# Liquid4CONTROL

## User Guide



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#### Liquid4Control ™ Software

Please visit the Liquid4Pre<sup>™</sup> product page at www.focusrite.com to download the latest version of the free Liquid4Control<sup>™</sup> software application, for Mac OS X or Windows XP. The application allows you to edit The Liquid4Pre<sup>™</sup> remotely, plus load, save and archive the mic pre emulations and program memories. The Liquid4Control<sup>™</sup> user guide is available to download in PDF format.

## Introduction

The Liquid4Control application allows you to edit Focusrite's Liquid4Pre remotely, archive program and channel memories, and upload preamp emulations from your computer:

- **Remote Operation** the software communicates with the Liquid4Pre via 10 Base T Ethernet (also compatible with 100 and 1000 Base T). All settings within the unit can be controlled from the software GUI, and up to 32 units can be controlled from a single computer; that's 128 channels of remote controlled Liquid mic pre!
- Save/Load All, Program and Channel Memories by saving program and channel memories using Liquid4Control you can archive a virtually unlimited number of settings onto your computer, and manage the recall of settings across multiple units. In addition, Save/Load All allows you to store and recall the complete configuration of a multi-unit setup.
- **Restore Preamp Emulations** Each Liquid4Pre unit can store up to 40 preamp emulations in its hardware memory. Using Liquid4Control, emulations stored on your computer can be uploaded (restored) to any Liquid4Pre on the network. This allows you to change emulation sets for different productions. Visit the Liquid Assets pages at www.focusrite.com to find out more and download additional mic preamp emulations.

## System Requirements

- Mac: OS X 10.3.9 or 10.5 or above
- PC: Windows XP or Vista
- Both platforms: TCP/IP Ethernet port (connection via Ethernet hub when connecting to more than one device)
- Liquid4Pre firmware version 1.0 build 10 or above

## Installation

#### Software Installation (Mac)

- 1. Download the Mac installer from www.focusrite.com
- 2. Double-click on the downloaded file to uncompress the installer.
- 3. Double-click on the DMG file, then simply drag the Liquid4Control application icon into the Applications folder on your machine.
- 4. Run the Liquid4Control application on your computer.

#### Software Installation (Windows)

- 1. Download the Windows installer from www.focusrite.com
- 2. Double-click on the downloaded file to uncompress the installer.
- 3. Double-click to launch the installer, and follow the on-screen instructions.
- 4. Run the Liquid4Control application on your computer.

## Network Connections - setting up your computer and Liquid4Pre on the network

To control the Liquid4Pre unit(s) remotely from the Liquid4Control application, you will need to connect your computer to the Liquid4Pre(s) via 10 (or other speed, e.g. 100 or 1000) Base T Ethernet and configure a TCP/IP network connection (this may happen automatically depending on your setup – see below). Note that your Liquid4Control computer can connect to a single Liquid4Pre directly, or to multiple units via an Ethernet router/switch (sometimes referred to as a hub). In either case, please note:

- Each Liquid4Pre unit and Liquid4Control computer must be assigned a unique network IP address for correct operation
- If you are running a Firewall on your Liquid4Control computer, then you may need to disable it for the Liquid4Control application

(On Windows: Control Panel --->Windows Firewall --> Off or Mac OS: System Preferences --> Network --> Firewall)

#### It is essential that the network connections are set up before you first run Liquid4Control

The Liquid 4Pre network connection can be configured in one of two modes: Manual or Auto DHCP. Auto DHCP (default mode) allows for automatic configuration and IP address allocation, while Manual requires that you specify the IP address and other network settings manually. If you are controlling your Liquid4Pre(s) through an Ethernet router with a built in DHCP server, then you can use Auto DHCP mode to configure the Liquid 4Pre network settings automatically. If you are connecting one Liquid4Pre directly (without a router or switch), or one or more units through a switch or hub without a built-in DHCP server, then the network settings will need to be configured manually. To find out whether you have a router with a built-in DHCP server, you can check the network settings on your computer and see whether the computer has been given an IP address. If the computer has been automatically assigned an IP address, then you can use Auto DHCP to configure Liquid 4Pre on the network. Alternatively, follow the steps below on the Liquid 4Pre hardware to determine whether or not you can use Auto DHCP IP address allocation. Note that if you have never edited the Liquid4Pre's Ethernet settings then steps 1 and 2 can be skipped, as AutoDHCP is the default mode.

- 1. From the Liquid 4Pre front panel, set System Setup  $\rightarrow$  Ethernet  $\rightarrow$  Mode to Auto DHCP.
- 2. Press System Setup again to apply the change.
- 3. Now press and hold the SETUP button in the channel 4 section of the hardware until INFO... appears at the top of the screen. If this screen shows an IP address at the bottom, e.g. 'IP:192.168...', then the router has allocated an IP address for the hardware and neither Liquid4Pre or your computer should need to be configured manually.



Here is a brief guide to the Network settings you will need to check on your computer and Liquid4Pre:

- IP Address this is a unique address for a device on a network, used to identify it from other devices
- Subnet Mask this allows creation of sub-networks within a network. When all devices are communicating with one another, this value should be the same on all devices
- Gateway/Router this is the address of the master device, that controls the flow of data between devices on a network. This will be the computer IP address in diagrams 1 and 3 overleaf and the router address (assigned automatically) in diagrams 2 and 4

Here are diagrams representing the 4 different network configurations and showing the setup for each one:

1. Connecting a unit directly to your computer.



All these values must be entered manually. Select values for X and Y from any 2 numbers between 0 and 255, e.g. 80 and 137. For instructions on how to access these setup pages, see the following sections. A crossover cable is recommended for this setup although some systems may not need one.

2. Connecting one unit to your computer using a router/switcher with a built-in DHCP server (which assigns IP addresses automatically).



The computer and Liquid4Pre should both be set up this way as default so no manual setup is required.

3. Connecting multiple units to your computer using a router/switcher without a built-in DHCP server (IP addresses must be set manually - see diagram 1)



#### Liquid4PRE

4. Connecting multiple units to your computer using a router/switcher with a built-in DHCP server (which assigns IP addresses automatically).



The computer and Liquid4Pre should both be set up this way as default, so no setup is required.

Here are instructions for manual configuration of your Liquid4Pre and computer network settings:

#### **Configuring your Computer Network Settings**

#### PC (Windows Vista)

The following process should be carried out for setups 1 and 3 in the previous section.

1. Go to Control Panel and select Network and Sharing Centre.



2. Select Manage Network Connection.



3. Right-click on Local Area Connection and select Properties.



4. Select Internet Protocol Version 4 and select Properties.



- 5. Enter the following details:
- IP: 192.168.0.X where X is equal to a number from 0 to 255
- Subnet Mask: 255.255.255.0
- Gateway: same as IP address above

#### Then click OK

		→ Control Panel ト Network Conn	ections - 4 Search	2
P		ganize 🔻 🏢 Views 🔻 💥 Disable this n	Local Area Connection Properties	» ()
ta II	nternet Protocol Version 4 (TCP/	/IPv4) Properties	Networking	Assess to Los
	General		Connect using:	Access to Loci
	You can get IP settings assigned this capability. Otherwise, you n	automatically if your network supports eed to ask your network administrator	Broadcom 440x 10/100 Integrated Controller	
le	for the appropriate IP settings.		Configure	
	Obtain an IP address auton	natically	This connection uses the following items:	
	• Use the following IP addres	is:	Client for Microsoft Networks	
	IP address:	192.168.0.110	<ul> <li>File and Printer Sharing for Microsoft Networks</li> </ul>	
	Subnet mask:	255.255.255.0	Internet Protocol Version 6 (TCP/IPv6)	
	Default gateway:	192 . 168 . 0 . 110	A Internet Protocol Version 4 (TC//PV4)     A Link-Layer Topology Discovery Mapper I/O Driver     A Link-Layer Topology Discovery Mapper I/O Driver	
	Obtain DNS server address	automatically	Enk-Layer ropology biscovery responder	
	Use the following DNS server	er addresses:	Install Uninstall Properties	
	Preferred DNS server:	14 14 14	Description	
	Alternate DNS server:		Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	
		Advanced		
		OK Cancel	OK Cancel	

Note that if using XP then steps 2 and 3 become 'Go to Network Connections', and in step 4 'Internet Protocol' must be selected.

In setup diagrams 2 and 4 showed previously (using a router with a built-in DHCP server), the Network connections box should show the following:

Control Panel > Network and Sharing Center	✓ <sup>4</sup> → Search	1	₽
		1	
Ta O V V Control Panel > Network Connections	- 4+	Search	<u>م</u>
Cc Local Area Connection Properties	Diagnose this connection	Rename this connection	» ()
Se N Networking	Dev Dev	rice Name	Connectivity Access to Loci
	network bro	adcom 440x 10/100 integrate	Access to Loca
Broadcom 440x 10/100 Integrated Controller			
	Interne	et Protocol Version 4 (TCP/IPv4	4) Properties 💦 🛃
This connection uses the following items:	Gene	ral Alternate Configuration	
Client for Microsoft Networks	You	can get IP settings assigned auto	omatically if your network supports
QoS Packet Scheduler	for	the appropriate IP settings.	to ask your network auministrator
Image and thinker sharing for Microsoft Networks     Image and thinker sharing for Microsoft Networks		Obtain an IP address automatic	ally
Internet Protocol Version 4 (TCP/IPv4)      Internet Protocol	-0	) Use the following IP address: —	
A Link-Layer Topology Discovery Responder	1	P address:	
	s	iubnet mask:	· · · · · · · ·
Install Uninstall Properties	D	)efault gateway:	· · · · · · · ·
Transmission Control Protocol/Internet Protocol, The default	6	) Obtain DNS server address aut	omatically
Se wide area network protocol that provides communication across diverse interconnected networks.		) Use the following DNS server ad	ddresses:
Int	P	referred DNS server:	
Wi OK Carcel	A	Alternate DNS server:	
			Advanced
o sansana see na ma san s	目的和目的		UK Cancel

#### Mac (OS X Tiger)

The following process should be carried out for setups 1 and 3 above.

- 1. Go to System Preferences and select Network.
- 2. Select Built-in Ethernet in the Show field.



3. Select Manually in the Configure... field.

00	Network		
Show All		Q	
Loc	ation: Automatic	\$	
	Show: Built-in Ethernet	:	
тс	Manually	thernet	
Configure IPv4 🗸	Using DHCP Using BootP	)	
IP Address	Off	Renew DH	CP Lease
Subnet Mask:	255.255.0.0 DHCP Client ID:		
Router:		(If required	)
DNS Servers:			(Optional)
Search Domains:			(Optional)
IPv6 Address: fe	80:0000:0000:0000:0217:f2ff:fecf:a9	af	
(	Configure IPv6		?
Click the lock to pre	vent further changes.	me)	Apply Now

- 4. Type in the following details:
- IP: 192.168.0.X where X is equal to a number from 0 to 250
- Subnet Mask: 255.255.255.0
- Gateway: same as IP address above

0 0	Network		
Show All		Q	
Lo	ocation: Automatic	\$	
	Show: Built-in Ethernet	\$	
TCP/	IP PPPoE AppleTalk	Proxies Ethernet	
Configure IPv4:	Manually	•	
IP Address:	192.168.0.110		
Subnet Mask:	255.255.255.0		
Router:	192.168.0.110		
DNS Servers:			
Grande Damainer			
Search Domains:			(Optional)
IPv6 Address:	fe80:0000:0000:0000:02.	17:f2ff:fecf:a9af	
	Configure IPv6		?
Click the lock to p	event further changes.	Assist me	Apply Now
Click the lock to pr	event further changes.	Assist me	Apply Now

#### Then click Apply Now

In setup diagrams 2 and 4 showed previously (using a router with a built-in DHCP server), the Network connections box should show the following:

00	Networ	k		
Show All			Q	
Loca	ation: Automatic		\$	
S	Show: Built-in Etherne	et	\$	
TCP/IP	PPPoE AppleTalk	Proxies Et	hernet	
Configure IPv4:	Using DHCP	\$		
IP Address: 1	69.254.13.178	(	Renew DHC	P Lease
Subnet Mask: 2	55.255.0.0 E	DHCP Client ID:		
Router:			(If required)	
DNS Servers:				(Optional)
Search Domains:				(Optional)
IPv6 Address: fe	80:0000:0000:0000:02	217:f2ff:fecf:a9a	f	
C	Configure IPv6			?
Click the lock to prev	ent further changes.	Assist m	ne)	Apply Now

#### Configuring your Liquid4Pre Network Settings

For Liquid4Pre to work in setup diagrams 1 and 3 in the Network Connections section, the Ethernet Settings page must be configured manually, rather than set to Auto DHCP. To do this, carry out the following steps:

- 1. Press the System Setup button on the master section of the unit to change the LCD of channel 1 to System Setup.
- 2. Scroll through the options and select More.. to access System Setup 2.
- 3. Scroll through the options again and select More.. to access System Setup 3.

- 4. Scroll down and select Ethernet.. to view the Ethernet Settings page.
- 5. Change the Mode option from Auto DHCP to Manual.
- 6. Make sure the values displayed on the screen follow the guidelines in setups 1 and 3:
- IP address must be unique, e.g. 192.168.0.Y, where Y is a different number to that of your computer or other connected Liquid4Pres
- Mask is the same as that of your computer
- Gateway is the same as that of your computer



## **Opening the Software**

1. Double-click on the Liquid4Control software icon to open the application.

How the Liquid4Control software behaves depends on whether this is the first time you have connected to the Liquid4Pre network:

#### **First Time Connection**



When Liquid4Control is opened for the first time, you will see the following dialogue box: Select OK. Then the following box will appear:

FirmWare Update required.
You need to update the hardware unit(s) firmware before running this version of Liquid4Control. Do you want to update the firmware now?

Select OK. Then Liquid4Control will update the firmware on any connected Liquid4Pres:



Once done, the following box will appear:



Make sure you follow the instructions in the box by powering down any connected Liquid4Pres, quitting Liquid4Control, then powering the hardware and restarting the software. Note that a 'firmware update failed' message may appear. This does not necessarily mean that you have to run the updater again. Simply quitting the software, powering down the hardware, then restarting the software and powering up the hardware should generally fix the problem. If having further difficulty updating the firmware, consult the answerbase on the Focusrite website.

Liquid4Control is now ready to use.

#### **Re-opening a Connection**

Each time you close the Liquid4Control application, the current configuration is saved. This means that the next time you open the application, Liquid4Control will automatically reconnect to the same unit(s).

Providing each unit is connected and configured with the same IP Address, the application reconnects and you can view and remotely edit settings online.

However, if a unit cannot be found on the network, you will see this screen:

Choose either Reconnect, to reconnect to the unit, or Remove, to remove the unit from the GUI. If all units are removed, then the application will open in "Demo Mode".

## Multi Unit Setup -→ Add/Remove Units

At any time, you can manage the connections to your Liquid4Pre units using the Multi Unit Setup  $\rightarrow$  Add/Remove Units dialogue box. This can be used for a number of applications, for example:

- To add or remove Liquid4Pre units to or from an existing configuration.
- To manage the order of Liquid4Pre units within a multi unit setup this enables you to decide which unit is controlled by GUI channels 1-4, which unit by channels 5-8, and so on.
- 1. To access the dialogue box, select Multi Unit Setup - $\rightarrow$  Add/Remove Units from the top menu bar:



The 'Unit/Remote Connection Setup' box will then appear:

	L4Pre Remote Connection	
Available Remote Units		Active Remote Units
192.168.1.254 "jeff "	Add->       Remove         The active remote units always appear on-screen in the order shown even if they are temporarily offline.       Select an Available Unit and use Add to move a unit to your list of Active Remote Units.         Select and Active Unit and use Remove to remove a unit from your list.       Select an Active Unit and use the Move Up or Move Down to change the order of units on screen.	192.168.1.254 "jeff "
Find Remote Unit Delete Find All	Use the Find and Delete buttons to control the list of available units.	Move Up Move Down

On the left-hand side, you will see the IP address and unit name of all Available Remote Units – these are all the units which the Liquid4Control software has detected on your network.

On the right-hand side, you will see the IP address and unit name of all Active Remote Units – these are the units which are currently under control from the Liquid4Control GUI; the unit at the top of the list is controlled from GUI channels 1-4, the next from channels 5-8, and so on.

#### Adding Units

To add a new Liquid4Pre unit or units to an existing configuration, first you must find the unit(s) on the network, and then add them to the list of "Active Remote Units" as follows:

1. To find a new unit, either select Find All Units, or type the IP address of the Liquid4Pre into the "Find Remote Unit" box and click Find.

The software will report that it is "Searching" the network, and then present the following pop-up screen:

	L4Pre Remote Connection
Available Remote Units	Active Remove  Add->  Carbon Constraints always appear on-screen  Found 1 unit. Add this to the list?
	Cancel OK Select an Active Unit and use the Move Up or
	Move Down to change the order of units on screen.
Find Remote Unit	Delete Use the Find and Delete buttons to control Move Up ( Find )

2. Click on OK to add the unit(s) to the "Available Remote Units" list on the left-hand side of the screen:

	L4Pre Remote Connection	
Available Remote Units		Active Remote Units
192.168.1.254 "jeff "	Add->       Remove         The active remote units always appear on-screen in the order shown even if they are temporarily offline.       Select an Available Unit and use Add to move a unit to your list of Active Remote Units.         Select and Active Unit and use Remove to remove a unit from your list.       Select an Active Unit and use the Move Up or Move Down to change the order of units on screen.	
Find Remote Unit Delete Find	Use the Find and Delete buttons to control the list of available units.	Move Up Move Down
Find All	Ap	oply changes Cancel changes

**NOTE:** If the unit does not appear in the list, check your network settings, as described in the Network Connections section.

3. Next, select a Liquid4Pre from the "Available Remote Units" list and click on Add  $\rightarrow$  to add the unit to the "Active Remote Units" list:

	L4Pre Remote Connection	
Available Remote Units		Active Remote Units
192.168.1.254 "jeff "	Acid->       Remove         The active remote units always appear on-screen in the order shown even if they are temporarily offline.       Select an Available Unit and use Add to move a unit to your list of Active Remote Units.         Select and Active Unit and use Remove to remove a unit from your list.       Select an Active Unit and use the Move Up or Move Down to change the order of units on screen.	192.168.1.254 "jeff "
Find Remote Unit Delete Find All	Use the Find and Delete buttons to control the list of available units.	Move Up Move Down

4. Repeat to add each unit you wish to control from Liquid4Control.

**NOTE:** The order of units in the "Active Remote Units" list determines which GUI channels control which unit; the Liquid4Pre at the top of the list is controlled from GUI channels 1-4, the next from channels 5-8, and so on.

5. When you have finished, click on Apply changes.

The dialogue box closes, and the Liquid4Control GUI updates accordingly.

You will see the unit name and the current settings of each Liquid4Pre you have added. Each unit is now active and you can remotely edit its settings from the GUI.

**NOTE:** Click on Cancel Changes if you wish to close the dialogue box without making any changes to the current configuration.

#### **Removing Units**

To remove a Liquid4Pre from the active configuration:

1. Select the Liquid4Pre from the "Active Remote Units" list on the right of the Multi Unit Setup -→ Add/Remove Units dialogue box, and click on Remove:

	L4Pre Remote Connection	
Available Remote Units		Active Remote Units
192.168.1.254 "jeff "	Add-> (4PRE Remove	192.168.1.254 "jeff "
	The active remote units always appear on-screen	
	in the order shown even if they are temporarily	
	offline.	
	Select an Available Unit and use Add to move a	
	unit to your list of Active Remote Units.	
	Select and Active Unit and use Remove to remove	
	a unit from your list.	
	Select an Active Unit and use the Move Up or	
	Move Down to change the order of units on	
	screen.	
Find Remote Unit Delete	Use the Find and Delete buttons to control the list of available units.	Move Up Move Down
Find	)	
Find All	A	oply changes Cancel changes

2. Then click on Apply changes.

The dialogue box closes, and the Liquid4Control GUI updates - any channels above the removed unit move down 4 positions on the GUI.

**NOTE:** As long as the Liquid4Pre remains in the "Available Remote Units" list, it can be added back into the active configuration at any point. If you wish to permanently remove it from the Liquid4Control software – for example, if you have replaced a Liquid4Pre with a new unit – then select the unit from the "Available Remote Units" list and click Delete. This permanently removes the unit from the configuration.

#### Changing the GUI Channel Order

The Multi Unit Setup - $\rightarrow$  Add/Remove Units dialogue box determines the order of Liquid4Pre units within a multi unit setup – in other words, which unit is controlled by GUI channels 1-4 (top), which unit by channels 5-8 (next unit down), and so on. To change the order:

1. Select the Liquid4Pre you wish to move from the "Active Remote Units" list, and click Move Up or Move Down to move it one position up or down the list:

	Active Remote Units
4PRE Remove	192.168.10.152 "Fred" 192.168.10.150 "Wilma"
units always appear on-screen n even if they are temporarily	192.168.10.151 "Barny"
e Unit and use Add to move a FActive Remote Units.	
Unit and use Remove to remove ist.	
nit and use the Move Up or ange the order of units on	
and Delete buttons to control ilable units.	Move Up Move Down
Ар	ply changes Cancel changes

2. When you are finished, click on Apply changes.

The dialogue box closes, and the Liquid4Control GUI updates to reflect the new order.

## The Liquid4Control Graphical User Interface (GUI)



#### **Remote Operation**

The main part of the display mirrors the physical controls on the front panel of the Liquid4Pre. Each unit added to the "Active Remote Units" list (see Page 13) adds a 4-channel control section to the Liquid4Control GUI:

- Channel Controls input metering, input gain, etc. for each of the 4 channels.
- Master Section sample rate, system setup, etc.

When online, editing a parameter in Liquid4Control causes the Liquid4Pre hardware to update. Alternatively, if you edit a parameter on the Liquid4Pre you will see the change reflected within the Liquid4Control GUI.

If you have multiple units connected, use the left/right scroll bar at the bottom of the window to view additional channels up to the maximum of 128. The order of units within the "Active Remote Units" list (see Page 13) determines which Liquid4Pre is controlled by GUI channels 1-4, channel 5-8, etc.

If a unit is disconnected, then the channels are greyed out with the option to Reconnect or Remove the unit.

## Hardware Controls: The Channel



The Liquid4Control interface includes four identical sets of channel controls. These mirror the functions found on the front panel of the Liquid4Pre:

#### Channel Name

This field displays the channel name:

- 1. Click once to enter a new name (the field turns red).
- 2. Type in a new name e.g. Vocal.
- 3. Press Enter to confirm; the name is uploaded to the Liquid4Pre channel.

#### Input Select

Click beside the Input select button to select Mic, Line or Digi from the pop-up:



#### Input Meter

The input meter provides a digital peak level meter for the channel input. Note that this meter provides greater resolution than that on the front panel of the Liquid4Pre, and always remains as a peak level meter even if the VU meter option is selected on the physical unit.

#### Clip LED

The CLIP LED lights if the channel input overloads.

Note that the LED turns red while the input is clipping, and then latches to Amber once the input level has subsided to indicate that digital clipping has occurred at some point on this channel.

The CLIP LED can be cleared by clicking on it with the mouse.

#### **On/Off Buttons**

Click on the +48V, Ø, High Pass Filter or Hi Z buttons to toggle these functions on or off.

#### **Preamp Emulation**

This field displays the shortened (10-character) name of the current mic preamp emulation – e.g. FF GREEN 5

Click on the preamp name to access a drop-down menu listing all the available mic pre emulations within the Liquid4Pre unit, and select a new option to load it to the channel:



**NOTE:** If the channel is switched to LINE input, only the FLAT emulation can be selected (as described in the Liquid4Pre User Guide):



#### **Input Gain**

Click and drag on the Gain encoder to adjust the input gain:

- Drag up or to the right to increase the gain.
- Drag down or to the left to reduce the gain.

Alternatively, you can click on the Gain field (it turns red) and type in a gain value. Note that if you try and enter a value outside of the permitted gain range, the gain will be set to the closest allowable value.

#### **Session Saver**

Click on the Session Saver button to arm the function (it turns amber); the red LED lights when session saver gain is active. Click again on the amber Session Saver button to clear the function.

#### Harmonics

Click and drag on the Harmonics encoder to adjust the amount of harmonic distortion:

- Drag up or to the right to increase the amount.
- Drag down or to the left to reduce the amount.

Alternatively, you can click on the Harmonics field (it turns red) and type in a value.

#### Link

The Link field indicates when a channel has been assigned to a link bus:

-- : No link bus assigned, Fx : Channel assigned to Absolute (Full) link bus x, Rx : Channel assigned to Relative link bus x.

#### Setup



Click on the Setup button to access the following channel setup functions:

- Load... to load a channel memory from your computer to the Liquid4Pre channel.
- Save... to save the current channel settings into a channel memory on your computer.
- Link Bus to assign the channel to an Absolute or Relative Link Bus.

See Page 24 for more details on loading and saving channel memories, and the next section for details on channel linking.

## Linking Channels

You may link channel controls across multiple Liquid4Pre units using the Setup - $\rightarrow$  Link Bus option on the Liquid4Control GUI.

Any number of channels may be added to 8 Absolute Link Busses or to 8 Relative Gain Link Busses. Channels assigned to the same Link Bus track each other's controls and have identical settings. Note that in the case of Relative Gain Link Busses, only input gain offsets are retained, whereas with Absolute Link Busses, the only elements not linked are the digital input source, +48V button and channel name.

**NOTE:** When you set up channel linking from the Liquid4Pre unit, you are limited to 2 Absolute and 2 Relative Gain busses, and can only link channels within a single unit. However, using Liquid4Control any number of channels may be assigned to the same link bus – you can even link all 128 channels if you wish! Therefore, note that when a Liquid4Pre is controlled from the Liquid4Control software, the Link Bus option inside the unit is not available. This is to avoid any conflict when channel linking across multiple units.

To link a number of channels, assign each channel to the same link bus as follows:

- 1. Click on the Setup button at the bottom of the channel strip, and open the Link Bus option.
- 2. Then select either Absolute Link 1-8, or Relative Gain Link 1-8, and pick a bus e.g. Link Bus 1:



3. Repeat for each channel you wish to link.

When you have finished, edit a control on one channel, and all channels assigned to the same link bus will follow; if the link bus is relative, then only input gain offsets are retained.

Note that the Link field at the bottom of each channel strip indicates the type of link:



- -- : No link bus assigned, Fx : Channel assigned to Absolute (Full) link bus x, Rx : Channel assigned to Relative link bus x.
- 4. To remove a channel from a link bus, select Setup  $\rightarrow$  Link Bus and then click on None.

## Hardware Controls: The Master Section



This area of the display mirrors the front panel controls found within the master section of the Liquid4Pre and relates to systemwide functions for the unit.

#### System Setup

Click on the System Setup button to access the following master functions:



- Sample Rate click to select the sample rate of the unit from the available options.
- Clock Source click to select an external clock source for the Liquid4Pre from the available options.
- Load all Settings... load a program memory from your computer to the Liquid4Pre.
- Save all Settings... save the current settings of the Liquid4Pre into a program memory stored on your computer.

See Page 24 for more details on loading and saving program memories.

#### Unit Name

This field displays the name given to the hardware unit and is particularly useful when you are working with multiple units within the Liquid4Control software. Click in the Unit Name field (it turns red) and type in a new name – e.g. Test Unit – and press Enter.

NOTE: It may take a few seconds to update the Unit Name on the network.

By giving each Liquid4Pre a unique Unit Name, you can manage units more easily; select Multi Unit Setup -→ Add/Remove Units and you will see each Liquid4Pre appears with its Unit Name and IP address:



#### **Program Name**

This field displays the name of the program memory, as entered from the Save All page on the Liquid4Pre hardware unit.

The field is used to show the name of the last program memory to be loaded, either from your computer or from the Liquid4Pre unit. Or, it can be used to enter a new name before saving a program memory.

Note that when you are saving program memories to your computer, it is a good idea to update the Program Name field so that it matches the filename on your computer.

Click in the Program Name field (it turns red) and type in a new name – e.g. Stage1 – and press Enter. See Page 24 for more details on loading and saving program memories.

#### **EDITED Indicator**

The EDITED text below the Focusrite badge illuminates in red if the settings on the Liquid4Control GUI have been edited since the last program memory save/load to/from your computer. This serves as a reminder that you must save a program memory if you wish to store these settings on your computer.

#### **Clock Source**

The Clock Source field displays the name of the external clock source.

Click on the System Setup button and select an external clock source from the available options:

C Load U	nit Settings	WORDCLOCK		Unterminated
Save Ur	nit Settings	ADAT	۰.	75 Ohm terminated
Input Input Line	Input I Mic Line Digi	ETHERSOUND	: U Digi	

Then click on the External button to switch between External and Internal clock; when the unit is correctly locked, the Lock LED illuminates.

#### Sample Rate

These LEDs display the current sample rate of the unit. Click on any LED to open up the sample rate selection menu:



## Save All and Load All

You can save all the settings of a Liquid4Control session into a Save All Setup file – called a project file. This provides a quick way of saving everything you need to reconfigure a multi unit setup.

**NOTE:** A project file stores ALL settings for ALL channels within the Liquid4Control session. This includes:

- the Multi Unit Setup configuration which units are active, and their order within the GUI.
- the master section settings of each 4-channel Liquid4Pre.
- the channel settings of each Liquid4Pre channel.
- any channel linking.

**NOTE:** Settings are stored according to the Liquid4Pre positions within the Liquid4Control GUI. So, for example, a project will load channel 1-4 settings to the Liquid4Pre in top position within the Multi Unit Setup configuration, channel 5-8 settings to the next unit, and so on. This allows you to take a project and load it into any Liquid4Pre setup, even if it has a different number of Liquid4Pre units. Note that if you load a project into a configuration with fewer units, then the project will load as many channels as it can – for example, if a project with 24 saved channels is loaded to a 3-unit configuration, then channels 1-12 will be recalled.

To save the current session settings:

1. Select File - $\rightarrow$  Save All... (Mac) or Multi Unit Setup - $\rightarrow$  Save All Setup (PC)

Liquid4Control	File	Liquid4	1Pre	Multi U	nit Setup
1	Clo	se	жw	-	Liquid4C
11	N Sav	e All	ЖS	-	Liquid4C
1	Load All		жΟ	Name	- #
-	Mir	nimise	ЖM		Focus
			riogi Se	am Name	-

You will be presented with the Project Save dialogue box.

2. Select a folder and enter a File name for the configuration, and then click on Save:

000		Select a Destina	tion
	Save As:	L4Project0.lqp	
	Where:	Desktop	
			Cancel Save

The Project is saved to your computer.

To load a stored project:

3. Select File  $\rightarrow$  Load All... (Mac) or Multi Unit Setup  $\rightarrow$  Load All Setup... (PC):

You will be presented with the Project Load dialogue box.



4. Select the file you wish to load, and then click on Open.

The configuration is loaded and the Liquid4Control GUI updates accordingly.

### Saving and Loading Channel/Program Memories

Each Liquid4Pre unit can store up to 99 program memories plus 99 channel memories within its hardware memory. To expand the number of program and channel memories that can be stored, and also provide tools for managing recall to multiple units, both program and channel memories can be saved and loaded to your Liquid4Control computer. There is no limit to the number of memories that can be stored; typically each memory is around 1kB in size.

Remember that a program memory stores the complete settings for a Liquid4Pre unit (all 4 channels and any system settings), providing a convenient way of resetting an individual unit for a particular application or location. Using Liquid4Control, you can archive program memories to your computer, and use them to copy settings between units – perfect for multi unit setups.

A channel memory stores settings for an individual channel. Using Liquid4Control, you can store as many channel memories as you wish, and load them to any channel controlled by the Liquid4Control software.

#### Saving and Loading Channel Memories

**TIP:** When a channel memory is saved, all channel settings are stored including the channel name. Therefore, if you want the channel name to match the filename of the memory, edit the channel name field before you save.

To save the current settings of a channel into a channel memory on your computer:

1. Click on the Setup button at the bottom of the Liquid4Control channel strip:



2. And select Save...

You will be presented with the Channel Save dialogue box.

3. Select a folder and enter a File name for the memory, and then click on Save:

$\bigcirc \bigcirc \bigcirc \bigcirc$		Select a Destina	ation
	Save As:	L4Project0.lqp	
	Where:	E Desktop	+
			Cancel Save

The channel memory is saved to your computer.

The default file paths for saved Liquid4Pre settings are as follows:

**Mac OS:** /users/←username→/Application Support/Liquid4Control

To load a channel memory from your computer to any Liquid4Control channel:

- 1. Click on the Setup button at the bottom of the channel strip.
- 2. And select Load...

You will be presented with the Channel Load dialogue box:



3. Select the file you wish to load, and then click on Open.

The channel memory is loaded and the settings on the Liquid4Pre update accordingly.

#### Saving and Loading Program Memories

**TIP:** The Program Name field is saved with each program memory. So, before saving a memory it is a good idea to update the Program Name so that it will match the filename on your computer.

To save the complete settings for a Liquid4Pre unit into a program memory on your computer:

1. First enter a suitable Program Name, e.g. SQuartet, within the Liquid4Control master section by clicking on the field, typing in a new name and pressing Enter:



2. Then click on the System Setup button and select Save Unit Settings...



You will be presented with the Unit Save dialogue box.

3. Select a folder and enter a File name for the memory, and then click on Save:

The program memory is saved to your computer.

To load a program memory from your computer to any Liquid4Pre unit:

- 1. Click on the System Setup button within the Liquid4Control master section for the unit you wish to load to.
- 2. Select Load Unit Settings...



You will be presented with the Unit Load dialogue box.

3. Select the file you wish to load, then click on Open.

The program memory is loaded and the settings on the Liquid4Pre update accordingly.

## **Restoring of Emulations**

Each Liquid4Pre unit can store up to 40 preamp emulations in its hardware memory. Using Liquid4Control, emulations stored on your computer can be uploaded (restored) to any Liquid4Pre on the network. This allows you to change emulation sets for different productions. Visit the Liquid Assets pages at www.focusrite.com to find out more and download additional mic preamp emulations...

To restore a backup file, or a new set of emulations downloaded from the Liquid Assets pages:

1. Select Multi Unit Setup - $\rightarrow$  Restore All Emulations From Backup...

File	e Lio	quid4Pre	Multi Unit Setup	Help		
	0	0	Add/Remove Ur	nits		
	System Setup	Unit Nar jeff	Restore All Emu	lations Fr	om Ba	ickup
-	۲	Program N SOuarte	lame	External	Lock	88.2 96 176.4

You will be presented with the Restore backup dialogue box.

2. Select the file you wish to restore, and then click on Restore.

The file is uploaded to the Liquid4Pre.

3. Now click on the Preamp Emulation box on any channel within the unit, and your new emulations are available for selection.

## File Management

Note that Liquid4Control can generate up to four different types of file:

.lqp – this is a Project file, which can be saved or loaded from the Multi Unit Setup button. This file stores ALL settings for ALL channels within the Liquid4Control session, including the unit configuration, master and channel settings for each Liquid4Pre, and the configuration of any channel linking.

.lqu – this is a Unit file (program memory). This type of file stores all the settings for an individual Liquid4Pre Unit, and is saved or loaded from the master section System Setup button.

.lch – this is a Channel memory, which stores all the settings for an individual channel, and can be saved or loaded from the channel strip Setup button.

.lbq – this is a Backup file, which stores preamp emulations from the Multi Unit Setup button. The file can be used to archive current preamp emulation sets, and/or upload new emulations.

If you are going to be using Liquid4Control to manage different Liquid4Pre installations or complex multi-unit setups, then it is worth organising your files carefully so that related Project, Program and Channel memory files are easy to find!

## **Firmware Updates**

The Liquid4Control software can be used to check the firmware version of each Liquid4Pre unit, and if necessary update it.

1. First check the firmware version of each active Liquid4Pre unit by selecting Liquid 4Pre -→ Firmware -→ Show Hardware Versions from the main menu bar:



The software will check the status of each active unit and report back as follows:



Each unit is listed according to the order of Active Remote Units set within the Multi Unit Setup  $\rightarrow$  Add/Remove Units dialogue box; our example shows a single active unit named 'jeff'.

2. Then check if the firmware embedded within the Liquid4Control release is later than that running on your hardware - select Liquid4Pre -→ Firmware -→ Show Embedded Firmware Version:

Fi	le	Liquid4Pre	Multi Unit Setu	up Help	-
	0	Select Liqu	id4Pre Units	ntrol	
		Firmware	►	Show Hardware Versions	
	Sys. Seti	ip jeff	Fearment	Show Embedded Firmware Version	1
1	9	Program Na	ame	Update Firmware	-
		Counctor	L'EDITED		-1

A dialogue box will tell you the version you are currently on (PC users will also be told the version that you can update to):



3. You can choose to update the firmware versions by selecting Liquid 4Pre  $\rightarrow$  Firmware  $\rightarrow$  Update Hardware

File	Liquid4Pre	Multi Unit Set	up Help
00	Select Liqu	id4Pre Units	
	Firmware	•	Show Hardware Versions
System Setup	Тор	E	Show Embedded Firmware Version
۲	Program Name	Focusrite	Update Firmware

4. Click Update Units to perform the update or Cancel to quit the dialogue box.

	Liquid4Pre Firmware Update
	Progress for unit 1 : Top
4PRE	Overall progress
Update	Units OK Cancel

After the firmware update is complete, a 'firmware update failed' message may appear. This does not necessarily mean that you have to run the updater again. Simply quitting the software, powering down the hardware, then restarting the software and powering up the hardware should generally fix the problem. If having further difficulty updating the firmware, consult the answerbase on the Focusrite website.

**NOTE:** New firmware versions can be downloaded from www.focusrite.com. **WARNING:** DO NOT use your computer or the Liquid4Pre hardware until the firmware update is complete.

## LIQUID 4CONTROL Quick Reference Guide

Click on Liquid4Pre to access the following menu options:

- Select Liquid4Pre units opens the Multi Unit Setup  $\rightarrow$  Add/Remove Units dialogue box, see Page 13.
- Firmware options for checking and updating the firmware version of a Liquid4Pre unit. See Page 27.

Click on Multi Unit Setup to access the following menu options:

- Add/Remove opens the Multi Unit Setup  $\rightarrow$  Add/Remove Units dialogue box, see Page 13.
- Save All Setup... (PC only, File Menu on Mac) saves a Project file which stores the project configuration of the Liquid4Control GUI in other words, which units are active and their order.
- Load All Setup... (PC only, File Menu on Mac) loads a multi unit configuration Project file.
- Restore All Emulations From Backup restores a preamp emulation backup file.

Click on Help to access the following menu options:

- Focusrite Home Page opens a link to the Focusrite Home Page within your web browser.
- Liquid4Pre Home Page opens a link to the Liquid4Pre Home Page within your web browser.
- About... opens a dialogue box showing the version of the Liquid4Control software.