

## ■ USING LIQUID MIX WITH PRO TOOLS

Liquid Mix comes as a VST, AU and RTAS plug in. The RTAS version is called a wrapped version, this means that it takes the VST plug-in and uses it to generate an RTAS version. Operating in this way, the following is true for this version of the plug-in:

### Pro Tools TDM

Liquid Mix is compatible with Pro Tools HD systems on Mac OSX. Please note: there is no Liquid Mix version for Mac OS9. The following should be also be noted:

- Delay compensation is included (up to a limit of 4095 samples)
- 4095 limit can not be exceeded
- Delay compensation introduces a CPU overhead (see website for more details)
- Liquid Mix uses about half of the total delay compensation allowable
- All tracks (inc MIDI, aux and Audio tracks) are delayed
- Liquid Mix must be bypassed within the unit, NOT via apple-clicking the plug-in

### Pro Tools LE

Liquid Mix is compatible Pro Tools LE but users should be aware of the following:

- Pro Tools LE has a limited delay compensation feature set
- Delay compensation is switched off on the FXpansion wrapper, as it is for all plug-ins that use the wrapper
- Users have to manually delay all MIDI tracks by 2056 samples to compensate for this
- Users must manually delay audio tracks which do NOT have a liquid mix instance, by 2056 samples using the time adjuster plug-in (see doc below)
- The time adjuster plug-in cannot be bypassed without removing it.
- Liquid Mix should be bypassed within the unit, NOT via apple-clicking the plug-in, otherwise the 2056 sample delay is removed.

### Delay Compensation in Pro Tools

In Liquid Mix, all processing is done using onboard DSP, so it has almost no effect on your computer's own CPU. However, the Liquid Mix unit requires a vast amount of processing power in order to do the number crunching involved to get the emulations translated. This then needs to be sent to the Firewire unit and back again, which does introduce a delay.

In order to compensate for this signal delay, modern software packages include a feature called 'Delay compensation', which looks for any delays introduced into any of the DAW channels, works out which channel that has the longest delay and adjusts all other channels accordingly. All external processing cards incur delays of this kind.

In the Digidesign Pro Tools DAW, Automatic Delay compensation (ADC) has been included since version 6.4. This feature is well documented in the Pro Tools User guide, so here we will deal with the important aspects of using the Liquid Mix within the Pro Tools environment.



Some important points to make are that Pro Tools TDM and Pro Tools LE differ in the level of Delay compensation that is included. Pro Tools LE users have a limited delay compensation feature set, where all audio paths apart from wrapped plug-in slots are delay compensated. MIDI is also not delay compensated and so a manual offset has to be set-up in the preferences menu. Pro Tools HD has a full ADC feature set and can deal with most delay issues without manual configuration being required.

Please read pages 505-509 in you Pro Tools User Guide, which details the use of delay compensation.

## Where to find the VST>RTAS Wrapper

The VST>RTAS (v2) Wrapper is included on the DVD. This will only work with Liquid Mix, not other plug-ins. To use the Wrapper with other plug-ins, you will need to upgrade to the full version.

**VST-RTAS v2 is for Pro Tools 7 and above. Pro Tools 6 is not supported but a version 1 Wrapper is available separately from FXpansion.**

Once set up, Liquid Mix will appear in the Pro Tools plug-in menu as a Wrapped plug-in.

## Setting up Liquid Mix with the VST>RTAS Wrapper

- Make sure that FXpansion VST>RTAS adapter has been correctly installed
- Make sure that delay compensation is enabled in Pro Tools.
- Set Delay compensation to Long/4095 samples per channel in the preferences menu.
- Set view delay compensation in Display/Mix Window Shows/Delay compensation.  
(This allows the user to see the total amount of delay compensation being used.)

