USING LIQUID MIX WITH PRO TOOLS

Installing the RTAS wrapped Liquid Mix plug-ins

The VST>RTAS (v2) Wrapper runs during the Liquid Mix installation, and can only be used to wrap the Liquid Mix plug-ins. To use the Wrapper with other plug-ins, you will need to upgrade to the full version from FXpansion.

The Liquid Mix hardware must be connected to the Mac in order for the RTAS plug-ins to be wrapped and installed successfully.

VST-RTAS v2 only works with Pro Tools 7 and above. In order to use Liquid Mix with Pro Tools 6, the 1.x version of the VST2RTAS Wrapper must be obtained from FXpansion.

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

Setting up Liquid Mix with ProTools 7

- Ensure that the RTAS plug-ins have been wrapped and installed correctly. They will appear within /Library/Application Support/Digidesign/plug-ins.
- Enable delay compensation and set to 'Long/4095 samples per channel' in the ProTools 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.)

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. Therefore Liquid Mix plug-ins cannot be inserted serially (ie. one after another) because each serial instance incurs 2056 samples.
- 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 FXpansioin 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 pluq-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.
- If two Liquid Mix plug-ins are inserted serially (ie.one after another) the 2056 sample delay will double (4112 samples).



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.

