LIQUID MIX

USER GUIDE
VERSION 2

Focusrite®
www.focusrite.com

Rev. 1.0

NEW FEATURES

Liquid Mix version 2 has been updated with the following new features:

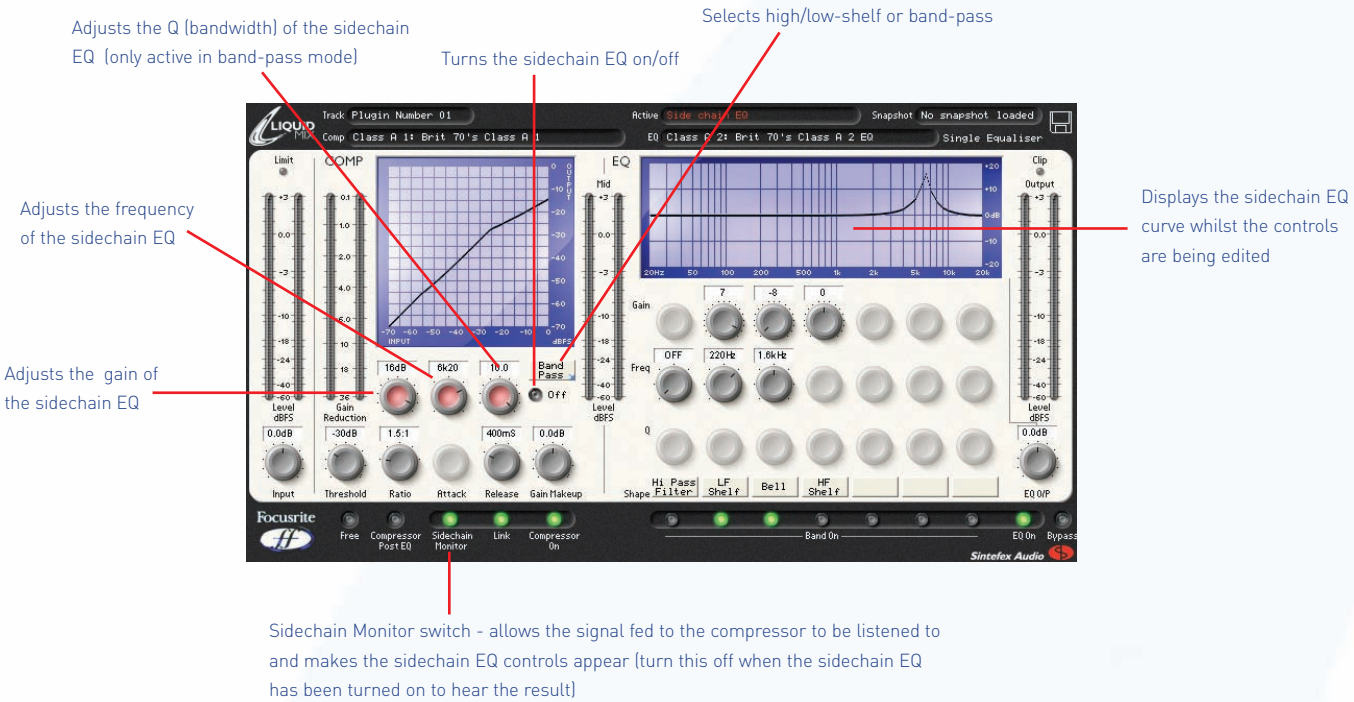
- Sidechain EQ – allows the signal to be EQ'd before being fed to the compressor
- Variable latency – allows Liquid Mix to work more reliably with different sequencers due to having a flexible latency, based on the DAW buffer setting in the sequencer and the new Minimum Latency setting in Liquid Mix Manager
- Hardware follows plug-in – allows the hardware to always control the active plug-in on screen, unless deactivated in Liquid Mix Manager

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 individually, 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.



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 DATA encoder to select 'ScEq' (Sidechain EQ) along the bottom of the hardware LCD screen. Doing so makes the EQ controls active, as indicated by the LEDs above each dial.

VARIABLE LATENCY

Liquid Mix latency is now variable. It 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 a new 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 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.

HARDWARE FOLLOWS PLUG-IN

There is now an option in the Liquid Mix Manager that allows for the hardware control surface to follow the plug-in currently selected in the DAW. When this option is enabled, if you select a Liquid Mix plug-in in the DAW, it will automatically be selected on the hardware. If you have two Liquid Mix plug-in windows open at the same time, the hardware will display whichever plug-in has most recently received 'focus'; that is, whichever one was clicked/selected most recently.

To return to the older system, where the hardware and software function separately and different instances of Liquid Mix must be selected manually using the hardware, deactivate the 'Hardware follows plug-ins' box at the top of the Liquid Mix Manager window.