Liquid Mix 16

User Guide

Contents

Introduction - Getting Started

Thank you for purchasing Liquid Mix. This User Guide provides detailed instructions on how to operate both the hardware control surface and software GUI (Graphical User Interface) of Liquid Mix.

Liquid Mix is essentially a hardware device with integrated software functionality. This means that all the audio processing (of tracks in your session) actually goes on within the Liquid Mix hardware, despite seemingly going on inside your DAW. This incurs a delay due to the sending and returning of audio to and from your session. This delay is often compensated for automatically by your DAW but will occasionally need manual compensation. Check the Focusrite online answerbase in the support section of www.focusrite.com if unsure on how to do this.

Despite the hardware processing, however, Liquid Mix appears and works like a plug-in, or multiple plug-ins. With Liquid Mix, you have access to 16 channels of processing (this number can be increased with the optional expansion card), which appears in the form of 8 stereo or 16 mono (or any combination of mono and stereo) instances of the Liquid Mix software. The software settings of each instance can be adjusted within the plug-in window or from the hardware, as desired. The hardware will always control the instance that is currently active within your session.

To get started with Liquid Mix, you must first run the installer found on the supplied resources disc. This will install the Liquid Mix Manager application, the Liquid Mix plug-in software and EQ/Compressor emulations onto your computer.

Installation

Mac

1. Connect Liquid Mix hardware to your computer using the supplied Firewire cable.

2. Insert the Liquid Mix Resources DVD. This should automatically open up the Mac installer but if not, double click the disc icon on the desktop.

3. Double click 'Install Liquid Mix' to run the installer and then follow the on-screen instructions. These will include:

   - Choose location to install Liquid Mix. Default is: /Mac HD/Applications

   - Choose location to install AU and VST plug-ins. The default is set to wherever your default DAW looks for AU and VST plug-ins. You can select a different location of your choice

   - Choose installation type. Software and 44.1k emulations are required, but the snapshot library, higher sample rate emulations and RTAS plug-ins are optional

Once done, you can boot up your music software and begin applying vintage flavours to your mix. Always make sure the hardware is connected before booting up the sequencer, otherwise the plug-ins may be made inactive.

PC

1. Connect Liquid Mix hardware. The Windows Hardware wizard will appear, but ignore this for now.

2. Insert the Liquid Mix DVD. This will automatically launch the PC installer (unless the user has turned autorun off on their PC). If autorun is off, they will need to right + click on the DVD:\Drive to access the installer.

3. Follow the on-screen instructions provided by the installer. This will include:

   - Choose location to install Liquid Mix. Default is Program Files. At present, this is the only supported location

   - Choose location to install VST plug-ins. The default is set to wherever your default DAW looks for VST plug-ins. You can select a different location of your choice

   - Choose installation type. Software and 44.1k emulations are required, but the snapshot library, higher sample rate emulations and RTAS plug-ins are optional

4. The installer will begin once you press install on the page titled "Ready to Install".

5. Return to the Windows Hardware wizard window that popped up when you connected the hardware and click Next:
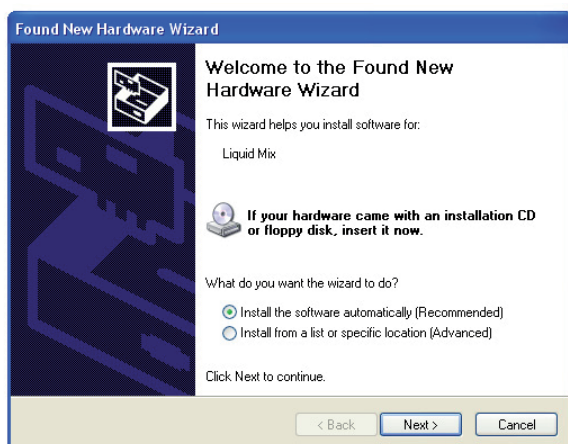
6. The Hardware wizard will tell you that the software is installed and ready to use, then you can begin using Liquid Mix.

Hardware Controls

1. Limit LED - indicates when the input limiter is active

2. Gain reduction meter - shows the amount of compression taking place

3. EQ Band Select – scrolls through the available EQ bands when rotated, to then allow editing of the selected band using the three dials to the right

4. Shape - selects additional EQ options for the selected band, e.g. higher (x 3) frequency setting that may be available on the original unit

5. Mid Meter - shows the level of the signal between Compression and EQ stages (after compression, without Compressor Post EQ switch active or after EQ, with switch active)

6. Output Meter - displays the level of the signal after both EQ and compression

7. EQ controls - Gain, Frequency and Q

8. Save Snapshot - allows saving of Liquid Mix settings

9. EQ Output - sets the level of the signal after EQ

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10. Bypass - bypasses the currently active instance of Liquid Mix

11. EQ/Band On - activates the whole EQ (EQ On) or the selected band (Band On) for the currently active instance of Liquid Mix

12. Compressor On - activates the compressor for the currently active instance of Liquid Mix

13. Link - compresses the left and right channels of stereo instances of Liquid Mix equally when active (active as default)

14. Sidechain Monitor - enables listening to the compressor sidechain

15. Compressor controls - Threshold, Ratio, Attack, Release, Gain Makeup

16. Compressor Post EQ - reverses the order of the processor sections (places the EQ before compression)

17. Free - enables unrestricted compressor controls (all dials across full ranges)

18. Input - sets the level of the signal before compression and EQ

19. Input Meter - displays the level of the signal before Liquid Mix processing occurs

Software GUI controls
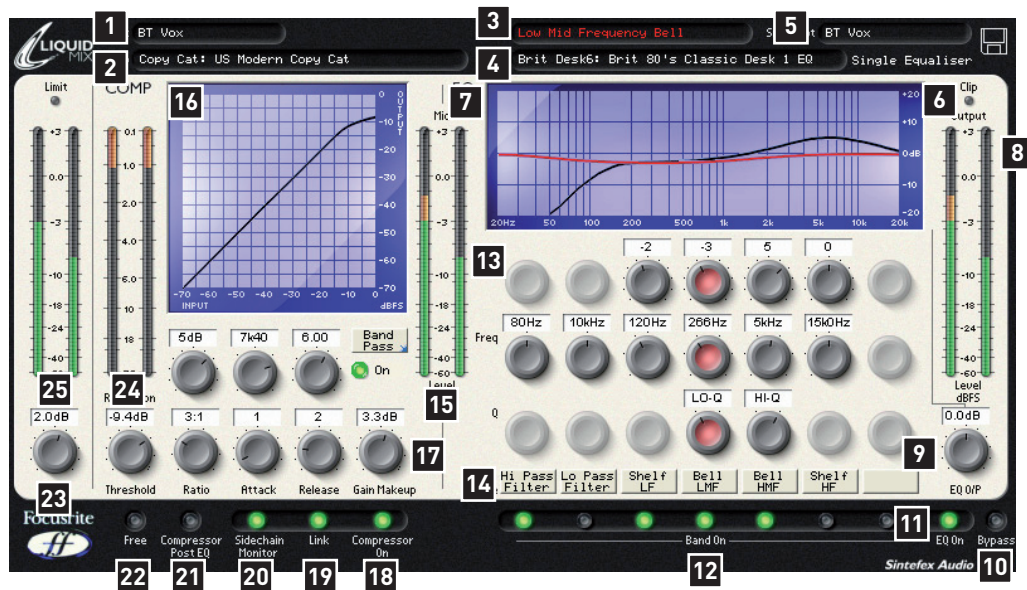
1. Track name - helps identify the instance of Liquid Mix

2. Compressor - displays the currently active compressor emulation, click to choose a different one

3. Active - defines the currently selected EQ band

4. EQ - displays the currently active EQ emulation, click to choose a different one

5. Snapshot - shows the name of the current snapshot if one has been saved, click the disk symbol to load, save or rename a snapshot

6. Clip - lights if compression and/or EQ are causing the output signal to overload

7. EQ Graph - displays the overall EQ in black, current band shape in red and Sidechain EQ in green

8. Output meter - displays the level of the signal after compression and EQ

9. EQ Output - sets the level of the signal after the EQ section

10. Bypass - bypasses this instance of Liquid Mix

11. EQ On - activates/deactivates the EQ section (all bands)

12. Band On - activate/deactivate each of the seven EQ bands

13. EQ controls - Gain, Frequency and Q dials for each of the seven bands

14. Shape Names - display the shape of each band, click to select additional options when a blue arrow is displayed

15. Mid Meter - shows the level of the signal between Compression and EQ stages (after compression, without Compressor Post EQ switch active or after EQ with switch active)

16. Compressor Graph - displays the compressor shape (threshold and ratio)

17. Compressor controls - Threshold, Ratio, Attack, Release, Gain Makeup

18. Compressor On - activates the compressor

19. Link - compresses the left and right channels of stereo instances of Liquid Mix equally when active (active as default)

20. Sidechain Monitor - enables listening to the compressor sidechain

21. Compressor Post EQ - reverses the order of the processor sections (places the EQ before compression)

22. Free - enables unrestricted compressor controls (all dials across full ranges)

23. Input - sets the level of the signal before compression and EQ

24. Gain Reduction Meter - shows the amount of compression taking place

25. Input Meter - displays the level of the signal before Liquid Mix processing occurs

Applying Compression and EQ within the sequencer
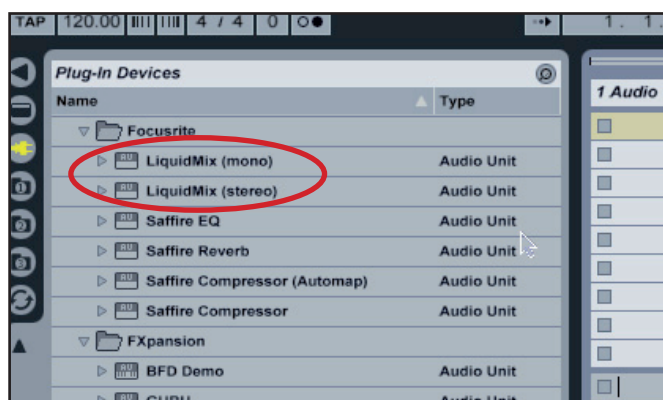
To apply compression or EQ to a track within the sequencer, an instance of the Liquid Mix software must be activated. The software will appear in your list of VST, AU or RTAS (as a wrapped VST) plug-ins. Open up a mono or stereo Liquid Mix to begin applying vintage textures to your track. The software window will open on screen and will automatically become active on the Liquid Mix hardware.

At 44.1/48kHz sample rates, 16 separate mono instances of Liquid Mix can be activated on any tracks. Note that at higher sample rates, this number decreases as listed in the Liquid Mix Specifications.

Liquid Mix Manager

The Liquid Mix Manager is an application for changing the core hardware settings. On a Mac, the Manager needs to be running at all times whilst using Liquid Mix in your DAW (the app opens up automatically when you load up a Liquid Mix plug-in instance). On a PC, the Manager is for setting up your Liquid Mix and only needs to be opened when changes are to be made (e.g. to the sample rate).

Mac
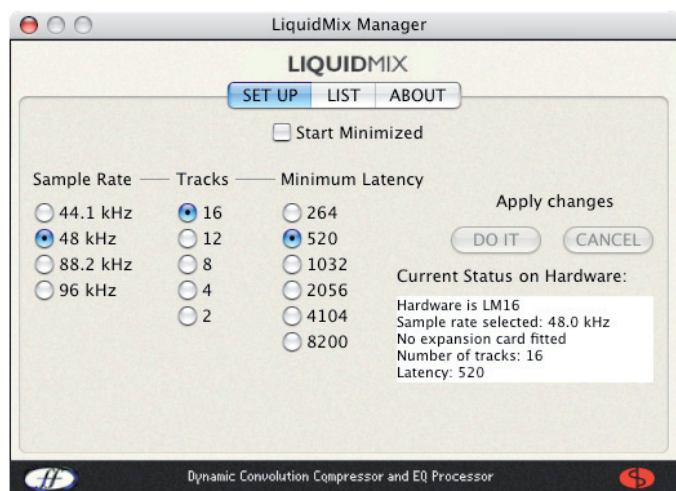
There are three Tabs at the top of the window:

- Set up - allows the main settings to be viewed/edited

- List - shows a list of all available compressor and EQ emulations

- About - provides information about the software, e.g. version number

Set Up

On the Set Up page, the sample rate that the Liquid Mix processes at can be selected. This should be set to the same value as the sample rate of your sequencer session. Setting a different value will bring up error messages and prevent the unit from functioning correctly. The maximum number of tracks (mono instances of the Liquid Mix software) can also be set within this window. At higher sample rates, the maximum number of tracks that can be selected will decrease, due to the increase in processing requirements and Firewire bandwidth (see the Specifications section for more details). Set a lower track total if you want to decrease Liquid Mix's bandwidth allocation, if other Firewire devices are connected for example. There is also a column for setting the Minimum Latency, explained fully in the next section.

Once the sample rate or any other settings have been changed, the APPLY option must be clicked for them to take effect.

In the upper half of the window, there are options for the Manager such as 'Start Minimized', which makes the software minimize automatically when started up. There is also an option for enabling the DSP Expansion card, if one is installed. (See the Expansion Card section for details.) Check the relevant boxes to activate.

PC

The Liquid Mix Manager is an application for changing the core hardware settings. This software does not need to be open at all times whilst using Liquid Mix, but instead is a configuration tool and only need be opened when changes to the setup are required.
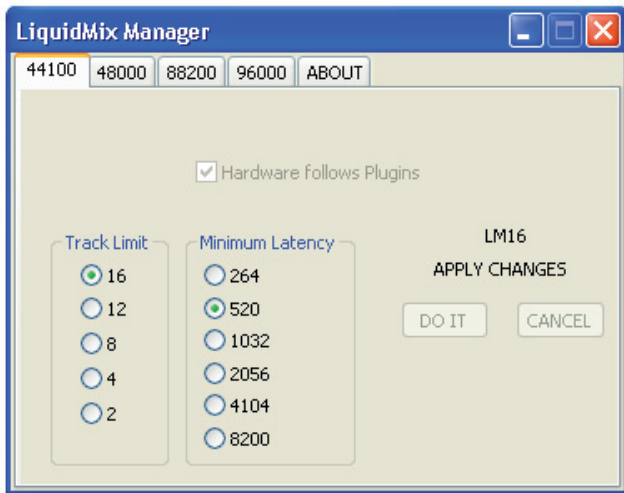
There are Tabs at the top of the window for selecting sample rates. Once a sample rate has been selected, the track limit can be set below. This is the maximum number of mono instances of Liquid Mix that can be run in a session. Be aware that, at higher sample rates, the maximum track limit will reduce due to the increase in processing requirements and Firewire bandwidth (see the Specifications section for more details). Installing the optional expansion card will increase the maximum track limits at all sample rates.

In the upper half of the window, there are options for clipping at 0dBFS and one for activating the Expansion card (if one is fitted). Check the relevant boxes to activate. Once the sample rate or any other settings have been changed, the DO IT option must be clicked for them to take effect.

Variable Latency

Liquid Mix latency can be varied to achieve the best performance in your DAW. The way you set this depends upon two factors: DAW buffer size and the Liquid Mix Minimum latency setting, selected within Liquid Mix Manager (described below). You can check the Liquid Mix plug-in latency at any time while the plug-in is open by clicking the Liquid Mix logo in the top left corner of the plug-in window. This displays the current sample delay of Liquid Mix plug-ins on your system.

Minimum Latency Setting

Within the Liquid Mix Manager window is an option called Minimum Latency, with 6 possible settings ranging from 264 to 8200 samples.

The Liquid Mix latency is tied to the DAW buffer size in the following way:

LM Latency = 2 x DAW buffer size + 8 samples

For example, if the DAW (sequencer) buffer size is set to 256 samples, the resulting Liquid Mix plug-in latency will be 520 samples (2 x 256 + 8). This rule is true so long as the result is greater than or equal to the Minimum Latency set in the Liquid Mix Manager. In other words, the Liquid Mix latency is tied to the DAW latency down to a set minimum. For example, if the DAW buffer size is set to 128 samples and the Liquid Mix Minimum Latency is set to 520 samples, the resulting latency will be 520 samples. However, if the DAW buffer size is set to 256 samples and the Liquid Mix Minimum Latency is set to 264 samples, the resulting latency will be 520 samples. Remember, if this all sounds too confusing, just check the latency in the plug-in window as described above!

In summary, the Liquid Mix latency is defined by the Minimum Latency setting made in the Liquid Mix Manager, UNLESS the DAW buffer size multiplied by 2 plus 8 samples is over that value. If you are experiencing performance problems with Liquid Mix then setting the Minimum Latency value higher will normally alleviate any issues with the CPU.
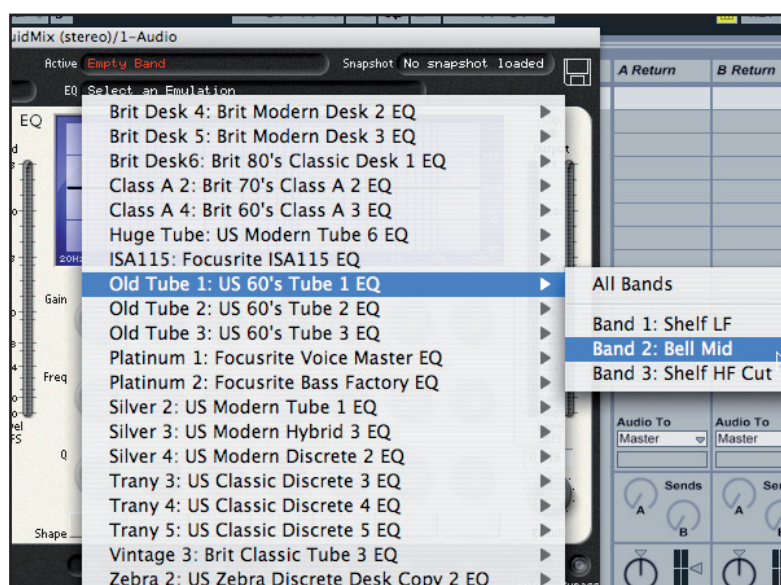
Selecting Compressors and EQs

Selecting Compressors and EQs is done from within the Liquid Mix plug-in window. To select a Compressor emulation, click on the 'Comp' box in the top left of the window and then choose an emulation from the drop-down list.

Similarly, to choose an EQ, click on the 'EQ' box on the header bar and select an emulation from the list. If selecting an EQ when no band is selected, the entire EQ emulation can be selected from the main drop-down list (without having to go to the submenu and select 'All Bands'). If choosing when a band is selected, the submenu for each EQ must be used. In each EQ submenu, there are individual bands (labelled accordingly) and an 'All Bands' option. Select an individual band (by clicking on any of its 3 dials in the plug-in window) to insert 1 band into the 7-band EQ (into the currently selected band in the software window), and begin building a Hybrid EQ. See the Building a Hybrid (Mixed) EQ section for more details. If a Hybrid (Mixed) EQ has been created and you want to abandon these and simply choose one emulation, click on 'All Bands' within the submenu for that EQ.
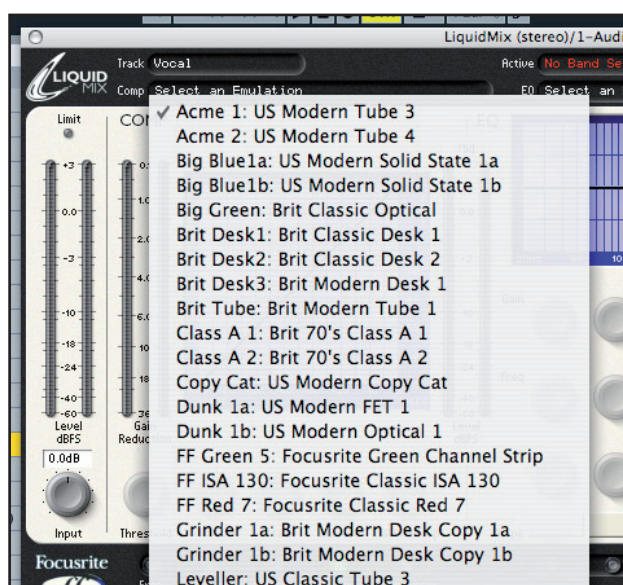
Selecting a compressor emulation

Selecting 1 band of an EQ emulation

Adjusting Compressor settings

Compressor settings can be modified from the hardware or software in identical ways, as the same controls are available on either. To edit using the hardware, make sure the correct plug-in instance of Liquid Mix is open and selected. (You may need to click inside the plug-in window after opening it up before the hardware can control it.) Note that the available compressor controls will differ depending on the emulation, e.g. if the vintage original only has Threshold and Ratio then that is what will be available, unless the Free switch is active. Read the Free Switch section for more information.

The available compressor controls are as follows:

Compressor On

The compressor is activated by pressing/clicking the Compressor On button/switch, located in the bottom left of the software and hardware.

Threshold

The Threshold control sets the level at which compression begins. The lower the threshold, the more the signal is compressed. Setting a higher threshold allows quieter passages in the music or speech to remain unaffected; only passages that exceed the threshold will be compressed. The level of threshold varies depending on the chosen compressor (unless the Free switch is active), and the exact value is shown in dB directly above the dial in the software GUI.

Ratio

The Ratio control determines the amount of compression applied to the signal with increasing input, and is the ratio of change in input level compared to change in output level. Higher ratio settings will produce more noticeable compression, so for the least obtrusive result, the ratio should be set at the minimum necessary for the application. For example, using low threshold and

low ratio will produce a less subjectively noticeable effect than a high threshold and high ratio, even though the total amount of compression may be the same. The range of ratios selectable varies depending on the chosen compressor emulation, and the exact value is shown directly above the dial in the software GUI.

Attack

The Attack control determines how quickly compression is applied once the level of the source signal has risen above the threshold. When turned anti-clockwise the response is very fast, which tends to make the compressor react to the peak levels of the signal. This is sometimes desirable, but short transients can cause unwanted 'pumping' of steadier low-level signals. A slower attack will cause the compressor to ignore short transients and respond more to the average loudness of the signal; however this may seem to increase the relative volume of the transients. The range of attack times selectable varies depending on the chosen compressor (unless the Free switch is active), and the exact value is shown in milliseconds (ms) directly above the dial in the software GUI.

Release

The Release control determines how quickly compression is removed once the level of the source signal has fallen below the threshold. When in the anti-clockwise position, the compression releases very quickly, which may be appropriate on rapidly varying signals to avoid compressing the beats that follow, but can result in excessive distortion on more sustained material. Clockwise rotation increases the release time, giving a smoother effect, but may also result in transients causing audible 'pumping'. The Release time varies depending on the chosen compressor (unless the Free switch is active), and the exact value is shown in milliseconds (mS) directly above the dial in the software GUI.

Gain Makeup

Compression results in an overall reduction in level. The Makeup control allows you to increase the gain of the compressed signal. The range of makeup values selectable varies depending on the chosen compressor, and the exact value is shown (in dB) directly above the dial in the software GUI.

Link

This switch enables both left and right channels to be compressed equally, for use when compressing a stereo signal. This switch will be active as default when a stereo instance of Liquid Mix is opened. Deactivate the switch if you are wishing to compress two mono signals separately; this makes the instance of Liquid Mix function in dual-mono mode.

Gain Reduction Meter

The vertical LED meter indicates the action (Gain Reduction) of the compressor, in expanding increments down to -15 dB.

Sidechain Monitor

Activating the Sidechain Monitor switch allows the signal being fed to the sidechain to be listened to. See the Sidechain EQ section for details.

Compressor Post EQ

The Compressor Post EQ Switch allows the order of processing within Liquid Mix to be reversed, positioning the EQ before compression. Although this is not normal procedure, as compression can often squash the effects of the EQ, it is sometimes a desirable effect. With the switch active, the Mid Meter displays the level of the signal directly after EQ and before compression (after the EQ Output dial) and the compressor Gain Makeup dial now controls the main output level (after both EQ and compression).

Free Switch

A lot of the vintage units that have been sampled to create the compressor emulations have fewer controls or control options than all of the available dials on Liquid Mix. As such, in default mode, some of the controls may not be active. On the hardware, this will be indicated by the control active LEDs above those dials not being lit and no corresponding values being displayed on the screen. On the software, the inactive controls will be greyed out with no values directly above. Similarly, if the vintage unit simply had a few preset buttons or very limited options, then the Liquid Mix controls will step through those options as the active controls are rotated.

The Free switch on the Liquid Mix hardware and software provides you with options previously impossible with the vintage units. Activating the switch makes all the Liquid Mix compressor controls active for that emulation, each with a full range. For example, the 'Vintage' compressor emulation has no Ratio and Attack controls in default mode but with the Free switch active both controls

are enabled, with ranges of 1:1-20:1 and 0.1mS-2S, respectively. Additionally, the Release control now has a range of 1mS-20S, rather than stepping through the 6 TC (Time Constant) presets available on the vintage unit.

Sidechain EQ

Liquid Mix provides an extra band of EQ that can be sent to the compressor sidechain. This is called the Sidechain EQ and allows the signal to be EQ'd before compressing, so that certain frequencies can be compressed more or less than others. The Sidechain EQ controls (other than the Sidechain Monitor switch) appear when the Sidechain EQ band is selected using the EQ Band Select dial on the hardware, or when the Sidechain Monitor switch is active. See the Using the Sidechain EQ section for more details.

Modifying EQ settings

EQ settings can be adjusted from the Liquid Mix hardware or software; three dials per band are available within the software window whereas the hardware provides three dials and an EQ Band Select dial. To edit using the hardware, make sure the correct plug-in instance of Liquid Mix is open and selected. (You may need to click inside the plug-in window after opening it up before the hardware can control it.)

EQ settings can be modified using the dedicated controls in the software, or using the three hardware controls. To use the hardware controls, first make sure you select the band to be edited with the EQ Band Select dial. The currently selected band is shown by its dedicated software controls turning red.

The EQ controls on the hardware and software are as follows:

EQ On

The EQ is activated using the EQ On switch, located in the bottom right section of the software and hardware. All seven bands will be turned on/off, regardless of the currently selected band.

Band On

On the hardware, pressing the Band On button (next to the EQ On button) with a particular Band selected will activate that Band. On the software, there are separate Band On switches for each band, located below the three dedicated EQ dials.

Gain

The Gain dial boosts or attenuates the gain of the selected band across a range dependant on the settings of the original EQ. Rotate the control clockwise to increase. Note that for some band types, such as High-Pass and Low-Pass, the Gain dial will be inactive because the only controls for such types are the (cutoff) frequency and occasionally resonance.

Frequency

The frequency dial determines the area of the frequency spectrum that the band acts upon. Rotate the control clockwise to increase. Note that for some band types, such as a 3kHz peak/notch, the Frequency dial will be inactive because that value is fixed.

Q

The Q dial defines the width of the band. The control has an inverse function so increasing its value, by rotating clockwise, decreases the band's width. A narrower band is more focussed and so has a powerful effect on the sound, whereas a wider band will be washier but more obvious as it affects a larger area.

Shape

The Shape switch on the hardware will display any further options for the selected band, if any are available. This accounts for additional frequency and shape settings, such as 'x3' buttons or variable curves. Pressing the Shape button repeatedly toggles through all available options. The same options will appear within the software if the Shape box for that band is clicked with the mouse, making a drop-down menu appear; the Shape box will show a small blue arrow in the corner if further options are available. Refer to the Compressor and EQ Emulations Guide section for more details on the Shape options for each EQ emulation.

Remember that the Band On switch must be active for an EQ band to have an effect, despite a curve appearing on the software display. In the software window, the current band being edited is displayed on the EQ graph in red with the overall EQ shape permanently displayed in black. To just display the overall EQ, select an empty band with the mouse or, if all bands are full, rotate the EQ Band Select dial on the hardware until 'No Band Selected' is shown in the 'Active' box in the software.

Note that some bands have no active controls as all values are fixed. In these instances, only the Band On switch has an effect.

Using the Sidechain EQ

The Liquid Mix sidechain EQ provides an additional EQ band, purely for applying to the compressor input. This means that certain frequencies in a track can be compressed more or less than others, rather than having to compress the whole track. This is useful if wanting to remove excessive sibilance from a vocal (de-essing) or a particular resonant frequency from a guitar, for example.

In the plug-in window, the sidechain EQ is controlled by 3 dials, a switch and a small menu, which all appear above the main compressor controls when the Sidechain Monitor switch (in the compressor section) is clicked. These allow you to set the type of EQ band, the frequency, gain and Q (bandwidth), as well as turn the sidechain EQ on and off. Once turned on, the EQ'd signal will replace the standard signal that normally feeds the compressor.

Once the controls appear (after the Sidechain Monitor switch has been clicked), the band will appear on the EQ display, which can be used as a visual guide to setting up the sidechain EQ. Note that the standard EQ graph will disappear when the sidechain EQ is being modified, but will reappear when any standard EQ controls are activated.

Adjusts the Q (bandwidth) of the sidechain EQ (only active in band-pass mode)

Turns the sidechain EQ on/off

Selects high/low-shelf or band-pass

Adjusts the frequency of the sidechain EQ

Adjusts the gain of the sidechain EQ

Displays the sidechain EQ curve in green whilst the controls are being edited

Sidechain Monitor switch - allows the signal fed to the compressor to be listened to and makes the sidechain EQ controls appear (turn this off when the sidechain EQ has been turned on to hear the result)

The Off/On switch on the right can be used to activate the Sidechain EQ. Once active (with the Sidechain Monitor switch also active), the signal now being fed to the compressor input can be heard and the remaining sidechain EQ controls can be used to adjust the band as desired.

Use the small menu called up by clicking the box on the right (containing Low-shelf or similar) to set the type of EQ band to either low-/high- shelf or band-pass. With low- or high- shelf selected, the low or high frequencies can be boosted or cut using the first dial to set the gain (from -20 to +20dB) and the second dial to set the frequency. In band-pass mode, a small band of frequencies can be boost or cut, with a third dial also appearing to allow the bandwidth to be set.

Once the desired EQ is set, deactivate the Sidechain Monitor switch (with the sidechain EQ On/Off switch still active) to hear the resulting effect. The sidechain EQ On/Off switch can be toggled on and off at this point to hear the result without the Sidechain EQ controls disappearing. Remember that to remove a particular band of frequency, you first have to boost it in the Sidechain EQ band.

So, to get rid of nasty sibilance on a vocal, first set the EQ type to band-pass, then set the bandwidth/Q to the maximum setting (10/very narrow) and the gain to the maximum setting, then select a frequency of between 5 and 10kHz. With the Sidechain Monitor switch active, you should now hear the sibilance very obviously. Activating the Sidechain EQ On/Off switch and turning Sidechain Monitor off will then de-ess the vocal.

Hardware Control

The Liquid Mix hardware can be used to control the Sidechain EQ, rather than the plug-in window, if desired. With the hardware, the sidechain controls can be viewed and edited without having to activate the Sidechain Monitor switch in the plug-in window. This is done by using the EQ Band Select dial to select the Sidechain EQ band. You will know the band has been selected when 'Sidechain EQ' is displayed in the Active box at the top of the plug-in window and the EQ curve turns green. The hardware EQ controls can then be used to adjust the Sidechain EQ settings, as follows

Rotate until Sidechain EQ is selected in the Active box at the top of the plug-in window to begin controlling the Sidechain EQ

Press the SHAPE button to change the type of Sidechain EQ band; pressing repeatedly toggles low-/high- shelf and band-pass

Adjust the sidechain EQ with the three EQ controls (Q is only active in band-pass mode)

Press Band On to turn the Sidechain EQ on and off (with ScEq selected on the screen)

Press Sidechain Monitor to listen to the sidechain EQ band being sent to the compressor input

Building a Hybrid (Mixed) EQ

In every instance of Liquid Mix, there are seven EQ bands available. These can be filled in whatever way you want, using a mixture of individual bands from seven different EQ emulations or one complete 4-band emulation with up to three additional bands, and so on.

Constructing Mixed EQs is done by clicking on a band (any one of the vertical column of three dials for each band) and then using the EQ box above to select an individual band emulation. You will know the band is selected because, if there is currently an emulation in it, the active control(s) will be red or, if it is empty, all three dials will be blue. With the band selected, click on the EQ box above. This brings up the root EQ emulation list. Move the mouse cursor to an emulation to view the submenu of separate bands for that EQ. Move the cursor to an individual band from one of the submenus and click to make that band active. Clicking the mouse outside the drop-down menus at any point will cancel the emulation select. Now click on another of the seven bands and repeat the process as required.

Limit LED

This LED indicates when Liquid Mix's input limiter is active. The limiter has been included to make sure that the signal level of the input does not exceed that of the original sampling process. Attempting to process a signal higher than this (above the normal peak operating level) would cause unpleasant and excessive distortion. If a signal above the limiter threshold is received, there will be a momentary reduction in signal level as the instant limiter becomes active, to make sure the input doesn't clip.

Compressor and EQ Emulations Guide
Compressors (outline controls with FREE switch inactive)

FLAT COMP/ CLEAN SOUND FREE CONTROLS
Focusrite Liquid Mix DSP compressor

TRANY C/ US CLASSIC DISCRETE 1C
Based on an API 2500*stereo mastering compressor, (US) serial #0016
(Old/Normal/Hard settings.)

All controls – stepped Ratio (with LIMIT at max setting), Attack and Release

TRANY A/ US CLASSIC DISCRETE 1A
Based on an API 2500*stereo mastering compressor (US) serial #0016
(Old/Normal/Soft settings.)

All controls – stepped Ratio (with LIMIT at max setting), Attack and Release

SILVER 2/ US MODERN TUBE 1
Based on an AVALON VT-737SP*valve channel strip (US) serial #28150

All controls – Attack and Release have SLOW and FAST in max and min settings, respectively

LIVE SOUND/ BRIT LIVE SOUND 1
Based on a BSS DPR402* dual compressor/limiter (UK) serial #02-9983-B

All controls – ratio has LIMIT at max setting

LONDON/ BRIT BOUTIQUE TUBE 1
Based on a CHISWICK REACH* (UK) stereo valve compressor serial #RMS0061

No Ratio – Attack starts at THUMP and ranges from 1-11, then SLOW. Release starts at FAST and ranges
1-11, then SLOW

WASP 2/ BRIT CLASSIC SOLID STATE 1
Based on a DRAWMER DL221X* (UK) serial #1008X

All controls

WASP 1/ BRIT CLASSIC TUBE 1
Based on a DRAWMER 1960*(UK) vacuum tube compressor amplifier
serial #1002

No Ratio – Attack has FAST, MED and SLOW. Release has 6 settings, 1 being fastest and 6 being slowest

BIG BLUE A/ US MODERN SOLID STATE 1A
Based on a dbx 160S* (US) compressor/limiter serial # 000004 (Standard
compression setting.)

All controls – Attack scale is dB/m (dB per millisecond) and Release scale is dB/S (dB per second)

BIG BLUE B/ US MODERN SOLID STATE 1B
Based on a dbx 160S* (US) compressor/limiter serial # 000004 (OverEasy compression setting.)

All controls – Attack scale is dB/m (dB per millisecond) and Release scale is dB/S (dB per second)

US RADIO/ US CLASSIC SOLID STATE 1

Based on a dbx 165* compressor/limiter (US) serial # 1821

All controls – Attack scale is dB/m (dB per millisecond) and Release scale is dB/S (dB per second)

COPY CAT/ US MODERN COPY CAT

Based on a EMPIRICAL LABS EL8 DISTRESSOR* (US) serial # 1689

Stepped Ratio with NUKE at max setting – Attack and Release range from 1 to 10, with 1 being fastest and 10 being slowest

VINTAGE/ US VINTAGE TUBE 1

Based on a FAIRCHILD MODEL 670* (US) serial # 530

No Ratio or Attack – Release has 6 TC (Time Constant) settings, 1 being fastest and 6 being slowest

FF ISA 115/ FOCUSRITE CLASSIC ISA 115

Based on a FOCUSRITE ISA 115 (UK) serial # F00052T

FF GREEN 5/ FOCUSRITE GREEN CHANNEL STRIP

Based on a FOCUSRITE CHANNEL STRIP (UK) serial # GO05116

All controls – stepped Ratio with LIMIT at max setting, Attack has SLOW and FAST at max and min settings, respectively

FF RED 7/ FOCUSRITE CLASSIC RED 7

Based on a FOCUSRITE RED 7 (UK) serial # FO6350T

All controls – stepped Ratio, Attack has SLOW and FAST at max and min settings, respectively

DUNK A/ US MODERN FET 1

Based on a MANLEY SLAM!* (US) serial # SLAM120 (FET limiter)

No Ratio – Attack has VF (Very Fast), F (Fast) and M (Med). Release is stepped with CLIP in min setting

DUNK B/ US MODERN OPTICAL 1

Based on a MANLEY SLAM!* (US) serial # SLAM120 (ELOP (opto) limiter)

No Ratio, Attack and Release

PRIMITIVE/ US CLASSIC TUBE 2

Based on a MANLEY STEREO "VARIABLE MU"* (US) serial # MSLC61536

Attack has SLOW and FAST at max and min settings, Release has FAST, MF (Medium Fast), MED, MS (Medium Slow) and SLOW settings

BIG GREEN/ BRIT CLASSIC OPTICAL

Based on a JOE MEEK SC2* COMPRESSOR* (UK) serial # 05-1038

All controls – Ratio has four presets, 1 being the lightest and 4 being the heaviest compression. Attack and Release have SLOW and FAST at max and min settings

NEW AGE 2E/ US MODERN HYBRID 2E

Based on a MILLENNIA STT-1* (US) serial # 0-161 (Solid state input, solid state compressor settings.)

All controls

NEW AGE 2A/ US MODERN HYBRID 2A
Based on a MILLENNIA STT-1* (US) serial # 0-161 (Vacuum tube input,Vacuum
tube compressor settings.)

All controls

CLASS A 1 / BRIT 70'S CLASS A 1
Based on a NEVE 2254/A* dual/stereo compressor/limiter (UK) serial # 5008K

No Attack – stepped Ratio and Release. Release has AUTO at max setting (Automatic Release)

CLASS A 2/ BRIT 70'S CLASS A 2
Based on a NEVE 33609/B* dual/stereo compressor /limiter (UK) serial # 108

No Attack – stepped Ratio and Release. Release has AUTO1 and AUTO2 at max settings (Automatic Release)

BRIT DESK1/ BRIT CLASSIC DESK 1
Based on a NEVE VR CONSOLE* compressor (UK) serial # unknown.

All controls – Ratio has LIMIT at max setting, Attack has FAST and NORM settings

MEAT PIE/ BRIT 60'S CLASS A
Based on a PYE 84 4060/01* compressor/limiter (UK) serial # 60

No Attack – stepped Ratio (with LIMIT at max setting) and Release

GRINDER A/ BRIT MODERN DESK COPY A
Based on a SMART RESEARCH C2* bus compressor (UK) serial # C217.

All controls – stepped Ratio (with LIMIT at max setting), Attack and Release (with AUTO at max setting)

GRINDER B/ BRIT MODERN DESK COPY B
Based on a SMART RESEARCH C2* bus compressor (UK) serial # serial # C217.
(Crush setting.)

All controls – stepped Ratio (with LIMIT at max setting), Attack and Release (with AUTO at max setting)

MIX BUSS/ BRIT CLASSIC BUSS
Based on a SOLID STATE LOGIC FX G384* stereo compressor (UK)
serial # FX384-180

All controls – stepped Ratio, Attack and Release (with AUTO at max setting)

BRIT DESK2/ BRIT CLASSIC DESK 2
Based on a SOLID STATE LOGIC SL 4000 G+* console compressor (UK)
serial # unknown.

All controls – stepped Ratio (with LIMIT at max setting) and Attack with FAST and NORM settings

BRIT DESK3/ BRIT MODERN DESK 1
Based on a SOLID STATE LOGIC SL 510* (5000 series dynamics module) (UK)
serial # unknown

All controls – stepped Ratio (with LIMIT at max setting) and Attack with FAST and NORM settings

ACME 1/ US MODERN TUBE 3
Based on a SUMMIT DCL-200* dual compressor/limiter (US) serial # 0721076

All controls – 10 ratio settings with 1 being the lightest and 10 the heaviest compression

ACME 2/ US MODERN TUBE 4
Based on a SUMMIT TLA-100A* tube levelling amplifier (US) serial # 0120429

All controls - 10 ratio settings with 1 being the lightest and 10 the heaviest compression, Attack and Release have FAST, MED and SLOW settings

LEVELLER/ US CLASSIC TUBE 3
Based on a TELETRONIX MODEL LA-2A* (US) valve compressor/limiter
serial # 00227 (Silver face, pre-Harman)

Attack and Release are fixed – Ratio switches between COMP and LIMIT modes

BRIT TUBE/ BRIT MODERN TUBE 1
Based on a TL AUDIO C-1*dual valve compressor (UK) serial # 121739

All controls – stepped Ratio, Attack and Release (both with SLOW and FAST at max and min settings)

VIKING 1/ DANISH CLASSIC TUBE 1
Based on a TUBE TECH CL-1B* compressor (DK) serial # 04150

Attack and Release are fixed – stepped Ratio

VIKING 2/ DANISH CLASSIC TUBE 2
Based on a TUBE TECH LCA 2B* dual/stereo compressor/limiter (DK)
serial # 04010

No Release – stepped Ratio, Attack switches between 6 Presets

STELLAR 1/ US CLASSIC SOLID STATE 1
Based on a UNIVERSAL AUDIO 1176LN* mono limiting amplifier, (US)
serial # 1394 (Black face, pre-Harman; a re-issue of the Urei 1176LN)

All controls – Ratio has four settings with the fifth being all buttons on the front panel pressed

STELLAR 2/ US CLASSIC SOLID STATE 2
Based on a UREI MODEL 1176LN* mono limiting amplifier (US)
serial # 11854 (Silver face)

All controls – Ratio has four settings with the fifth being all buttons on the front panel pressed

STELLAR 3/ US CLASSIC SOLID STATE 3
Based on a UREI/TELETRONIX* mono levelling amplifier LA-3A (US)
serial # 1584 (Black face, 30dB switch setting on rear panel.)

Attack and Release are fixed – Ratio switches between COMP and LIMIT modes

STELLAR 4/ US CLASSIC OPTICAL 1
Based on a UREI LA-4* compressor/limiter (US) serial # 4832A (Silver face)

Attack and Release are fixed – stepped Ratio

EQs

DIGI-FILTER
Focusrite Digital Low-pass and High-pass filter

CLASS A 2: based on a Neve 1073 ser. 1742

HPF - OFF and switched Freq
LF shelf - OFF and switched Freq, Variable Gain
MF Bell - OFF and switched Freq, Variable Gain, freq-dependent Q
HF shelf – Vari Gain

TRANY 4: based on an API 550b ser. 02212

LF shelf/bell - Vari Gain and Freq
LMF bell - Vari Gain and Freq
HMF bell - Vari Gain and Freq
HF shelf/bell - Vari Gain and Freq

TRANY 5: based on an API 559 ser. AX-GP02211

Bell – Vari Gain, switched Freq x 7 (Bell 2, Bell 3....)
7 Identical bands to emulate a graphic EQ

OLD TUBE 1: based on a Pultec EQP1 ser. 1253

LF Boost - Variable Gain, switched Freq
LF Cut – Bands 1 and 2 are interactive (both use the same Freq control)
MF bell boost – Fully parametric
HF Cut - Vari Gain

OLD TUBE 2: based on a Pultec MEQ5 ser. 1742

LMF bell boost - Vari Gain, switched Freq
MF bell cut - Vari Gain, switched Freq
HMF bell boost - Vari Gain, switched Freq

PLATINUM 1: based on a Focusrite VoiceMaster ser. p070110

HPF - Variable Freq
Warmth bell - Vari Gain and Freq, gain-dependent Q
Presence bell - Vari Gain, gain-dependent Q
Absence (around 4k) - On/Off
HF shelf - Vari Gain

ISA115: based on a Focusrite ISA 115

HPF - Switched Freq
LPF - Switched Freq
LMF bell - Fully parametric, x 3 Freq option
HMF bell - Fully parametric, x 3 Freq option
LF shelf - Vari Gain, switched Freq
HF shelf - Vari Gain, switched Freq

CLASS A 4: based on a Neve 1058 ser. 375

LF shelf – Vari Gain
MF Bell - Vari Gain and Freq
HF shelf – Vari Gain

TRANY 3: based on an API 550A ser. 4445

Filter (giant band-pass) – Fixed, On/Off
LF bell/shelf - Vari Gain, switched Freq
MF bell - Vari Gain, switched Freq
HF bell/shelf - Vari Gain, switched Freq

SILVER 3: based on an Avalon Vt 747sp ser. 27093 (stereo channel strip with graph EQ)

15 Hz LF shelf - Vari Gain, with Solid State or Tube signal paths in Shape options
125Hz Bell - Vari Gain, with Solid State or Tube signal paths in shape options
500Hz Bell - Vari Gain, with Solid State or Tube signal paths in Shape options
2kHz Bell - Vari Gain, with Solid State or Tube signal paths in Shape options
5kHz shelf - Vari Gain, with Solid State or Tube signal paths in Shape options
32kHz shelf - Vari Gain, with Solid State or Tube signal paths in Shape options

OLD TUBE 3: based on a Pultec EQH2 ser. 4670

LF boost - Variable Gain, switched Freq
LF Cut – bands 1 and 2 are interactive with linked Freq
HMF bell boost - Vari Gain, switched Freq
HF shelf Cut - Vari Gain

VINTAGE 3: based on an EAR 822Q ser. TH82

LF boost - Vari Gain, switched Freq
LF cut – Bands 1 and 2 are interactive with linked freq
MF bell boost - Vari Gain and Q, switched Freq
HF shelf Cut - Vari Gain

BRIT DESK 4: based on an SSL E-series ser. XCH164

HPF - Vari Freq
LPF - Vari Freq
LF shelf/bell - Variable Gain and Freq
LMF bell - Vari Gain, Freq and Q
HMF bell - Vari Gain, Freq and Q
HF shelf/bell - Vari Gain and Freq

BRIT DESK 5: based on an SSL G-series ser. XCH177

HPF - Variable Freq
LPF - Vari Freq
LF shelf/bell - Vari Gain and Freq
LMF bell – Vari Gain, Freq and Q
HMF bell – Vari Gain, Freq and Q
HF shelf/bell - Variable Gain and Freq

HUGE TUBE: based on a Manley Massive Passive – ser. MSMPX1100

HPF - Switched Freq
LPF - Switched Freq
LF shelf/bell - Vari Gain, Freq and Q
LMF shelf/bell - Vari Gain, Freq and Q
HMF shelf/bell - Vari Gain, Freq and Q
HF shelf/bell - Vari Gain, Freq and Q

BRIT DESK 6: based on an AMEC Angela ser. 1314

HPF - Fixed – On/Off
LPF - Fixed – On/Off
LF shelf boost - Vari Gain, switched Freq
LMF bell - Vari Gain and Freq, switched Q
HMF bell - Vari Gain and Freq, switched Q
HF shelf - Vari Gain, switched Freq

SILVER 2: based on an Avalon Vt 737sp ser. 12545

HPF - Variable Freq
LF shelf - Vari Gain and Freq
LMF Bell - Vari Gain and Freq, with x 10 in Shape options and 2 Q settings
HMF Bell - Vari Gain and Freq, with x 10 in Shape options and 2 Q settings
HF shelf - Vari Gain and Freq

SILVER 4: based on an Avalon 2055 ser. 10747

LF shelf/bell - Vari Gain, switched Freq
LMF bell - Fully parametric, optional x 10 Freq setting
HMF bell - Fully parametric, optional x 10 Freq setting
HF shelf/bell - Vari Gain, switched Freq

PLATINUM 2: based on a Focusrite Bass Factory

HPF – Variable Freq (linked to Band 2)
LPF – Variable Freq (linked to Band 1)
Bass – Vari Gain
Mid – Vari Gain
Treble – Vari Gain – optional HMF (lower freq) setting
LF shelf/bell – Vari Gain and Freq, optional high Q setting in bell mode
HF shelf/bell – Vari Gain and Freq, optional high Q setting in bell mode

ZEBRA 2: based on a Chandler Limited EMI Passive TG channel Abbey Rd ser. 001112

HF shelf boost – Vari Gain, switched Freq
MF bell boost – Vari Gain, switched Freq, frequency-dependent Q with optional high Q setting
MF bell cut – Vari Gain, switched Freq, high Q
LF shelf/bell boost – Vari Gain, switched Freq, freq-dependent Q
LF cut – Vari Freq

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Snapshots - saving Liquid Mix settings

Liquid Mix has the ability to save and load settings. This means that a successful combination of compressor and EQ, constructed for vocals for instance, can be recalled at any point and used on another track. Saving and Loading is primarily done from the plug-in window, but a Save Snapshot button is included on the hardware for initiating the save process; pressing it calls up the Save window, in which the snapshot name can be entered and the location on your computer set.

Saving a snapshot from the plug-in window is done by clicking on the disk image in the top right of the plug-in window, then selecting Save a Snapshot from the drop-down list. This will save as a .lss file in any location on the computer, which can then be browsed to when the settings need recalling at a later date.

There is also an option to rename a snapshot, when the disk image in the top right of the software window is clicked. Selecting this option allows a new name to be typed into the Snapshot box in the top right of the software window. This will also change the name of the saved file on your computer.

Restoring settings

Snapshots can be recalled from the plug-in window, to load a particular configuration of Compressor and/or EQ, with specific settings.

To load a snapshot, click on the disk image in the top right of the plug-in window, then select Load Snapshot from the drop-down list. A submenu will appear, offering to load the entire snapshot, just the EQ or just the compressor. Select as required. A window will then appear, allowing you to navigate to the snapshot anywhere on your computer. Navigate to the snapshot and click OK to load it.

Where to Locate/Place Emulations

The Files for Liquid Mix Emulations are located in the following place:

Mac
/Mac HD/Library/Application Support/LiquidMix

PC
C:\Documents and Settings\All Users\Application Data\LiquidMix

Note: If you are using a non-English version of XP or if you run your Program Files on a drive other than the C:\ drive, your paths will be different. In other words, if you are running on the D:\ drive, replace C:\ with D:\ in the path.

Emulations must be placed in this location to be used with the Liquid Mix. All factory emulations are placed there automatically during installation.

On Vista, the path is different

C:\ProgramData\LiquidMix\

The web installer takes this into account automatically by creating the empty LiquidMix folder with an info text file inside.

Expansion Card

An optional expansion card can be purchased separately and installed if wanting to use more instances of Liquid Mix within your DAW. The card is installed by simply removing the screws from the bottom of the hardware, taking off the cover and slotting the card into place. More detailed instructions are supplied with the expansion card.

Fitting the card increases the track count as follows:

Sample Rate	Without card installed	With card installed
44.1/48kHz	16 mono instances/8 stereo	24 mono instances/12 stereo
88.2/96kHz	4 mono instances/2 stereo	8 mono instances/4 stereo

Specifications

Windows

Operating System

- VST, RTAS
- Windows® XP Service Pack 2 (Home, Professional, or Media Centre Edition) or Windows Vista (32-bit only) - OS Version subject change
- Min version of ProTools™ required - 7.0 if planning to use the included FXpansion wrapper (earlier versions will require the full FXpansion VST wrapper.)

Computer

- Windows® XP compatible PC (Pentium© 4 2GHz or higher recommended)
- 400MB/s IEEE1394/FireWire port (OHCI compliant recommended)
- DVD drive required for Installation

CPU/Clock

- 1.4 GHz Intel or compatible
- 2.0 GHz Pentium© 4 or Xeon recommended

Memory (RAM)

- 256MB or more
- 512MB or higher recommended

Mac

Operating System

- AU, VST, RTAS
- Mac OS X Panther (10.3.9 or later) - OS Version subject to change
- Min version of Logic required - Logic 7.1, but 7.2 highly recommended
- Min version of ProTools™ required - 7.0 if planning to use the included FXpansion wrapper (earlier versions will require the full FXpansion VST wrapper.)

Computer

- Apple Mac Power PC G4, G5 or Intel Mac (any)

CPU/Clock

- G4/800 MHz (minimum)

- G4/1.5GHz or higher recommended

Memory (RAM)

- 256MB or more

- 512MB or higher recommended

Additional Information

- Firewire chipsets from TI (Texas Instruments), VIA, and NEC are recommended

- It is highly recommended that Liquid Mix be run on its own Firewire bus/card

- In order to use Liquid Mix with a 4-pin IEEE1394 port you will need a 4-pin to 6-pin cable (not included) and must use the PSU (included)

Latency Due to the round trip transmission, which is required on the firewire bus, incurs a delay equal to 2 x the audio buffer size + 8 samples. This sample delay results in different amounts of time delay depending upon sampling frequency. With a DAW buffer size of 1024 samples (ie, Liquid Mix latency of 2056 samples), the Liquid Mix latency is as follows:

- 47 ms @ 44.1kHz

- 43 ms @ 48kHz

- 23 ms @ 88.2kHz

- 21 ms @ 96kHz

With a DAW buffer size of 256 samples (ie, Liquid Mix latency of 520 samples), the Liquid Mix latency is as follows:

- 12 ms @ 44.1kHz

- 11 ms @ 48kHz

- 6 ms @ 88.2kHz

- 5 ms @ 96kHz

Sequencer compatibility

Liquid Mix operates as VST, AU, or as a RTAS-wrapped VST within compatible hosts.

Cubase 4 on Intel Macs does not support VST 2.3 plug-ins. If you want to use Liquid Mix with Cubase 4 on an Intel Mac, you must install the Liquid Mix 2.4 VST plug-ins available separately on the Liquid Mix downloads page.

Optional Expansion Card details

The card is suitable for those people interested in operating at sample rates of 88.2 or higher. The channel count increases as follows:

Channel Counts:

• 44.1kHz/48kHz: 16 channels mono, (16 stereo) unexpanded. Expansion card provides 24 mono / 12 stereo

• 88.2/96kHz: 4 channels mono, (2 stereo) unexpanded. Expansion card provides 8 mono / 4 stereo

Weight

• 0.8kg

• 1.76lbs

Dimensions

• 220mm (W) x 28 - 45mm (H - front to rear) x 152mm (D)

• 8.66" (W) x 1.1" - 1.77" (H - front to rear) x 5.98" (D)

E & O.E.