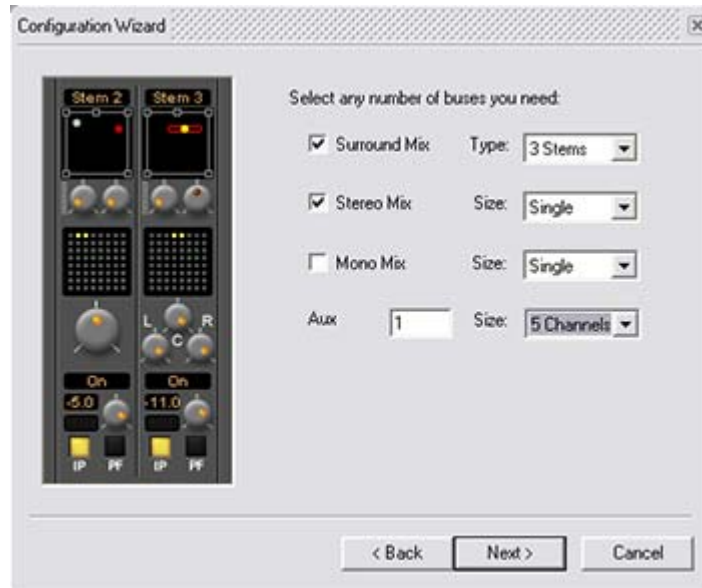
Inverting either Sum or Difference results in the image being reversed left to right.

Note: If the **Input meters** consistently show **S** higher than **M** then either the image is very wide and unlikely to be compatible for a mono listener or the **M** and **S** inputs have become reversed at some point. Regrettably, this is extremely common when dealing with location recordings in film and TV.

Creating and Configuring Mixers

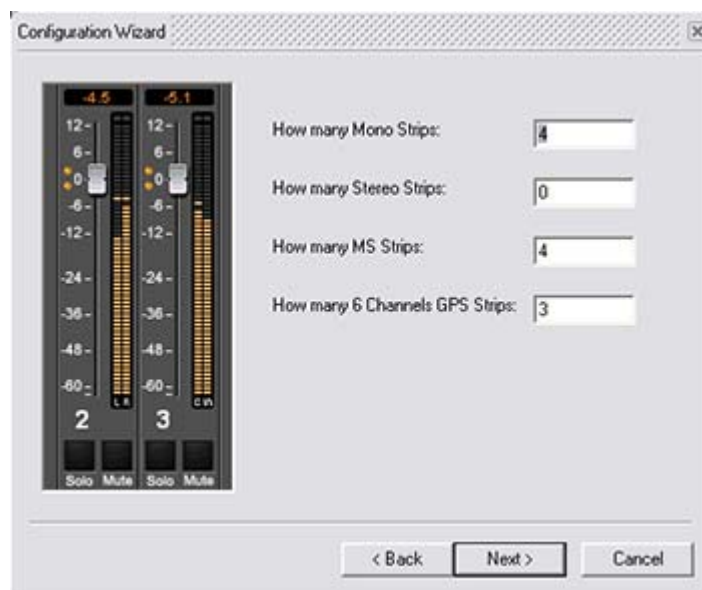
If one of the numerous mixer presets does not quite suit your application it is simple to modify an existing mixer, create one using the Mixer Wizard or design one from scratch. The Wizard can be started from an existing mixer by right-clicking anywhere on the mixer surface and selecting **Settings > Wizard...**

Mixer Configuration Wizard



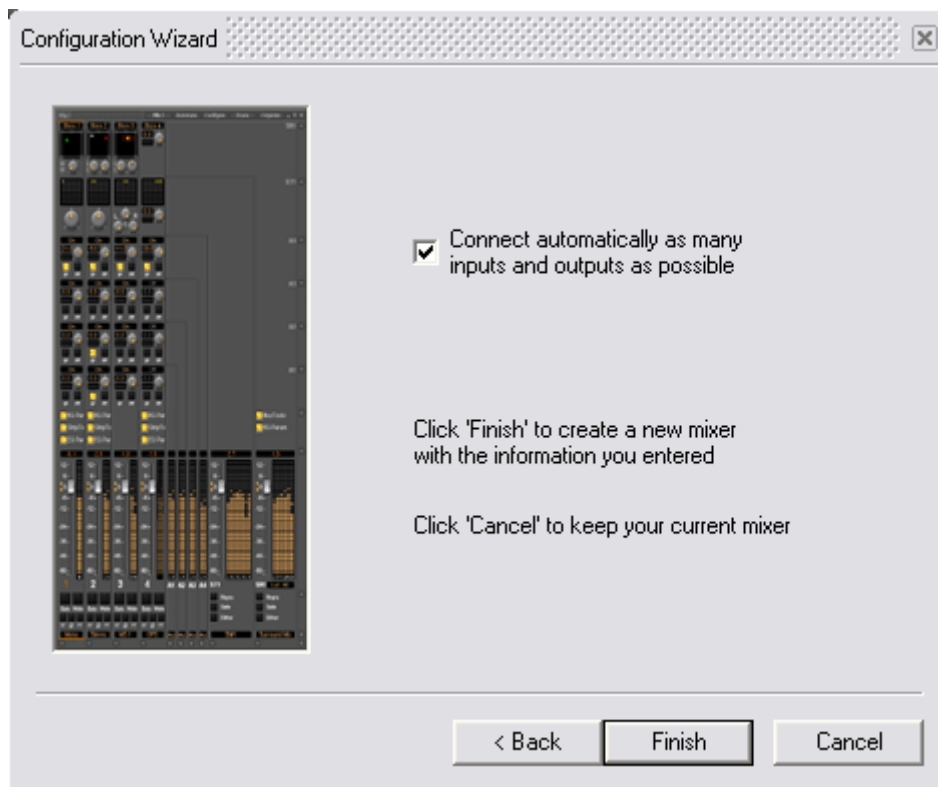
Configuration Wizard busses dialog

Select the type(s) of busses required using the check boxes and the number needed from the drop down lists on the right. Note that a single **Mono or Stereo Mix Bus** can consist of from **1 - 64** busses, and a **Surround Mix Bus** can consist of from **1 - 16** multi-channel stems. **Aux Busses** can have from **1 - 8** channels. Click the **Next** button to move on to the next page.



Configuration Wizard strips dialog

Select the type(s) of channel strips required using the check boxes and the number needed from the drop down lists on the right. Click the **Next** button to move on to the next page.



Configuration Wizard auto connect dialog

Checking the **Connect automatically as many inputs and outputs as possible** check-box will create the same number and types of **Tracks** as there are **Input Strips** and connect as many as possible to the available physical inputs in ascending order and output Busses to the physical I/O attached to the Mykerinos board(s) and Track outputs to Mixer Input Strips, although you can easily reconfigure this later. If the box is not ticked, the tracks will be created in the same way with Track outputs connected to Mixer strips but no physical Inputs or Outputs will be connected.

Clicking **Cancel** opens the new Project with a **Blank Mixer Window** (See below)

I/O Busses Explained

The total number of available output busses, regardless of the number of Mykerinos cards, is 64 in HDTDM Mode and 128 in XDTDM Mode. The maximum number of logical inputs and outputs to Pyramix is also 64 and 128 respectively. However, it is perfectly possible, and permissible, to have more than 128 physical inputs and outputs connected to a Pyramix system. Routing to assign physical inputs and outputs to Pyramix logical inputs and outputs is made in the **Settings > Hardware > HDTDM Routing** or **XDTDM** pages. For example: a system containing three Mykerinos boards, with MAD1 daughterboards has a total of 192. In HDTDM mode any 128 of these may be routed to Pyramix logical inputs and any 128 Pyramix logical outputs (less the number of assigned **Internal Return Busses**; see below), can be routed to physical outputs.

Input Strip Types

To make it easier to work with a variety of source **Formats** Pyramix offers a number of different types of Input Strip. These can control from one to 8 channels from a single set of controls.

Internal Return Busses

Some of the time slots on the HDTDM/XDTDM bus can be reserved to convey **Aux** or **Master Output** Busses back to input strips. In effect, these are internal send/return paths. To change the number of available Internal Return Busses, close all open Projects (if any) and go to:

Settings > All Settings > HDTDM Routing or **HSR-HTDM** if using **HTDM** mode.

XDTDM Routing > PCM I/O routing or **PCM-HSR I/O Routing** if using **XDTDM** mode.

DXD Projects I/O Routing if you wish to use Internal Return Busses in a **DXD** Project.

The number of Internal Return Busses can be set using the **Internal Busses** combo box. Click on the **OK** button to memorize the setting and exit.

The number of **Internal Return Busses** you assign here will be available as possible channel strip sources in the mixer.

Mixer Delay Compensation

Summary

With Mixer Delay Compensation turned **On**:

1. Input strip set as a (normal) Input: no compensation. If a Delay is applied manually the output signal of this strip will be delayed by the applied value.
2. Input strip set as an Aux or Bus, Internal Return: all other Output Strips are automatically delayed by the amount equal to the Bus internal processing delay.
3. Input strip set as an Aux or Bus, External Return: all other Strips are automatically delayed by the amount equal to the Bus internal processing delay. If a Delay is applied manually, the signal of all other output strips will be further delayed, according to the value entered.

Typical latency in ms of outboard gear ranges from 2 to 5 ms. The following chart may help you to compute the proper delay compensation values for outboard equipment:

Delay Chart

Ms	samples@ 44.1kHz	samples@ 48kHz	samples@ 88.2kHz	samples@ 96kHz	samples@ 176.4kHz	samples@ 192kHz	samples@ 352.8kHz
1	44	48	88	96	176	192	352
3	132	144	265	288	529	576	1058
5	221	240	441	480	882	960	1764
7	309	336	617	672	1235	1344	2470
9	397	432	794	864	1588	1728	3175
10	441	480	880	960	1764	1920	3528
12	529	576	1058	1152	2117	2304	4234
Max Delay (Auto PLUS Manual)	1216	1216	2432	2432	4864	4864	9728

Time Alignment of Recorded Clips

All recordings from Input Strips designated as **Input** are automatically time-aligned. E.g. recordings from live inputs.

Recording Bus Returns

When recording the output of an input strip taking an Aux or Bus return, for example to “freeze” a reverb track, the recorded media will be placed too early in the Timeline. In this situation it may therefore be desirable to designate this Aux or Bus return as a normal **Input** in order to ensure correct time-alignment of the recorded clip.

Note: For Power Users the **SABR** debug windows show the delay values applied to each bus / aux node and may prove useful.

Delay Compensation Detail

All digital processing takes a finite amount of time. When **Internal Return Busses** are used to route **Aux** or **Master** output busses back into channel inputs (by selecting an **Internal Return Bus** input from the routing pop-up for the **Aux** or **Bus** output, and selecting an **Internal Return Bus** output as the return channel input) all other busses not so routed must be delayed if the Mixer is to be ‘time-aligned’ I.e. If a signal is fed to two inputs, the first feeding the Main Output direct and the second routed back to an input via (say) an **Aux** bus with the return input strip routed to the Main Output, then the second will be delayed with respect to the first. Selecting **Settings > Enable Delay Compensation** from the mixer context pop-up menu will automatically ensure both signals remain in sync by delaying the signals directly routed to the Main Output by an amount equivalent to the delay introduced by the extra processing in the second path.

Input Strip Mode

In order for Pyramix to correctly calculate the required delay you have to tell it which bus is the source for the Internal Return Bus. Clicking on **Input** at the bottom of the strip, above the XLR icon, pops-up a list of

all the output busses and **Input**. **Input** is the default and means the strip is fed from a physical live input and no delay compensation is required. If any Internal or External Return Bus is ticked and **Automatic Delay Compensation** is turned on, Pyramix calculates the required delay and applies it to all Output busses not feeding a return bus.

Delay vs. Delay Compensation

When the Input Strip Mode is set to **Input** the delay setting affects the only the delay on the strip's signal. When **{any Bus name} Return** is selected as the Input Strip Mode the delay setting affects the delay on all other output bus signals to ensure correct time-alignment.

Delay Compensation of External Inputs

Where an Output Bus or Aux Bus is used to feed an external processor via a physical output and the external processor output is fed back into Pyramix via an external live input, then the necessary delay compensation must be computed and applied by the operator since Pyramix has no means of determining the delay of the external device. However, the Input Strip Mode (Click on **Input** to pop-up the menu) should be set to the bus feeding the external processor (as above) so that the input channel delay setting affects delay compensation rather than simply delaying the signal through the input strip.



Input Type pop-up

In the illustration, **Aux Bus Ext Rev** feeds an external device via physical outputs **17 & 18**. The outputs of the external device are connected to physical inputs **7 & 8**. The channels' **Mode** has been set to **Ext. FX Return** and delay compensation of **256** samples applied.

In contrast **Int FX** output bus feeds **Internal Return Busses 1 & 2 (IB1 & IB2)**. Two channels are fed by the **IB1 & IB2** outputs with their mode set to **Int FX Return**.

Determining Delay Compensation

One strategy for achieving this is to route a signal directly to an output bus and, via an Aux, to a physical output, to the external processor's input. The processor's output is connected to a physical Pyramix input and routed to an input strip. The strip mode must be set to the bus used as the source. Then use impulse sounds, clicks, rimshots etc. to aid manual adjustment of the delay compensation.

Configuring a Blank or Existing Mixer

Configuration of the mixer control surface is accomplished via the **Configure Page, Route Page (Please see: Configure Page on page 117 and Route Page on page 124)** or contextual menus. The precise options available will depend on where you click on the mixer. If you wish to affect the entire mixer, right-click on the top bar of the Mixer window. To change options for a Bus, right-click on a blank area of the Bus strip. Similarly, for a channel input strip, right click on a blank area of the Strip. Right-clicking within a function block adds menu entries to the top of the list, relevant to the specific block.

Adding Strips

Right-click anywhere on the Faders, choose **Strip > Add** and select the appropriate type of strip to add or right-click anywhere on the Faders, choose **Bus > Add** and select the appropriate type of bus to add.

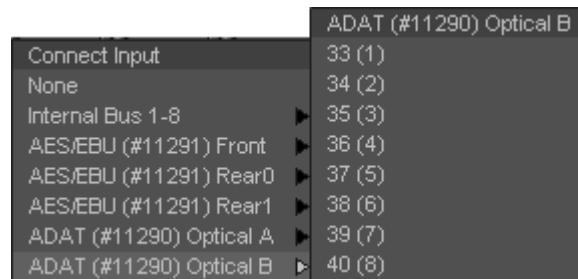
Removing Strips

To remove a given input strip, bus or group, right-click directly on it and choose **Strip > Remove (Strip, Bus or Group)** as appropriate.

Mixer I/O Assignments

To or from physical I/O

To change **I/O** assignments to or from physical **I/O** or the **Internal Return Busses**, click on the appropriate **XLR icon**. Choose **Connect Input** or **Connect Output** from the pop-up menu and choose the desired connection.



I/O assignment pop-up

When connecting a multichannel strip clicking on the header (ADAT(#11290) Optical B in the above illustration) will connect all channels consecutively.

From tracks

Note that several tracks may be routed to the same mixer input strip. Tracks are assigned to mixer input strips either automatically or manually from the **Track Header**. See: **Track Header Panel** on page 15

Plug-ins

Native Plug-ins

These include the eq and dynamics found on a conventional hardware mixer's channel strip. To add a native plug-in when in **Mix !** mode, right-click with the mouse cursor over the strip where the plug-in is to be added. If you right-clicked in the effects area of the strip select **Effects > Add**. If you clicked somewhere else, select **Add Effect**. Select an effect from the sub-menu. It will appear in the strip.

Direct X and VST Plug-ins

To add a Direct X plug-in the procedure is the same except select **Direct X Plug-In**, **VST Plug-In** or **Add Direct X Plug-In**, **Add VST Plug-In**.

Note: DirectX Plug-ins can only be added to Input Strips or used in the FX Rack. **Please see: Effects Rack** on page 227

Further Mixer Configuration Options

Mixer Context Pop-up menu

The entries on this menu vary according to where you right-click on the mixer surface. At the top of the menu the entries concern the specific mixer component under the mouse cursor when you right click. The next section of the menu has entries which affect the Strip. Entries from **Mixer** to the end of the menu affect the entire mixer and are available wherever the mouse is right-clicked.

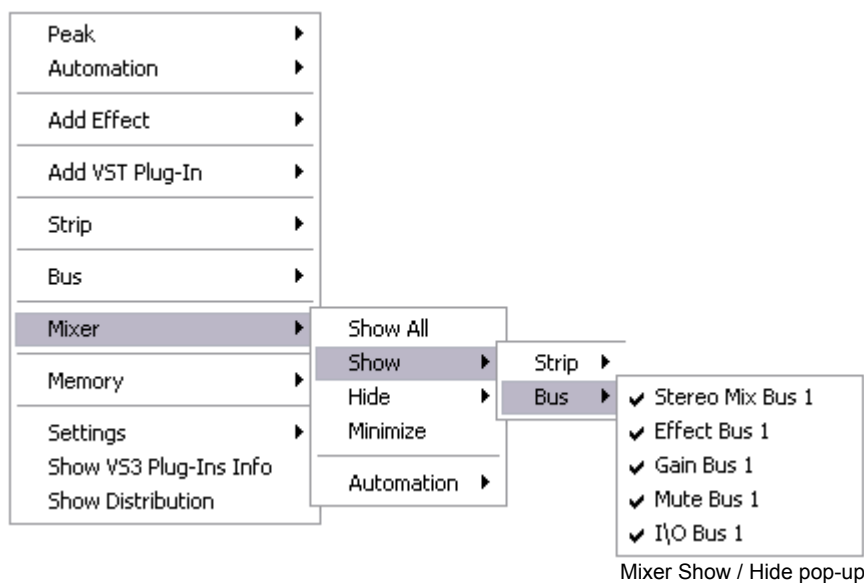
Mixer > Show

Show All

Makes all input strips and busses visible

Show / Hide >

Selects **Strips** and **Busses** to be shown or hidden. When checked, the Busses or strips are visible on the console surface. Both **Show** and **Hide** access the same lists.



Mixer Show / Hide pop-up

Minimize

When checked, Mixer window is minimized

Automation >

Isolate

These menu choices toggle the Automation mode for the entire mixer. **Please see: Automation Modes on page 212**

Play

Record

Auto-write

Memory >

The choices here enable mixer presets to be saved loaded and managed.

Please see: Mixer Presets on page 149

Settings >

General...

Opens the Mixer Settings window at the **All Settings > Hardware > Hardware > Formats & Sync** page. **Please see: Formats and Sync on page 307**

Enable Delay Compensation Enables Delay Compensation for the mixer

Dithering

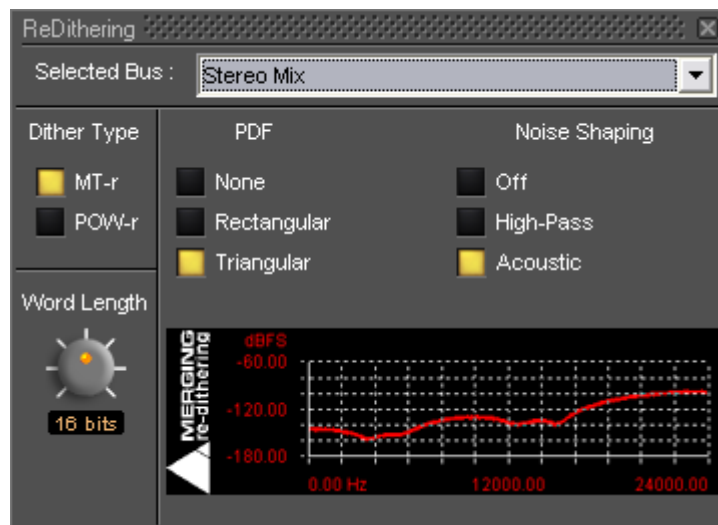
Opens the **Dithering** window. **Please see: below and Dither on page 223** for an explanation of the need for dither

Remove

Select **All Strips**, **All Busses** or **All** to remove groups of mixer components or every component.

Auto-connect	Automatically connects the Mixer inputs and outputs using the available inputs and outputs of the installed daughter card (s) and the Mixers Preferred Monitoring Outputs
Wizard...	Launches the Configuration Wizard. Please see: Mixer Configuration Wizard on page 140
Show VS3 Plug-Ins Info	Pops up the VS3 Plug-Ins Information window. Please see: VST Plug-Ins Information on page 193
Show Distribution	When checked, a narrow colored bar is inserted at the bottom of each input strip which indicates which card (in a multi-board system) is providing the DSP for the strip.

Dithering Options



Dithering **MT-r** floating Window

To open the **ReDithering** window, right-click anywhere on the mixer surface and select **Settings > Dithering...** The **Dithering** window opens.

Selected Bus :

The combo box allows the choice of any of the Mixer's busses.

Dither Type

The Pyramix Mixer offers a choice of dither algorithms. **MT-r** and **POW-r** click the box to choose.

Word Length

The output word length of the digital audio data can be varied from 8 bits to 24 bits. Click on the rotary knob and drag left and right to adjust the value.

MT-r

PDF (Probability Density Function)

In basic terms, the addition of a dither signal (noise) into the digital audio streams improves linearity in the reproduction of low-level signals. In other words, as signal level drops (such as in a fade out) dithering helps to maintain a smooth decay. There are three options:

None

No dither signal will be added to the data.

Rectangular

A rectangle shape dither signal will be added to the data.

Triangular

A triangle shape dither signal will be added to the data.

Noise Shaping

Noise shaping is a technique that is used to push quantization noise energy, which in linear digital systems is normally spread over the whole audio spectrum (0 Hz up to half the sampling frequency), into higher frequencies where the human ear is less sensitive to its effects. There are three noise shaping options and the graph shows the curve applied:

Off

No noise shaping added.

Hi Pass

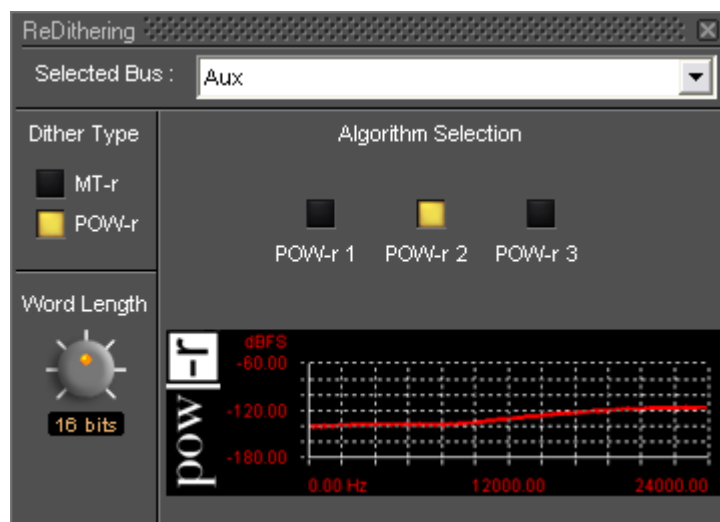
This provides a first-order high-pass filter for the noise transfer function. This type of noise shaping takes little computational power to produce, but at the expense of not tracking the characteristics of the human ear very accurately compared to:

Acoustic

Psycho acoustically noise shaped dither inserts an FIR-filter in the feedback path. This shapes the noise as closely as possible to the characteristics of the human ear. More taps in this type of filter allow a closer approximation to the response curve of the ear, but each tap, of course, increases the computational instructions required. The filter implemented here is a 9-tap FIR-filter, which closely approximates the curve of the human ear.

POW-r

POW-r offers the choice of three settings, **POW-r 1**, **POW-r 2** and **POW-r 3**. The graph indicates the effect of the noise-shaping.



Dithering **POW-r** floating Window

Mixer Presets

Mixer Presets can be saved in a user folder or added to the main **Mixer Preset** list either for the current user or all users.

Default Mixer

To Save the current Mixer setup as the default Mixer, right click on the Mixing Console and select **Memory > Presets > Store > Default**.

Storing New Mixer Presets

To add a preset to the main list of available Mixer presets I.e. the list which appears when starting a new project, right click on the Mixing Console, select **Memory > Presets > Store > New...** and enter a name for your Mixer Preset. If the **Global** check box is checked then the preset will be available for any user logged on the current machine, if not the preset will be available only for the user that created the new preset.

Removing Mixer Presets

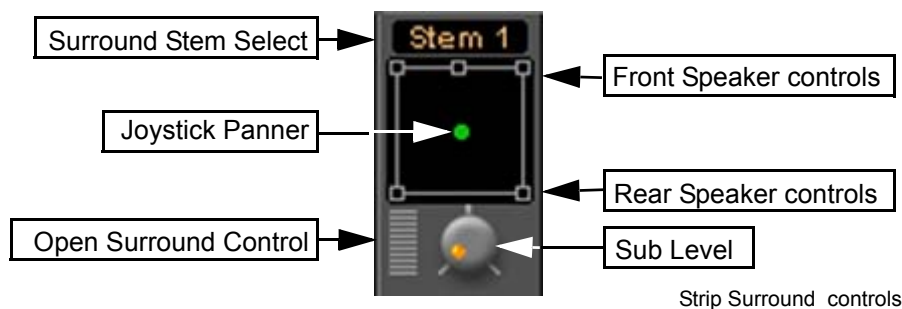
To remove a preset from the main list, right-click on the Mixing Console, select **Memory > Presets > Remove > (preset you wish to remove)**. The **Remove Preset** dialog box appears with **OK** and **Cancel** options.

Saving / Loading Mixer Presets

Mixer Presets can also be stored in Windows folders. Right-click on the Mixing Console, select **Memory > Save**. A Windows Explorer window opens enabling the current Mixer Preset to be named and saved to any Windows folder. Similarly, selecting **Memory > Load** enables a Mixer Preset to be loaded from any Windows folder.

Mixer Surround Components

When a **Surround Bus** is added to the mixer an surround panner appears at the top on the **Input Strips**



Speaker Controls

Double-clicking on any of the Speaker Controls toggles the mute on/off of the selected surround channel (also muting any audio routed to that surround channel output). When a channel control is muted, it is no longer displayed on the Mixer Input Strip.

Joystick Panner

Determines the position of the source within the surround sound space. To position it, simply left-click on the control and move it to the desired location. Double-clicking on this control will automatically center it.

Sub Level

Determines the level sent to the Sub (.1) output.

Surround Stem select

If a Multiple Surround Bus has been added to the mixer **Stem 'X'** appears at the top of the strip. Click on the box to select the stem you wish to route the strip to.

Stereo Input Strips.



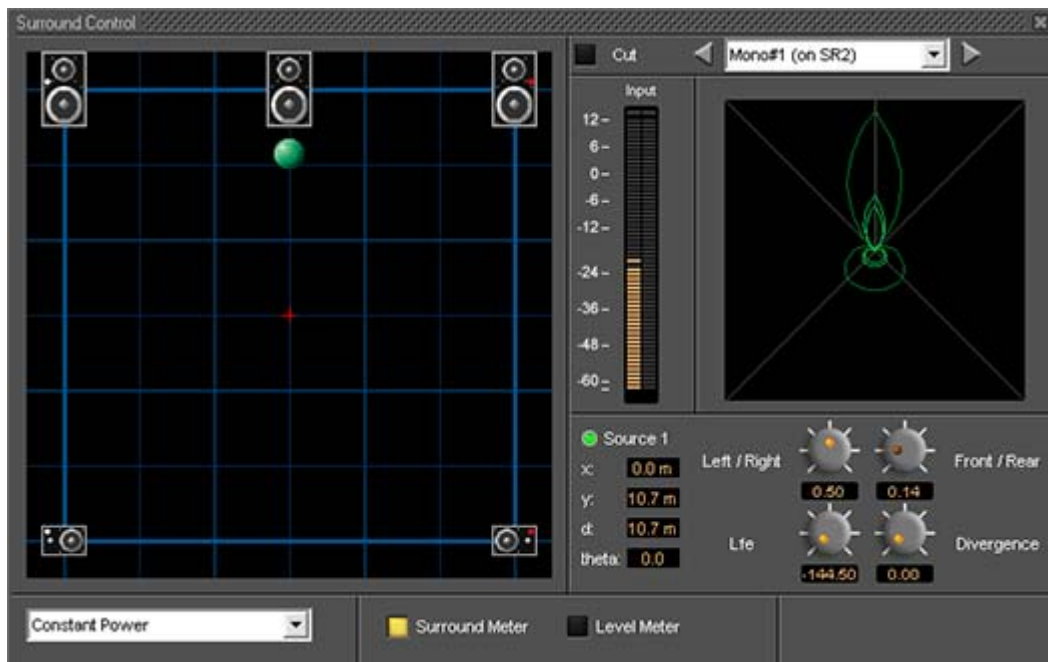
Stereo strip surround controls

The Surround Sound Panner Position control behaves slightly differently in a Stereo Input Strip. Notice there are now two independent position controls and two independent Sub sends. One for each input channel.

Open Surround Control

The **Surround Control** window offers far more information and a greater degree of control over all the surround panning parameters than could be shown on an individual Input strip.

Surround Control window



Surround Control floating Window

Options available will depend on whether the Mixer Channel is single source (mono) or 2 sources (stereo)

.Position/Speaker Control

When a single source is used, the Position Control is displayed as a green dot on a grid with 5 speaker icons. Each speaker icon represents a Surround Speaker Position (L, C, R, SL, SR). The position of the Green Dot determines the position of the source within the surround sound space. To position it, simply left-click anywhere within the surround sound space. To position it, simply left-click on the control and move it to the desired location or use the knobs. Double-clicking on the Green Dot automatically centers it.

Surround Panning Algorithm

The drop down list gives a choice of panning algorithms.

Constant Gain

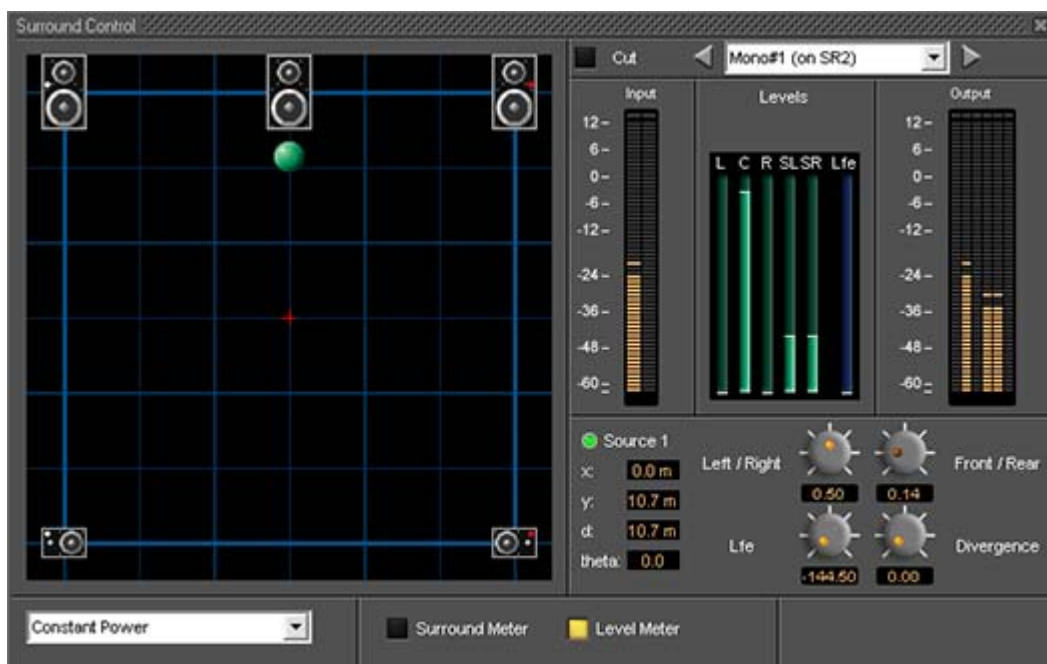
Allows the surround panning to preserve a constant gain sum on all speakers wherever the Position Control is placed.

Constant Power

Allows the surround panning to preserve a constant power sum on all speakers wherever the Position Control is placed.

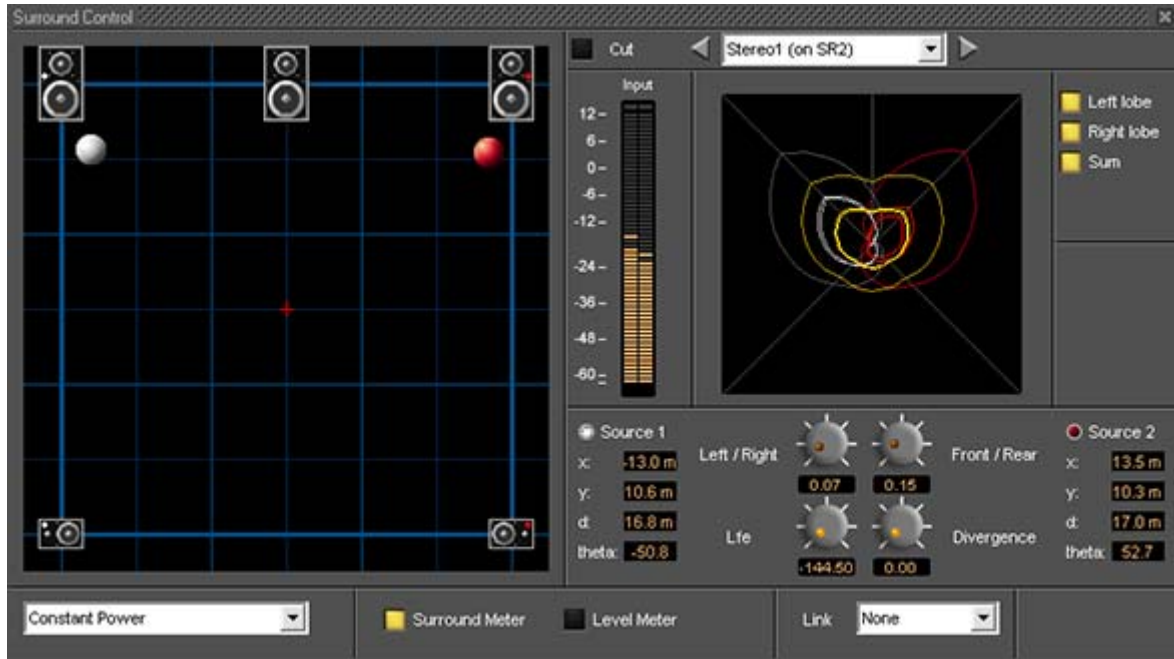
Level Meter

Toggles the main display between the **Surround Meter** and **Level Meter**. This shows the send **Levels** to each surround channel in the middle of the right-hand section and **Output** meters on the right:



Surround Control floating Window

Stereo Surround Control



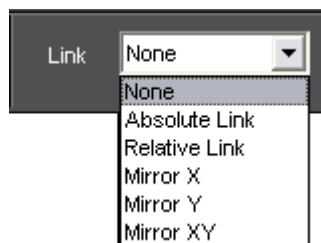
Surround Control floating Window

Surround Meter

The Display can show static Left, Right and Summed Lobes in white, red and yellow, respectively when the buttons are lit with the actual signal in bright red.

Link

Click and drag on the red and white balls is independent and the controls are switched between **Source 1** and **Source 2** by clicking on the buttons. If a **Link** option is chosen from the combo box click and drag and the controls will affect both sources depending on the chosen linking.



Surround Control Link combo box

9

Monitor



Pyramix 5.0

DIGITAL AUDIO WORKSTATION




Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Monitor ! Window

Pyramix has a dedicated **Monitor** section. This extremely powerful tool offers comprehensive monitoring facilities including summing and downmixing for all supported formats.

You do not have to use the **Monitor** and disabling it will save DSP power.

The monitor is also used to output the audio signal from the audition function of the Media Manager and Libraries as an unformatted input. (I.e. Routed to LRC in a Surround 5.1 Speaker Set and to LR in a Stereo one)

By default the **Monitor** window is hidden. It can be opened with **View > Monitor** or the  icon in the View Toolbar.



Monitor Main Monitor Window

The Monitor has two pages: a Main **Monitor !** page in normal operation and a **Configure** page for configuration.

Monitor ! page

The **Monitor !** window is divided vertically into three sections.

Input, left-hand section:

The button top-left of the title bar enables/disables the Monitor and lights yellow when enabled. This allows DSP power to be saved when comprehensive monitoring control is not required. Below the **Enable Monitoring** button is a tree view of all busses used in the mixer. Clicking on the **+** and **-** boxes shows and hides branches in the usual way. Click on any complete bus or any available stem or any bus/stem channel to select it for monitoring. Selection is exclusive unless the **Ctrl key** held is down. Then selection is cumulative and clicking adds or subtracts inputs according to their current state.

Main, centre section:

Input area

<< Input: Shows/Hides the Input Section

<< SR1 >>: Select previous/next input. Only sources visible in the **Input** section are available. I.e. If the component channels of a bus or stem are collapsed this bus or stem is switched as a unit.

<< ... >>: Not yet implemented.

<< Surround 5.1 >>: Select **previous/next Speaker Set**.

<< Main >>: Select the **previous/next Downmix** defined in the Configure page.

Output area

Output >>: Not yet implemented (will show/hide the output section of the monitoring window)

Main area

Speakers are inactive (grayed) if they are not connected in the **Configure** page.

The **Mode** buttons at the bottom determine the function of the active Speaker buttons.

Mute: Clicking on a speaker mutes it. Selections are cumulative.

Solo: Clicking on a speaker solos it. Selections are cumulative.

SoloX: Solo eXclusive on the clicked speaker. Selections toggle.

Reset: Deselect all speakers.

In Place/Center: In **Solo** and **SoloX**, toggles between **In Place** and **Center**. **Center** routes the soloed channel(s) to the Center speaker or equally to the L/R speakers if no center speaker is present. **In Place** mode is the normal Solo, SoloX mode.

Output, right-hand area

Monitor Level box Displays the current output level. Output level can be entered numerically in the box after clicking on it.

Volume Knob: sets all the output gains in a range from -144.5dB to +24dB. Double-click to set it to 0dB.

Mute: button mute the outputs.

Dim: button reduces the output level by an amount set in the **Configuration** page. Default value is -20dB.

Speaker Sets

A speaker set consists of:

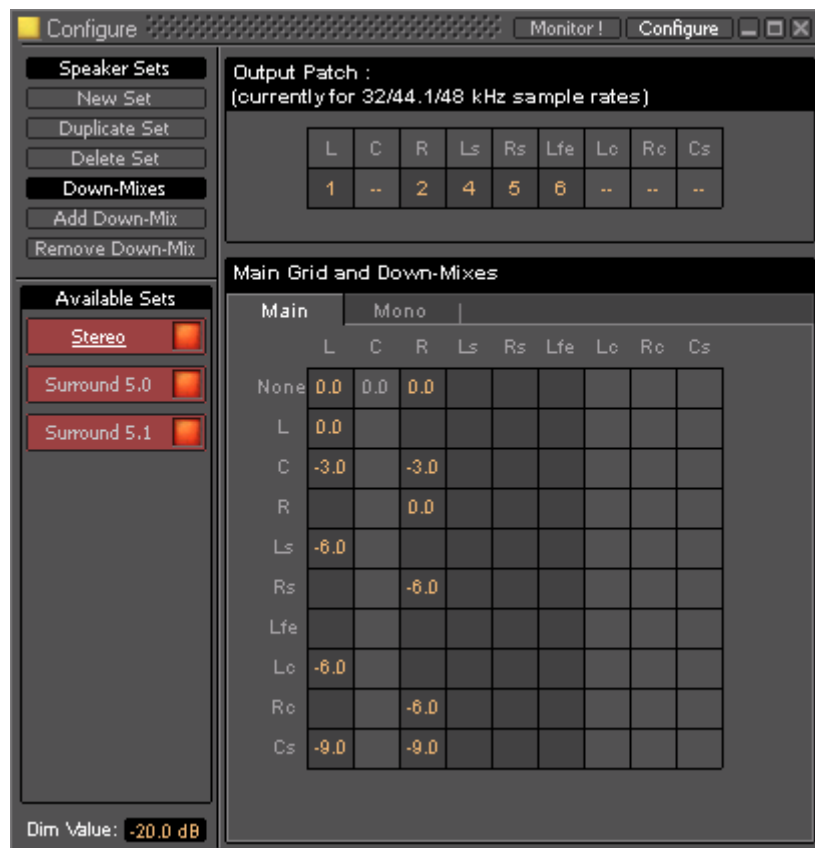
A **Patch**: This connects signals to the physical outputs of the board(s). The number of connection will depend on the number of speakers you want to connect. Since the number of available live outputs depends on the selected sampling rate, the patch will differ for 1Fs, 2 Fs, 4Fs and 8 Fs sampling rates.

A **Main grid**: this matrix defines the relation between the Mixer's busses output channel types and the monitor's output channel types (thus the monitor's physical outputs). Typically, the main grid would show a diagonal for the channel types patched.

A set of **Downmixes** (max: 4) : A downmix is a an alternative grid which uses the same patch as the main grid. In this page you can patch the outputs of you monitor, add/remove downmixes, and defines the corresponding grids in dB (only the channel types which are patched).

Configure page

The **Configure** page enables multiple **Speaker Sets**, each with multiple down-mixes, to be created and edited. Two factory Speaker Sets (**Stereo** and **Surround 5.1** labelled on a red background at the top of the **Speaker Sets** list) are installed with Pyramix. Their Main channel to speaker Main Grid and Down-Mix assignments cannot be changed, but their output Patches from speakers in the Monitor to physical outputs can. They and each of their down-mixes can be enabled/disabled in order to determine which ones are visible in the main Monitor page.



Monitor Configure Window

The **Configure** page is divided into three areas; **Commands** (**Speaker Sets** and **Down-Mixes**), **Available Sets**, **Output Patch** and **Main Grid and Down-Mixes**.

Available Sets

To select an existing Speaker Set in order to view or alter its settings, click on its title in the **Available Sets** list. The label will become underlined and the Set's parameters will appear in the grid. If the Set has Down-Mixes already defined there will be one or more tabs next to the **Main** Tab in the **Main Grid and Down-Mixes** area.

Two sets **Stereo** and **Surround 5.1** are factory defined and cannot be altered. New Sets and Down-Mixes can be created, duplicated and deleted using the Commands.

Dim Value

To change the Dim Level, click on the value box to highlight it and type the desired attenuation value and hit **Enter** or click elsewhere on the window to save the change.

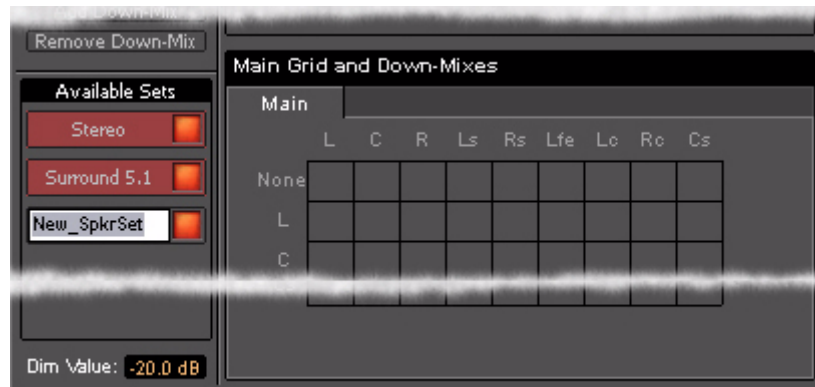
Note: Only negative values are accepted. Positive values revert to 0dB. I.e. Type **"-15"**

Commands

Speaker Sets

New Set

Clicking on **New Set** creates a new Speaker Set with a blank matrix Grid and adds a new entry to the **Available Sets** list with the label highlighted ready for text entry:



Monitor Configure New Speaker Set

Type a suitable name and click on a blank area or hit **ENTER** to accept the name.

Duplicate Set

Creates a new Speaker Set with a the same matrix Grid settings and Down-Mixes and settings as the set currently selected (underlined) and displayed in the grid. The new label is highlighted ready for text entry.

Delete Set

Deletes the currently selected (underlined) Speaker Set.

Down-Mixes

Add Down-Mix

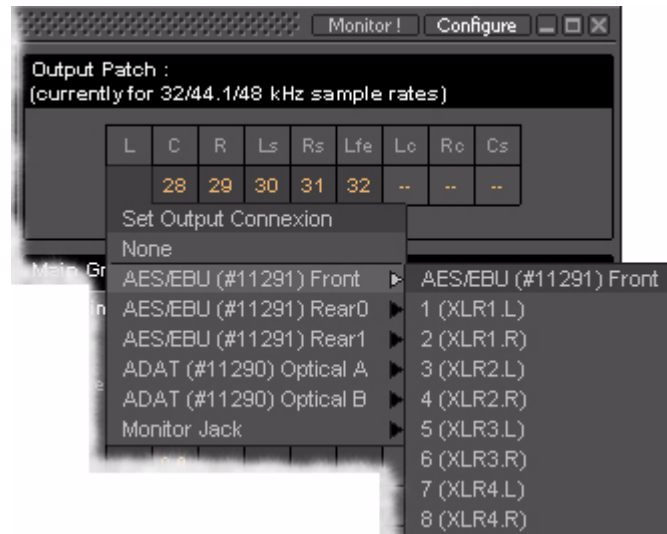
Creates a new Down-Mix associated with the currently selected Speaker Set with a new tab in the **Main Grid** and **Down-Mixes** section.

Remove Down-Mix

Deletes the current Down-Mix

Output Patch :

This is where the Monitor's Speaker Set outputs are patched to physical outputs.



Monitor Configure Output Patch

Clicking on a cell pops up the **Set Output Connection** menu with all available physical outputs grouped by their connectors. The sub-menus list the group and the individual channels. Select an individual channel to connect it or select the group, e.g. **AES/EBU (#11291) Front** to connect the whole group in ascending order from the cell clicked on.

Note: Each Speaker Set has its own **Output Patch** associated with it. This is useful where different speakers are used for different formats. If there is only one set of speakers patch all Speaker Sets to the same physical outputs.

Double Assignment

When an output of the Mixer and an output of the Monitor are connected to the same physical output then these are summed and the Mixer displays the connection in orange as a warning.

Saving Speaker Sets

Mixer to Monitor connection status is saved in the project.

The Speaker Set settings are saved when you leave the page to go back to the **Monitor !** page; otherwise, modifications are not saved.

10 Effects



Pyramix 5.0
DIGITAL AUDIO WORKSTATION

 Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Plug-Ins

This chapter describes individual effects and their components.

Adding and Managing Effects

Please see: **Effect Management** on page 120

Common Components

Several of the following Pyramix plug-ins share common components.



Channel Combo Box

Shows which channel has the plug-in that the window is currently controlling. Clicking the arrow drops down a list of all channels that have this plug-in assigned to them. Click on a name to select a channel from the list. The control values will change to reflect the current state of the plug-in on the selected channel. This feature enables all instances of a particular plug-in to be controlled from the same interface window without opening duplicate windows for each channel.

On/Off (Bypass) Switch

The On/Off (bypass) switch activates and deactivates the effect.

Bypass all Effects

Clicking on a bypass button with **Shift** bypasses all effects in the strip.

Auto Gain Compensation

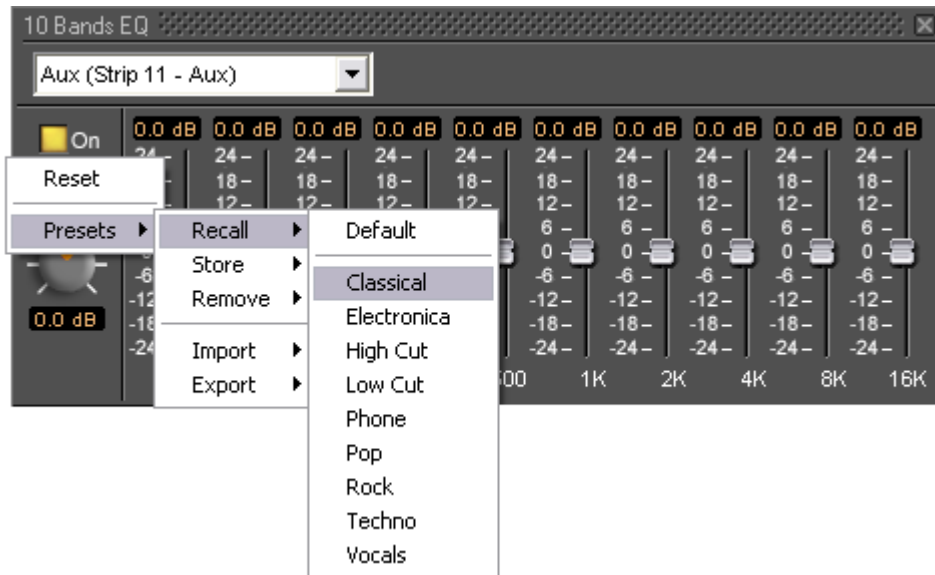
(Only where relevant) When this switch is lit **Auto Gain Compensation** is in circuit. The function is intended to keep the output level of the plug-in approximately equal to the input level.

Output Gain

Manually adjusts the gain applied at the output of the plug-in. The value is shown in dB.

Effects Presets

Right-clicking in the Plug-in window pops-up a contextual menu which enables the plug-in to be **Reset** to its default values. **Presets** can be **Recalled**, **Stored** or **Removed** and **Imported** or **Exported** to and from libraries.



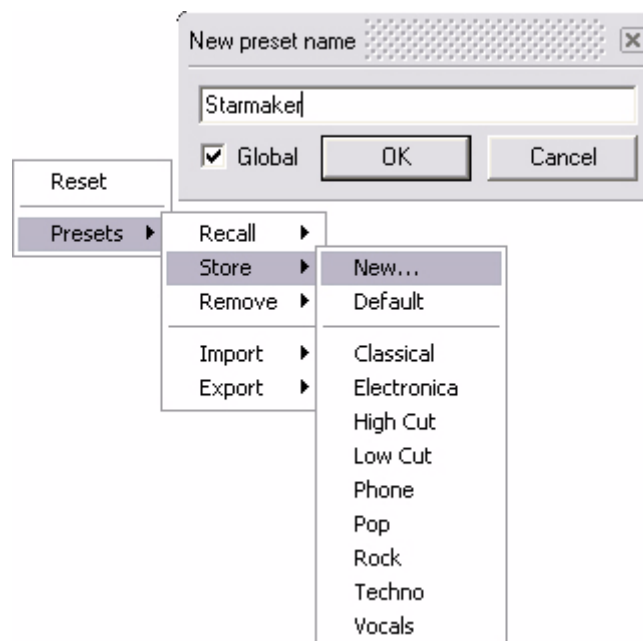
Effects Presets context menu and recall sub-menu

Choosing Presets

Click on the desired preset from the list. The plug-in's parameters will be set to the values stored in the preset.

Storing Presets

Creating a new preset stores a snapshot of the current values. **Store > New** opens the **New Preset Name** dialog box.



Effects Presets context menu and Store New... sub-menu

If the **Global** box is checked, the Preset will be available in all future Projects.

Default

Choosing **Presets > Store > Default** makes the current parameters the default. These can be from new values or a previously recalled Preset

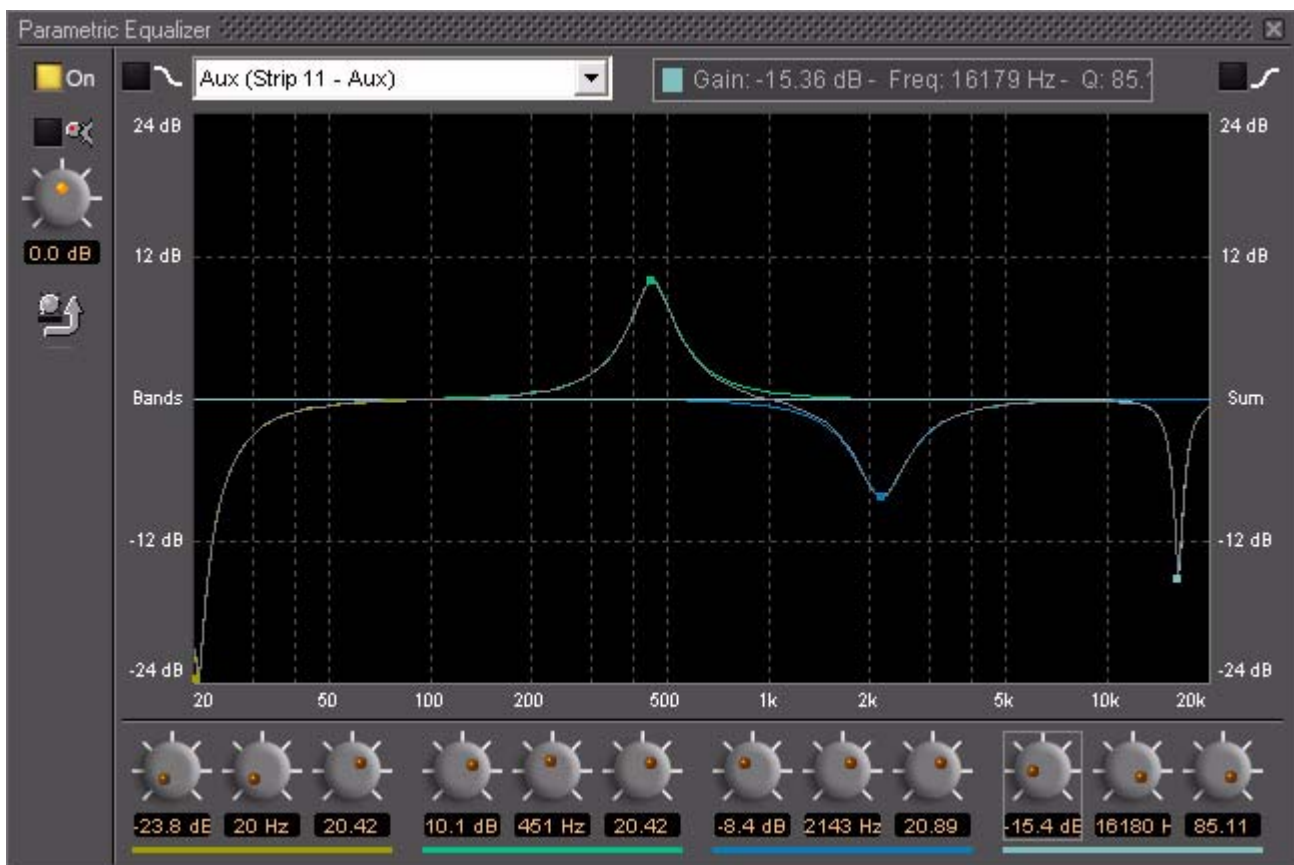
Modifying an Existing Plug-in Preset

To modify or update an existing preset, set the effect's parameters to the desired new settings. Right-click and select **Presets > Store** then choose the Preset name in the list to update or modify. A **Store preset** dialogue box will appear asking if you wish to replace the chosen Preset. Click **OK** to accept or **Cancel** to reject. The new settings will overwrite the previous preset parameter settings.

Deleting Presets

To delete the current preset, right click in the effects window. Then choose **Presets > Remove** then choose the preset you wish to remove.

Parametric EQ



Parametric EQ floating Window

The Parametric Equalizer is a four band fully parametric EQ with independent control of boost and cut, frequency, and bandwidth (Q factor) for each band. The common controls at the top of the window behaves as outlined earlier. The equalizer can be operated using the rotary controls at the bottom (shown or hidden by the knob and arrow icon on the left), by directly entering numerical parameters in the boxes below the knobs or by clicking and dragging on one of the four colored nodes. Left-clicking enables level and frequency to be adjusted, right-clicking then dragging left or right allows adjustment of Q.

All bands are full range. Boost and cut of up to 24dB is available. Q can be set anywhere from 0.2 (wide) to 20 (narrow).



This button shows or hides the rotary controls.



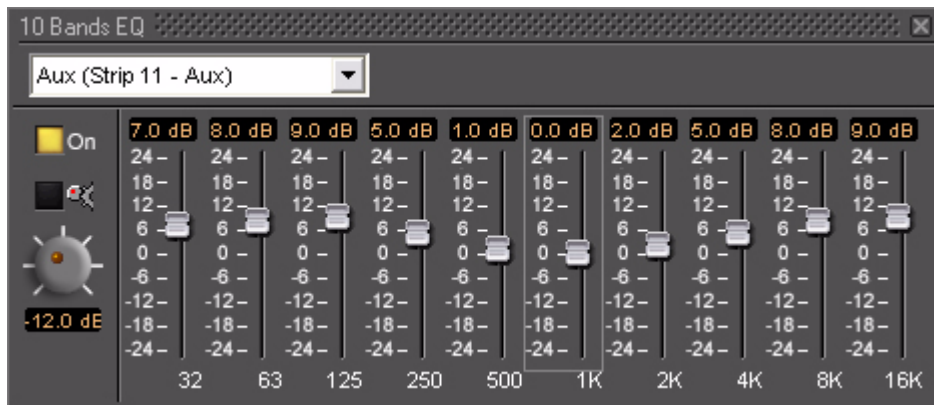
Peaking / Shelving When lit, the lowest (red) band is switched to shelving response. In this mode the Q control for the band is unavailable.



Peaking Shelving When lit, is switched to shelving response. In this mode the Q control is for the band unavailable.

10 Bands EQ

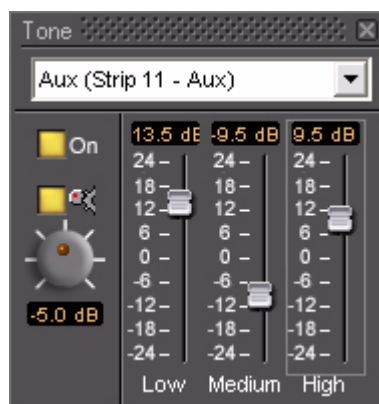
This ten band graphic equalizer offers +/-24dB of boost or cut in any or all of ten bands, one band per octave, ranging from 32Hz to 16kHz. Double-clicking on a slider knob restores it to zero.



10 Bands EQ floating Window

Three Band Tone Control

A simple three band equalizer which offers a boost or cut of +/- 24dB in any or all of three bands.

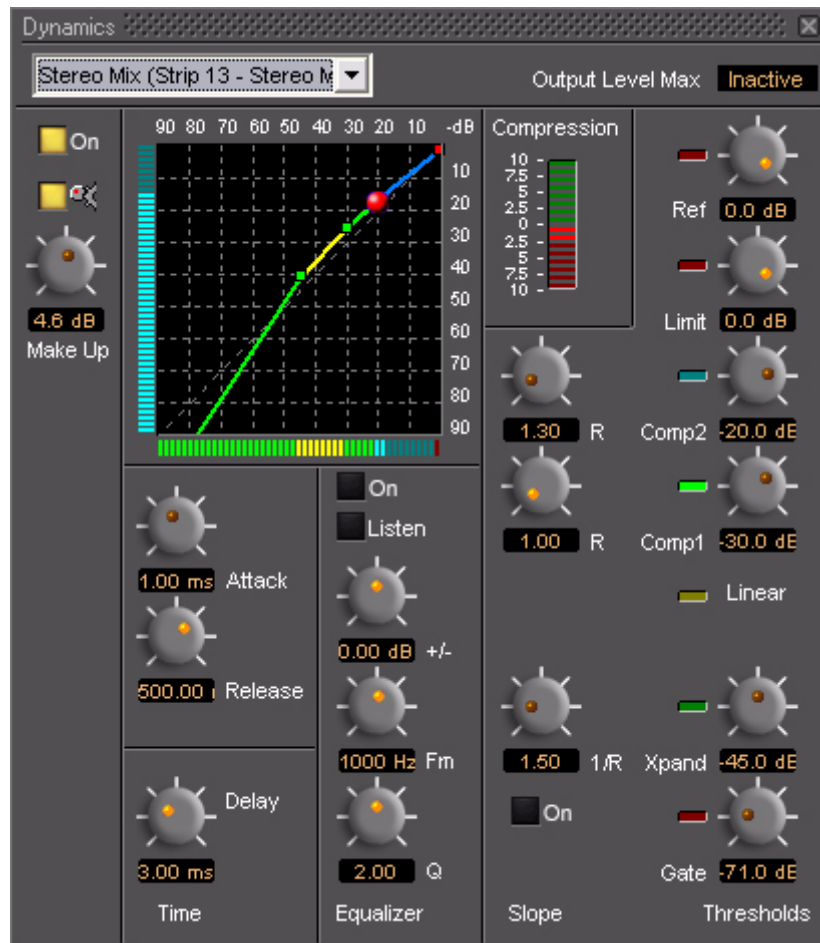


Tone Control floating Window

The Low LPF is a shelving EQ with a slope of 6dB/Octave and a turnover frequency of 100 Hz, the Medium BPF has a Q (bandwidth) of 0.8 with a center frequency of 2 kHz, and the High HPF is a shelving EQ with a slope of 6dB/Octave and a turnover frequency of 8 kHz.

Dynamics Processing

A comprehensive dynamics processing module. Functions available include one gate, one expander, two compressors, one limiter, and a de-esser. The operation of each of these effects is interrelated in this comprehensive dynamics processor, and the user interface shows the operative dynamic range where each process takes effect.



Dynamics floating Window

Output Level Max

This box shows **Inactive** when **auto-gain compensation** is on.

Thresholds

Threshold controls set the level above or below which the plug-in will affect the dynamics of the input signal. All the threshold settings are on the right of the window. From the bottom up, Gate, Expander, Compressor 1, Compressor 2, Limiter, and Input Reference Level.

Reference Level

Sets the input level reference. E.g, setting the reference level to -20 would mean an input level of -20dB is considered to be the equivalent of unity gain for purpose of calculating the input threshold levels for all

dynamics processes except limiting. The reference level value is variable between 0dB (unity gain) to -30dB.

Limit

Sets the limit threshold (and ceiling).

Ratios / Slope

Limit and Gate have fixed ratios, tending to infinity. Ratio settings for the Expander and Compressors are to the left of their respective Threshold controls.

Compression Bar Graph Meter

The Compression bar graph indicator, above the ratio controls, shows the amount of overall gain reduction or increase applied to the input signal. No change is in the middle of the scale. Green 'leds' above the middle indicate gain increase, red 'leds' below indicate gain reduction. The display range of the indicator can be toggled between +/-10dB, +/- 20dB, and +/-40dB by clicking on it.

Time

The speed at which the dynamics processor responds when signals go above or below any of the threshold settings are in this section. Careful setting of these parameters make dynamics processing more subtle and less obtrusive.

Delay

Allows the main program signal to be delayed by 0.01ms to 10ms. Allows 'brick-wall' limiting since the processor has time to respond to fast transients.

Attack

Attack Time sets the response speed of the processor when a threshold level is reached within the range of .01 milliseconds to 600 milliseconds.

Release

Release Time sets the rate at which applied gain change returns to unity after the threshold is no longer exceeded. Range is 5 milliseconds to 5 seconds.

Equalizer

The equalizer is in the side-chain. I.e. it affects the key signal which triggers the effect of the dynamics processor, but does not alter the tonal balance of the main signal. This enables the response of the processor to be made more sensitive to certain frequencies than others. This is typically used to produce a de-essing effect, used to control excessive sibilance. E.g. boosting frequencies 3kHz to 8kHz range so that a compressor acts when the signal has components in this range thus reducing signal level and making the sibilance less obtrusive.

Q

Sets the bandwidth of the eq.

Frequency

Sets the equalizer center frequency in the range 20Hz to 20kHz. 24dB of **Boost/Cut** are available. The **Test** button toggles the output of the EQ between side and program chains. When **On**, the output of the EQ is heard. This can be useful when identifying sibilance etc. **On/Off** toggles the equalizer on and off in the side chain. When **Off**, the program material triggers the processor. When **On**, the signal is in effect, split. The portion sent via the equalizer is used to trigger or 'key' the operation of the dynamics processor on the normal program material.

X/Y Dynamics Response Display

This shows the threshold and ratio settings for the gate, expander, compressor 1, compressor 2, and limiter processes, and the Dynamics Processor's reference level. These are shown as a series of colored lines with control handles on a grid representing input level in dB below unity gain (0dB) on the horizontal axis, and output gain in dB below unity gain (0dB) on the vertical axis.

The legend for this display is as follows:

Process	Line Color	Handle Color	Line Slope Function	Handle Function
Gate	Red	***	Gate on/off	***
Expander	Green	Red	Expander Ratio	Gate Threshold, Expander Ratio
Linear	Yellow	Green	Linear response between Expander and Compress 1	Expander Threshold
Compressor 1	Green	Green	Compressor 1 Ratio	Compressor 1 Threshold
Compressor 2	Blue-Gray	Blue	Compressor 2 Ratio	Compressor 2 Threshold, Compressor 1 ratio
Limiter	Red	Red	Shows Limit	Limiter Threshold, Compressor 2 Ratio
Reference		Red	***	Limiter Threshold

Adjusting Dynamics Parameters

Parameters can be altered by clicking and dragging on the control knobs or by clicking and dragging the control handles in the graphic display. Handle controls are affected by other parameter settings. In some instances dragging a handle will change more than one parameter.

Dancing Star Real-time Response Indicator

A red "dancing star" inside the graphic display gives a useful indication of how the processor is affecting program material. It shows the output level in real-time when signal is present at the inputs.

Delay

The delay Plug-in provides four delay-based effects. 'Plain-vanilla' **Delay**, **Echo**, **Comb Filter** and **All Pass Filter**. The interface is slightly different when **Delay** is selected.



Delay floating Windows

uses a straight-through signal path at unity gain with no direct (un-delayed) signal present at the output. The length of delay can be set in milliseconds, meters or samples. The range of delay available is 0 to 800 ms. Delay time can be set with the knob, or by typing in the desired delay amount in the text box.

Echo

Echo adds a set amount of delay to the signal passing through it and then mixes this delayed signal with the direct audio source signal. The delayed signal is always at unity gain. The level of the direct signal relative to the delayed signal is set by the **Delay Gain** control as a factor between 0 (full attenuation of the direct signal), 1 (unity gain of the direct signal), and -1 (unity gain of the direct signal phase reversed).

Comb Filter

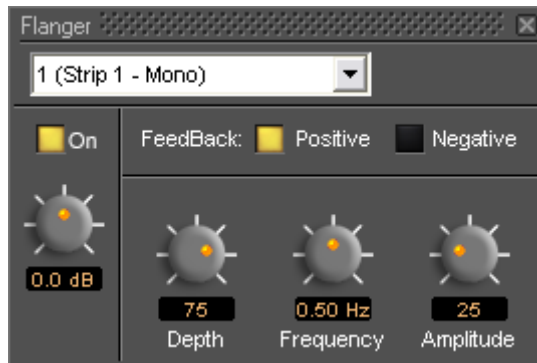
Delays the signal then feeds part of the delayed signal back to the input of the delay. **Comb Filter** has the same control parameters as **Echo**, but the audible effect is quite different because it uses a feed backward rather than a feed forward signal path. The name **Comb Filter** comes from the fact that signals with a wavelength which is an odd multiple of half the delay time are canceled by the process. This result gives a frequency response chart which looks like a comb, with some frequencies (depending on the delay time) missing, like the gaps between the teeth of a comb.

All Pass Filter

Combines the processes used in the **Echo** and **Comb Filter** effects. The result is a multiple echoed signal with a flat frequency response. The control parameters are again the same as in the Echo and Comb Filter effects. Delay Gain has a quite different effect. It doesn't affect the overall level of the output signal. It primarily affects the phase of the signals at different frequencies. If set to 1, it inverts the phase of the input signal and there will be no echo. With a gain of -1, the input signal there is no phase shift. A gain of 0 means that there is no direct signal component and the delayed signals are phase shifted by an amount dependent on their respective frequencies.

Flanger

The flanger produces the characteristic sound which was first produced by playing two copies of something, in sync but varying the speed of one copy by holding the flanges of the tape spool.



Flanger floating Window

Pyramix **Flanger** plug-in simulates this effect by time modulating the signal and feeding it back to the input either in phase (positive) or phase reversed (negative). Feedback type toggles between Positive and Negative. Depth of modulation can be varied between 0 and 100%, Frequency between 0.05Hz and 5Hz and the Amplitude of the modulation between 0 and 100%.

MS Encoder

As it says on the tin.



MS Encoder floating Window

Either input can be phase reversed, the input levels are adjustable and the both channels can be individually panned anywhere between hard left and hard right.

Encode Levels

With the controls hard Left and Right and Unity gain applied signals are encoded in this way:

$$M = A + B - 3dB$$

$$S = A - B - 3dB$$

AnguDion

Interesting! Three buttons labeled **Stooge**, **Angel**, and **Tricky**, one knob calibrated from 0 - 100

You work out what it does!



Angudion floating Window

AnguDion II

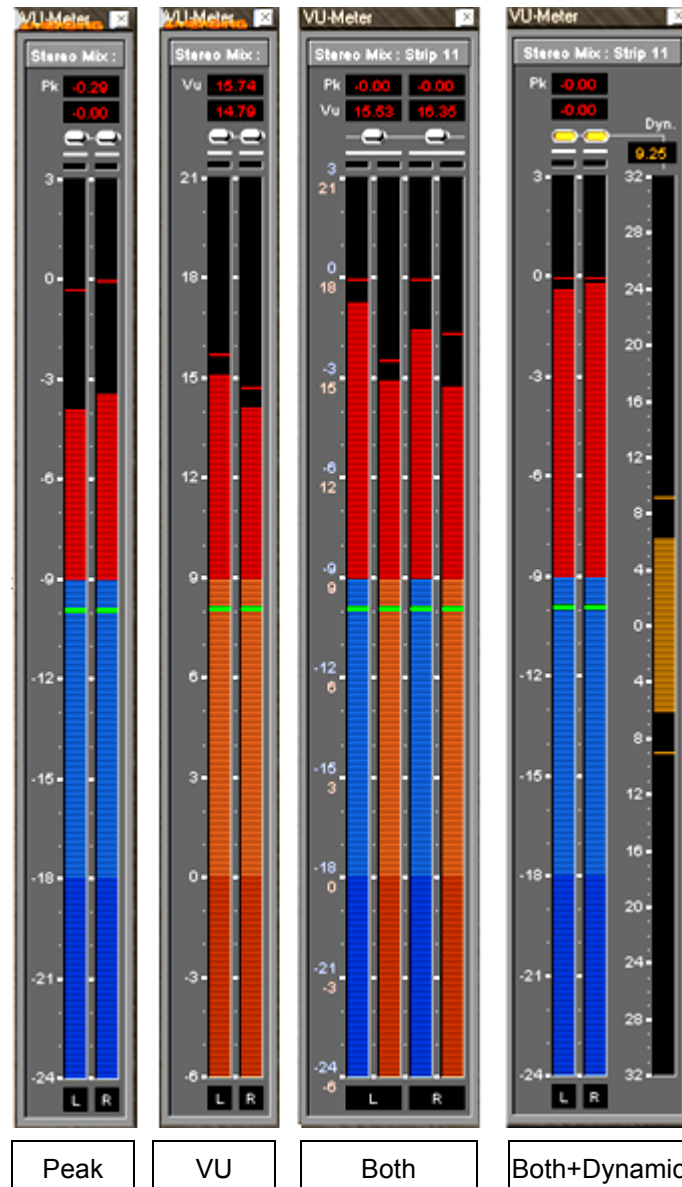
Even more interesting!



Angudion II floating Window

This time with **Wide** and **Sub** buttons and linkable **Input** and **Output** gain rotaries. **Velocity** and **Amount** rotaries flank a rotary switch with **Stooge**, **Angel** and **Tricky** options. The concentric **Wide** pot becomes active when **AnguDion II** is inserted in a stereo channel and the wide button is pressed. The sub button can be selected when **AnguDion II** is inserted in a surround strip.

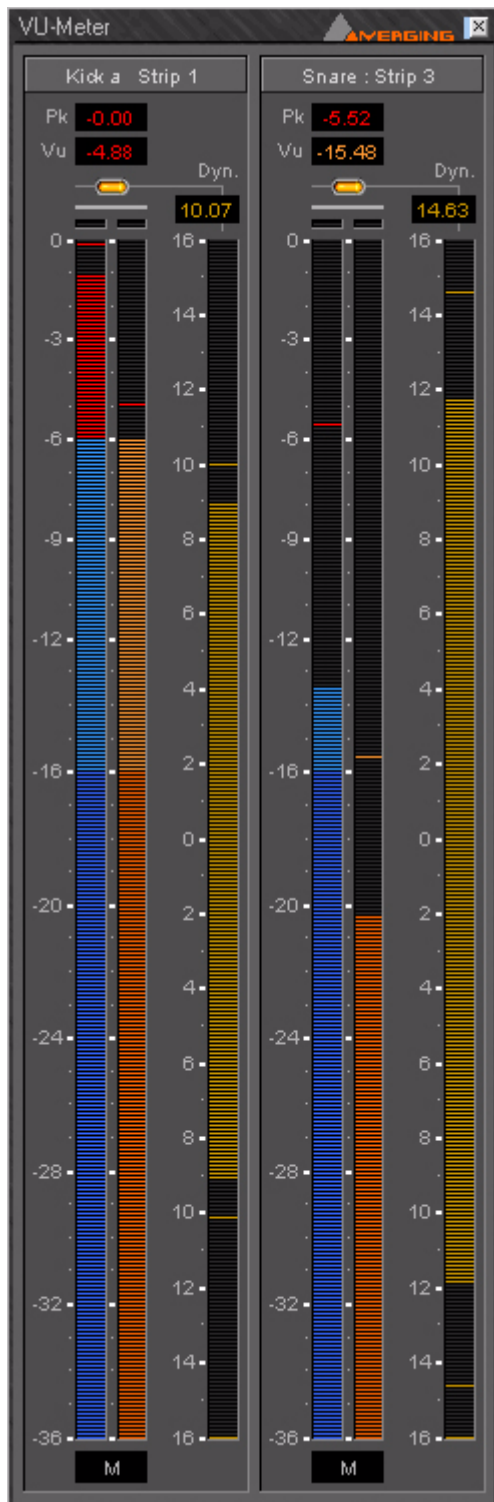
Mastering Peak/Vu Meters



Meter floating Windows

A precise measuring instrument. The VU meter displays the audio level on every strip where it is activated in a common window. It can serve as a master level display replacing expensive external hardware metering units. Clicking on a VU meter plug-in opens the meter window. The plug-in offers three different level displays, each with the option of Dynamic range display.

Peak-Meter



Peak Meter floating Window

This measures the peak value of the audio signal. Peak metering is very useful to check the absolute digital level of the audio signal. The Peak meter bars are blue and it has a default release time of 16 dB/second.

VU-Meter

The VU (Volume Unit) meter displays an average amplitude level. The VU meter is displayed in orange/yellow color, has a default integration time of 60 ms and a release time of 10 dB/second.

Dynamic-Meter

This display measures the instantaneous dynamic range of the audio signal. Basically this is the difference between the Peak and the VU display. If a pure sine tone is measured, the dynamics would be zero. The Dynamics meter is displayed in yellow and has a default release time of 12 dB/second.

Activating the VU-Meter

The VU-Meter can be added like any other plug-in on any strip by choosing **Add Effect > VU-Meter** from the context menu within the mixer strip. The only difference compared to other plug-ins is that when multiple instances of the VU-Meter are activated they are always displayed within a single window frame.

Display options

The Peak and the VU meter can be displayed individually with a middle mouse click anywhere within the window area of the VU meter. Each click with the middle mouse switches between the options Peak and VU, only Peak and only VU.

The Dynamics display can be activated by clicking on the switches at the top of the meter bargraphs. On multi-channel meters (stereo strips, surround mixes, etc.), the dynamics are summed together into one bargraph, allowing for example to display the dynamics of the L, R and C channels of a surround mix without the rear channels.

VU-Meter controls



Vu-Meter Controls Timing floating Window

Most of the display parameters of the VU-meter can be adjusted individually. Click with the right mouse button anywhere on the VU-meter to display a dialog allowing to control almost any parameters of the VU-meter.

The left side of the control window contains global settings and several predefined presets, while the right side has four Tab panels.

Switch Display

Clicking on this area cycles through VU, PEAK and BOTH.

Double VU

When this button is lit, the peak meter switches to VU characteristics, thus enabling you to run 2 VU-meters with different settings at the same time.

Level Mark

When lit this inserts a gray bar into the meter display at your desired “nominal” level. When the input signal exceeds the mark level, the bar will become light green.

Global settings and presets

Eight presets are defined which allow you to quickly select a set of parameters which fit best to your application.

Preset Name	Description
Def. (ref -16)	Default preset with a VU reference level of -16 dBFS
Def. (ref -18)	Default preset with a VU reference level of -18 dBFS
Fast (ref -16)	Preset with fast response times and a VU reference level of -16 dBFS
Fast (ref -18)	Preset with fast response times and a VU reference level of -18 dBFS
Slow (ref -16)	Preset with slow response times and a VU reference level of -16 dBFS
Slow (ref -18)	Preset with slow response times and a VU reference level of -18 dBFS
BBC VU (ref -16)	Preset with BBC standard settings (slower VU release time settings) and a VU reference level of -16 dBFS
BBC VU (ref -18)	Preset with BBC standard settings (slower VU release time settings) and a VU reference level of -18 dBFS

Double VU

When this option is activated, the peak meter switches to VU characteristics, thus enabling you to run 2 VU-meters with different settings at the same time.

Level Mark

This option allows you to set a mark at your desired “nominal” level, which will be displayed as a gray bar. When the input signal exceeds the mark level, the bar will become light green.

Timing parameters

These parameters are accessed by clicking onto the **Timing** Tab at the right side of the settings pane (see also picture above).

Peak integration

This parameter adjusts the integration time of the peak meter for rising levels measured in milliseconds.

VU integration

This is the integration time of the VU meter for rising levels measured in milliseconds.

Peak Release

This is the speed at which the peak meter falls, when the level is decreasing, expressed in dB's per second.

VU Release

This is the speed at which the VU meter falls, when the level is decreasing, expressed in dB's per second.

Dyn Release

This is the falling time of the dynamics display. It is expressed in dB's per second.

Max Level Hold Time

The highest segment reached will remain lit for a specified time after the level decreases, making it easy to see what the maximum level was. This parameter adjusts the length of time the segment remains illuminated.

Alignment parameters

The alignment parameters affect the scale of the peak and VU meter. They are accessed by clicking the **Align** Tab.



Vu-Meter Controls Align floating Window

VU Ref

This parameter sets the level of the 0 VU point in relation to 0 dBFS (0 dBFS is the value at which the maximum value of a sample word is reached. Anything above this level means that the signal is clipped).

If, for example, the VU Reference level is set to -16 dBFS, the VU meter would display 0 dB when the signal is at -16 dBFS.

Peak Color A/B alignment

The peak meter uses three colors depending on the magnitude of the displayed level. Below the **A** point, the color is blue. Between the **A** and **B** point, the color is a lighter blue, and above the **B** point, the color is red.

These two parameters adjust the level of the **A** and **B** points.

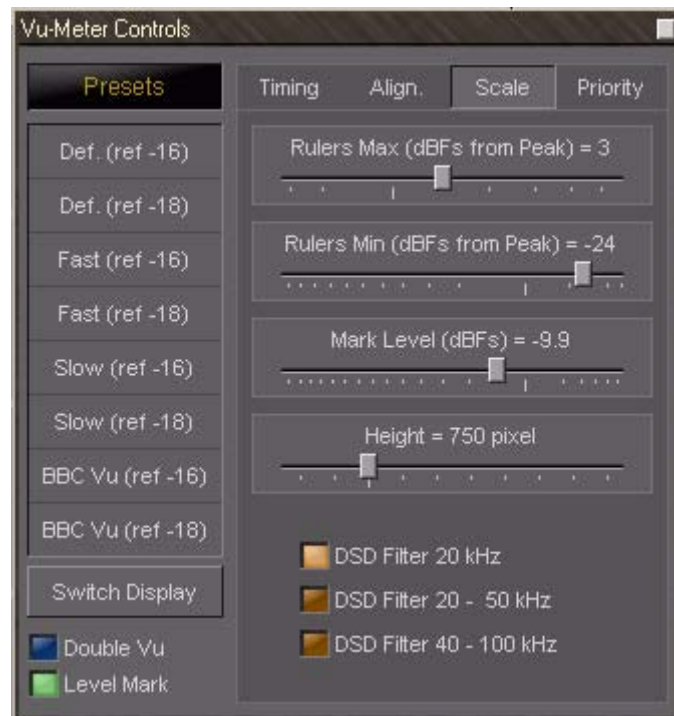
VU Color A/B alignment

The VU meter uses three colors depending on the magnitude of the displayed level. Below the **A** point, the color is dark orange. Between the **A** and **B** point, the color is a lighter orange, and above the **B** point, the color is red.

These two parameters adjust the level of the **A** and **B** points.

Scale parameters

These alignment parameters affect the rulers of the peak and the VU meter and also the dB range of the display. They are accessed by clicking the **Scale** Tab.



Vu-Meter Controls Scale floating Window

Rulers Max

This sets the maximum level of the range displayed by the peak meter. Usually you would set this to 0 dBFS, such that a digital full scale level would reach exactly the top of the scale. But since Pyramix uses Floating Point arithmetic, you might theoretically have signal levels above 0 dBFS, so it may be useful to be able to display them (of course, at the output of the mixer, such a signal has to be converted back to an integer number, and would cause digital clipping, so care should be taken with signals at these levels).

Rulers Min

This sets the minimum level of the range displayed by the peak meter, and thus influences the accuracy and the resolution of the peak and VU meter. Signals lower than the minimum are not visible on the meter.

Height

This modifies the height (in pixels) of the VU meter plug-in window as it is displayed on the screen.

DSD Filtering options

In the specific case of a DSD session the VU meter offers three filtering options which allow you to make sure that your DSD signal is compatible to the AES recommendations concerning the high frequency dither noise content. These radio buttons let you choose one of three possible filters which will be applied to the DSD signal before it is measured by the level meter.

The **20k** option applies a 20 kHz low pass filter to the signal, thus only the audible audio content is measured.

The **20k-50k** option applies a band pass filter with a frequency range of 20 kHz to 40 kHz to the signal. According to the AES recommendation the signal level in this frequency range should not exceed -28 dB.

The **40k-100k** option applies a band pass filter with a frequency range of 50 kHz to 100kHz to the signal. According to the AES recommendation the signal level in this frequency range should not exceed -20 dB.

Priority settings

The priority settings are accessed by clicking the **Priority** Tab.



Vu-Meter Controls Priority floating Window

This selects the how much CPU time of the host PC can be consumed by the plug-in, and therefore influences the redraw speed and accuracy of the VU-meter. The higher the priority, the more CPU time is assigned to the plug-in.

Phase-Oscillo

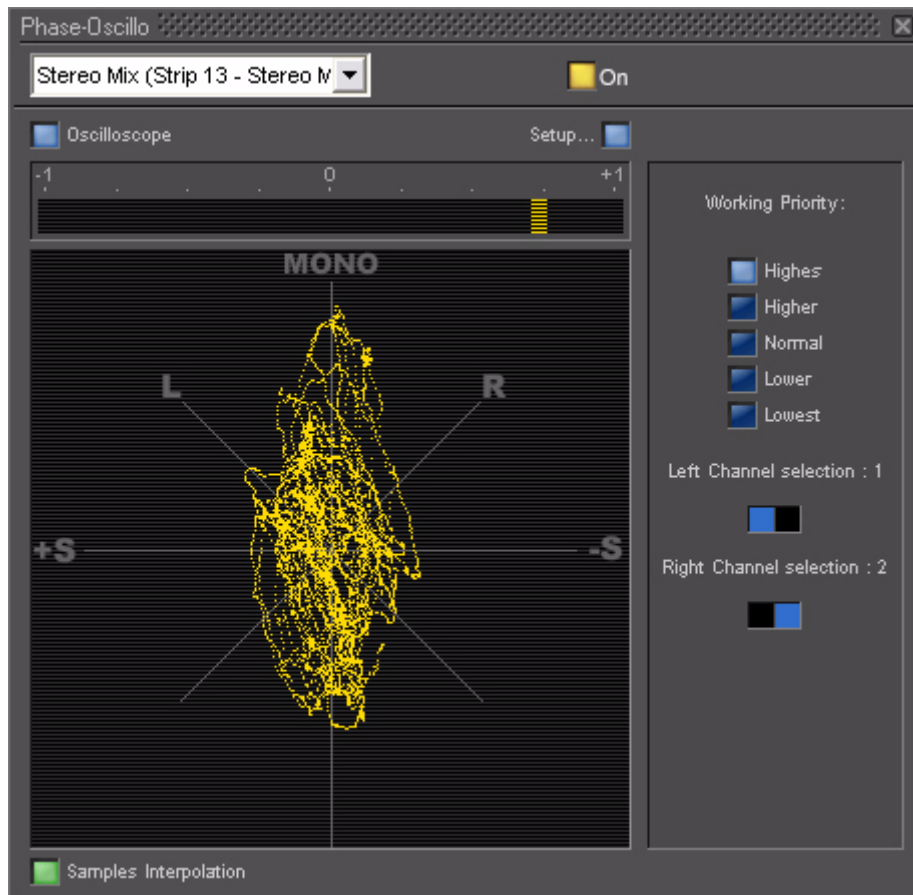
This plug-in combines a phase meter and a X/Y oscilloscope.

Note: Phase-Oscillo cannot be used in a mono strip. If you do so, it will return an error message.

The phase meter displays the phase of a stereo signal within the range of -1 to +1. a value of +1 means that the left and right channel are completely in phase. A value of -1 means that the left and right channel are completely out of phase causing complete cancellation when they would be summed into a mono signal. A good stereo mix should be somewhere in between 0 and +1.

The oscilloscope gives you some information about the stereophony and the phasing of a stereo signal. A signal which is completely mono appears as a vertical line. If only the right channel carries a signal, it is displayed as a straight line at a 45° angle from the bottom left to the top right. If only the left channel carries a signal, it is displayed as a straight line at a 45° angle from the bottom right to the top left. If the left and right channel are out of phase, this would result in a horizontal line.

A decent stereo mix would appear as a vertically shaped cloud as shown in the example below:



Phase-Oscillo floating Window

Phase-Oscillo configuration

The Phase-Oscillo plug-in has several buttons to configure it's operation.

Oscilloscope button

This switches the oscilloscope display on and off. If set to off, only the phase meter is displayed.

Sample interpolation

When this switch is on, the samples of the signals displayed on the oscilloscope are interconnected, resulting in an increased readability of the display.

Setup

This button opens the set-up pane with further options

Working Priority

Choose one of these switches to select the amount of CPU time of the host PC which can be consumed by the plug-in, and therefore influences the redraw speed and accuracy of the oscilloscope. The higher the priority, the more CPU time is assigned to the plug-in

Drop frame display

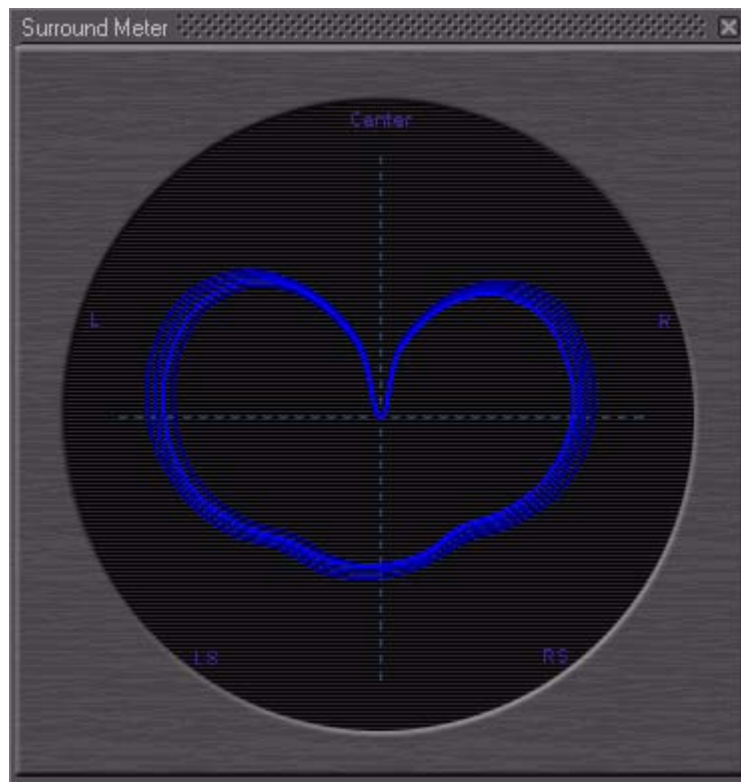
Depending on the chosen working priority of the Phase-Oscillo plug-in might not get enough CPU time to continuously redraw the display. The drop counter displays the amount of frames which could not be drawn because of lack of CPU time since the start of the actual Pyramix session.

Left and Right channel selector

If the plug-in is inserted on a bus with more than two channels (e.g. a surround bus or a multiple stereo bus), these two selectors allow you to select the appropriate channels for the left and right input of the plug-in. On a surround bus, you might for example select the left front and right front channels to be displayed on the **Phase-Oscillo** plug-in.

Surround Meter

Gives a very useful indication of energy distribution in a surround sound field.

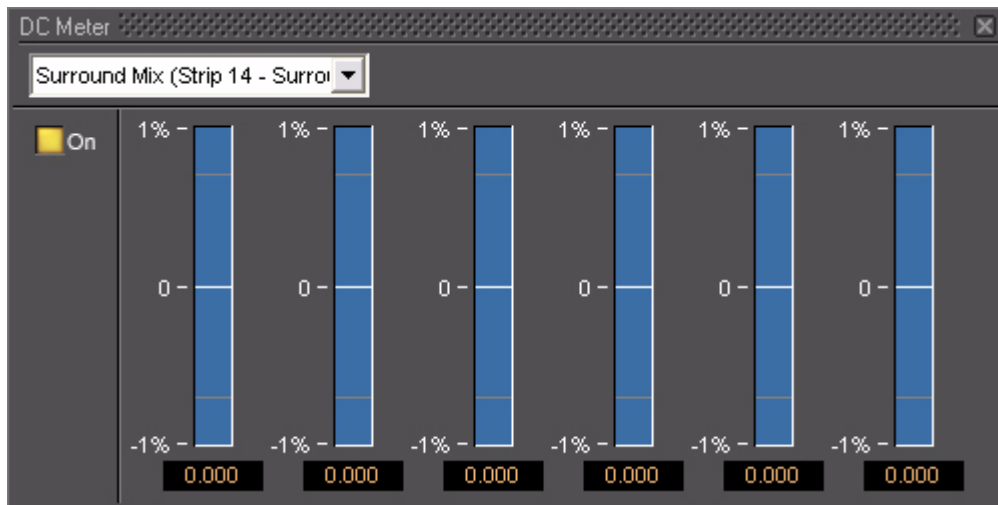


Surround Meter floating Window

The Surround Meter incorporates automatic gain ranging which maintains a meaningful display for a wide range of material. There are no settings to adjust!

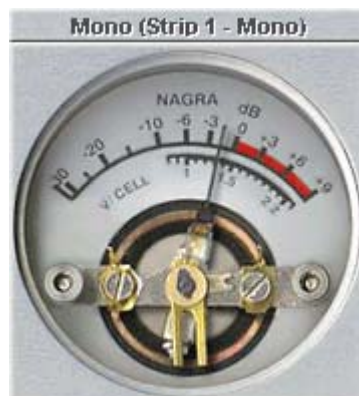
DC Meter

Measures the DC content in the signal.



DC Meter floating Window

Modulometer

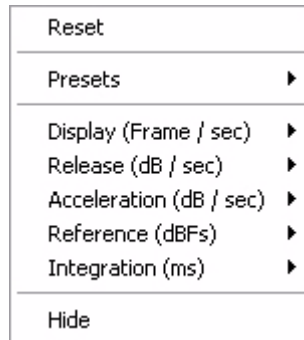


Modulometer floating Window

The **Modulometer** is a faithful reproduction of the classic meter fitted to Nagra portable Tape recorders.

Common operational practice is to set levels so the meter reads (average) - 8 when recording speech. This is partly due to the modulometer's characteristics as a quasi peak meter (quasi because it has the ballistics of a mechanical meter) and it also reflects the caution required in location dialogue recording where a lost take can represent many thousands of dollars. Although not by any means desirable, a low level signal is

better than one with distortion from peak clipping. Right-clicking anywhere on the window pops up a context menu. This has several options which control the behavior of the **Modulometer**.



Modulometer menu

Reset

Restores the default settings

Presets

Offers the standard **Preset** options

Display (Frame / Sec)

Sets the display refresh rate

Release (dB / Sec)

Sets the **Release** time

Acceleration (dB / Sec)

Sets **Acceleration** rate

Reference (dBFS)

Sets the **Reference** level in DeciBels Full Scale

Integration (ms)

Sets the **Integration** time in milliseconds

Hide

Hides the **Modulometer**

Function Generator

This oscillator can produce a Sine wave, a Pulse wave, a Triangular (Sawtooth) wave, DC and White or Pink Noise.



Function Generator floating Windows

Wordlength Meter

The **Wordlength Meter** (or Bit Meter) allows you to view the effective wordlength of a signal.



Wordlength Meter floating Window

Bear in mind that, once you apply any gain adjustment (e.g. a fader set anywhere other than 0dB) the signal will become 32 bit float data.

Plug-in Automation

All signal processing Plug-in parameters in Pyramix can be fully automated dynamically. **Please see Automation Modes on page 212.**

Effects Snapshots

Effect Settings can be easily stored and recalled by dragging them to/from libraries.

Creating Effects Snapshots

Hold **Alt + Shift**, then click and drag from the horizontal bar next to the **Channel** combo box in a **Plug-in** window to the library where you want to store the settings, then release. A new item, of the type **Mixer Snapshot**, is stored in the library. The snapshot is given the name of the plug-in by default. The new item is automatically highlighted so, if you wish to change the default name, simply type the new name and hit **Enter** to confirm. The name of the snapshot can be subsequently changed by clicking on the name in the library, then entering the new name.

Note: In some plug-ins **Alt + Shift** click and drag will work on any of the horizontal section title bars and in others from anywhere on the plug-in window where the cursor changes to



Using Effects Snapshots

Simply click and drag a snapshot from a user library to a plug-in of the same type as the original and release anywhere on the surface where the cursor changes to



Anywhere the snapshot cannot be dropped, or if the snapshot plug-in type does not match the target plug-in, the cursor changes to



Optional Plug-ins

Optional Pyramix plug-ins. For operating instructions please see each plug-in's guide.

Merging Technologies

EQ-X



EQ-X floating Window

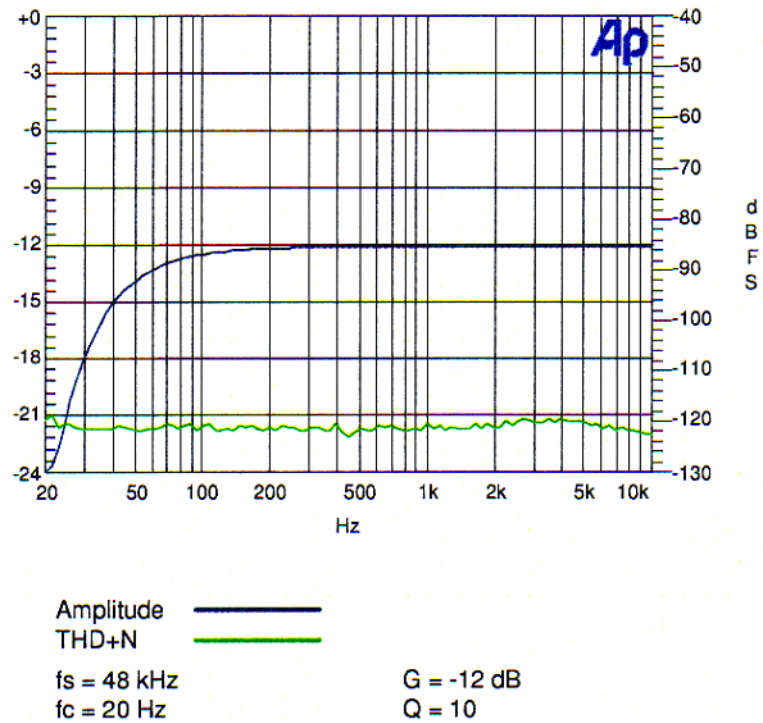
EQ-X builds on the existing and universally acclaimed quality of Pyramix EQ. It is backwards compatible. **EQ-X** offers Extreme definition filtering at sampling frequencies up to DXD with notch, low pass, hi-pass, peak and shelving filter types available.

The state space filter design of this Extreme Definition Equalizer has been specifically optimized to deal with the highest audio resolutions while still permitting very low noise & distortion, typically offering a THD+N of better than -110dB, throughout the entire audible (and even non-audible) range. Of course, this new digital filter's topography, while designed with high sample rate in mind, also offers the extra benefits and low noise to 1FS equalization. However, since there is no such thing as a free lunch, EQ-X does "eat" about double the processing DSP power of an equivalent "traditional" digital EQ instance in Pyramix.

EQ-X is a five band fully parametric EQ with independent control of Filter Type, Gain boost and cut, Frequency, and Q factor (bandwidth) for each band. The equalizer can be operated using the rotary controls, by directly entering numerical parameters in the boxes beside the knobs or by clicking and dragging on one of the five colored box nodes which appear when the mouse cursor is over the response graph. Left-clicking enables level and frequency to be adjusted, right-clicking then dragging left or right allows adjustment of Q.

All bands are full range. Boost and cut of up to 24dB is available. Q can be set anywhere from 1.0 (wide) to 100 (narrow). Master Gain enables the overall level to be adjusted to suit the applied eq.

Frequency-Response THD+N



EQ-X Frequency Response THD+Noise

Solera



Solera floating Window

Solera is the flag ship of the range of **Angel Class Dynamic Processors**. It is primarily designed for mastering and re-mastering applications. However, it can also be used as a regular dynamic processor for superior sonic quality and distortion free operation.

Developed for Merging Technologies by Gael Yvan Son et Développement, every Angel Class Dynamic Processor plug-in uses some exclusive algorithms that endows them with an incredibly clear and natural sound.

The **Pure** series uses the same technologies for specific dynamic processes.

Here are some of the key features that make our plug-in the best available for dynamic processing in the digital domain:

1. Analog like metering. RMS values are more useful than dBfs when setting up a dynamic processor.
2. The **Angel's Share** parameter takes account of the signal for intelligent relaxation of the compressor action.
3. The **Hysteresis** parameter allows compressing and de-compressing independently of the sound level and can be mixed with the standard compression scheme.

4. The **Auto Release** features an unique algorithm that avoids typical pumping effect.
5. A delay line can inserted in the signal path to produce a null attack time.
6. The **A/B** compare and **Morphing** section enables ultra-fast and precise operation.

The **Angel Class** Dynamic Processor family supports up to simultaneous 8 channels and DXD operations.

***Note:** Solera is a wine making technique: A Solera is method of fractional blending for wine, closely paralleling the making of Sherry or Madeira. A solera consists of several rows of stacked oak barrels with the oldest wine in the bottom row and the most recently made at the top. At bottling, about one-third of the wine in the bottom row is removed and wine from the row just above replaces it and soon, until reaching the top row, which is replenished with new wine. The concept behind a Solera is to make a wine that remains consistent from year to year.*

***Angel's Share** is a term used for Armagnac, Cognac, Whisky; that part of the spirit that evaporates during the process of aging.*

Full operating details can be found in the **Angel Class Processors User Guide**.

Pure Series

The **Pure Series** plug-ins are essentially the individual building blocks of **Solera** presented as individual plug-ins. The advanced release mode is only available in Solera.

Pure Compressor

Pure Compressor is the compressor section of the Solera

Pure Expander

Pure Compressor is the expander section of the Solera

Pure DCompressor

Pure Compressor is the de-compressor section of the Solera

Pure DExpander

Pure Compressor is the de-expander section of the Solera

Algorithmix

DeNoiser

DeScratcher

DeNoiser + DeScratcher, Restoration Suite

Nova

Overview

The Nova™ plug-in for the Pyramix rendering interface is an impressive weapon in the battle for cleaner recordings. Coughs, chair scrapes even mobile phone tones are all in its sights.

The Nova™ Plug-In enables audio data in the frequency domain to be modified simply and quickly. These modifications include interpolation of selected areas over the time- and/or frequency line as well as gain modifications. The interpolation can also be restricted to certain gain ranges within the selected area, which is very useful if only a certain part of the data needs treatment (e.g. one specific harmonic etc.) which cannot otherwise be selected. The Nova™ window is fully resizable for optimum compatibility with all screen resolutions.

Arkamys

UpMix5

Overview

UpMix5 is a plug-in for Pyramix Virtual Studio that upmixes a stereo source to a 5.1 multichannel output. From a FFT analysis of the stereo signal, UpMix5 discriminates all the 5.1 components. UpMix5 doesn't use any reverb, nor key compression to get a 5.1 surrounding. This plug-in is designed for Broadcast and Post Production applications on any stereo material: movie or music.

UpMix5 discriminates mono, stereo and 'out of phase' components from the original stereo signal. The mono component is played back in the center speaker (C) and the out of phase component is played in the rear speakers (LsRs). User can choose the width of the final front LR and surround LsRs signals.

Vincent Burel

Aphro V1 Reverb / Aphro V1.5 Reverb

Aphro-V1.0/Aphro V1.5 are real time Digital Effects Processors. Elements of a high quality effects processor series called Aphro-Vx, Aphro-V1 and V1.5 are specially created to simulate sonorous atmosphere and room effects, in a realistic way. The handling philosophy is made simple and practical thanks to a wide range of presets, which requires the user to select a preset matching the best desired effect, and then to use the different interfaces in order to adjust it, according to his requirements. Grouping parameters by theme, gave us the idea of creating a modular and ergonomic user interface.

C-Limiter

Stereo Manager

Striptool

Compresso5rs

C10 Limiter

EQ Pro-pack

Tone-X

Chorus

GEQ

MultiTap Delay

VU-Meter + Cor

Frequencies Analyzer

Stereo Oscilloscope

Mono-Switcher

Cedar Audio Restoration Suite for Pyramix

Cedar's range of restoration tools need no introduction here. The following processes are available for Pyramix:

Cedar dehiss for Pyramix

Cedar declick for Pyramix

Cedar manual declick for Pyramix

Cedar decrackle for Pyramix

Cedar dethump for Pyramix

Cedar Retouch for Pyramix

Prosoniq

MPEX3 Timestretch and pitch change

Overview

The MPEX3 algorithm for Pyramix has been developed with the German based company Prosoniq, well known for their high quality digital audio algorithms.

MPEX stands for **M**inimum **P**erceived Loss Time Compression/**EX**pansion. Incorporating this technology into Pyramix Virtual Studio enables users to adjust timing and pitch of existing material with outstanding results and ease of use.

Algorithm

Time Scaling (also known as 'Time Stretching', 'Time Compression/Expansion' and 'Time Correction') is the process of changing the length of a sound or sounds without changing its pitch. When a sound is transposed by playing it back at a different speed, e.g. when slowing down the playback speed of a tape recorder, it will play back at a different tempo but also at a different pitch. While this may be fine when tuning drum loops to match the speed of a recording it will make pitched sounds - like vocals - sound totally out of tune. Therefore it is desirable to provide a process that enables the duration and pitch of a recording to be changed independently from each other.

Time Stretch and Pitch Change for Film Applications

There are three main categories of Cinema time stretching and pitch changing requirements:

- 1) Conversion of audio rushes from 24 to 25 or 25 to 24 when their associated video or film has to be sped up or slowed down. The main reasons are:
 - a. The shooting has been done with film AND video, so one part of the rushes or the other have to be sped up or slowed down.
 - b. The telecine process to bring the film rushes to video for editing didn't preserve the original speed, intentionally or by mistake.
 - c. The shooting has been done on video at 25fps (intentionally or by mistake) and has to go to film.

Pyramix provides various solutions to this problem:

Batch conversion

of a whole media folder. Just select all media to stretch/squeeze / pitch change and select the menu **Quick Convert > Prosoniq MPEX3** module. All media will be processed in one shot. Media will have to be re-synchronized in time with their video equivalent by using the reference "Clap".

In the case where all the media are already synchronized in time with their video equivalent (either manually or because they've been properly stamped while recording), then simply send all these media to their original TimeCode (time stamp) in a Pyramix project and select the menu item **Project > Stretch / Pitch**. All media will be properly stretched/squeezed and their position will be also correctly updated. The new original TimeCode (time stamp) can then be written back to the media by selecting the menu item **Clips > Operations > Update Media Original TC**, so these new media can now be used exactly as if they've been recorded and stamped at that new speed, allowing also auto-conformation or other TimeCode based processes. All information stored in the clips referencing these media in the Timeline (like fades, sync points, gain curve, ...) are also stretched/squeezed properly. Optionally the media can be consolidated to convert only the required part

The two processes described above are necessary when a mix of different source material speed have to be "normalized". In the case where it is known from the beginning that the whole editing and mix will have to be stretched back to the other (original rushes) speed, Merging provides a very convenient solution in term of hard-disk space, conversion time and finally sound quality. The Virtual Transport Video Player allows playing the video editing at a different speed than the audio material allowing matching (for instance and in the majority of cases) a video running at 24 frames per second with an audio editing stamped at 25 frames per seconds. This avoids compressing the audio so it matches the video being played too fast (25fps instead of 24) but preferably run the video at the correct speed (24fps) and therefore the audio also.

Surround Post-processing

Conversion of a final mix from 24 to 25 for DVD/Video distribution of a film or 25 to 24 for film distribution of a video shot and edited movie.

Pyramix allows stretching/squeezing a whole surround mix by selecting the menu **Project > Surround Post-processing** and choosing the **Prosoniq MPEX3 24/25 Time Stretcher** module. This function stretches/squeezes a whole 5.1 mix without inter-channels phase artifacts thanks to the new Prosoniq MPEX3 algorithm. This function allows processing multiple stem surround mixes stem by stem. Due to artefacts introduced by most time stretching algorithms available until now, the normal procedure was to separate the dialogue stem and the music/effects/ambience stems, time-stretch them separately and remix them afterward. Although the Surround Post-processing function allows this methodology, this is no longer required due to the very high quality of the MPEX3 module. Therefore a complete mix can be stretched in one pass retaining maximum sound quality.

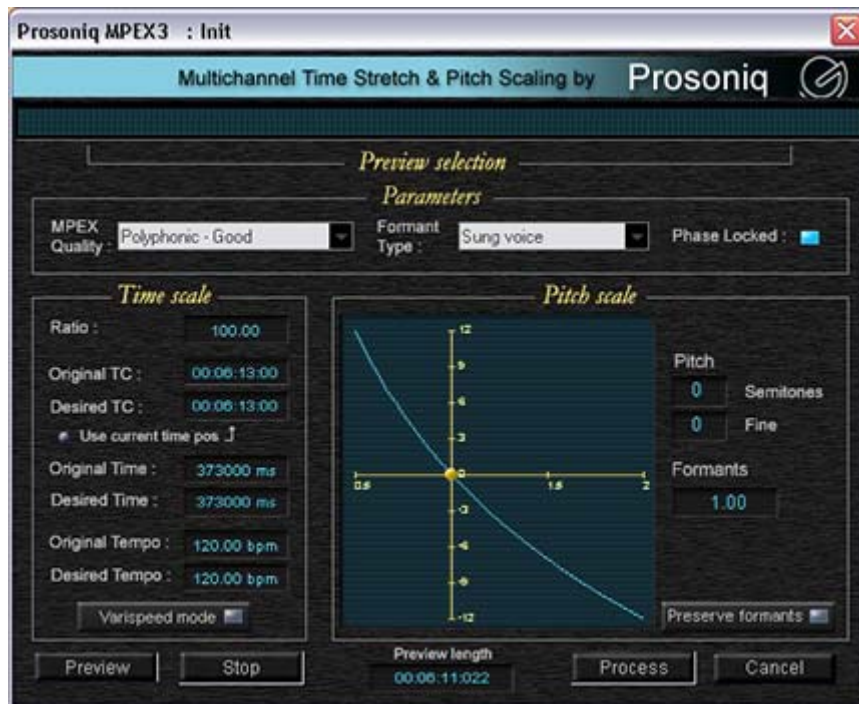
Time fit

Compression or expansion of a portion of audio to fit in a given time, generally dialogue, ADR, translation or Foley.

Pyramix provides three ways to stretch/squeeze a region of audio:

- Just select the region or clip to process and place the cursor at the position where the nearest region boundary should be extended to and select **Edit > Stretch**. A dialog will then allow the boundaries to be precisely adjusted with the help of TimeCode entries, or simply click OK or press the Enter key to confirm the operation.
- Select the region or clip you want to process and copy it (**Edit > Copy**, or **Ctrl C** etc.). Select the region you want the copied region to fit into then simply use the command **Edit > Fit Selection**.

- Select the region or clip to process, select the menu **Project > Render** and choose the **Prosoniq MPEX3** module.



Prosoniq MPEX3 dialog

A comprehensive interface then enables the time-stretch parameters to be precisely adjusted. In addition to time-stretching this interface also allows Pitch and Formant adjustments.

Quick Convert

The Prosonique MPEX3 process can also be accessed by the Quick Convert function (Media Management Tab Window, Menu **Convert > Quick Convert > Prosonique MPEX3**)

PureNotes

Broadband noise removal

Scopein

TimeZone Time Compression

VST / DirectX support

Direct X Plug-ins

DirectX plug-ins may be used in Mixer Input strips and also in the FX Rack **Please see: Effects Rack on page 227**

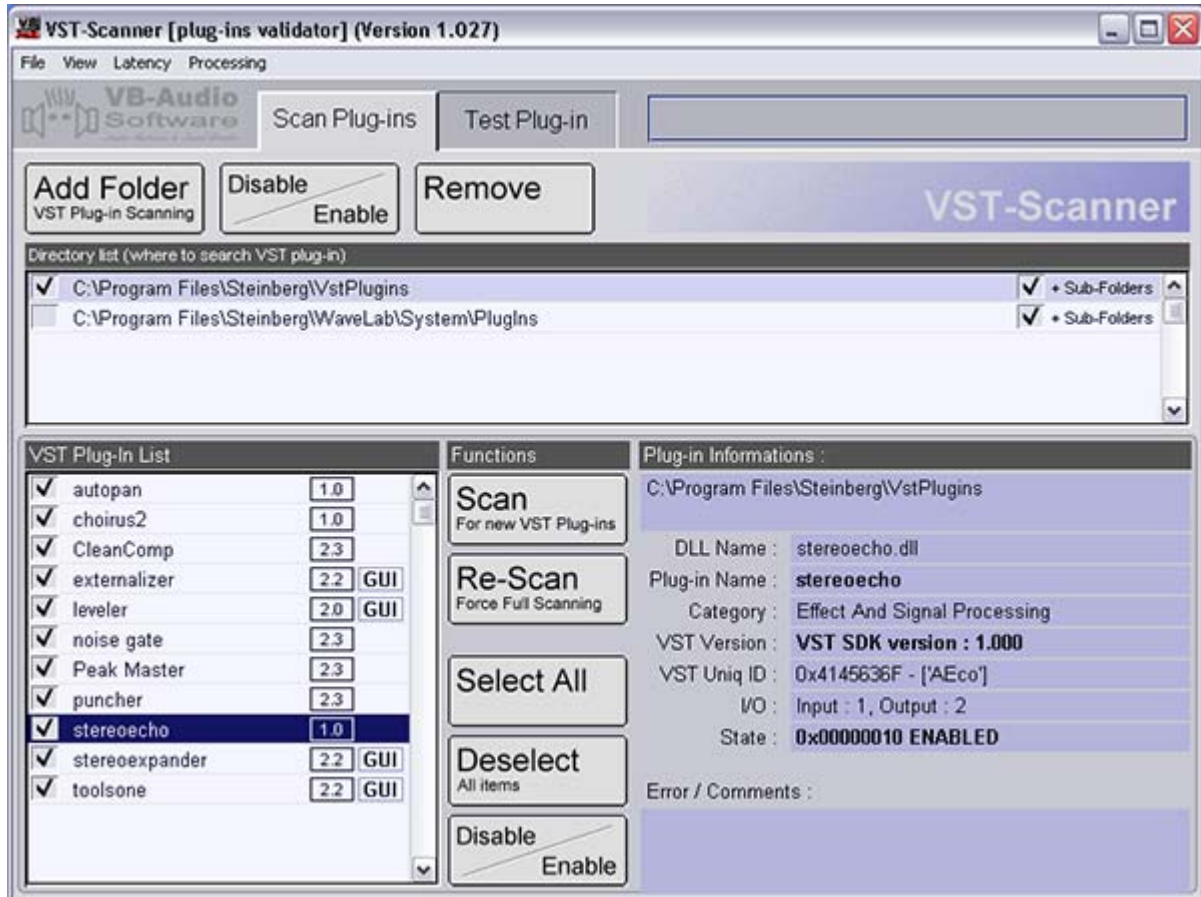
VST Plug-ins

VST Scanner

To Load VST plug-ins in Pyramix you first have to tell Pyramix where they are. Go to **Start > Programs > Pyramix > VST Scanner**. If you have Cubase or any standard VST program you will see your VST plugs

appear in the left window. Select the ones you want to use in Pyramix (including Waves VST and TC Powerecore).

If nothing appears in the left window, you just need to have a folder containing all your VST plug-ins files



VST - Scanner Window

(they are .dll file type) somewhere on your disk, hit the **Change** button at the bottom of the VST Plug-Ins Chooser window, browse your disks and select the folder containing the VST plug-ins. They will now be listed and recognized in Pyramix.

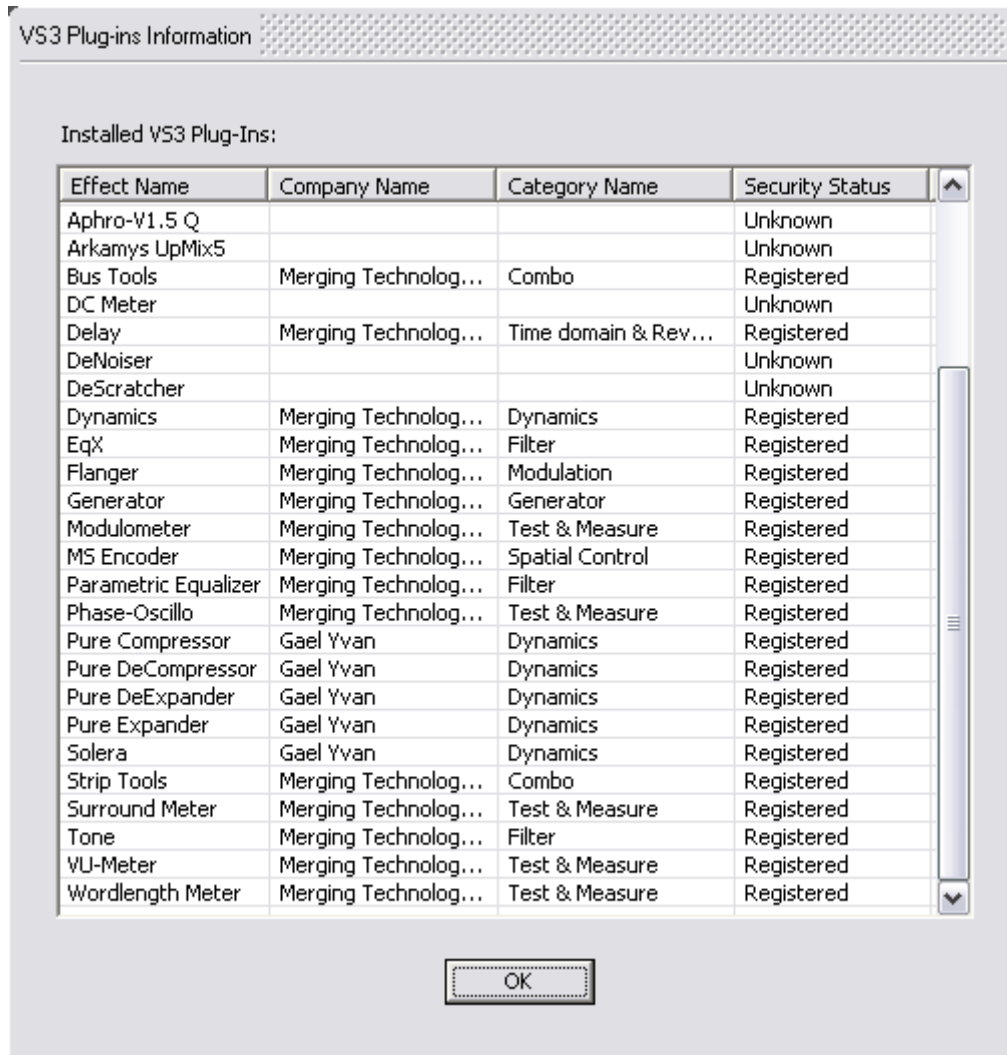
Note: The VST plug-ins, like Direct-X plug-ins, are processed by the host CPU. Therefore, if you are intending to use VST or DX plug-ins intensively, fast Host processors are recommended.

The VST Scanner can be used as a validation tool. User instructions and the latest version can be found at its developer's (VB Audio) website:

http://perso.wanadoo.fr/vb-audio/fr/resources/vst_scanner/vst_scanner.htm

VST Plug-Ins Information

The Mixer right-click context menu has an option to pop-up the **VST Plug-Ins Information Window**



VS3 Plug-ins Information

Installed VS3 Plug-Ins:

Effect Name	Company Name	Category Name	Security Status
Aphro-V1.5 Q			Unknown
Arkamys UpMix5			Unknown
Bus Tools	Merging Technolog...	Combo	Registered
DC Meter			Unknown
Delay	Merging Technolog...	Time domain & Rev...	Registered
DeNoiser			Unknown
DeScratcher			Unknown
Dynamics	Merging Technolog...	Dynamics	Registered
EqX	Merging Technolog...	Filter	Registered
Flanger	Merging Technolog...	Modulation	Registered
Generator	Merging Technolog...	Generator	Registered
Modulometer	Merging Technolog...	Test & Measure	Registered
MS Encoder	Merging Technolog...	Spatial Control	Registered
Parametric Equalizer	Merging Technolog...	Filter	Registered
Phase-Oscillo	Merging Technolog...	Test & Measure	Registered
Pure Compressor	Gael Yvan	Dynamics	Registered
Pure DeCompressor	Gael Yvan	Dynamics	Registered
Pure DeExpander	Gael Yvan	Dynamics	Registered
Pure Expander	Gael Yvan	Dynamics	Registered
Solera	Gael Yvan	Dynamics	Registered
Strip Tools	Merging Technolog...	Combo	Registered
Surround Meter	Merging Technolog...	Test & Measure	Registered
Tone	Merging Technolog...	Filter	Registered
VU-Meter	Merging Technolog...	Test & Measure	Registered
Wordlength Meter	Merging Technolog...	Test & Measure	Registered

OK

VST - Plug-Ins Information Window

This window shows all effects currently present on the machine. Fields show the **Effect Name**, the manufacturer/developer **Company Name**, the **Category Name** and **Security Status**. I.e. if the plug-in is currently authorized.

External Effects

Any Pyramix **Bus** can be routed to any physical output. Thus, an **Aux** can be routed via a physical output to an external effect. The output of the external effect is simply brought back into Pyramix via one of the physical inputs. However, a delay will be introduced by the external processor and the converters. If the return needs to be time-aligned with other signals please see: **Mixer Delay Compensation** on page 142

11

Strip and Bus Tools



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Strip and Bus Tools

Eq, Comp/Limiter/Expander

Strip and Bus Tools are a quick and efficient way of adding the Equalization and Dynamics (compression and expansion) functions commonly found on hardware consoles to channels and busses. Strip and Bus Tools are particularly economical with DSP processing power. Each processing block may be switched 'into circuit' individually. Blocks which are not 'in circuit' do not use DSP resources.

Difference between Strip Tools and Bus Tools

There is only one difference between Strip and Bus Tools. Bus Tools have a sophisticated Limiter with **Look-ahead** and **Delay Compensation** where Strip Tools has a Compressor.

Both may be freely used in Strips or Busses if the need should arise for a limiter in an Input Strip or a Compressor in a Bus.

Modules

The Strip and Bus Tools plug-ins consist of several **Sections** or modules. Each **Section** has a title bar at the top containing an **On/Off** switch for the section and a control triangle which toggles between showing or hiding the section.

Display Options

Multiple instances of the Bus Tools plug-in are displayed in one large window. Right-click onto the window title bar of the plug-in to open a menu offering some general display options for the Strip Tools plug-ins:



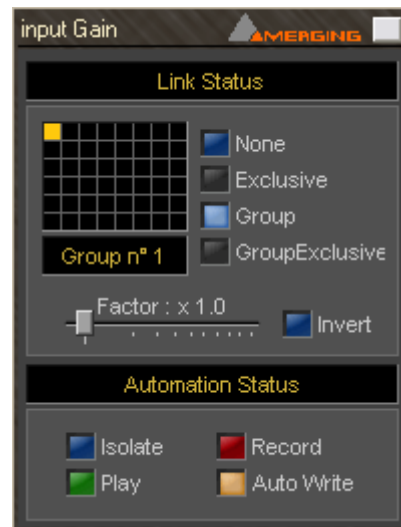
Strip Tools - General Display Options

This menu allows you to either directly select the number of strips displayed in the plug-in window, or to increment/decrement this number by one. The maximum number will vary depending on how many Strip Tools are assigned.

Linking Strip-Tools controls

Any choice of Strip Tools controls can be linked together. When you move any of the controls which is a member of a link group, all the other members of the group also move. There are 48 link groups for linear/ rotary controls and 48 link groups for switches.

To add a control to a link group, right-click on the knob or button to display its **Link Status** and **Automation Status** pop-up window. E.g. this is the pop-up for an input gain control.:



Strip Tools - Link and Automation Status

Group assignment mode buttons

These four buttons define the link mode of the control. Four choices are available:

- | | |
|------------------------|--|
| None | The control is not a member of any group. |
| Group | The control is a member of the selected group. When you move (or switch) this control or any other control which is a member of this group, all the members of the group will move (or switch) along with it. |
| Exclusive | This mode is only available for switches. With this mode selected, when this switch is on, all the other members of the group will be switched off. |
| Group Exclusive | This is a mode which has a superior effect on all groups which are set to Group Exclusive. When any of the groups which are set to Group Exclusive is switched on, all the other groups set to Group Exclusive will be switched off. |

Grouped controls are indicated by a yellow **L** in the corner of the control 'block'.



Strip Tools - Grouped Controls

- | | |
|------------------------|--|
| Factor X Slider | Works only on continuous (rotary or linear) controls. It determines the gearing of this control in relation to other members of the group and vice versa. E.g, |
|------------------------|--|

assume the input gain of strip tools #1 and the input gain of strip tools #2 are both assigned to group one. The scale factor of the gain of strip tools #2 is set to 2. Now when you change the gain of strip tools #1 by 1 dB, the gain of strip tools #2 will change by 2 dB's.

Invert

Also works only on continuous controls. It inverts the effect of the movement for this control caused by another group member or vice versa. E.g, assume the input gain of strip tools #1 and the input gain of strip tools #2 are both assigned to group one. The invert button of the gain of strip tools #2 is on. Now when you increase the gain of strip tools #1 by 1 dB, the gain of strip tools #2 will diminished by 1 dB.

Automation mode switches

Please see: **Automation Modes** on page 212 for a description of the automation mode switches.

When a grouped control is clicked, all other members of the group are shown with a yellow box around them.

Offset

If controls are offset when grouping is turned on, they retain the offset as shown here.



Strip Tools - Grouped Knobs

The red bar at the top of the strip indicates it is selected. The grayed out knob is the one which was right-clicked.

Sections



From top to bottom, Strip Tools contains the following Sections:

Input Level

This section contains the input level control and shows the name of the mixer strip this instance of the plug-in is assigned to.

Dynamics

This section contains a compressor. It can be switched, as shown here, to act as a decompressor.

Expander

This is a downwards expander. It can also be switched to act as an upwards expander.

Equalizer

This is a five band fully parametric equalizer. Each band can be switched to high or low pass, shelving or peaking characteristics.

Output

This section controls the output level of the strip tool and also offers automatic gain make up for the compressor.

Common Features

Each Section or module of Strip and Bus Tools has a number of controls in common.

Title Bar

A text description of Section's function, e.g. **Input**, **Dynamic** etc. Also contains:

Show/Hide triangle

At top left of every Section a grey triangle toggles between showing or hiding the section. Clicking a triangle with **Shift** held down opens the Section (If hidden) and hides all other Sections. Clicking a Section with **Ctrl**. held down opens all Sections.

Note: Sections remain active when hidden.

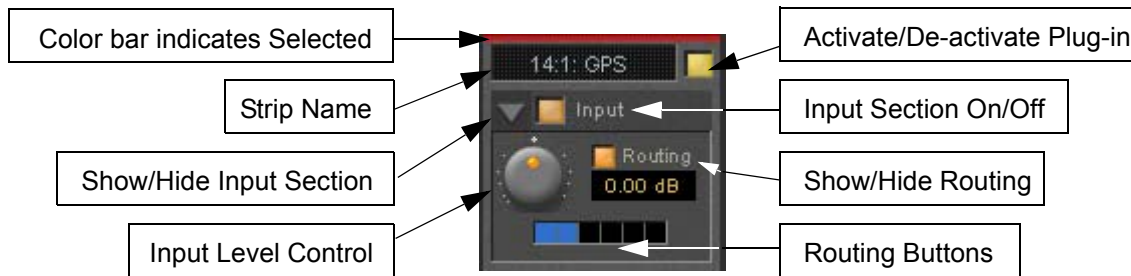
Section On/Off Button

Between the **Show/Hide** triangle and the Section **Title** is the **On/Off** button for the Section.

Knobs

The position indicator dot lights orange when the control is at the default value. A white star appears top-left of the scale of the last control 'touched'.

Input Section



Color Bar

Indicates strip is selected.

Strip Name

Displays the name of the strip the plug-in is assigned to. The name for the plug-in can be changed by double-clicking on the strip name, then typing in a name and hitting the **Return** key to confirm. If a plug-in name is changed in this way, subsequent changes to the parent mixer-strip name do not affect the plug-in strip name. To recover the name of the parent strip, simply remove the strip name.

The strip name is saved with presets and within Pyramix projects.

Activate/deactivate plug-in

This button switches the entire Strip plug-in on or off. Note that when the plug-in is switched off, it doesn't consume any DSP power.

Show/Hide input section

Input section on/off

Input level control

Adjusts the input level over a range of -48 dB to +48 dB.

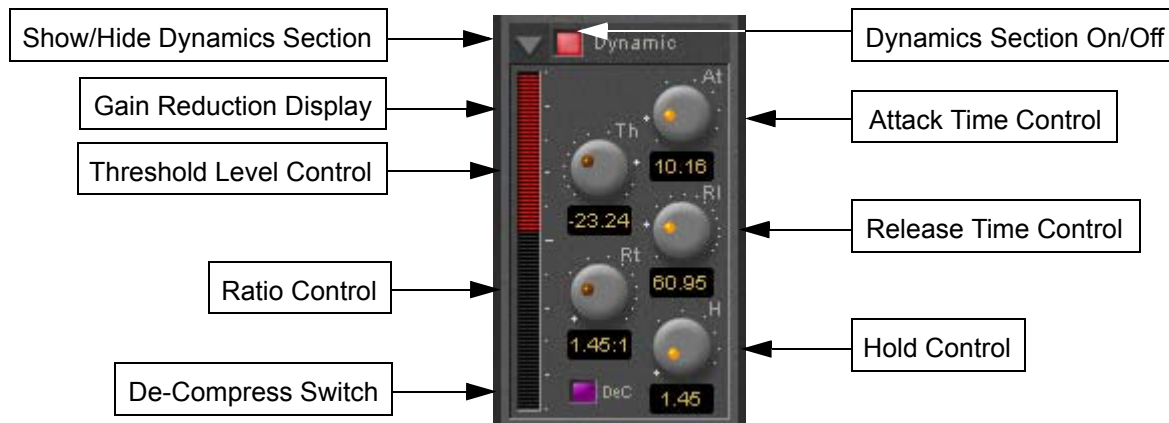
Show/hide Routing

By default Routing buttons are hidden. This button toggles between Showing and Hiding the Routing Buttons. Routing remains active when hidden.

Routing Buttons

Determine which audio streams running through the strip will be processed by the plug-in. The number of buttons depends on the number of streams controlled by the strip. Currently this means one for a mono input channel or two for a stereo input channel but will be 8 for a 7.1 input channel. Streams which are not selected will be left untouched.

Dynamics Section



Show/Hide Dynamics section

Dynamics Section On/Off

Gain reduction display

The bar graph shows the gain reduction/increase generated by the **Dynamics Section** or by the **Expander**. The range of the display can be switched between ± 10 or 20 dB by clicking on the bar graph. Scale markings in 1dB increments on the right-hand side of the bar graph make it easy to see if the range is 10 or 20 dB.

Colors are used to denote a gain reduction or increase generated by either the compressor or the expander:

- Gain reduction by the Compressor is displayed in **Red** from top to bottom.
- Gain increase by the De-Compressor is displayed in **Pink** from bottom to top.
- Gain reduction by the Expander (normal or inverse) is displayed in **Green** from bottom to top. With the compressor in inverse mode, the gain reduction of the expander is displayed in **Green** from top to bottom

Threshold Level Control

Sets the level at which the compressor begins to act. If the input signal level exceeds the **Threshold Level**, the gain is reduced (or increased in De-Compressor mode) in proportion to the setting of the ratio control.

Ratio Control

Determines the proportion of gain reduction (or increase) for signals above the threshold level. If, for example, the ratio is set to 2.00:1, in Compressor mode, if the input level rises by 2dBs above the threshold level, the output level will only rise by 1 dB.

Attack Time Control

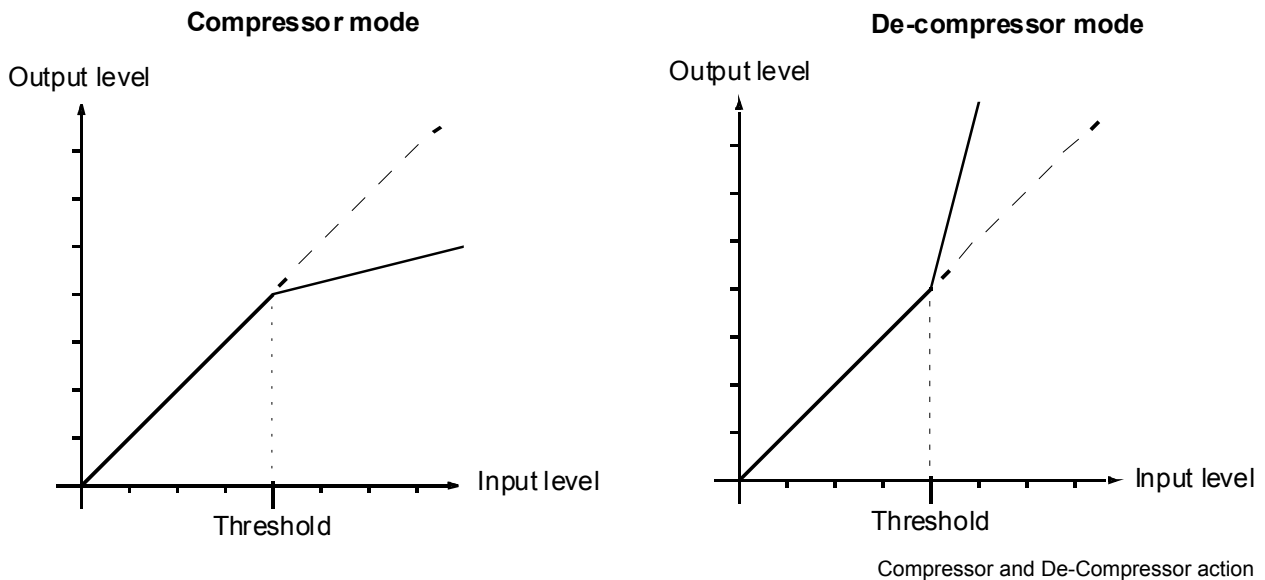
Controls the time the compressor takes to react when the input level exceeds the **Threshold Level**. The lower the attack time, the faster the reaction.

Release and Hold Time controls

These two parameters work together and control the amount of time the compressor takes to react when the input level is above the threshold level and starts fall. During the hold time the gain of the compressor remains constant. After the hold time the gain of the compressor is changed at the rate set by the release time. The lower the release time, the faster the reaction.

De-Compress Switch

Switches the compressor between the compress and the de-compress modes.



In compressor mode, when the input level exceeds the threshold level, the gain is reduced according to the setting of the ratio control. In de-compressor mode, when the input level exceeds the threshold level, the gain is increased according to the setting of the ratio control.

Expander Section



Show/hide Expander section

Dynamics section on/off

Threshold Level Control

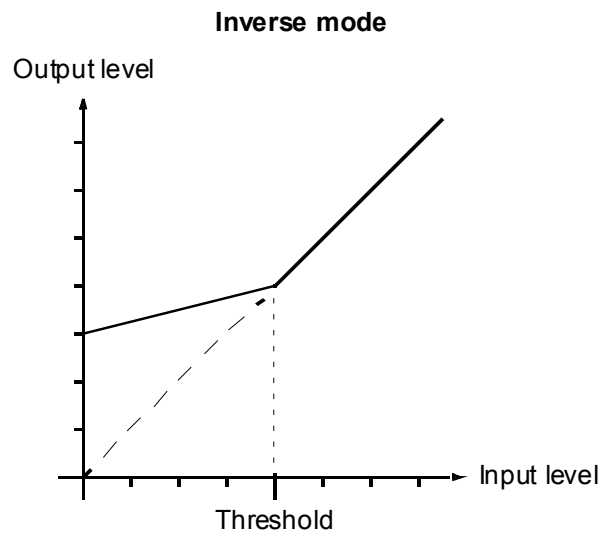
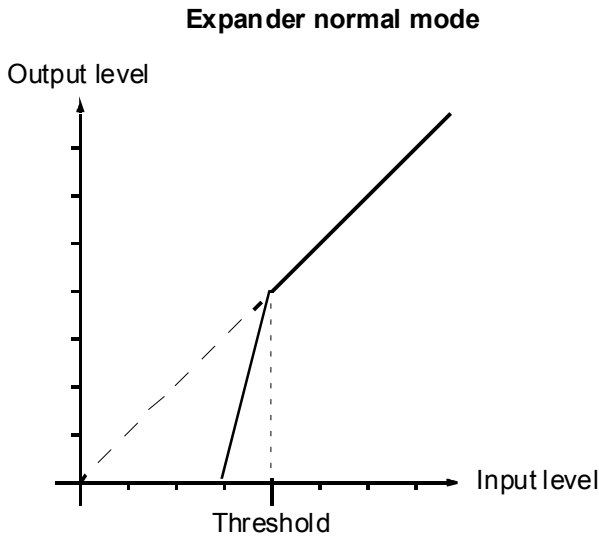
If the input signal level falls below the threshold level, the gain of the expander is reduced (or increased in inverse mode) according to the setting of the ratio control.

Ratio control

Determines the proportion of gain reduction (or increase) for signals below the threshold level. If, for example, the ratio is set to 2.00:1, in normal mode the output level will be decreased by 2 dB if the input level is decreased by 1 dB below the threshold level.

Inverse switch

Switches the between normal and inverse expander modes.



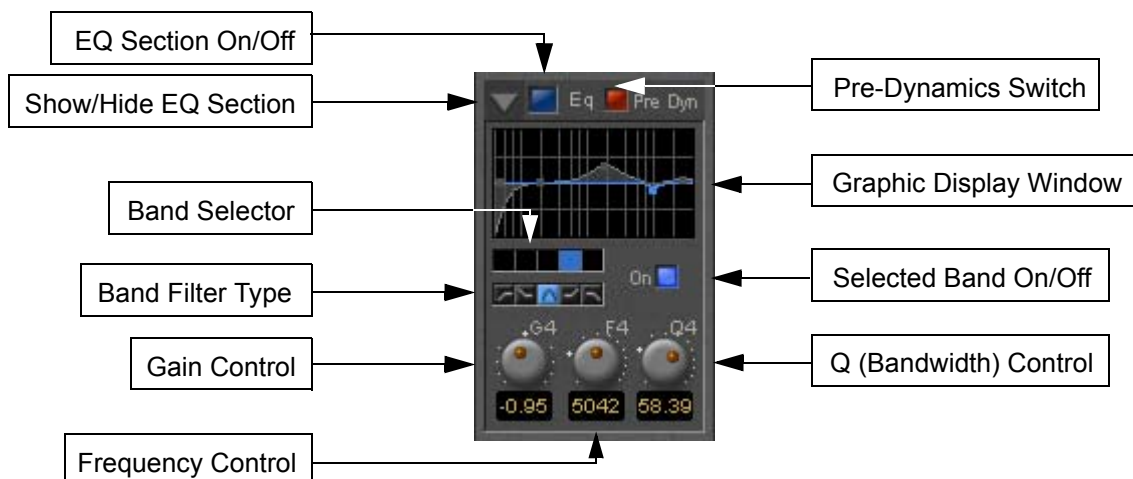
Expander normal and Inverse mode action

Attack/Release/Hold controls

The **Expander Section** uses the settings of the **Attack/Release/Hold** controls in the **Dynamics Section** to control it's timing.

Equalizer section

A fully parametric five band equalizer. Each band covers the entire frequency range from 20 Hz to 20 kHz (or higher, depending on the sampling rate of the project) and can be switched between peaking, high or low shelving and low-pass or high-pass characteristics. Each of the five bands can be switched off. De-activated bands do not consume DSP power.



Show/ Hide EQ Section

EQ section on/off

Pre Dynamics Switch

This switch offers the option to switch the EQ before the dynamics section. By default the EQ is after the dynamics section.

Graphic Display Window

This small window displays the settings of the currently selected EQ band in blue color and the resulting curve of the whole EQ section in gray color. You can click and drag directly onto the handles (the small blue or gray points) of the EQ bands to change the settings within the graph window.

Double-click anywhere in the window to open a bigger version. Please see **The Big Graph Window** on page 204.

Band Selector

Click onto one of these five buttons to select the band to be manipulated by the Gain, Frequency and Q control underneath. A band gets also selected if it is manipulated in the small or big graph window.

Selected band characteristics

These five buttons determine the characteristics of the selected EQ band. The choices from left to right are High-Pass Filter, Low Shelving, Peak, High Shelving and Low-Pass Filter.

Selected Band On/Off

Switches the selected EQ band on or off. By default the five bands are switched off in order to economize DSP power, so don't forget to switch an EQ band on before you can hear what it is doing.

Gain Control

-24 dB to +24 dB, boost and cut.

Frequency Control

The range for each band is depending on the sampling rate of the project:

- For sampling rates up to 48 kHz the frequency range of each band is 20 Hz to 20 kHz.
- For sampling rates up to 96 kHz the frequency range of each band is 20 Hz to 40 kHz.
- For sampling rates up to 384 kHz (e.g. DSD mixing) the frequency range of each band is 20 Hz to 80 kHz.

Q (bandwidth) Control

The range for the Q parameter is 0.2 up to 100. A Q of 0.2 results in a very wide bandwidth, a Q of 100 will give an extremely narrow notch.

Output Section



Show/ Hide Output section

Output section on/off

Output Level control

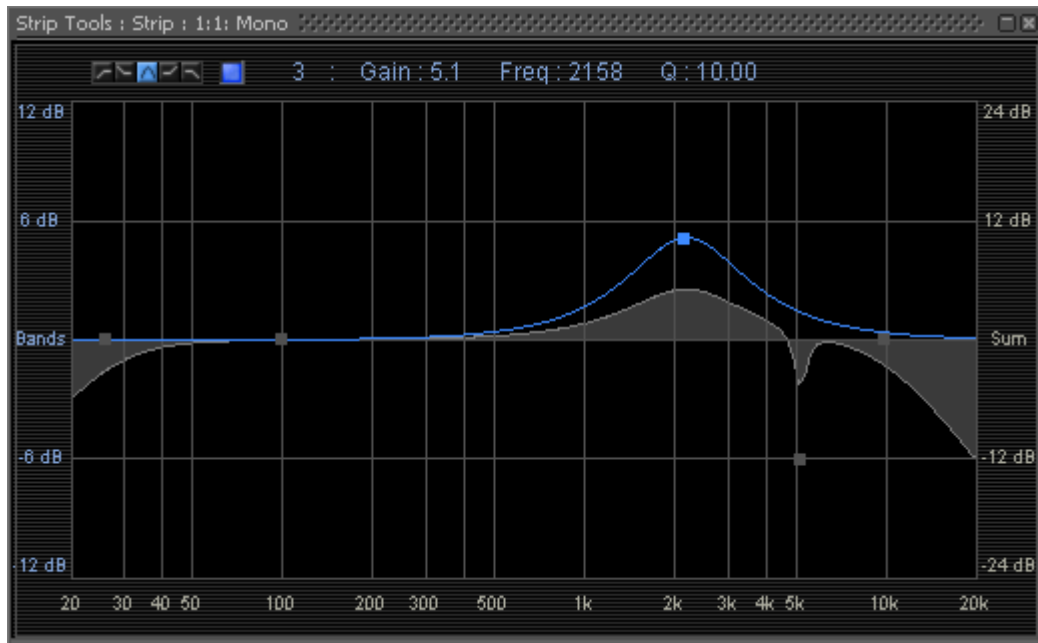
Adjusts the output level over a range of -48 dB to +48 dB.

Automatic Gain Make Up switch

When lit, Output gain is automatically adapted according to the settings in the **Dynamics Section**. In this case the **Output Level Control** will be grayed out and inaccessible.

The Big Graph Window

The big graph window opens when you double-click the small graph window inside the **EQ Section**. The current settings of the selected EQ band are displayed as a blue line and the resulting overall EQ curve is displayed as a gray shaded area. Frequency and Gain parameters of each of the five bands can be altered by clicking on a band's handle and dragging with the mouse. Handles of bands which are not selected are displayed as small gray squares. Grabbing and drag a handle selects the band.



Big Graph floating Window

The frequency response display uses two separate gain scales. The left hand, blue scale shows the scale used for individual bands. The right hand, gray scale shows the scale for the overall EQ curve. Both scales automatically adapt their range according to the settings of the curves they apply to. The range of the left and the right scale may be different. The ranges for the individual bands can be either +/- 6 dB, +/- 12 dB or +/- 24 dB, but the scale for the overall curve may go up to +/- 72 dB.

The upper area of the **Big Graph Window** provides an **On/Off** switch and buttons to select and indicate the characteristic (High-Pass, Low Shelf, Peak, High Shelf or Low-Pass) for the selected EQ band together with numeric displays of Gain, Frequency and Bandwidth.

Frequency and Bandwidth setting.

Shortcuts

- Double click on a handle to reset the gain of this band to unity.
- The **Tab** key switches between EQ bands.
- Clicking and dragging a handle with the right mouse button alters the Q (bandwidth) of this band.
- Hold the **Ctrl** key while dragging with the left mouse button to lock the gain parameter and only change the frequency.
- Hold the **Shift** key while dragging with the left mouse button to lock the frequency parameter and only change the gain.

Bus Tools

Bus Tools are very similar to **Strip Tools** but are specifically designed to be inserted into busses rather than channels. **Bus Tools** combine the most frequently used 'mastering' processing blocks you find on the output busses of a mixing console in a single plug-in, including an advanced limiter. Like Strip Tools multiple instances of the Bus Tools plug-in are displayed in one large window. The number of instances displayed is user selectable.

IMPORTANT! Pre-Anticipation (PA) and Delay Compensation (DC)

Delay compensation adds a delay determined by the Pre-Anticipation delay setting to all channels passing through a Bus Tools plug-in NOT selected for processing.

If two or more Bus Tools are inserted in a Bus with PA & DC on, the delay times of each Bus Tools will add together for all channels:

Sections

The **Input**, **EQ**, and **Output** sections are almost identical to the ones found in **Strip Tools**. Please see the relevant paragraphs in the **Strip Tools** section for a full description. Where there are differences, these will be dealt with here. **Shortcuts**, **Linking** and **Automation** functions are the same as **Strip Tools**.

From top to bottom, the Bus Tools plug-in contains the following sections:



Input Level

This section contains the input level control and shows the name of the mixer strip this instance of the plug-in is assigned to.

Limiter

This section contains the limiter, which either acts as a standard limiter, but it can also work in conjunction with Limiter DRC section below.

Limiter DRC

This section adds a Dynamic Release Compensation (DRC) to the Limiter section. This enables very musical control of the release time of the limiter.

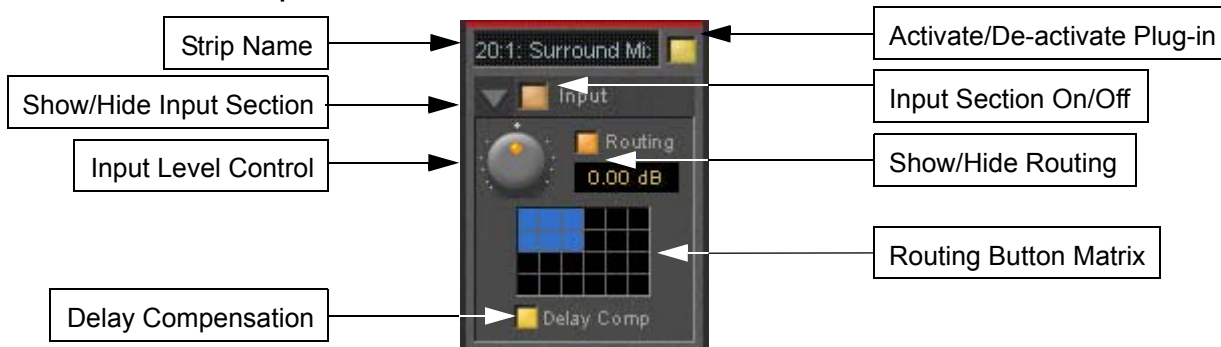
Equalizer

This is a five band fully parametric equalizer. Each band can be switched to high or low pass, shelving or peaking characteristics.

Output

This section controls the output level of the Bus Tool and also offers automatic gain make up for the Limiter.

Main and Input Level Section



Strip Name

Activate/Deactivate Plug-in

Show/Hide input Section

Input Section On/Off

Input level control

Adjusts the input level over a range of -48 dB to +48 dB.

Show/Hide Routing

By default Routing buttons are hidden. This button toggles between Showing and Hiding the Routing Buttons. Routing remains active when hidden.

Routing Button Matrix

The buttons determine which audio channels running through the Bus will be processed by the plug-in. The number of buttons shown depends on the number of channels controlled by the Bus. In the case of a multiple surround Bus this may be up to 64. A single instance of Bus Tools can process up to 8 channels selected from this matrix.

A 5.1 surround bus will have six buttons. The order of the channels selected by the buttons is (from left to right): Left, Center, Right, Left Surround, Right Surround, Subwoofer.

This enables, for example, the Left, Center and Right channels of a surround Bus to be independently processed from the surround channels by adding two Bus Tools plug-ins to the Bus and selecting L, C, R in the first and LS and RS in the second.

Using Bus Tools on multiple surround busses

Although a single instance of Bus Tools can process 8 channels it is simple to use multiple instances to process many more with linked parameters. E.g. with four surround Busses you could use 3 instances. Assign the L & R channels of each Bus to Bus Tools A, the Centers of each bus to Bus Tools B and the Surround Ls and Rs of each Bus to Bus Tools C. The 3 Bus Tools can then be linked as you wish by right-clicking and creating control groups in the yellow matrix. If Delay Compensation (see below) is activated all channels will remain time-aligned, even when using Pre-Anticipation.

Delay Compensation

Delay Compensation

When the DRC section is active, the plug-in introduces a small delay to the audio signal. Since some signals of a bus may not be selected for processing using the routing buttons, these signals would not be delayed, and there would be a time misalignment at the output of the bus. When Delay Compensation is on, the same delay is applied to all signals whether selected for processing or not. This results in correct time alignment for all the signals of a bus.

Limiter section

This is a straightforward 'brick-wall' limiter with simple Threshold and Release parameters. However, the DRC (Dynamic Release Compensation) feature described in the next section can be activated to allow very musical control of the release time.

A brickwall limiter is a limiter which guarantees that the output level will never exceed the threshold level. On a normal limiter, a high level signal with very fast attack might cause an output higher than the threshold level, with a brickwall limiter this will not happen.



Show/Hide Limiter section

Limiter section on/off

Gain reduction display

The bar graph shows the gain reduction generated by the **Limiter Section**. The range of the display can be switched between 6 or 12 dB by clicking on the bar graph. Scale markings in 1dB increments on the right-hand side of the bar graph make it easy to see if the range is 6 or 12 dB.

Threshold control

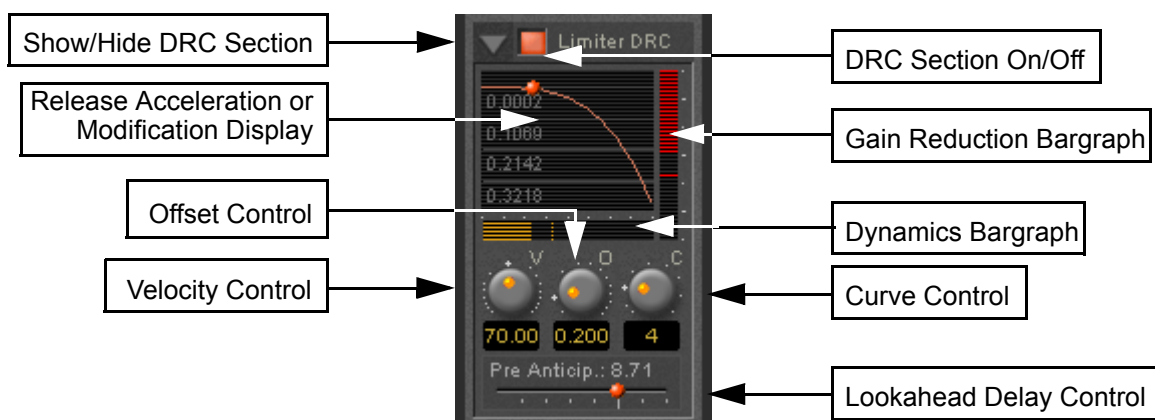
If the input signal level rises above the threshold level, the gain of the limiter is reduced. This limiter guarantees that at no time will the level of the output signal exceed the threshold.

Release control

This parameter controls the amount of time the limiter takes to release. I.e remove the gain reduction) when the input level was above the threshold level and starts fall. During the hold time the gain of the compressor remains constant. The lower the release time, the faster the reaction.

Limiter DRC Section

DRC stands for **D**ynamic **R**elease **C**ompensation. In short, this means the release time of the limiter is altered depending on the dynamic nature of the signal routed through the processor.



Show/Hide DRC section

DRC section on/off

Release Acceleration or Modification Display

Shows a curve which illustrates the relationship between the change in dynamics of the input signal and the variation of the release time. The curve can be adapted between linear and power function characteristics (see also the description of the **Curve Control** parameter). During playback the display will also show a small red ball moving along the curve. This shows the range the algorithm is working in.

Gain reduction bargraph

Displays the gain reduction of the limiter while the DRC circuit is active. The scale is fixed at 6 dB.

Dynamics bargraph

Displays the dynamics of the input signal, which is the basis for the DRC algorithm.

Velocity control

Determines the speed of the DRC algorithm. The lower the value, the faster the algorithm reacts to changes of the dynamics of the signal and the more it reacts to dynamics the more the release time will remain constant.

Offset control

This parameter basically sets the minimum release time. In this sense the release control of the limiter defines the maximum release time, so the release time determined by the DRC algorithm will vary between these two times.

Curve control

This parameter controls the characteristics of the relationship between the dynamics of the signal and the resulting release time

Pre-Anticipation (Lookahead delay) control

This parameter changes the integration time for RMS detection and thus changes the effect of the DRC circuit.

The delay setting here also determines the delay that will be applied to signals passing through the plug-in NOT not be selected for processing when Delay Compensation is switched ON

Note: Please note that this parameter delays the all signals running through the **Bus Tools** plug-in, so phase or other timing errors may occur when the plug-in is used in places other than the mix bus.

EQ and Output Sections

These are identical to the Strip Tools versions.

It is worth noting that, since the Limiter is in this case a brickwall design, the Automatic Gain Make-up function compensates for the same amount as the value set by the **Threshold Control** of the **Limiter**. The resulting signal will be close to, but never exceed 0dBfs. If **Gain Make-up** is **Off** the **Output Level Control** will act as a 'ceiling' control, setting the absolute level of the resulting output signal.

Delay Compensation / Pre-Anticipation

Example

5.1 Surround Mix Bus using two Bus Tools						
Channel	BUS 1	BUS 2	BUS 3	BUS 4	BUS 5	BUS 6
Routing	L	C	R	SL	SR	SW
Instance 1	IN	OUT	IN	OUT	OUT	OUT
Delay	8,71 (PA)	8.71 (DC)	8,71 (PA)	8.71 (DC)	8.71 (DC)	8.71 (DC)
Instance 2	OUT	OUT	OUT	IN	IN	OUT
Delay	5.8 (DC)	5.8 (DC)	5.8 (DC)	5.8 (PA)	5.8 (PA)	5.8 (DC)
Total Delay	14.51 ms	14.51 ms	14.51 ms	14.51 ms	14.51 ms	14.51 ms

In this table Bus Tools Instance 1 is IN circuit for the Left and Right channels of the mix and Bus Tools Instance 2 is IN circuit for the Left Surround and Right Surround channels. For the Center and Sub-Woofer Channels both Bus Tools are OUT of circuit. BUT Pre-Anticipation and Delay Compensation is switched ON for the channels selected for processing. To ensure proper time alignment all channels are automatically delayed by the same total amount. (the 8.71 and 5.8 figures are arbitrary)

If all channels are selected for processing (in circuit) with linked Pre-Anticipation then there is no need to activate Delay Compensation.

12

Automation



Pyramix 5.0

DIGITAL AUDIO WORKSTATION

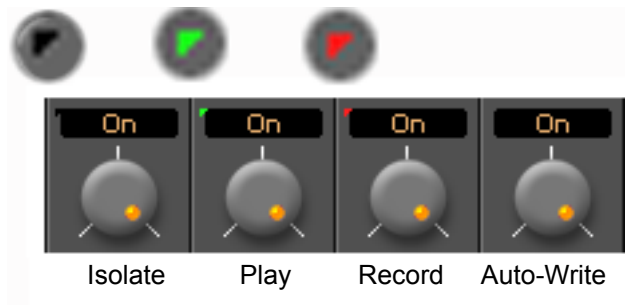


Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Pyramix Virtual Studio is equipped with an extremely powerful automation system, including both dynamic and snapshot automation of levels, pans, effects, etc.

Automation Modes

Every control in the mixer can be set to one of four dynamic automation modes. The automation mode can be set for individual controls, for channel strips, for busses, for groups of controls or for the whole mixer. The current mode is shown by the absence, presence and color of small indicators.



Dynamic automation mode indicators

Isolate

Black triangle indicator.

The control(s) are isolated from any automation moves already recorded. Controls can be moved without affecting existing automation data.

Play

Green triangle indicator.

The control(s) follow the last automation data recorded for them or maintain their default position where no previously recorded automation data exists.

Record

Red triangle indicator.

With the transport in Play, and the **Master Automation Controls** in **Write** mode, the current state of all controls in **Record** mode is recorded as automation data.

Auto-Write

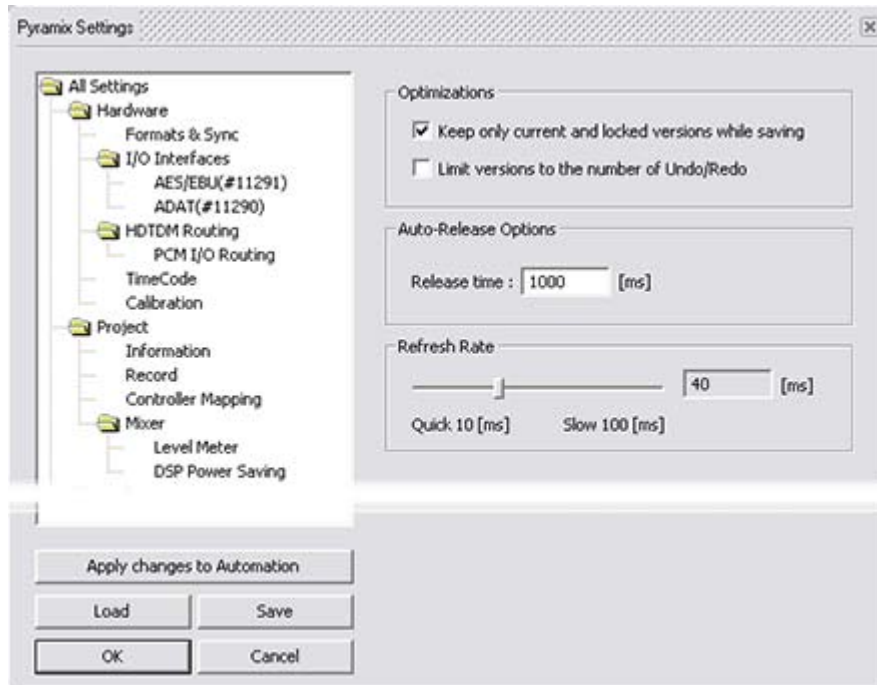
No indicator.

(This is the default for all controls)

With the transport in Play, and the **Master Automation Controls** in **Play** or **Write** modes, the control(s) play back previously recorded automation data. When a control is moved new automation data is written until the control is released. Behavior when the control is released, or the transport stopped, is governed by the choices made in the **Automation** menu and in **Automation > Automation Settings**.

Automation Settings

Select **All Settings > Application > Automation**. (**Automation > Automation Settings** also takes you to the **Automation** page).



Automation Settings page

Optimizations

Offers a choice of options to enhance system performance when using automation.

Keep only current version while saving when checked, the system only saves the current version of all automation tracks. This loses the saved automation versions history, but dramatically shortens the save time for projects with automation.

Limit versions to the number of Undo/Redo when checked the system only keeps a limited number of versions in memory (the same as the number of **Undo/Redos** as defined in the **Settings > All Settings > General** Page). This reduces the number of automation versions kept in the history but enhances performance.

Auto-Release Options

Refresh Rate If **Auto Release** is enabled any control will, when released or when the transport is stopped, return to its value or state in the previous automation pass or the default where no previous pass exists. This occurs either immediately if the control only has two states (e.g. a button) or over a period of time if the control is a fader or knob. The time period is determined by the value entered in the **Release Time** box in ms.

The **Refresh Rate** setting determines the rate at which the automation data is recorded. By default the refresh rate is the same as the actual time code frame rate, e.g. 40 ms at a frame rate of 25 fps.

The possible range of the refresh rate is 10 to 100 milliseconds. Please note that your setting is rounded to entire frames, so that the effective refresh rate will be either one, two or three times the actual frame rate.

One reason to choose a slower setting for the refresh rate would be to save the processing power required to calculate the automation movements in case of complex mixes.

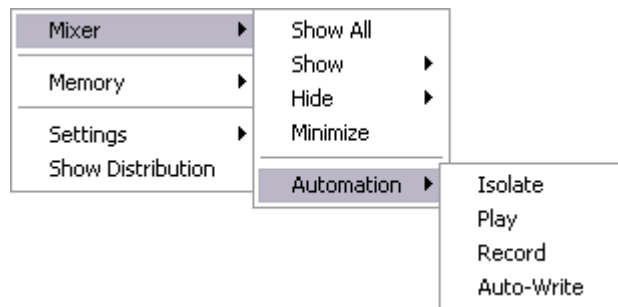
Automation Menu options

Please see: Automation on page 385

Selecting Automation Modes

Entire Mixer

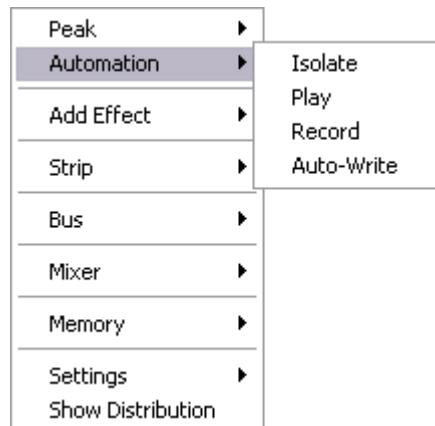
The entire mixer can be set to the same mode by right-clicking in a blank area of mixer panel (E.g. under the bus strips) and selecting the desired mode from the popup menu. **Mixer > Automation > Isolate**



Mixer context menu Mixer Automation sub-menu

Block, Strip, Bus or Entire Mixer

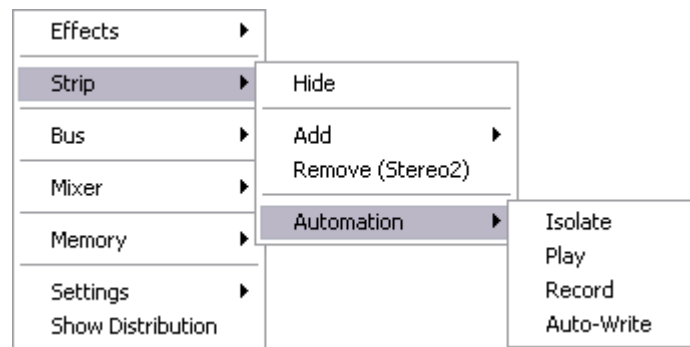
Right-clicking in a mixer channel strip function-block, e.g. as shown here in the fader area, pops up a contextual menu. Selecting **Automation** opens a sub-menu offering a choice of the four automation modes:



Automation sub-menu

This contextual menu also enables the automation mode for the whole strip, one or more busses or the entire mixer to be set by choosing **Strip**, **Bus** or **Mixer**.

Selecting one of these opens a sub-menu. The last choice in each case is **Automation**. selecting this opens a further sub-menu offering a choice of the four automation modes:



Strip Automation sub-menu

Master Automation Controls

The **Master Automation Controls** are in a dockable Tool Palette, by default located at the bottom right side of the main **Pyramix** window. There are **Off**, **Play** and **Write** buttons plus two buttons with camera icons which deal with **Snapshot** automation:.



Master Automation Controls dockable toolbar

When the **Off** button is pressed, no existing automation data is played back and no new data is recorded when controls are moved.

When the **Play** button is pressed it 'lights' green. Controls set to **Play**, or **Auto-Write**, play back existing automation data, otherwise they maintain their default values. Controls set to **Isolate** or **Record** maintain their current values and no new data is recorded.

When the **Record** button is pressed it 'lights' red. Controls set to **Record** record their current values. Controls set to **Auto-Write** only record when they are moved. Controls set to **Play** playback existing automation data (if any). Controls set to **Isolate** maintain their current values.




The **Snapshot** button inserts an automation event (key frame) which records the state of all enabled controls at the current cursor position.



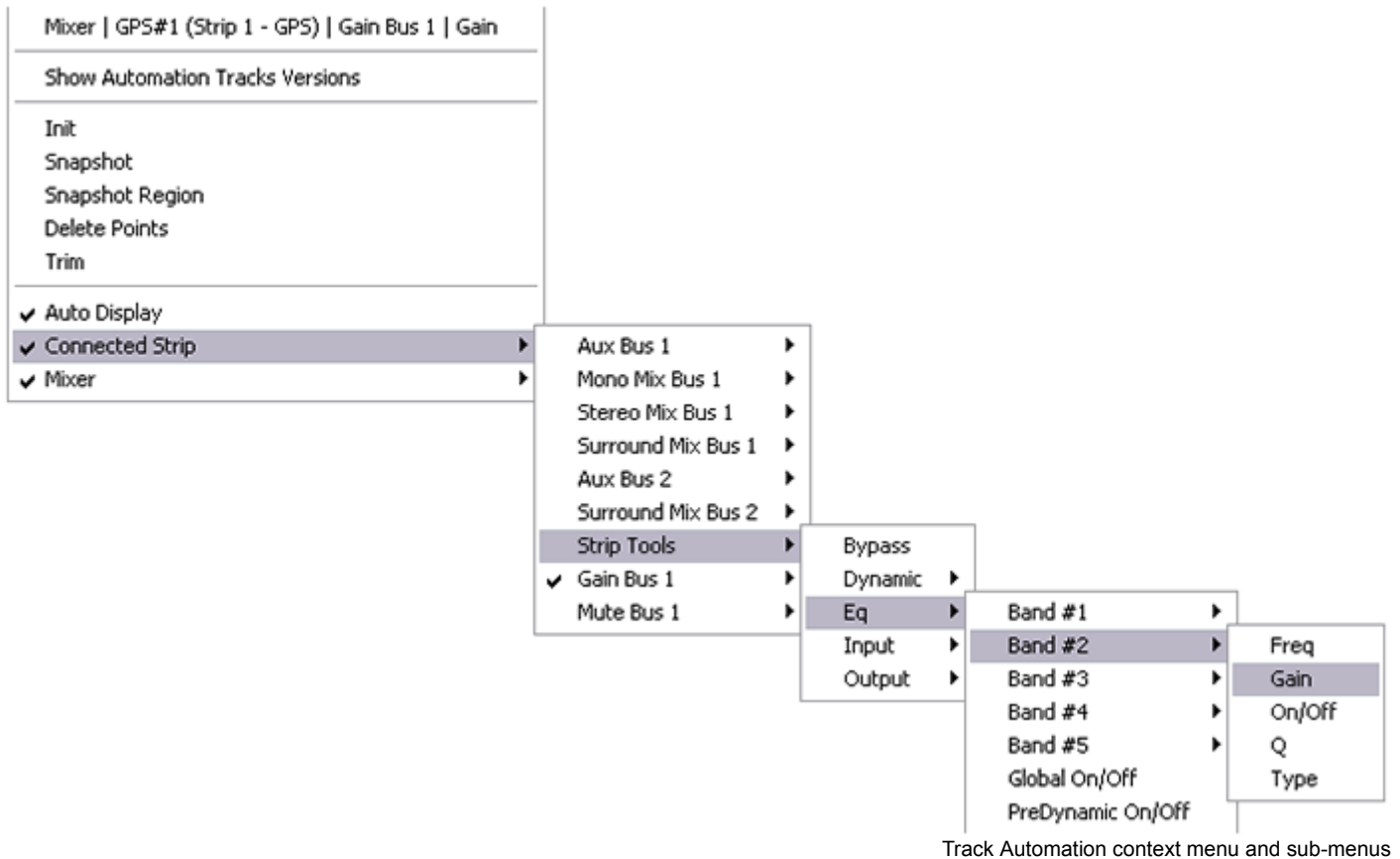
The **Snapshot Range** button inserts automation snapshot key frames of all enabled controls at the **Mark In** and **Mark Out** cursor positions. In effect this sets all enabled controls to the current state throughout the range defined by the marks.

Display and Editing of Automation Data

The automation data recorded for any control can be viewed and edited on any track in the Timeline.

Clicking the  **Show/Hide Automation** button in the Track Header displays or hides automation data as a black line when being replayed and a red line when being written.

Right-clicking the **Show/Hide Automation** button pops up the automation menu for the track.



Track Automation context menu and sub-menus

'Mixer'

Init

The current parameter displayed is shown at the top of the menu

Creates an initial automation track for mouse editing. The initial version is created with the current state of the mixing console control.

Snapshot

Creates a snapshot of the currently displayed control curve.

Snapshot Region

Creates a snapshot of the control curve in the current region.

Delete Points

Deletes all automation points from the control curve in the current region.

Trim

See below

Auto Display

Connected Strip

Enables automation data for any control on the mixer strip to be selected for display via sub-menus. In this illustration the gain of band 2 Eq of the Strip Tools plug-in will be displayed.

Mixer

Functions in the same manner as Connected Strip but enables display of automation data for ANY control on the current mixer. Auto Display should normally be left unchecked when using this option.

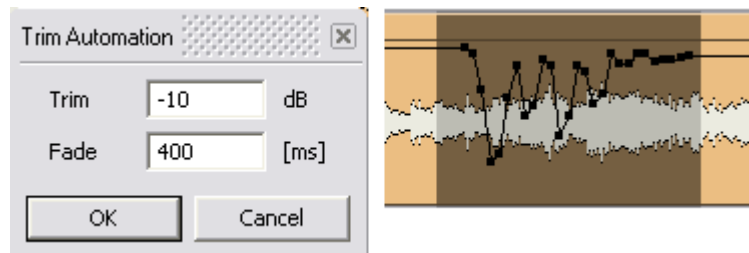
Auto Display

When Auto Display is checked the automation data displayed will be from the last control connected to the track which has changed state.

Note that, if **Auto Display** is used when a control has been selected for display using **Mixer** then if a control on the strip connected to the track is moved display of the control selected using **Mixer** will be lost. The automation data is retained. For this reason **Auto Display** should normally be off when any control not on the connected strip is displayed.

Trim

When automation **Trim** is invoked a dialogue box opens which enables the automation points values in the currently selected range to be trimmed:



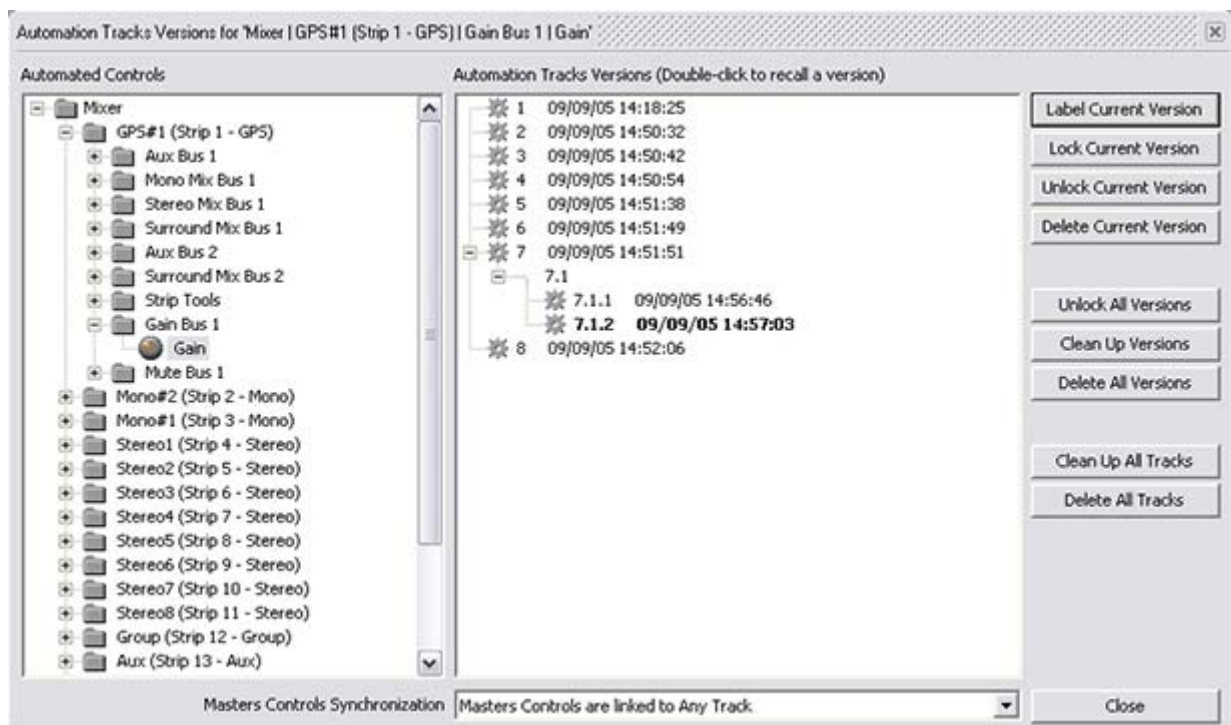
Trim Automation dialog

Values can be increase by simply typing the number of dB required or decreased by typing - before the number in the **Trim** box. The **Fade** box allows a value in ms to be entered. This defines the length of fade which is automatically applied at the beginning and end of the selected range from and to the original values.

Note: dB applies to level changes. If the automation curve is displaying frequency, values will be in Hz and so on.

Show Automation Track Versions

Opens the **Automation Tracks Versions** window



Automation Tracks Window

Automated Controls

The **Automated Controls** pane displays all the automatable controls in a tree structure. The last control written is automatically selected. The **Automation Tracks Versions** pane shows all the automation passes for the selected control in a tree structure. Double-clicking a version makes it current. If a previous version is made current and a further automation path written, a sub-branch results. In the example above seven

passes were made then version 7 was recalled by double clicking it. Two further passes were made labelled 7.1.1 and 7.1.2 The times when the passes were written reflects this.

Label Current Version	creates a copy of the current version for the selected control or branch of controls, gives it a name that will be displayed in the version Tree and locks it/ them. This makes it easy to recall a given and easily identifiable version of the automation for the whole mixing console. A warning dialogue is shown if the item selected is anything other than Mixer .
Lock Current Version	Unlock Current Version
Delete Current Version	Deletes the selected version. Subsequent passes are re-numbered as necessary.

Unlock All Versions

Clean Up Versions Deletes all versions except the most recent.

Delete All Versions Deletes all the automation passes for the selected control.

Clean Up All Tracks Deletes all versions except the current one for all tracks.

Delete All Tracks Deletes all automation information for all tracks.

Locked Versions

Locked versions will be preserved when:

- Clicking on the Clean Up Versions button
- Clicking on the Clean Up All Tracks button
- Saving with the “Keep only current and locked versions while saving” option in the Automation Settings
- The “Limit versions to the number of Undo/Redo” option is enabled in the Automation Settings

Locked versions will NOT be preserved when:

- Clicking on the Delete Current Version button
- Clicking on the Delete All Versions button
- Clicking on the Delete All Tracks button

Masters Controls Synchronization

The combo box allows selection of which Track(s) or Track Groups will affect all Master controls of the Mixing console when editing in Auto-Ripple mode. Like **Markers** or **CD/SACD Markers**, all Masters controls can be either:

- Independent (No action on any track will affect them)
- Linked to Any Track (Any editing action requiring synchronization will affect the Masters controls)
- Linked to Any Track without a Group
- Link to Track Group A, B, C, etc...

View Several Parameters

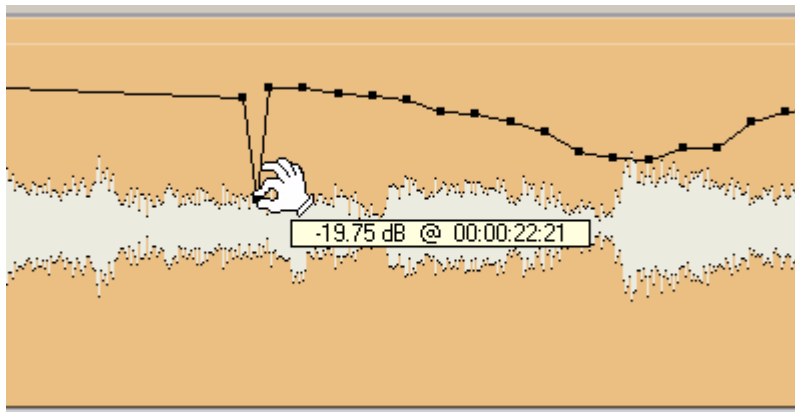
To view more than one automation parameter for a track, create **Virtual tracks** for each parameter you wish to view. **Please see Virtual Tracks on page 14**

Undo/Redo

The menu item **Edit > Undo/Redo** also reacts to Automation actions providing a shortcut to the **Automation Tracks** Window.

Editing Automation data

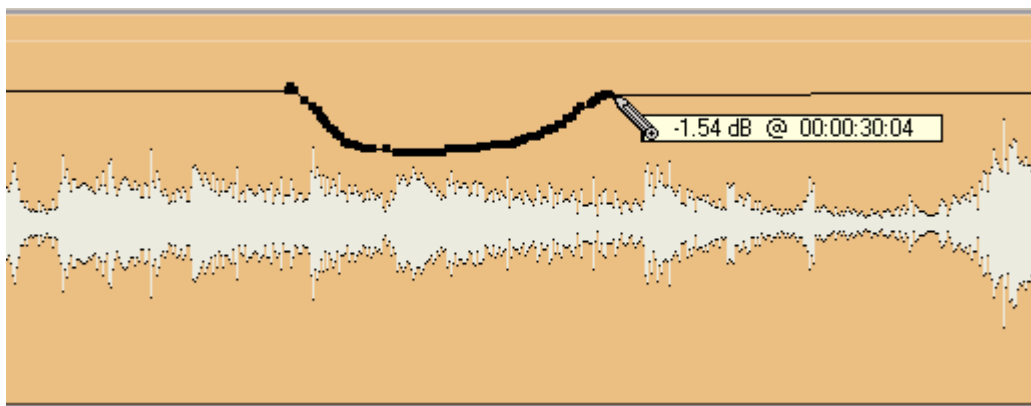
Automation data can be edited directly with the mouse. When the mouse is over the of automation curve, the cursor changes into a hand. When the mouse is over a node of the automation curve, the value and timestamp of the point is displayed.



Dragging an automation node

The value can be adjusted by clicking on the node and dragging. If you click anywhere on the automation curve, a new node will be inserted.

If you hold the **Alt** key while dragging on the automation curve, the mouse pointer will turn into a pencil. The curve can then be drawn freehand.



Drawing an automation curve

Holding the **Ctrl** key allows all points in the selected region to be dragged together. E.g. to offset a section.

If **Ctrl + Alt** are held clicking on a point erases it.

All the above are applied to all Clips in a vertical selection regardless of which clip's envelope nodes are clicked on unless the **Shift** key is held down. Then the changes will only be applied to the curve of the clip clicked on.

If **Ctrl** is held down when selecting a region, the Pyramix extends the selection backwards and forwards to the nearest pre-existing automation nodes.

Automation in editing and libraries

You can use the Automation menu Cut/Copy/Paste functions to copy data (even between projects). Just select a region and select **Automation > Copy Selected Points**, then choose which list(s) to copy, then go into another project (or the same) and select **Automation > Paste Points to Cursor** or **Paste Points to Original TC**.

If you enable the menu item **Edit > Enable Automation Cut/Copy/Paste** then any editing operation on clips also applies to all associated automation data (cut/copy/paste, Auto-Ripple, etc...)

If you drag a clip(s) to a library, all automation over that clip(s) is copied/pasted as well.

Auto-Write And Release Modes

Auto-Write and Release Modes are set Globally with **Automation > Auto-Write Mode** and **Automation > Release Mode**, Every control touched or released will follow these modes. Keyboard modifiers alter this behavior.

When Touching a Specific Control:

Ctrl :	Forces the Write & Release Mode
Ctrl + Alt :	Forces the Write & Hold Mode
Ctrl + Shift :	Forces the Update & Release Mode
Ctrl + Shift + Alt :	Forces the Update & Hold Mode

More generally, **Alt** forces the **Hold Mode** for the current **Write** or **Update** Mode

When Releasing a Control:

Ctrl :	Forces the Snap Mode
Shift :	Forces the Auto-Release Mode
Control + Shift :	Forces the Write to Next Mode

When added to these combinations, **Alt** forces the **Hold Mode** for the current **Write** or **Update** Mode

External Remote Controllers such as the Merging **OASIS** or others will provide different modifiers to alter the Global Auto-Write and Release Modes depending on the specific hardware availability (dedicated buttons, existing button combinations, special movements, etc...)

Mixer and Plug-in Snapshots

Note: Mixer Snapshots as described here use the dynamic automation mechanism.

Mixer Snapshots

Snapshots of the entire state of the mixer surface may be easily and quickly saved and recalled.

Saving Mixer Snapshots

To save a Mixer snapshot hold down **Alt** and **Shift** then **Click** anywhere on the **Mixer** surface and drag to a user library. A new item of the type **Mixer Snapshot** will appear in the library. The snapshot is named **Mixer Snapshot** by default. To accept this name just hit **Enter**. Otherwise, type a suitable name then hit **Return**.

Recalling Mixer Snapshots

To recall a mixer snapshot simply click on it in the library, drag it over the mixer surface and release. All parameters will be reset to the values stored in the snapshot.

Note: A Mixer Snapshot includes all Plug-in Parameters.

Effects Snapshots

Effect Settings can be easily stored and recalled by dragging them to/from libraries.

Creating Effects Snapshots

Hold **Alt + Shift**, then click and drag from a **Plug-in** window to the library where you want to store the settings, then release. A new item, of the type **Mixer Snapshot**, is stored in the library. The snapshot is given the name of the plug-in by default. The new item is automatically highlighted so, if you wish to change the default name, simply type the new name and hit **Enter** to confirm. The name of the snapshot can be subsequently changed by clicking on the name in the library, then entering the new name.

13

Project Processes



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Dither

Whenever changes are made to digital audio signals such as mixing, altering gain, eq or reverb, the result is usually an increase in the number of bits. These extra bits have to be removed to suit the requirements of delivery and interconnect standards. If the bit depth is reduced by simply ignoring the extra bits (truncation) or even rounding the least significant bit up or down, the resulting error can give rise to audible distortion of low signal levels. Obviously, there is also a permanent loss of resolution. These effects are cumulative. I.e. If the signal is repeatedly processed and bit reduced to shorter word lengths, there will be a significant and audible loss of accuracy in subtle, low level sounds. Human hearing makes use of this low level information in imaging and unless something is done to avoid the problem, space and clarity will be adversely affected.

In Pyramix all processing takes place in 32 bit floating point so, if signals are kept within this environment, there is no need for bit depth reduction until the final stage before output. Truncation or rounding are undesirable but a single 'dithering' stage can reduce bit depth whilst maintaining low level linearity. This is achieved by adding a controlled amount of low level noise to the signal. Since there is no such thing as a free lunch, the trade off is a slightly increased level of noise. However, the noise can be 'shaped' to reduce its perceived audibility.

See also: Dithering Options on page 147

It is important dithering is only applied once.

Mixing Down Projects

Exporting a Composition to a File

Once you have finished editing your **Composition**, the complete **Composition** or any selected area can be exported to an audio file (or files). This is really the same as mixing down the **Composition** to a file instead of to an audio output.

1. Choose **Project > Mix Down** to open the **Mix Down** dialog box.
2. In the **Target Settings** section, type in an appropriate file name under **Record Name**; choose the folder to which the file will be saved from the **Media Folder** combo box (only previously mounted folders will be available as options); choose the bit depth /word length from the **Resolution** combo box; leave the **One file per track box** unchecked to make a single multi-track audio file, or click it to generate separate audio files for each Track and choose the appropriate export file type from the **Format** pop-up list. The **Suffix with Bus Name** option will create files named like:

Terminator_Final-M&E-Stem1-L.wav

Terminator_Final-M&E-Stem1-C.wav

Terminator_Final-M&E-Stem1-R.wav

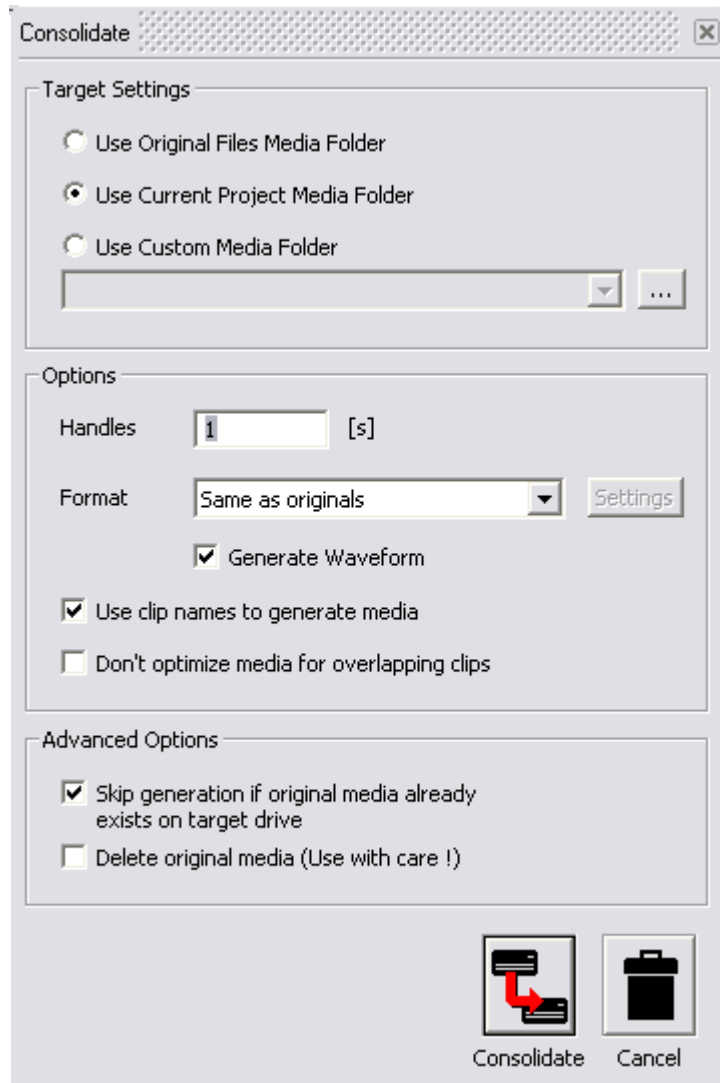
Note: These settings are completely independent of the settings for **Recording** and **Render**.

3. In the **Record** section, choose to export the **Whole composition**, or the area between the **In** and **Out** Markers with **Between Marks** or a previously made **Region with Selection** by clicking the appropriate radio button.
4. Choose the appropriate output bus as the source for the exported file. All output busses configured in your **Mixer** will be available in the **Mix Source** list box.
5. Click the **Mix Down** button to begin the process.

Archiving Projects

Menu: **Project > Archive** This function copies the project and all used media to a single location. Optionally all media can be **Consolidated**, and referenced libraries can be archived as well.

Consolidating Projects



Consolidate dialog

Consolidating a Composition is a method of reducing the storage space used by Media files and of bringing all elements of the Composition together to move it to another machine or storage medium. The Consolidate function makes a selective backup of the media used in the Composition. Instead of backing up the whole of every media file referenced by the clips in a composition, Consolidate backs up only those parts of the media files that are referenced by the clip segments.

Target Settings

The Radio Buttons offer a choice of locations for the consolidated Composition.

Use Original Files Media Folder

The Consolidated Composition will be saved in the same location as the original files

Use Current Project Media Folder

The Consolidated Composition will be saved in the same location as the current Project Media

Use Custom Media Folder

The Consolidated Composition will be saved in a user selected location.

Options

Handles

To allow for limited further editing of the Consolidated Composition, changing fade durations etc. extra material (if it exists), can be retained at each end of every clip, beyond that which is defined by the Composition EDL. Enter a value in seconds.

Format

This drop down list enables the Consolidated Composition to be saved in the same format as the original or to be converted to any supported format.

Generate Waveform

When checked, waveform files will be generated and saved with the Consolidated Composition

Use clip names to generate media

When checked, the original clip names are used for the newly generated media

Don't optimize media for overlapping clips

Advanced Options

Skip generation if original media already exists on target drive

When checked new media will not be written where a version already exists on the target drive.

Delete original media (Use with care!)

When checked the original media files referenced by the consolidation are deleted after the consolidation is complete. **N.B. Destructive!**

Converting Projects

Changing Project Length / Pitch

Processes whole Projects. Offers Time Compression or Pitch Reduction of 4% (24fps to 25fps) or Time Expansion or Pitch Rise of 4.17% (25fps to 24fps)

Given an Origin Reference and a Ratio all clips of the project are stretched/squeezed and moved accordingly to the stretch ratio and origin reference. Optionally all media can be consolidated to process only the part of audio required by the clips. This function is available through the menu Project / Stretch and requires the Prosoniq MPEX2 authorization key to be entered.

Reconforming a Project

Processes entire project. To be used where the existing project was created by Autoconforming material to a CMX EDL.

Surround Post-Processing Projects

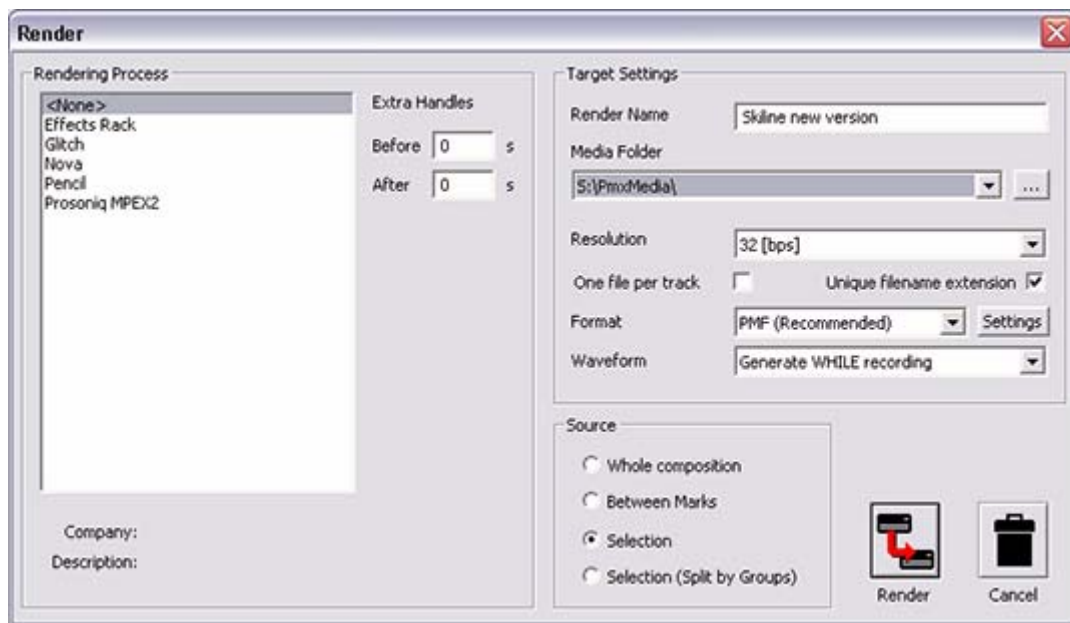
The Surround Source Stem can be selected from a list of available stems from all Surround busses.

Available processing plug-ins are:

- Multiple File Export
- Minnetonka AC3 (Dolby Digital) Encoder (to be purchased separately)
- MPEX3 Cinema 24fps to 25fps or 25fps to 24fps Multi-channel Time Stretcher by Prosoniq (optional)

Rendering Projects

The Render function available in menu **Project > Render** offers a choice of Rendering plug-Ins.



Render dialog

Rendering Process

Lists the currently authorized Rendering Processes and is where you select the one required.

Extra Handles

The before and after boxes allow a time value to be entered for extra material (where available) to be included in the material used for analysis by the process (where applicable).

Note: Handles added in the Render menu are not meant to be processed. They're only used to give some extra material to processes that need analyzing before or after the given portion of data.

Handles will **NEVER** be processed by any Render plug-ins.

Target Settings

Affect the Output File.

Render Name	A text entry box where any legal filename may be entered.
Media Folder	The drop-down list allows mounted Drives/folders to be selected as the destination for the output file. The adjacent ... button opens a browser window if more options or a new folder are required.
Resolution	A drop down list with all valid choices of bit-depth for the output file(s)
One file per track	When checked, multi-track sources will be rendered as separate files.
Unique filename extension	When checked, ensures the output files have unique extensions.
Format	The drop-down list allows a choice of output formats.
Settings	If options are available for the chosen format, this button accesses them. If no options are available the button is grayed out.
Waveform	The drop-down list offers Waveform generation options. None , Generate AFTER recording or Generate WHILE recording .

Note: These settings are completely independent of the settings for **Recording** and **Mix-down**.

Source

Offers a mutually exclusive choice of sources between **Whole composition**, **Between Marks**, **Selection** or **Selection (Split by Groups)**

Selection (Split by Groups) splits the rendering process into multiple renders for each selected Clip Group in the timeline. In this case the **Render Name** text edit box is ignored and all renders take the name of the first clip in time of each group.

Process Plug-ins

Effects Rack

Enables chains of up to eight VST and or Direct X plug-ins to be used as rendered processes.

Glitch

Finds Glitches and Pops.

Levelizer

Optional loudness analysis and correction plug-in.

Nova

An optional renovation suite plug-in by Algorithmix.

Pencil

For retouching waveforms.

Prosoniq MPEX3

An optional Multi-channel Time Stretch / Pitch Scaling with Formant plug-in.

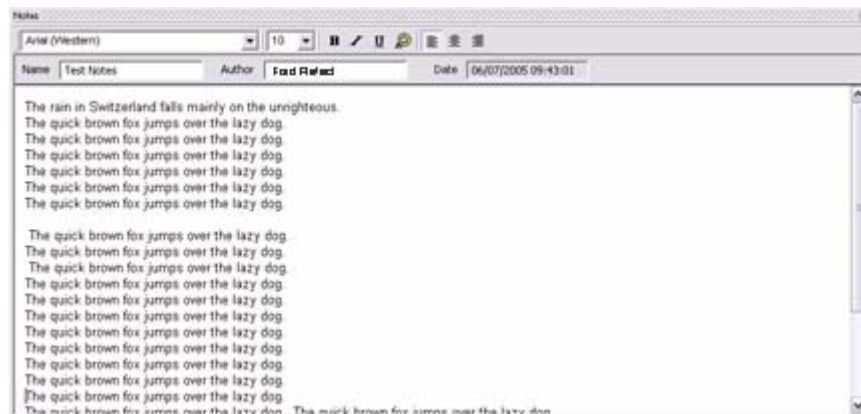
Cleaning Up Project media

Deletes all Media files in the selected folder which is not used in, or referenced by the current Project.

N.B. This operation is NOT reversible. There is no **UNDO**!

Project Notes

Click on the **Notes** tab to add text notes to a project. Type or cut and paste text into the editor. Drop down list boxes give a choice of font and size. Text can be emboldened, italicized, underlined and colored. Justification can be left, centre or right.



Notes Editor

Notes entered here are saved with the project. The notes can be reviewed, edited and copied into other applications by highlighting the text and copying with **Ctrl + C**.

14

CD/SACD Mastering



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Mastering a Composition to CD-R

Pyramix is used to set CD Track **Start**, **Stop**, and **Index** Markers for CD-R Mastering, and a separate application called **DiscWrite** is provided to actually burn a CD-R or make a DDP.

One of the advantages to this way of working is that multiple 'virtual discs' can exist. This makes it simple to produce several different versions using the same material.

CD Markers

CD Markers are much like other User Flags or Markers.

To set a **CD Start Marker** (which indicates the beginning of a CD track), place the Play Head at an appropriate CD track Start location and choose **Cursors & Marks > Add CD Start Marker to Cursor**; similarly, to set the **CD Stop Marker** (which indicates the ending of a CD track), place the Play Head at the appropriate CD track End location and choose **Cursors & Marks > Add CD Stop Marker to Cursor**. A named **CD Index Marker** can also be added using **Cursors & Marks > Add CD Index Marker to Cursor**. These CD Markers can be examined, named and changed in the **CD/SACD** Tab window.

Add CD Markers Automatically

CD track Start Markers and Stop Markers can be added automatically to Grouped Clips in a Composition. To accomplish this, first create a CD in the CD/SACD Tab window and select it. Make an appropriate Group of Clips which correspond to CD tracks. Then choose **Cursors & Marks > CD Mark Groups** from the **CD/SACD** Tab window **Markers** menu or from the main **Cursor and Marks** menu to open the **CD Mark Groups** dialog:

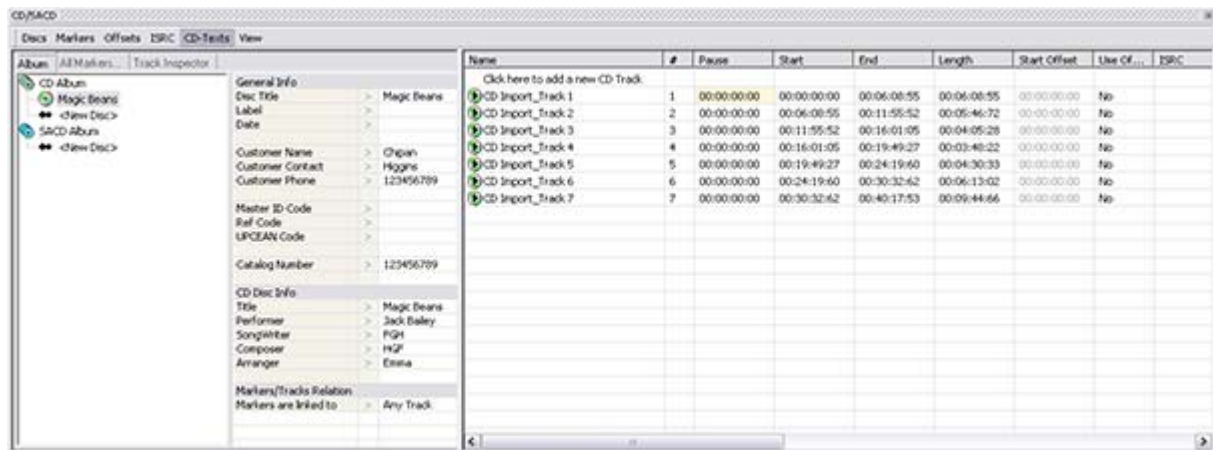


CD Mark Groups dialog

The only option is a check box to **Remove existing CD Markers**. Click on **OK** to automatically create CD markers for all grouped clips.

Note: If the gap between clips in the Pyramix TimeLine is less than one second only **Start Markers** are placed or required. (There will always be a **Stop Marker** after the last clip). **Stop Markers** can be useful where there is applause after a piece which may not be wanted when broadcasting from a CD. Suitably equipped CD Players can be set to stop when they find a **Stop Marker**.

CD/SACD Tab Window



CD/SACD Tab window

All the mastering features are grouped in the CD View; in two sections.

In the **Left Pane** there are three window Tabs:

Album, All Markers and Track Inspector

The **Right** pane shows the track list fields. (see below)

Album:

The left-hand pane shows a tree view of CD and SACD Albums and Discs with **<New Disc>** entries to create new discs. The right-hand pane allows CD properties and default parameters to be set for the selected disc.

General Info

- **Disc Title** CD Title
- **Label** CD Production Label
- **Date** CD Date
- **Customer Name**
- **Customer Contact** Customer Contact (name)
- **Customer Phone** Customer contact phone number
- **Master ID Code** CD Identifying code (if one is required)
- **Ref Code** CD Reference Code (if one is required)
- **UPCEAN Code** (Universal Product Code, aka EAN) CD Bar Code (13 digits). This field has a validation routine. So you can enter the bar code as you want and it will be automatically validated. (exp. 123-123456789-1 gives 1231234567891).
- **Catalog Number**

CD Disc Info

(Global – CD Header). In addition, there are similar fields for each track in the CD Track grid.

- **Title** CD Title
- **Performer** CD General Performer
- **SongWriter** CD General Song Writer
- **Composer** CD General Composer
- **Arranger** CD General Arranger

Markers/Tracks Relation

- **Markers are linked to** Clicking in the field shows a list of choices. These are the same as the **Markers** Tab window choices: **<Independent>**, **Any Track** or **any Track without Group**

All Markers...

Shows and allows editing of all the PQ markers. Here only the PQ is modified, not the audio edit. CD Markers can be Cut / Copied / Pasted like standard Markers by right clicking an entry.

The CD Marker List is linked to the Disc (in the case of CD) and Area (in the case of SACD). There is no longer a CD Marker List in the Track Group tab window or a Global CD Marker List. If necessary the CD Marker List in Disc/Area can be linked to a Track Group to associate Audio content to a CD Marker List.

Name

Name of the PQ Marker. When the markers are automatically created with the function "CD Mark Group", the stop marker gets the same name as the start marker + a **Stop** suffix at the end. The "*" tells you that this marker was auto generated.

(Number)

(Read only) Number of the PQ Marker. The stop marker has the same number as the start. The index markers begin at 2 then Inc... This is a Read only property; it depends on the position of the marker in relation to the others.

Type

Type of the Marker.

TimeCode

TimeCode position of the Marker.

Offset

Offset of the Marker. Grayed out when offset is disabled.

Use Offset

Enable or disable the Offset of a marker.

Track Inspector

Shows, and allows editing of, data pertaining to the track selected in the right-hand pane.

- **Name** Track Name. The "*" tells you that this name was auto generated.
- **# (Number)**
- **Pause**
- **Start**
- **End**

- **Length**
- **Start Offset**
- **Use Offset** Clicking in the field toggles between **Yes** and **No**
- **ISRC** Clicking in the field allows an ISRC code to be entered
- **Copy** Clicking in the field toggles between **Yes** and **No**
- **Comment**

CD Text Info

- **Title**
- **Performer**
- **Song Writer**
- **Composer**
- **Arranger**

Clicking in any of these fields enables text to be entered.

Right section

The right-hand pane is the CD Tracks List which enables viewing and editing the content of the CD; by track. **All modifications applied here automatically affect your edit.** For example, if you modify a track pause from 4 to 6 seconds, all the clips (from the first one in the selected track to the last clip of the last track), markers and automation will be rippled to the right to add 2 seconds to the pause.

All operations can be undone.

The fields are:

Name

Name of the CD Track

(Number)

Number of the Track. Click on the Value to display a drop-down list with all available track position numbers, then you can select a new location for the track (E.g. Send track 9 to 2).

Pause

Pause of the CD Track: Time between the start of the track and the stop of the previous one. The pause of the first track is always 0 (the 2 second pause required by the RED Book standard are automatically added for you in the final TOC) except in case of a Ghost track (see the Ghost Track section for more detail).

Start

Start of the CD Track in the Timeline. Modify this value to ripple the track and all the tracks after.

End

Stop of the CD Track in the Timeline. Modify this value to ripple all the tracks after (performs a similar function to **Length**).

Length

Length of the CD Track. Modify this value to increase or decrease the length of the track and ripple all the tracks after.

Start Offset

Negative Offset for the start marker of the track.

Use Offset

Enable or disable the offsets of the track (start, stop, and index). To individually apply offset to start, stop and index, go the **All Markers** page in the left-hand panel.

ISRC

International Standard Recording Code. See the **CD Properties** section in the left-hand panel to get a complete description of this code. See the **Extra Functions** section to see how to automatically create this code. This field has a validation routine. The code may be entered as you wish and will automatically be validated. (E.g. "(FR) W01 - 02 / 1" gives "FRW010200001").

Copy

Toggles the Copy Protection bit.

Comment

General purpose comment. For 'in house notes'.

CD Text fields

All the remaining fields can be copied from the **CD Properties** page, see the **Extra functions** section, after this:

CD Text Title

CD Text Performer

CD Text Song Writer

CD Text Composer

CD Text Arranger

CD/SACD Tab Window Menus

Discs

Delete

Cut

Copy

Paste

Copy Info

Paste Info

Validate PQ

Validates the **PQ** for the disc. (**Please see Red-Book Validation on page 239**)

Markers

Cut

Copy
Paste

Delete Selected Track(s) Deletes selected track(s) complete with clip, Markers, Automation etc.
Clear All Markers Clear all the PQ markers

CD Mark Groups Generate PQ markers automatically from clips or clip groups.

Add Start Marker Add a Start Marker to the cursor position.
Add Stop Marker Add a Stop Marker to the cursor position.

Add Index Marker Add a Index Marker to the cursor position.

Validate name For a track selected in the right-hand pane: Removes the “*”, which is included in the name of an auto-generated marker and copy the name of the Start Marker to the Stop marker (if it is the last track in a disc), with a “stop” suffix added at the end of the Stop Marker name.

Offsets

Show Offset Move the PQ marker to reflect the final position of the markers with offset. The **Table of Content** page always displays the final PQ code with offset; so this function is useful to show the real position of the marker on the Timeline or when you want simulate the final CD with the CD player.

Copy First Start Apply the **Offset before first Track** value.
Copy Last Stop Apply the **Offset after last Stop** value.
Copy Start Apply the **Offset before start** value.
Copy Stop Apply the **Offset after stop value**.

ISRC

Create Create ISRC for the selected track(s) using the ISRC default parameters in the CD Properties page. If there is more than one selected track, the ISRCs are first created on the first selected track then incremented for the other(s).
Inc. Selection Increment the designation code part of the ISRC for the selected track(s).
Validate ISRC Check if the ISRC code is correct and correct it if it's bad.

CD-Text

Copy All Copy all the CD Disc information to the selected track(s) CD Text fields.
Copy Title Copy the CD **Title** to the selected track(s) CD Text **Title** field.
Copy Performer Copy the CD **Performer** to the selected track(s) CD Text **Performer** field.
Copy Song Writer Copy the CD **Song Writer** to the selected track(s) CD Text **Song Writer** field.
Copy Composer Copy the CD **Composer** to the selected track(s) CD Text **Composer** field.

Copy Arranger Copy the **CD Arranger** to the selected track(s) **CD Text Arranger** field.
Copy Title from Track Name Copy the **Track Name** to the **CD Text Title** for the selected track(s).

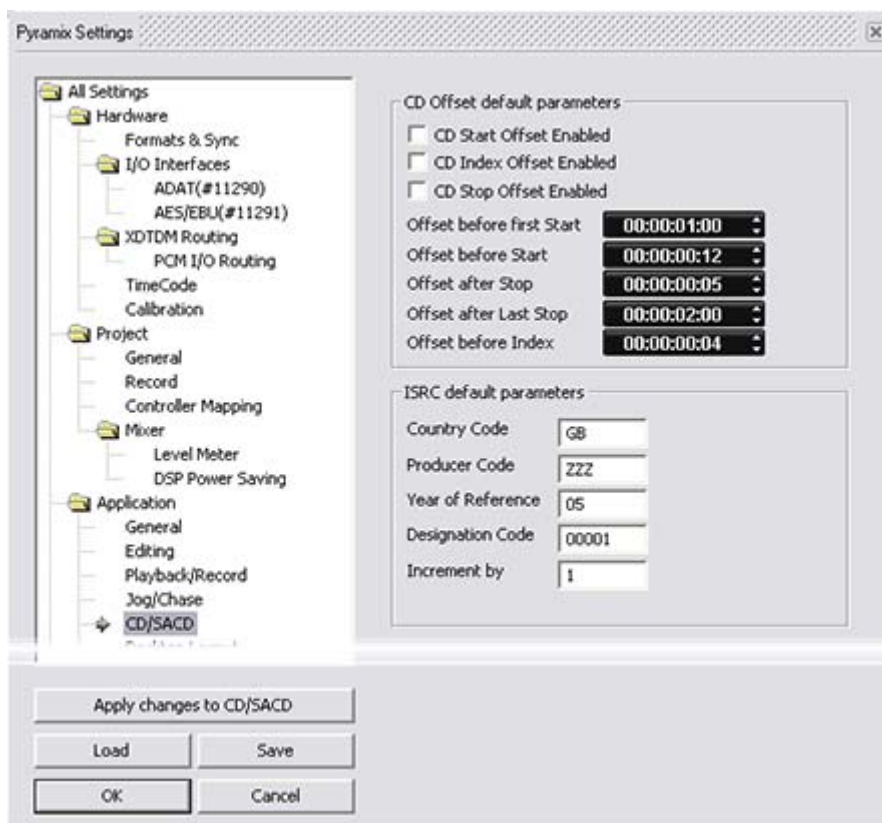
View

Show CD Player Opens the **CD Player** floating window **Please see: Show CD Player on page 238**

Display TOC... Opens the **XToc** dialog. The left hand pane shows all **Discs** in **CD Albums** and **SACD Albums** associated with the current project. Click on a **Disc** to select it, then click on the **Display XTOC** button to display the complete TOC for the Disc in the right-hand pane.

Default Settings

CD Offset default parameters and ISRC default parameters are set in the **Settings > All Settings > Application > CD/SACD** page.



All Settings Application CD/SACD Page

CD Offset default parameters

These parameters are used when the offset of a PQ marker is set to zero and you enable them by ticking the boxes.

CD Start Offset Enabled
CD Index Offset Enabled
CD Stop Offset Enabled

Offset values can be typed and/or adjusted using the increment decrement buttons.

Offset before first Start

Negative offset applied to the first PQ start marker only.

Offset before Start

Negative offset applied to all PQ Start markers except the first one.

Offset after stop

Positive offset applied to PQ Stop marker except the last one.

Offset after last stop

Positive offset applied to the last PQ stop marker.

Offset before Index

Negative offset applied to PQ index marker.

ISRC default parameters

These parameters are used to automatically create or increment ISRC with the function **ISRC > Create & ISRC > Inc Selection** are invoked from the **Offsets** and **ISRC** menus. (Right-click anywhere in the right-hand pane)

All these parameters are stored in the project. If you want to define the value as Default value, right click on the value and select "Set as Default".

Country Code

2 characters (GB, SW, FR etc...)

Producer

3 characters (W01).

Year of Reference

2 digits (02).

Designation Code

5 digits (00012, 80010).

Increment by

Used to auto increment the designation code part of the ISRC. The default value is "1".

Show CD Player



CD Player floating Window

Displays an “always on top” small CD Player which enables simulation of the CD playback (like a “real” CD player). The CD can be simulated with or without the markers offset. Choose **Show Offset** in the Track list pane pop-up menu to take care of the offset. The player has standard playback functions (play, stop, next, previous, scan etc...) and some special functions:

Preroll

Clicking in the number box allows a value (in seconds) to be entered.

Postroll

Clicking in the number box allows a value (in seconds) to be entered.



Skip Track Backwards



Skip Track Forwards



Stop



Play



Rewind



Fast Forward



Play Transition Play the current track from the previous **Stop marker** minus **pre-roll** to the current **Start marker** plus **post-roll**. Pre and Post roll can be edited directly on the CD player interface.



Play All Transitions Has the same functionality as Play Transition but plays all transitions between CD tracks.

Track



Track Clicking on the third from the right button cycles through four different time display options. Elapsed time from start of CD, Time remaining from the End of the CD. Elapsed time of Track and Time remaining from end of Track



Frame Shows/hides the CD frames display

Rnd

Ghost Track

Normally a CD begins from the first track which has a 2 second pause. Pyramix allows you to modify this and create a ghost track; a track before the first track. To accomplish this simply add a CD Index Marker at the beginning of your ghost track, before the first start marker. You can also edit the pause of the first track then this will create or move the ghost marker index for you.

Multiple CDs or versions in one Project

All CD Information and CD Markers can be either "global" or per Track Group. Each Track Group that has the Destination type and Free Markers enabled has its own CD Information and CD Markers. This enables multiple versions of PQ editing for an album to be handled and for multiple CD albums in the same document. The CD Info and Markers displayed in the CD Tab Window follow the currently selected Track Group.

Red-Book Validation

Validate PQ: This function ensures that the PQ conforms to the Red Book specifications by carrying out the following checks and corrections.

- **When a pause is less than 1 second, the pause is removed. (The offset is automatically dealt with).**
- **Track Length is set to 4 second if it is less. (The offset is automatically dealt with).**
- **Track count is reduced to 99 if greater**
- **ISRC is removed if it is incorrect**
- **UPCEAN is removed if it is incorrect**

This function can be undone if necessary.

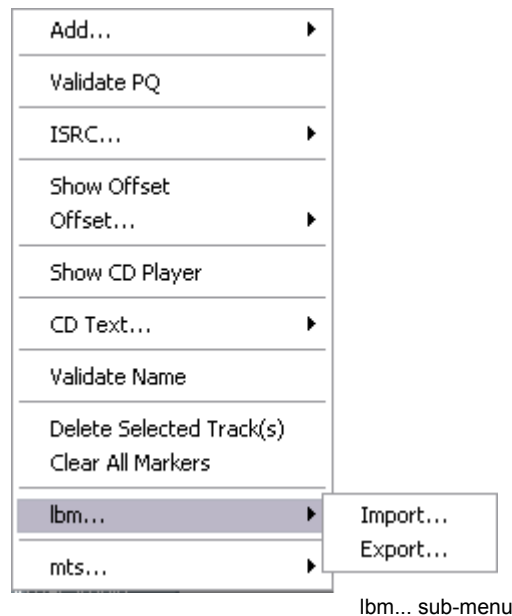
DDP Import

You can use the DDP import function **Project > Import > DDP Import** to import a DDP tape or file and generate a new CD image file. From this CD image file you can burn a CD or generate a new DDP tape.

SACD Functions

Accessed from the right-click context menu:

lbn...



lbn... sub-menu

Import... / Export...

Opens a Windows browser window to save or load SACD text **.lbn** files.

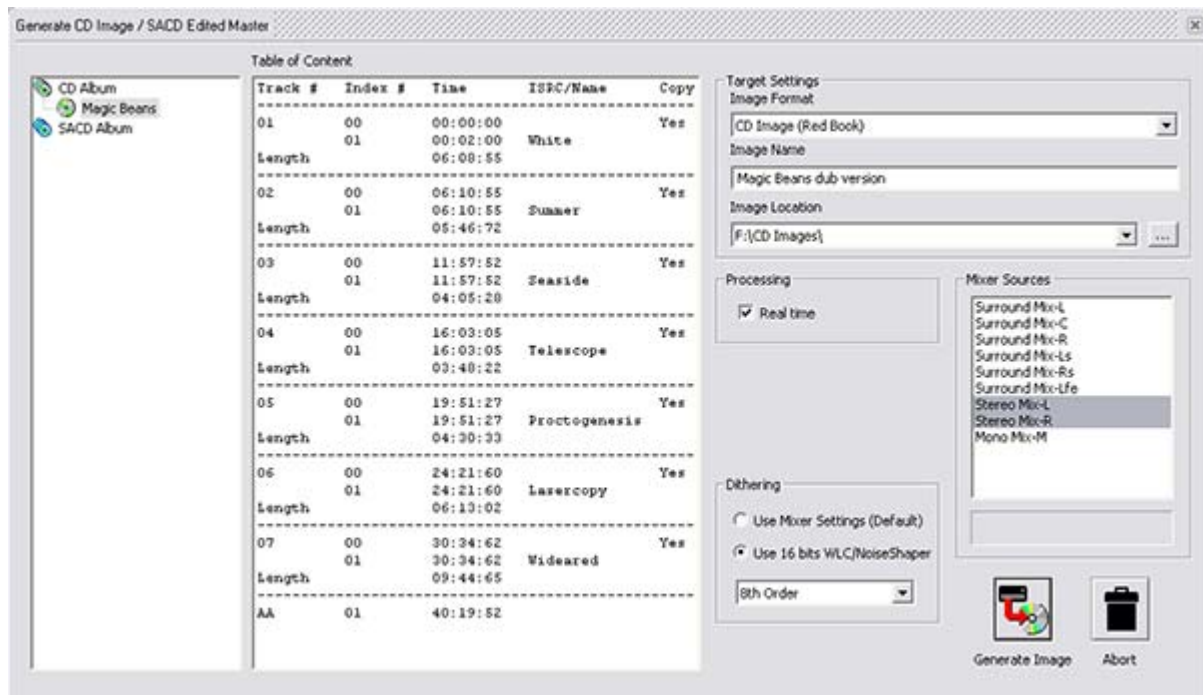
mts...

Opens a Windows browser window to save or load SACD text **.mts** files.

Exporting Projects to CD Image Files

To export a previously Marked Composition to a CD-R image file:

Open the **CD/SACD** Tab window. Fill in CD-R information as appropriate. Choose **Project > Generate CD Image / SACD Edited Master**. This opens the **Generate CD Image** dialog.



Generate CD Image / SACD Edited Master


Select a **CD-Disc** from the left-hand pane.

Target Settings

Image Format

Image Name

Image Location

The combo box has a list of all mounted media folders or you can use the  button to open the **Choose a media folder to mount** dialog.

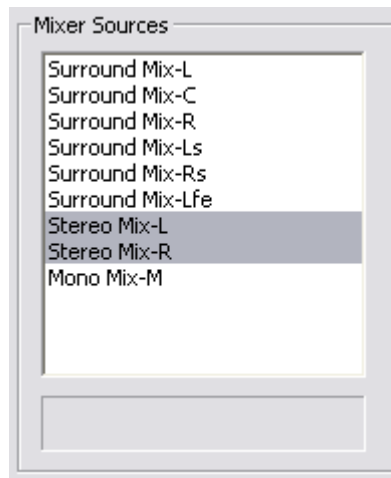
Processing

Real Time

Tick the box if you want to generate in real time or if you wish to listen to the CD while the image is being generated.

Mixer Sources

Pick two appropriate bus outputs from the list shown by **Ctrl + Clicking** them.



Generate CD Image - Mixer Sources

If more or less than two are chosen this error message appears:



Generate CD Image - Mixer Sources Error

Dithering

Note: There is no necessity to manually disable dither in the Mixer.

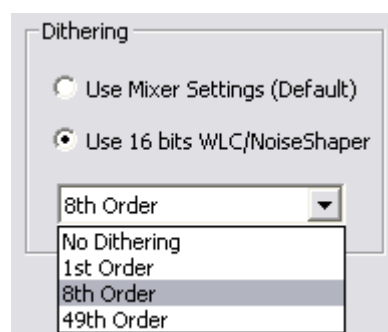
There is a choice between two dither processing units:

Use Mixer Settings (default)

Applies the same treatment as the Mixer's Dither (parameters are those selected in the Mixer) or

Use 16 bits WLC/Noise Shaper

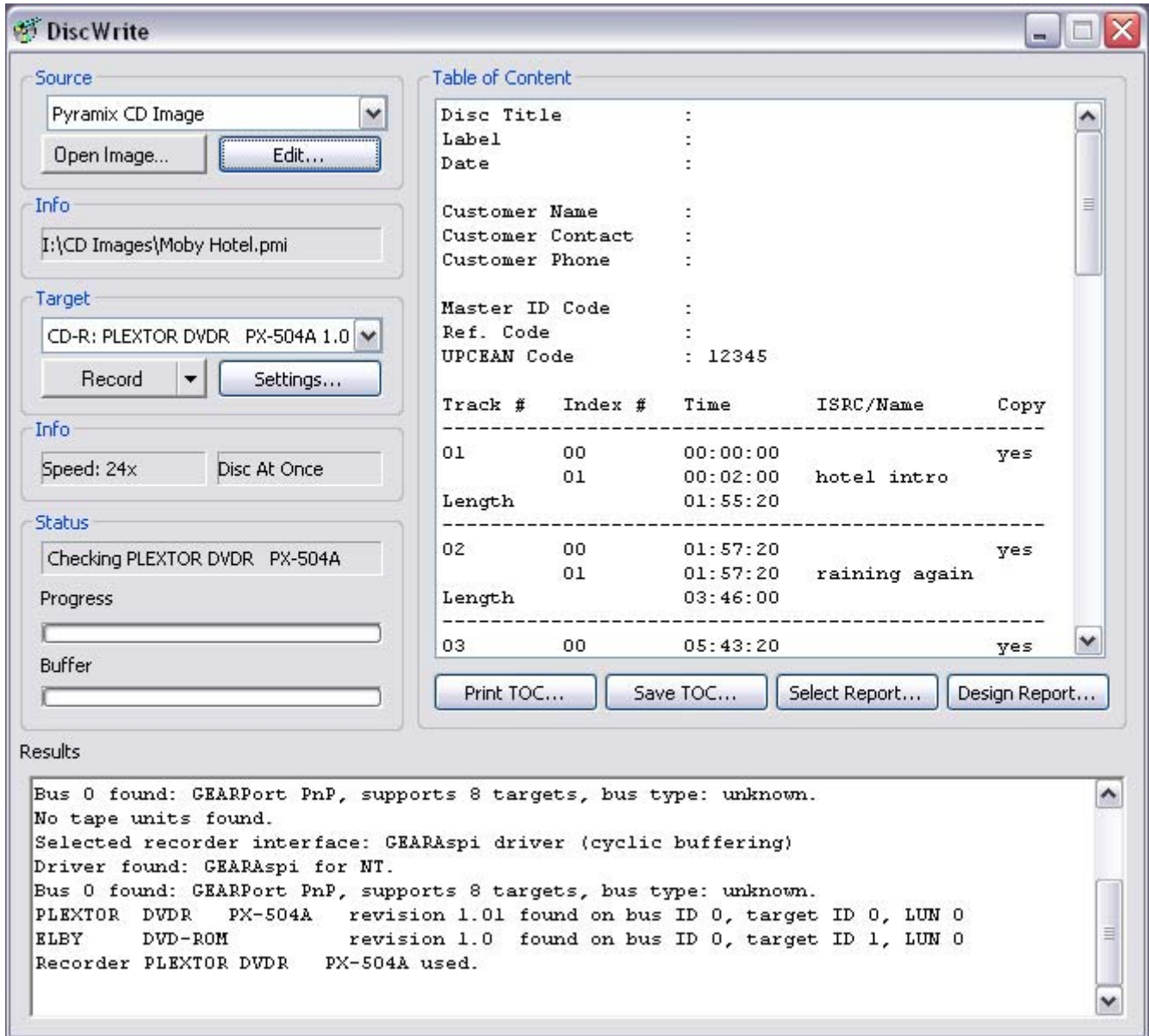
This is the same as the dither in V4.2, available even if no SRC is applied. The combo box offers a choice of settings:



Generate CD/SACD dialog - Dither options

DiscWrite

DiscWrite is a separate application bundled with Pyramix Virtual Studio that is used to write the CD image out to a CD-R disc or a DDP image file to a folder or DDP tape drive.



Source

Pyramix CD Image

Open Image... Edit...

Info

I:\CD Images\Moby Hotel.pmi

Target

CD-R: PLEXTOR DVDR PX-504A 1.0

Record Settings...

Info

Speed: 24x Disc At Once

Status

Checking PLEXTOR DVDR PX-504A

Progress

Buffer

Table of Content

Disc Title :
Label :
Date :
Customer Name :
Customer Contact :
Customer Phone :
Master ID Code :
Ref. Code :
UPCEAN Code : 12345

Track #	Index #	Time	ISRC/Name	Copy
01	00	00:00:00		yes
	01	00:02:00	hotel intro	
Length		01:55:20		
02	00	01:57:20		yes
	01	01:57:20	raining again	
Length		03:46:00		
03	00	05:43:20		yes

Print TOC... Save TOC... Select Report... Design Report...

Results

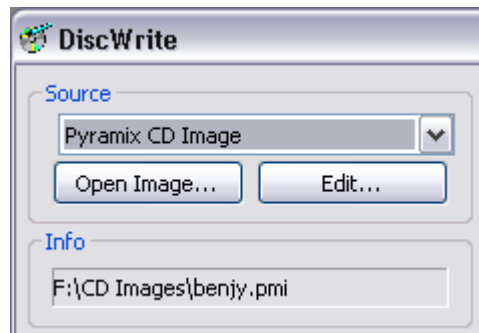
```
Bus 0 found: GEARPort PnP, supports 8 targets, bus type: unknown.
No tape units found.
Selected recorder interface: GEARAspi driver (cyclic buffering)
Driver found: GEARAspi for NT.
Bus 0 found: GEARPort PnP, supports 8 targets, bus type: unknown.
PLEXTOR DVDR PX-504A revision 1.01 found on bus ID 0, target ID 0, LUN 0
ELBY DVD-ROM revision 1.0 found on bus ID 0, target ID 1, LUN 0
Recorder PLEXTOR DVDR PX-504A used.
```

DiscWrite application window

Source

The drop-down list enables the user to choose between a **Pyramix CD Image**, all installed optical drives or a U-Matic tape as the source for the new CD-R or DDP file.

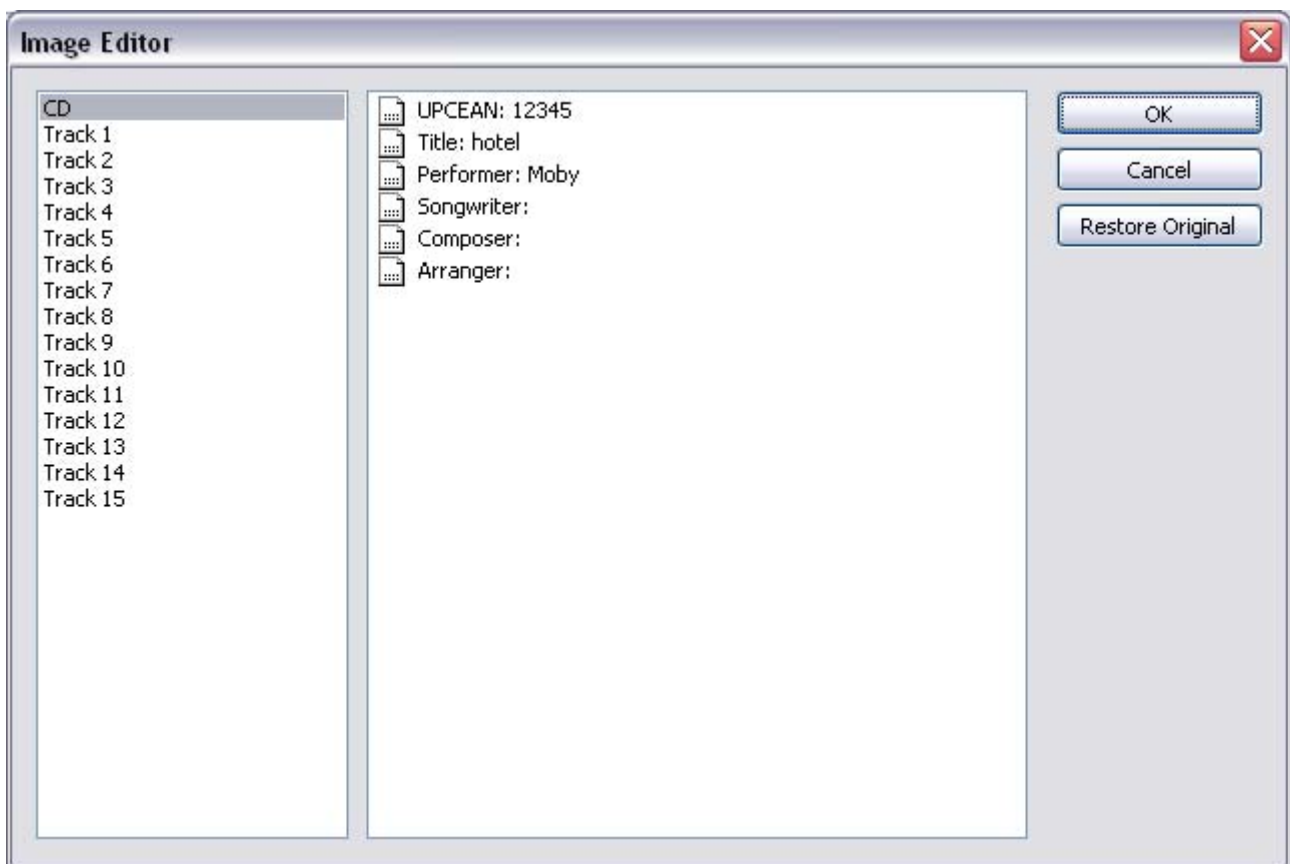
Source - Pyramix CD Image



DiscWrite Source - CD Image

When the chosen **Source** is **Pyramix CD Image**, the left-hand button below the **Source** drop-down list will be **Open Image...** Clicking on **Open Image...** leads to a file browser window where you can navigate to the desired image file. The right-hand button will be **Edit...**

Clicking on the **Edit...** button opens the **Image Editor** dialog:



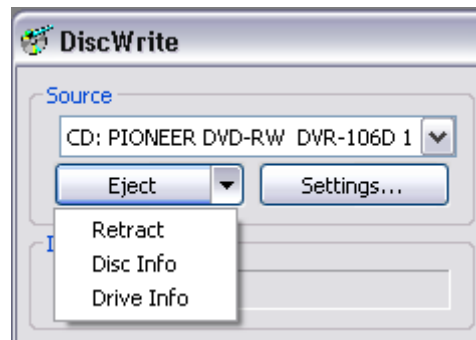
DiscWrite Image Editor Dialog

CD-Text can be freely edited.

Restore Original

Undoes any changes made since the dialog was opened.

Source - CD Drive



DiscWrite Source - CD Eject Drop-Down

When the chosen **Source** is **CD:**, the left-hand button below the **Source** drop-down list will be **Eject** and the right-hand one **Settings...**

Eject

opens the loading tray of the selected optical disk drive (or ejects the disk if the drive is a slot-loader). Clicking on the down arrow next to the Eject button drops down a list of other optical disk drive commands.

Retract

Closes the loading tray on the source drive

Disk Info

Reads the disc information and displays it in the **Results** box

Drive Info

Interrogates the optical drive firmware and displays information about the drive in the **Results** box

Info

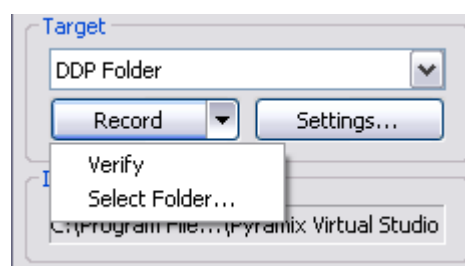
The **Info** box shows either the read speed of the optical drive or the path to the image file.

Target

The drop-down list enables the user to choose between any installed CD-R or DDP drives or a **DDP Folder**

DDP Folder

When **DDP folder** is the selected target the button beside the **Record** button drops-down a list of options:



DiscWrite Target - CD Eject Drop-Down

Verify

Verifies the recording

Select Folder...

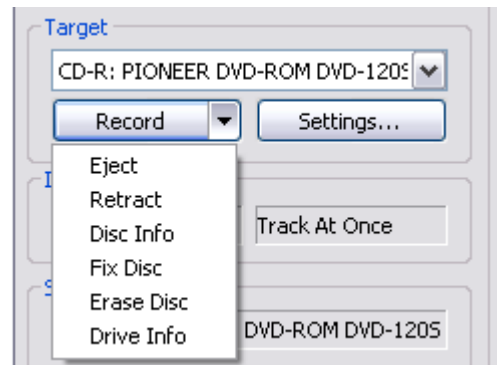
Opens a Browser to enable a suitable folder to be chosen

Settings...

Opens a window with DDP settings information and options.

CD-R/CD-RW

When a CD-R(RW) is the selected target, the arrow beside the **Record** button drops-down a list of options:.



Eject	Opens the loading tray on the target drive
Retract	Closes the loading tray on the target drive
Disk Info	Reads the target disc's information and displays it in the Results box
Fix Disc	Writes the information necessary to allow a Track at Once disc to be read by a CD player.
Erase Disc	Erases a re-writable disc
Drive Info	Interrogates the optical drive firmware and displays information about the drive in the Results box

Settings...

The **Settings...** button is grayed out unless a suitable optical drive or image file has been selected. When available, clicking on **Settings...** opens a dialogue with access to all relevant settings. In particular, this is where you can choose between **Disc-at-Once** and **Track-at Once** modes. Use **Disc-at-Once** for maximum compatibility.

Record

Clicking on the **Record** button initiates the recording process.

Detailed reporting about the progress of the process is shown in the **Results** box as the recording is made.

Info

Shows the Write speed of the target drive or the path if you are writing a DDP file to a folder. Also shows the chosen record mode, e.g. Track At Once or Disk At Once.

Status

Shows the status of the recording device/process

Progress

A 'thermometer' bar graphically shows the progress of the recording.

Buffer

Another 'thermometer' showing the state of the record buffer.

Results

This box displays detailed information about various aspects of the process depending on what you are doing at the time.

Table Of Content

Displays the TOC in detail.

Print TOC...

Opens a **Print Options** dialog. The actual options available will depend on the printer you have selected.

Save TOC...

Opens a File Browser dialog. Here, you can type a name for the TOC file and choose a suitable folder to save it in.

Select Report...

Opens a File Browser dialog where you can select a report style for the TOC

Design Report

Opens the **Report Designer** application. With this you can design your own report formats for TOCs.

Optical Drives - Important Note:

Most, if not all the issues you might encounter when working with optical drives, Windows and DiscWrite can be solved by installing the latest firmware for your drive. This, together with installation instructions, should be available from the drive manufacturer's website. This is true for CD-Text writing, write speed & buffer issues, as well as for CD-Import.

CD Text

CD-Text has been successfully tested with several high quality DVD-R and CD-R drives. However, DiscWrite and its CD-text functionality should work with most of the writers available on the market, provided care has been taken to install the latest available firmware for the unit.

A warning will appear when a non CD-Text writer is intended to be used to write a Disc Image containing CD-Text.

Compatibility with CD-Text can be confirmed in the **Target** area by making sure the desired drive is selected and choosing Drive Info from the **Record** drop down menu.

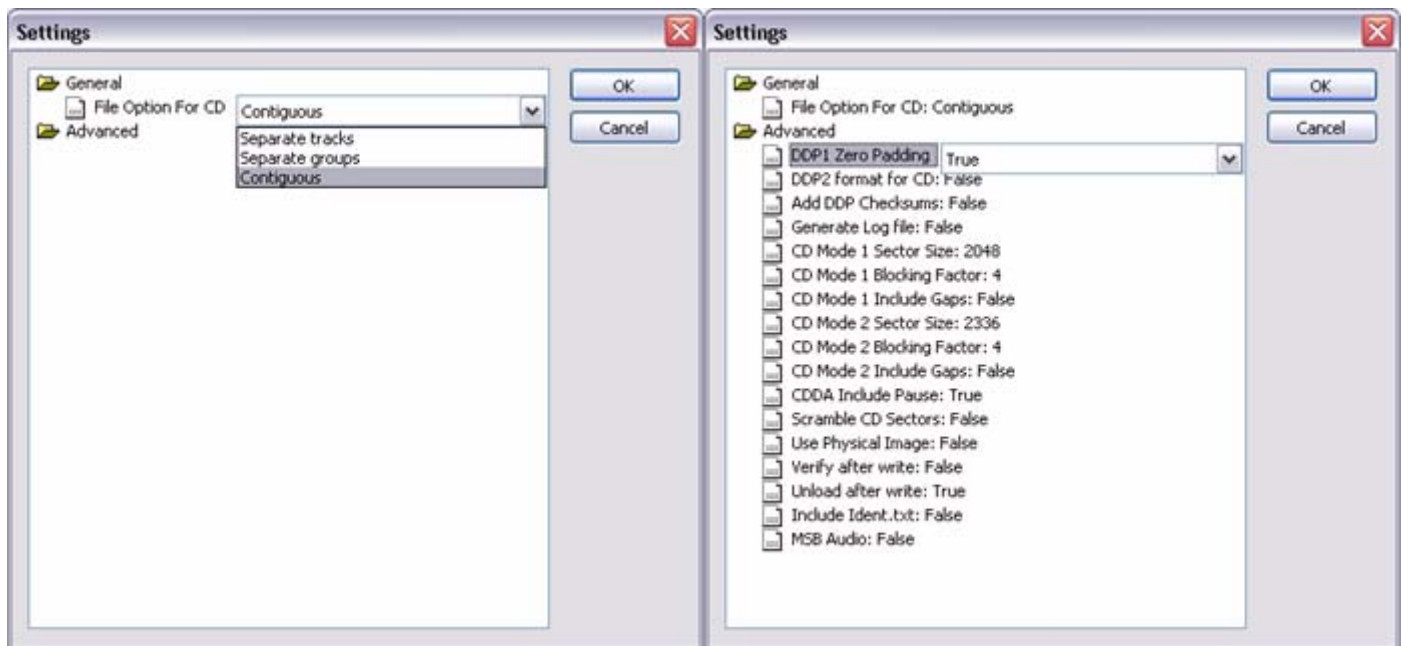
Writing CD-Text (audio, disc at once): Yes. Should be found in the **Supported write methods:** section of the list in the **Results** window. (You will have to scroll the list to find this)

Burning a CD-R

Launch **DiscWrite**. (A normal Pyramix installation places a **DiscWrite** icon on the desktop) To burn a CD-R from a previously created CD image file:

1. In the **Source** section, click the **Open Image...** button, then navigate to and select a previously created CD Image file (an **.img** or **.pmi** file).
2. In the **Target** section, click in the drop-down menu to select a CD-R device. **DiscWrite** should recognize a previously configured CD-R device which is also recognized by the OS itself.

- Also in the **Target** section, click on the **Settings...** button to open the **CD-R Settings** dialog box. Set these as desired for the CD-R burning session. The default settings will usually be fine but it is worth checking that the **CD Write Method:** entry is set to **Disc At Once**.



DiscWrite General and Advanced Settings

- When all CD-R settings are adjusted as needed, click the **Record** button in the **Target** section to begin burning the CD-R.

DDP Masters

Note: As in the above example, Pyramix allows you to specify burning your DDP to a folder (instead of an Exabyte tape) and from there on it may be transferred, copied, duplicated, checked, archived or whatever else you want to do with it, such as sending it over a secure FTP connection.

Red Book Compatible Masters

If the CD-R is to be used as a "Red Book" compatible master "**Contiguous**" MUST be selected.

CD Copy

Where suitable hardware is available, a CD may be directly copied by selecting a CD-ROM drive as the source and a CD-R/RW drive as the destination.

TOCs

Print TOC... prints the current TOC in the currently selected report format.

Save TOC... opens a file save dialog to save the current TOC as a text (.txt) file.

Select Report... opens a file open dialog. Any previously designed TOC report format (*.lst) may be loaded.

Design Report... Opens the **Report Designer**. Please see the on-line documentation.

15

File and Project Interchange



Pyramix 5.0

DIGITAL AUDIO WORKSTATION

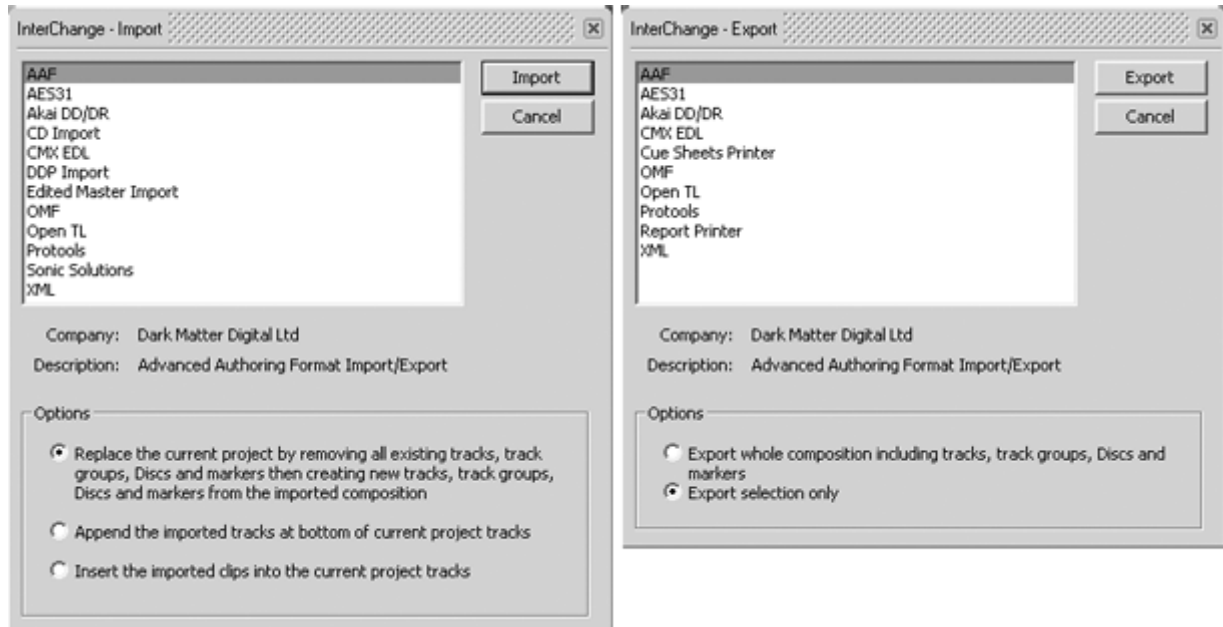


Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Project Interchange

Import and Export are handled by **InterChange**. In the **Project** menu **Import** and **Export** open windows where a list of available **InterChange** plug-ins is presented.

Thus **Project > Import** and **Project > Export** open these windows:



Project Interchange - Import and Export dialogs

Import Options

The **Options** radio buttons determine how the imported material will affect the current project:

- Replace the current project by removing all existing tracks, track groups and markers then creating new tracks, track groups and markers from the imported composition
- Append the imported tracks at bottom of current project tracks
- Insert the imported clips into the current project tracks

Export Options

- Export whole composition including tracks, track groups and markers
- Export selection only

The **Export selection only** will be grayed out if there is no selection in the Timeline of the project.

File Interchange with Apple Macintosh

History

Old Macintosh files such as SD2 and PT4.x and PT5.x projects files have a Mac-binary, or double-fork structure that the PC cannot handle directly. As opposed to interchange files, PC files or new Mac files (that do carry a simple single file structure), SD2 and PT5 projects files are based on a Data fork (the one you see in every computer file) and a Resource fork (a hidden, second file storing all the file info). While this

binary structure was actually quite a clever and convenient move, the fact that half of the file is hidden by design makes it a very fragile cross-platform media.

A sure sign that the resource fork has been lost is when the file appears with a generic icon and is present but unreadable. A broken binary file cannot be rebuilt.

Problem

If transfers are done incorrectly the hidden resource fork file, necessary for Mac files format like SD2 but unrecognized by Windows, is generated by Pyramix but gets lost in the transfer.

More recent, universal, formats such as WAV, AIF, JPEG, as well as compressed archives don't use the resource fork file and therefore transfer transparently between the two platforms. This can lead to the belief that the same ease of use can apply to SD2 files and this is not the case. Care should be taken not to lose half of the file in the interchange process. This is no easy task since it is hidden by design.

Solution

On the PC

To properly handle and move SD2 and PT4.x / 5.x mac files that require the resource fork file to and from PCs requires MacDrive 2000 or MacDrive 5 to be installed on the PC. MacDrive is a product of Mediafour Corporation, please see:-

www.mediafour.com

MacDrive6 allows you to read and write Mac HFS CDs or DVDs and read, write and format Mac HFS / HFS+ hard drives connected via Firewire / USB2 / SCSI / SATA or IDE.

MacDrive also comes handy for packing & unpacking MacBinary files on native NTFS windows hard drives. This is needed because, on a PC, when binary files are to be written to PC CDs, copied to a USB key or sent via Internet, it is necessary to pack the data and resource fork together into a "MacBinary" in order to preserve the integrity of the file. This can be achieved with a right-click on a selection or multi-selection (with MacDrive installed) and choosing **Create Mac Binary file**.

Hard Drives

Prohibited:

FAT16 - FAT32 formatting (still in use on flash memory & USB keys) will damage the resource fork. NTFS formatted with any other block size than standard 4KB will also destroy the resources. So, any of the above formats will not work with SD2 - PT4.x or 5.x binary files.

Recommended:

NTFS and HFS+ hard drives with standard 4KB formatting.

So, since 64KB block formatting is highly recommended for getting the most performances out of modern NTFS plus hard drive with Pyramix, following set-up should be used when PT Interchanges are made on a workstation:

a) NTFS drive or partition - 64KB formatting - For regular PMF recordings.

b) NTFS drive or partition - 4KB formatting - For PT Interchange. (An HFS+ drive, formatted with MacDrive will also work.)

A flash memory drive can be formatted in NTFS, if "**Optimize for Performance**" is chosen in **Properties/ Policies**.

Over Ethernet

SD2 / PT Project files will transfer safely over an Ethernet network, provided all Hard Drive rules above are respected for each source and destination disk in use. This is also true when Apple workstations are connected to the network, if proper AFP service is activated on Windows 2003 Server. (Currently SMB sharing activated on Apple machines apparently damages the Resource forks So Apple machines can only safely write & read binary files to & from an AFP share)

Note: A network drive should be mapped locally (using the Windows **Map Network Drive** feature) for Pyramix to be able to directly Import or Export a ProTools Project onto it.

On the Mac

When a CD or DVD for interchange is created on a Mac, it must be a Hybrid CDFS/HFS, otherwise the resource fork is "encoded" by the Mac in a manner MacDrive doesn't support. Attempting to generate any other sort of "PC disk" (such as ISO9660) on the Mac side will certainly destroy the resource forks at this stage. Unless the binary file has been packed on the Mac, but this is outside the scope of this manual.

When properly created, the CD should appear with a little Apple over its icon on the PC. If not, right click on it and choose the **Show Mac Files** options in the **MacDrive** menu. The files should then appear properly.

Finally

As always, but even more important in this situation, please make sure that all the software components involved in file transfer carry software revisions of identical generation or better still, the latest software/firmware/driver/system available.

This is true for: Windows OS, Mac OS, External drive firmware and drivers and MacDrive software. Failing to heed this advice could lead to unexpected data and drive loss.

File Size Limitations

By design SD2, WAV or BWF files are limited to a maximum of 2GB due to their 32bit signed addressing (thus 31 available bits) formats, while 32bits unsigned addressing AIF files are limited to 4GB. Please keep this in mind when recording and/or exporting to any of these formats, the 2GB/4GB limit might in fact be quite close, particularly when working with high sample rate multitrack files.

As a comparison, Pyramix, thanks to its own PMF 64bit addressing file format can generate PMF files of virtually limitless size. This makes it the file type of choice for creating single file, large multitrack projects at high sampling rates.

Hard Drive Limitations

A very similar 2GB/4GB* limit can also be encountered the hard way when attempting to write large files, even in PMF format, onto storage units (hard drives, memory cards etc.) formatted using an old 32bit file system such as FAT32 or HFS.

Yet another, higher, limitation also exists with IDE ATA/ATAPI drives. This will show up at around 137GB. This may be caused by part of a system (drivers, controllers and/or old Windows version) only recognizing the 28bit addressing of the original ATA specifications, and not the enhanced 48bits available on newer equipment. This is usually solved by installing fresh and or updated Bios/Drivers/OS.

*The official limit is 4GB, but serious trouble can start at around 2GB.

AAF

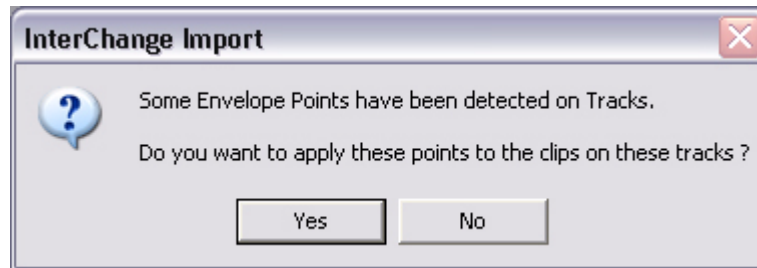
Pyramix can import and export projects in AAF (Advanced Authoring Format)

Import

Select **AAF** in the **Interchange Import** dialog. Choose the appropriate import option and click on **Import**.

The **Import AAF File** window opens. Navigate to the required AAF file or type its name in the **File name** box and click **Open**.

If the file contains envelope information this dialog opens:



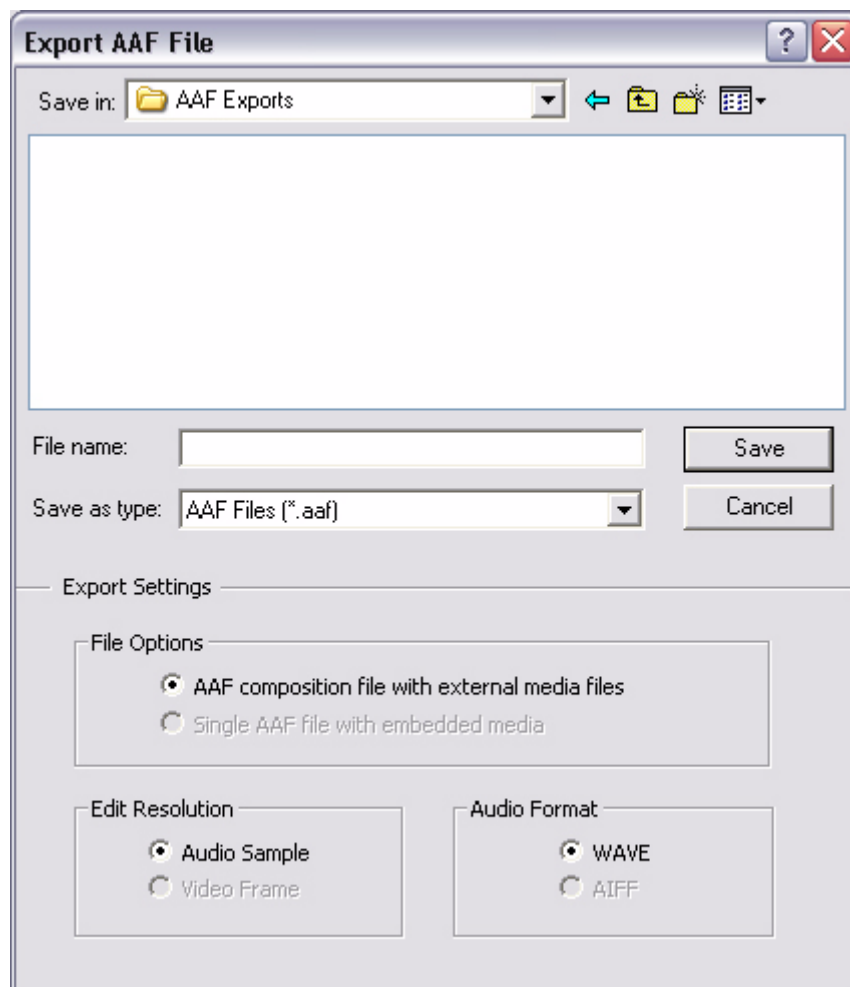
Interchange - Import dialog

Click **Yes** to apply envelope information or **No** to import the material without envelope information.

Export

Select **AAF** in the **Interchange Export** dialog. Choose the appropriate export option and click on **Export**.

The **Export AAF File** dialog opens:



Export AAF File dialog

Navigate to the required drive/folder, type a suitable filename in the **File name** text box, choose the appropriate file type from the **Save as type** drop-down list. Make appropriate choices in the **Export Settings** section then click **Save** to begin the export process. When the export is concluded this info box appears:
Akai DD / DR



Interchange Export info box

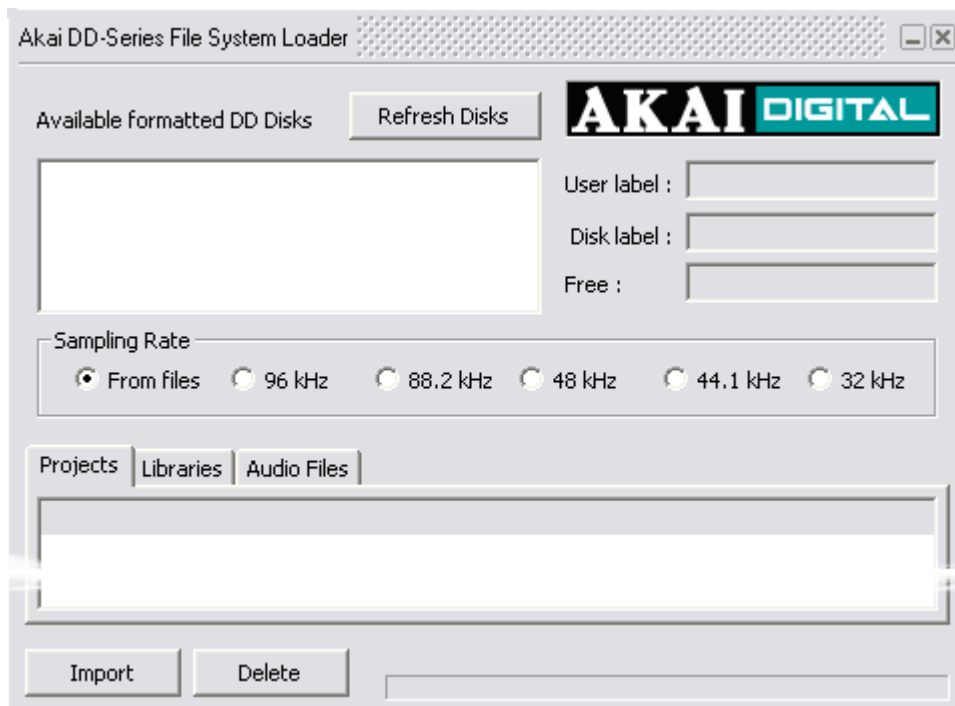
AKAI disk import

Pyramix is capable of recognizing disks recorded in the Akai DD-Series format and importing their data.

Preparing the system

Connect the Akai disk to your PC. Usually this will be done via a SCSI interface, but can also be a Magneto-Optical or a Jaz disk.

Project > Import opens the **Project Interchange** dialog box. Choosing **AKAI DD/DDR** from the list opens the **AKAI DD-Series File System Loader** dialog box



Akai DD-Series File System Loader dialog

When the dialog is opened, Pyramix searches for available Akai disks and displays them in the upper left part of the dialog box. Choose the disk you want to work with by selecting it with the mouse.

The **Refresh Disks** button restarts the search for available Akai disks.

The lower part of the dialog box shows the data found on the selected Akai disk. Following the data structure of Akai disks this panel has three Tabs named Project, Libraries and Audio Files.

Import Button

To import the data into your Pyramix session, simply select the desired data and click the **Import** button. The behavior is the same as 'Quick Import'; All the files are imported and stored into a mounted media folder. When an Akai library is imported, a new Pyramix project library will be created.

Delete Button

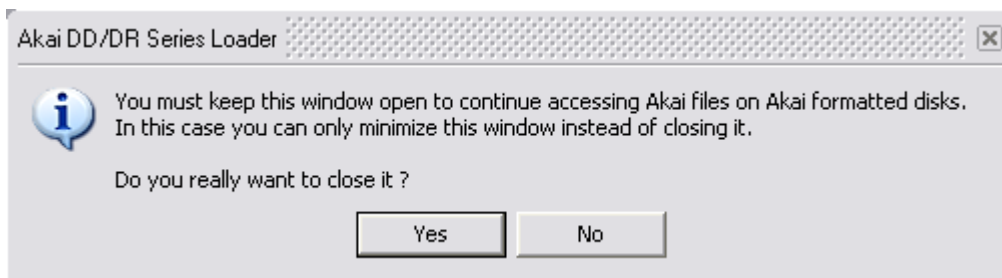
Deletes selected files from the Akai media providing this is not write protected.

Audio File import

Since Pyramix is capable of reading the audio data directly from an Akai disk, it is not necessary to import the actual audio files into a local Windows drive. Thus, when you click the Import button, a dialog box is displayed: **Do you want to import the Audio Files used by this/those projects?** If the answer is **No**, only references to the audio files will be stored in the local Windows Media folder instead of copies of the actual audio data. The audio will play correctly but no waveforms will be displayed.

Closing the Akai loader dialog

If you attempt to close the **Akai DD-Series File System Loader** the following dialog appears:

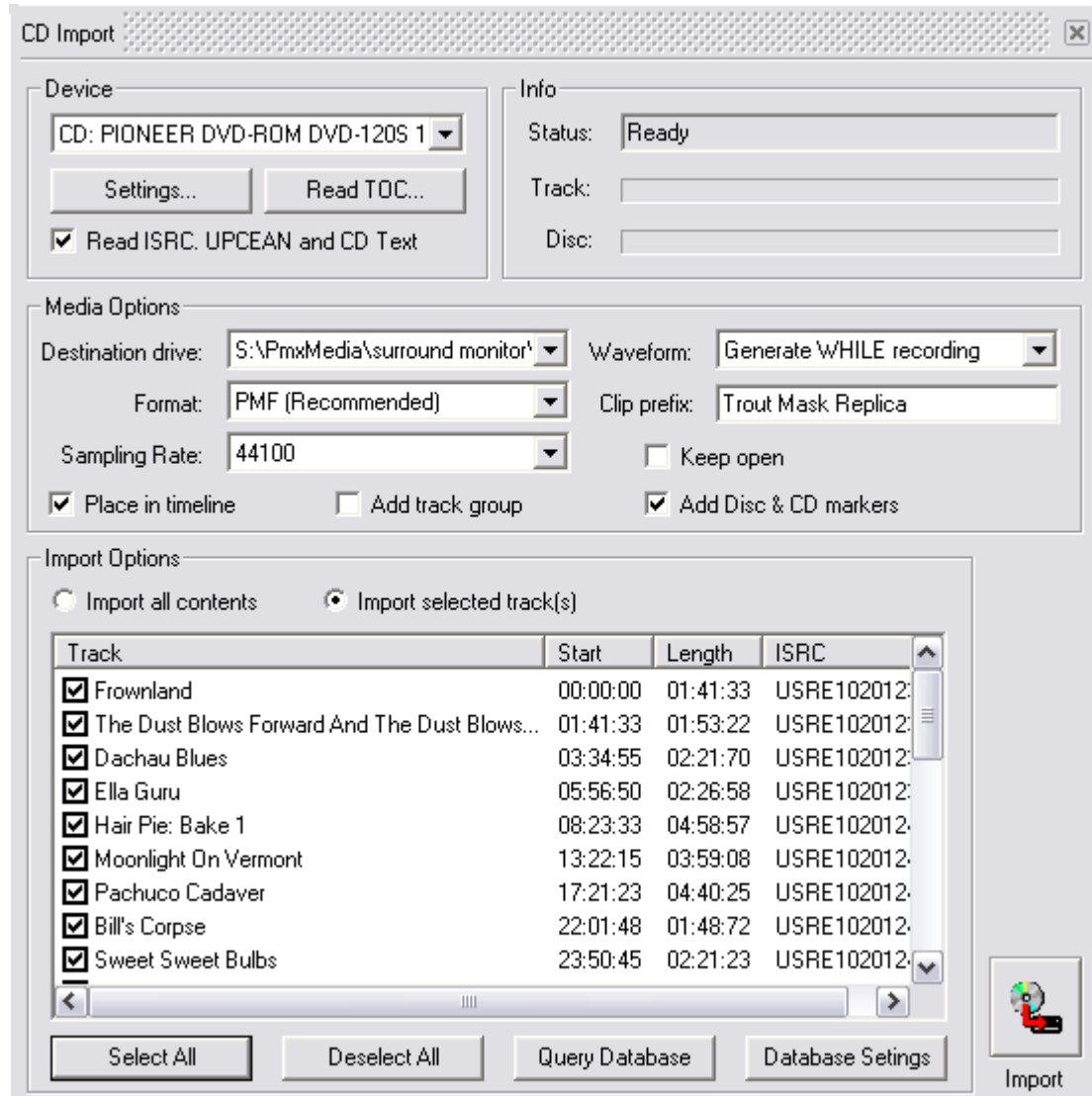


Akai DD/DR-Series Loader dialog

If you wish to continue to directly access Akai files click **NO** and minimize the window.

CD Import

Pyramix has comprehensive CD import functions. **Project > Import** opens the **Interchange Import** dialog box. choose the appropriate destination option and choose **CD Import**



The CD Import dialog box is divided into several sections:

- Device:** A dropdown menu showing 'CD: PIONEER DVD-ROM DVD-120S 1'. Below it are 'Settings...' and 'Read TOC...' buttons. A checkbox 'Read ISRC, UPCEAN and CD Text' is checked.
- Info:** Fields for 'Status' (Ready), 'Track', and 'Disc'.
- Media Options:**
 - 'Destination drive:' dropdown showing 'S:\PmxMedia\surround monitor\'. 'Waveform:' dropdown showing 'Generate WHILE recording'.
 - 'Format:' dropdown showing 'PMF (Recommended)'. 'Clip prefix:' text field showing 'Trout Mask Replica'.
 - 'Sampling Rate:' dropdown showing '44100'. A 'Keep open' checkbox is unchecked.
 - Three checkboxes: 'Place in timeline' (checked), 'Add track group' (unchecked), and 'Add Disc & CD markers' (checked).
- Import Options:**
 - Radio buttons for 'Import all contents' (unchecked) and 'Import selected track(s)' (checked).
 - A table with columns: Track, Start, Length, ISRC.

Track	Start	Length	ISRC
<input checked="" type="checkbox"/> Frownland	00:00:00	01:41:33	USRE102012
<input checked="" type="checkbox"/> The Dust Blows Forward And The Dust Blows...	01:41:33	01:53:22	USRE102012
<input checked="" type="checkbox"/> Dachau Blues	03:34:55	02:21:70	USRE102012
<input checked="" type="checkbox"/> Ella Guru	05:56:50	02:26:58	USRE102012
<input checked="" type="checkbox"/> Hair Pie: Bake 1	08:23:33	04:58:57	USRE102012
<input checked="" type="checkbox"/> Moonlight On Vermont	13:22:15	03:59:08	USRE102012
<input checked="" type="checkbox"/> Pachuco Cadaver	17:21:23	04:40:25	USRE102012
<input checked="" type="checkbox"/> Bill's Corpse	22:01:48	01:48:72	USRE102012
<input checked="" type="checkbox"/> Sweet Sweet Bulbs	23:50:45	02:21:23	USRE102012

At the bottom are buttons: 'Select All', 'Deselect All', 'Query Database', 'Database Setings', and an 'Import' button with a CD icon.

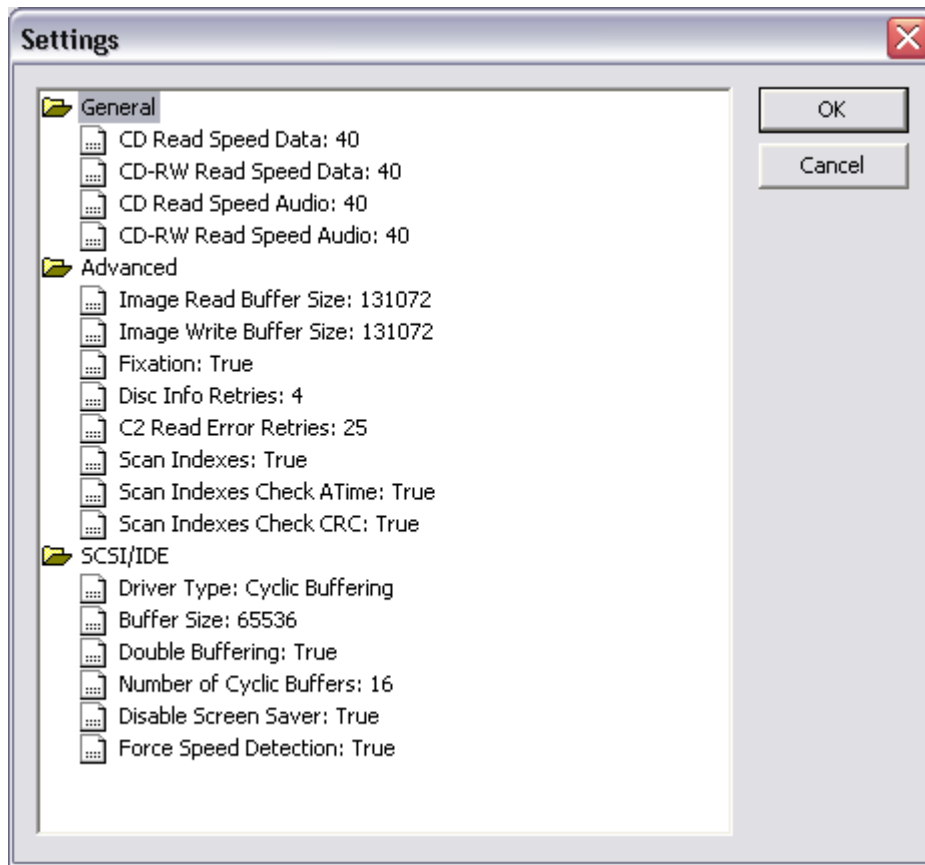
CD Import dialog

Device

The combo box shows all suitable drives on the machine.

Settings

Settings pops up a dialog box with specific drive settings. These settings may be altered if required by clicking on an entry and typing a new value in the box.



CD Import Settings dialog

Read TOC reads the Table Of Contents on the CD and lists the tracks in the left hand pane.

If **Read ISRC**, **UPCEAN** and **CD Text** is checked this information will also be read if present.

Import Options

If **Import all contents** is checked the whole disc will be imported. If **Import selected tracks** is checked only the tracks with a tick in their checkbox will be imported.

Select All and **Deselect All** do what they say.

Query Database uses an online database to obtain track names and other data about commercial CDs results are shown in a dialog:



CD Import Query Database results dialog

If multiple disc entries are shown, click on the appropriate one to select it then click on **OK** to import the data. The disc name is automatically entered in the **Clip Prefix** field.

Database Settings allows the database address and other settings to be changed:



Default settings are shown above. To change a setting, click on the entry and type. Click **OK** to save the edited settings. **Defaults** restores the default settings.

Info

The **Status** line shows useful information about the process as it proceeds. The **Track** and **Disc** lines are progress meters. **Track** shows a growing gray bar as the track transfer proceeds and **Disc** shows progress of all selected tracks.

Media Options has three drop-down list boxes to select the **Destination Drive**, the **Format** the CD audio will be captured in and **Waveform** determines whether a waveform will be generated and, if so, **WHILE recording** or **AFTER**. A text entry box allows a **Clip Prefix** to be set for all imported tracks. (default is **CD Import**) Checkboxes determine if the resulting clips will be placed in the Timeline, whether **CD Markers** will be added in the Timeline and whether a **Track Group** will be added.

Sampling Rate enables the import(s) to be sample rate converted as they are imported with a choice of rates in the combo box.

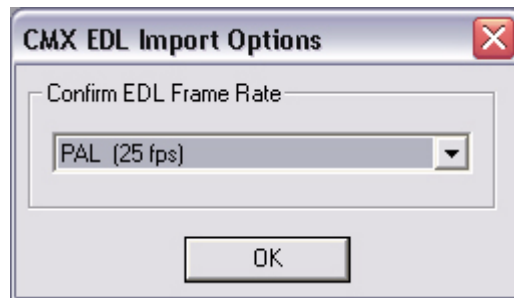
Keep open keeps the **CD Import** window open after the import is completed and grays out the Place in timeline, **Add Track Group** and **Add Disc & CD markers** options.

Clicking on the **Import** icon initiates the process. Unless **Keep open** is checked, the window closes when the import is complete.

CMX EDL

Importing a CMX EDL

Select **Project > Import** choose **CMX EDL** in the **InterChange-Import** dialog then click on the **Import** button. Select the desired edl file in the **Open** file-browser window. The CMX EDL Import Options dialog opens:



CMX EDL Import Options dialog

If the EDL Frame Rate is correct, simply click the **OK** button. Otherwise, select the correct rate from the drop down list and click the **OK** button. The CMX EDL Import Options main dialog opens. The **Settings Presets** buttons at the bottom of the box set the options for a variety of common CMX variants. If the edl you wish to import matches one of these, simply click the appropriate Preset button. The settings are reflected in the rest of the dialog. Click the **OK** button to begin the Import.

If the edl is not one of the common variants or the intention is to perform a partial or re-conform, make the appropriate choices in the dialog before clicking on the **OK** button to begin the Import.

OMF

OMF Import supports both OMF1 and OMF 2 format. Supports 10.5.3 / 11 sub-compositions.

When exporting OMF from another application, there is a choice of either embedding the audio files into the OMF file, or keeping them external as a link. Pyramix supports both approaches.

When importing an OMF file with embedded audio, Pyramix will ask if the user wants to extract the media files. Please answer **Yes** to this question only the first time the OMF file is imported. The OMF Media Handler also generates an external Waveform (.pk) file.

If the same file is imported a second time, there's no need to extract the audio twice, simply mount the folder where it's been extracted to, prior to importing the OMF file.

When importing an OMF file that references (links) to external audio files, the folder(s) that contain theses files must be Mounted in Pyramix before importing the OMF file. (This also applies to Sonic Solutions import).

Avid and AudioVision bins may be imported as a library. In a library tab window select:

Library > Import OMF library (Avid bin)

Note: Known limitation: OMF import doesn't support 24bits files for now.

ProTools

Note: Please see also: the PDF file 'Protools 5 InterChange with Pyramix 5' This file is installed with Pyramix 5.0 or it can be downloaded from:-

<http://www.merging.com>

Protools 5 InterChange with Pyramix 5.0

Importing and exporting Protools 5 sessions in Pyramix is accomplished via the InterChange architecture. This requires Pyramix 4.2 or higher and MacDrive 2000 or MacDrive 5 to be installed. MacDrive is a product of Mediafour Corporation, please see:-

www.mediafour.com

Importing a Protools session

Pyramix supports Protools version 5.0 or 4.x. If you're using a more recent version of Protools, first export your session as a version 5.0 session in Protools with the menu "**Save Session Copy in...**". This will create a set of SDII files along with the new session.

Bring your session with the audio files into the Pyramix station by mounting the Mac HFS disk or inserting the cartridge in the appropriate reader. Windows and MacDrive support all SCSI disks or removable storage like Jaz, MO, removable hard-disks, CD-R, DVD, etc.

If your session comes on multiple CDs (or cartridges) you can copy all the files directly to a Pyramix workstation disk. In this case the PC disk must be formatted as a NTFS volume. We recommend using NTFS for all disks.

Create an empty project in Pyramix or open an existing one.

Project > Import opens the **Interchange - Import** dialogue box. Select the appropriate import option from the three choices at the bottom using the radio buttons.

These are:

1. Replace the current project by removing all existing tracks, track groups and markers then creating new tracks, track groups and markers from the imported composition
2. Append the imported tracks at the bottom of current project tracks
3. Insert the imported tracks into the current project tracks

Then choose the **ProTools** module from the list. An explorer - style file dialog box **Import ProTools Session** will open, browse to the disk containing the Protools session, select it and click **Open**.

The Protools session should appear in your project Timeline, creating new tracks if needed.

Create or load a mixing console, connect your tracks and work with your session.

Exporting a Protools session

Load the Pyramix project you wish to export as a Protools session and from the Project Menu select the appropriate Export option and the Protools module and click OK.

Menu: **Project > Export** opens the **Interchange - Export** dialogue box. Select the appropriate export option from the two choices at the bottom using the radio buttons.

These are:

1. .Export whole composition including tracks, track groups and markers
2. .Export selection only

The latter choice will only be available if there is a selection or selections in the Timeline.

Then choose the **ProTools** module from the list and click **Export**. A dialog box, **Export ProTools Session File** will open. The top of this dialogue box is concerned with file saving and enables a suitable destination folder to be chosen or created, a file name to be entered and gives the choice of saving **ProTools Session *.*** or **All files *.*** By default, the file name entry box contains the name of the Pyramix project.

At the bottom of the dialog box **Export Settings** choices are made. Drop down lists offer the choice of saving in ProTools 5.0 or 4.* Session formats and 16 bits or 24 bits. If you wish to reduce the amount of data to be exported, select the **Consolidate** checkbox. When this is checked, the 'handle' length can be selected in the **Handle** text entry box from 0 to 999999 frames.

When you have selected the appropriate options and named the export file (or accept the default) click **Save** to complete the export.

Please see also: File Interchange with Apple Macintosh on page 250

AES-31

Straightforward Import and Export in AES-31 format.

Genex Cuepoint files are supported. If a **.CPT** file exists near the **.ADL** file, cue points will be converted to Pyramix markers.

DDP

Import DDP file.

Edited Master

Import Edited Master file.

Sonic Solutions

Straightforward Import in Sonic Solutions format. When importing an Sonic Solutions file that references (links) to external audio files, the folder(s) that contain theses files must be Mounted in Pyramix before importing the file.

Tascam Open TL

Straightforward Import and Export in Tascam Open TL format

XML

Straightforward Import and Export in XML format.

SACD EDL Export

Please see: **DSD / SACD Guide**

Report Printer

(includes EDL, Markers, CD TOC report sheet)

This program really needs a printer. Here is a way to add a printer when no physical printer exists:

1. Start the add new printer wizard. **Start > Settings > Printers > add Printer**
2. In the wizard choose **local printer** and deactivate **automatically detect**
3. Under "Use the following port" choose **File**
4. Select the printer that you will eventually use to print the file
5. The rest of the installation is the same as a standard printer installation

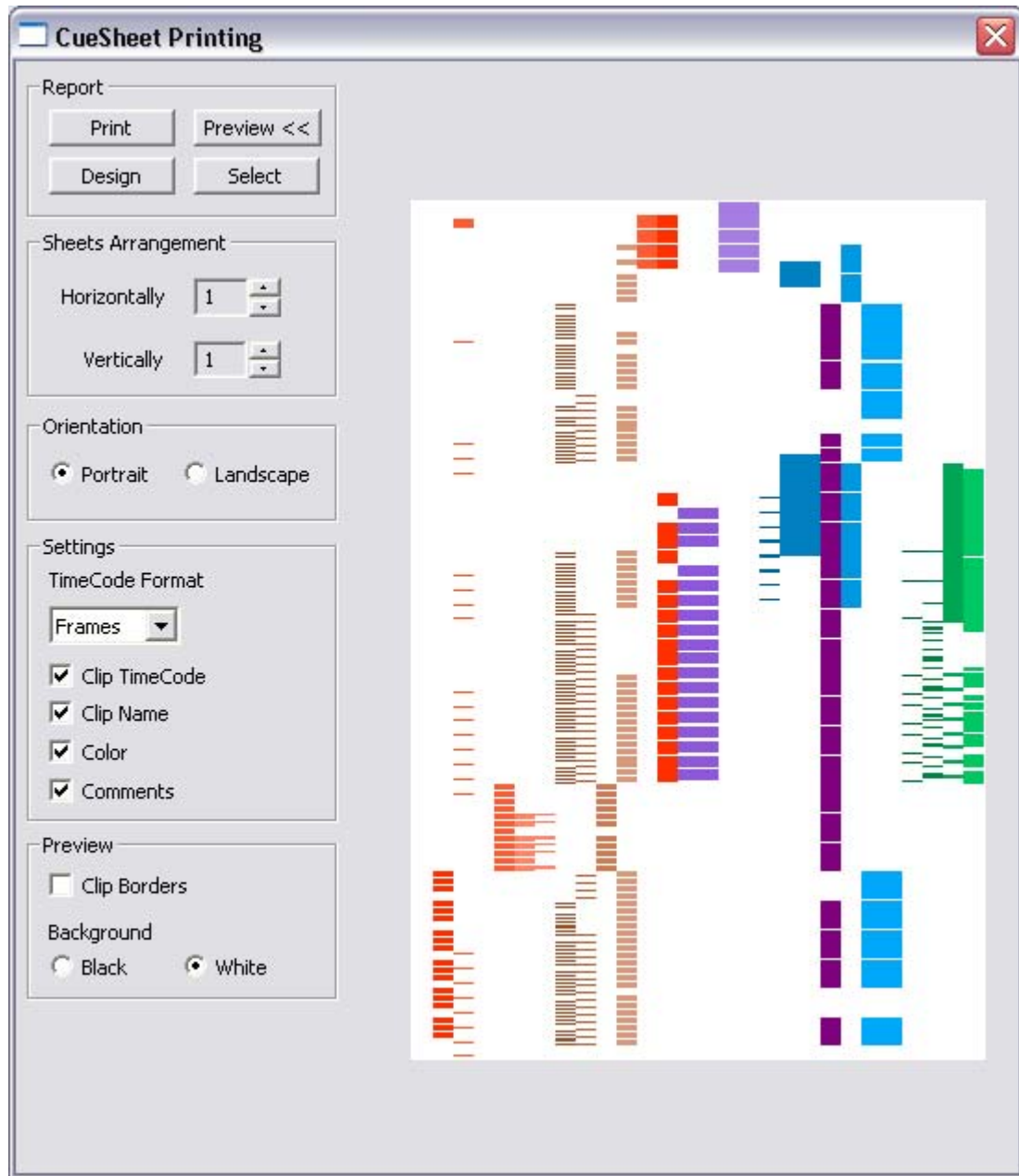
If you print a page test, a dialog will open and ask you the name of the file. Then enter the path where you want to write the file.

Cue Sheet Printer

The **Cue Sheet Printer** offers comprehensive options for printing out a graphic representation of the Timeline. Cuesheets are frequently a contracted delivery requirement which takes much time and effort to produce.

Select **Project > Export**. This opens the **Project Export** dialog box. Select **Cue sheets printer** and click on the **Export** button. (or simply double-click the **Cue sheets printer** entry)

The **CueSheet Printing** window opens. (Shown with the **Preview** option selected.):



CueSheet Printing Window

Report

Print

Click this button to print the cue sheet(s) with the selected options. This opens the **Print Options** dialog box unless the **Orientation** selected is different from the printer's default. If it is the **Paper Orientation conflict** dialog box pops-up with buttons which offer a choice of **Select other report**, **Change Orientation**, **Force** or **Cancel**. **Force** should make the printer change orientation for this print. Some printers will not accept this. If this is the case, see below.

Print Options dialog box

Offers the choice of which pages to print and the number of copies. Allows any installed printer to be selected and configured. If **Force** does not result in correct page orientation the printer page orientation can

be changed by clicking **Change** then **Select** in the next screen which should give access to the Printer's set up dialog with options dependant on the selected printer.

Preview

Adds a graphic preview of the Cue-Sheet(s) to the right-hand side of the window

Design

Opens the design software used to create the Cue-sheets. Please see the on-line documentation

Select

Opens a file browser. Saved Cue-sheets can be loaded for printing.

Sheets Arrangement

Horizontally and **Vertically** set the number of pages with the increment / decrement buttons. This also controls the time scaling.

Orientation

Portrait / Landscape

Toggle between vertical and horizontal page orientation.

Settings

TimeCode Format

Shows the TimeCode format which will be used on the cue-sheets from the choice in the drop-down list.
Frames, Samples, [ms] or CD Frames

Clip TimeCode

When checked, **Clip TimeCodes** will be printed

Clip Name

When checked, **Clip Names** will be printed

Color

When checked, the cue-sheets will be printed in the colors used in the original project. (With a color printer)

Comments

When checked, **Comments** will be printed

Preview

Clip Borders

When checked, clip borders are shown in the preview display.

Background

Black / White

Toggle the preview background color.

16

Conforming and Reconforming



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



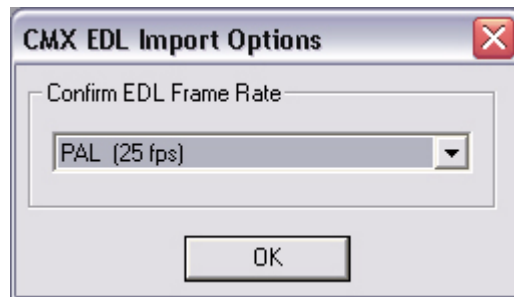
Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Conforming

Pyramix can conform audio to match a CMX format EDL and also reconform an existing project to match a CMX change EDL.

Importing a CMX EDL

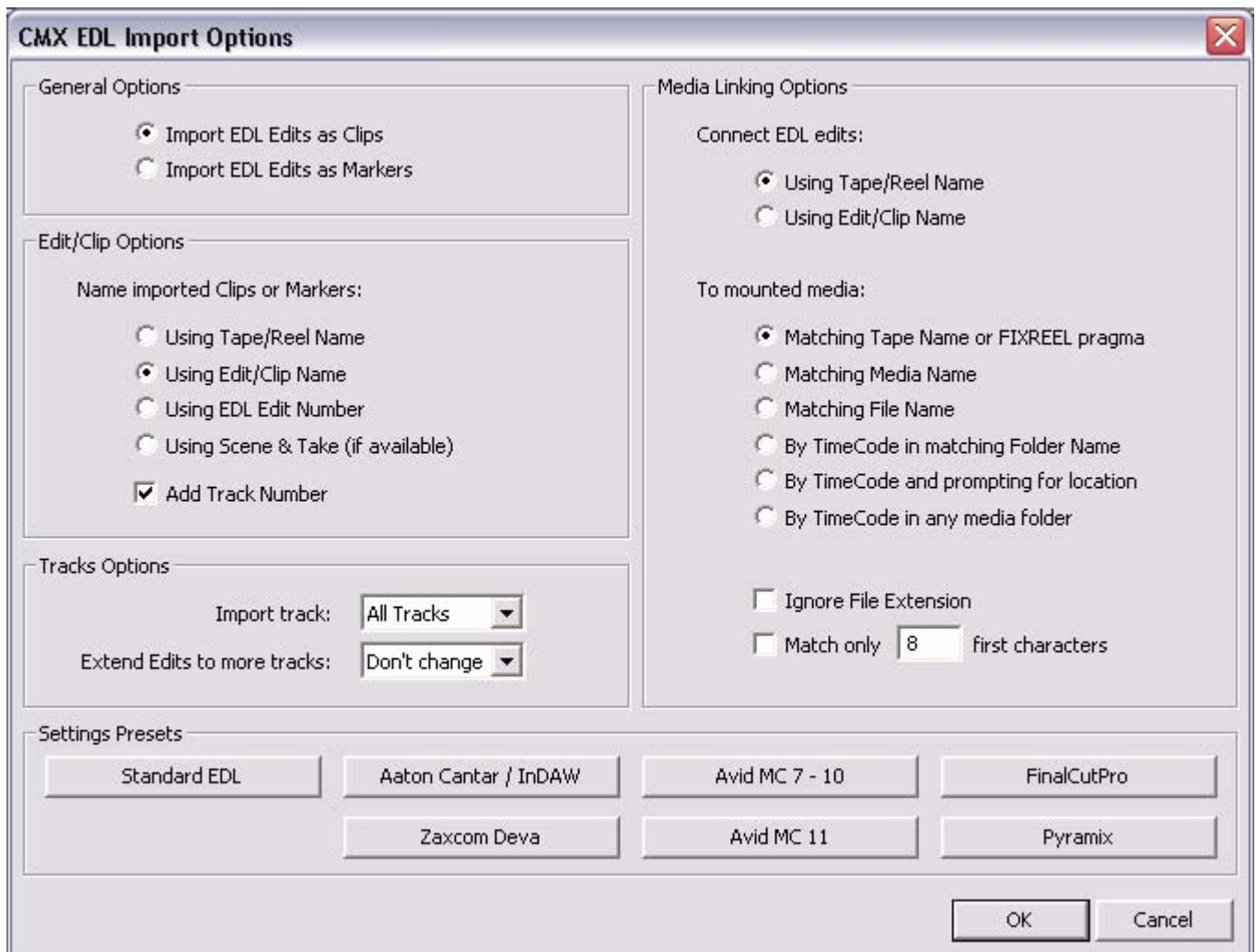
Select **Project > Import** choose **CMX EDL** in the **InterChange-Import** dialog then click on the **Import** button. Select the desired edl file in the **Open** file-browser window. The CMX EDL Import Options dialog opens:



CMX EDL Import Options dialog

If the EDL Frame Rate is correct, simply click the **OK** button. Otherwise, select the correct rate from the drop down list and click the **OK** button.

The CMX EDL Import Options main dialog opens.



The dialog box is titled "CMX EDL Import Options" and contains several sections:

- General Options:**
 - ☒ Import EDL Edits as Clips
 - ☐ Import EDL Edits as Markers
- Edit/Clip Options:**

Name imported Clips or Markers:

 - ☐ Using Tape/Reel Name
 - ☒ Using Edit/Clip Name
 - ☐ Using EDL Edit Number
 - ☐ Using Scene & Take (if available)
 - ☒ Add Track Number
- Tracks Options:**

Import track:

Extend Edits to more tracks:
- Media Linking Options:**

Connect EDL edits:

 - ☒ Using Tape/Reel Name
 - ☐ Using Edit/Clip Name

To mounted media:

 - ☒ Matching Tape Name or FIXREEL pragma
 - ☐ Matching Media Name
 - ☐ Matching File Name
 - ☐ By TimeCode in matching Folder Name
 - ☐ By TimeCode and prompting for location
 - ☐ By TimeCode in any media folder

☐ Ignore File Extension

☐ Match only first characters
- Settings Presets:**

Buttons for: Standard EDL, Aaton Cantar / InDAW, Avid MC 7 - 10, FinalCutPro, Zaxcom Deva, Avid MC 11, Pyramix
- Buttons:** OK, Cancel

CMX EDL Import Options dialog

Common CMX Variants

The **Settings Presets** buttons at the bottom of the box set the options for a variety of common CMX variants. If the edl you wish to import matches one of these, simply click the appropriate Preset button. The settings are reflected in the rest of the dialog. Click the **OK** button to begin the Import.

If the edl is not one of the common variants or the intention is to perform a partial or re-conform, make the appropriate choices in the dialog before clicking on the **OK** button to begin the Import.

CMX EDL import Options

General Options

Import EDL Edits as Clips

Import EDL Edits as Markers

Edit/Clip Options

Choose to name created clips from either:

Using Tape/Reel Name

Using Edit/Clip Name

Using EDL Edit Number

Using Scene & Take (if available) of linked media file. (E.g. BWF PMF etc. files with information in the **Scene & Take** fields)

Tracks Options

Import Track

Drop-down list offering a choice of importing **All Tracks** (default) or any individual track. Importing only the edits made on the first audio track. This can be useful with projects edited on a MediaComposer where the TimeCode of all audio tracks but the first one has been lost from files imported from a Deva recorder.

Extend Edits to more tracks Offers the choice of extending the edits to more tracks than the original list by selecting the desired number of target tracks from the drop down list.

Media Linking Options

Connect EDL edits: Choose the way to relink the audio media to edits by either:

Using Tape/Reel Name

Using Edit/Clip Name

from the EDL...

To Mounted Media: ... and match it to either

Matching Tape Name or FIXREEL pragma (the media original)

Matching Media Name (the media original)

Matching File Name (the media original)

By TimeCode in matching Folder name (the media Timestamp in a folder whose name matches the Reel or Edit name)

By TimeCode and prompting for location (the media Timestamp in a given folder)

By TimeCode in any media folder (the media Timestamp in any mounted media folder)

Ignore File Extension When checked any file extension is ignored while comparing file names

Match only X first characters When checked only the given number of first characters in the filename are compared. (useful for matching files coming from Aaton Cantar or InDAW recorders)

CMX EDL Format

CMX Edls are a set of statement lines which typically look like this:

TITLE: An example of CMX EDL

001 TEST AA C 00:00:24:24 00:00:25:00 00:59:58:00 00:59:58:01

AUD 3 4

* Sine on all tracks

002 DAT12 AA C 20:18:18:07 20:18:21:13 01:02:40:02 01:02:43:08

* Introduction

003 TAPE1 AA C 01:15:07:07 01:15:11:13 01:02:43:13 01:02:47:19

004 TAPE1 NONE C 01:15:14:02 01:15:16:04 01:02:47:19 01:02:49:21

AUD 3 4

```
005 TAPE1 NONE C 1000Hz      01:15:14:02 01:15:16:04 01:02:47:19 01:02:49:21
```

```
006 TAPE1 NONE C "A sound" 01:15:14:02 01:15:16:04 01:02:47:19 01:02:49:21
```

Pyramix will extract all the information regarding audio from these EDLs and then paste a set of clips into the current composition's Timeline.

There are many CMX formats which differ in details, Pyramix should be tolerant enough to accept most of them as long as edit lines fields are well separated by spaces or TABs.

Any errors encountered while parsing an EDL file are stored and reported after loading as much of the file as possible. Any non valid lines, missing media or media sampling rate mismatches are reported.

Media Reconnection

The major problem encountered while importing an EDL is reconnecting to referenced media. Pyramix needs all referenced media to be present (mounted) when the import occurs. After the import, the newly created composition **MUST** be saved as a Pyramix project to keep the connection between clips and media.

Media are searched while importing the EDL by Media Source name (or Reel name following the EDL terminology), and Source In and Source Out TimeCodes. So, to be reconnected, a clip needs to find in any media folder a media file with a Media Source name matching field #2 in the EDL, in the preceding example TEST, DAT12 or TAPE1, and where the original TimeCode and length match the Source In and Source Out field.

Source Names - FIXREEL

It often happens that the media is generated with a different Source (Tape, Reel) name than the EDL referencing it. For this purpose we have added a special keyword to the CMX language which allows Pyramix to replace one Reel name with another while parsing the EDL.

FIXREEL: DAT12 DAT012 This preamble added at beginning of the file will replace all occurrences of the reel name DAT12 by DAT012. The preamble can be preceded by the comment asterisk (and a space or TAB) so the EDL remains compatible for import by other systems:

```
* FIXREEL: DAT12 DAT012
```

It is also possible to add the keyword MEDIANAME, FILENAME or FOLDERNAME at the end of this line to tell Pyramix, instead of the Source (Tape, Reel) name, to search for the Media name or the Media File-name:

```
* FIXREEL: DAT12 Ambiance43b MEDIANAME
```

```
* FIXREEL: DAT12 d:\pmxmedia\dat12\ambiance43b.wav FILENAME
```

or to search by TimeCode in the given mounted media folder (this is kind of a conformation to existing digitized material):

```
* FIXREEL: DAT12 d:\pmxmedia\dat12 FOLDERNAME
```

The keyword OFFSET followed by a TimeCode can be added at the end of the line to allow media without origin (original TimeCode, source TimeCode, time stamp) to be referenced, for example WAVE files.

```
* FIXREEL: DAT12 Ambiance43b MEDIANAME OFFSET 08:45:32:00
```

* FIXREEL: DAT12 d:\pmxmedia\ambiance43b.wav FILENAME OFFSET 08:45:32:00

This covers most cases of media reconnection and should help solve special cases of EDLs exported by exotic systems.

Media Reconnection Failure

An imported clip whose media has not been retrieved or whose media is not at the same sampling rate as the current project will be associated a 'fake' media.

It **WILL NOT** be possible to retrieve its media file after the import, but it will be possible to associate a new media file in the standard way (Control key pressed while dragging a media file from a media folder).

CMX Autoconform

When an CMX EDL is not accompanied by audio files on disk an **Autoconform** can be performed. A **Digitizing Session** is used to grab the audio referenced by the CMX EDL from an external machine (This may be operated under 9-pin control or simple time-code chase). The CMX EDL can then be imported into an **Editing Project** (as described above) to link to the digitized media.

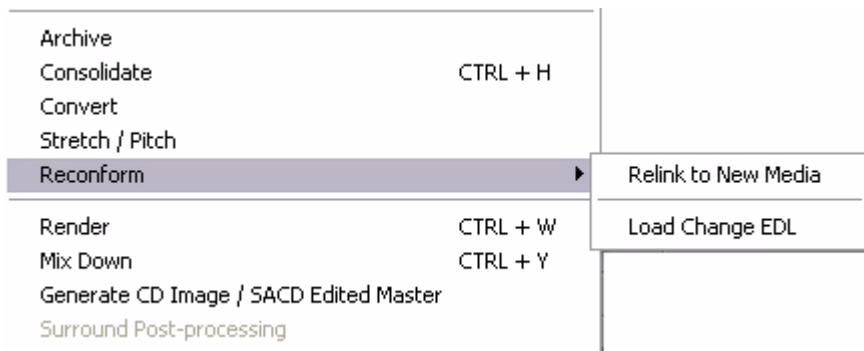
Please see also: **Digitizing Sessions** on page 78

Reconform

CMX Reconform

The **Reconform** function allows recuts to be applied to a project by loading a so called "Change EDL". This EDL is a standard CMX EDL generated from a "State 1 EDL" and a "State 2 EDL". The **Reconform** function rearranges Cues within the current project where necessary to reflect the change from State 1 to State 2 by creating edits on all tracks of the project using the original material as sources and placing them to the new destination TimeCodes.

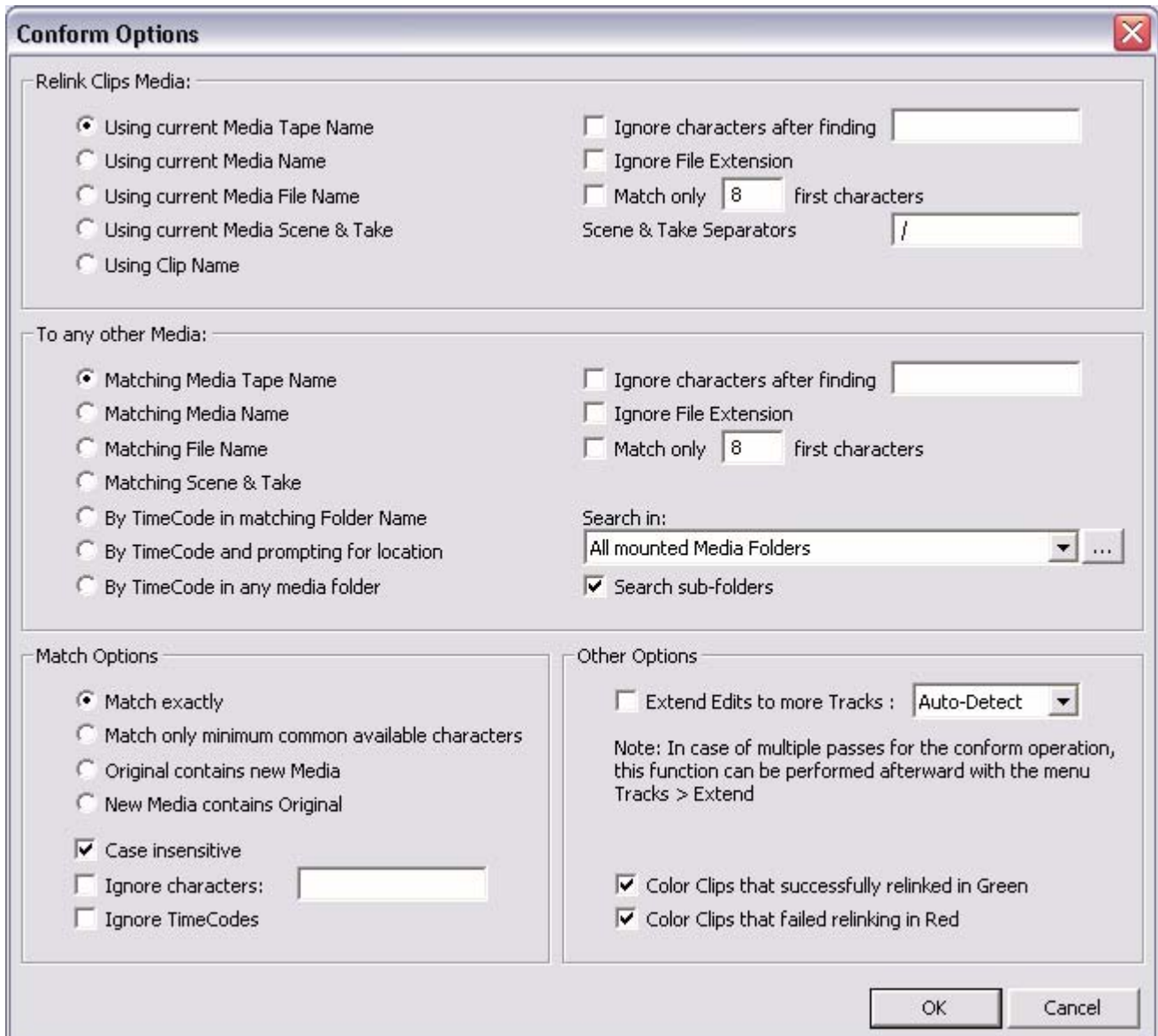
Menu: **Project > Reconform**



Project Menu - Reconform Sub-menu

Relink to New Media

Opens a dialog offering various options similar to the CMX Import function.



The dialog box is titled "Conform Options" and contains three main sections:

- Relink Clips Media:**
 - ☒ Using current Media Tape Name
 - ☐ Using current Media Name
 - ☐ Using current Media File Name
 - ☐ Using current Media Scene & Take
 - ☐ Using Clip Name
 - ☐ Ignore characters after finding
 - ☐ Ignore File Extension
 - ☐ Match only first characters
 - Scene & Take Separators
- To any other Media:**
 - ☒ Matching Media Tape Name
 - ☐ Matching Media Name
 - ☐ Matching File Name
 - ☐ Matching Scene & Take
 - ☐ By TimeCode in matching Folder Name
 - ☐ By TimeCode and prompting for location
 - ☐ By TimeCode in any media folder
 - ☐ Ignore characters after finding
 - ☐ Ignore File Extension
 - ☐ Match only first characters
 - Search in: ...
 - ☒ Search sub-folders
- Match Options:**
 - ☒ Match exactly
 - ☐ Match only minimum common available characters
 - ☐ Original contains new Media
 - ☐ New Media contains Original
 - ☒ Case insensitive
 - ☐ Ignore characters:
 - ☐ Ignore TimeCodes
- Other Options:**
 - ☐ Extend Edits to more Tracks :
 - Note: In case of multiple passes for the conform operation, this function can be performed afterward with the menu Tracks > Extend
 - ☒ Color Clips that successfully relinked in Green
 - ☒ Color Clips that failed relinking in Red

Buttons: OK, Cancel

Reconform Relink to New Media Options dialog

This allows relinking all or a selection of clips to new media. Typically, this is used for replacement of 16 bit versions of audio files with 24 bit versions based on the clip name, media name, Scene & Take information or original TimeCode.

Relink Clips Media Gives options to extract a string from the original clip:

Using current Media Tape Name

Using current Media Name

Using current Media File Name

Using current Media Scene & Take

Using Clip Name

With various options applicable to the above:

Ignore characters after finding...	ignores the rest of the string after a given substring is found
Ignore File Extension	ignores any characters after the last dot
Match only ... first characters	ignores all characters after a given number
Scene & Take Separators	gives a choice of characters to be used to separate a Scene name and a Take name from the string.

Note: Note: this is relevant only for Tape, Media and Clip Name, as Scene & Take are already properly separated in a Media Scene & Take tag.

To any other Media gives options to find which information to use from the Media that will be searched:

Matching Media Tape Name

Matching Media Name

Matching Media File Name

Matching Media Scene & Take

By TimeCode in matching Folder name	Any Media with overlapping TimeCode in a folder with a matching name
By TimeCode and prompting for location	Any Media with overlapping TimeCode with prompting for the folder name/ location
By TimeCode in any media folder	Any Media with overlapping TimeCode

With various options:

Ignore characters after finding...	ignores the rest of the string after a given substring is found
Ignore File Extension	ignores any characters after the last dot
Match only ... first characters	ignores all characters after a given number of them
Search In	allows the choice of which Media Folder to search in
Search sub-folders	When checked sub-folders are searched

Match Options Offers options for the matching algorithm:

Match exactly	both strings must be identical
Match only minimum common available characters	Take0001.new.01 will match with Take0001
Original contains new Media	Take0001 will match with 0001
New Media contains Original	0001 will match with Take0001
Case insensitive	TAKE0001 will match with Take0001
Ignore characters...	if, for instance, /_+- are specified then 12-A/0001 will match with 12/A_0001
Ignore TimeCodes	no checks are made on Original TimeCodes (timestamps). This allows media with erroneous/lost timestamps to be replaced with the correct ones or vice-versa.

Other Options

Extend Edits to more tracks	When conforming a clip referencing multiple tracks to a clip referencing a mono media file adds a new clip (with the same fades, etc...) for all of these tracks as well.
------------------------------------	---

Note: In the case of multiple passes for the conform operation, this function can be performed afterwards with the menu item **Tracks > Extend** This automatically extends the number of tracks to accommodate all the Media channels of each of the clips of one or more timeline track(s)

Color Clips that successfully relinked in Green

No comment

Color Clips that failed relinking in Red

no comment

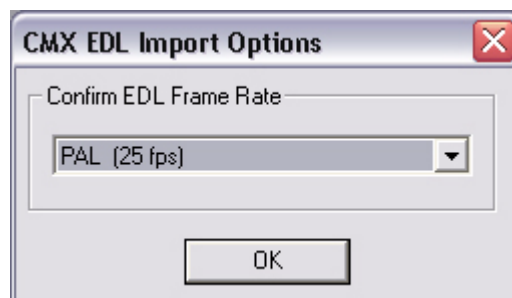
Load Change EDL

Opens the **Reconform...** dialog:



Reconform... dialog

Changes made to the automation during the Reconforming process cannot be undone. For this reason it is better to save a copy and reconform that. Clicking the **OK** button opens a file browser window to enable the "changes" EDL file to be chosen. Clicking **OK** opens the **CMX EDL Import Options**, **Confirm Frame Rate** dialog



If the Frame Rate is incorrect, choose the correct one from the drop-down list. Clicking **OK** begins the reconform process.

17

Customizing Pyramix



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Customizing the User Interface

Pyramix Virtual Studio allows considerable customization of the user interface. Apart from the usual Windows interface possibilities Pyramix has **Interface Editors**, user defined **Workspaces**, customizable **Keyboard Shortcuts** and user defined **Macros**.

Desktop Layout, **TimeLine Layout** and **Track Headers Layout** are designed in **Settings > All Settings > Application**

Workspaces

Workspaces are a method of saving many of the Pyramix Project Editing Panel settings, especially **Track Header** switches. Once saved a Workspace can be quickly recalled for future use.

Workspaces can be accessed via the pull down menu on the Pyramix Virtual Studio Window toolbar or via the Project Management Panel Tab.

New Workspaces can be added by clicking 'Click here to add a new Workspace' on the first line of the Tab Window. A text entry box opens where you type a name for the new Workspace. Hitting **Return** places the new Workspace at the bottom of the list.

Workspaces may be re-named by clicking the name.

Workspaces can be deleted by selecting them and pressing the 'Delete' key.

Applying a Workspace is done by double-clicking on the Workspace icon to the left of the name, or select the menu item **Workspaces > Recall > Recall Workspace (X)**

Parameters remembered by Workspaces are selectable per Workspace by clicking in the appropriate columns.

If the 'Update on change' column is set to 'Yes'. The current state of all selected parameters is saved to the current Workspace when another Workspace is selected.

Customizing Keyboard Shortcuts

We strongly encourage you to learn the default Pyramix keyboard shortcuts. These have been used by audio professionals for over a decade, and are powerful, quick and efficient for audio editing and device control. However, if you are already familiar with another style of audio or video editing, you may wish to create your own **Keyboard Shortcuts** for various Pyramix transport and editing functions.

To define your own **Keyboard Shortcuts**:

1. Choose **View > Customize > Keyboard Shortcuts** from the **Toolbar**. This opens the **Keyboard Shortcuts** window.
2. All menu **Commands** are grouped together into **Tabs** within this window. Select the **Tab** with whichever group of **Command** Functions you wish to add or change key assignments for.
3. Click on the appropriate **Command** so that it is highlighted.
4. Click in the **Press new shortcut key** box. The cursor will become a blinking bar.

5. Now press the desired **Key** or combination of **Key** and modifier (e.g. the **Ctrl**, **Shift**, **Alt**, etc.). These will appear in the **Press new shortcut key** box. Note that Pyramix will warn you if the chosen **Key** or combination is already assigned to another function.
6. Click the **Assign** button.
7. Continue assigning **Keys** to **Commands** until you are satisfied.
8. Any set of user defined **Keyboard Shortcuts** can be saved as a **Preset**. To do so, click the **Save Preset** button, then name the **Preset**. Similarly, to recall a previously saved **Preset**, click in the **Presets** box and select it from the pop-up list. Note that several common **Presets** are shipped with **Pyramix Virtual Studio**. The Table will be saved in the system for the user currently logged in and will not affect any other user.
9. A table can be Saved or Loaded to a file so it can be taken to an other system. Just Click on the Save Table or Load Table button.
10. A table can be exported as a Text File along with some comments about commands. This is very useful since it enables you to print it as a command reference guide with your own keyboard shortcuts.

Example:

Many users with a video editing background will be familiar with the J, K and L keys assigned to Reverse Play, Stop and Play respectively. To make these assignments:

1. Choose **Settings > Keyboard Shortcut Editor** or **View > Customize > Keyboard Shortcut Editor**
2. Select the **Active Machine Tab**
3. Click on the **Play Reverse** Command to select it.
4. Click in the **Press new shortcut key** box.
5. Type **J** (Notice **J** is not currently assigned to any function)
6. Click **Assign**
7. Click on the **Stop** Command to select it.
8. Double click the **J** in the **Press new shortcut key** box to highlight it.
9. Type **K**
10. Click **Assign**.
11. Repeat steps **7 to 10** substituting **Play** and **L**
12. Save the **Preset**. It is immediately active.

User Macros

Macros are sequences of commands which can be invoked by a single keypress or combination. Macros can be a very powerful aid to productivity.

To define a new **Macro**:

1. Choose **Settings > Macro Editor** or **View > Customize > Macro Editor**. This opens the **Macros** window.
1. Click the **New Macro** button, then name the Macro.
2. Various menu **Command** functions are grouped together into **Tabs**. Select the **Tab** with whichever group of **Command** Functions you wish to add to the Macro.

3. Click on the appropriate **Command** so that it is highlighted.
4. Press the << button to add this command to the **Macro**.
5. Repeat steps 3 to 5 to assign further **Commands** to the **Macro** until it is complete.

A **Keyboard Shortcut** can now call the new **Macro**. Follow the instructions in the previous section for assigning **Keyboard Shortcuts**. In this case, choose the **Macro Tab** within the **Keyboard Shortcut** window. Your new **Macro** will appear as an option inside this window.

18

Applications



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



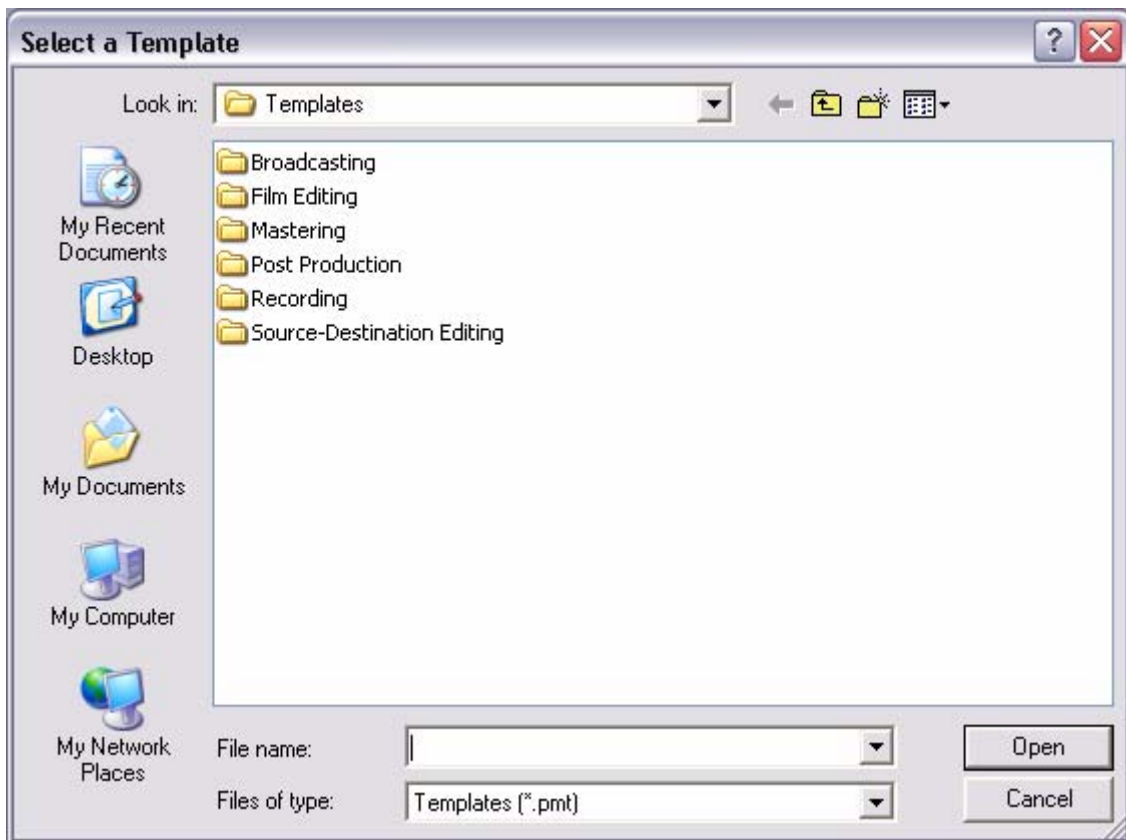
Virtual Transport
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Project Templates

Pyramix provides the user with a number of **Templates** for various applications. A Template is a complete Pyramix Project, without any associated audio, specially configured to suit a particular type of activity. Apart from configuring the appearance of Pyramix, the track layout and mixer design, templates also include important optimizations to suit the activity.

Please see: Optimizing Pyramix on page 300

These templates also offer a good starting point for creating your own customized templates. To begin a new project using a template choose **Project > New from Template** which opens the **Select a Template** file browser.



Select a Template dialog

When a template is opened a dialog box appears requesting the user to choose a **Media Folder** for the new project. Unless the project is saved using the **Save As** option, the first time it is saved the **Save As** dialog will appear.

Further Templates will be added as they are developed.

To save a new Template choose **File > Save as Template**, name and save.

Virtual Multi-track

A number of **Templates** suitable for multi-track recording are provided with Pyramix. These **Templates** have all the required settings already in place. If none of the supplied Templates is exactly suitable for your task it will save time if you modify the one closest to your needs and save it as a Template for future use.

Settings for Multi-track recording

Multi-track recording can be demanding on disk performance, DSP and the host CPU. In order to optimize Pyramix for the purpose if not using one of the supplied Templates the following settings should be made in the **Record Page**:

- Flatten Track Numbers: **OFF**
- Quiet if creation failed: **ON**
- Prompt for name at end of recording: **OFF**
- Keep in default library: **OFF** (Should always be **OFF**)

Suggested Settings

- Group Recorded Clips: **ON**
- Increment Take Number: **ON**
- Prefix with Track Name: **ON**

To Record audio directly into the Tracks of a Project, using Pyramix Virtual Studio as if it were a tape machine:

1. Set the **Destination Drive**, **Resolution** and **Format**.
2. **Arm** each **Track** on which you wish to record. In this case, set each **Track** to **Record Ready** mode (simple **Red Dot**).
3. Check your input levels using the **Mixer**, and adjust as appropriate.
4. Position the **Play Head Cursor** in the **Composition** where you wish the recording to start.
5. Click the red **Master Record** button in the **Transport Strip** or **Transport Window**. The recording will begin, and display a red bar in those **Tracks** you have armed for recording.
6. Press the **Stop** button in the **Transport Strip** or **Transport Window** to stop the recording. A **Record Name** dialog box will appear.

If you are satisfied with the recording, type an appropriate name into the **Record Name** box and click the **Good Take** button. This will save an audio **Media File** of the selected type onto the selected **Media Drive**, with the name you just chose and place a **clip** in the **Timeline**, also with the same name. If you are not satisfied with the recording, click the **Delete Take** button and the recording will not be saved. The third option is **Bad Take**. A **Bad Take** is saved and a **clip** placed in the Timeline just like a **Good Take**, but the **clip's** color is set to a specific color (definable in the **Settings > All Settings > Application > TimeLine Layout** page) and are numbered the following way: Take 1, Take 2, Take 3 (Bad 1), Take 3 (Bad 2), Take 3 (Bad 3), Take 3, Take 4, Take 5 (Bad1), Take 5, and so on... This helps manage takes where there are mistake(s) but the user wishes to keep them anyway.

To Punch In audio directly into the Tracks of a Project, using Pyramix Virtual Studio as if it were a tape machine with punch in capabilities:

1. Set the Destination Drive, Resolution and Format as above.
2. Arm each **Track** on which you wish to punch in. In this case, set each **Track** to **Record Punch In** mode (**Red Dot with 2 vertical bars**). (**alt-click** on the round **rec/play** button in the track header).
3. Check the input levels using the **Mixer**, and adjust as appropriate.
4. Mark a punch in record **In** and **Out** point. This can be done either by marking a selection area on a **Track**, or by setting a **Mark In** and **Mark Out** on the **Time Scale** bar. The simplest way to mark a selection area on a **Track** is to click and drag in the **Track**: a darker gray rectangle indicates the selected area. The simplest way to set a **Mark In** is to **Shift-click** on the **Time Scale** bar: a movable red triangle

and vertical line indicates the **Mark In**. The simplest way to set a **Mark Out** is to **Ctrl-click** on the **Time Scale** bar: a movable green triangle and vertical line indicates the **Mark Out**. A selection takes precedence over Mark In and Out for punch in.

5. Position the **Play Head Cursor** before the marked **In** point or **Selection** area.
6. Press the red master **Record** button in the **Transport Strip** or **Transport Window**. The **Play Head** will begin moving through the **Composition**, and **Tracks** will begin playback. Recording will begin on the armed **Tracks** as soon as the selection area or **Mark In** point is reached during playback. A red bar will be displayed in those **Tracks** which are recording.
7. The recording will stop automatically when the selection out or **Mark Out** point is reached. The **Play Head Cursor** will continue playing through the **Composition**.
8. Press the **Stop** button in the Transport Strip or Transport Window to stop playback. A **Record Name** dialog box will appear with the same options as a normal recording.

Player/Recorder Mode

Settings > All Settings > Project > Mixer > DSP Saving : Special modes section.

This mode allows big configurations (such as 48 x 48 channels) to run on a single board. Player/Recorder Mode is intended for use with an external hardware console. When this mode is activated, the Pyramix mixer is relegated to the role of signal router, there is no level control, no panning, no plug-ins and no inserts. This option is only available in configurations with multiple mono mix busses.

The Pyramix **Direct Out** functionality provides an alternative, more user configurable, method of achieving similar DSP savings. **Please see: Channel Direct Outputs on page 132**

Multitrack Editing

Pyramix is ideally suited for editing multitrack recordings. Grouping clips across all tracks used for the recording allows edit decisions to be made while listening to a single track or several with the resulting edit changes reflected in all the clips in the group. Track Grouping functions enable you to work in a way that suits you. The Source - Destination editing model is just one possibility.

Please see the following sections:


Grouping Clips on page 84

Track Groups on page 21

Source - Destination Editing on page 103

Editing with Limited Hardware

Multi-track recordings with many tracks (E.g. 48 track 96kHz 24 bit music recordings) can be edited on hardware which cannot support this number of tracks. (E.g. a laptop) Simply mute tracks that do not need to be heard using

the  button in the Track Header. Tracks muted here, rather than in the mixer, no longer access the disk. Providing the Multitrack recording's Clips are grouped across all tracks, then any editing changes made on the tracks used for the editing guide sound will also be reflected in the muted tracks.

LTC sync

EXAMPLE - where a cinema projector must be the master

- Cinema projector follows mains (or is crystal controlled) and sends biphasic signal to a Biphasic -to LTC converter. (E.g. the Rosendahl BIF)
- Converter's LTC output is directly fed to Pyramix LTC input
- Pyramix is set to "LTC sync" mode and will adapt it's own internal clock to sync to LTC whenever the Pyramix is set to lock and the external LTC is recognized to be playing at about 1x forward speed.
- Pyramix feeds it's own clock to the DA-88 (or similar machine used as an A/D converter) via Wordclock.
- The DA-88 (or equivalent) is set to sync to external Wordclock
- The DA-88 in turn provides the Pyramix TDIF daughtercard input with digital audio data.

All LTC sync ballistics in the Pyramix software have been carefully designed to both allow a large locking range (-7 to +5%) while still exhibiting extremely low instantaneous jitter and more importantly a controlled maximum speed change slope - not more than about 25 PPM per ms (25 Parts Per Million/millisecond) - in order to make sure that any other digital audio equipment connected to it's Wordclock output is provided with a smoothly changing clock speed (free of any abrupt speed changes). When used with Tascam digital multi-tracks such as the DA-88 this in turn allows the TDIF input decoding circuitry in Pyramix to properly decode the digital audio data at all times without disruptions while the complete system follows the actual master speed changes.

Driving the pyramix with the LTC output of the DA-88 is maybe possible in some situations but will demonstrate several limitations which should not occur if you precisely follow the recommended setup as described above. Keep in mind that the DA-88 does exhibit big instantaneous 1000 PPM (0.1%) speed changes and this prohibits proper TDIF decoding at the other end.

Dubbing Mode

This mode is provided principally for film re-recording. It allows tracks to be Armed or Disarmed for recording while recording is taking place.

Dubbing Mode is selected via **All Settings > Settings > Project > Record**

Enable Dubbing

When checked, **Dubbing Mode** is engaged.

Confirm Track Arming

Only available when **Dubbing Mode** is selected in the adjacent check box. A check in this box means that any changes to track arming made whilst recording must be confirmed by a new Record command before they will take effect.

Example

When recording a final mix in stems (E.g. Dialogue, Effects and Music) you may well wish to retain a previous take for, say Effects, until a certain point. This can be achieved by arming the Dialogue and Music Track Groups, playing the transport and punching into record at the desired point. Once in record, the Effects Track Group can be dropped straight into record at the appropriate moment by simply arming it, or if

the **Confirm Track Arming** box is checked, by arming it and, applying a second record command when you wish to begin recording. (either on screen or via MMC, 9-pin etc.)

Virtual Tape Mode

This media format type / mode allows real destructive punches to be made directly into BWF files.

Virtual Tape Format

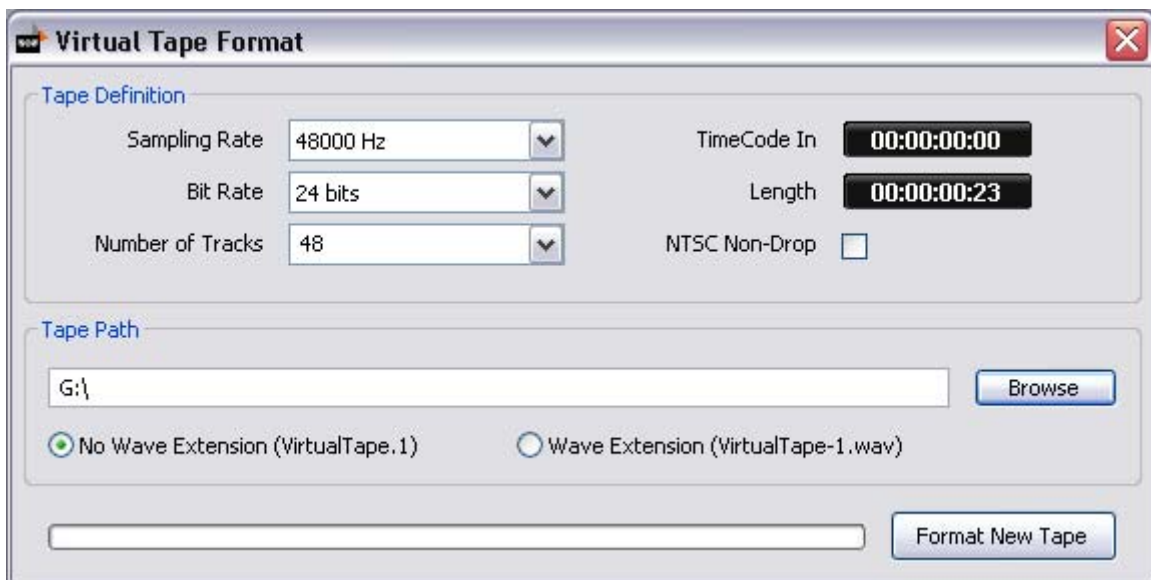
A separate application allows a Virtual Tape to be prepared.

Start > All Programs > Pyramix > VirtualTapeFormat

Before running the application, format a 10'000 RPM SCSI disk using FAT32 if you wish to plug the disk directly into a Mac later or NTFS if you intend to copy the files to another disk at the end of the session.

Use 64K as the Sector Allocation Unit Size when formatting the disk.

Launch the **Virtual Tape Format** application and make the desired settings for these parameters:



Virtual Tape Format Application Window

Sampling Rate

Bit Rate

Number of Tracks

TimeCode In (Original TimeCode / TimeStamp)

Length of the tape

Check the 'NTSC Non-Drop' box if you wish to have a tape that will (virtually) run at 1001/1000 (this just ensures the TimeStamp and Length will be correct)

Choose a location in the SCSI drive where you wish to create the tape

Click Format New Tape

A set of (slightly enhanced) BWF files will be created in the target folder (one per track).

There can be only one Virtual Tape per folder. The application will refuse to create a second tape in a folder where one already exists.

Do not attempt to move or copy the tape once created as this would suppress the block interleaving on the disk made by **Virtual Tape Format**. Even if you feel that copying a “template tape” from another disk would be quicker, that wouldn’t align properly the tape blocks to the disk blocks.

The resultant files are standard BWF files and will be recognized as such by any other application.

Only Pyramix sees them as Virtual Tapes. In the future we will find a way to let Pyramix decide to see them as BWF files instead of Tapes to allow editing them when the dubbing session is over. (Please see **Known Limitations** below for a temporary solution)

Pyramix Settings for Virtual Tape Mode

Open Pyramix and go into the **Settings > All Settings > Application > Playback/Record** page.

- Enter the value **‘262144’** in the **Playback Buffer Size** entry box and click **‘Set’**
- Select **96 KB** in the **Record Block Size** box.
- In the **Jog/Chase** page you should uncheck **‘Silent Chasing’**. Even if checking this setting would reduce locking time, you would still have to wait for the Virtual Tape buffers to be filled after Pyramix is locked before entering Record.
- In the **Layout** page Uncheck **‘Generate waveform automatically at clip insertion’**
- Create a Pyramix recording project with the same number of tracks you specified in the **Virtual-TapeFormat** application.
- Ensure you select the correct sampling rate, corresponding to your ‘tape’.
- Mount the folder in which the tape has been created.
- Select the tape and in the **Media Manager** menu choose **Edit > Place**. Select **‘Place at Original TimeCode on Original Track’** and click **OK**.
- Select the menu item **View > Zoom > Fit in Window**. Your tape should be at its proper location in the Timeline.
- Now go into the **Project > Information & Settings : Record Settings Page**:
- Select the **Media Folder** where your tape resides
- Select the **Resolution** you specified for your tape
- Select **‘Virtual Tape’** in the Format box
- Enable **Dubbing Mode**
- Check **One file per track**
- Uncheck **Flatten track numbers**
- Check **Don’t create Playlists**
- Uncheck **Name is Scene & Take**

You should now be able to use Pyramix normally.

Note the Following:

- Any punch-ins will be destructively performed on the Virtual Tape. There is no undo!
- No new clips will be created for each punch-in, only the underlying tape will be modified.
- Any attempt to punch-in outside the tape will fail.

Known limitations:

- Punching in on fresh parts of the tape (still silent) may result in small clicks at the punch-in points for now. Fades on Punch-ins in Virtual Tape Mode will be implemented soon.
- For now, there is no waveform support.

Discontinuous TimeCode

Auto-Punch mode allows a whole tape with discontinuous TimeCode to automatically be recorded.

- Set all desired tracks is auto-punch mode
- Place Mark In at 00:00:00:00 and Mark Out at 23:59:59:24 (default values for a new project)
- Plug LTC Out from the tape machine into Pyramix
- Set Chase mode to HARD CHASE
- Rewind the tape
- Press Play on the tape machine

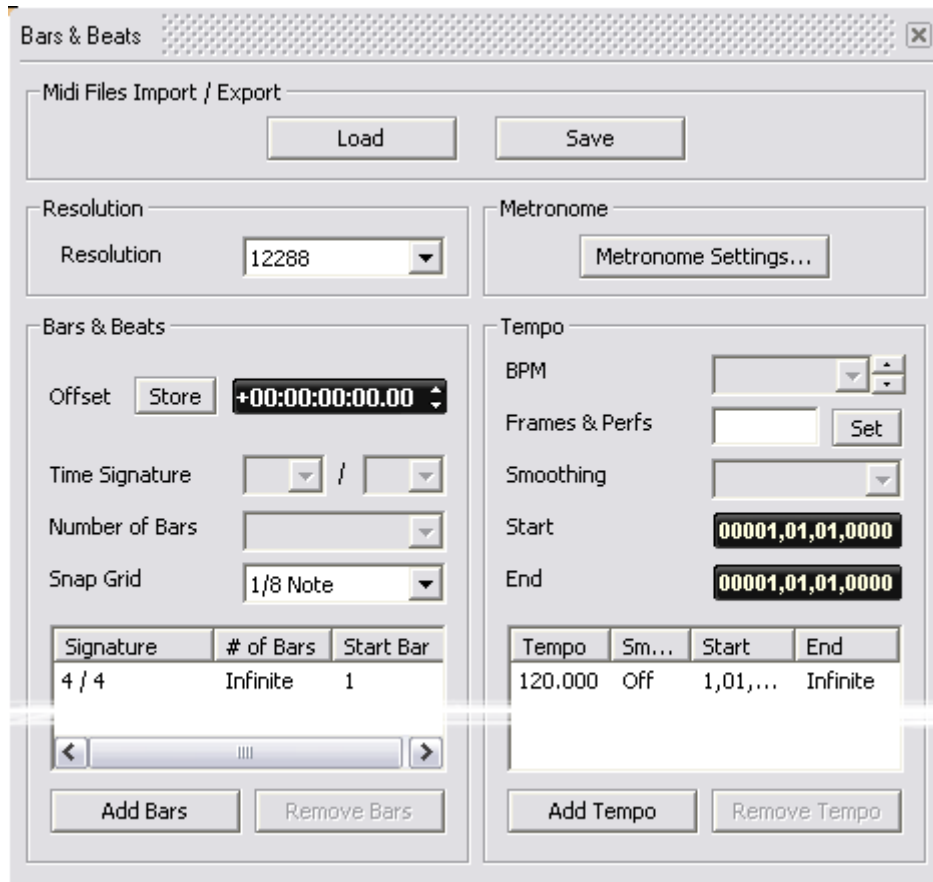
Each time a valid TC is encountered Pyramix will lock and start recording a new clip, then stop when the timecode jumps. A separate media file will be created for each continuous timecode on the tape.

Metronome / Click Track

To obtain an audible **Metronome** or **Click-Track**, first add a **Bars & Beats** ruler by going to:

View > Scales / Toolbars and clicking on **Bars & Beats**
(Alternatively use the keyboard shortcut **ALT + B**)

Open the **Bars & Beats Settings** dialog in the same, **View > Scales / Toolbars**, sub-menu.



Bars & Beats Settings dialog

Set up a suitable **Tempo** for your needs by adding a new one. First choose a **Tempo** and **Smoothing** value then set the **Start** and **End** times in bars and beats. Click on the **Add Tempo** button to add your new Tempo to the list. You may wish to delete any others.

Tip: Select **View > Scales / Toolbars > Tempo Map** to see the new Tempo in the Timeline.

Tempo (bpm) Allows you to pick a tempo from the common values in the drop-down list, to increment or decrement in 1bpm steps with the up and down buttons or to directly type a value in the box.

Smoothing Enables values between **Note** and **1/64** . to be chosen. (or **OFF**)

Start

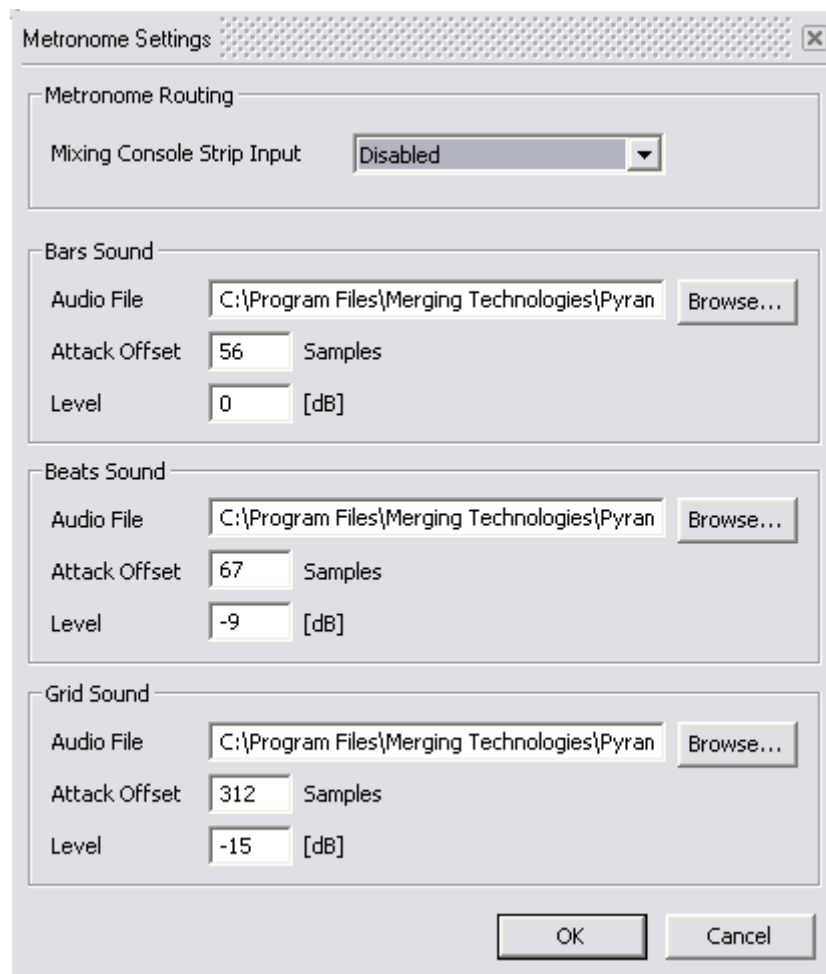
End

The Information pane shows all currently defined Tempos. The **Tempo**, **Smoothing**, **Start** and **End** fields reflect the values for the highlighted (selected) Tempo.

Add Tempo Adds another Tempo

Remove Tempo Removes the highlighted (selected Tempo) from the list.

Then click on the **Metronome Settings...** button



Metronome Settings dialog

Choose a console strip for the Metronome sound from the drop-down list.

Any audio file can be used, for the **Bars**, **Beats** and **Grid** sounds. By default, some suitable WAV files are installed with Pyramix in the same location where you installed the Pyramix software. By default, this will be:

C:\Program Files\Merging Technologies\Pyramix Virtual Studio\Metronome Bars.wav etc.

The **Attack Offset** parameters enable the timing to be adjusted and the values in the **Level** data input fields determine the playback levels of the chosen sounds.

Midi Files Import / Export

Load

Save

Both buttons open a Browser Window to enable navigation to a file to load or a location to save to.

Currently, when midi files of type 2 are imported, only the tempo map and signature of track 1 is imported.

Reconforming to Original Media from Avid &/or OMF

There are no specific rules for the detailed settings of the procedure described below. It may change from user to user, project to project, etc... It really is up to the user to define a specific workflow including naming of the original recording, importing the stereo/original version into the Avid and making sure that the Video Editor properly keeps track of the proper naming, metadata, etc... Once the method is properly defined and working, the rules should then be communicated to all people involved in a given project, once and for all.

Philosophical Point

Reconforming to New Media always involves some delicate & dirty experimentations in the **Relink to New Media** dialog. This usually requires comparisons of Clip information in Clip Properties and Media information in Pyramix Media Manager. Once some kind of correspondence in the naming structure can be found, then all of a sudden the whole process becomes incredibly simple, the entire TimeLine becomes populated by happy green clips and an amazing feeling of personal achievement is yours forever.

The following example could and should be interpreted at will to match your specific needs and requirements

Procedure

- Import the OMF from the Avid (even without Avid media, it is not required)
- Mount the original Multitrack session media
- Select **Project > Reconform > Relink to New Media**
- Now the hard part: try to find, in the Clips imported from the OMF, any matching information (in **Clip Properties**) that can also be found in the original media properties
- For instance, you may find that the **Clip Names** match the Original **Media File Names**, but you may very well find that the Clip Names are in fact **Scene & Takes** and should rather match the Original Media Scene & Take, etc...

(OMF is at this better than CMX since it can include information such as Clip Names, Metadata, Time-Codes, etc...)

It finally all depends on how the original media has been documented while recording (BWF metadata) and how the Video Editor and Media "Ingestor" have documented the Media and Clips in the Avid.

Again, as already stated above, there are no rules and it may change from user to user, project to project.

Suggested procedure for managing a workflow

- Record the Original Media in **BWF** with TimeCode and name them Take1, Take2, Take3, etc... or any other name that can easily be understood and searched.
- Create a **BWF** 16 bits Stereo Render of your Multitrack recording files **WITH THE SAME NAME** as the original.
- Import these files into the Avid and make sure all clips created out of these Media keep the Media Name or File Name.
- Export an OMF out of the video edit and import it back in Pyramix (Even without media).
- You should then be able to match the OMF Clip Name to the Original Media File Name, or at least, if the Video Editor messed up with the Clip Names, the OMF Media Names with the Original Media Name or File Name.
- - Once the **Relink** procedure has been successfully achieved, you should have all your Clips referencing the Original Media's first track(s).

- - Then go to **Tracks > Extend**, select all tracks you want to extend and choose **Auto-Detect**. This should extend all your clips according to the number of tracks of your original multitrack recording.

Summary

If something goes wrong with Reconform (apart from SD2 files not recognized, **Please see: File Inter-change with Apple Macintosh on page 250**) please look for some sort of timing or wording mismatch between Clips and Media and feel free to try several different settings in the **Relink to New Media** Dialog, till you find THE ONE that matches your topology.

Broadcast WAV file Tips.

File Types

There are two types of BWF file:

BWF P means polyphonic -> multitracks

BWF M means monophonic -> one file per track

The Cantar location recorder produces only **BWF-M** files, and some Avid people want **BWF-P**. To convert **BWF M** **BWF P** mount the file in the **Media Manager** and select **Convert > Quick Export**, then do **NOT** check the **One file per Track** option. (Uncheck it if necessary). All Scene and Takes information present in the original BWF file will be also exported in the resulting BWF-P file.

Metadata

BWF files have a special chunk in the file that contains metadata; this is called the **BEXT** chunk or Broadcast Wave File metadata.

The first field of this chunk is the Description. This is the field we display in the Name column for **BWF** files instead of the file name. We do the same for PMF and OMF. We only display the real filename for Wave, AIFF and SDII that have no metadata.

In v4.2.6 or higher you can add the **FileName** column to also display the real filename of all files. (**Media Manager window View > Options : Columns** tab)

Once renamed in the Media Manager both the **Description** field and the filename of your BWF files should be updated.


Digitizing a Tape with Discontinuous TimeCode

Pyramix can automatically record a whole tape where the TimeCode is not continuous:

- Set all desired tracks in **Auto-Punch** mode
- Place **Mark In** at 00:00:00:00 and **Mark Out** at 23:59:59:24 (These are the default values for a new project)
- Plug LTC Out from the tape machine into Pyramix
- Set Chase mode to **HARD CHASE** (**Settings > All Settings > Jog/Chase : Chase Settings - Chase Mode**)
- Rewind the tape

- Press Play on the tape machine
- Each time a valid TC is encountered Pyramix will lock and start recording a new clip, then stop when the TimeCode jumps. A separate media will thus be created for each continuous TimeCode on the tape.

Loop Recording with simultaneous Playlist Creation

- Check the **Create an Empty Playlist for each Recording** option in the **Settings > All Settings Project > Record** Page.
- Put the required tracks in **Auto Punch** mode (Alt + click the track arming, the track arming button will display )
- Place **Mark In** and **Mark Out** around the region to be recorded.
- Put Pyramix in **Chase** Mode (preferably **Hard Chase**) and chase an LTC input.
- Have the TimeCode that feeds Pyramix looping around two boundaries that start a little before the Mark In and stop a little after the **Mark out**. (To make a Preroll Postroll. These should be big enough to let Pyramix sync properly and lock to the incoming TimeCode).
- Pyramix will then, for each loop, sync and lock, enter in record at **Mark In**, stop recording at **Mark Out** and create a new **PlayList** for each loop iteration.

N.B. This requires that an external TimeCode source/generator be used to generate the reference TC loop.

TimeCode Midnight

For those users with a requirement to sync/chase TimeCode with projects near or crossing the day barrier (be it Zero or 24 hours) Pyramix has an **Allow chasing across midnight** option in the **Settings > All Settings > Application > Jog/Chase** page.

If this setting remains unchecked (default) then the Pyramix cursor will always follow the exact given Time-Code and therefore will remain strictly within "day zero" of the Pyramix timeline. For additional security and comfort, if Pyramix is in **locked** state while crossing the midnight barrier, then even with this setting unchecked, there will not be an immediate jump from midnight back to zero while playing or recording in sync. The playback or recording will remain seamless, uninterrupted and cross the day barrier until an out-of-lock status is recognized. Only then is re-chase triggered to whatever the incoming TimeCode currently is.

Editing Multitrack Recordings

To edit Multitrack recordings without listening to all of them just Mute the tracks and Hide them. All edits performed on the remaining visible one will still occur on all others and only the audio from the visible one will be played back for monitoring. (E.g. a stereo guide mix)

Film 24 to NTSC Sync

Here are some settings for the most common Scenarios for Film 24 to NTSC Sync. Presets for all of these can be found in **Settings > All Settings > Hardware > Formats & Sync**.

Mix/Editing for TV shot in NTSC and 48 kHz and edited in sync with NTSC equipment:

- Set the Frame Rate to NTSC Drop
- Set the Video Format to NTSC
- Set the Sampling Rate to 48 kHz
- Set the Varispeed to Nominal

Result: FR = 29.97 SR = 48000 Video Input = 29.97 (Standard for TV, Audio at 48kHz in sync with 29.97 while Shooting, Post and Diffusion)

Mix/Editing for Film shot at 24 fps and 48kHz but edited in sync with NTSC equipment:

- Set the Frame Rate to Film (24 fps)
- Set the Video Format to NTSC
- Set the Sampling Rate to 48 kHz
- Set the Varispeed to Pull-Down

Result: FR = 23.98 SR = 47952 Video Input = 29.97 (Standard for Film, Audio at 48kHz in sync with Film 24fps for Shooting and Diffusion, but at 47952 in sync with 29.97 for the Post with Film 24 running at 23.98)

Mix/Editing for Film shot at 24 but converted 3:2 to 30 frames and edited in sync with NTSC equipment:

- Set the Frame Rate to SMPTE Non-Drop
- Set the Video Format to NTSC
- Set the Sampling Rate to 48 kHz
- Set the Varispeed to Pull-Down

Result: FR = 29.97 SR = 47952 Video Input = 29.97 (Standard for Film, Audio at 48kHz in sync with Film 24fps for Shooting and Diffusion, but at 47952 in sync with 29.97 for the Post with Film converted to 30 running at 29.97)

Special case:

Mix/Editing for Film shot in High Def at 23.98 fps and 48kHz and edited in sync with HD NTSC equipment like D5 or other:

- Set the Frame Rate to 23.98
- Set the Video Format to Trilevel 24/1.001
- Set the Sampling Rate to 48 kHz
- Set the Varispeed to Nominal

Result: FR = 23.98 SR = 48000 Video Input = 23.98 (For Film shot in HD 23.98, Audio at 48 kHz sync with Film 23.98 while Shooting and Post. **Caution:** The Audio needs a **Pull-Up** to run in sync with the Film if printed a real Roll)

Checking AC3 encoded files in Pyramix

Two types of AC3 encoded files can be played back in Pyramix:

If the file was generated as an .ac3 file, then Pyramix will automatically decode it on the fly and playback 6 channels of audio.

If the file was generated as a .wav file, then Pyramix will consider the file as Wave and simply play two channels of digital encoded AC3 to its (digital) outputs to feed an external decoder.

Most AC3 encoders allow embedding of encoded AC3 signal into a Wave file while encoding, for easy play-back. For example, **Minnetonka SurCode** offers this feature.

Working with External Machines

Use Auto-chase

Auto-Chase is a convenient, one button press solution for situations where control must be frequently switched between the Internal Machine i.e. Pyramix and an External Machine or machines.

If all enabled machines are set to **Auto-Chase**, when **Ctrl** is switched between machines the **Active Machine** is automatically taken out of **Chase** mode and the previously **Active Machine** automatically enters **Chase** mode. To activate **Auto-Chase** for all external machines, enable the menu setting:

Machines > External Machine > Auto-Chase

And, to activate **Auto-Chase** for the internal machine, enable the menu setting:

Machines > Internal machine > Auto-Chase

Using Freeze Mode

- If you are using Pyramix for sound-for-picture work, the **Freeze Mode** is a very powerful tool. For example, to position an out of sync car-door slam do the following:
- Use the Transport controls with all machines on-line to position the picture on the point where the door slams.
- Press the **Freeze** button to freeze the external machine(s).
- Select the clip that has the sound of the door slam.
- Position the **Clip Sync Point** at the beginning of the impact. (Click and drag the red **Clip Sync Point** or position the **Playhead Cursor** and select **Clips > Set Sync Point to Cursor (Ctrl + M)**
- Press **Freeze** and the Playhead Cursor will jump to the point at which **Freeze** was activated.
- Now, select **Clips > Send Sync Point to Cursor (Ctrl + Alt + M)** and the clip will move so that its Sync Point is at the Playhead Cursor position and the sound of the slam is synchronized with the picture.

Creating tracks via paste

This is a fast way of creating tracks.

If a clip is dragged and dropped or copied and pasted from Media Management or a Library onto a blank area of the TimeLine where no tracks exist, sufficient tracks will be created below the last existing track to accommodate the number of channels in the clip.

19

Remote Control



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Pyramix can control and be controlled by a wide variety of external hardware.

Control of External Device

If Pyramix is controlling another machine, (with the exception of GPO control) this device must be set up as an **External Machine**

External Machines

9-pin (Sony P2 protocol)

9-pin Control of External Machine

If you wish to control a 9-pin slave machine from Pyramix the target machine must be set up as an external machine. If you wish to control Pyramix as a slave from an external 9-pin controller / synchronizer then the external controller must be set up as a Remote Controller in Pyramix. **Please see: Control by External Device on page 296**

Note: The 9-pin driver in Virtual Transport is only intended for use with VT clients requiring 9-pin control. At present this means only the VT Video Player when used STAND ALONE.

Connection for the Sony 9-Pin protocol

Please see: Appendix IV 9 - Pin connection on page 413 for a description of the physical connection between the PC's COM port and the RS-422 connector of the external machine.

Setting up an external machine

- Select the **Settings > All Settings Remote Control > Machine** page
- Click the **Add** button.
- Enter a suitable name for the external machine in the **Name** field, such as "Betacam".
- Choose the **Driver** for the machine from the drop-down list. **Sony 9-pin**
- Check the **Enable** field.
- Adjust the Driver Properties, the Port Properties and the Settings according to your needs. **Please see: Sony 9-Pin Protocol Configuration (Machine) on page 348**
- Click **OK** to confirm all the entries and to add the new machine to the list.

Chase Synchronizer

With this option Pyramix can synchronize external 9-pin (Sony P2 protocol) machines including those that cannot chase TimeCode. No TimeCode connection TO the machine from Pyramix is required. The Chase Synchronizer compares the TimeCode coming from the external machine with the required position (including offset, if any) and sends transport commands in order to synchronize the machine.

Practical Machine Control

Machine control is frequently a source of confusion. Pyramix features such as the **Oasis Protocol** make control of external machines near seamless.

Hardware Control Surfaces

Hardware remote control is accomplished via the Merging Technologies **Oasis** protocol, Proprietary protocols, MIDI or the 9-pin (Sony P2 protocol). Templates are supplied for some popular controllers or you can map your own MIDI control surface to Pyramix.

The following controllers and digital mixers are (or will be) supported (if the appropriate Pyramix option Keys are present):

Manufacturer	Supported Modes	Key 1	Key 2	Supported Model	Capabilities with Pyramix	Mapping	Support in PMX 5x
Merging Technologies	Oasis	PSO-RCTR		ISIS-RC	Mixer + Transport + Editor	Auto + Manual	Yes
Merging Technologies	Oasis	PSO-RCTR		ISIS-FE	Mixer	Auto + Manual	Yes
AMS-Neve	Oasis	PSO-RCTR	PSO-OAS-BAS	"Encore Plus" compatible consoles	Mixer + Transport + Advanced Editor	Full Auto	Yes
Euphonix	Oasis	PSO-RCTR	PSO-OAS-BAS	"Eucon" compatible consoles	Mixer + Transport + Advanced Editor	Full Auto	Yes
Harrison-GLW	Oasis	PSO-RCTR	PSO-OAS-BAS	"IKIS Direct" compatible consoles	Mixer + Transport + Advanced Editor	Full Auto	Yes
Smart AV	Oasis	PSO-RCTR	PSO-OAS-BAS	Smart Consoles Elite Series	Mixer + Transport + Advanced Editor	Full Auto	Yes
Mackie	EMC	PSO-RCTR	PSO-RCT-EMC*	Mackie Control / HUI compatible models	Mixer + Transport + Editor	Auto + XML	Planned for V5.0 SP1
Radikal Technologies	EMC	PSO-RCTR	PSO-RCT-EMC*	SAC2.2 / SAC2k	Mixer + Transport + Editor	Auto + XML	Planned for V5.0 SP1
Tascam	EMC	PSO-RCTR	PSO-RCT-EMC*	Mackie Control / HUI compatible models	Mixer + Transport + Editor	Auto + XML	Planned for V5.0 SP1
Yamaha	EMC	PSO-RCTR	PSO-RCT-EMC*	HUI compatible models	Mixer + Transport + Editor	Auto + XML	Planned for V5.0 SP1
JL Cooper	Proprietary / Midi	PSO-RCTR		MCS-3800 / 3000 / 3000x / Bridge	Mixer + Transport + Editor	Graphical + Cloning	Yes
Sony	Generic Midi Control	PSO-RCTR		DMX-R100	Mixer	Manual Learn	Yes
Any	Generic Midi Control	PSO-RCTR		Midi Controller	Mixer	Manual Learn	Yes
Any	Sony P2	PSO-RCTR		Sony 9-pin P2 Controllers	Transport	Fixed	Yes
Any	Midi Machine Control	PSO-RCTR		MMC Compatible devices	Transport	Fixed	Yes
Sea Level	Proprietary SeaLevel	PSO-RCTR	PSO-GPIO	SeaI/O 4xx series	GPI / GPO Events	Manual	Yes
Sea Level	Proprietary SeaMax	PSO-RCTR	PSO-GPIO	SeaPort PLC16	GPI / GPO Events	Manual	Yes

* Effective Q1 2006 and available in Pyramix 5.0 SP1 - PSO-RCT-HUI becomes PSO-RCT-ECM.

EMC stands for "Enhanced Midi Control" and offers support for both "legacy" Midi HUI and Mackie Control modes.

For the latest version of this table and downloadable **User Guide** documents about supported controllers/ consoles please go to:

www.merging.com

Then select: **Pyramix : Download : Documentation : Controllers**, and choose the required document for download.

For links to controller and console manufacturers go to:

www.merging.com

Then select: **Pyramix : Controllers** and choose the relevant manufacturers link.

Control by External Device

If Pyramix is to be controlled by another device or devices, these are installed via **Settings > All Settings Remote Control Controller** and, where applicable, Pyramix functions are mapped to the controller via the **Settings > All Settings > Project > Controller Mapping** page.

9-pin Control of Pyramix by an External Machine

If you wish to control Pyramix as a slave from an external 9-pin controller / synchronizer then the external controller must be set up as a Controller in Pyramix. If you wish Pyramix to work as a 9-pin controller, e.g. to control an audio or video tape recorder then the target machine must be set up as an External Machine. **Please see: Machine on page 346**

Note: The 9-pin driver in Virtual Transport is only intended for use with VT clients requiring 9-pin control. At present this means only the VT Video Player when used STAND ALONE. I.e. without running Pyramix on the same machine.

GPI / GPO Support

GPI/O support is available as a Remote Controller module.

Note: At present this module only supports USB to GPI/O adaptors from JWorks and Sea-level modules including USB and PCI boards with opto-electronic inputs and relay outputs supported by the SealO driver. Please see:

<http://www.j-works.com>

<http://www.sealevel.com>

A Windows XP/2000 driver for the j-works devices is available from Merging Technologies:

<http://www.merging.com>

Note: The SealO driver MUST be installed before Pyramix.

Using the GPI/O controller

Add a GPI/O Controller

Before Pyramix can use the adaptor, it must be set up.

Select the **Settings > All Settings > Remote Control > Controller** page

Click the **Add** button. The **Controller Properties** dialog opens. Type a name for the Controller and select **GPI/GPO** from the **Driver** drop down list. Click **OK** to close the dialog and click **OK** to close the Pyramix Settings window.

Note: Do not do this more than once. Only one GPI/GPO controller is allowed. However this can control more than one physical GPI/GPO USB Module

Enable/Disable

The GPI/GPO controller may be disabled by unchecking the **Enable** box in the **Controller Properties** Dialog. Some GPI/GPO USB Modules can be individually enabled or disabled by clicking on the **Properties** button to the right of the **Driver** combo box.

Configuring the GPI/O controller for a specific project

Open the **Settings > All Settings > Project > Controller Mapping** page.

Select your GPI/O controller and click **Properties**

The GPI/O Controller Configuration Window will appear;

On the left you can browse the **Remotes** list. Next to this is the GPI/O Controllers list.

To map a Remote to a GPI/O Input or Output pin just drag the Remote onto the Controller pin;

The right-hand pane is a list of all currently mapped Controller pins. By clicking in the **Mapping Options** column you can configure how the pin works.

Click **OK** to accept the changes to the GPI/O configuration, or **Cancel** to abort.

GPI/O Remote types

There are 5 different types of **Remote** that can be used with GPI/O Input and/or Output pin:

- **Toggle** can be associated with both input and output pins.
- **Range** can be associated with both input and output pins and acts like a toggle 0 =off, other = on
- **Event** can only be associated with input pins.
- **Event-Status** can be associated with input and/or output pins;
- **Status** can be only associated with output pins.

The other **Remotes** cannot be mapped to GPI/O pins.

GPI/O Input and Output Pin Configuration

- Input pins mapped to Toggle or Range remotes can be configured as:
 - **Normal Input**
 - **Inverted Input**
 - **Rising Event**
 - **Falling Event**

Input pins mapped to Event or Event-Status remotes can be configured as:

- **Rising Event**
- **Falling Event**

Output pins mapped to Toggle or Range remotes can be configured as:

- **Normal Status**
- **Inverted Status**

Output pins mapped to Status or Event-Status remotes can be configured as:

- **Normal Status**
- **Inverted Status**

20

Productivity



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Optimizing Pyramix

Use Templates

The supplied Templates have settings appropriate to their purpose and are the fastest way of optimizing Pyramix. However, the following information should help when deciding what settings to use when creating your own projects and templates.

Pyramix File Format .PMF

We strongly recommend the use of the native .PMF format for a number of reasons.

The first issue is the size limitation of the WAV and BWF formats. These are LIMITED TO 2 GB in size by design (they use 32 bit signed, which gives a total of 2 to the power of 31 Bytes addressable = 2'147'483'648 Bytes precisely).

2GB may sound a lot but a little elementary arithmetic will show it is easy to exceed this limit when using higher sample rates and bit depths for multi-track recordings of real-world durations.

AIFF is slightly better in the sense that it is "only" LIMITED TO 4 GB (it uses 32 bit unsigned, which gives a total of 2 to the power of 32 Bytes addressable = 4'294'967'296 Bytes precisely).

PMF uses 64 bit addressing which would probably allow 128 tracks to be recorded for about 10,000 years (if you can afford the disks!), which should be more than enough for any practical applications.

The second advantage of the Pyramix File Format for large multitrack projects is that it is not "sample-interleaved" but "block-interleaved". Which means that instead of (as with WAV, BWF and AIFF) recording on disk one sample of channel 1, then 1 sample of channel 2, and so on to 1 sample of channel n, .pmf was designed from day one to optimize disk access by recording a quite large block of samples for each channel in a sequence. Typically 64 kB of channel 1, then 64 kB of channel 2, etc, finally 64 kB of channel n.


This setting (default 64 kB) can be changed by the user to one of four alternative values in the **Record Block Size** section of the **Playback/Record** page of **All Settings > Settings > Application**. However, the alternatives are really only applicable to certain RAID and Network-Attached-Storage set-ups and, unless you have considerable knowledge and experience, the default setting should be used.

One File Per Track option

Found in the **All Settings > Settings > Project > Record** page, The **One file per track** option should always be chosen (checked) whenever more than 2 tracks of recording are contemplated as there is a rather high potential performance penalty that can occur with all the sample-interleaved file formats (E.g.WAV and AIFF) on playback, when not all tracks of a multi-channel recording are used or played in their original sync relationship on the Timeline. This is because with other, interleaved, formats the hard disk head will still have to go through all the bits of all the channels, even if only 1 or 2 tracks of that file are used at a given point in time.

Reducing Unnecessary Disk Access

Track and Mixer Muting

There is a subtle difference between muting a Track Output (with the  button in the Track Header) and muting the same signal in it's associated mixer input strip. Muting a track stops disk access for the track (There is a delay before the sound stops while the replay buffer is emptied). Muting a mixer strip doesn't affect disk access but simply mutes the strip (Therefore muting is immediate). Muting track outputs enables multi-track recordings with many tracks (E.g. 48 track music recordings) to be edited on hardware which cannot support this number of tracks. (E.g. a laptop) Providing the Clips are grouped across all

tracks, then any editing changes made on the tracks used for the editing guide will also be reflected in the muted tracks. **Track Grouping** can be used to make operation simpler and more convenient.

DSP optimization

At the core of the Mykerinos cards is a very powerful Trimedia VLIW (Very Long Instruction Word) processor. This functions as a kind of DSP chip and can do a lot of things including implement quite large real-time audio mixer topologies. However even this very powerful chip has its limits and while it is more than adequate in implementing say a 48 input strips by 16 output bus configuration, it cannot be expected to implement a full "matrix mixer" of say 64 inputs by 64 outputs with a full independent multiply/add + individual delay on each matrix node on what would be a $64 \times 64 = 4096$ nodes, while also taking care of all the other housekeeping tasks such as locking with ultra low jitter to external clocks, managing time code, record streams, playback streams, not to mention possible FX such as EQ, Dynamics, Reverb, etc. Therefore Pyramix offers a few DSP saving modes in the **All Settings > Settings > Project > Mixer > DSP Power Saving** page:

Player / Recorder mode

Transforms the mixer's full nodal matrix topology into a "diagonal" topology where only the direct paths are computed (i.e. Input 1 to Output 1, Input 2 to Output 2, Input n to Output n)

As one might expect, such a mixer topology optimization reduces the complexity of a 64 x 64 sized mixer from 4096 nodal computations down to just 64 computations, which is a dramatic DSP processing saving feature and allows Pyramix to accommodate very large player/recorder track counts. It **MUST** be used with Multiple Mono Mix busses. In Version 5 the channel count has been further increased to a maximum of 128.

Disable Punch in / Punch Out

is another DSP processing saving function that, as its name indicates, disables concurrent record stream management whenever no Punch recordings are required during certain phases of a project's life. This might save another couple of % of DSP load.

Disable Mixdown

is similar to the above. Disables concurrent Master outputs possible extra paths used for recording as mix-downs.

DSP Allocation

There is a degree of user control over DSP allocation in the **VS3** control panel application (**Start > All Programs > Pyramix > VS3 Control Panel**). To help make sensible choices this is what the DSP processing blocks do:

Fx Out

- All output busses
- All VS3 plug-ins inserted on output busses,
- All active Output connections.

Note: All Fx Out calculations are inherently summing tasks so they need to be processed in the same card - so only one card can be used for this.

Mixer

All internal calculations that are carried out in the background, allowing **INs** to be forwarded to **OUT** busses. It can be seen as internal matrix.

In the Pyramix user interface, this is only reflected by the numbers of Ins routed to OUTs, no plug-ins, input strips or output busses are calculated here.

Mixer can be calculated in a single DSP or can share DSP with **Fx In** or with **Fx Out**.

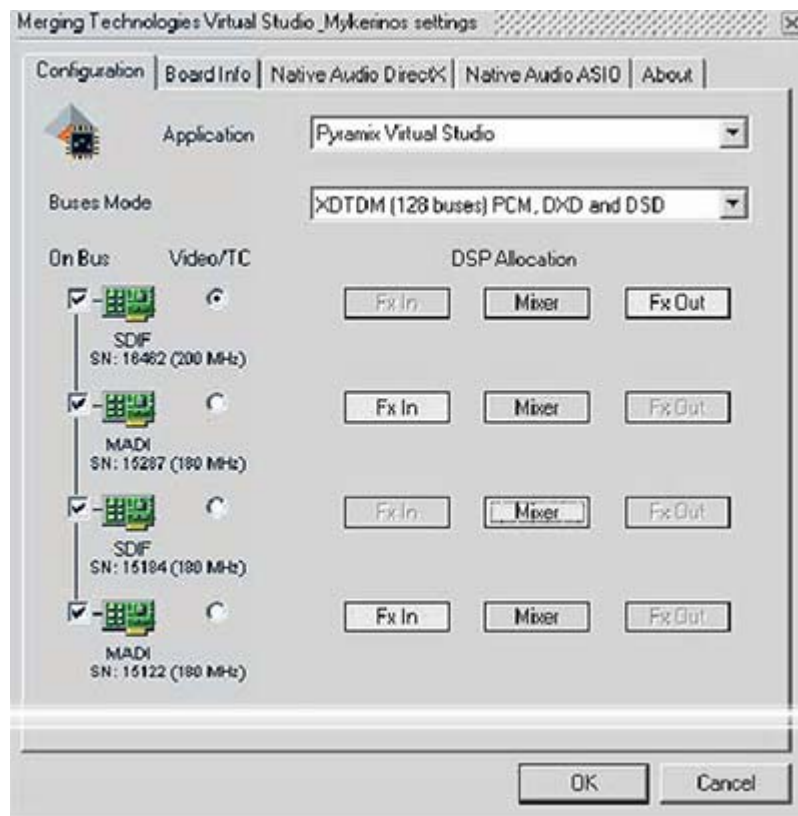
Fx In

- All input strips
- All VS3 plug-ins inserted on Input strips
- All active Input connections

Fx-INs can be spread across multiple DSP cards (since no summing is required at this stage).

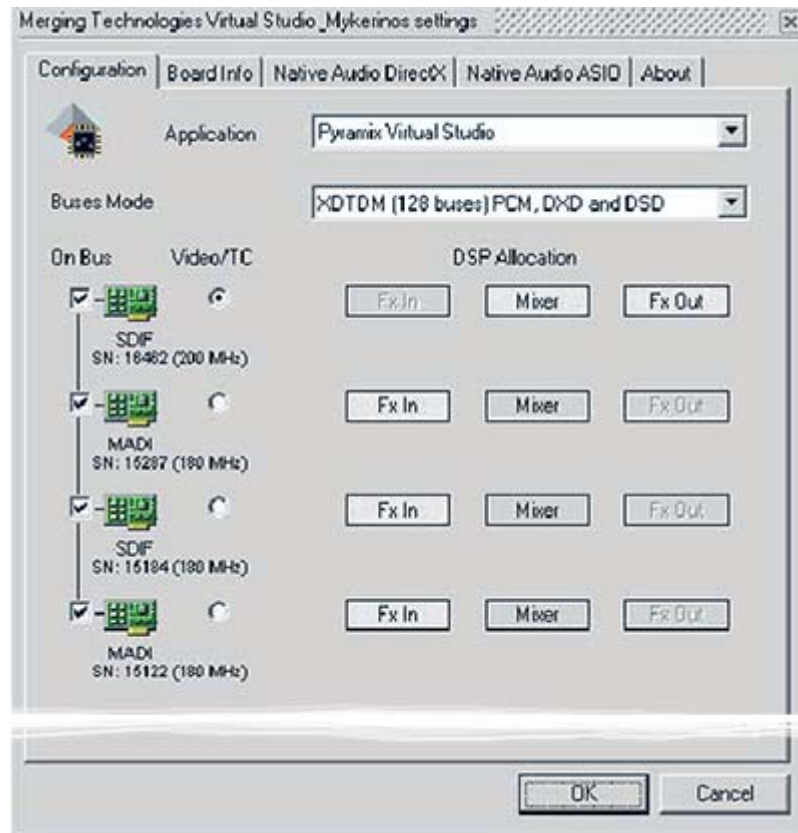
DSP allocation is set in the VS3 Settings Control Panel, for all available "On Bus" cards:

1. Choose the Video/TC card, typically the most powerful card available Card selected as Video/TC will carry all time code/video ref/headphone jack connections. This card will automatically dedicated to Fx-Out.
2. Select which card will be allocated to **Mixer**, by clicking the **Mixer** button on the chosen card
3. Remaining card(s) will be automatically dedicated to Fx In



Mykerinos VS3 Control Panel Settings Window

Note: If most of the DSP power is needed for Input strips, Mixer can also be assigned concurrently with Fx Out on the same card:



Mykerinos VS3 Control Panel Settings Window

DSP routing is totally independent of I/O routing, thanks to the HDTDM / XDTDM design for bussing (apart from the headphone out...)

Physical I/O routing is available in **All Settings > Settings > Hardware > HDTDM(XDTDM) PCM I/O Routing** and can be changed with Pyramix running, when there is no project open.

Use Work Spaces

Workspaces provide a powerful means of storing and recalling the state of a number of parameters of the Project Editing Panel, especially Track Header Panel switches. In effect a Workspace is a snapshot which enables the operator to quickly switch between set-ups for a variety of common tasks.

- New Workspaces can be added by clicking on the first line of the Tab Window and typing a name.
- Workspaces can be deleted by selecting them and pressing the 'Delete' key.
- Applying a Workspace is achieved by double-clicking on the Workspace icon.
- Parameters remembered by Workspaces are selectable per Workspace by clicking in the appropriate columns.

The last column allows a stored Workspace to be automatically updated to the current values before switching the another one.

21

Settings



Pyramix 5.0

DIGITAL AUDIO WORKSTATION

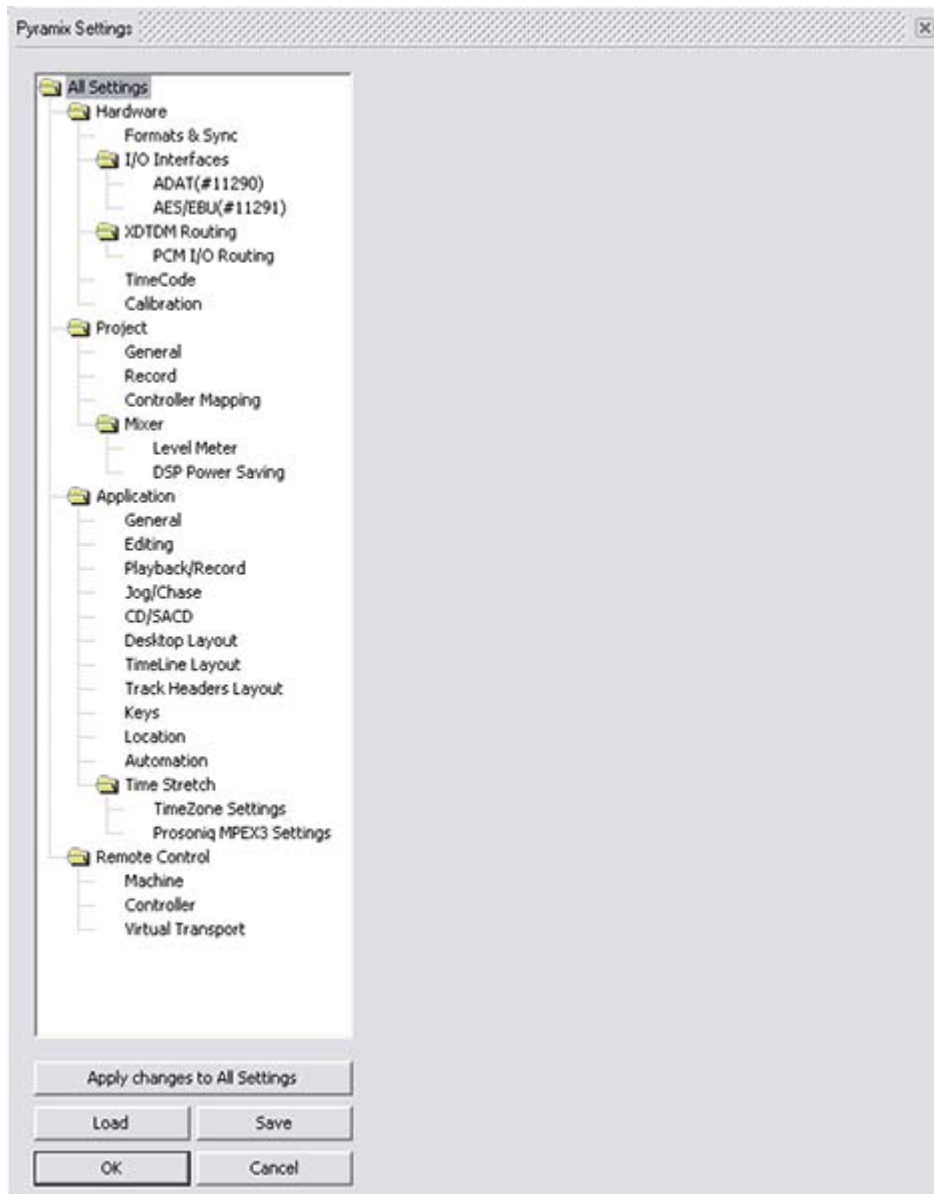


Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Overview

Pyramix is massively configurable to suit diverse applications and personal preferences. To keep the vast number of parameters manageable, Pyramix has an intuitive **Settings** dialog window. The **Pyramix Settings** dialog window brings together all Pyramix settings apart from the **Keyboard Shortcut Editor** and the **Macro Editor**, both of which can be accessed from the **Settings** menu. Although you will find information about individual pages elsewhere in this document, all the Settings pages are detailed in this chapter. **Settings** can be accessed from a Tool Bar icon, the menu **Settings > All Settings** or **Alt + G**.

Configuration - The Settings Dialog Window



Pyramix Settings Window - No folder open

The left-hand side of the window shows all available settings grouped in folders. Folders can be collapsed or expanded by clicking on the folder icons. By default, all folders are open, displaying the settings pages they contain by name. Clicking on a settings page opens it in the right-hand side of the window for viewing and editing.

Settings Buttons

Apply changes to ...

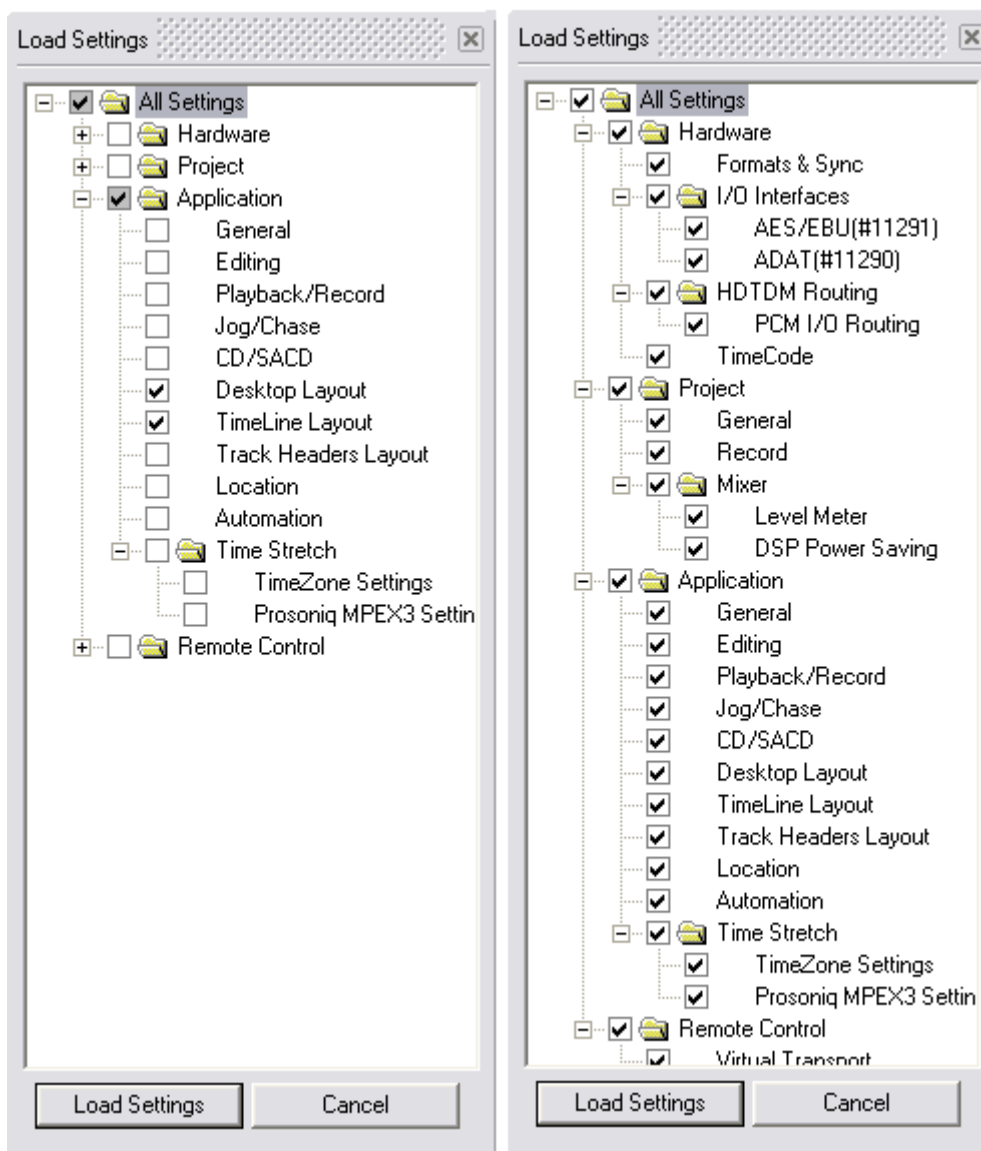
Below the Settings folders tree view the first large button's function and label changes to reflect the currently open settings page (if any). **Apply changes to ...** does as it says without saving the changes to a Settings file. Settings can be saved selectively or in their entirety for future use.

Save

To save all settings, Click on the: **Save** button to open a **Save As** browser window. If necessary, navigate to a suitable location for the file. Type a suitable name in the **File name:** box and click the **Save** button to save the file and close the browser window.

Load

Load opens a Browser window to enable location of settings **Profile (*.pms)** files. When the required file has been located clicking on the **Open** button loads the file and opens the **Load Settings** dialog.



Load Settings dialog

Loading Settings Selectively

Load Settings loads only the settings with ticked boxes. The **Load Settings** dialog auto selects the currently selected page. Clicking a folder check box checks the boxes of all the sub-folders and pages they contain. Thus, clicking **All Settings** checks all the boxes.

OK

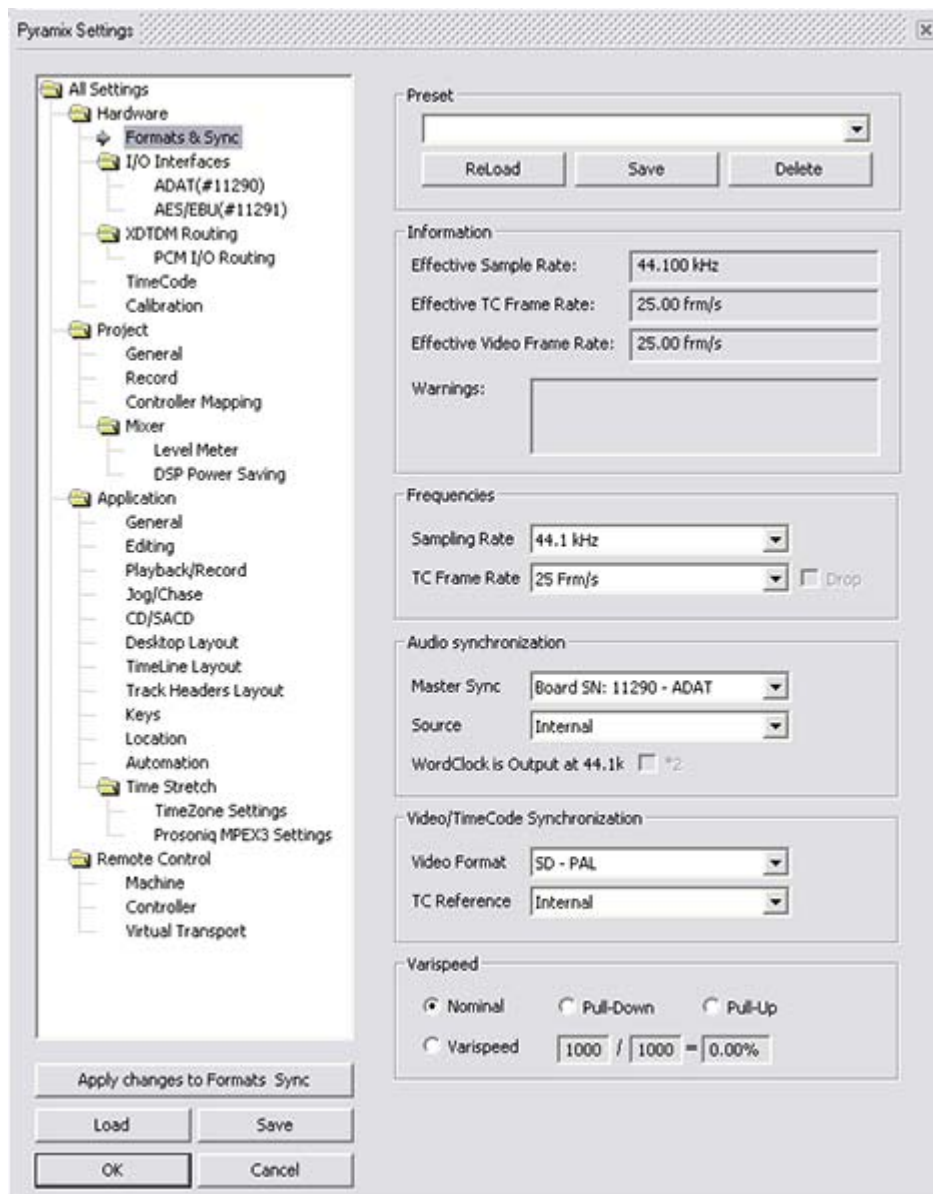
Saves any changes made to settings and exits the **Pyramix Settings** window.

Cancel

Cancels any changes made to settings and exits the **Pyramix Settings** window.

Hardware

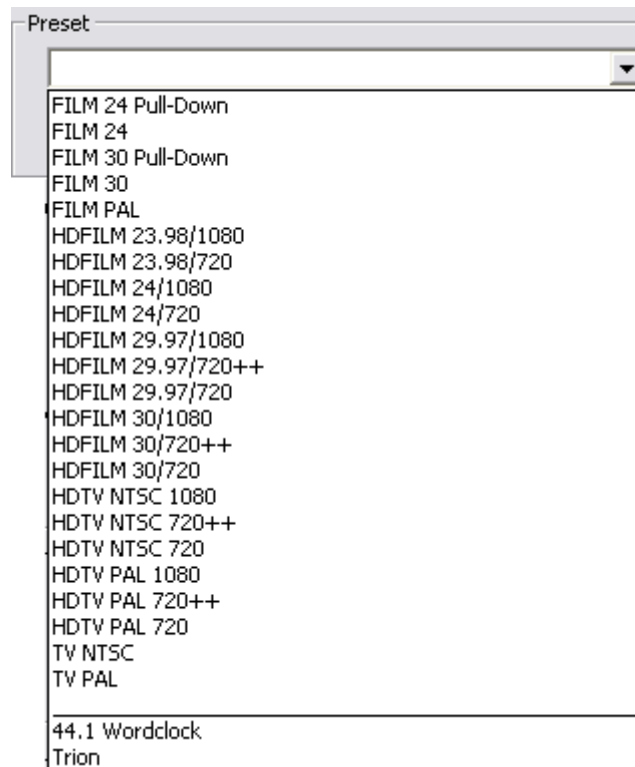
Formats and Sync



All Settings Hardware Formats & Sync Page

Preset

This section allows the user to **Save** and **ReLoad** or **Delete** Presets of all the parameters in this page. A variety of common scenarios are covered in the supplied Presets:



All Settings Hardware Formats & Sync Preset List

Sampling Rate

Displays the rate set when the project was created or the default **Mixer** preset loaded. This can be changed from the **Sampling Rate** drop-down list.

Board

In a multi-board system, use the drop down list to select the daughter-card for which you want to view or change settings.

Master

In a multi-board system, this check box determines which board is the source of digital audio sync. Only one board can be selected as master.

Sync

Source

This determines the sample clock source for the whole Pyramix system. If an external source is selected and no valid signal is detected, the system reverts to **Internal** until the external signal is restored. The following choices are available:

Internal

Selects the board's internal oscillator as clock master.

Video

Selects an external video input as the reference. The card derives word clock from the video sync rate. A valid video signal must be connected to the Mykerinos board chosen as the Video / TC master in the VS3 control panel.

Word Clock

Selects an external word clock source as the reference. The word clock must be connected to the Mykerinos board chosen as video / TC master in the VS3 control panel. This option is grayed out if there is no valid source connected.

LTC

In special situations this option enables word clock to be derived from Linear TimeCode

Audio Input

Select this option if you want Pyramix to derive it's clock from an external audio source connected to any of the daughtercard(s) present. The correct audio input must also be selected.

Input

Format

Provides input format selection. This varies, depending on which Mykerinos Daughter card is currently selected by the Board drop-down menu.

Range

Shows the number of possible system inputs available depending on the Mykerinos Daughter card currently selected **Board** drop-down menu.

Output

Mode

Provides output format selection. This is variable, depending on the Mykerinos Daughter card under consideration.

Monitoring

Preferred Outputs

The monitoring outputs defined here will be used by the following system functions:

- The **Auto-Connect** function
- Monitoring in **Media Libraries**
- **Digitizing Session** monitoring

If you are using the video sync input/output features of Pyramix, select the **Video Tab** to configure the video standard or format (e.g. **NTSC**, **PAL** or one of the supported **HD** formats). You can also enable or disable a visible time code burn-in window on the Pyramix video output for standard PAL / NTSC formats.

Varispeed

Allows either choice of either a pull-up / pull-down sampling rate or running Pyramix in **Varispeed** mode by adapting the sampling rate.

Important! Typical digital to analog or analog to digital converters (such as Merging Technologies Sphynx or DUAll) do not operate beyond $\pm 0.15\%$ (150 ppm) and therefore will mute in any Varispeed mode. It is suggested to route the Mykerinos digital I/O's through external real-time sam-

pling rate conversion circuitry or to use adequate external converters with built-in pull-up or pull-down support.

Note: Note: Locking to external NTSC video reference is limited to nominal and pull-down sampling rates.

Nominal

'Normal' mode. Uses the nominal sampling rate as set in the **Sampling Rate** pull-down menu.

Pull-Up

Increases the sampling rate by 0.1%. Most often used in audio post production for compatibility reasons between NTSC frame rates of 30 fps and 29.97 fps.

Pull-Down

Decreases the sampling rate by 0.1%. Most often used in audio post production for compatibility reasons between NTSC frame rates of 30 fps and 29.97 fps.

Varispeed

The speed of audio playback can be varied within the range of -12.5% to +12.5%. Select this option, then enter the required speed change in tenths of percents into the adjacent entry field. Values entered outside of the allowed range will be limited to the extent of the allowed range. E.g. if 1500 is entered, the value will be set to 1125.

Resulting Sampling Rate

Displays the sampling rate resulting from pull-up or down or Varispeed settings.

Note: The sampling rate display in the Status Bar also displays the resulting sampling rate.

I/O Interfaces

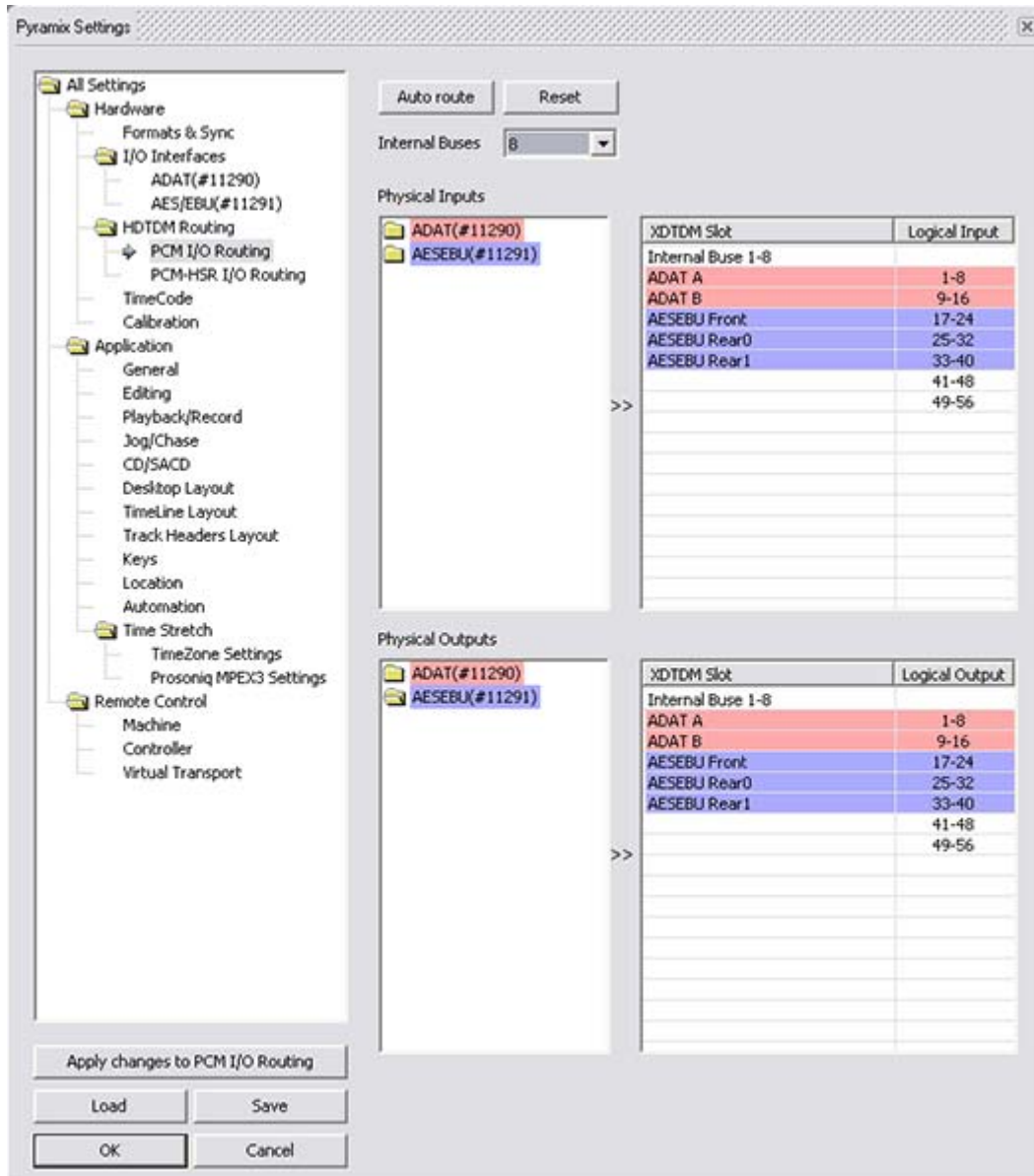
ADAT(#11290)

(Mykerinos Daughter Card Settings)

These settings provide hardware specific configuration for the currently installed Mykerinos daughter card(s). Please see the documentation supplied with the card.

XDTDM / HDTDM Routing

There are several routing pages. Only pages appropriate for the currently selected mode, HDTDM or XDTDM are available/shown in the tree. In the illustration below, Pyramix is in HDTDM mode and only **PCM I/O Routing** and **PCM-HSR** (High Sampling Rate) are available.



All Settings Hardware HDTDM PCM I/O Routing Page

PCM I/O Routing

Is used for PCM project running at 1FS (32k, 44k1 and 48kHz). In **XDTDM** mode there are a total of 128 logical inputs and 128 logical outputs including any internal busses. In **HDTDM** mode there are 64 of each.

PCM-HSR I/O Routing

Is used for PCM projects running at 2, 4 or 8FS. This routing page displays I/O as 2FS, don't forget that the number of I/O will be divide by 2 at 4 FS and by 4 at 8FS.

When an AES/EBU daughter-card is present, this routing page takes account of the **HighSamplingRate** setting (from the **AES/EBU (# 'card number')** page) to enable you to route 12 AES channels or 24 for the corresponding daughtercard.

DSD Projects I/O routing

Is used for DSD Projects

The **DSD Mapping** of an AES/EBU daughter-card can be changed in the AES/EBU page with the **DSD Mapping** setting.

The audio data format carried by MADI is selected in the **MADI (# 'card number')** page (**I/O Audio Data Format** setting).

Note: DSD Projects only support DSD format.

DXD projects I/O Routing

Is used for DXD Editing projects. This is the same as the **DSD Projects I/O Routing** page except DXD audio data format is supported.

Internal Busses

Set the required number of internal busses in the combo box.

Routing Physical I/O to Logical I/O

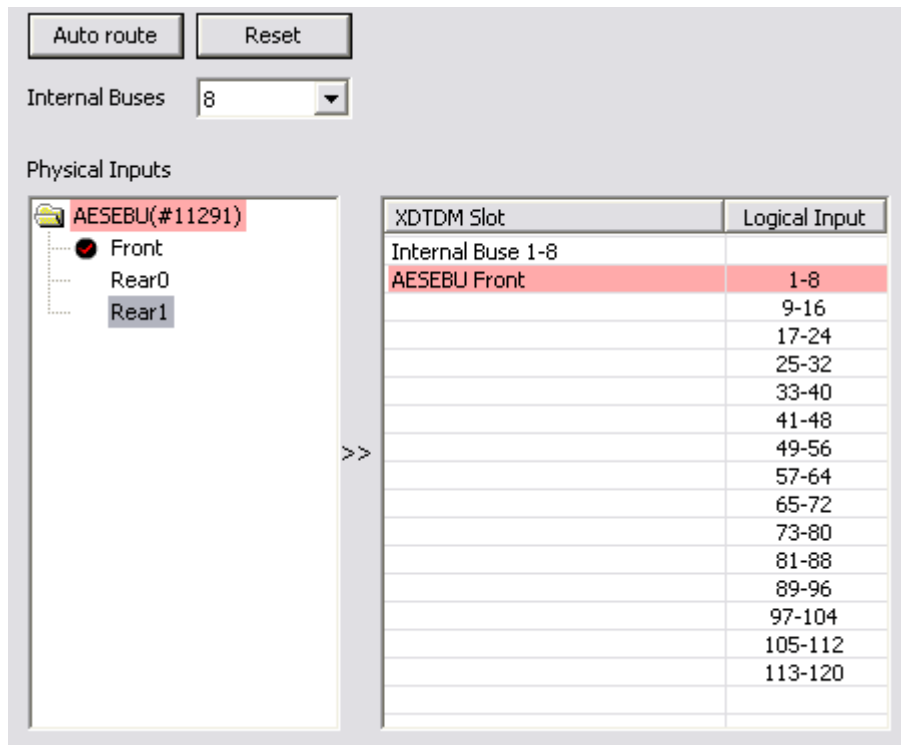
Routing can only be undertaken when there are no projects open.

Reset removes all patching

Autorange connects all available inputs and outputs in ascending order.

Manual Routing

Double-clicking the folders in the left-hand frames opens them to show the separate physical connectors. A round black mark with a red tick appears beside each connector entry when it is assigned.

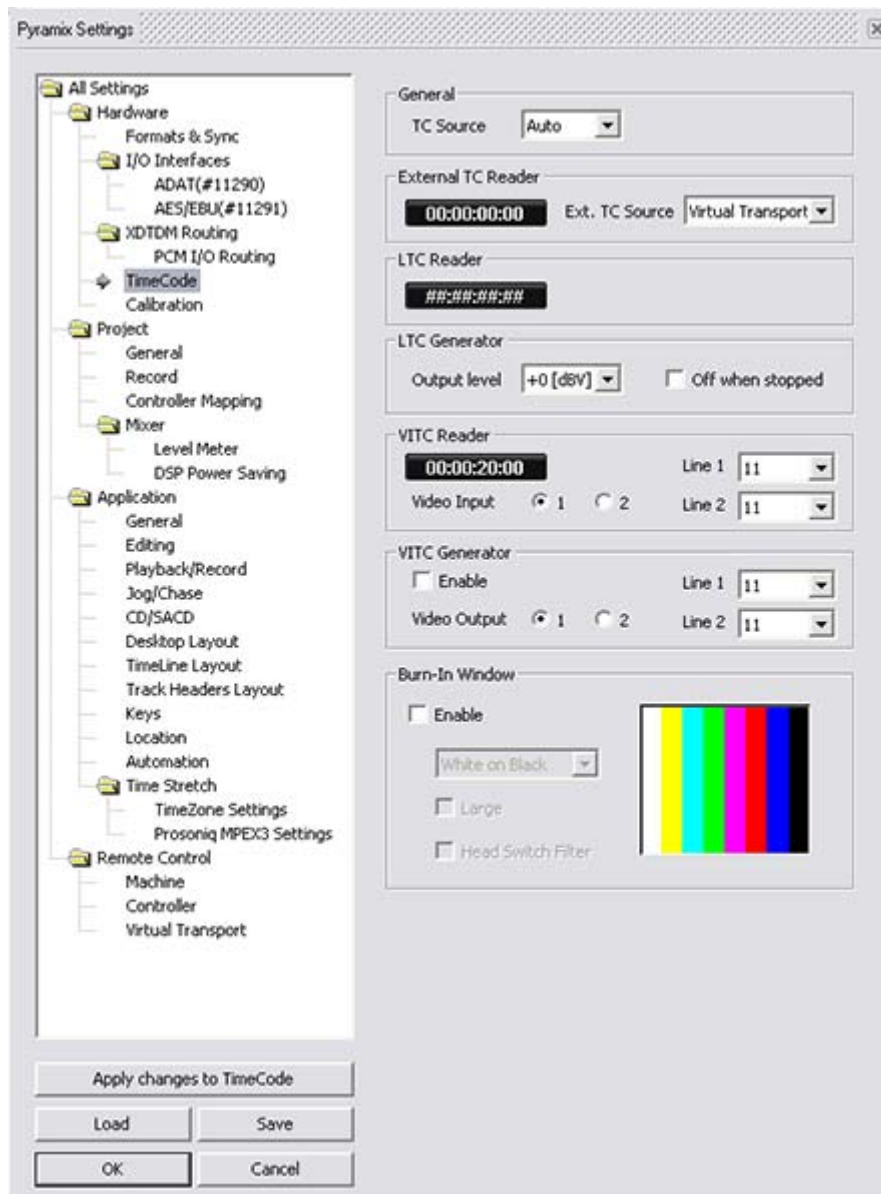


XDTDM PCM I/O Routing

Individual connectors or whole folders can be dragged and dropped onto the right-hand pane to patch.

Double clicking-entries in the **XDTDM / HDTDM Slot** pane removes the patch.

TimeCode



All Settings Hardware TimeCode Page

If you are using the TimeCode input /output features of Pyramix, select the **TimeCode** page to configure the system. **Time code Format, Reference and Source**. If an external time code source has been physically connected to the **Pyramix** linear time code or video inputs, you should see the current value in the **LTC** or **VITC Reader** registers

General

These are the general settings on which all other time code parameters are based. The **TC Source** combo box offers a choice of **Auto**, **LTC**, **VITC** or **External**.

Auto looks at all the sources and uses them in the order: **LTC > STC > VITC**

Format

Shows the current TimeCode format selected from the drop-down list. Pyramix supports the following formats: Film 23.98 fps, Film 23.98 fps Drop, Film 24 fps, PAL 25 fps, NTSC 29.97 FPS, NTSC 29.97 fps Drop, SMPTE 30 fps, SMPTE 30 fps Drop.

Reference

The **Reference** drop-down menu sets the time code source when TimeCode is selected as the digital audio Sync Source in **Settings > Mixer Settings : I/O** page **Sync Source**.

The Reference pull-down list allows for choosing between clocking the system's audio engine to an Internal reference derived from the audio board's time code generator chip, or a clock derived from the time code input port on the optional Video/TC interface. To set the digital audio word clock source, see the I/O panel in the Virtual Studio Settings window.

TC Source

Shows the source of time code that will be used to synchronize Pyramix playback or to generate the timestamp when an audio file is digitized. A drop down list offers the following choices:

Internal uses the code from the internal time code chip on the audio board.

VITC uses code from the Vertical Interval Time Code (VITC) input on the optional Video/TC interface bracket / breakout cable.

LTC uses the Linear Time Code (LTC) input on the Video/TC interface bracket to derive

Auto Pyramix automatically uses any valid time code location reference from an Internal, VITC, LTC or External time code source.

External uses the code from the **External TC reader** source.

External TC reader

Shows the current value of the External Time Code reader. The drop-down list offers a choice of **Virtual Transport** and all external machines installed and enabled in the **Settings > All Settings > Remote Control > Machine** page.

LTC reader

Shows the current value of the Linear Time Code (LTC) reader chip. I.e. the external LTC input.

LTC Generator

Mykerinos boards have a Linear Time Code generator.

Output Level (dBV)

Shows the current LTC output level in dBV. The drop-down list offers a choice of output level from -24dBV to +9dBV in 3dBV increments, or it can be switched Off.

Off when stopped

When checked Pyramix mutes the LTC output when stopped. If not checked, it continues to output it's actual position. (static TimeCode) Certain video and audio machines cannot handle static TimeCode.

VITC Reader

Mykerinos boards are capable of reading Vertical Interval Time Code encoded in a lines of a video signal. VITC has the advantage of being accurate and readable even when the video is stationary.

Video Input

These check buttons allow the choice of which of the two video inputs will be used for the VITC signal.

Line

Shows which lines will be decoded. Although VITC code fits into a single line, it is normally duplicated to provide redundancy reducing read errors. The drop-down lists allow any two lines to be chosen. Different pairs of lines often carry different code. E.g. Time-of-day and Absolute time.

VITC Generator

Mykerinos boards have a Vertical Interval Time Code generator.

Enable

When checked the output of the VITC generator is On.

Video Output

These check buttons allow the choice of which of the two video outputs will be used for the VITC.

Line

Show which lines will contain VITC.

General

These controls are for setting the general format of the Video Sync signal.

Format

Shows the current video format. The drop-down list offers a choice of PAL, NTSC and a wide variety of Tri-Level HD (high-definition) formats.

Burn-in Window

Mykerinos boards can burn-in a Time-code display window into a composite video input signal.

Enable

When checked the TimeCode overlay is displayed

Color

Shows the current display scheme. The drop-down list offers a choice of:

- White on Black
- Black on White
- Black on Background
- White on Background

Large

When checked the TimeCode display will be the larger of the two possible sizes.

Head Switch Filter

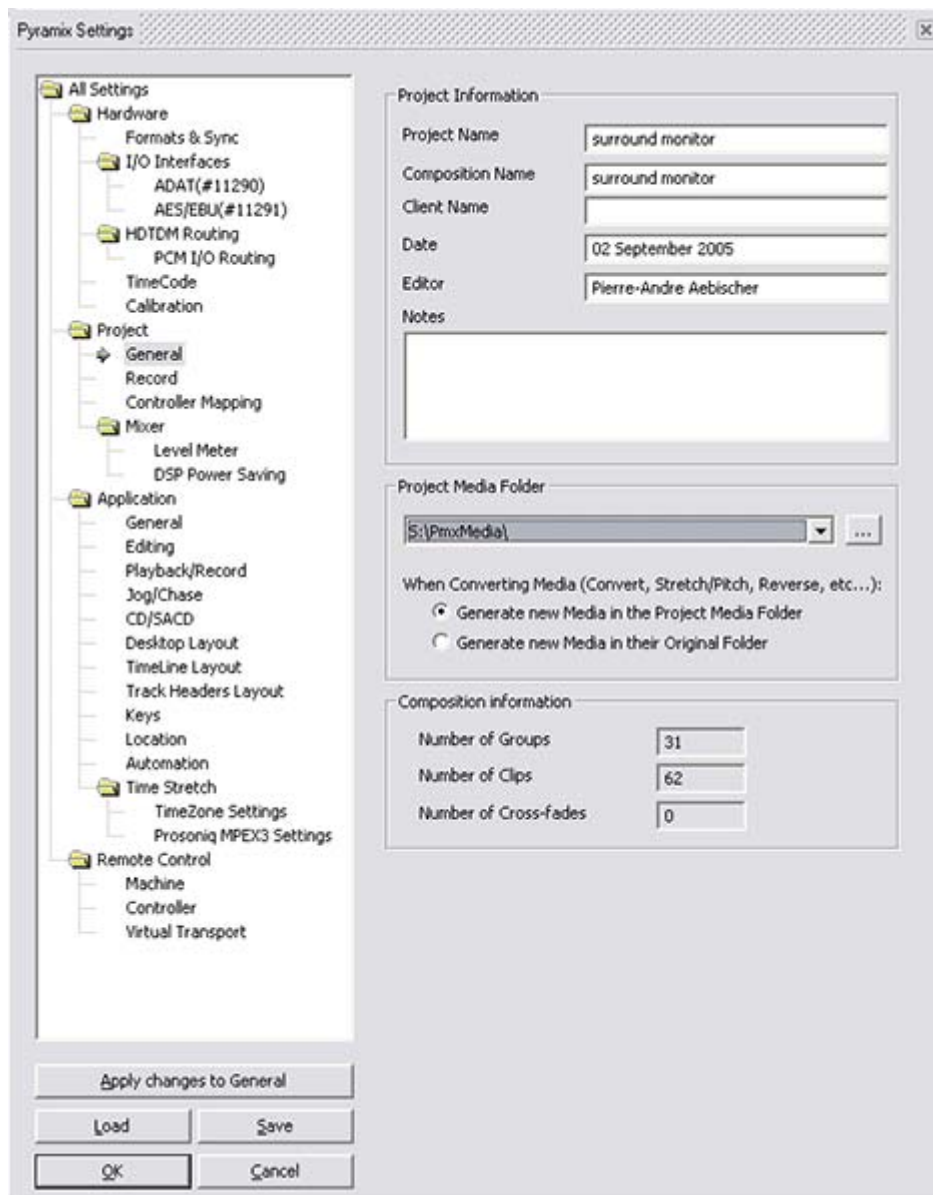
When checked, the clamp circuit ignores head-switch transients and horizontal sync during the last six to seven lines before the vertical front porch. Otherwise, the clamp circuit responds as always.

Burn-in Location

Simply drag the video burn-in window to the desired location within the color bars screen.

Project

General




All Settings Project Information Page

The General Page has fields for displaying and entering information concerning the current project. This information is specific to the Project and will always be available in this display.

Project Media Folder

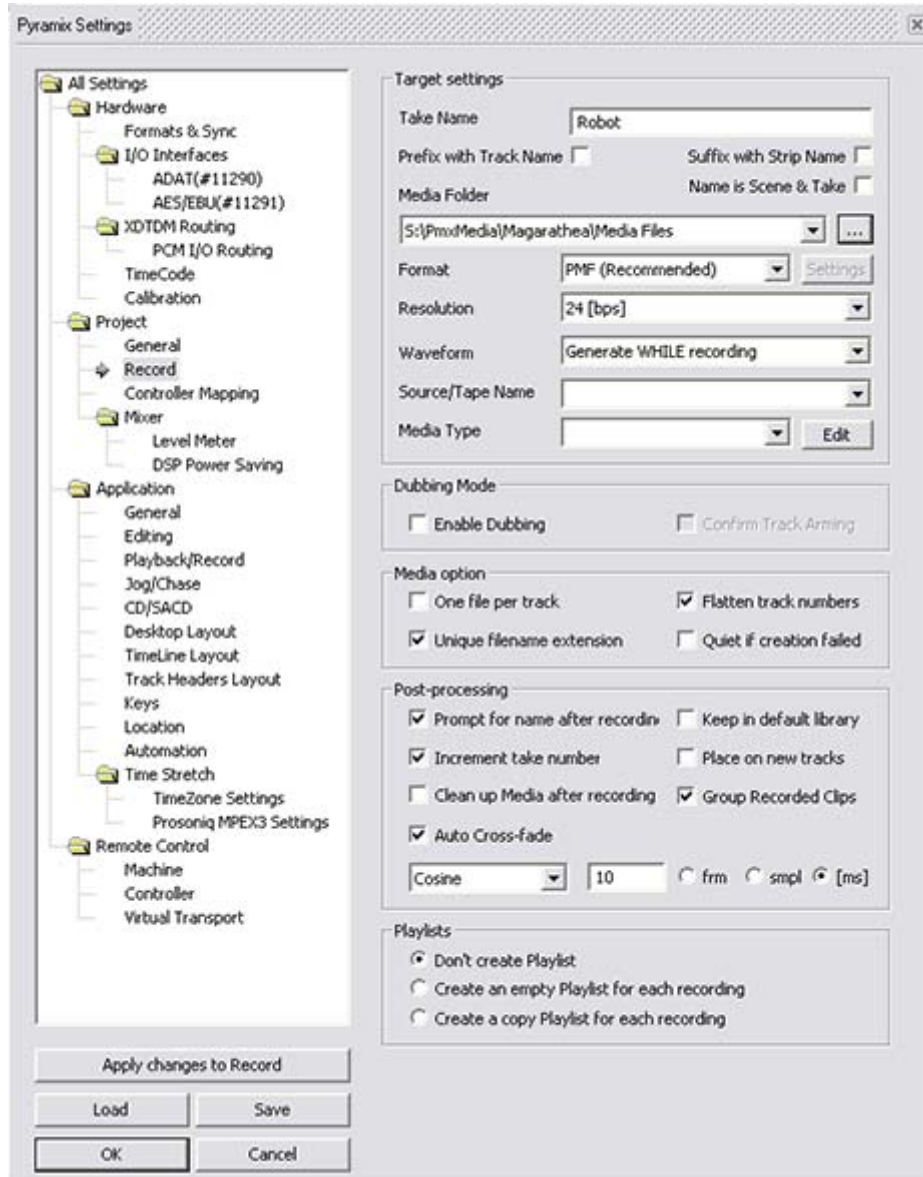
When a Project is created, either with **Project > New** or **Project > New From Template** and a Media Folder is created or selected, the **Project Media Folder**, the **Record : Target settings** Media Folder, the **Project > Render : Target Settings** Media Folder and the **Project > Mix Down : Target Settings** Media Folder all point to the same folder.

The combo box has a list of all mounted Media Folders and the  button opens the **Choose a Media Folder to Mount** dialog where you can browse for and mount or create and mount any other Media Folder. Please See: Housekeeping on page 25

When a Project operation will generate new Media Files, the radio buttons below the combo box offer the choice of either:

- Generate new Media in the Project Media Folder
- Generate New Media in their Original Folder

Record



Pyramix Settings

All Settings

- Hardware
 - Formats & Sync
 - I/O Interfaces
 - ADAT(#11290)
 - AES/EBU(#11291)
 - XDTDM Routing
 - PCM I/O Routing
 - TimeCode
 - Calibration
- Project
 - General
 - Record**
 - Controller Mapping
 - Mixer
 - Level Meter
 - DSP Power Saving
- Application
 - General
 - Editing
 - Playback/Record
 - Jog/Chase
 - CD/SACD
 - Desktop Layout
 - TimeLine Layout
 - Track Headers Layout
 - Keys
 - Location
 - Automation
 - Time Stretch
 - TimeZone Settings
 - Prosoniq MPEX3 Settings
- Remote Control
 - Machine
 - Controller
 - Virtual Transport

Target settings

Take Name:

Prefix with Track Name ☐ Suffix with Strip Name ☐

Media Folder: ...

Format: Settings

Resolution:

Waveform:

Source/Tape Name:

Media Type: Edit

Dubbing Mode

☐ Enable Dubbing ☐ Confirm Track Arming

Media option

☐ One file per track ☒ Flatten track numbers

☒ Unique filename extension ☐ Quiet if creation failed

Post-processing

☒ Prompt for name after recording ☐ Keep in default library

☒ Increment take number ☐ Place on new tracks

☐ Clean up Media after recording ☒ Group Recorded Clips

☒ Auto Cross-fade

☐ frm ☐ smpl ☒ [ms]

Playlists

☒ Don't create Playlist

☐ Create an empty Playlist for each recording

☐ Create a copy Playlist for each recording

Apply changes to Record

Load Save

OK Cancel

All Settings Project Record Page

Target Settings

Take Name

Type a 'seed' name here. This is used to begin the name of new recordings. E.g, if you type "Vocal" the next recording you make into a track will be called "Vocal". This field works in conjunction with the "Increment take number" function (see below). If you leave this field blank, Pyramix will apply the name "Untitled" as a default.

Prefix with Track Name

When checked the name of the recording will be prefixed by the name of the track it was recorded on, like:

Guitar-Take 001_###001##_wav

Guitar-Take 002_###001##_wav

Suffix with Strip Name

When checked allows Multitrack recording of typed sources, typically for archiving Film stems, or Render of Mixes/Dubs:

With a set of multi-channels strips (GPS strips) properly named and typed, the **Suffix with Strip Name** option will create files named like:

Episode3-M&E-Ls.wav

Episode3-M&E-Rs.wav

Episode3-LtRt-L.wav

Episode3-LtRt-R.wav

Name is Scene & Take

When checked, the name of a take recorded in Pyramix will be used as the source for the Scene and Take fields in BWF and PMF audio files with the proper tag set. The last numeric digits of the name are used as the Take number and any preceding characters are used as the Scene name.

E.g. 203/5 003 will be interpreted as SCENE = 203/5 TAKE = 003

Media Folder

Displays the selected Media Folder for recording. Clicking the adjacent button opens the **Choose a Media Folder to Mount** window. This enables folders to be created mounted and managed. **Please See: Housekeeping on page 25**

Resolution

Displays the number of bits per sample for recordings from the choice available in the drop-down list. (16bps, 24bps or 32bps)

Format

Displays the current recording format from the choice available in the drop-down list. (PMF, SD2, AIFF, AVI, WAVE, BWF, CD Image or OMF)

Waveform

Displays the current Waveform generation mode from the choice available in the drop-down list. (None, Generate AFTER recording or Generate While Recording)

Source Name

This field allows you to give a name to indicate the source of the material being recorded into Pyramix. For example, you might enter "Reel #1" to indicate the first source reel, etc. If the MediaType field (see below) is set to "None", the Source Name field will be grayed out and not available.

Media Type

Displays the type of media the source material came from, chosen from the drop-down list. Clicking on the **EDIT** button allows existing names to be edited or new ones created. The media type chosen here and the source name given in the previous field are saved with the media file created by the new recording. This information can then be viewed by selecting a clip and displaying its Properties page.

Dubbing Mode

Please see also: **Dubbing Mode** on page 282

This mode is provided principally for film re-recording. It allows tracks to be Armed or Disarmed for recording while recording is taking place.

Enable Dubbing

When checked, **Dubbing Mode** is engaged.

Confirm Track Arming

Only available when **Dubbing Mode** is selected in the adjacent check box. A check in this box means that any changes to track arming made whilst recording must be confirmed by a new Record command before they will take effect.

Media option

One file per track

When checked, each recording on each track of a multi-track recording is recorded into a separate file. When this option is off (which is the default), one single media file is created containing all the tracks.

Flatten track numbers

When a recording is made on a track, Pyramix always adds media number to it. When checked on (default), Pyramix starts enumerating at one. E.g. If a recording is made on tracks 5 and 9 of a multitrack session simultaneously, the media numbers will be 1 and 2. When this option is off, Pyramix adds the real track numbers to the media. In the example above, this would be 5 and 9.

Unique filename extension

When checked, Pyramix will append a random number to the name of each new recording in order to avoid duplicate file names.

Quiet if creation failed

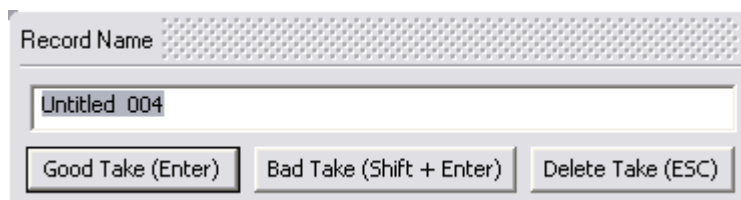
Unless this box is checked, Pyramix displays a dialog with an error message when the creation of a media file fails. This can be annoying if Pyramix is remotely controlled. Checking the box suppresses the error message.

Post Processing

These options determine what Pyramix will do after each recording is finished.

Prompt for name after recording

When checked, a **Record Name** dialog box will open immediately after recording is finished and playback of Pyramix is stopped.



Record Name dialog box

If a name was entered in the **Take Name** field (see above) it will automatically appear in the **Record Name** dialog box when it opens. You can edit the existing name, or replace it completely with a new name.

Keep in default library

When checked, new recordings will automatically appear in the Default library of the current Project.

Increment take number

When checked, each successive recording will have the name in the **Take Name** field applied to it, plus a number that will increment with each new recording. E.g, if the first recording is named "Take", the next recording will automatically be named "Take 2", etc.

Place on new tracks

When checked, Pyramix will place the newly recorded clips on new tracks. These new tracks will be added to the Project Editor as soon as playback is stopped following a punch in/punch out recording. When first created, these tracks are not assigned to mixer channels, so it will be necessary to assign them when you want to output them. If this item is not checked, the new clips will be placed on the track(s) set to record them.

Clean up Media after recording

Note: This option is automatically set OFF when a Project is opened.

This mode makes Pyramix work like an analog or DASH multitrack. I.e. All punch-ins are **highly destructive !!** With modern, large hard drives, we would rather recommend:

View > Used Media > Invert selection > Delete media (after a good **archive/consolidate/back-up** has been made) or:

b) **Project > clean-up media**, etc.

All these functions destroy media on the hard drive, but **b & c** offer more control over what is permanently deleted.

Group Recorded Clips

When checked, clips in a multi-track recording are automatically grouped.

Auto Cross-fade

When checked a cross-fade is automatically applied when punching in or out. The current fade shape is displayed from the choice available in the drop-down list (Power, Linear, dB, Cosine or Root-Cosine) Duration can be set in frames, samples or milliseconds depending on which box is selected.

Playlists

These buttons toggle between three possible choices:

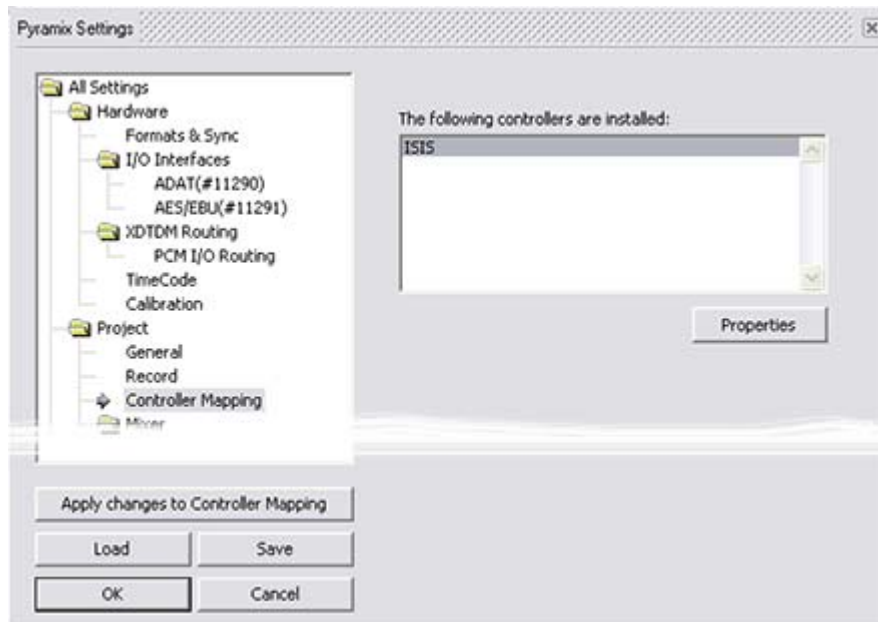
Don't create Playlist

Create an empty Playlist for each recording

Create a copy Playlist for each recording

Please see: **Playlists** on page 95

Controller Mapping



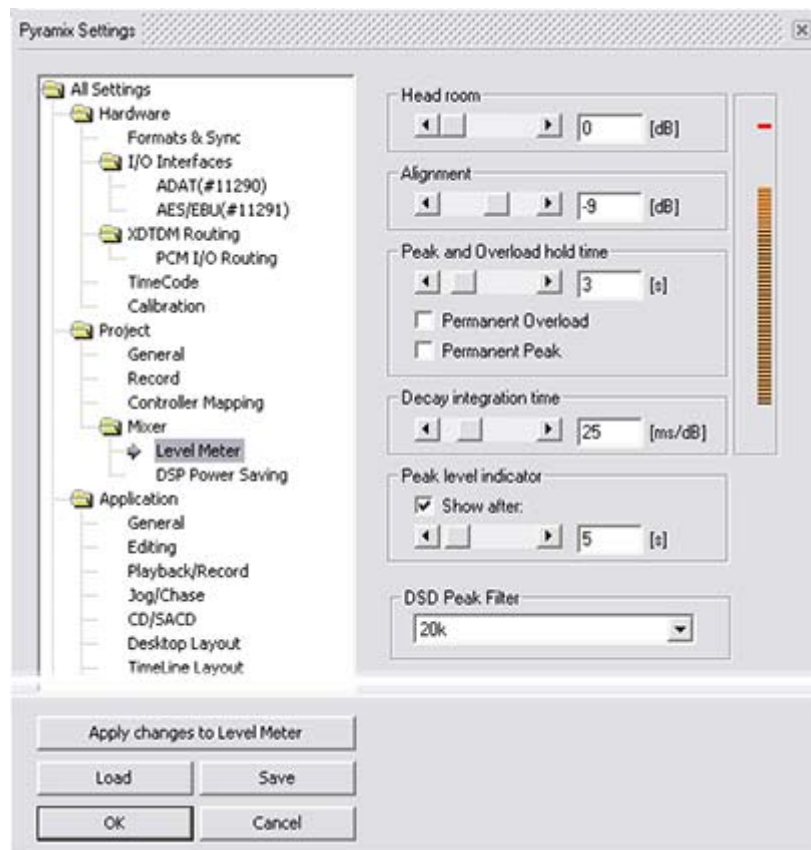
All Settings Project Controller Mapping Page

Please see Guides for specific controllers. E.g. Merging Technologies **ISIS**.

Mixer

Level Meter

This page determines the appearance and behavior of the level meters in the **Mixer** and **track Headers**.



All Settings Project Mixer Level Meter Page

These settings only apply to the current **Mixer**. This allows each **Mixer** to have its own custom **General** and **Level Meter** settings. To change any of the settings, click the left or right buttons or drag the horizontal scroll bar to increment or decrement the selected parameter. Alternatively, type directly into the number field for each parameter (these fields will only accept numbers within the permissible range for each parameter). The color graphic display of the level meter will respond immediately to show the effect of Headroom and Alignment parameter changes.

Level Meter

This page determines the appearance and behavior of the level meters in the **Mixer** and **track Headers**. These settings only apply to the current **Mixer**. This allows each **Mixer** to have its own custom **General** and **Level Meter** settings.

To change any of the settings, click the left or right buttons or drag the horizontal scroll bar to increment or decrement the selected parameter. Alternatively, type directly into the number field for each parameter (these fields will only accept numbers within the permissible range for each parameter). The color graphic display of the level meter will respond immediately to show the effect of Headroom and Alignment parameter changes.

Headroom

Sets the amount of headroom displayed as red meter segments before clipping.

Alignment

Sets the alignment level. Displayed by the point on the scale at which the dark orange segments begin.

Peak and Overload Hold Time

Sets the amount of time in seconds that the peak segment or overload segment (topmost red segment) of the level meter remains illuminated.

Permanent Overload

When the box is checked, the red Overload LED above a track will remain lit, even after playback is stopped. To clear the LED, double-click it. When not checked, the Overload LED will automatically clear itself after a few seconds and remain off until the next overload occurrence.

Note: The overload LED will go on after one sample with the maximum level.

Permanent Peak

This parameter works in conjunction with the Peak Level Display. When this is on (checked), the Peak Level pop-up display will show the value and location of the highest level reached on a track up to the time when the mouse was clicked on the meter. The level display will not be updated until the next time playback is stopped and re-started. If it is not on (unchecked), the Peak Level Popup Display will show the highest level reached in that track from the last time the Popup Display is activated (while playback continues). For example, clicking a channel's meter while playing back will display the Peak Level Popup, which will show the peak level (and its location) reached so far. Click away from the Popup, and it will disappear. Click on that meter again, and the Popup will appear again, this time showing the peak level/location reached since the last time the Popup was displayed.

Decay integration time

This parameter sets the rate at which the level meter display decays after the level falls below the most recent peak. The slope of the decay is given in terms of milliseconds per decibel (ms/dB).

Peak level indicator

Show After

When the box is checked, the **Fader/Input Level** displays located above the faders on each mixer strip display the peak level of the signal running through the corresponding mixer strip. The value are updated at the interval set by the slider below the check box. If the check box **Show After** is off, the **Fader/Input Level** displays always show the setting of their corresponding fader.DSD Peak Filter

For DSD projects this drop-down list offers the choice between two filtering options which will be applied to the DSD signal before it is measured by the level meter.

This will help enable you to ensure that the DSD signal is compatible with the AES recommendations concerning the high frequency dither noise content.

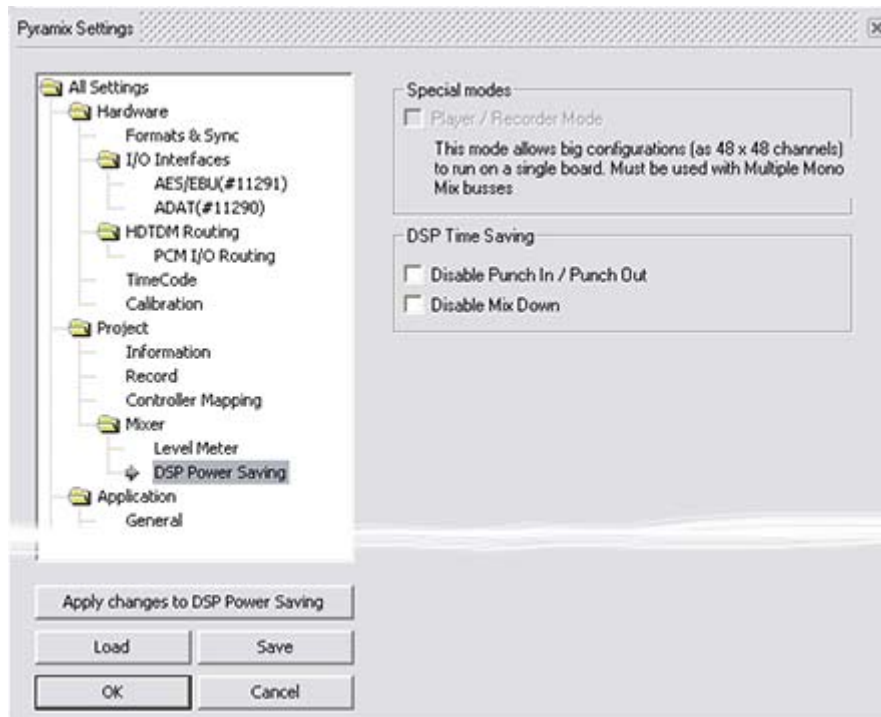
20k

Applies a 20 kHz low pass filter to the signal, thus only the audible audio content is measured.

40k-100k

Applies a band pass filter with a frequency range of 40 kHz to 100kHz to the signal. According to the AES recommendation the signal level in this frequency range should not exceed -20 dB.

DSP Power Saving



All Settings Mixer DSP Power Saving Page

DSP Time Saving

Disable the Punch in/out

When the box is checked, Punch-in and out recording capabilities are disabled.

Important! Pyramix still will allow you to arm tracks and to start the recording process, but the resulting media file will contain digital nulls.

Disable Mix Down

When the box is checked, the digital mixdown function activated with the menu command **Project->Mix Down** is disabled.

Important! Pyramix still will allow you to start the mixdown process, but the resulting media file will contain digital nulls.

Special Modes

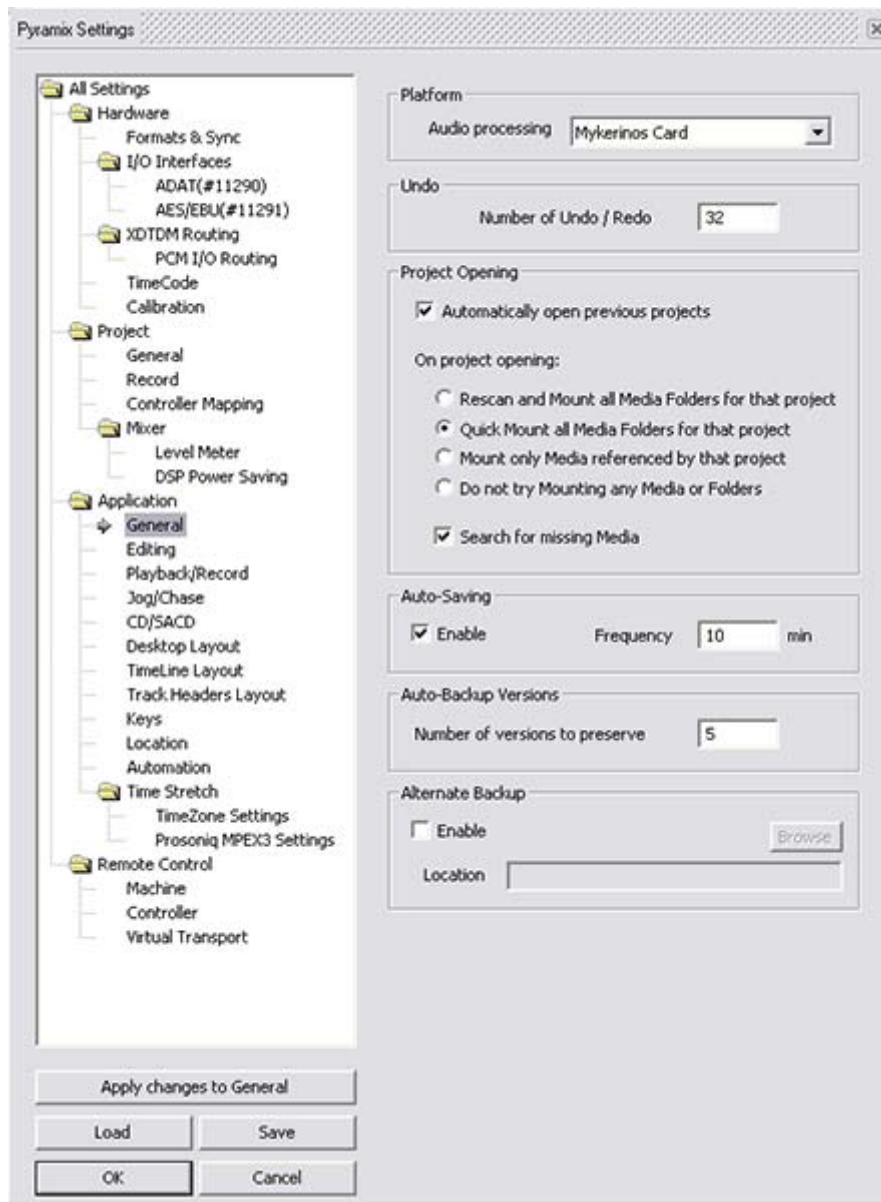
Player/Recorder Mode

This mode allows big configurations (such as 48 x 48 channels) to run on a single board. Player/Recorder Mode is intended for use with an external hardware console. When this mode is activated, the Pyramix mixer is relegated to the role of signal router, there is no level control, no panning, no plug-ins and no inserts. This option is only available in configurations with multiple mono mix busses.

The Pyramix **Direct Out** functionality provides an alternative, more user configurable method of achieving similar DSP savings. **Please see: Channel Direct Outputs on page 132**

Application

General



All Settings Application General Page

Platform

Audio processing

The drop down list, offers a choice of which audio device to use with Pyramix. The available choices are **Mykerinos Card** or **Native Processing**. I.e. the computer's host processor(s) & sound card, if you have purchased this option.

Undo

Number of Undo / Redo

Sets the **Number of Undo / Redo** levels. Also sets the number of automation versions to be kept when the **Automation** tab option, **Optimization : Limit versions to the number of Undo/Redo** is enabled. The default is 32.

Note: Increasing this value uses more RAM.

Project Opening

This section determines Pyramix behavior when the application is launched.

Automatically open previous projects

When checked, Pyramix opens all projects that were open when the application was last used.

On Project Opening:

Rescan and Mount all Media Folders for that project

Can result in long opening times when there are very large Media Folders

Quick Mount all Media Folders for that project

Default. Usually results in the fastest opening time.

Do not try Mounting any Media or Folders

Media must be mounted manually.

Search for missing Media

When checked, Pyramix automatically searches for unmounted or missing media when a project is opened.

Auto-Saving

Pyramix can be set to automatically perform a save of all open projects at regular intervals. This does not create a backup unless a value in excess of 1 is entered in **Auto-Backup Versions** (see below).

Enable

When checked the current Project will be automatically saved at the interval set by:

Auto-Saving. Frequency

Sets the time between saves between 1 and 60 minutes.

Auto-Backup Versions

Determines how many previous versions will be kept. This ensures that every Save operation (Automatic or Manual) preserves at least one version of any projects being saved in their last stored state. The number of previously saved versions to preserve can be set by the user. As said above, the minimum is one.

Alternate Backup

Enable

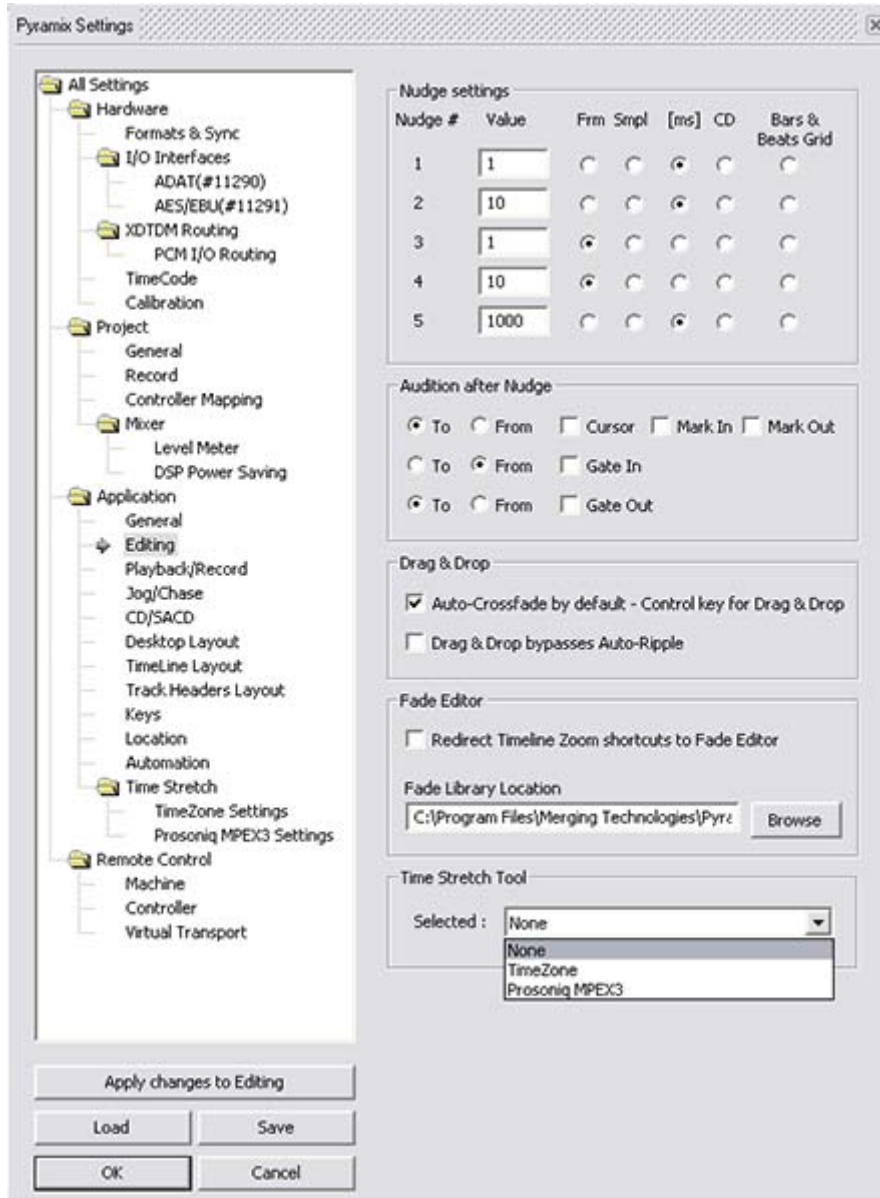
When enabled all projects saved (automatically or manually) are also saved to the chosen alternate location. The Backup Versions are not saved to the alternate location. This offers increased security if another drive or network drive is chosen.

Note: Only project files are stored into this directory, not the media files.

Location

Displays and sets the alternative location. The **Browse** button opens a Browser window to enable navigate to a suitable location.

Editing



Pyramix Settings Application Editing page

Nudge settings

These settings control the amount by which a cursor or clip will be nudged when using the left and right Arrow keys. Five Nudge Settings can be stored. Any one of these can be selected as the current nudge setting using **Clips > Nudge > Current Setting** or **Cursors&Marks > Current Nudge Setting**.

Nudge #1~Nudge #5

For each nudge preset, enter an numeric value and click the appropriate check box to set increments to frames, samples, milliseconds, CD frames or the current Bars & Beats grid.

Audition after Nudge

These options set automatic **Audition** on for the selected actions.

To

When checked, the playback will start before the selected option and stop when this is reached (cursor, mark in or mark out)

From

When checked, the rehearse will be performed from the selected option (cursor, mark in or mark out)

Separate **To** and **From** options are provided for **Gate In** and **Gate Out**

Drag & Drop

Auto-Crossfade by default - Control key for Drag & Drop

When checked, dragging a selection or clip over another results in a crossfade. (Cursor changes to a hand with an X.) Otherwise, dragging a selection or clip over another overwrites it. (Cursor is a hand) Holding down the control key when dragging selects the alternate function.

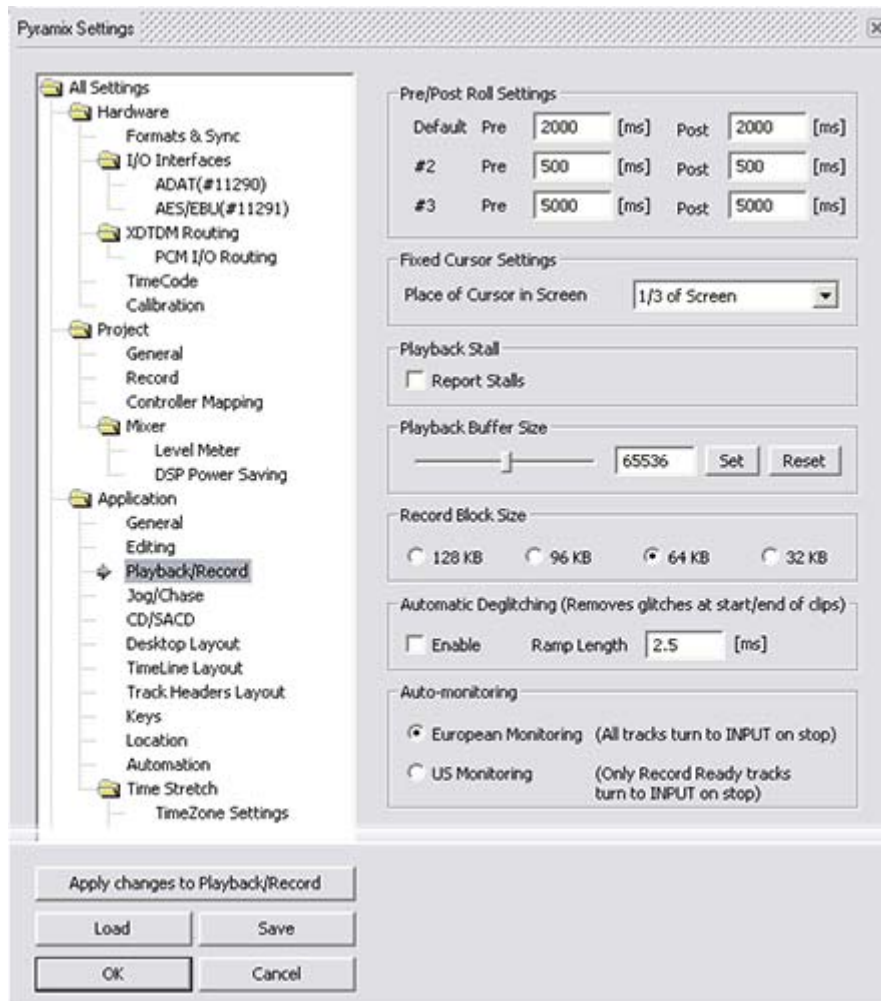
Fade library location

This is the path for the fade library. The **Browse** button launches an Explorer window allowing any local or network path to be set.

Time Stretch Tool

The **Selected:** combo box offers a choice of Time Stretch algorithms depending on which keys are installed.

Playback/Record



All Settings Application Playback/Record Page

Pre/Post Roll Settings

Allows values to be set for the **Default** and two alternative Pre and Post-roll settings.

Fixed Cursor Settings

The drop-down list offers nine possible positions for the Playhead cursor position on screen when scrolling Timeline with fixed cursor is selected. (**View > Fixed Cursor while playing**)

Playback Stall

When checked, interruptions to playback will pop-up a message box.

Playback Buffer

Buffer size may be set by typing in a value or by clicking and dragging the slider. Click **Set** to accept the new value or **Reset** to return to the default value.

Record Block Size

Offers a choice of four possible values. Should be left at the default **64kB** in most circumstances.

Automatic Deglitching (Removes glitches at start / end of Clips)

When **Enable** is checked, a short fade is applied to the start and end of every clip. **Ramp Length** sets the fade duration.

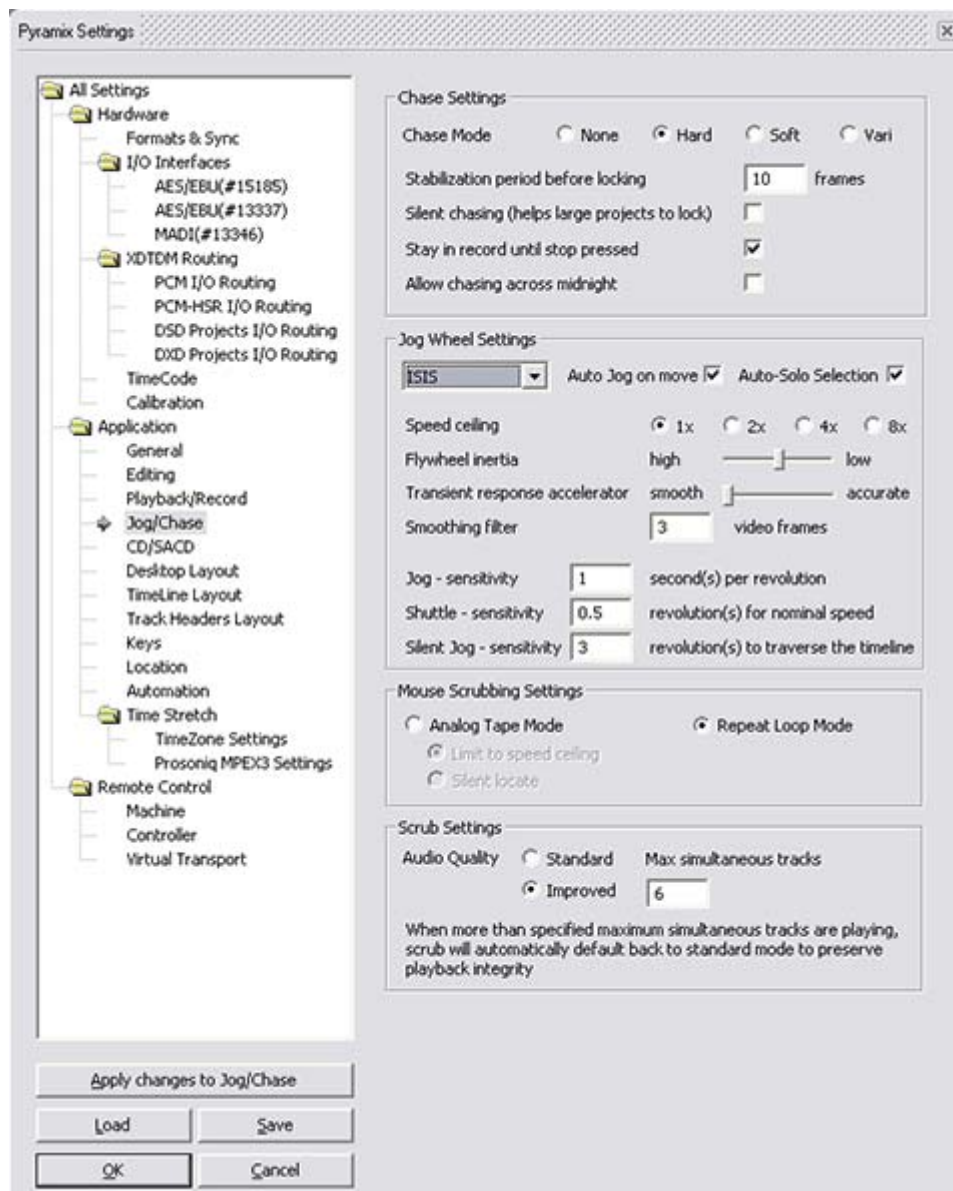
Auto-Monitoring

Toggles between two options

European Monitoring (All tracks turn to INPUT on stop) or

US Monitoring (Only Record Ready tracks turn to INPUT on stop)

Jog/Chase



All Settings Application Jog/Chase Page

Chase Settings

Chase Mode

The radio buttons give a choice of Chase Mode

- | | |
|-------------|--|
| None | Pyramix does not chase external TimeCode |
| Hard | When Hard Chase is active, Pyramix will only playback when valid TimeCode is detected on the chosen TimeCode input port. If there is a jump in the incoming TimeCode, Pyramix will adjust to the new TimeCode, re-synchronize and begin playback from the new TimeCode position. Pyramix will run on its own internal TimeCode for up to 1 frame if there is a drop out in the time code. If no valid TimeCode is detected after that time, playback will stop. |
| Soft | When Soft Chase is active, Pyramix will only playback when valid TimeCode is detected on the chosen TimeCode input port. If there is a jump in the incoming TimeCode, Pyramix will not adjust to the new TimeCode, but will continue playback with an offset from the incoming TimeCode position. Pyramix will continue to run on its own internal TimeCode for up to 1 frame if there is a drop out in the TimeCode. If no valid TimeCode is detected after that time, playback will stop. |
| Vari | When the Vari Chase is active, Pyramix will Varispeed, i.e. alter its sampling rate to follow fluctuations in an external TimeCode. (going back and forth, slowing down, accelerating, playing normally or backwards, up to 8x nominal speed) while in playback (not in record) |

Stabilization period before locking

Although Pyramix is capable of locking to incoming TimeCode within 3 - 4 frames, there are cases where synchronization is more stable if there is a longer waiting time. This is because some external devices take a considerable time to stabilize their speed after playback is started. This parameter allows a waiting time to be defined before Pyramix will start chasing the TimeCode. 30 frames is a good starting point if you experience problems with external machines.

Silent Chasing (helps large projects to lock)

When checked Pyramix allows large projects to lock immediately while chasing. In this mode locking time does not depend on the number of tracks. The drawback is that sound only appears one second after a lock is established.

Stay in record until stop pressed

If this box is checked Pyramix will remain in record (once properly locked to TimeCode) regardless of disturbances / discontinuities in the code until the Pyramix **Stop** button is pressed.

Allow chasing across midnight

When this option is unchecked the Chase engine always locks between 00:00:00:00 and 23:59:59:2X of Day 0

When this option is checked the Chase engine allows locking anywhere in the Pyramix timeline (-1000 days to +1000 days). The engine interprets the incoming timecode to be the nearest position to the current cursor position, thus allowing chasing around midnight of any days of the timeline.

For additional security and comfort, if Pyramix is in the "locked" state while crossing the midnight barrier, then even with this setting unchecked setting, there will not be an immediate jump from midnight back to zero while playing or recording in sync. The playback or recording will remain seamless, uninterrupted and cross the day barrier until an out-of-lock status is recognized. Only then is a re-chase triggered to whatever the incoming Timecode value is at that point.

Sony 9-pin Chase Mode

Offers choice of **None**, **Hard**, **Soft** and **Varispeed**. Varispeed enables chasing an external TimeCode by varispeeding.

Redirect Remote Controllers commands to the External Machine when chasing

When checked, any transport commands generated by an external hardware controller will be redirected to the active External Machine when the Internal Machine is in Chase mode as follows:

When the Internal Machine is chasing and the External Machine is selected (Active Machine), then **Play**, **Rewind**, **Fast Forward**, **Stop** and **Goto** commands sent by any Remote Controllers (Sony 9-Pin or MIDI) are redirected to the External Machine.

Record and Track Arming commands are **NOT** redirected.

When **Auto-Jog** is enabled, all Jog Commands are processed a slightly different way. Pyramix temporarily stops chasing and starts Jogging while sending Goto commands to the External Machine. The audio is therefore perfectly scrubbed and the external machine follows the audio as well as it possibly can. When the user stops Jogging, Pyramix automatically returns to chase mode.

This option is best used in conjunction with the **Auto-Chase External Machine** option available in the menu **Machines > Active Machine > Auto-Chase External Machine** which allows for easily switching between Internal and External Machine transport while continuing to chase.

Jog Wheel Settings

Preset

The combo box offers a choice of hardware controller presets including the Merging Technologies ISIS. Choose your controller from the list or, if not shown **User Defined**

Auto Jog on move

When ticked moving the jog-wheel enters **Jog** mode.

Auto-Solo Selection

When ticked all tracks in the current selection are **Solo'd** when jogging.

Speed ceiling

Sets the maximum jog speed from a choice of **1X**, **2X**, **4X** or **8X** play speed

Smoothing Filter

The Smoothing Filter parameter determines the length of the “fade in” and “fade out” when beginning and ending scrubbing. Enter the required value in the box expressed in video frames.

Flywheel inertia

Low follows the actual movements as sent by the jog wheel. **High** passes the actual movement through a smoothing filter. So, when the slider is set to **Low** the **Smoothing Filter** parameters have no effect.

For sound to picture work where tight sync to picture is required use a setting biased to Low. For a more pronounced flywheel effect choose a Higher setting.

The Middle position is a good starting point.

Transient response accelerator

Optimizes Pyramix's reactivity to jog moves, settings range from Smooth to Accurate.

When the slider approaches **Accurate** there may be some strange undesirable effects.

Jog - sensitivity - second(s) per revolution

Sets the time moved in one revolution of the jog wheel. Type the required value in the box.

Shuttle - sensitivity - revolution(s) for nominal speed

Sets the fraction of a revolution or number of revolutions required to maintain nominal speed. E.g. an entry of 0.25 will require a quarter of a turn clockwise to achieve nominal speed.

Navigate - sensitivity - revolution(s) to traverse the timeline

Navigate is silent jog mode. Sets the number of revolutions of the jog wheel required to traverse the visible timeline. I.e. the actual speed varies with the zoom setting.

Mouse Scrubbing Settings

Scrubbing Mode

Analog Tape Mode gives a similar response to 'reel-rocking' on an analogue tape machine.

Limit to Speed Ceiling When checked, limits scrub speed to the value set under **Speed Ceiling**

Silent Locate Enables scrubbing to be undertaken without audio when speed exceeds the value set under **Speed Ceiling**

Repeat Loop Mode continuously repeats a loop starting at the cursor position.

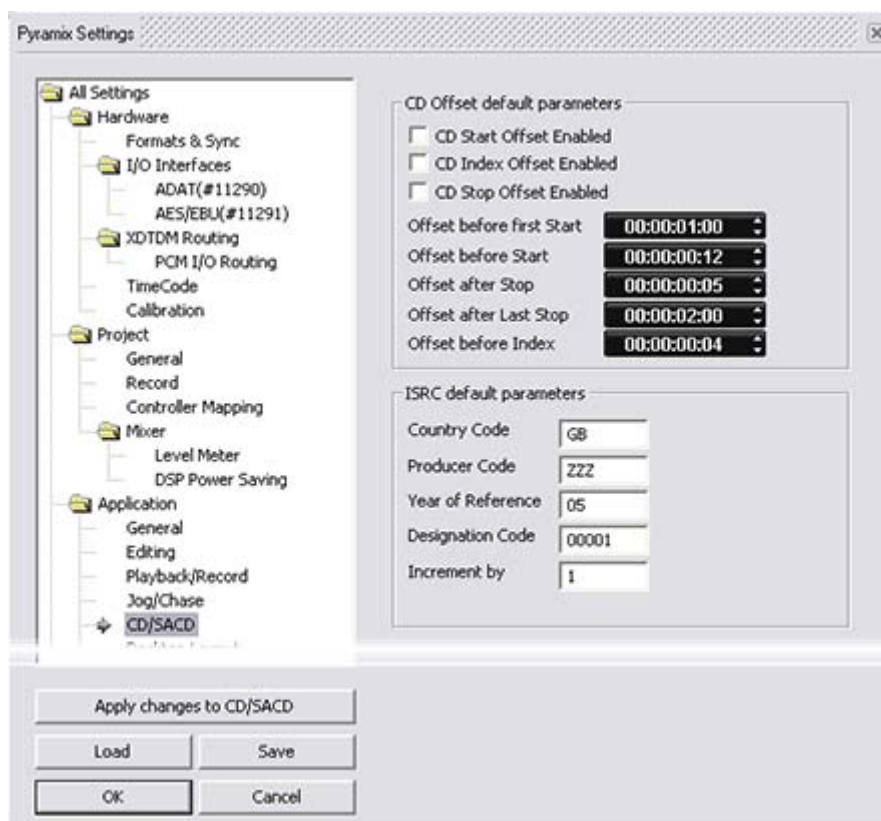
Scrub Settings

Audio Quality

Offers a choice of **Standard**, **Improved** or **Best**. The higher the quality chosen the greater the CPU load. Default is **Standard**, **Improved** is available and **Best** is for future use.

Improved mode is more demanding in terms of system resources. This setting will be automatically overridden to **Standard** mode if more tracks than the number specified in the **Max simultaneous tracks** field are scrubbed at the same time.

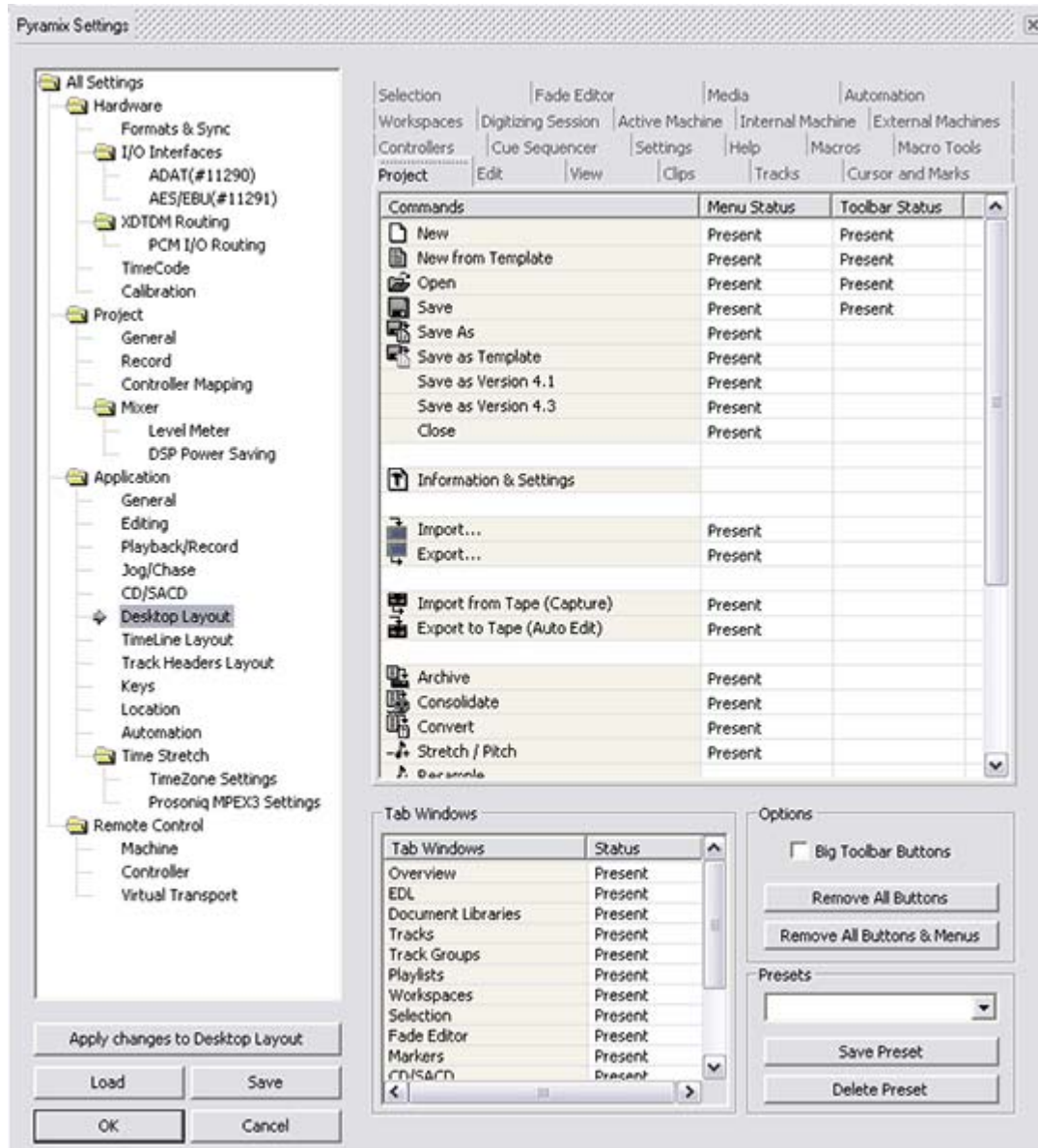
CD/SACD



All Settings Application CD/SACD Page

Please see: **CD/SACD Default Settings** on page 236

Desktop Layout



All Settings Application Desktop Layout Page

This is where you can customize the content of **Menus** and **Toolbars**. Clicking in the **Menu Status** and **Toolbar Status** cells toggles each entry **Present** or blank (absent). This can be used to tailor the user interface for specific tasks or operators.

Tab Windows

Clicking in the **Status** cells toggles each **Tab Window** entry **Present** or blank (absent).

Options

Big Toolbar Buttons Doubles the size of the Toolbar buttons when checked.

Remove All Buttons As it says - use with extreme caution.

Remove all Buttons and Menus Likewise - leaves a limited number of essential menu entries

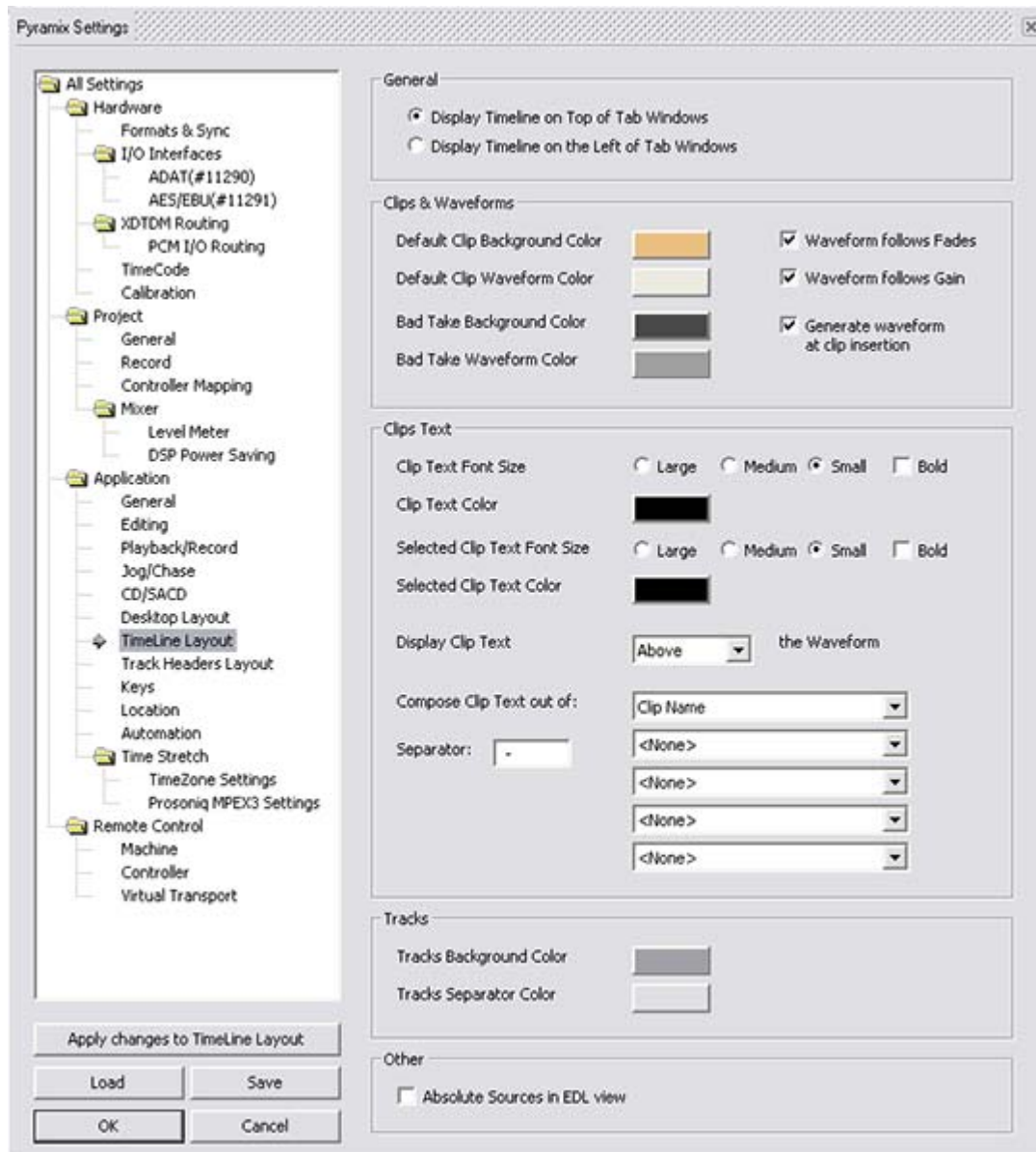
Presets The combo box offers a choice of previously saved **Presets**

Save Preset Pops up a simple **Save Preset** dialog

Delete Preset

Deletes the preset currently shown in the **Presets** combo box above.

TimeLine layout



All Settings Application Timeline Layout Page

For all the color options, clicking on the colored block pops up a list of defined colors. At the bottom of the list selecting **More Color...** opens a full **Color** picker dialog.

General

Display Timeline on Top of Tab Windows as it says.

Display Timeline on the Right of Tab Windows allows good use of dual monitors. Check this box when using a dual monitor set-up to enable the Timeline to be displayed on one screen and all Tab Windows on the other one.

Clips & Waveforms

Default Clip Background Color

Default Clip Waveform Color

Bad Take Background Color

Bad Take Waveform Color

Waveform follows Fades

When checked the waveform display is scaled in height during fades and crossfades. The original waveform is shown grayed out.

Waveform follows Gain

When checked the waveform display is scaled in height in proportion to the gain adjustment applied.

Generate waveform automatically at clip insertion

When checked a waveform file is automatically generated in the background for any clip which does not already have one when it is placed on the Timeline.

Clips Text

Clip Text Font Size The radio buttons offer a choice of **Large**, **Medium** or **Small** and the check box em**Boldens**.

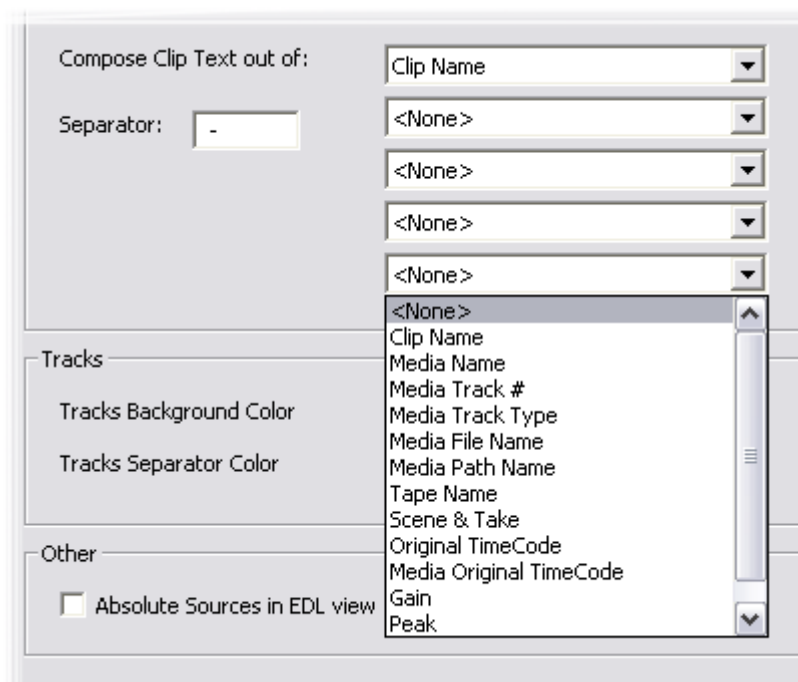
Clip Text Color

Selected Clip Text Font Size The radio buttons offer a choice of **Large**, **Medium** or **Small** and the check box em**Boldens**.

Selected Clip Text Color

Display Clip Text The combo box offers a choice of **Above**, **Below**, **In Front Of** or **Behind the Waveform**

Compose Clip Text out of: The clip text displayed can consist of up to five elements chosen from the five combo boxes, separated by the character typed in the **Separator** box:



Compose Clip Text out of : combo box

Tracks

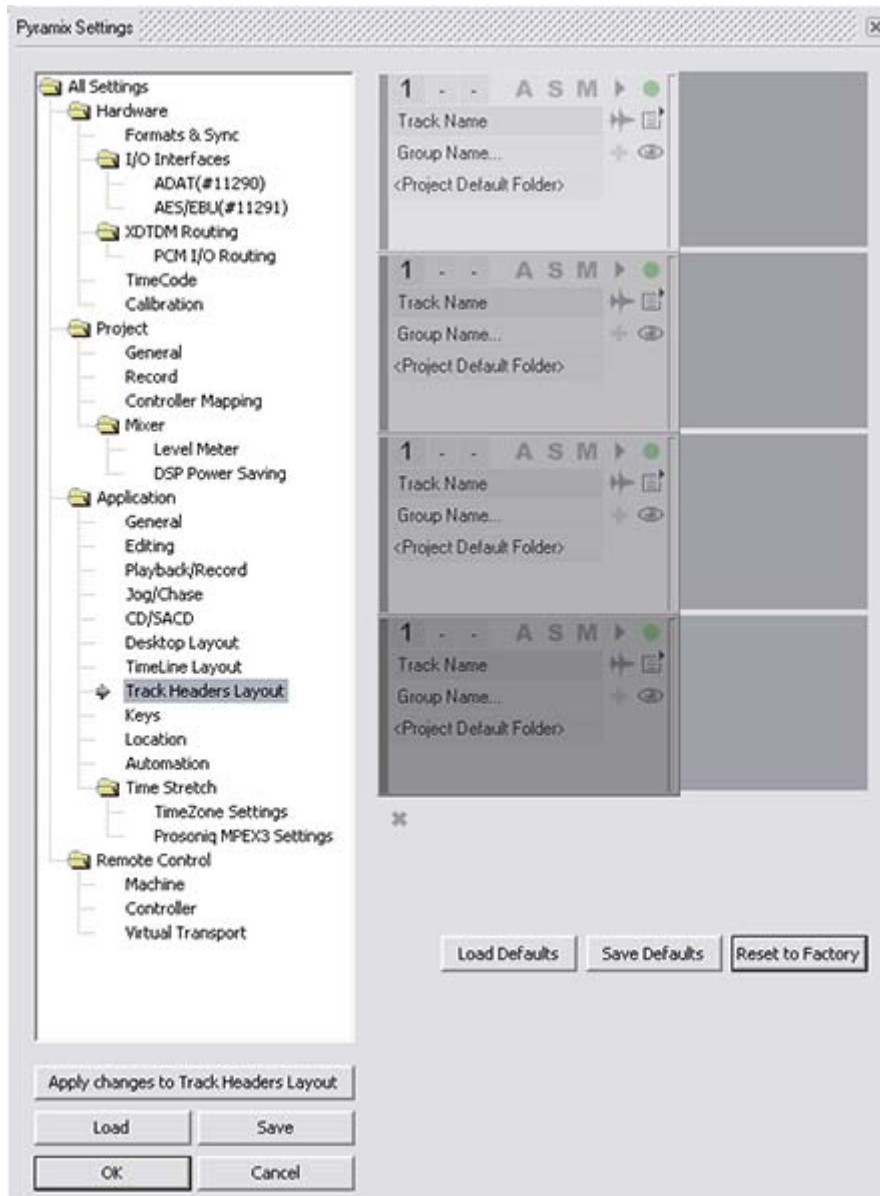
Tracks Background Color

Tracks Separator Color

Other

Absolute Sources in EDL view When **Absolute Sources in EDL View** is checked in the **Settings > All Settings > Application > TimeLine Layout** page, the original **Source In**, **Source Out** and **Sync Point** times are shown in **Absolute Time** in the **EDL View**. Absolute time is the incoming TimeCode recorded at the audio capture. When this mode is disabled, the default start time of TimeCode for the captured clip is 00:00:00:00.

Track Headers Layout



All Settings Application Track Headers Layout Page

Here, the user can determine the items that appear in the Track Header.

Clicking on any of the 'building blocks' of the Track Header selects the block, indicated by a square red outline. Blocks may be positioned anywhere in the Track Header by clicking and dragging. To remove a block from the Track Header, double-click it. The block disappears from the Track Headers in the Interface Editor and appears in the '**Pool**' at the bottom. Double-clicking a block in the Pool places it in the Track Header.

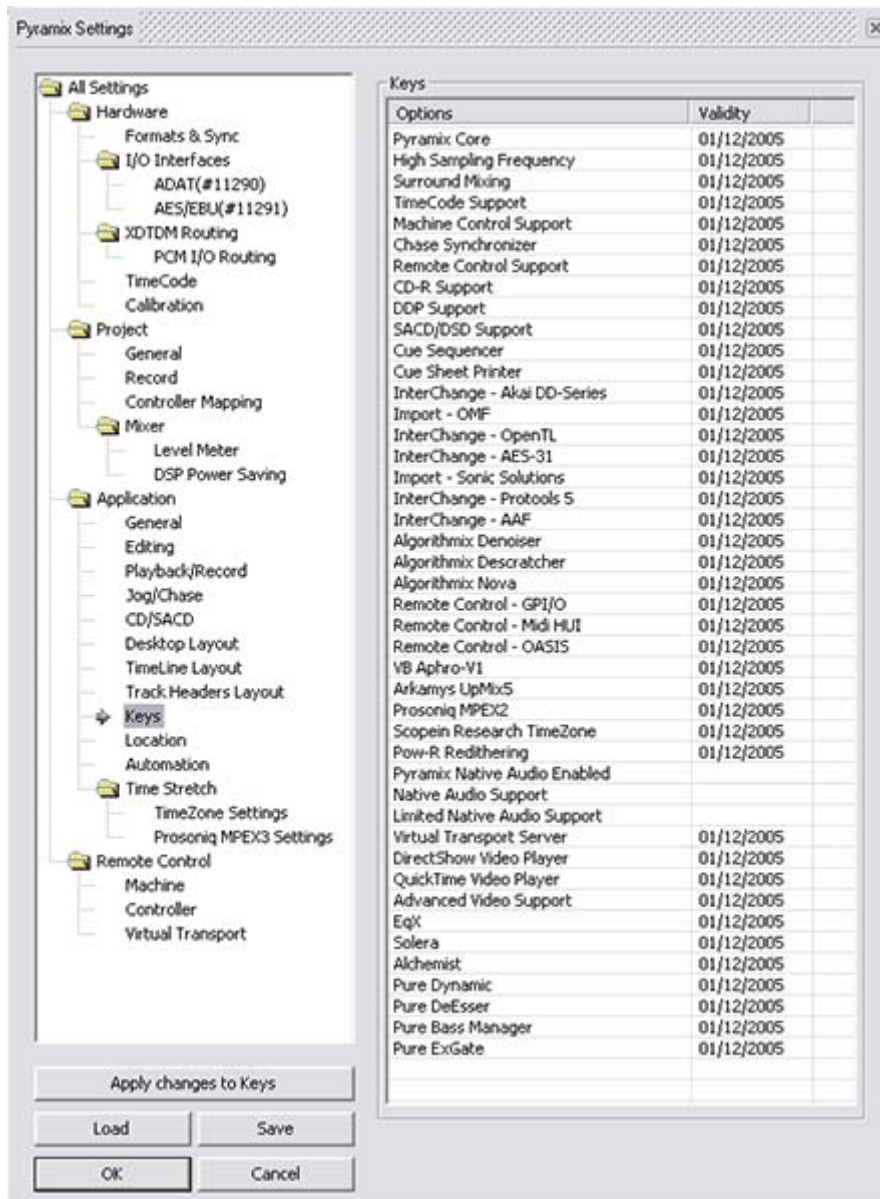
Load Defaults loads the default Track Header design saved with:

Save Defaults saves the current design as the default.

Reset to Factory

Resets Track Header Layout to the Factory default.

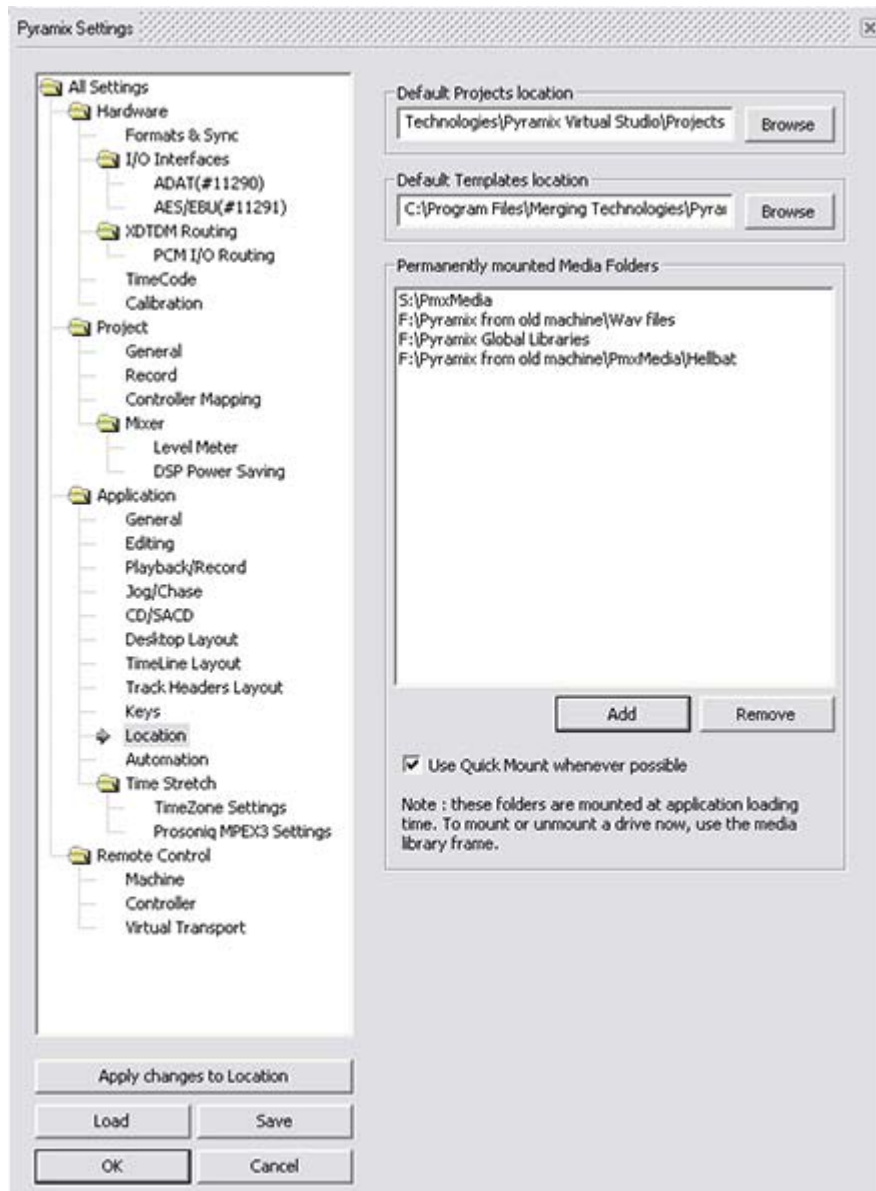
Keys



All Settings Application Keys Page

Information only. Nothing can be changed here. Shows the Keys which are validated and the date they are validated to.

Location



All Settings Application Location Page

Default Projects Location

This path is set when a new Project Workspace is created. It can be changed here either by typing the path into the box or browsing the Windows filing system using the **Browse** button

Default Templates Location

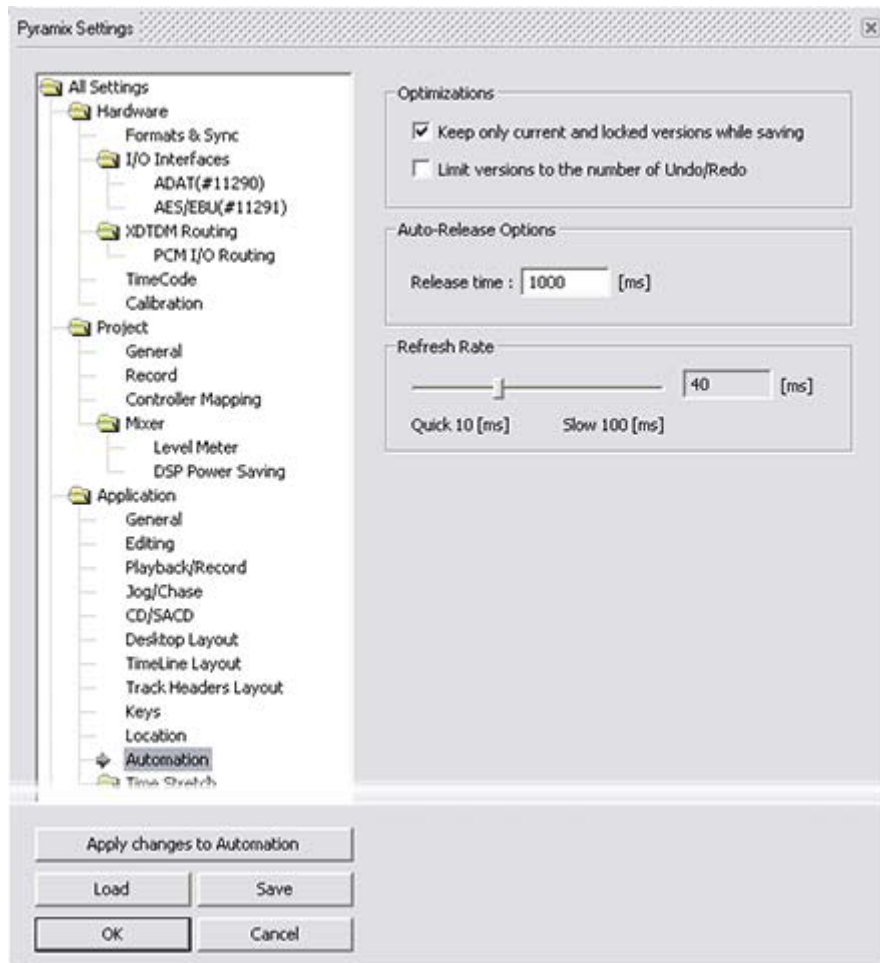
This path is set when Pyramix is installed. It can be change here in the ways described above.

Permanently Mounted Media Folders

Shows a list of Media Folders available to all projects. Clicking **Add** opens the **Choose a Media Folder to Mount** window. Here you can browse for Folders or create new ones.

Folders are removed by highlighting their list entry and clicking the **Remove** button.

Automation



All Settings Application Automation Page

Optimizations

Keep only current version while saving when checked does as it says

Limit versions to the number of Undo/Redo when checked does as it says. Number of **Undo/Redos** is defined in the **Settings > All Settings > Application General** page.

Auto-Release Options

Refresh Rate

If **Auto Release** is enabled any control will, when released or when the transport is stopped, return to its value or state in the previous automation pass or the default where no previous pass exists. This occurs either immediately if the control only has two states (e.g. a button) or over a period of time if the control is a fader or knob. The time period is determined by the value entered in the Release Time box in ms.

Refresh Rate

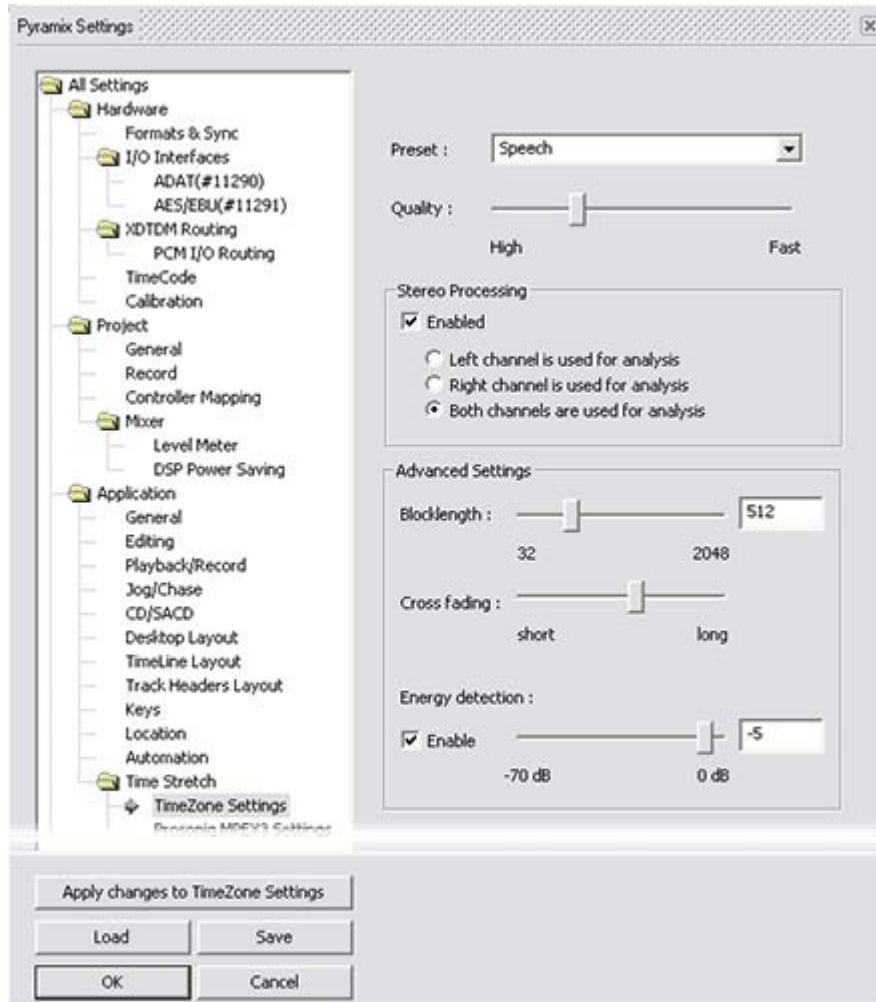
The **Quick 10[ms] Slow 100[ms]** slider allows the **Refresh** rate to be changed. (Or type a value in the box.) The **Refresh Rate** setting determines the rate at which the automation data is recorded. By default the refresh rate is the same as the actual time code frame rate, e.g. 40 ms at a frame rate of 25 fps.

The possible range of the refresh rate is 10 to 100 milliseconds. Please note that the setting is rounded to entire frames, so that the effective refresh rate will be either one, two or three times the actual frame rate.

One reason to choose a slower setting for the refresh rate would be to save the processing power required to calculate the automation movements in case of complex mixes.

Time Stretch

TimeZone Settings



All Settings Application Time Stretch TimeZone Settings Page

Preset

The drop-down list offers a choice of algorithm presets for various sound types.

Quality

The slider offers a choice between High Quality and Fast processing.

Stereo Processing

When the **Enabled** box is checked offers a choice of which channel(s) of a stereo media will be used for analysis.

Advanced Settings

Blocklength

Allows the user to determine the length of the blocks used for processing by entering a value between 32 and 2048 in the text box or by positioning the slider.

Cross fading

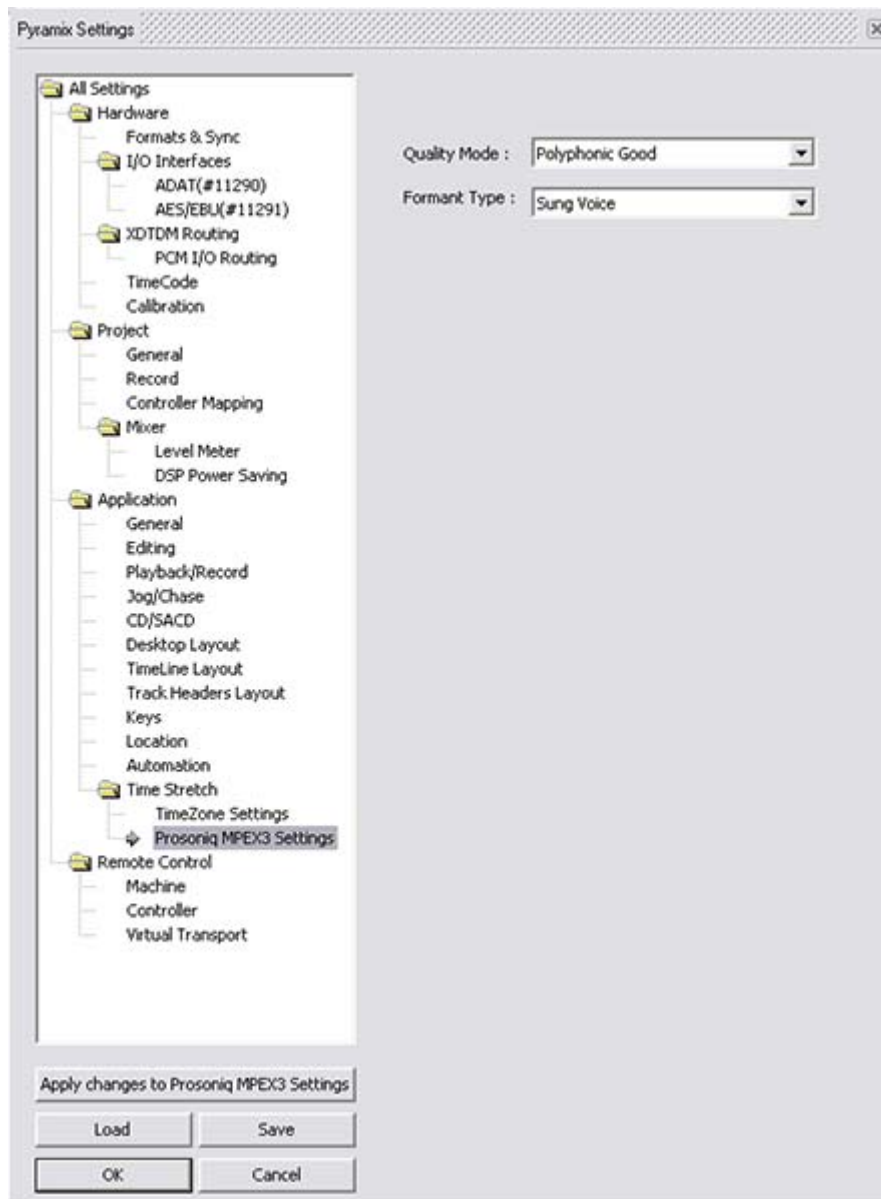
Allows the user to vary the length of the crossfades between blocks by positioning the slider

Energy Detection

When the **Enable** box is checked the user can set the threshold level by entering a value between -70dB and 0dB in the text box or by positioning the slider.

These parameters affect the quantity and character of audible artifacts and allow fine tuning of the process to suit specific material.

Prosoniq MPEX3 Settings



All Settings Application Time Stretch Prosoniq MPEX3 Settings Page

Optimize **MPEX3 Settings** by making appropriate choices from the **Quality Mode** and **Formant Type** combo boxes.

Quality Mode

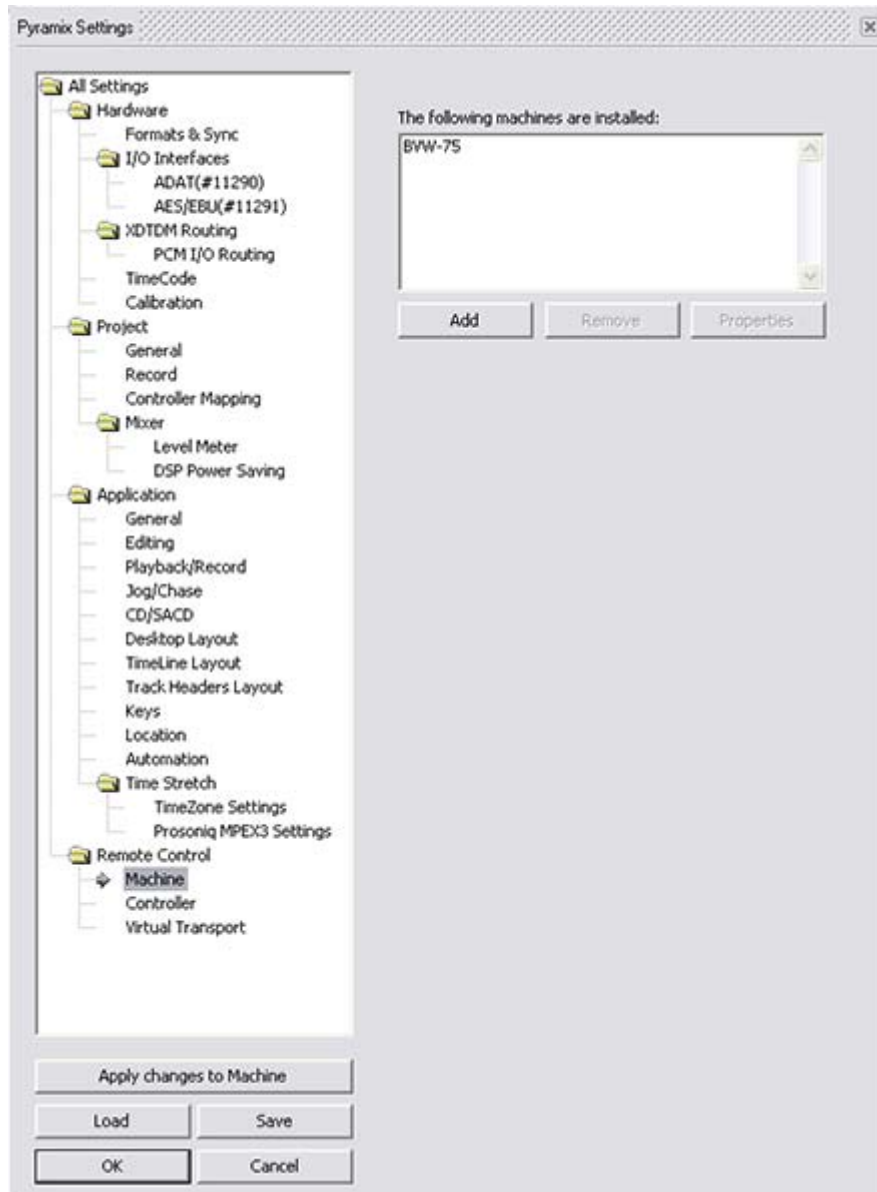
Single Instrument Fast
Single Instrument Best
Polyphonic Fast
Polyphonic Good
Polyphonic Best

Formant Type

Sung Voice
Spoken Voice

Remote Control

Machine



All Settings Remote Control Machine Page

The following machines are installed:

Displays a list of all installed machines. Machines in this list will be available as possible machine choices in the Transport Control.

Add

Clicking on the **Add** button opens the **Machine Properties** dialog box (see below)

Remove

If a machine is selected (highlighted) in the list, clicking **Remove** uninstalls the machine and removes it from the list.

Properties

Clicking on the **Properties** button opens the **Machine Properties** dialog box (see below)

OK

Click OK to accept changes (if any) and close the Machines page.

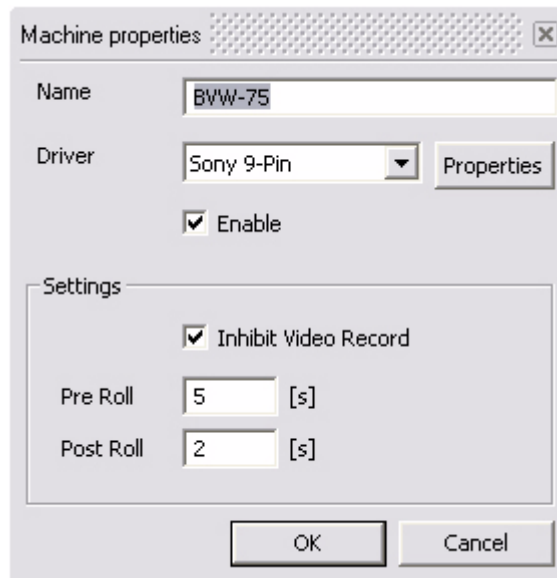
Cancel

Click Cancel to reject changes (if any) and close the Machines page.

Apply

Click Apply to apply changes without closing the Machines page.

Machine Properties



The image shows a screenshot of the 'Machine properties' dialog box. It has a title bar with a close button. Inside, there are three main sections. The first section has a 'Name' field with the text 'BWV-75'. The second section has a 'Driver' dropdown menu showing 'Sony 9-Pin' and a 'Properties' button next to it. Below this is a checked checkbox labeled 'Enable'. The third section is titled 'Settings' and contains a checked checkbox labeled 'Inhibit Video Record'. Below this are two input fields: 'Pre Roll' with the value '5' and '[s]', and 'Post Roll' with the value '2' and '[s]'. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Machine Properties dialog

When the **Machine Properties** dialog is opened by the **Add** button, the **Name**, **Protocol** and **Port** displays are blank. When the dialog is opened by the **Properties** button the displays reflect the name etc. for the selected machine.

Name

Displays the name of the current selected machine. When adding a new machine, type a suitable name here.

Driver

Displays the current interface protocol **Sony** (9-pin P2 protocol) in the drop-down list. (Currently Sony only)

Driver - Properties

Opens the **Sony 9 - Pin Protocol Configuration** dialog box (see below) when **SONY** is selected. There are currently no options for **MMC**

Settings

Inhibit Video Record

When checked prevents record arming of video in order to ensure video cannot be accidentally overwritten.

Pre Roll

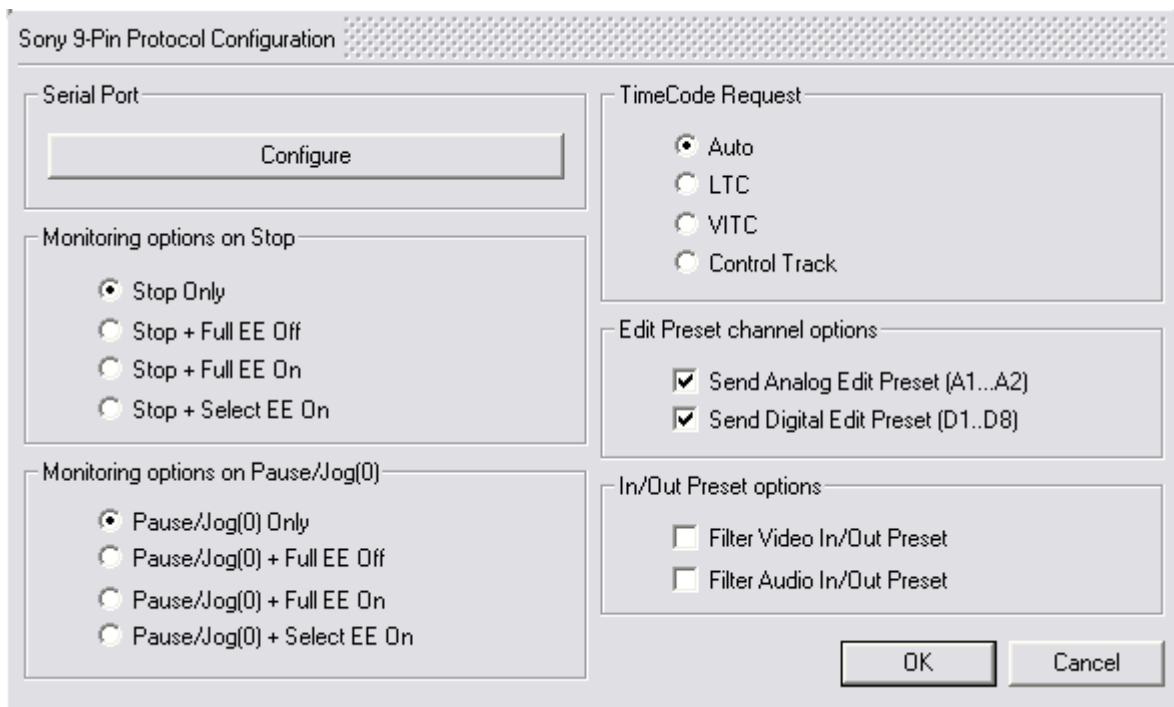
Shows the current **Pre Roll** time for the external machine. Type in the box to change the value.

Post Roll

Shows the current **Post Roll** time for the external machine. Type in the box to change the value.

Driver Properties

Sony 9-Pin Protocol Configuration (Machine)



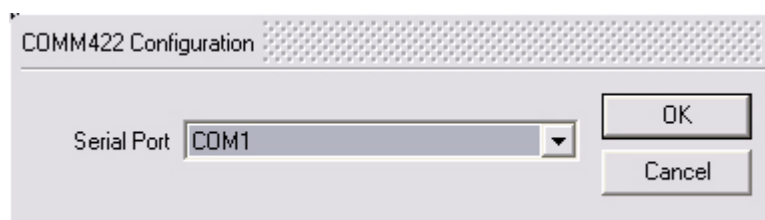
Sony 9-Pin Protocol Configuration dialog

This dialog determines **Monitoring Options on Stop**, **Monitoring Options on Pause/Jog**, **Preset Channel Options** the type of **TimeCode Request**, **In/Out Preset options** and gives access to the **Serial Port** configuration dialog.

Serial Port

Configure

Clicking the **Configure** button opens the **COMM422 Configuration** dialog box:



COMM422 Configuration dialog

Serial Port

Shows the current **Serial Port** selected from the drop-down list. If not already highlighted, select the desired serial COM port. Standard choices are either COM1 or COM2.

Click **OK** to confirm the choice. This automatically sets the selected COM port with the proper parameters of the Sony 9-pin communication protocol.

Monitoring options on Stop

After a **Stop** command the following command will be issued:

- **Stop Only**
- **Stop + Full EE Off**
- **Stop + Full EE On**
- **Stop + Select EE On**

Monitoring Options on Pause/Jog(0)

After a **Pause/Jog** command the following command will be issued:

- **Pause/Jog(0) Only**
- **Pause/Jog(0) + Full EE Off**
- **Pause/Jog(0) + Full EE On**
- **Pause/Jog(0) + Select EE On**

Edit Preset channel options

Enables Track Arming commands to be filtered out if required.

- **Send Analog Edit Preset (A1..A2)**
- **Send Digital Edit Preset (D1..D8)**

This feature is mostly relevant where the console or a third-party record/monitoring controller is used for record commands.

TimeCode Request

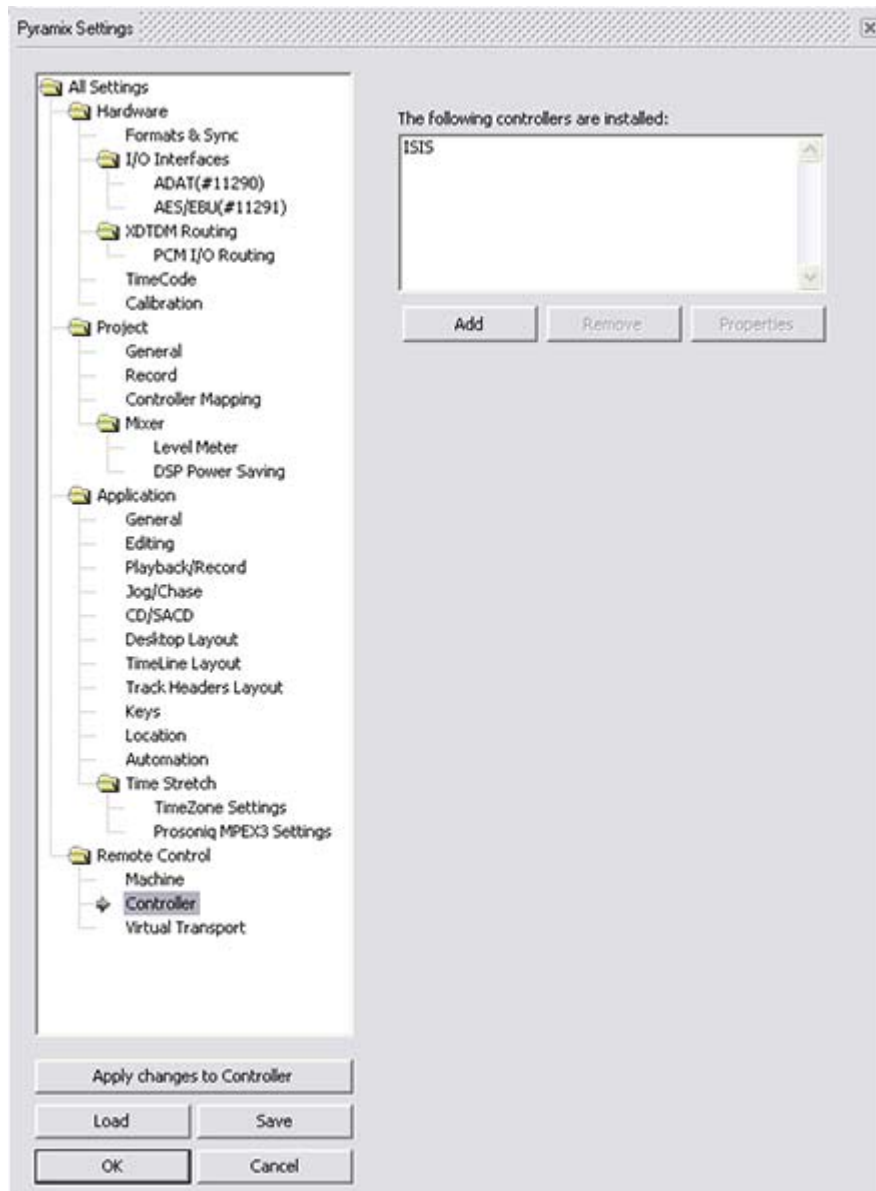
The radio buttons select the source of the TimeCode from the external machine. Sony machines usually respond to all requests, so the Auto setting will probably be appropriate. If necessary E.g. where there are several different TimeCodes present on a tape, you can specify a desired TimeCode source to override the automatic setting. U-Matic machines do not respond to all requests, therefore you must specify the Time-Code source.

Send In/Out Preset options

By default, Pyramix sends Edit Video In/Out and Edit Audio In/Out points when an In/Out point is set in the Transport Control panel. These options enable these commands to be filtered out if necessary.

- **Filter In/Out Preset (video)**
- **Filter Audio In/Out Preset**

Controller



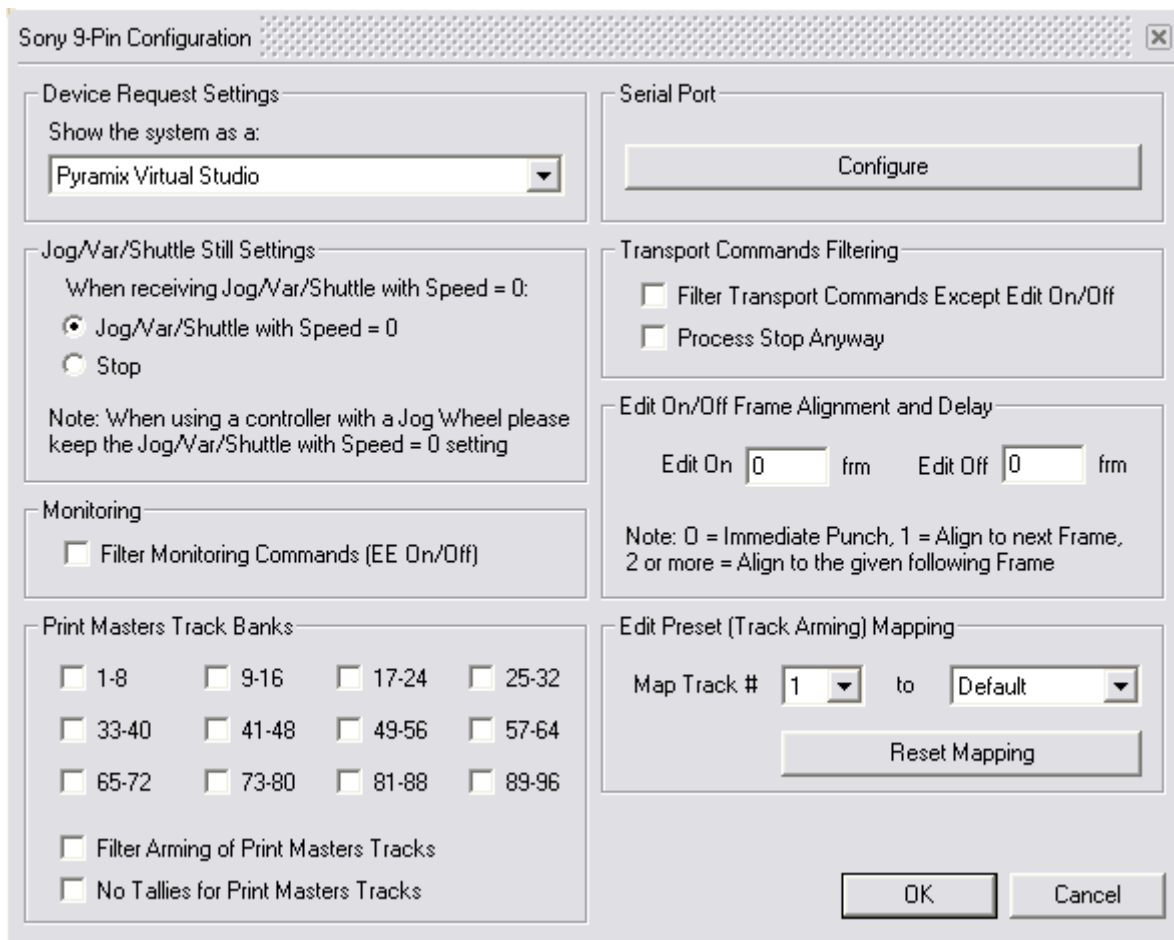
All Settings Remote Control Controller Page

The **Controller** page shows a list of all external controllers currently installed.

Properties

Pops up the configuration window for the selected controller. **Please see: Control by External Device on page 296** for further details.

Sony 9 - Pin Protocol Configuration



Sony 9-Pin Configuration dialog

Device Request Settings

The Sony 9-pin P2 protocol transmits a code to identify the machine. Some machine controllers will do nothing or exhibit aberrant behavior if they do not recognize the identifier code. Therefore, Pyramix can masquerade as another device. The device identifier can be selected from a long list in the **Show the system as a:** combo box.

Jog/Var/Shuttle Still Settings

The radio buttons determine Pyramix behavior **When receiving Jog/Var/Shuttle with speed = 0** commands:

- **Jog/Var/Shuttle with Speed = 0 (default)**
- **Stop**

Note: When using a controller with a jog wheel please keep the **Jog/Var/Shuttle ... Speed = 0** default setting.

Monitoring

Filter Monitoring Commands (EE On/Off) when ticked, E to E On and off commands are filtered out.

Print Masters Track Banks

The selected banks of **8 tracks** are armed for recording when any OTHER track is armed. This is primarily useful when recording a Print Master or Masters at the same time as stems. E.g. if you are recording Dialogue, Music and Effects stems it is common practice to update an element on one stem only. However, the final mix Print Master, which is the sum of all the stems must be updated at the same time. Print Masters Track banks allow the user to forget about arming the Print Master tracks and concentrate on the stems.

Filter Arming of Print Masters Tracks

When ticked, arming a Print Master track will not arm the other Print Master tracks.

No Tallies for Print Masters Tracks

When ticked, record tally commands are filtered out for the Print Masters tracks.

Serial Port

Configure

Opens the **COMM422 Configuration** dialog.

Please see: Serial Port on page 348

Transport Commands Filtering

- **Filter Transport Commands Except Edit On/Off** When ticked all transport commands apart from Edit On or Edit Off are filtered out.
- **Process Stop Anyway**

Some controllers send a **Chase Off** command for Stop. If you need this command when filtering Transport Commands, checking the box will allow it through.

Note: These filter settings are mainly relevant where multiple controllers are in use. E.g. where a Mixing console controls monitoring and recording.

Edit On/Off Frame Alignment and Delay

Edit On and **Edit Off** boxes enable delays (in ms) to be entered.

Note: 0 = Immediate Punch, 1 = Align to next Frame boundary, 2 or more = Align to the given following Frame boundary.

Edit Preset (Track Arming) Mapping

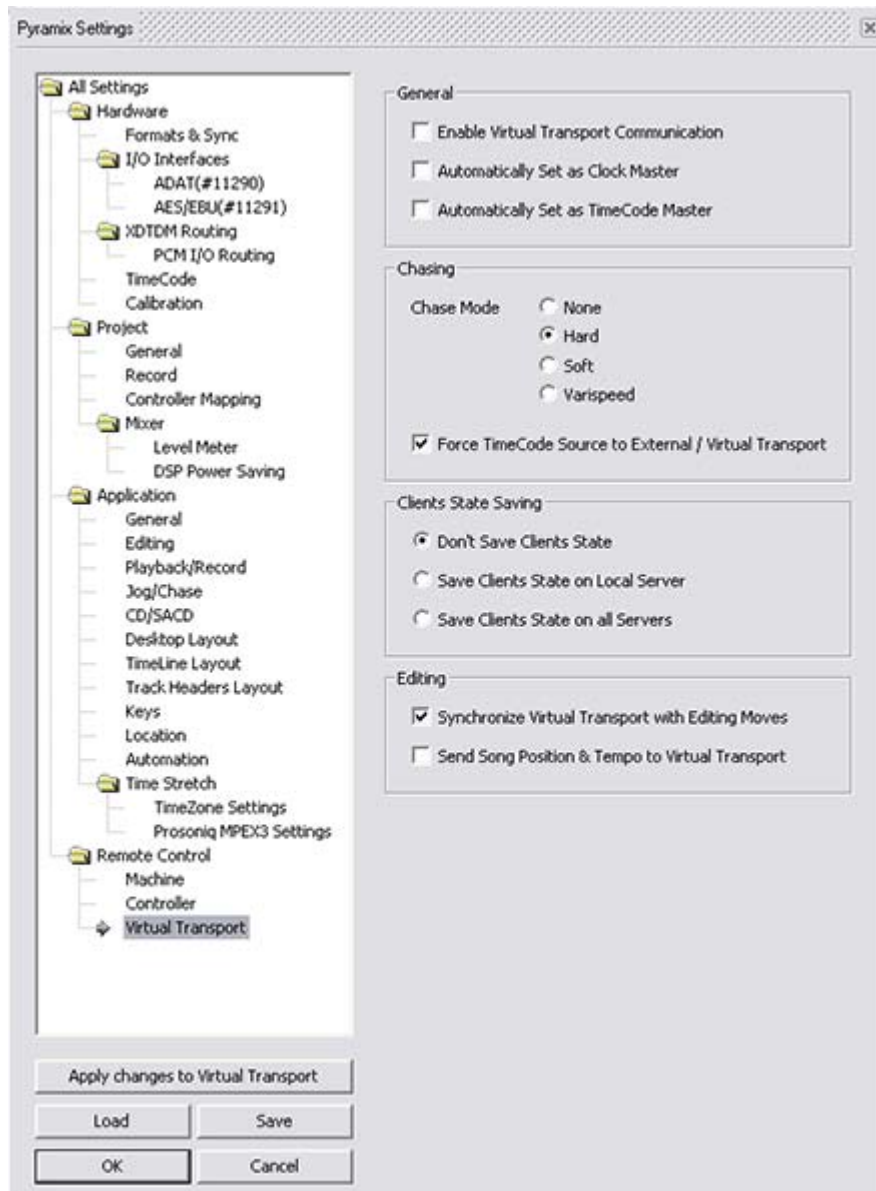
The **Map Track #** combo box allows you to select a track between **1** and **96** to be mapped to a choice made in the second combo box from:

- **Default**
- **No change**
- **Always Off**
- **Always On**

or any track between **1** and **96**

This function is useful if more than one Pyramix is to be controlled by the same controller. E.g. with two machines set up to record 32 tracks each, Pyramix one is mapped **1 - 1** to **32 - 32** and Pyramix two is mapped **1 - 33** to **32 - 64**

Virtual Transport



All Settings Remote Control Virtual Transport Page

General

Enable Virtual Transport Communication

When checked, Pyramix communicates bi-directionally with Virtual Transport.

Automatically Set as Clock Master

When checked, the Pyramix Client is set as Clock Master. I.e. Pyramix is the master clock reference for all Clients

Automatically Set as TimeCode Master

When checked, the Pyramix Client is set as TimeCode Master. I.e. Pyramix provides the master TimeCode reference for all Clients

Chasing

Chase Mode - None - Hard - Soft

These radio buttons toggle the Pyramix Chase Mode.

Force TimeCode Source to External / Virtual Transport

When checked, TimeCode source is External / Virtual Transport.

Clients State Saving

Toggles between:

Don't Save

Save Client's State on Local Server

Save Client's State on all Servers

Editing

When checked,

Synchronize Virtual Transport with Editing Moves

Send Song Position and Tempo to Virtual Transport

22

Menus



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



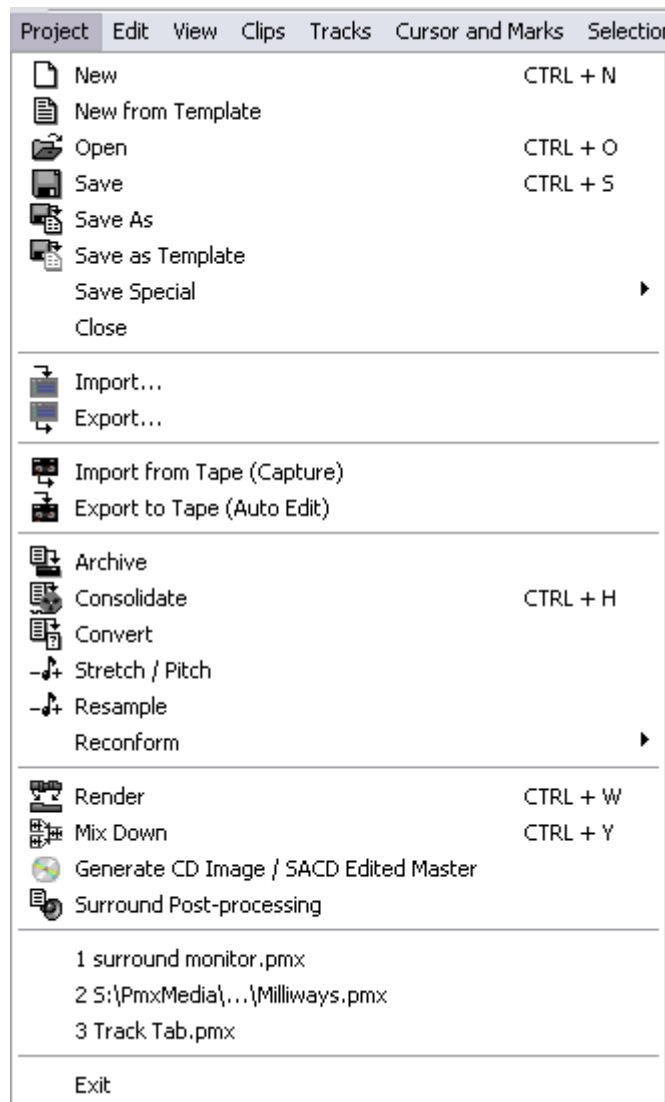
Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Pyramix Default Menus

Menus are highly configurable in Pyramix. Commands can be hidden or added and entire menus shown or hidden. If a command cannot be found check if it is currently hidden in the relevant tab page of **Settings > All Settings > Application > Desktop Layout**.

Many Pyramix menu entries are self-explanatory. Here, these are simply listed. Other menu entries are either described here or elsewhere in this manual. Wherever menu options have Toolbar Icon alternatives, these are shown in the menu screenshots.

Project



Project menu

New

Create a new Editing Project or Digitizing session

New from Template

Create a new Project based on a Template

Open

Open an existing Editing Project or Digitizing session

Save	Save current Project. If the project has never been saved, the Save As dialog box will appear
Save As	Save current Project with a new name
Save as Template	Save current Project as a Template
Save as Version 4.3	For compatibility
Close	Close the current Project. If the file has changed since last saved, the Save dialog box will appear
Information & Settings	The Information Panel has fields for entering information related to the current project
Import...	Opens the InterChange Import Manager
Export...	Opens the InterChange Export Manager
Import from Tape (Capture)	Allows media on external devices to be captured into the current Project
Export to Tape (Auto Edit)	Allows the current composition to be exported to an external device
Archive	Creates a copy of the current project with all associated media to another location
Consolidate	Create an optimized set of media for the current project
Convert	Convert the whole project to an other sampling rate
Stretch / Pitch	Stretch or Pitch the whole project from 24fps to 25fps (4% time compression or pitch reduction) or 25fps to 24fps (4.17% time expansion or pitch rise)
Resample	Opens the resampler
Reconform >	
Relink to New Media	Opens a dialog offering various options similar to the CMX Import function. This allows relinking all or a selection of clips to new media. Typically, this is used for replacement of 16 bit versions of audio files with 24 bit versions based on the clip name, media name, Scene & Take information or original TimeCode.
Load Change EDL	Allows a so-called "Change EDL" generated from a "State 1 EDL" and a "State 2 EDL" to be loaded. Cues are rearranged within the current project to reflect the change from State 1 to State 2
Render	Render the project or current selection to a new Media File
Mix Down	Mix the project or current selection down to a new Media File through the mixing console
Generate CD Image / SACD Edited Master	Opens the Generate CD Image / SACD Edited Master Dialog: DSD options are only available for DSD Projects
Surround Post-processing	Enables the current composition to be encoded in different Surround format such as AC3 or DTS (if the appropriate optional encoder plug-in is installed)
"1 surround monitor.pmx" etc.	The most recently opened Projects are listed at this position. Clicking on an entry opens the Project.

Exit

To quit the application, choose Exit from the File menu. If there have been changes since the last time you saved the project, the system will prompt you to save your changes

Note: The **Stretch / Pitch** menu selection requires the optional Prosoniq MPEX.

Edit

Edit	View	Clips	Tracks	Cursor & Marks	Selection	Fade Editor	Audio
Undo split clip(s) or region Undo history					CTRL + Z, F5		▶
Nothing to Redo Redo history					CTRL + SHIFT + Z, F6		▶
Delete Cut Copy					DELETE CTRL + X, F2 CTRL + C, F3		
Paste							▶
Fill Selection Replace Selection Loop Selection Fit Selection					CTRL + SHIFT + V CTRL + SHIFT + ALT + V		
Delete and Ripple Cut and Ripple Paste and Ripple Insert Silence					CTRL + DELETE CTRL + ALT + X CTRL + ALT + V CTRL + ALT + S		
Delete and Join Cut and Join Delete and Ripple to Black Cut and Ripple to Black							
Split Unsplit Trim Trim In to Cursor Trim Out to Cursor Stretch Reverse Normalize					CTRL + T CTRL + SHIFT + X CTRL + SHIFT + S		
Consolidate Spread Abut to selected Automatic Silence Removal					CTRL + Q CTRL + SHIFT + E CTRL + E		
Delete with Media Update Media Original TC Source-Destination Jog-Wheel Editing Editing Modes							▶ ▶ ▶
Auto-Ripple Auto-Crossfade Enable Automation Cut/Copy/Paste Update Original TC on Move Snap							▶

	Paste to Cursor	CTRL + V, F4
	Paste Tail to Cursor	
	Paste Sync Point to Cursor	
	Paste & Place	
	Paste to Original TimeCode	SHIFT + ALT + V
	Paste to End of Selection	

Paste Sub-menu

Edit menu

The Edit menu in Pyramix contains the conventional Delete, Cut and Copy commands, and a Paste sub-menu, also options for Undo and Redo of previous edit operations and special edit commands for placing clips in the Pyramix Composition Editor.

Undo clip(s) move	Undo command changes to show the last edit action and cancels it when selected
Undo history >	leads to a sub-menu with a list of all previous editing actions which can be undone
Redo clip(s) move	Redo command changes to show the last action undone and cancels it when selected
Redo history >	leads to a sub-menu with a list of all editing actions which have been undone and can be redone
Delete	Deletes the currently selected clip/selection
Cut	Cuts the current selection from the project and saves it on the Clipboard
Copy	Copies the current selection from the project and saves it on the Clipboard
Paste >	
Paste to Cursor	Inserts what's on the Clipboard to the current cursor position
Paste & Place	This command opens the Placement Tool to allow for more extensive placement options
Paste to Original TimeCode	Inserts what's on the Clipboard to the pasted clip's original source time code position
Paste to End of Selection	Inserts what's on the Clipboard to the end point of the current selection
Fill Selection	This command will substitute the Clipboard contents for the selected clip or region
Replace Selection	This command will substitute the Clipboard contents for the selected clip or region and ripple following clips if there's a length difference
Loop Selection	This command will substitute a loop of the Clipboard contents for the selected clip or region without changing sync on the track
Fit Selection	This command allows inserted clips to be fit into specified regions on the Timeline. This requires the Timezone Time compression/Expansion plug-in
Delete and Ripple	Deletes the currently selected clip/selection, forcing a ripple to occur
Cut and Ripple	Cuts the current selection from the project and saves it on the Clipboard, forcing a ripple to occur
Paste and Ripple	Inserts what's on the Clipboard to the current cursor position, forcing a ripple
Insert Silence	This command will insert blank space (silence) into to the current selection
Delete and Join	Deletes the currently selected clip/selection and ripples the end of the clip.
Cut and Join	Cuts and saves to the clipboard the currently selected clip/selection and ripples the end of the clip.
Delete and Ripple to Black	Deletes the currently selected clip/selection and ripples all following butted or cross-faded clips.
Cut and Ripple to Black	Cuts and saves to the clipboard the currently selected clip/selection and ripples all following butted or crossfaded clips.

Split	This command uses the play cursor as a razor blade to split selected clips into two clips at the point where the play cursor crosses the selected clips
Unsplit	Clips that have been Split , Cut or Crossfaded can now be joined back together providing they are still in sync and referencing the same media
Trim	The Trim handles allow you to shorten or extend the length of a clip by moving the head or tail relative to the rest of the clip
Trim In to Cursor	
Trim Out to Cursor	
Stretch	This allows a clip to be stretched or squeezed
Reverse	This allows a clip to be fit into a selection on the Timeline. The values of the Time-zone plug-in will be set automatically to fit the clip into the selection
Normalize	Apply the normalize process to the selected clip
Consolidate	The Consolidate function will make a selective backup of the media segments in the Composition
Spread	This command allows a space (silence) to be inserted between selected clips
Abut to selected	This command abuts all clips between the Mark In and Mark Out on a track to a selected clip between the marks on the same track
Automatic Silence Removal	This command opens the Automatic Silence Removal dialog box
Delete with Media	Removes the current selected clip from the composition, and delete the associated media file
Update Media Original TC	Updates the Media Original TC for all selected clips with their TimeCode position in the composition. This operation modifies the Media and is not reversible

Source-Destination >

Auto-Edit Source to Destination

Executes the appropriate Source/Destination 2, 3 or points editing operation depending on the Gates status

Overwrite Source to Destination

Overwrites the content between the Destination Track Group Gates with the content between the Source Track Group Gates

Insert Source to Destination Inserts the content between the Source Track Group Gates to the Destination Track Group Gates

Replace Source to Destination

Replaces the content between the Destination Track Group Gates with the content between the Source Track Group Gates by rippling the Destination

Fit Source to Destination Replaces the content between the Destination Track Group Gates with the content between the Source Track Group Gates by stretching the Source

Auto Set Destination Gate In after Edit

When this option is checked (enabled), the Destination Gate In point is automatically set to the current Gate Out point after any Source-Destination operation

Auto Select Destination after Edit

When this option is checked (enabled), the Destination Track Group is automatically selected after any Source-Destination operation

Limit 1 Gate Sources to End/Beginning of Clip

When this option is checked (enabled), then the Source material between the Source Gate and the end of the clip under the Gate instead of the whole track is copied to the Destination

3 Gates Auto-Edit does Overwrite

When this option is checked (enabled), then when 2 Gates are set in a Source and 1 is set in the Destination then AutoEdit performs an Overwrite operation

3 Gates Auto-Edit does Insert

When this option is checked (enabled), then when 2 Gates are set in a Source and 1 is set in the Destination then AutoEdit performs an Insert operation

Jog-Wheel Editing

A number of editing actions may be undertaken on a selected clip or group of clips using a jog-wheel on an external hardware controller.

First select the Clip or group of Clips, then select the desired Jog-Wheel Editing Mode from the choice of:

Move

Trim In

Trim Out

Trim Fade Out

Tim Fade In

Trim Fade In Symmetrically

Trim Fade Out Symmetrically

Trim Sync Point

Slip In

Slip Out

Slide Media

Now simply move the jog wheel to **Move**, **Trim**, **Slip** or **Slide** the Clip(s)

Pressing the **Spacebar** or **Enter** confirms the change(s), **Esc** cancels.

Editing Modes > Insert Mode >

Overwrite

When checked, any clip placed so that it overlaps an existing clip will overwrite the part of that clip where the two overlap.

Insert Track

When checked, any clip placed on a track will be inserted into the track and will ripple all other material on the track later in time (to the right) by the length of the clip being inserted.

Editing Modes > Remove Mode >

- Remove** When checked any selected material will simply be removed from the Timeline. Everything else will be left intact and in the same place.
- Remove and Ripple** When checked any selected material will be removed from the Timeline. Everything else to the right (after) the removed material will be Rippled (moved) to the left (earlier) to take up the space left by the removed material.

Editing Modes > Snap Mode >

- Don't Snap** No snap mode set. This mode doesn't affect the behavior of objects placed on a track. Behavior follows the existing Insert and Remove modes.
- Head to End** This mode will cause the beginning of any clip placed on a track to snap to the end of the last clip on the track, abutting the head of the new clip to the end (tail) of the last clip.
- Tail to Beginning** This mode will cause any clip placed on a track to snap to the beginning of the first clip on the track, abutting the tail of the new clip to the head of the first clip.
- Head to Nearest** This mode will cause any clip placed on a track to snap the head of the clip to the nearest edit point or mark on the track. This includes the head or tail of existing clips on the track, as well as the Play Head Cursor, Mark In, Mark Out, Named Markers, or CD Marks. The clip will interact with existing clips according to the Insert Mode setting.
- Tail to Nearest** This mode will cause any clip placed on a track to snap the tail of the clip to the nearest edit point or mark on the track. This include the head or tail of existing clips on the track, as well as the Play Head Cursor, Mark In, Mark Out, Named Markers, or CD Marks. The clip will interact with existing clips according to the Insert Mode setting.
- Snap to Original TimeCode** This mode will cause any clip placed on a track to snap the head of the clip to the time location represented by the clips original TimeCode. The clip will interact with existing clips according to the Insert Mode setting.

Auto-Ripple When this option is checked (enabled) all **Insert** or **Remove** operations ripple the rest of the track

Auto-Crossfade When this option is checked (enabled) the default cross-fade (defined in the Fade Editor Tab Window is applied to any Paste or Source-Destination operation

Enable Automation Cut/Copy/Paste

When this option is checked (enabled) all **Cut / Copy / Paste** operations also include automation tracks

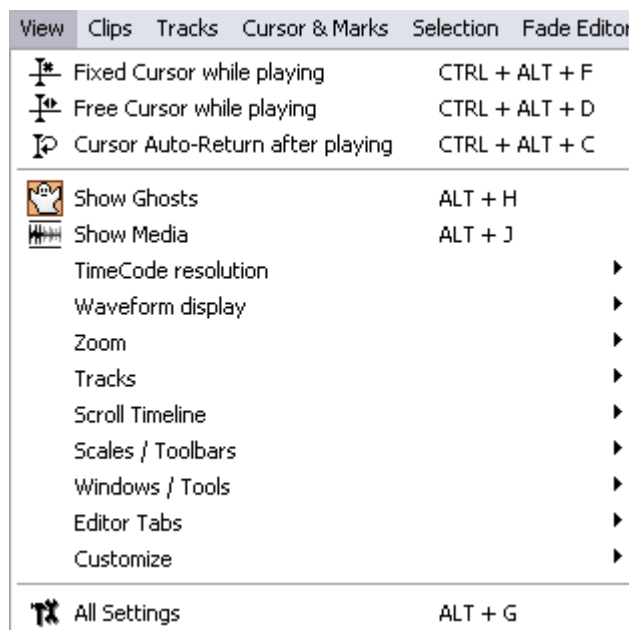
Update Original TC on Move When this option is checked (enabled) the original TimeCode stamp of any copied/ move selection is updated to the position it was in before the current move

Snap >

- Snap Off** When this option is checked (enabled), Snap mode is disabled
- Snap to Edits** When this option is checked (enabled), Snap mode is set to Edits
- Snap to Scale** When this option is checked (enabled), Snap mode is set to Scale
- Snap to Feet Scale** When this option is checked (enabled), Snap mode is set to Feet Scale
- Snap to Bars & Beats Grid** When this option is checked (enabled), Snap mode is set to Bars & Beats Grid

Snap Cursor	When this option is checked (enabled), the Cursor is also snapped following the current mode
Snap Region Selection	When this option is checked (enabled), the Selection is also snapped following the current mode
Snap Selection Head	When this option is checked (enabled), Snap mode is set to Head of selection
Snap Selection Tail	When this option is checked (enabled), Snap mode is set to Tail of selection
Snap Selection Sync Point	When this option is checked (enabled), Snap mode is set to Sync Point of selection

View Menu



View menu

Fixed Cursor while playing	When checked (enabled) Playhead Cursor remains stationary while playing at the position set in the Settings > All Settings > Playback/Record page and the Tracks scroll from right to left.
Free Cursor while playing	When checked (enabled) Playhead Cursor disappears when the screen boundary is reached. I.e. the Timeline is not redrawn.
Cursor Auto-Return after playing	When checked (enabled) Playhead Cursor returns to its starting position when playback stops
Set Focus to the Timeline	Most useful when mapped to a keyboard shortcut. When a floating Tab or other window has been opened that keeps the focus and monopolizes some commands, typically the Space Bar and Cursor buttons invoking this command is the direct equivalent of clicking in the Timeline to restore the focus, but avoids having to grab the mouse and loosing any selections.

Show Ghosts	When checked (enabled) shows a ghost image of clips on related virtual tracks
Show Media	When checked (enabled) shows the full extent of the underlying digital media for a selected clip as a red line on the track above and below the selected clip with a grayed out image of the waveform when this is on
TimeCode Resolution >	
Frames	Sets the < 1 second Cursor TimeCode display resolution to frames
Samples	Sets the < 1 second Cursor TimeCode display to samples
[ms]	Sets the < 1 second Cursor TimeCode display to display milliseconds
CD frames	Sets the < 1 second Cursor TimeCode display to display CD frames
Display as CD time	Sets the TimeCode display to CD Track elapsed time (only available when CD Markers are present)
Waveform Display >	
Larger	Increase the size of the current waveform display
Smaller	Decrease the size of the current waveform display
x1	Sets the magnification factor of the current waveform display to 1x
x2	Sets the magnification factor of the current waveform display to 2x
x4	Sets the magnification factor of the current waveform display to 4x
x8	Sets the magnification factor of the current waveform display to 8x
dB	Sets the current waveform display to decibels
Auto-Scale Waveform	Sets the current waveform display to automatically display an optimal waveform
Show Full Waveform	Sets the current waveform display to display a waveform that is fully colored even at sample level (like peak display)
Show Waveform Origin	Sets the current waveform display to display a waveform that show also at sample level the 0dB origin
Show Dynamic Waveform	Sets the current waveform display to display a waveform that shows the dynamic range for each pixel
Hide Clip Name when Waveform Shown	Hides the clip names when the waveform is displayed
Zoom >	
Fit in window	Adjusts the horizontal magnification (zoom level) of the Project Editor panel to fit the selected clip or region
Previous zoom	Restores the Project Editor Panel view to the previous zoom resolution and location
Zoom In	Zooms in by a factor of 2x, centered around the middle of the Project Editor Panel
Zoom Out	Zooms out by a factor of 2x, centered around the middle of the Project Editor Panel
Recall Preset >	

Zoom 1	Recall Preset Zoom 1
Zoom 2	Recall Preset Zoom 2
Zoom 3	Recall Preset Zoom 3
Zoom 4	Recall Preset Zoom 4
Zoom 5	Recall Preset Zoom 5
Set Preset >	
Zoom 1	Set Preset Zoom 1
Zoom 2	Set Preset Zoom 2
Zoom 3	Set Preset Zoom 3
Zoom 4	Set Preset Zoom 4
Zoom 5	Set Preset Zoom 5
Auto Zoom Selection	Project Editor Panel display automatically zooms-in to any selection made on the Timeline

Tracks >

Show all Tracks	Show (Unhide) all Tracks and Expand (Uncollapse) all Track Groups
Hide Tracks without selection	Hide all tracks that have nothing selected
Fit View to >	
Fit View to 1 Track	Fit current View to 1 Track
Fit View to 2 Tracks	Fit current View to 2 Tracks
Fit View to 4 Tracks	Fit current View to 4 Tracks
Fit View to 8 Tracks	Fit current View to 8 Tracks
Fit View to 16 Tracks	Fit current View to 16 Tracks
Fit View to All Tracks	Fit current View to All Tracks
Enlarge Track Size	Enlarge current Track Size
Reduce Track Size	Reduce current Track Size

Scroll Timeline

Scroll Timeline Left	Scroll the whole Timeline to the left
Scroll Timeline Right	Scroll the whole Timeline to the right
Scroll Timeline Up	Scroll the whole Timeline up
Scroll Timeline Down	Scroll the whole Timeline down

Scales / Toolbars >

TimeCode Toolbar	Shows/Hides the main TimeCode Toolbar
Feet	Adds a ruler calibrated in Feet below the Time ruler (if present)
Feet Settings	Opens the Feet Settings dialog box
Bars&Beats	Adds a ruler calibrated in Bars&Beats below the Time ruler (if present)
Bars&Beats Settings	Opens the Bars&Beats Settings dialog box
Tempo Map	Adds a Tempo map below the Time ruler (if present)

Source - Destination

Transport Toolbar	Shows/Hides the Transport Toolbar
--------------------------	--

Automation Toolbar Shows/Hides the **Automation** Toolbar

Windows / Tools >

Transport	Displays the Transport Large Control
Mixer	Displays the Mixer
Monitor	Displays the Monitor
Media Management	Displays the Media Management folders
Global libraries	Displays the Global Libraries
Fade Library	Displays the Fade library
Information	Displays the Information Window
On the Air	Displays the On the Air Window
I/O Status	Displays the I/O Status Window

Editor Tabs >

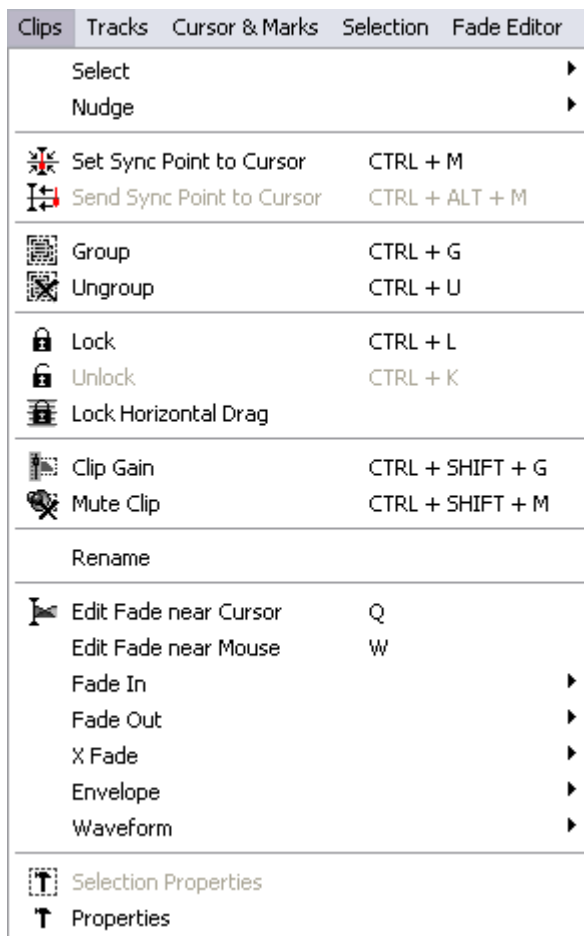
Overview	Open Overview Tab window
EDL	Open EDL Tab window
Document Libraries	Open Document Libraries Tab window
Tracks	Open Tracks Tab window
Track Groups	Open Track Groups Tab window
Playlists	Open Playlists Tab window
Workspaces	Open Workspaces Tab window
Selection	Open Selection Tab window
Fade Editor	Open Fade Editor Tab window
Markers	Open Markers Tab window
CD	Open CD Tab window
Notes	Open Notes Tab window
Machines	Open Machines Tab window
Media Management	Open Media Management Tab window
Global Libraries	Open Global Libraries Tab window

Customize >

Keyboard Shortcut Editor	Opens the Keyboard Shortcuts window (shortcut creation and management)
Macro Editor	Opens the Macros window (macro creation and management)

All Settings Displays the **All Settings** window

Clips



Clips menu

Select >

- Select All** Select all clips on Timeline
- Select All to Mark In** Select all clips on Timeline, to the current **Mark In** Point
- Select All between Marks** Select all clips on Timeline, between current **In/Out** Marks
- Select All from Mark Out** Select all clips on Timeline, from the current **Mark Out** Point
- Select Source** Select all clips on current audio track
- Deselect All** Deselect all currently selected clips

- Select Previous Clip** Select clip to left of currently selected clip
- Select Next Clip** Select clip to right of currently selected clip
- Add Previous Clip to Selection** Apply selection to clip to left of currently selected clip
- Add Next Clip to Selection** Apply selection to clip to right of currently selected clip
- Add all Preceding Clips to Selection** Apply selection to all clips preceding the currently selected clip
- Add all Following Clips to Selection** Apply selection to all clips following the currently selected clip

Nudge >

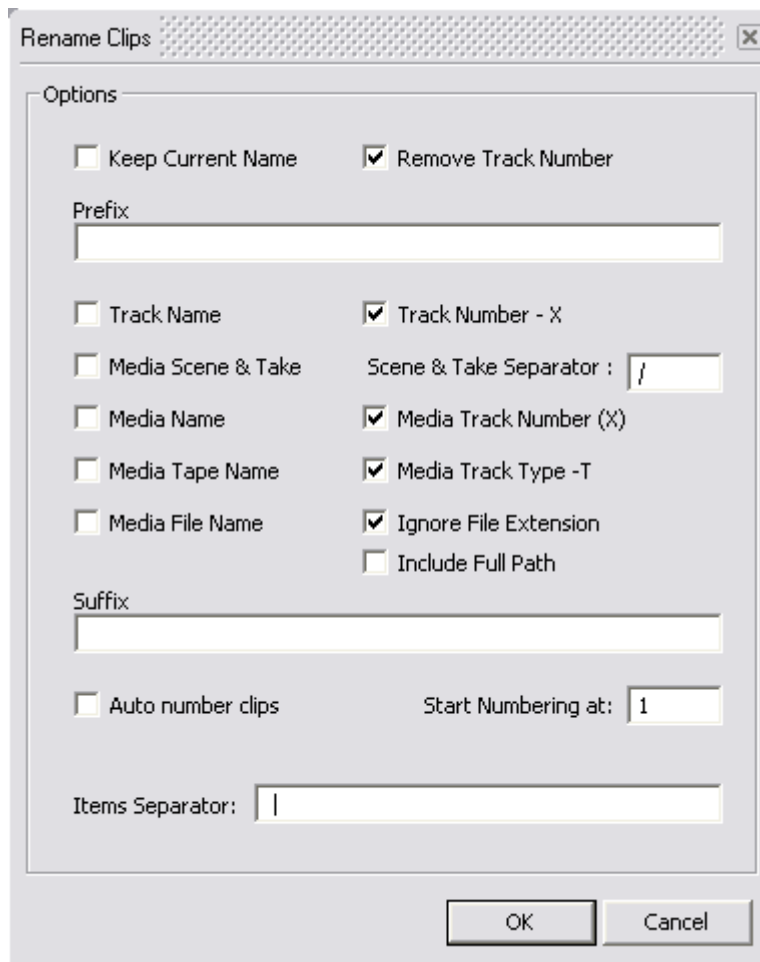
Nudge to Previous Edit	Nudges the selected clip to the left (earlier in time) to the previous edit points in the track or marks in the editor
Nudge to Next Edit	Nudges the selected clip to the right (later in time) to the next edit points in the track or marks in the editor
Nudge to Left	Nudges the selected clip to the left (earlier in time) by an amount equal to the current Nudge setting
Nudge to Right	Nudges the selected clip to the right (later in time) by an amount equal to the current Nudge setting
Nudge to Left Custom	Nudges the selected clip to the left (earlier in time) by an amount that can be entered with the keyboard
Nudge to Right Custom	Nudges the selected clip to the right (later in time) by an amount that can be entered with the keyboard
Nudge to Left Custom in Bars/Beats	Nudges the selected clip to the left (earlier in time) by an amount that can be entered in Bars/Beats with the keyboard
Nudge to Right Custom in Bars/Beats	Nudges the selected clip to the right (later in time) by an amount that can be entered in Bars/Beats with the keyboard
Nudge In to Left	(Pressing Control has the same effect as per moving with the mouse)
Nudge In to Right	(Pressing Control has the same effect as per moving with the mouse)
Nudge Out to Left	(Pressing Control has the same effect as per moving with the mouse)
Nudge Out to Right	(Pressing Control has the same effect as per moving with the mouse)
Nudge Media to Left	
Nudge Media to Right	
Move Up	Moves the selected clip or region up to the adjacent track above it
Move Down	Moves the selected clip or region up to the adjacent track below it
Move Up with Fade	Moves the selected clip or region up to the adjacent track above it. If there is another clip on the adjacent track at that location, it will interact with it by crossfading
Move Down with Fade	Moves the selected clip or region up to the adjacent track below it. If there is another clip on the adjacent track at that location, it will interact with it by crossfading

Current Setting >

Nudge Setting 1	Apply Nudge Setting 1
Nudge Setting 2	Apply Nudge Setting 2
Nudge Setting 3	Apply Nudge Setting 3
Nudge Setting 4	Apply Nudge Setting 4
Nudge Setting 5	Apply Nudge Setting 5

Set Sync Point to Cursor	Sets the selected clip's Sync Point at the current cursor position
---------------------------------	--

Send Sync Point to Cursor	Sends (moves) the currently selected clip so that its Sync Point is aligned with the current position of the Play Cursor
Group	Groups together all selected clips in the Timeline
Ungroup	Ungroups members of a selected group clip in the Timeline
Lock	Locks selected clips so that they can no longer be edited or moved in the Timeline
Unlock	Unlocks selected locked clips so that they can be edited again
Lock Horizontal Drag	When enabled, clips cannot be dragged horizontally (left to right)
Clip Gain	Displays an audio fader to set the audio level for the selected clips
Mute Clip	Mutes all selected clips
Rename	Enables a selection of clips to be renamed with various combinable options chosen in the Rename Clips dialog



Rename Clips dialog

Options

Keep Current Name	When checked the current name is retained but with the choice of keeping or removing the current track number in parenthesis
--------------------------	--

Remove Track Number	Removes Track Number from the Clip Name
Prefix	Text entry box where a new custom Prefix may be added adding a custom prefix and suffix text to the automatic renaming and automatically renumbering all clips.
Track Name	
Track Number - X	
Media Scene & Take (if available)	
Media Name	
Media Track Number (X)	
Media Tape Name	
Media File Name	
Ignore File Extension	
Include Full Path	
Suffix	Text entry box where a new custom Suffix may be added
Auto number clips	When checked clips are numbered starting with the value in:
Starting Numbering at:	
Items Separator	Text entry box where a new custom Separator may be added

Edit Fade near Cursor Opens the **Fade Editor** with the audio fade located near the current Playhead cursor position ready to be edited

Edit Fade near Mouse Opens the **Fade Editor** with the audio fade located near the current mouse cursor position ready to be edited

Fade In >

Fade Out >

X Fade >

Note: Sub-menu options for **Fade In**, **Fade Out**, and **X Fade** are the same. For brevity, only the **Fade In** sub-menu options are listed.

Fade In New	Apply new Fade In
Fade In Edit	
Default >	Edit Fade In
Fade In Default	Apply Fade In Default
Fade In Default Curve	Apply Fade In Default Curve
Fade In Standard >	
Fade In Power Linear	Apply Fade In Power Linear
Fade In Tension Linear	Apply Fade In Tension Linear
Fade In dB Linear	Apply Fade In dB Linear
Fade In Cosine	Apply Fade In Cosine
Fade In Root Cosine	Apply Fade In Root Cosine

















Envelope >

Envelope Reset	Reset the gain envelope for the whole selection by deleting all automation nodes within the selection only on the track under the mouse cursor when Reset is chosen.
Envelope Reset Selection	Reset the gain envelope for the whole selection by deleting all automation nodes within the selection.
Envelope Copy to Selection	Copies the values of all automation nodes within the selection from the track under the mouse cursor when Copy to Selection is chosen to all other tracks in the selection
Envelope Punch	Places four new automation nodes at the bounds of the selection on the track under the mouse cursor when Punch is chosen and opens the Punch Envelope dialog box
Envelope Punch Selection	Carries out the same operation as Punch but to all tracks in the current Selection.

Waveform >

Waveform follow Track	Waveform display of the clip will always correspond to the setting for the entire track in the Track information and Settings panel
Waveform force Waveform	clip will always show the waveform display regardless of the waveform display settings for the track
Waveform force Name	clip will always show the clip name regardless of the waveform display settings for the track
Generate Waveform	Generate the waveform data in the background for the selected clip
Selection Properties	Opens the Selection Properties display window, which shows details concerning the current selection
Properties	Opens the Selection Properties display window, which shows details concerning the currently selected clip

Tracks



































Tracks	Cursor & Marks	Selection	Fade Editor	Automation	Workspaces
	New Audio Track		CTRL + SHIFT + N		
	New Virtual Track		CTRL + SHIFT + T		
	Delete		CTRL + SHIFT + DELETE		
	Delete to Last		CTRL + SHIFT + ALT + DELETE		
Auto-connect					
	Select Previous Track Group				
	Select Next Track Group				
	Duplicate Selected Track Group				
	Auto Create/Delete Track Groups				
	Select Previous Track		UP		
	Select Next Track		DOWN		
	Deselect Track		SHIFT + ESC		
	Auto Select Tracks				
	Synchronize Tracks & Strips				
	Select All Clips		CTRL + SHIFT + A		
	Select All Clips to Mark In		CTRL + SHIFT + I		
	Select All Clips between Marks		CTRL + SHIFT + B		
	Select All Clips from Mark Out		CTRL + SHIFT + J		
	Deselect All Clips		CTRL + SHIFT + D		
	Ripple				
	Extend				

Tracks menu

New Audio Track	Allows new audio tracks to be created on the Composition Editor
New Virtual Track	Allows new virtual tracks to be created on the Composition Editor
Delete	Removes the currently selected track from the composition editor
Delete to Last	Deletes all tracks between the currently selected tracks to the last track on the Composition Editor
Auto-connect	Automatically connect all tracks sequentially to any available mixer input
Select Previous Track Group	Selects the track group above the currently selected track group
Select Next Track Group	Selects the track group below the currently selected track group
Duplicate Selected Track Group	Duplicates the currently selected track group
Auto Create/Delete Track Groups	When enabled allows Track Groups to be automatically created when clips insertion requires creation of new tracks
Select Previous Track	Selects the audio track above the currently selected track

Select Next Track	Selects the audio track below the currently selected track
Deselect Track	Deselects the currently selected audio track
Auto Select Tracks	The audio track is automatically selected on any click / move in its content
Synchronize Tracks & Strips	The audio track and its associated mixing console strip are always selected together
Select All Clips	This command selects and highlights all clips on the selected track
Select All Clips to Mark In	Selects all clips on the track from the beginning of the composition up to the mark in
Select All Clips between Marks	Selects all clips on the track between the Mark In and Mark Out
Select All Clips from Mark Out	Selects all clips on the track from the Mark Out to the end of the composition
Deselect All Clips	Deselects all clips on the selected track
Ripple	Launches the Ripple Tracks dialog box
Extend	Automatically extends the number of tracks to accommodate all the Media channels of each of the clips of one or more timeline track(s)

Cursors & Marks

Cursor & Marks			Selection	Fade Editor	Automation	Workspaces	Machines
	Nudge Cursor						
	Nudge Marks						
	Nudge Gates						
	Current Nudge Setting						
	Goto TimeCode	NUM 6					
	Goto Foot	SHIFT + NUM 6					
	Goto Beat	CTRL + NUM 6					
	Cursor to Mark In	NUM 4					
	Cursor to Mark Out	NUM 5					
	Cursor to Gate In						
	Cursor to Gate Out						
	Cursor to Selected Marker	SHIFT + ENTER					
	Cursor to Start of Selected Track						
	Cursor to End of Selected Track						
	Auto Center on Goto						
	Mark In to Cursor	NUM 7, F7					
	Mark Out to Cursor	NUM 8, F8					
	Gate In to Cursor						
	Gate Out to Cursor						
	Marks to Selection	ENTER					
	Lock Marks	CTRL + SHIFT + L					
	Hide Marks						
	Add Marker to Cursor	NUM 9					
	Prompt for Marker Name at insertion						
	Delete Selected Marker	SHIFT + DELETE					
	Move Selected Marker to Cursor	CTRL + ENTER					
	Set						
	Goto						
	Select Previous Marker						
	Select Next Marker						
	Show Cursor						
	Show Mark In						
	Show Mark Out						
	Show Gate In						
	Show Gate Out						
	Show Selected Marker						
	Add CD Start Marker to Cursor	SHIFT + ALT + ENTER					
	Add CD Stop Marker to Cursor	CTRL + ALT + ENTER					
	Add CD Index Marker to Cursor	CTRL + SHIFT + ALT + ENTER					
	Delete Selected CD Marker	SHIFT + ALT + DELETE					
	CD Mark Groups	SHIFT + ALT + G					

Cursors & Marks menu

Nudge Cursor >

Nudge Cursor to Previous Edit	Nudge Cursor to Previous Edit
Nudge Cursor to Next Edit	Nudge Cursor to Next Edit
Nudge Cursor to Previous Clip	Nudge Cursor to Previous Clips
Nudge Cursor to Next Clip	Nudge Cursor to Next Clip
Nudge Cursor to Previous Clip Fade	Nudge Cursor to Previous Clip Fade
Nudge Cursor to Next Clip Fade	Nudge Cursor to Next Clip Fade
Nudge Cursor to Previous Marker	Nudge Cursor to Previous Marker
Nudge Cursor to Next Marker	Nudge Cursor to Next Marker
Nudge Cursor to Previous CD Marker	Nudge Cursor to Previous CD Marker
Nudge Cursor to Next CD Marker	Nudge Cursor to Next CD Marker
Nudge Cursor to Left	Nudge Cursor to Left
Nudge Cursor to Right	Nudge Cursor to Right
Nudge Cursor to Left with Region	Nudge Cursor to Left and update the nearest selection boundary to this location
Nudge Cursor to Right with Region	Nudge Cursor to Right and update the nearest selection boundary to this location
Nudge Cursor to Left Custom	Nudge Cursor to Left by an amount entered with the Keyboard
Nudge Cursor to Right Custom	Nudge Cursor to Right by an amount entered with the Keyboard
Nudge Cursor to Left Custom in Bars/Beats	Nudge Cursor to Left by an amount entered in Bars/Beats with the Keyboard
Nudge Cursor to Right Custom in Bars/Beats	Nudge Cursor to Right by an amount entered in Bars/Beats with the Keyboard
Nudge Cursor to Previous Foot	Nudge Cursor to the Previous Foot
Nudge Cursor to Next Foot	Nudge Cursor to the Next Foot
Nudge Cursor to Previous Foot Frame	Nudge Cursor to the Previous Foot Frame
Nudge Cursor to Next Foot Frame	Nudge Cursor to the Next Foot Frame
Nudge Cursor to Previous Bar	Nudge Cursor to the Previous Bar
Nudge Cursor to Next Bar	Nudge Cursor to the Next Bar
Nudge Cursor to Previous Beat	Nudge Cursor to the Previous Beat
Nudge Cursor to Next Beat	Nudge Cursor to the Next Beat
Nudge Cursor to Previous Grid Step	Nudge Cursor to the Previous Grid Step
Nudge Cursor to Next Beat Grid Step	Nudge Cursor to the Next Grid Step

Nudge Marks >

Nudge Mark In to Left	Nudge Mark In to Left
Nudge Mark In to Right	Nudge Mark In to Right
Nudge Mark In to Left Custom	Nudge Mark In to Left by an amount entered with the Keyboard
Nudge Mark In to Right Custom	Nudge Mark In to Right by an amount entered with the Keyboard

Nudge Mark In to Left Custom in Bars/Beats	Nudge Mark In to Left by an amount entered in Bars/Beats with the Keyboard
Nudge Mark In to Right Custom in Bars/Beats	Nudge Mark In to Right by an amount entered in Bars/Beats with the Keyboard
Nudge Mark Out to Left	Nudge Mark Out to Left
Nudge Mark Out to Right	Nudge Mark Out to Right
Nudge Mark Out to Left Custom	Nudge Mark Out to Left by an amount entered with the Keyboard
Nudge Mark Out to Right Custom	Nudge Mark Out to Right by an amount entered with the Keyboard
Nudge Mark Out to Left Custom in Bars/Beats	Nudge Mark Out to Left by an amount entered in Bars/Beats with the Keyboard
Nudge Mark Out to Right Custom in Bars/Beats	Nudge Mark Out to Right by an amount entered in Bars/Beats with the Keyboard

Nudge Gates >

Nudge Gate In to Left	Nudge Gate In to Left
Nudge Gate In to Right	Nudge Gate In to Right
Nudge Gate Out to Left	Nudge Gate Out to Left
Nudge Gate Out to Right	Nudge Gate Out to Right

Current Nudge Setting

- Nudge Setting 1**
- Nudge Setting 2**
- Nudge Setting 3**
- Nudge Setting 4**
- Nudge Setting 5**

Goto TimeCode	Opens the Goto TimeCode dialog box, which allows the Play Cursor to be positioned to a specific TimeCode position
Goto Foot	Allows the Play Cursor to be positioned to a specific Footage
Goto Beat	Allows the Play Cursor to be positioned to a specific Beat
Cursor to Mark In	Moves the Play Cursor to the Mark In
Cursor to Mark Out	Moves the Play Cursor to the Mark Out
Cursor to Gate In	Moves the Play Cursor to the selected track group Gate In
Cursor to Gate Out	Moves the Play Cursor to the selected track group Gate Out
Cursor to Selected Marker	Moves the Play Cursor to the Selected Marker
Cursor to Start of Selected Track	Moves the Play Cursor to the start position of the first clip on the selected track
Cursor to End of Selected Track	Moves the Play Cursor to the end position of the first clip on the selected track
Auto Center on Goto	When enabled, the Project Editor will automatically center the display to the new Play Cursor position when the Goto TimeCode command is used

Mark In to Cursor	Moves the Mark In to the Play Cursor
Mark Out to Cursor	Moves the Mark Out to the Play Cursor
Gate In to Cursor	Moves the selected track group Gate In to the Play Cursor
Gate Out to Cursor	Moves the selected track group Gate Out to the Play Cursor
Marks to Selection	Moves the Mark Out to the current selection
Lock Marks	Prevents the Mark In/Out points from being changed
Hide Marks	Removes the Mark In/Out cursors

Add Marker to Cursor	Adds a new Marker to the current Play Cursor Position
Prompt for Marker Name at insertion	When ticked the Add New Marker dialog opens when a new marker is inserted
Delete Selected Marker	Deletes the currently selected Marker
Move Selected Marker to Cursor	Moves the selected Marker to the current Play Cursor Position

Set >

Set Marker 1	Set the Marker #1 to the current Play Cursor Position
Note: Set Markers 2 - 10 not shown	
Goto Marker 1	Set the Play Cursor position to Marker #1
Note: Goto Markers 2 - 10 not shown	

Select Previous Marker	Selects the previous Marker (left) of the currently selected Marker
Select Next Marker	Selects the next Marker (right) of the currently selected Marker

Show Cursor	Automatically centers the display of the Project Editor to the Play Cursor
Show Mark In	Automatically centers the display of the Project Editor to Mark In current position
Show Mark Out	Automatically centers the display of the Project Editor to Mark Out current position
Show Gate In	Automatically centers the display of the Project Editor to the selected track group Gate In
Show Gate Out	Automatically centers the display of the Project Editor to the selected track group Gate Out
Show Selected Marker	Automatically centers the display of the Project Editor to the currently selected Marker

Add CD Start Marker to Cursor	Adds a CD Start marker at the Play Cursor position
Add CD Stop Marker to Cursor	Adds a CD Stop marker at the Play Cursor position
Add CD Index Marker to Cursor	Adds a CD Index marker at the Play Cursor position


























Delete Selected CD Marker

Deletes the currently selected CD Marker

CD Mark Groups

Enables automatic creation of CD Markers Groups in the Project Editor

Selection

Selection	Fade Editor	Automation	Workspaces	Machines	Macros	Settings	Window	Help		
Nudge										
	Set Cursor to Selection Start					;		Nudge to Left	CTRL + SHIFT + LEFT	
	Set Cursor to Selection Start with Preroll							Nudge to Right	CTRL + SHIFT + RIGHT	
	Set Cursor to Selection Start with Preroll #2							Nudge Start to Left	CTRL + ALT + LEFT	
	Set Cursor to Selection Start with Preroll #3							Nudge Start to Right	CTRL + ALT + RIGHT	
	Set Cursor to Selection End					#		Nudge End to Left	CTRL + SHIFT + ALT + LEFT	
								Nudge End to Right	CTRL + SHIFT + ALT + RIGHT	
	Set Selection Start to Cursor					[	Move Selection Up	CTRL + UP
	Set Selection End to Cursor]			Move Selection Down	CTRL + DOWN
	Select between Gates								Grow Selection Up	CTRL + SHIFT + UP
	Gates to Selection								Grow Selection Down	CTRL + SHIFT + DOWN
	Select Clip(s) under Cursor					\			Narrow Selection Up	CTRL + SHIFT + ALT + DOWN
									Narrow Selection Down	CTRL + SHIFT + ALT + UP
	Undo Selection					BACKSPACE				
	Redo Selection					SHIFT + BACKSPACE				
	Undo / Redo Selection					CTRL + BACKSPACE				

Cursors & Marks menu

Nudge >

Nudge to Left

Nudges the selection to the left

Nudge to Right

Nudges the selection to the right

Nudge Start to Left

Nudges the selection start to the right

Nudge Start to Right

Nudges the selection start to the left

Nudge End to Left

Nudges the selection end to the right

Nudge End to Right

Nudges the selection end to the left

Move Selection Up

Moves the current selection to the track above its current position

Move Selection Down

Moves the current selection to the track below its current position

Grow Selection Up

Applies the current selection to the track above its current position

Grow Selection Down

Applies the current selection to the track below its current position

Narrow Selection Up

Removes the current selection from the track above its current position

Narrow Selection Down

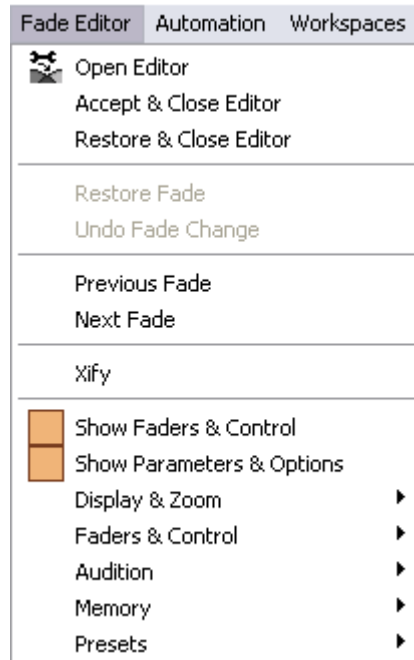
Removes the current selection from the track below its current position

Set Cursor to Selection Start
Positions the Play Cursor to the start point of the current selection
Set Cursor to Selection Start with Preroll Positions the Play Cursor to the start point of the current selection, adding the defined Preroll value

Set Cursor to Selection Start with Preroll #2 Positions the Play Cursor to the start point of the current selection, adding the defined Preroll #2 value

Set Cursor to Selection Start with Preroll #3	Positions the Play Cursor to the start point of the current selection, adding the defined Preroll #3 value
Set Cursor to Selection End	Positions the Play Cursor to the end point of the current selection
Set Selection Start to Cursor	Positions the start point of the current selection to the Play Cursor position
Set Selection End to Cursor	Positions the end point of the current selection to the Play Cursor position
Select between Gates	Sets the Selection between the selected track group Gates
Gates to Selection	Moves the Gates to the extremities of the current selection
Select Clip(s) under Cursor	Selects the clip(s) currently in contact with the Playhead Cursor
Undo Selection	Cancels the last selection command
Redo Selection	Cancels (redo) the last Undo Selection command
Undo / Redo Selection	Toggles between the last Undo / Redo Selection command

Fade Editor



Fade Editor menu

Open Editor	Opens the Fade Editor window
Accept & Close Editor	Approve changes to the fade and close Fade Editor window
Restore & Close Editor	Restore fade to original state and close Fade Editor window

Restore Fade	Restore fade to original state
Undo Fade Change	Undoes the last parameter change
Previous Fade	Select / Edit previous fade
Next Fade	Select / Edit net fade
Xify	Reset the current fade to a standard Power X fade
Show Faders & Control	Show the Faders and Control Section of the Fade Editor
Show Parameters & Options	Show the Parameters and Options section of the Fade Editor

Display & Zoom >

Fit Fade	Zoom around the current Fade (Reset Zoom)
Zoom In	Zoom in on graphic display
Zoom Out	Zoom out on graphic display

Display & Zoom Options >

No Auto-Center	Auto-Centering off
Auto-Center Fade	Auto-Centering on
Auto-Center Reference Point	Auto Center on Reference Point

Free Zoom	Follows only Zoom Reset, In and Out
Auto-Zoom	Automatically Zooms around the current Fade after some operations
Auto-Zoom/Free	Automatically Zooms around the current Fade but only when it enters the Fade Editor, thereafter, the Zoom is Free
Timeline Zoom	Follows the Timeline Zoom factor
Zoom Preset 1	Recall Preset Zoom #1
Zoom Preset 2	Recall Preset Zoom #2
Zoom Preset 3	Recall Preset Zoom #3
Zoom Preset 4	Recall Preset Zoom #4
Zoom Preset 5	Recall Preset Zoom #5

Faders & Control >

Nudge Out Gain Less
Nudge Out Gain More
Nudge In Gain Less
Nudge In Gain More

Nudge Intercept Less

Nudge Intercept More
Nudge Asymmetry Less
Nudge Asymmetry More

Nudge Out Length Less
Nudge Out Length More
Nudge In Length Less
Nudge In Length More

Nudge Out Position Left
Nudge Out Position Right
Nudge In Position Left
Nudge In Position Right

Nudge In Media Left
Nudge In Media Right
Nudge Out Media Left
Nudge Out Media Right

Faders & Control Options >

Link Length	Links length of Fade Out & In
Mirror Length	Length of Fade Out and In will be changed symmetrically (centered)
Link Position	Links position of Fade Out & In
Fade Safe	Ensures all following fades (to the right of the one being edited) are left intact while editing the current fade.
Force Safe	

Audition >

Audition X Fade
Audition X Fade with Ref

Audition Out with Curve
Audition Out without Curve
Audition Out after Fade
Audition Out with Curve with Ref
Audition Out without Curve with Ref
Audition Out after Fade with Ref
Audition Out Original Material

Audition In with Curve
Audition In without Curve
Audition In before Fade
Audition In with Curve with Ref

Audition In without Curve with Ref

Audition In before Fade with Ref

Audition In Original Material

Audition Options >

Audition Pre-Roll 1

Audition Pre-Roll 2

Audition Pre-Roll 3

Audition Post-Roll 1

Audition Post-Roll 2

Audition Post-Roll 3

Audition Speed 100%

Audition Speed 50%

Audition Speed 25%

Audition Solo

Audition Loop

Audition After Nudge

Memory >

Set Memory 1

Set Memory 2

Set Memory 3

Set Memory 4

Set Memory 5

Recall Memory 1

Recall Memory 2

Recall Memory 3

Recall Memory 4

Recall Memory 5

Presets >

Load Default X Curve

Load Default X Preset

Save Default X Preset

Load Default Out Curve

Load Default Out Preset

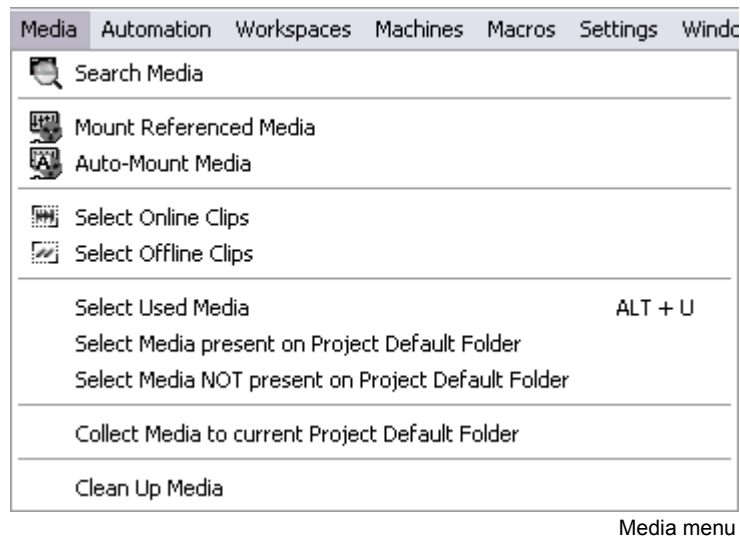
Save Default Out Preset

Load Default In Curve

Load Default In Preset

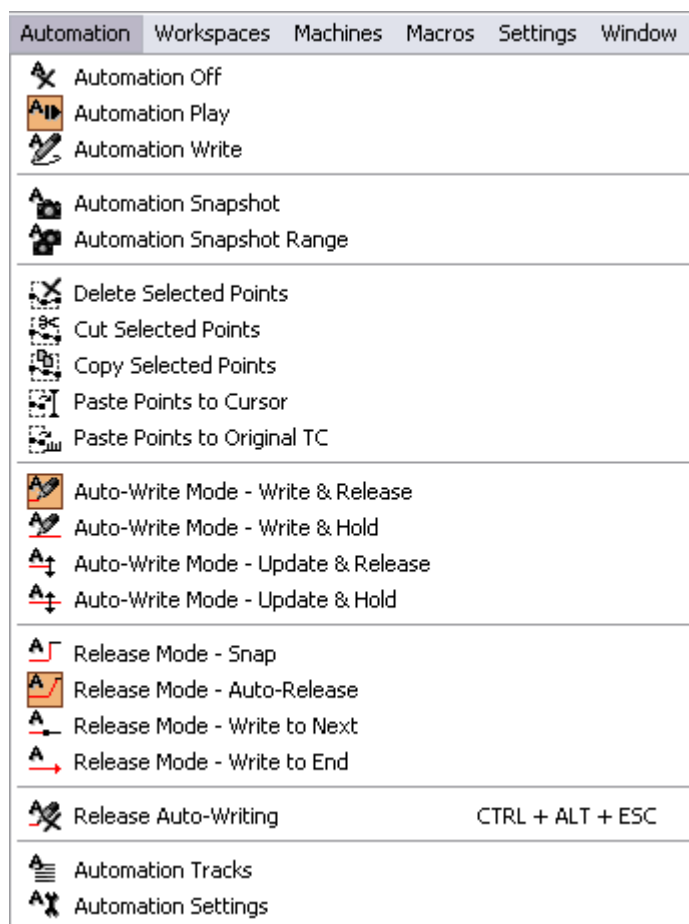
Save Default In Preset

Media



Search Media	Opens the Media Search Tool with the Query page displayed. (See User Manual : Media Management Chapter for details)
Mount Referenced Media	Mounts all media not already mounted and used in the current Project
Auto-Mount Media	When selected, whenever a reference from an Offline library is placed in the current Project, the Media will automatically be mounted.
Select Online Clips	Selects all Clips in the Timeline whose Media files are currently mounted
Select Offline Clips	Selects all Clips in the Timeline whose Media files are not currently mounted
Select Used Media	Opens a floating Media Manager window containing all media used by the current Project.
Select Media present on Project Default Folder	Opens a floating Composition Library window with all Media present in the Project Default folder selected (highlighted)
Select Media NOT present on Project Default Folder	Opens a floating Composition Library window with all Media NOT present in the Project Default folder selected (highlighted)
Collect Media to current Project Default Folder	Copies all media files used in the current project (as shown when the previous Select Media not present ... is invoked to the current Project Default Folder. Clean-Up Media Opens the Choose a Media Folder to Clean-Up window. Choose the folder from the list and click OK . All media not referenced by the current Project will be permanently removed from the selected folder.

Automation

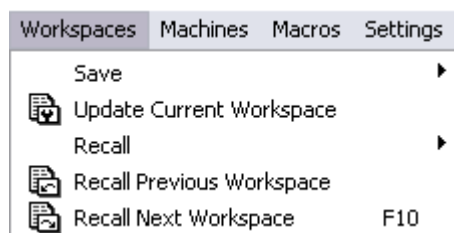


Automation menu

Automation Off	Automation system is disabled
Automation Play	Automation system is set to playback any previously recorded automation data
Automation Write	Automation system is set to playback any previously recorded automation data and record new automation data for all enabled controls
Automation Snapshot	Creates an automation key frame at the current cursor position, for all currently armed automation controls
Automation Snapshot Range	Places automation key frames at the currently defined In / Out cursor positions, for all currently armed automation controls
Delete Selected Points	Deletes all automation points contained in the selected region
Cut Selected Points	Cuts all automation points contained in the selected region
Copy Selected Points	Copies all automation points contained in the selected region
Paste Points to Cursor	Pastes all copied or cut automation points at the cursor on the selected track
Paste Points to Original TC	Pastes all copied or cut automation points at the cursor on the selected track

Auto-Write Mode - Write & Release	The automation starts writing when the control is touched and stops writing when the control is released.
Auto-Write Mode - Write & Hold	The automation starts writing when the control is touched but continues when the control is released and stops only when the machine stops.
Auto-Write Mode - Update & Release	The automation starts updating the current pass when the control is touched and stops updating when the control is released.
Auto-Write Mode - Update & Hold	The automation starts updating when the control is touched but continues when the control is released and stops only when the machine stops.
Release Mode - Snap	A straight jump is made from the last point written to the previous pass.
Release Mode - Auto-Release	An interpolation is created from the last written point to the previous pass. The length of this release line is defined in Automation Settings > Auto-Release Time .
Release Mode - Write to Next	The same value is kept after the last written point until the next point is found in the previous pass.
Release Mode - Write to End	Removes all points after the last written point at the end of an automation pass.
Release Auto-Writing	Releases all controls currently recording automation
Automation Tracks	Opens the Automation Tracks window. This view allows the automation versions for a specific control to be displayed. Once the desired control has been located in the tree view, simply double-clicking on the control will update the Automation Track Versions window
Automation Settings	Opens the Settings > All Settings > Application > Automation page which allows automation parameters and settings to be defined

Workspaces



Workspaces menu

Save >

Save Workspace 1 Save Workspace 1

Note: Save Workspace 2 to 10 omitted

Update Current Workspace Updates the current Workspace with current settings

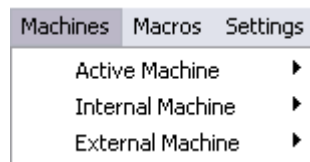
Recall >

Recall Workspace 1 Recall Workspace 1

Note: Recall Workspace 2 - 10 omitted

Recall Previous Workspace	Toggles backwards through the list of available Workspaces
Recall Next Workspace	Toggles forwards through the list of available Workspaces

Machines



Machines menu

Active machine >

Note: Active machine Sub-menus will reflect whichever machine is currently chosen as the active machine.

Toggle machines Toggle between installed machines

Stop Stop

Pause Pause

Play Play

Play Special >

Play Reverse Play Reverse

Play 1/2 Play 1/2

Play 1/2 Reverse Play 1/2 Reverse

Play 1/4 Play 1/4

Play 1/4 Reverse Play 1/4 Reverse

Play 1/16 Play 1/16

Play 1/16 Reverse Play 1/16 Reverse

Play 2x Play 2x

Play 2x Reverse Play 2x Reverse

Play 4x Play 4x

Play 4x Reverse Play 4x Reverse

Toggle Play/Stop Toggle Play/Stop

Toggle Play/Pause Toggle Play/Pause

Toggle Play/Record Toggle Play/Record

Record Record

Fast Forward Fast Forward

Fast Rewind Fast Rewind

Scan Forward Scan Forward

Scan Rewind	Scan Rewind
Start	Goto Start
End	Goto End

Goto TimeCode	Goto TimeCode
----------------------	---------------

Nudge +1 frame
Nudge -1 frame

Set Loop In
Set Loop Out

Goto Loop In
Goto Loop Out

Chase
Store Chase Offset

Jog Wheel Mode - Jog
Jog Wheel Mode - Shuttle
Jog Wheel Mode - Loop
Jog Wheel Mode - Jump
Jog Wheel Mode - Off

Internal Machine

Stop	Stop
Pause	Pause
Play	Play

Play Special >

Play Reverse	Play Reverse
Play 1/2	Play 1/2
Play 1/2 Reverse	Play 1/2 Reverse
Play 1/4	Play 1/4
Play 1/4 Reverse	Play 1/4 Reverse
Play 1/16	Play 1/16
Play 1/16 Reverse	Play 1/16 Reverse
Play 2x	Play 2x
Play 2x Reverse	Play 2x Reverse
Play 4x	Play 4x
Play 4x Reverse	Play 4x Reverse

Toggle Play/Stop	Toggle Play/Stop
Toggle Play/Pause	Toggle Play/Pause
Toggle Play/Record	Toggle Play/Record
Toggle Stop/Record Safe	

Note: This command toggles between **Play** and **Stop** (or other state) but has no effect when recording. In this case the real **Stop** command has to be issued to stop a recording.

Play with Preroll
Play with Preroll #2
Play with Preroll #3

Record	Record
Fast Forward	Fast Forward
Fast Rewind	Fast Rewind
Scan Forward	Scan Forward
Scan Rewind	Scan Rewind
Start	Start
End	End

Punch >

Punch Selection	Punch Selection
Punch Selection with Preroll	Punch Selection with Preroll
Punch Selection with Preroll #2	Punch Selection with Preroll #2
Punch Selection with Preroll #3	Punch Selection with Preroll #3

Auto-punch with Preroll	Auto-punch with Preroll
Auto-punch with Preroll #2	Auto-punch with Preroll #2
Auto-punch with Preroll #3	Auto-punch with Preroll #3

Remake last Punch (In only)	Repeat last Punch operation (Punch In only)
Remake last Punch (In - Out)	Repeat last Punch operation

Play Selection	Play Selection
Loop Selection	Loop Selection
Play between Marks	Play between Marks
Loop between Marks	Loop between Marks
Play between Gates	Play between selected track group Gates
Loop between Gates	Loop between selected track group Gates
Audition >	

Audition Pre	Audition Pre
Audition Pre (Preroll #2)	Audition Pre (Preroll #2)
Audition Pre (Preroll #3)	Audition Pre (Preroll #3)
Audition	Audition
Audition (Pre/Postroll #2)	Audition (Pre/Postroll #2)
Audition (Pre/Postroll #3)	Audition (Pre/Postroll #3)
Audition Post	Audition Post
Audition Post (Postroll #2)	Audition Post (Postroll #2)
Audition Post (Postroll #3)	Audition Post (Postroll #3)
Audition Gate In Pre	Audition selected track groups Gate In Pre
Audition Gate In Pre (Preroll #2)	Audition selected track groups Gate In Pre (Preroll #2)
Audition Gate In Pre (Preroll #3)	Audition selected track groups Gate In Pre (Preroll #3)
Audition Gate In	Audition selected track groups Gate In
Audition Gate In (Pre/Postroll #2)	Audition selected track groups Gate In (Pre/Postroll #2)
Audition Gate In (Pre/Postroll #3)	Audition selected track groups Gate In (Pre/Postroll #3)
Audition Gate In Post	Audition selected track groups Gate In Post
Audition Gate In Post (Postroll #2)	Audition selected track groups Gate In Post (Postroll #2)
Audition Gate In Post (Postroll #3)	Audition selected track groups Gate In Post (Postroll #3)
Audition Gate Out Pre	Audition selected track groups Gate Out Pre
Audition Gate Out Pre (Preroll #2)	Audition selected track groups Gate Out Pre (Preroll #2)
Audition Gate Out Pre (Preroll #3)	Audition selected track groups Gate Out Pre (Preroll #3)
Audition Gate Out	Audition selected track groups Gate Out
Audition Gate Out (Pre/Postroll #2)	Audition selected track groups Gate Out (Pre/Postroll #2)
Audition Gate Out (Pre/Postroll #3)	Audition selected track groups Gate Out (Pre/Postroll #3)
Audition Gate Out Post	Audition selected track groups Gate Out Post
Audition Gate Out Post (Postroll #2)	Audition selected track groups Gate Out Post (Postroll #2)
Audition Gate Out Post (Postroll #3)	Audition selected track groups Gate Out Post (Postroll #3)

Goto TimeCode

Goto TimeCode

Nudge +1 frame
Nudge -1 frame
Set Loop In
Set Loop Out
Goto Loop In
Goto Loop Out

Loop On/Off Loop On/Off

Chase Hard Chase

Store Chase Offset Store Chase Offset

Auto Chase

Freeze External Machines

Cursor Auto-Return after playing Auto Return On/Off

External Machine

Stop Stop

Pause Pause

Play Play

Play Special >

Play Reverse Play Reverse

Play 1/2 Play 1/2

Play 1/2 Reverse Play 1/2 Reverse

Play 1/4 Play 1/4

Play 1/4 Reverse Play 1/4 Reverse

Play 1/16 Play 1/16

Play 1/16 Reverse Play 1/16 Reverse

Play 2x Play 2x

Play 2x Reverse Play 2x Reverse

Play 4x Play 4x

Play 4x Reverse Play 4x Reverse

Toggle Play/Stop Toggle Play/Stop

Toggle Play/Pause Toggle Play/Pause

Toggle Play/Record Toggle Play/Record

Record Record

Fast Forward Fast Forward

Fast Rewind Fast Rewind

Scan Forward Scan Forward

Scan Rewind Scan Rewind

Start Goto Start

End Goto End

Goto TimeCode Goto TimeCode

Nudge +1 frame	Nudge +1 frame
Nudge -1 frame	Nudge -1 frame
Set Loop In	Set Loop In
Set Loop Out	Set Loop Out
Goto Loop In	Goto Loop In
Goto Loop Out	Goto Loop Out

Chase
Store Chase Offset
Auto-Chase

Eject	Eject
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Chase Cursor On/Off	Chase Cursor On/Off
----------------------------	---------------------

Enable Record On/Off	Enable Record On/Off
-----------------------------	----------------------

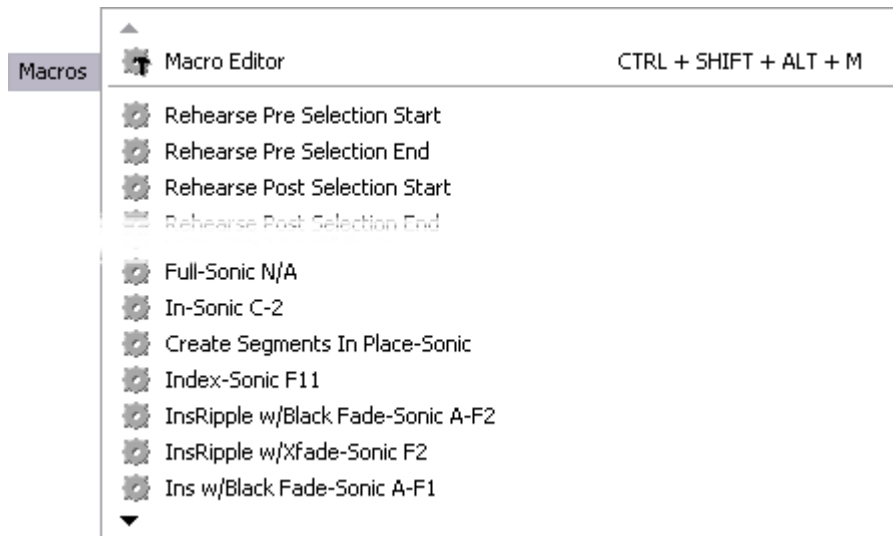
Record Ready >

Record Ready V1	Record Ready V1
Record Ready A1	Record Ready A1
	Record Ready A2 - A7 omitted
Record Ready A8	Record Ready A8

Locator >

Goto Locator 1	Goto Locator 1
Note Goto Locator 2 to 9 omitted	
Goto Locator 10	Goto Locator 10
Set Locator 1	Set Locator 1
Set locator 2 to 9 omitted	
Set Locator 10	Set Locator 10

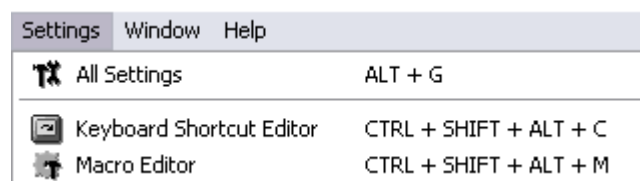
Macros



Macros menu

The **Macro** menu gives access to a large number of pre-programmed Macros, also to the **Macro Editor**. Please see **User Macros** on page 276

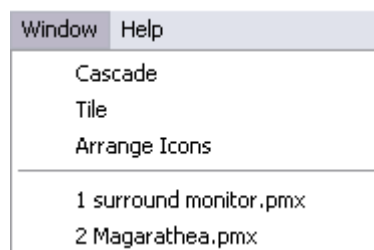
Settings



Settings menu

The **Settings** menu brings together access to the main **All Settings** window, the **Keyboard Shortcut Editor** and the **macro Editor**.

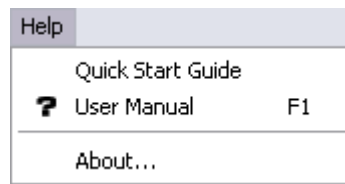
Window



Window menu

The **Window** menu maintains a list of open projects and enables switching between them. It also enables multiple open project windows to be arranged on screen, **Tiled** or **Cascaded**.

Help



Help menu

The **Help** Menu gives quick on-line access to this manual and others. **A**bout pops up a Window with the Pyramix logo and details about the registered user and software version.

23

Troubleshooting



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Troubleshooting is always a moving target as users discover ever more exotic ways to use Pyramix. Therefore, this section is necessarily historic.

If the answer to your problem cannot be found here or elsewhere in the documentation, for the latest information please consult the FAQ sections at:

<http://www.merging.com>

If you need further technical support, please e-mail

support@merging.com

Keeping Up To Date

Acquiring and installing regularly the latest Drivers/Firmware/Bios or Operating System available for equipment such as: Graphic Cards, CD/DVD writers, Network Adapters, Motherboards, (but exercise especial caution), external drives, RAID controllers and other third party hardware add-ons, will ensure that your system will always perform as efficiently as possible. Always accept any 'rollback' options, just in case the driver updates have unforeseen consequences.

Keeping Windows (and DirectX) up to date with latest service packs is also, in general, a positive move towards maintaining a healthy system.

Note: These operations are not required for Mykerinos and Daughter cards simply because the latest firmware for your hardware (if any) is automatically installed by the most recent Pyramix installer.

Error Messages

PCI Bus Too Slow

PC motherboards are by no means equal. Real-time intensive activities such as those found in audio and video workstations show up inadequacies unlikely to be noticed in more mundane applications. Even though one might expect the newest, ever faster Pentium or AMD processors to give better performance this isn't always the case. At least with respect to how well they handle the transfer of data over the PCI bus on which the Mykerinos board(s) resides.

Audio is requested or handed over on the PCI bus every 1.3ms. When the request (interrupt) is delayed for more than 20%, in this case 0.26ms, the first warning message will pop up, indicating a timing inconstancy of the PCI sub-system. There are two levels of warning with "PCI Bus too Slow" messages; $\leq 20\%$, which relates to a serious but not necessarily critical situation and the $\leq 50\%$ which would result in drop outs in audio playback or recording or other unwanted artifacts and you want to make absolutely sure you will not get any of these showing during playback or record. But if you were to get a warning when opening a project, creating or rebuilding a mixer or when launching Pyramix this, while still a sign of possible timing issue in the PCI communication at this very moment, would only bring minor inconvenience at a non critical instant and would, nonetheless, allow you to work perfectly safely.

Historically, we have observed the PCI Bus too slow messages to occur with the following hardware combinations:

- In the design of older firmware for the Southbridge 686B of VIA based motherboards.

- On non-Intel motherboards using the Intel 84x chipsets (in particular the Intel 845 series supporting the Pentium 4 processors). The reason for this is that the 84x series gives absolute priority to PCI writes over PCI reads.
- On some Dual Xeon motherboards, using multiple PCI controllers with PCI-X slots.

PCI performance can be affected by a combination of different parameters and add-on cards such as specific combinations of Raid adapters, Graphics adapters, Dual processors and PCI-X slots.

Upgrading a component's BIOS/driver/firmware or even the operating system will often fix some early limitations or conflicts with a particular PC component. As an example switching from Windows 2000 to Windows XP Pro totally fixed the PCI latency problems on a Dell Inspiron 8000 and installing a "Signed" graphic card driver did the same for an Asus Dual PIII workstation.

Audio Engine Drops Warning

This message informs users about possible CPU delays leading to potential audio errors in record or playback.

Mykerinos sends or requests audio data to or from the CPU in "frames" of 26ms. If one of these frames is not given to, or taken from, the Mykerinos driver in time, this will result in a loss of audio data, and the **Audio Engine Drops Warning** will be shown.

Playback Stalls Warning

Playback Stall messages are triggered by access delays impacting either the VS3, resulting in audio drops while preserving the synchronization of the tracks or the Mykerinos driver. In the latter case the stall may also endanger the integrity of the synchronization between tracks being recorded.

Multi-channel Audio Files

Wave, Broadcast Wave, AIFF or SDII multi-channel files are seen as mono files by the Pyramix Media Manager unless their file names conform to Pyramix requirements.

Audio File Formats

Some audio file formats (like Pyramix native format, PMF and OMF) embed the track/channel number(s) in the file itself. In this case, Pyramix recognizes the track as mono, stereo or multi-channel without problem even if the different audio tracks/channels of these files are actually stored in separate files.

Some other formats (like Wave, Broadcast Wave Format, AIFF or MacIntosh SDII) do not keep this information in the file itself but in the filename. Unless the correct naming convention is followed, Pyramix will see files in these formats as individual mono, regardless of whether they are part of a stereo pair or multi-channel recording.

Broadcast WAV Files

BWF-P means polyphonic. I.e. multitracks within the same file

BWF-M means monophonic. I.e. one file per track

Pyramix Requirements

In order for Pyramix to recognize that separate audio files in these formats are actually part of a stereo or multi-channel recording, Pyramix requires the following naming convention:

The filename of the different tracks/channels must be the same except for one section containing the tracks/channels number as 3 digits surrounded by **_##** and **##_**. For example: MyStereoSound_##001##_wav and MyStereoSound_##002##_wav are seen by Pyramix as a single two track media named MyStereoSound.

Other systems, the Zaxcom DEVA portable recorder for example, do not use the same convention. They may name the files they produce in this fashion: **MyStereoSound-1.bwf** and **MyStereoSound-2.bwf**. These files will be recognized by Pyramix as two mono media files.

Solution

MultiFileFixer is a small 'tool' application that automatically renames all files in a given folder and sub-folders, that fit selected parameters, to follow the Pyramix convention.

In a normal Pyramix installation the **MultiFileFixer** application can be found on the Windows Start menu:

Start > Programs > Pyramix > MultiFileFixer

No Sound on Live Inputs

Please carefully check the following points if there is no sound present on live inputs:

None of the connected inputs are muted (**MUTE ON**).

None of the connected inputs are in **SOLO** mode. In this case, all other inputs are muted.

The **DSP Load** (displayed at the bottom the Pyramix window) should be in a range of 20% to 90%. A higher level could produce clicks or occasionally mute the audio inputs.

In the **I/O Status** window (right click on the bottom of the Pyramix window):

- All Input LEDs (corresponding to physical connections) should be active (light green).
- The Lock LED (corresponding to the chosen Sync Source) should be active (light red) and not flashing.

In the Mixer Settings window (right click on the mixer and choose **Settings**):

In the **General** Tab page:

- The project's Sampling Rate must match the external studio equipment's settings sampling frequency.

In the **I/O & Sync** Tab page:

- The **Sync Source** must be chosen so there is only one Sync Master for all connected equipment.
- The **Input Format** must match the format of the incoming audio signal.

In the specific Tab page of each possible daughter card:

ADAT Tab: Only relevant for the outputs.

AES/EBU Tab:

- If the Reference is not in Auto mode and the Sync Source (in the I/O & Sync Tab page) is in Audio Input mode, there should be a physical connection to the chosen reference.

- If the Sampling Rate Converters are set to Ref 1/2, 3/4, 5/6 or 7/8, the corresponding Inputs are muted.

Note: This is valid for the AES/EBU with SRC daughter card only.

DUAL Tab:

- If the Reference is not in **Auto** mode and the Sync Source (in the **I/O & Sync** Tab) is in **Audio Input** mode, there should be a physical connection to the chosen reference.
- If the input level is simply too low, increase the **Input Gain**.

SDIF Tab:

- The Format (SDIF2 or SDIF3) must match the format of the incoming audio signal. Make certain the SDIF daughter card is only connected to DSD.

TDIF tab:

- If the Reference is not in **Auto** mode and the Sync Source (in the **I/O & Sync** Tab) is in **Audio Input** mode, there should be a physical connection to the chosen reference.

MADI (ver1 or ver2) Tab:

- **Input Groups** must be set accordingly to the used inputs.
- To activate the inputs 57 to 64, please set the MADI card to Extended Mode.
- In **Audio Sync Source** the outgoing MADI Word Clock should match the external equipment MADI Word Clock.
- In **MADI Word Clock Sync Source**, the external incoming Word Clock should match the one set in the MADI card.

In the **Input Check** window (right click on the bottom of Pyramix window / Debug menu):

- The input frequency should match the frequency set in the Mixer Settings.
- The yellow bar must be slightly visible in the Deviation field.
- The amount of jitter should be within a range of 0 to 100 ns, although higher values are possible.

For each input connection in the mixer, there should be a corresponding physical connection.

All audio tracks in use should be in **Live Input** or **Auto** mode. If this is not the case, all tracks which are set to **Repro** mode, will be muted.

Pyramix should not be in **Play** mode. In this case, all the audio tracks in **Auto** mode will switch to **Repro** mode and the corresponding inputs will be muted.

Clip Display Problems

No Waveform Display

Symptoms

Solution

Clip Names are Unreadable

Symptoms

Solution

Relaunch After Improper Exit

The I/O Status window

This window shows useful information about the input and synchronization status of Pyramix.



Input sources

All the possible input sources are shown, each with an associated red and a green light. The green lights show the presence of a valid digital signal (This does not necessarily mean, that the sampling rate of this input matches the current clock source of Pyramix). When the red light is on and steady, Pyramix is using this input as it's clock reference and is successfully locked up.

Default Clock Source

If Pyramix is set up to lock to an external clock source but cannot get a valid signal from this source, it will switch to Internal clock. In this case the red light associated with **Internal** will be on, and the red light associated with the intended clock source will be blinking.

Sampling Rate Mismatch

If Pyramix is set up to lock to an external clock source and the sampling rate set in the Virtual StudioMixer does not match the sampling rate of the clock source, the green light associated with the clock source will be on, but the red light will be blinking showing the sampling rate mismatch.

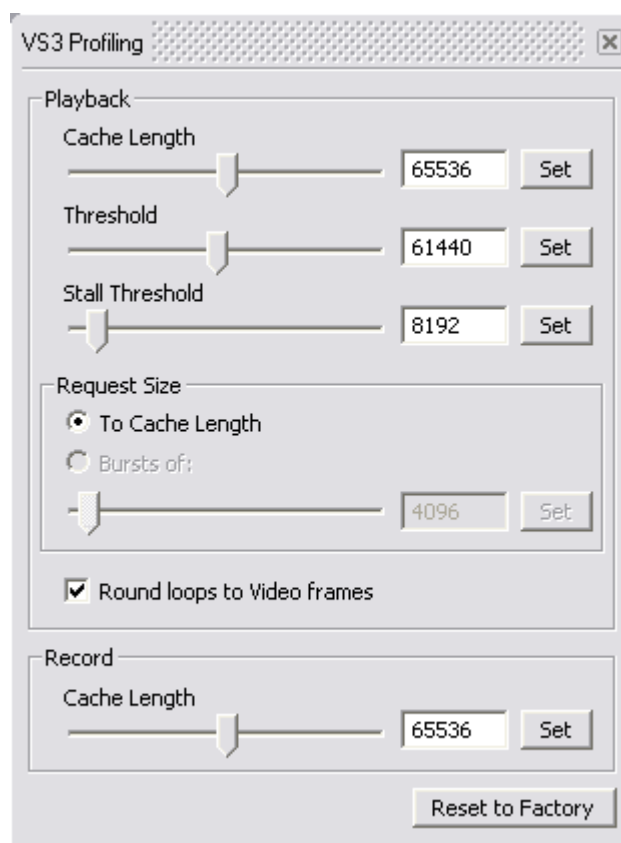
Debug Menu

Right-clicking on the **Sync:** section of the Status bar opens a context menu with a choice of **Debug** and **I/O Status** (see below).

Selecting **Debug** opens a further sub-menu with a number of tools primarily intended for Merging Technologies Support use. One option, **Profiling** is worth examining in detail.

The Profiling Window

The profiling window contains the parameters used to fine-tune the performance of hard disk accesses for Pyramix. These parameters are not intended for user modifications, and Merging cannot guarantee the proper functionality of Pyramix when modifications are made in this window.



VS3 Profiling window

Cache length

This is the size of the playback buffers allocated in the host PC's RAM. Pyramix allocates one buffer per track. When the audio playback is started, all the buffers are completely loaded by reading the data from the hard disk before the actual playback starts. Increasing the buffer size offers the benefit of a larger immunity against short term hard disk access stalls and other operating system slow-downs at the cost of longer latency at initial playback start.

Threshold

During playback, the audio data is read from the playback buffers, which are thus progressively emptied. When the amount of data in a buffer falls below the threshold value, new data is read from the hard disk to refill the buffer.

Request size

This parameter determines how much data is read from the hard disk when the threshold level is reached. One option is to completely fill (To Cache Length), the other option is to load a defined amount of data (Bursts of).

Stall Threshold

When the amount of data falls below the stall threshold, this means that the system has serious performance problems. Playback will be temporarily stopped, while a stall warning is issued.

Round loops to Video Frames

This option, which is enabled by default, rounds the start and the end point of a playback loop to complete video frames. The start point will always be rounded down, and the end point will always be rounded up, so that the loop will always contain at least the initial range intended for the loop.

Record cache length

This is the size of the buffer used while recording new data.

Reset to Factory

This button restores all the values to their factory default.

ADAT Daughterboard and XDTDM

The ADAT daughter card, despite the fact that its original design dates back to 1999, is still fully supported in Pyramix V5.0 in legacy HDTDM mode (64 I/O channels)

However, the use of this daughter card in XDTDM mode (128 I/O channels) is not guaranteed without the upgrade described below. The much higher transmission frequencies, employed in order to convey double the number of audio channels over the XDTDM bus, require an improved ground plane, which is achieved with an additional conductive shield:

- To work properly in XDTDM mode, the ADAT daughter card has to be retrofitted with a shield, tightly screwed to the card in order to ensure proper grounding. Should you have an ADAT card, not yet retrofitted with a Shield, that you wish to use in XDTDM Mode, please contact your Merging Sales Partner.

Note: In XDTDM mode, the ADAT daughterboard will only support 8 output channels through optical output A, duplicated through optical output B. ADAT inputs are no longer available in the XDTDM mode.

24

Appendices



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Appendix I - Mouse Modifier Keys

This table shows the valid modifier keys which can be used in conjunction with some mouse operations

Main Editor

Left Mouse Button

Click In the TimeCode Scale

Set Cursor to the mouse	None
Set Mark In to the mouse	Shift
Set Mark Out to the mouse	Ctrl
Set New Marker to the mouse	Ctrl + Shift

Click In the Bars & Beats Scale

Set Cursor to the mouse	None
Adjust tempo to the end	Shift
Adjust tempo for the current portion	Ctrl
Adjust tempo for the current Beat	Ctrl + Shift

Click In the Tempo Map

Create a new tempo portion	Ctrl
----------------------------	------

Click In the Track headers zone

Repeat action for the same button on all tracks	Shift
---	-------

Click In the Clips zone (anywhere)

Draw a region to zoom in	Alt
Dyna-Zoom	Z
Draw a region to select	None
Draw a region to select clips completely	Shift
Extend/Reduce the current region to this track	E
Invert No Selection mode for Track Groups	Q
Invert Auto Select Tracks	Q

Click In a Clip handle

Move only the clip handle under the mouse (no groups)	Shift
Move only the envelope point under the mouse (no groups)	Shift

Click In a Clip

Add remove clips to the selection	Shift
Drag the selection (to a library)	Shift + Alt
Move selected clips	None

Move selected clips with auto-crossfade	Ctrl
Slide the underlying media of a clip	Ctrl + Shift
Slide a clip over its underlying media	Ctrl + Alt
Move selected clips constrained in time	Ctrl + Shift + Alt
Cutter	C
Duplicate clip	D
Duplicate clip constrained in time	F

While moving

Auto-crossfade while moving clips	Ctrl
Force crossfade while moving clips lower handle	Ctrl
Detach crossfade while moving clips middle handle	Ctrl
Don't merge Envelope points	Ctrl
Constrain Envelope in time	V
Constrain Envelope in value	H
Don't merge Automation points	Ctrl
Constrain Automation in time	V
Constrain Automation in value	H
Select only what is under the mouse (no groups)	Shift
Select all tracks	Ctrl + Shift
Select and limit selection the clips boundaries	Ctrl + Alt
Snap Sync Point	S
Snap Head	H
Snap Tail	T
Audition while moving (Scrubbing)	A

Double-click in a Clip

Selection Properties	
Clip Properties	Ctrl

Double-click in a fade

Edit the fade in the Fade Editor

Double-click in an envelope point

Reset the envelope point	
Reset only the envelope point under the mouse (no groups)	Shift

Middle Mouse Button

Edit crossfade	Ctrl
Create & Edit crossfade	Ctrl + Shift
Select between edits	None
Enlarge selection between edits	Shift

Click In the TimeCode Scale

Scrub Audio	None
-------------	------

Right Mouse Button

Contextual Menu	None
Clip Gain	Ctrl

On dropping a fade or crossfade from a library

Apply to whole group	Shift
----------------------	-------

Overview

Left Mouse Button

Draw a region to zoom in	Alt
Drag the current composition (to a library)	Shift + Alt

Notes

Left Mouse Button

Drag the notes (to a library)	Shift + Alt
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Media Folder

Left Mouse Button

Replace media for target clip(s)	Ctrl
----------------------------------	------

Appendix II I/O Daughter-card Options

ADAT Optical I/O

The ADAT Optical daughter card offers 16 channels of audio input and 16 channels of audio output, 8 channels per optical connection. From top to bottom of the card, it has two digital optical input connectors (Inputs A and B) and two digital optical output connectors (Outputs A and B).

The signal format of optical connectors Input A and Output A can be set inside the Pyramix software to operate in either ADAT or S/PDIF mode. When in ADAT mode, there are 8 discrete audio channels carried per each optical connector. S/PDIF mode has 2 channels per optical connector.

Note: in SPDIF mode the maximum sampling rate is limited to 48 kHz

Note that whilst the ADAT daughterboard continues to function normally in HDTDM (64 bus) mode it cannot be used for input when in XDTDM (128 bus) mode and is only capable of 8 outputs via Optical Output A with the same 8 duplicated on Optical Output B.

WARNING! The **ADAT** Daughterboard requires modification before use with XDTDM mode. Failure to do this may result in data loss. Please contact your Merging Technologies Sales Partner to arrange a mod.

AES/EBU I/O

The AES/EBU daughter card offers 24 channels of I/O over 12 AES/EBU input and output pairs. Connection is via three DB-25 connectors, One on the main card attached to the **Mykerinos** and two more on a separate bracket connected via internal ribbon cable to the main card. An optional break-out cable can be ordered separately which connects to the DB-25 connector and terminates in 8 XLR connectors which may be used to connect to standard AES/EBU stereo inputs and outputs. AES daughter cards are available with or without 8 channels of SRC (sample rate conversion)

Dual DC I/O

The Dual DC offers up to 12 inputs and outputs at 32kHz, 44.1kHz or 48kHz sampling rates on a single board. All converters are 24 bit. Connection is via 2 DB-25 connectors. One, on the main card attached to the **Mykerinos**, carries the analog I/O and the second, on a separate bracket, carries four AES/EBU Input and Output stereo pairs. There are four analogue Line outputs and four analogue Line Inputs, two of which may be switched to accept Mic or Line level inputs. These have Mic pre-amps and 48V phantom powering. The analogue Line level I/O is adjustable over a 24dB range to accommodate all standard studio levels. Optional break-out cables can be ordered separately which connect to the DB-25 connectors and terminate in 8 XLR connectors.

The Dual DC is the most cost-effective I/O daughter card for Pyramix users. It is an ideal I/O solution for mixed analog/digital requirements, as encountered in Broadcast production, and Video post-production environments. It allows direct connection of up to two dynamic or condenser microphones, typically for quick and easy voice-over recording.

Note: the Dual DC I/O daughtercard is not HDTDM bus compatible and can not be used in a multiboard setup.

MADI I/O

The MADI daughter card offers 56 channels of 24 bit bi-directional I/O, and up to 64 channels in MADI-X (MADI Extended) format. It can be ordered either in a BNC coaxial version or an optical duplex SC version. Both versions are fitted with a standard Wordclock BNC I/O connector, which can be programmed in the Pyramix software as a Wordclock In or Out signal.

SDIF I/O

The Mykerinos SDIF daughter board is specially designed for multi-track DSD recording. It offers 8 channels of DSD digital input over 8 unbalanced, 75 Ohm terminated BNC connectors and 8 channels of DSD digital output over 8 unbalanced, 75 Ohm BNC connectors. One channel of DSD signal is transported at the bit-rate of 2.82 MHz through each BNC connector. SDIF-2 and SDIF-3 format are fully supported for DSD transport (selected under software control)

With one Mykerinos board, it is only possible to use one DSD Input and Output channel. To have the full range of 8 I/O channels, a second Mykerinos board is required to provide sufficient DSP power.

TASCAM TDIF

The TASCAM TDIF daughter card offers 24 channels of I/O over 3 Tascam TDIF connections. Connection is via three DB-25 connectors, One on the main card attached to the Mykerinos and two more on a separate bracket connected via internal ribbon cable to the main card.

TASCAM TDIF I/O Option

A TASCAM TDIF format option bracket may be added to the ADAT I/O daughtercard and provides is available for 8 channels of TDIF I/O. The TDIF bracket connects to a socket on the ADAT card only. This daughter card cannot be used in multi-board systems (since it utilizes the HTDM connector).

Appendix III Optional Features

Pyramix DSD / SACD

Hardware and Settings

Interfacing

DSD transmission works well with either AES-EBU or SDIF interfaces. Most converter manufacturers use SDIF. Only dCS does SDIF and AES-EBU.

A further issue is the existence of two different AES-EBU supported DSD formats. The so called "Sony" and one named "P3D." Merging Technologies support both of these. If you need to interface to both AES/EBU and SDIF two cards will be required.

Wordclock settings.

In DSD mode it is imperative Pyramix wordclock settings correspond with the requirements of the converters employed. To date all the DSD compatible converters we have tested generate and expect wordclock at the standard nominal rate. I.e. 44.1kHz.

Failure to set Pyramix to expect only 44.1kHz in DSD operation will prevent proper locking to the external source and therefore prevent correct decoding of the DSD bitstreams, resulting in very loud noise on its outputs. Check the setting via:

Settings > All Settings > Formats & Sync

make sure that the "Wordclock is Input at 44.1k x 2" checkbox is **NOT** checked when operating in DSD mode.

To verify Pyramix is correctly locked to incoming Word clock:

Left-click on the red 'LED' in the **Sync: WordClock** box (bottom right of Pyramix screen in the status bar). This will open the **I/O status** window. The green LEDs indicate active inputs and there will be a red LED in front of the chosen sync source if this is locked.

Right-click on the same (**Sync: WordClock**) red 'LED'. Select, **Debug > Input Check**. This window will enable you to check that Pyramix is effectively locked at the correct frequency.

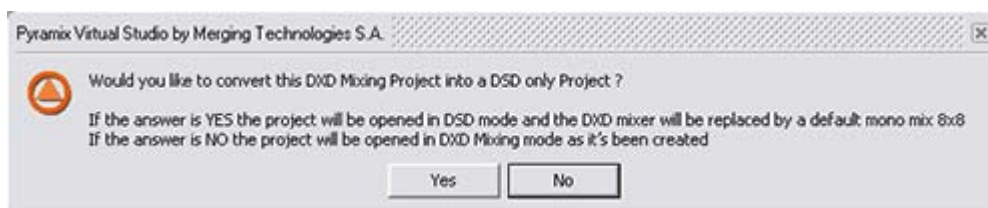
Project Types

DXD Mixing Project

The DXD Mixing Project can be used for recording, editing, mixing, processing and mastering DSD/SACD in DXD format (352.8 kHz - 32 bits)

Opening a DXD Mixing Project

When an existing DXD Mixing Project is opened this dialog appears:



Convert DXD Mixing Project to DSD Project mode? Dialog

Would you like to convert this DXD Mixing Project into a DSD only Project?

If the answer is **YES** the project will be opened in **DSD mode** and the **DXD** mixer will be replaced by a default mono mix 8x8.

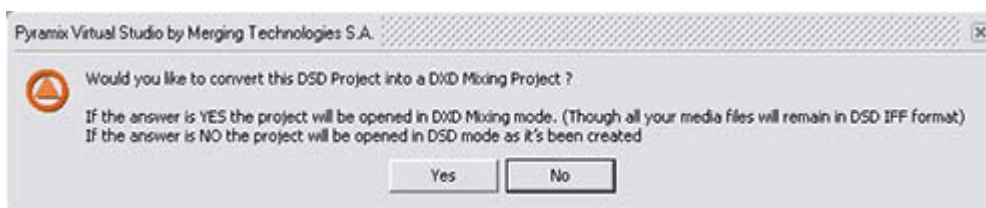
If the answer is **NO** the project will be opened in **DXD Mixing mode** with the **DXD** Mixer in the same configuration as it was when the Project was Saved.

DSD Project

The DSD Project - can be used recording, editing and mastering DSD/SACD in DSD format (2.8 MHz - 1 bit) Project for recording, editing and mastering DSD/SACD in DSD format (2.8 MHz - 1 bit)

Opening a DSD Project

When an existing DSD Project is opened this dialog appears:)



Convert DSD Project to DXD Mixing Project mode? Dialog

Would you like to convert this DSD Project into a DXD Mixing Project ?

If the answer is **YES** the project will be opened in **DXD Mixing mode**. (Though all your media files will remain in **DSD IFF** format)

If the answer is **NO** the project will be opened in **DSD mode** as it was when created.

Time-code Sync

Required if you intend to use LTC (Linear TimeCode) or VITC (Vertical Interval TimeCode) to synchronize Pyramix to external equipment.

Cue Sequencer

The **Cue Sequencer** is a live playout system

A **Cue** is defined as a **Track Group** and all the **Tracks** and **clips** it contains. All Track Groups in the composition appear in the Cue Sequencer list and are called a Cue.

Cues can be re-ordered in the Cue Sequencer list view by drag and dropping lines or groups of lines.

Double-clicking on a Cue selects its first track in the Editor.

Cue Parameters

Cues have the following parameters:

Name:	Same as the Track Group name
Notes:	free notes typed by the user
Event:	An event number (from 1 to 96) can be associated to any cue. This event number can be mapped to a keyboard shortcut with the Keyboard Shortcut Editor or mapped to a MIDI message with any Remote Controller. When triggered this event Starts the Cue.

Automation:	A Cue can use automation on the mixer channels connected to its tracks. A mixer channel can be controlled by only one Cue.
Start:	To Play a Cue.
Pause:	To pause the playback of a Cue.
Stop:	To Stop the playback of a Cue.
Start Offset:	An offset can be applied to a Cue so the starting point is not the beginning of the first clip of the Cue but a point before (negative Start Offset value) or after (positive Start Offset value).
Current Time:	Elapsed time since the Cue as been started
Remaining Time:	Remaining playback time of a Cue.

Cue Status

Cues have the following Status:

Disabled (White):	The sequence has to be reset to enable all Cues.
Ready (Pink):	The Cue is enabled and ready to play.
Playing (Green):	The Cue is playing, it can be paused or stopped.
Paused (Yellow):	The Cue is paused, it can be un-paused (return to playing from current position) or stopped.
Done (Grey):	The Cue finished playing. It can be played again without having to be reset.

Cue Sequencer Control

The Cue Sequencer is controlled the following way:

Safe Mode:	When in safe mode, the Cue Sequencer window is maximized and all Keyboard shortcuts except those related to the Cue Sequencer are disabled. The Cue Sequencer TimeCode counter is colored in red when not in Safe Mode.
Reset Show:	All Cues have to be reset before starting to play the sequence. When pressing this button all Cues are reset to the Ready State (Pink Color) and the time is reset to 00:00:00:000.
Stop Show:	To Stop the sequence playout
Start Show:	To Start the sequence playout.
Previous:	To set the focus to the previous Cue.
Next:	To set the focus to the Next Cue.
GO !:	To Start the currently selected Cue and select the next one.

Appendix IV 9 - Pin connection

PC RS-232 Serial Port to External Sony P2 RS-422 Controller

The RS-232 ports of a standard PC are slightly different from the RS-422 format used for the Sony P2 protocol. We recommend the use of an external RS-232/RS-422 adapter. One example is the **Antona ANC 6090** which can be ordered from your Merging sales representative under the item number **MRS422**. This adapter is intended to be connected directly to the serial port of your PC (either COM1 or COM2) with the other end used to connect a standard Sony P2 RS-422 cable. As both connectors on the adapter are Female DB9, beware of the orientation and please check that the printed indication "RS-232" is connected to the PC COM port.

Connecting an RS422 device using a direct cable

(without RS-232 / RS-422 adapter)

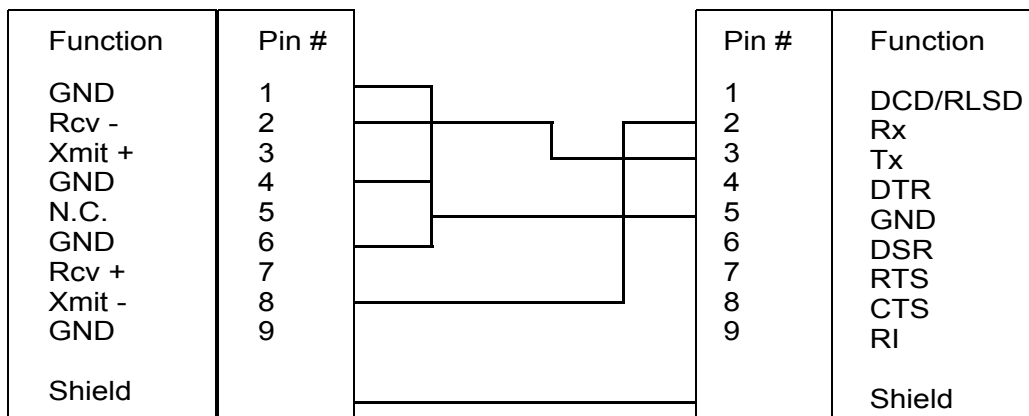
For emergency use and for short distances, a direct cable may be used. However, Merging Technologies does not guarantee the correct function of an external controller if this cable is used. Different cables are required depending on whether Pyramix is controlled by a master device or is controlling a slave device.

Direct Cable for a Master Device

This pinout should work in most of the cases where Pyramix is controlled by a Master device (check on your controller if the RS422 connector has to be male or female). It has been tested with various mixers such as Sony DMX-R100, Soundcraft Spirit, Soundtracs DPC II and DS3, and various other Sony P2 protocol capable controllers:

RS422 Male (or Female) DB9

RS232 Female DB9

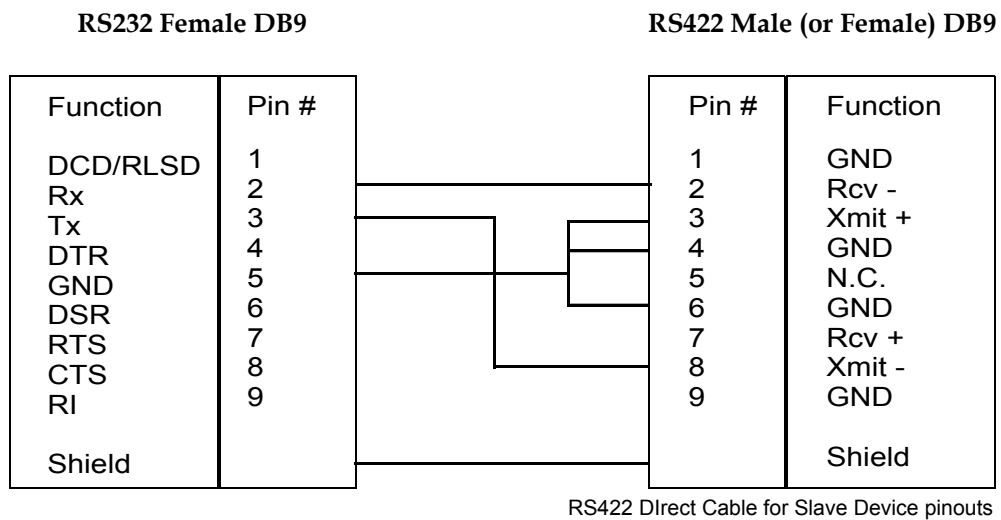


RS422 Direct Cable for Master Device pinouts

The RS422 standard is not implemented consistently on all devices, so the cable pinouts may differ. Please consult your controller's user guide for appropriate connector cabling.


















Direct Cable for a Slave Device

This pinout should work in most of the cases where Pyramix is controlling a Slave device.



The RS422 standard is not implemented consistently on all devices, so the cable pinouts may differ. Please consult your controller's user guide for appropriate connector cabling.

Appendix V Mykerinos Latencies

128 samples = 128/(sampling rate)	128 samples = 128/(sampling rate)	128 samples = 128/(sampling rate)	Latency at 48kHz
			2.7 ms
			5.3 ms
 			5.3 ms
			8 ms
  			5.3 ms
 			8 ms

Appendix VI - HDTDM v XDTDM

Internal Bussing & I/O Capabilities

HDTDM mode offers a maximum of **64 buses**

XDTDM mode offers a maximum of **128 buses**

In Pyramix V5.x, the number of channels has been doubled. The inter-board bus has been enhanced in terms of bandwidth and is now called **XDTDM bus** for eXtreme Definition Time Domain Multiplex. Some exceptions exist and these are discussed below.

Note 1																
	Bussing capabilities		AES Normal Speed		AES High Speed		MADI2 Standard		MADI2 Extended		ADAT		TDIF		SDIF	Notes
Broadcast	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM
48 kHz 1FS	64	128	24	24	24	24	56	56	64	64	16	8	16	16		See Note 2
96 kHz 2FS	32	64	12	12	12	24	28	28	32	32	8	4	8	8		
192 kHz 4FS	16	32	6	6	6	12	14	14	16	16	4	2	4	4		
384 kHz 8FS	8	16	3	3	3	6	7	7	8	8	2	1	2	2		
Musical	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM	HDTDM	XDTDM
44 kHz 1FS	64	128	24	24	24	24	56	56	64	64	16	8	16	16		
88 kHz 2FS	32	64	12	12	12	24	28	28	32	32	8	4	8	8		
176 kHz 4FS	16	32	6	6	6	12	14	14	16	16	4	2	4	4		
353 kHz 8FS	8	16	3	3	3	6	7	7	8	8	2	1	2	2		
DXD 8FS		16		3	← Note c) → 6			7		8	No				Note f)	See Note 3
DSD 64FS		16		8 or 6	Note b)			16		16	Note e)				8	

Detailed notes and information :

- The column "Bussing capabilities" indicates the maximum channels count available in a Pyramix system in V4.x and V5.x modes:
 - HDTDM** mode is the V4.x compatibility mode and offers the same PCM channels count as previously, except that DSD/DXD modes are no longer supported in this mode.
 - XDTDM** mode - V5.x only - offers twice as many PCM and DSD/DXD channels compared to Pyramix V4.x.
- The grayed-out cells indicate that the corresponding mode does not exist for the corresponding daughter cards.
 - The AES daughter card now offers the maximum possible count of 24 channels in 2FS High speed mode.
 - In DSD mode, the number of I/O depends on the AES I/O format (Sony or P3D respectively).
 - The DXD is now fully supported on the AES-DSD and SRC daughter cards.
 - Although the theoretic maximum DSD channel count with a MADI daughter card is 24, the bus capability has a maximum of 16 DSD channels.
 - The ADAT daughter card, despite its original design dating back to 1999, is still fully supported in V5.0 in **HDTDM mode only!**
The ADAT daughter card **ONLY** supports the XDTDM mode with a hardware rework. In this mode, the ADAT daughter card offers 8 output channels through optical output A) replicated on optical output B) and **No Inputs**.
This hardware rework consists of adding a shield to the ADAT daughterboard, similar to the one

used for the DUAL daughter card. Please contact your Merging sales partner to order this retrofit kit.

Under NO CIRCUMSTANCES attempt to use the ADAT daughter card in XDTDM mode without this required shield.

- f. In a mono-board system, only 2 DSD channels are available.

Appendix VII - Network Connections

Note: Direct Ethernet connection of Workstations (i.e.: 1x VCube and 1x Pyramix) with standard factory default DHCP* settings and without a proper DHCP server available in the network may lead to unexpected behaviour, E.g. software or system freezes. (ISIS controller will default to a fixed IP address, if no DHCP server is available).
At all times proper, individual, TCP-IP addresses for each machine, assigned either automatically (DHCP, if available) or manually (Fixed IP) are required, as described below.

This caution is not relevant for machines operating without network connection.

Ethernet Connection & Settings

1. Create an Ethernet connection between the machines, via an Ethernet switch or using a direct, cross-wired, Ethernet cable. (100Mbit for Sync/Control, 1000Mbit for file sharing recommended)
2. If, on your existing network, an Admin DHCP server is giving TCP/IP addresses to all connected clients, leave all Pyramix, Isis and VCube machines with the default "DHCP" settings ("Obtain IP address automatically" in the Local Area Connection Properties / Internet Protocol (TCP/IP) properties. (If you are connected to an existing network with no active DHCP server, please contact the (human) server administrator to obtain a range of available IP address from him, and enter these as shown below).
3. If no admin DHCP server is available, manually give each of your machines a unique TCP/IP number, in the Local Area Connection Properties / Internet Protocol (TCP/IP) properties. Typically, IP addresses can be, respectively: 192.168.0.3 (PMX) 192.168.0.4 (VCube) and 192.168.0.5 (Isis), with a common Subnet mask being 255.255.255.0. No default gateway is necessary.

Set-up for Pyramix & VCube in: **Control Panel > Network Connections > Local Area Connection > Properties / Internet Protocol TCP/IP / Properties.**

Set-up for Isis: Press **STOP** key for 5 seconds during power up. Set-up address with left/right cursor and Track keys 1 to 10, then **Set** key. See also **ISIS User Manual page 14.**

*. **DHCP:** Short for **Dynamic Host Configuration Protocol**, a protocol for assigning dynamic **IP addresses** to devices on a network.

Fixed IP address range, examples:

Choice A*	Choice B*	Typical use
192.168.0.1	10.0.0.1	Usually reserved (for Gateway or Server)
192.168.0.2	10.0.0.2	Usually reserved
192.168.0.3	10.0.0.3	Pyramix A
192.168.0.4	10.0.0.4	VCube A
192.168.0.5	10.0.0.5	ISIS A
192.168.0.6	10.0.0.6	Pyramix B
192.168.0.7	10.0.0.7	VCube B
192.168.0.8	10.0.0.8	ISIS B
192.168.0.9	10.0.0.9	Pyramix C
etc.	etc.	Increase only rightmost number (up to 254)

*Use an address from column A or B, then stick to the selected range for all machines connected on a single network.

Set subnet mask to **255.255.255.0**

Checking IP Configuration

To check the **IP Configuration** of the machine you are working on do the following:

Open a Command Prompt window. (**Start > All programs > Accessories > Command Prompt**) then type in the following command:

IPCONFIG followed by **Enter**

Checking Network Connections

Using "Ping"

To check that the connections you have set up are operational do the following:

Open a Command Prompt window. (**Start > All programs > Accessories > Command Prompt**) then type in the following command:

PING 192.168.0.3 (or whatever TCP/IP address is currently assigned to the workstation or device you wish to check) followed by **Enter** then wait for the machine to reply. Repeat the process for all other connected workstations / controllers.

Using Windows Explorer

In a Windows Explorer window, right-click on My Network Places and choose **Explore > Entire Network / Microsoft Windows Network / Workgroup or Domain** (choose whichever is appropriate) then verify that all Pyramix and VCube workstations can search/see each other on the network, including shared hard drives and folders. (Having all machines in the same "**Workgroup**" (default workgroup is "**WORKGROUP**") helps.

Note: With Windows XP, it may take some time for the TCP/IP lists to be appropriately updated to reflect the complete network topology on all machines. (Particularly when additional computers are added to a large existing network). Please allow for time for these operations to be properly carried out in the background. It may in fact take something like 10 to 50 minutes depending on the size of the network. (In certain situations,

E.g. a small 2 machine peer-to-peer network, rebooting both machines may speed up the process).

Synchronization with Virtual Transport

Open an authorized Virtual Transport, (versions **MUST** be identical version) on both machines and enable the **VT Network**.

Create a **VT Cluster** by dragging a first machine from the right-hand column to the left-hand column, then, drag a second or further machines onto the first one to finalize the cluster.

That's it, machines are now synchronized. However, in some situations you may find that the graphics in Virtual Transport's Network page are not being updated properly and you might face difficulties dragging a machine from the right-hand column to the left-hand column. If this occurs, please just sit back and relax, there is nothing else you can do but wait till all the TCP/IP lists are updated at OS level, then all will be fine.

Nothing is wrong with the software, it just is a matter of taking and enjoying a short break while every network list is being properly updated.

Index



Pyramix 5.0

DIGITAL AUDIO WORKSTATION



Virtual Transport
NETWORKED SYNCHRONIZATION SYSTEM

Numerics

- 9-pin (Sony P2 protocol) 294
- 9-pin Control of External Machine 294
- 9-Pin Monitoring Options 348

A

- AAF 252
- Absolute Sources in EDL View 101
- Absolute Sources in EDL view 339
- Absolute Time 339
- AC3 encoded files 291
- Active Machine 69
- ADAT Daughterboard 5
- ADAT Daughterboard and XDTDM 403
- ADAT Optical I/O 408
- Add Bars 56
- Adding Strips 145
- AES-31 261
- Akai DD / DR 254
- AKAI disk import 254
- Allow chasing across midnight 332
- Alternate Backup 327
- Alternate Time Scale Bar 51
- Angudion 170
- Apple Macintosh, File interchange 250
- Archiving Projects 224
- Arithmetic Timecode Entry 8
- Assumptions 4
- Audio current sample rate & sync source 7
- Audio Engine Drops Warning 397
- Audition after Nudge settings 329
- Audition Play 25
- Auto Cross-fade 321
- Auto Crossfade Mode 90
- Auto Deglitching 87
- Auto Edit 68
- Auto Jog on move 60
- Auto Silence Removal 100
- Auto-chase 69, 292
- Autoconforming 79
- Auto-Crossfade 329
- Auto-Crossfade By Default 91
- Automatic Deglitching 331
- Automation 212
 - Auto-Release Options 213
 - Off 62
 - Play 62
 - Write 62
- Automation in editing and libraries 220
- Automation Menu 385
- Automation Modes 212
 - Auto-Write 212
 - Isolate 212
 - Play 212

- Record 212
- Automation Settings 213
- Automation Track Versions 217
- Automation Trim 217
- Auto-Monitoring 331
- Auto-Mount Media 28, 384
- AutoPunch Mode 75
- AutoPunch Ready enable/disable 16
- Auto-Release Options 213
- Auto-Ripple 93
- Auto-Saving 327
- AUX Buses In-Place Panning 136
- Aux Busses 133
- Aux Send Routing 134

B

- Bars & Beats Settings 286
- Basic Strip 138
- Bios 396
- Broadcast WAV file Tips 289
- Burn-in Window 316
- Burning a CD-R 247
- Bus Returns
 - Recording 143
- Bus Tools 205
- Bus Tools Sections 206
- Buses Repro button 129
- Buttons 138
- BWF 319
- Bypass all Effects 161

C

- CD 231
 - Album 231
- CD Import 256
- CD Markers 230
- CD Red-Book Validation 239
- CD Text 235
- CD Text fields 234
- CD Writer drivers 247
- CD/SACD Tab Window Menus 234
- Channel Direct Outputs 132
- Chase 62
- Chase Mode 68, 332
 - Hard 68, 332
 - Soft 68, 332
 - Vari 69, 332
- Chase Settings 332
- Chase Synchronizer 294
- Check Sync 73
- Checking AC3 encoded files 291
- Clean up Media after recording 321
- Cleaning Up Project media 228
- Clean-Up Media 29, 384

- Click Track 285
 - Click-Track 285
 - Clip
 - Editing 84
 - Fade Handles 83
 - Gain 83
 - Head 83
 - Name 83
 - Sync Point 83
 - Tail 83
 - Trim Handle 83
 - Waveform Display 83
 - Clip Display Problems 399
 - Clip Fade Commands 91
 - Clip Information Only Fields 87
 - Media Offset 87
 - Original TimeCode 87
 - Peak Level 87
 - Clip Properties 85
 - Clip Selection 89
 - Clips
 - Default start time of captured Clips 339
 - Red 91
 - Clips and Compositions 82
 - Clips in a Composition 82
 - Clips Menu 368
 - CMX Autoconform 270
 - CMX EDL 259
 - CMX EDL Format 268
 - CMX Variants 267
 - Collect Media to current Project Default Folder 29, 384
 - Composition Information and Settings Toolbar 57
 - Composition Library
 - Libraries
 - Composition 26
 - Configuration 305
 - Conforming and Reconforming 266
 - CMX Autoconform 270
 - CMX EDL Format 268
 - CMX EDL import Options 267
 - CMX Reconform 270
 - Common CMX Variants 267
 - Load Change EDL 273
 - Relink to New Media 271
 - Consolidating Projects 224
 - Control by External Device 296
 - Control of External Device 294
 - Control Points 82
 - Controller
 - Sony 9 - Pin Protocol Configuration 351
 - Controllers
 - Automatically set offline 69
 - Controllers Online 62
 - Controllers Online/Offline 69
 - Conventions 4
 - Conversion processes 38
 - Convert 36
 - Converting Projects 225
 - Copy 96
 - Copy and Paste 90
 - Clip 90
 - Creating and Configuring Mixers 139
 - Creating Effects Snapshots 221
 - Creating tracks via paste 10, 292
 - Crossfade 91
 - Cue Sequencer 411
 - Cue Sequencer Control 412
 - Cue Sheet Printer 262
 - Cuepoint 261
 - Cursors & Marks Menu 375
 - Customizing the User Interface 275
 - Cut 96
 - Cut and Ripple 97
 - Cutter 94
- ## D
- Daughter Card Settings 310
 - DC Meter 180
 - DC Removal 43
 - DDP 261
 - DDP Import 239
 - Debug Menu 401
 - Default Clock Source 73
 - Default Library 26
 - Default Menus 356
 - Default Mixer 149
 - Default Projects Location 341
 - Default Templates Location 341
 - Delay 138, 168
 - Delay Compensation 205, 207
 - Delay Compensation of External Inputs 144
 - Delay vs Delay Compensation 144
 - Destination Wordlength 44
 - Determining Delay Compensation 144
 - Digitizing a Tape with Discontinuous TimeCode 289
 - Digitizing Sessions 78
 - Direct Output 138
 - Direct Outputs 118
 - Direct X Plug-ins 145, 191
 - Disable Mix Down 325
 - Disable Punch in/out 325
 - Discontinuous TimeCode 75, 285
 - DiscWrite 243
 - Display and Editing of Automation Data 215
 - Display Blocks 17
 - Display Envelope 17
 - Display Waveform 17
 - Dither 223
 - Dither Type 147
 - Dithering 44
 - Dithering Window 147

Don't Snap 93
 Dragging Clips into a Composition 89
 Drivers 396
 DSD Peak Filter 324
 DSD Project 411
 DSD Projects I/O routing 312
 DSP Allocation 301
 DSP load and latency 7
 DSP Time Saving 325
 DST Encoder 44
 DST Estimator 44
 Dual Monitors 7
 Dubbing Mode 282, 320
 Duplicate Selection 94
 DXD Mixing Project 410
 DXD projects I/O routing 312
 Dynamic-Meter 172
 Dynamics 165

E

Edit Commands 96
 Edit Menu 359
 Edit menu 359
 Edit Modes Context Menu 93
 Editing 82
 Clip & Selection 84
 Editing Automation data 219
 Editing Modes 92
 Editing Multitrack Recordings 290
 Effects Snapshots 183, 221
 EQ-X 184
 Error Messages 396
 Ethernet Connection & Settings 418
 European Monitoring 331
 Expand / Collapse 126
 Exit 358
 Export to a File 223
 Exporting Projects to CD Image Files 240
 Extend Tracks 374
 External Edit
 Review Edit 68
 External Effects 144
 External Machine
 Auto Edit 68
 Fast Forward 67
 Play 67
 Preview Edit 68
 Properties 347
 Record button 68
 Rewind 67
 External machine
 Stop 67
 External Machine panel - Specific Features 67
 External Machines 294
 External TC reader 315

F

Fade Editor 109
 Faders & Control Section 111
 Parameters & Options Section 112
 Fade Editor Menu 380
 Fade handles 83
 Fade In 98
 Fade library location 329
 Fade Out 91
 Fader 138
 Fast Forward 61, 66
 File Format and Disk Limitations 74
 Fill Selection 97
 Film 24 to NTSC Sync 290
 Film Feet Scale Bar 54
 Filter 34
 Fit Selection 97
 Fixed Cursor Settings 330
 Fixed or Moving Playhead Cursor 57
 FIXREEL 269
 Flanger 169
 Flatten track numbers 320
 Flywheel Inertia 333
 Focus to Timeline 364
 Foot Type 54
 Free Disk 6
 Freeze Mode 69
 Using 292
 Function Generator 182

G

Gain Window 84
 Gain window 84
 Gate colors 104
 General Tab 354
 Generate new Media in the Project Media Folder 318
 Generate New Media in their Original Folder 318
 Ghost Track 239
 Glitch and Pops finder 227
 Global Libraries 26
 GPI/O controller 296
 GPI/O Input and Output Pin Configuration 297
 GPI/O Remote types 297
 Graphic Cards 396
 Graphic EQ 164
 Group Normalize 43
 Group Recorded Clips 321
 Grouping Clips 84
 Groups 131

H

Head to End 93
 Head to Nearest 93
 Help Menu 394

I

- I/O Assignments 145
- I/O Busses 141
- I/O Status 400
- I/O Status Window 73
- Importing a CMX EDL 259
- Importing Audio Files 76
- improper application exit 400
- Increment take number 321
- In-Place Aux Panning Source 136
- Input Assignment 138
- Input Format 309
- Input Strip Mode 143
- Input Strip Types 141
- Input Strips 128, 144
- Insert Silence 97
- Internal Busses 312
- Internal Machine panel - Specific Features 66
- Internal Return Busses 142
- Introduction 2
- IP address range 419
- ISRC 235

J

- Jog Settings 60
- Jog Shuttle
 - Auto Jog 60
- Jog Speed ceiling 333
- Jog Wheel Mode 69
- Jog Wheel Sensitivity 333
- Jog Wheel Settings 333
- Jog-Wheel Editing 94

K

- Keep in default library 320
- Keep only current version while saving 213
- Keeping Up To Date 396
- Keyboard Shortcuts 275
- Knobs 199

L

- Length / Pitch, Changing 225
- Level Meter 323
- Levelizer 227
- Libraries 29
 - Default 26
 - Global 26
 - Offline / Reference 47
 - Project 26
 - Shelves 26
 - Updating 49
 - User 26
- Library Maintenance 27
- Library Menus 31

- Library, Tools 30
- Limit versions to the number of Undo/Redo 213
- Load Change EDL 273, 357
- Locking Clips 83
- Loop Play 61, 67
- Loop Recording with simultaneous Playlist Creation 290
- Loop Selection 97
- LTC Generator 315
- LTC reader 315
- LTC sync 282

M

- Machines Menu 387
- Macintosh File Interchange 250
- Macro Menu 393
- Macros 276
- Managing Media Folders 45
- Manual Digitizing 79
- Markers 59
- Markers / Tracks Sync 59
- Master Automation Controls 215
- Mastering Peak/Vu Meters 171
- Mastering to CD-R 230
- Media Browser 29
 - Menu 44
- Media Folder
 - Browse... 45
 - Mount / Create 45
 - Permanent Mount 45
 - Quick Mount 45
 - Recursive 45
 - Reset List 45
- Media Folder Menu 36
- Media Information Only Fields 88
 - Author 88
 - File Creation Date 88
 - File Location 88
 - File Name 88
 - File Size 88
 - Format 88
 - Length 88
 - Name 88
 - Notes 88
 - Original TimeCode 88
 - Peak 88
 - Sample Rate 88
 - Scene 88
 - Take 88
 - Tape 88
 - Tracks 88
 - UBITS 88
 - Word Length 88
- Media Management 25
- Media Management, tools 30
- Media Menu 27, 384
- Media Offset 87

Media option 320
Media reconnection 269
Media Target Settings 25
Media Track Information Only Fields 88
 File Name 88
Media Type 319
Menus
 Automation 385
 Clips 368
 Cursors & Marks 375
 Default 356
 Edit 359
 Fade Editor 380
 Help 394
 Machines 387
 Macro 393
 Media 384
 Project 356
 Selection 379
 Settings 393
 Tracks 373
 View 364
 Window 393
 Workspaces 386
Meter Alignment level 324
Meter Decay integration time 324
Meter Headroom setting 323
Meter Permanent Overload 324
Meter Permanent Peak 324
Metronome 285
Metronome Settings... 56, 287
MIDI Files Import / Export 55, 287
Mix ! 126
Mix Bus 129
Mixdown - Disable 301
Mixer and Plug-in Snapshots 220
Mixer Components 128
Mixer Configuration Further Options 146
Mixer Configure 144
Mixer Context Pop-up menu 146
Mixer Pages 139
Mixer Presets 149
Mixer Snapshots 221
 Recalling 221
 Saving 221
Mixer Surround Components 149
Mixing/Monitoring/Aux Buses 129
Modulometer 180
Monitor ! 154
Monitor Configure page 157
Monitoring 309
Mono Mix 129
Motherboards 396
Mount Referenced Media 28, 384
Mounting Media Drives 76
Mounting Rules 36, 46

Mouse Modifier Keys 405
Mouse Scrubbing Settings 60, 335
MS Encoder 169
Multi-channel Audio Files 397
Multiple CDs or versions in one Project 239
Multiple Mix Busses 129
Multiple Stereo Mix 129
Multiple Surround Mix 130
Multi-track Editing 281
Mykerinos 301
Mykerinos Daughter Card Settings 310

N

Native Plug-ins 145
Navigation 51
Network Adapters 396
Network Connections 418
No Sound on Live Inputs 398
Noise Shaping 44, 148
Normalize 98
 according to the selection peak 99
Nova 227
Nudge 6
Nudge settings 328

O

Offline / Reference Libraries 47
OMF 259
Operating System 396
Optical Drive drivers 247
Optional Plug-ins 183
Original Timecode 87
orphaned media 27
Output assignment shown in orange 159
Output Mode 309
Overview 71
Overwrite 93

P

Parametric EQ 163
Paste 96
Paste & Place 97
Paste and Ripple 97
Paste Sync Point to Cursor 96
Paste Tail to Cursor 96
Paste to Cursor 96
Paste to Original TC 97
Paste to Selection 97
PCI Bus Too Slow 396
PCM I/O Routing 311
PCM-HSR I/O Routing 311
PDF (Probability Density Function) 147
Peak and Overload Hold Time 324
Peak level indicator 324

Peak Meter in Track Header 17
 Peak/Vu Meters 171
 Peak-Meter 172
 Pencil Tool 227
 Permanently Mounted Media Folders 341
 Phase Invert 87
 Phase-Oscillo 177
 Ping 419
 Place on new tracks 321
 Placement Tool 102
 Play 18, 61, 66, 75
 Play Head Position 57
 Play Special 388
 Playback Buffer Meter 7
 Playback Buffer setting 330
 Playback Stall indication 330
 Playback Stalls Warning 397
 Player / Recorder mode 301
 Player/Recorder Mode 281, 325
 Playhead Cursor 57
 Playlist 17
 Playlists 321
 Plug-in Automation 183
 Plug-Ins 161
 Plug-ins 145
 Common Components 161
 Position/Speaker Control 151
 Post Processing 320
 POW-r 148
 Practical Machine Control 295
 Pre/Post Roll Settings 330
 Pre-Anticipation 205, 210
 Preferred Outputs 309
 Profiling Window 401
 Program and Project Settings 305
 Program Window 5
 Project Editing Panel 7
 Project Interchange 250
 Project Libraries 26
 Project Management Panel 7
 Project Media Folder 317
 Project Menu 356
 Project Notes 228
 Project Window 6
 Prompt for name after recording 75
 Prosoniq MPEX2 Properties 43
 Prosoniq MPEX3 Properties 40
 ProTools Interchange 260
 Pull-Down 310
 Pull-Up 310
 Punch in / Punch Out - Disable 301
 Pure Series plug-ins 187
 Pyramix audio file format 74
 Pyramix Guides 3
 Pyramix Virtual Studio Overview 5

Q

Query Page 28
 Quick Convert 37, 38
 Quick Export 36
 Quick Import 36
 Quiet if creation failed 320

R

RAID 396
 Reconfirming a Project 226
 Reconfirming to Original Media from Avid &/or OMF 288
 Record Block Size 330
 Record button 61, 66
 Record Name 75, 320
 Record Punch In (Auto) 18, 75
 Record Ready (Manual) 18, 75
 Recording Audio into a Pyramix Virtual Studio Project 74
 Recording Bus Returns 143
 Recording from a Tape with Discontinuous TimeCode 75
 Redirect Remote Controllers commands to the External Machine when chasing 333
 Region Selection 89
 Regions 26
 Rel. box 84
 Relative TimeCode Entry 8
 Relaunch After Improper Exit 400
 Relink to New Media 271, 357
 Remove 93
 Remove and Ripple 93
 Remove Bars 56
 Removing Mixer Presets 149
 Removing Strips 145
 Rename Clips 370
 Renaming Clips 85
 Rendering 226
 Replace 16 bit with 24 bit 357
 Replace Selection 97
 Report Printer 262
 Repro button 129
 Reverse 37
 Rewind 61, 66
 Rotary Controls 138
 Routing Physical I/O to Logical I/O 312

S

SACD EDL Export 262
 SACD Media Management Menu 44
 SACD Production Guide 4
 Sample Rate Conversion 76
 Samplerate Converter Properties 39
 Sampling Rate 308
 Sampling Rate Mismatch 73
 Save Fade 115

- Save X Fade 114
- Saving / Loading Mixer Presets 149
- Scene & Take 319
- Scroll Wheel 70
- Scrub
 - Analog Tape Mode 60
 - Middle Mouse button 60
 - Repeat Loop Mode 60
- Scrub Audio Quality 335
- Scrub Settings 335
 - Audio quality 61
- Scrubbing Mode 335
- Search 34
- Search Library 34
- Search Media 27, 384
- Search Media Tool
 - Query Page 28
- Search Results 28
- Sel. box 84
- Select Media NOT present on Project Default Folder 29, 384
- Select Media present on Project Default Folder 28, 384
- Select Offline Clips 28, 384
- Select Online Clips 28, 384
- Selecting a Clip 90
- Selecting Automation Modes 214
- Selection
 - Track Groups 23
- Selection and Clip Modifiable Fields 86
 - Auto Deglitching 87
 - Comment 87
 - Level 87
 - Mute 87
 - Name 86
 - Phase Invert 87
- Selection Menu 379
- Selection Operations 89
- Selection Tab Window 86
- Selection, adjusting 94
- Selection, moving 94
- Selection, splitting 94
- Selections and Region Selections 89
- Set Focus to the Timeline 364
- Settings 305
 - Application 326
 - Hardware 307
 - Project 317
 - Remote Control 346
- Settings Menu 393
- Shelves 26
- Show Automation Track Versions 217
- Show CD Player 238
- Show Used Media 28, 384
- Shuttle 60
- Shuttle Control 62
- Shuttle sensitivity 334
- Silent Chasing 332
- Silent Jog - sensitivity 334
- Slip Clip Mode 91
- Slip Media Mode 91
- Smoothing Filter 333
- Snap to Original TimeCode 93
- Snapshot 62
- Snapshot Range 62
- Solera 186
- Sonic Solutions 261
- Sony 9 - Pin connection 413
- Sony 9-pin Chase Mode 333
- sound effects libraries 48
- Source - Destination Editing 103
- Source - Destination environment 103
- Source Names - FIXREEL 269
- Speaker Sets 156
- Special Modes 325
- Splitting Clips 94
- Splitting Clips and Regions 94
- Status Bar 6
- stem mixing 130
- Stereo Mix 129
- Stop 61, 66
- Storing and Recalling Mixer Presets 149
- Storing New Mixer Presets 149
- Stretch 98
- Strip & Bus Types 132
- Strip and Bus Tools 195
 - Automation mode switches 197
 - Display Options 195
 - Group assignment mode buttons 196
 - Linking Strip-Tools controls 196
 - Modules 195
 - Sections 198
- Surround Components (Mixer) 149
 - Joystick Panner 149
 - Speaker Controls 149
 - Stereo Input Strips Surround Panner 150
 - Sub Level 150
 - Surround Stem select 150
- Surround Control 150
- Surround Control window 150
 - Level Meter 151
 - Link 152
 - Stereo Surround Control 152
 - Surround Meter 152
 - Surround Panning Algorithm 151
- Surround Meter 179
- Surround Mix - 5.1 129
- Surround Post-Processing 226
- Sync 308
- Sync & Format Preset 308
- Synchroniser 62

T

- Tail to Beginning 93
- Tail to Nearest 93
- Target Settings 318
- Tascam Open TL 261
- TASCAM TDIF I/O Option 409
- TC Source 314
- Templates 300
- Time Scale Bars 51
- Time Scale Zoom and Pan 70
- Time Stretch and Pitch Change for Film Applications 189
- TimeCode 314
- TimeCode Entry 8
- TimeCode Frame rate and reference source 7
- TimeCode Midnight 290
- TimeCode midnight 332
- TimeLine layout 337
- TimeZone Properties 41
- TOC 248
- Toggle Stop/Record Safe 389
- Tone Control 164
- Track and Mixer Muting 300
- Track Column Fields 19
 - Always Visible 20
 - Background Color 20
 - Collapsed 20
 - Display Mode 20
 - Group 19
 - Hidden 20
 - Input Connection 19
 - Monitoring 20
 - Mute 20
 - Name 19
 - Record Ready 20
 - Recording Media Folder 20
 - Repro Connection 19
 - Show Automation 20
 - Show Peak-Meter 20
 - Size 20
 - Solo 20
 - Waveform Color 20
- Track Group Column Fields 21
 - Auto Collapse 22
 - Auto Hide 22
 - Auto Mute 22
 - Auto Record Ready 22
 - Auto Solo 22
 - Collapsed 21
 - Collapsed Display 22
 - Exclusive Show 22
 - Free Markers 22
 - Free Zoom 22
 - Keep Cursor 22
 - Markers Locked 22
 - Name 21
 - No Selection 22
 - Show Scale 22

- Type 21
- Track Groups 21
- Track Height Zoom 70
- Track Record Modes 18, 74
- Track Types 12
- Tracks 10
 - Changing Repro or Input connections 19
 - Creating via paste or drag and drop 10, 292
 - Making Settings Changes to Multiple Tracks 19
- Tracks Menu 373
- Tracks Tab pop-up 19
- Tracks Tab window 18
- Tracks, Adding 10
- Tracks, Deleting 14
- Transient response accelerator 333
- Transport Control Panel 63
 - Controllers Section 69
- Transport Controls 61
- Trim Handles 82
- Trimmer 30
 - Select/de-select tracks for playback 30
- Trimmer Menu 35

U

- Undo / Redo 326
- Unique filename extension 320
- Updating Libraries
 - Adding new files 49
 - Orphaned Entries 49
- US Monitoring 331
- User Libraries 26

V

- Varispeed 309, 310
- View Automation 16
- View Menu 364
- Virtual Multi-track 279
- Virtual Tape Format 283
- Virtual Tape Mode 283
- Virtual Tracks 14
- VITC Generator 316
- VITC Reader 315
- VST Plug-ins 191
- VST Scanner 191
- VU-Meter 172
- VU-Meter controls 173

W

- Warnings 396, 397
- Waveform Display 83
- Window Menu 393
- Word Length 147
- Wordlength Converter Properties 43
- Work Spaces 303

Workspaces 275
Workspaces Menu 386

X

X Fade 92
Xify 110
XML 262