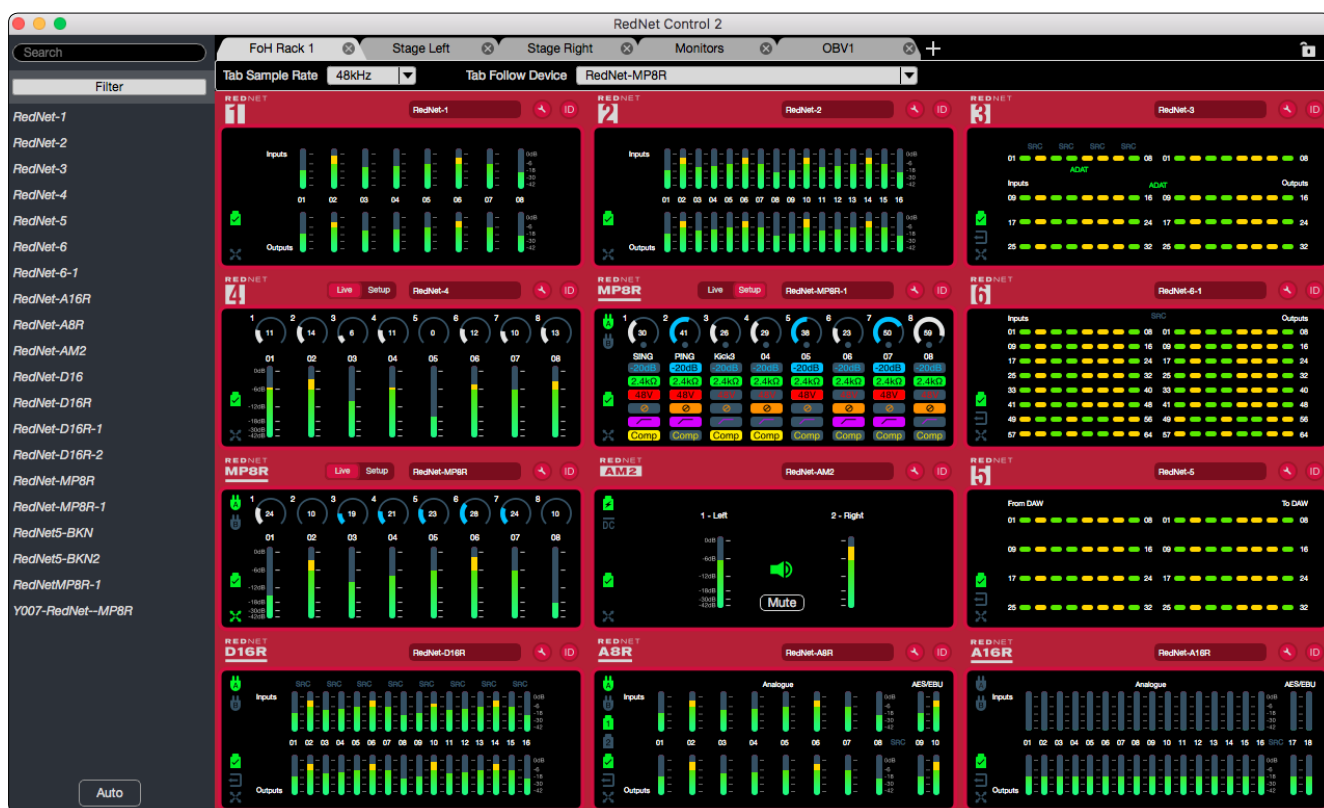


REDNET[®] CONTROL 2

User Guide



Focusrite[®]
www.focusrite.com

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Introduction

RedNet Control is Focusrite's software application for controlling and configuring Red and RedNet interfaces. It features a graphical representation of each device on the local network, giving critical feedback such as signal metering, clock status, power supply state and primary/secondary network connection state. RedNet Control is completely customisable which allows for several users on the same network to have completely different views.

The other primary function of RedNet Control is to provide remote control of each device. This includes, but is not limited to, clock source selection, sample rate converter configuration and reference level setup. In the case of mic pres, such as Red 4Pre and RedNet MP8R, all the functions of the mic pre can be remote controlled from the software, such as gain, input impedance, phantom power, high-pass filter, pad, gain compensation and more.

Where more hands-on control is required, RedNet Control features a MIDI bridge, allowing any programmable CC-based or SysEx MIDI controller to control up to 16 different mic pre devices on the network. This allows gain to be easily mapped to an encoder for tactile control. The CC protocol uses the same specification as the Avid Pre, meaning Red 4Pre and RedNet MP8R can be controlled from Pro Tools and in turn with one of the Pro Tools controllers such as D-Command, D-Control, Artist series, etc.

For users who switch between different setups on a frequent basis, such as during performances with multiple acts, RedNet Control provides both session and device – save and recall. This allows sessions to be saved and loaded across both Mac and Windows platforms. Device save also allows for critical mic pre parameters to be saved during sound-check and recalled at a later time within seconds. Simply hit Save, then later open the file to recall all the settings or select which specific settings are recalled – settings can be loaded to any device of the same type.

RedNet Control's automatic firmware updater ensures that all Red and RedNet devices on the network are kept up to date with the latest firmware. This guarantees that the latest Dante updates from Audinate will be loaded to the device, ensuring the best possible performance. Please update RedNet PCIe drivers during installation to ensure that they are as up-to-date as possible.

About this User Guide

This guide provides a detailed explanation of RedNet Control 2 and will help you achieve a thorough understanding of its capabilities. We recommend that all users, including those already experienced with RedNet and Red, take the time to read through this guide. If the guide does not provide the information you need, please be sure to consult: <https://pro.focusrite.com/technical-support>, which contains a comprehensive collection of common technical support queries.

Please note that this guide refers to the RedNet Control software only. For information on how to setup the network, or for information on specific hardware devices, please refer to the System User Guide or device specific user guides which can be found here: www.focusrite.com/downloads

Computer keyboard shortcuts are highlighted as: **Cmd/Ctrl-L**

Where **Ctrl** = the Windows Control key

And **Cmd** = the Mac Command (⌘) key

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System Requirements

Please visit the following link for up-to-date information on computer and operating system compatibility for RedNet Control 2: <https://focusrite.com/downloads/os>

Software Installation

Installation packages are available for both Mac and Windows. These packages include: the RedNet Control application, the Dante Controller application, PCIe drivers, the MIDI driver (*Windows only*) and the Red range driver (*Mac only*).

Locate either the *RedNet Control.pkg* disk image (Mac) or the *Rednet Control.exe* file (Windows).

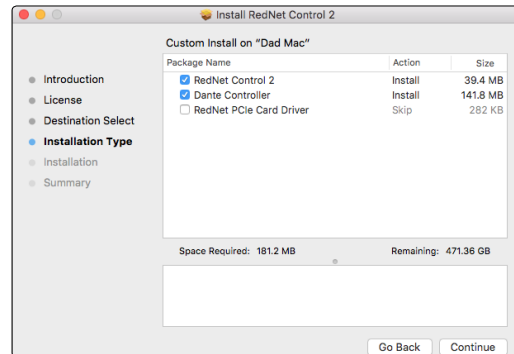
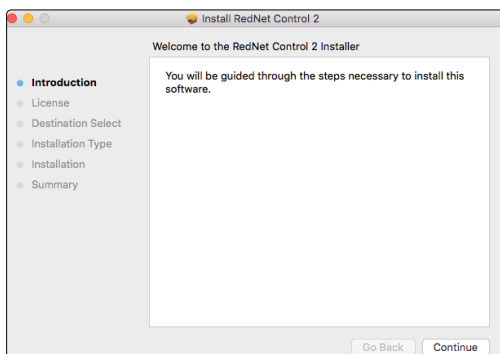
The files can be downloaded from the RedNet product download pages.

NB. For complete details on Dante Controller software, please refer to the Audinate website: <https://www.audinate.com> for more information.

Installing RedNet Control 2

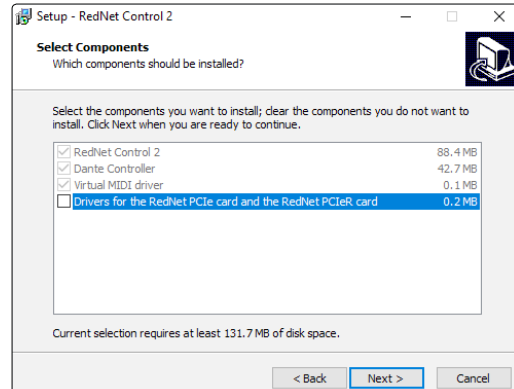
RedNet Control 2 – Mac

Open the *RedNet Control.pkg* and follow the installation steps provided by the installer. If Dante Controller is not already installed on your system, make sure that the application is also selected.



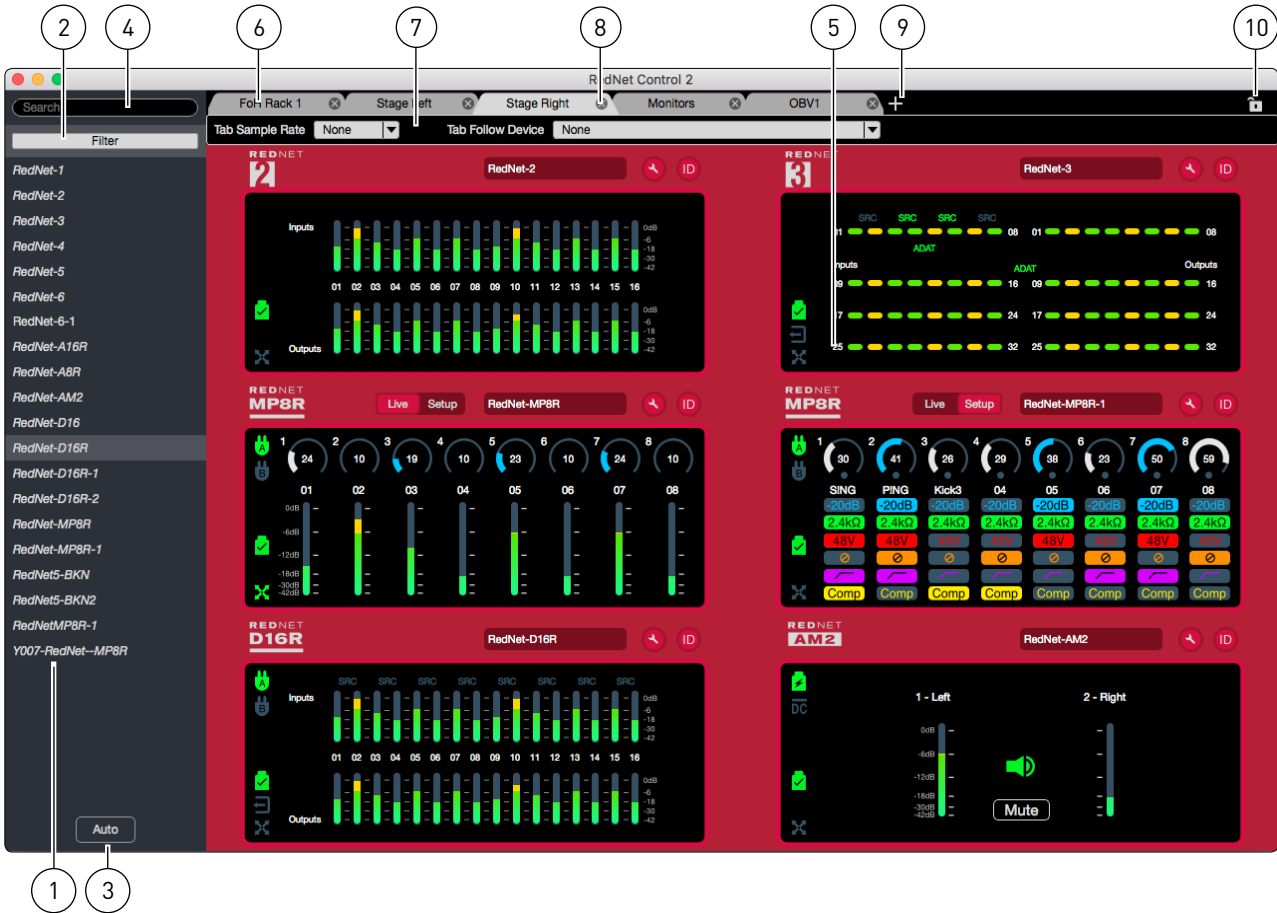
RedNet Control 2 – Windows

Run *RedNet Control.exe* and follow the installation steps provided by the installer.



Device Organisation

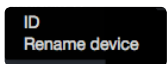
When launched, RedNet Control will display the Device View window:



1. Device List

Shows all devices on the network alphabetically. The list can be customised using the Device List Filter.

Right-click on any name to bring up its drop-down menu. **ID**: activates the device's ID function (see page 11); **Rename**: press **Enter** to confirm or **Esc** to cancel.

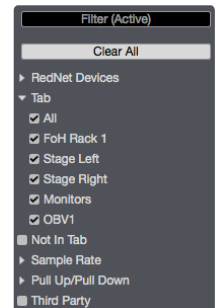


2. Device List Filter

Allows the list to be ordered according to specific categories:

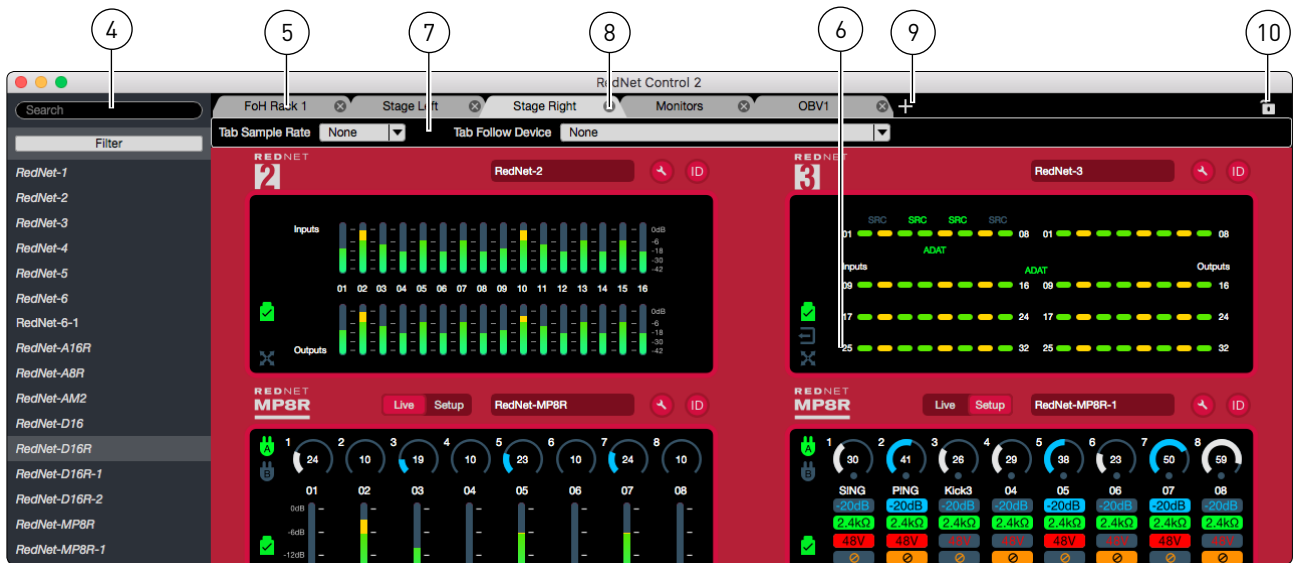
- RedNet Devices – Filter by device type (drop-down list)
- Red Devices – Filter by device type (drop-down list)
- Tab – Filter by tab name (drop-down list)
- Not In Tab – Show non tab-assigned devices
- Sample Rate – Filter by device sample rate (drop-down list)
- Pull Up/Pull Down – Filter by +/- % rate (drop-down list)
- Third Party – Show only 3rd party devices

Click 'Clear All' to remove all filters



3. Auto Button

Automatically allocates devices into the grid. See page 8 for full description.



4. Search Bar

To locate any device in the Device list, type its name in to the search bar.

5. Tabs

Show either a single Red range device (*Red: 4Pre, Red 8Pre or Red 16Line*), or groups of 6 or 12 RedNet devices. Tab groups can be freely organised to show individual hardware locations or, for example, units within an equipment rack.

- Up to 50 tabs of any type can be created
- Pulling a tab away will open a new device window. Separate windows can be reattached by dragging over another tab.
- Additional control options for tabs are provided via a **Tab Drop-Down Menu**.
See page 8 for details

6. Device Grid

Displays a graphical representation of the hardware unit(s) within each tab.

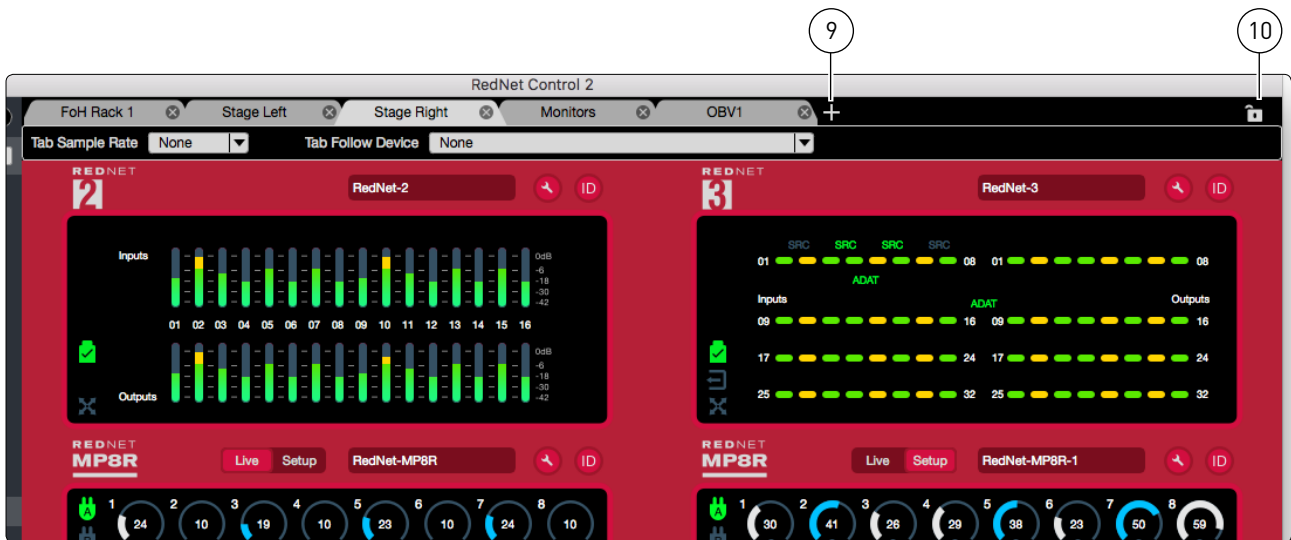
- To add a device to a grid, drag its name from the Device List onto the grid – use **Cmd/Ctrl** to multiple-select individual units in any order, or **Shift** for a large group selection
- The grid size under each tab can be set to display 1x1 (*Red range only*), 6 (2x3) or 12 (3x4) devices. The size is chosen when a new tab is created. *See New Tab on following page*
- A device already in a grid can be moved to another tab as follows:
 - Click-and-drag on a device
 - Hover over a different tab
 - Tab will move to the front to allow you to place the device

7. Tab Ribbon

Allows separate Sample Rate and Follow Device selection for each tab. *See page 8 for details.*

8. Tab Delete

To remove a tab click the grey 'X' by its name, or use the shortcut: **Cmd/Ctrl+W**.



9. New Tab

To add a new tab: click the **+** symbol then select the preferred grid size option.

*Tabs can also be added either by double-clicking in the blank space to the right of the **+** symbol, or by using the shortcut **Cmd/Ctrl-T**. The grid size defaults to the previously selected size.*

10. Lock

The Lock, shortcut: **Cmd/Ctrl-L**, prevents tabs from being added, removed or renamed; stops devices being added to the grid; disables the Auto function and prevents the Tab Sample Rate from being changed.

The Auto Function

Auto The Auto button is located at the bottom of the Device List.

Click to automatically assign devices from the Device List onto a Device Grid (in current list order if no devices have been selected). If there are insufficient grid spaces in the current tab, new tab(s) will be created (*the grid size will be the same as the previously selected tab: 2x3 or 3x4*).

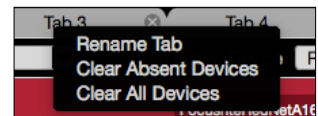
The Auto function will assign devices as follows:

- If there is a device already in the middle of a tab, it will auto assign around it – not overwrite it
- If a Device List filter has been selected, it will only assign devices that are visible in the List – meaning that the filters apply.
- Alternatively, choose which devices are to be assigned by selecting their names from the list; multiple devices can be selected – use **Cmd/Ctrl** (to select individually, in any order) or **Shift** (large group selection). The grid will be filled in the order of selection.
- A device can only be assigned once. *The names of devices already assigned are shown in italics.*
- Auto can be used as many times as required and will assign any RedNet or Red range device that isn't already in a tab.
- Red range devices will each be assigned to a single tab.
- Auto is not available when the grid is locked.

Tab Drop-Down Menu

Right-clicking on any tab brings up its drop-down menu:

- **Rename Tab** – Press **Enter** to confirm the change or press **Esc**, or click anywhere else, to cancel
The name can also be changed by double-clicking the current name
- **Clear Absent Devices** – Removes the GUI for inactive devices
- **Clear All Devices** – Empty the grid and return device names to the Device List



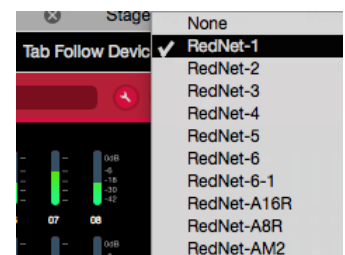
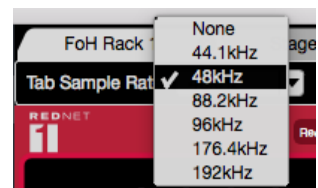
Tab Ribbon

Tab Sample Rate – Allows each tab to be assigned an individual sample rate. Also see page 17 for Global Sample Rate selection.

If any device added to the tab is set to a different sample rate, the sample rate indication will change to red. To force all devices to conform to the tab sample rate press the **Conform** button. Alternatively, select a different sample rate from the drop-down list.

Tab Follow Device – The drop-down allows the tab to follow any device on the network and will automatically update that tab's sample rate to match the device. This can be useful for, say, a device connected to Pro Tools.

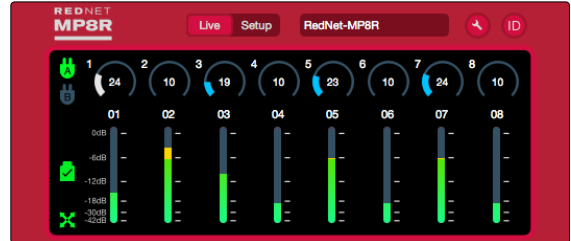
Note. If the devices in a tab are following another device, at say 192kHz, and the user changes the tab sample rate to 48kHz, this will highlight the Follow Device in red because it has been overridden and is no longer following the same sample rate. Select 'None' to clear.



Device Control

The graphical image for each device displays its current operational condition, signal levels and control settings for each channel. Also shown are the PSU and network status icons. *Controls are displayed as appropriate to each device. Please refer to each device's User Guide for its full operational details.*

Some RedNet devices have too many controls and indicators to be easily viewed in a single image. For these devices the graphical display is separated into two* pages: **Live** and **Setup** – Click **Live** to show level metering, or click **Setup** to show channel function settings. Alternatively, PCIe channel groups will appear as 1-64 / 65-128.



RedNet MP8R 'Live' View

*Graphical controls for the **Red range** devices are split across five pages. See pages 12-16 for the additional information.

- **Channel Gain** can be set by either of the following methods:
 - Click inside the channel's gain-control icon and use the scroll-wheel/trackpad. Holding down **Cmd/Ctrl** will slow the gain step changes to allow fine control
 - Double-click the gain icon to enter a numerical dB value via the keyboard – press **Enter** to confirm or press **Esc** (or click again anywhere outside the control icon) to cancel
- Click the associated icon to toggle a **Channel Function** on/off. Use **Option/Alt**-click to apply the setting to all channels simultaneously
- A device's **Name** can be set either by changing it in the device plugin, right-clicking it in the Device List or via the 'Dante Controller' application



RedNet MP8R 'Setup' View

Status Icons

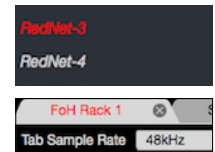
The status icons for PSUs and the network are shown at the left side of each device window:

- PSUs A & B – Each illuminates if PSU has power input and all DC outputs are present
- Networks – Each illuminates if a valid connection is present
- Locked – Unit is successfully locked to the network (changes to the red cross if not locked)
- External Clock – Green: unit is locked to the external source, Yellow: unit is locking, Red: unit is attempting to identify a network, Off: no network
- Network Master – Illuminates if a unit is the network master
- DC supply power input – Illuminates if power is being received from the external DC supply
- PoE power input – Illuminates if DC power is being received via the Ethernet cable

Channel Clipping Indication

In addition to the device level-meter displays, RedNet Control provides two additional indicators to draw attention to devices that have clipping audio:

- In the Device List, the name of a clipping device will change to red
- If the device with a clipping channel is not visible in the current tab, the name of the appropriate tab will show red to direct you to that device



Note. Double-clicking on a device name in the Device List will automatically jump to the tab that it is currently populating and will ID the unit in the grid.

To clear clip indicators:

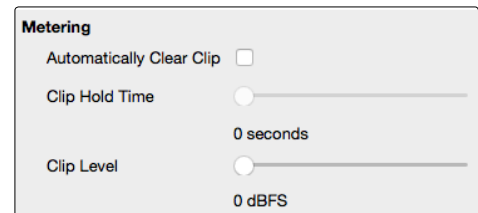
- On a device – Click on a clip LED to clear all clips on that device
- In a tab – Use the shortcut: **Cmd/Ctrl-Shift-C**
- Globally – Use the shortcut: **Cmd/Ctrl-Shift-Alt-C**

To clear clip indicators automatically, select “Automatically Clear Clip” from the ‘Preferences’ Menu.


Mac: RedNet Control 2 > Preferences

PC: File > Preferences

The clip indication Hold Time and threshold Level can both be adjusted using the sliders.




ID (Identification)

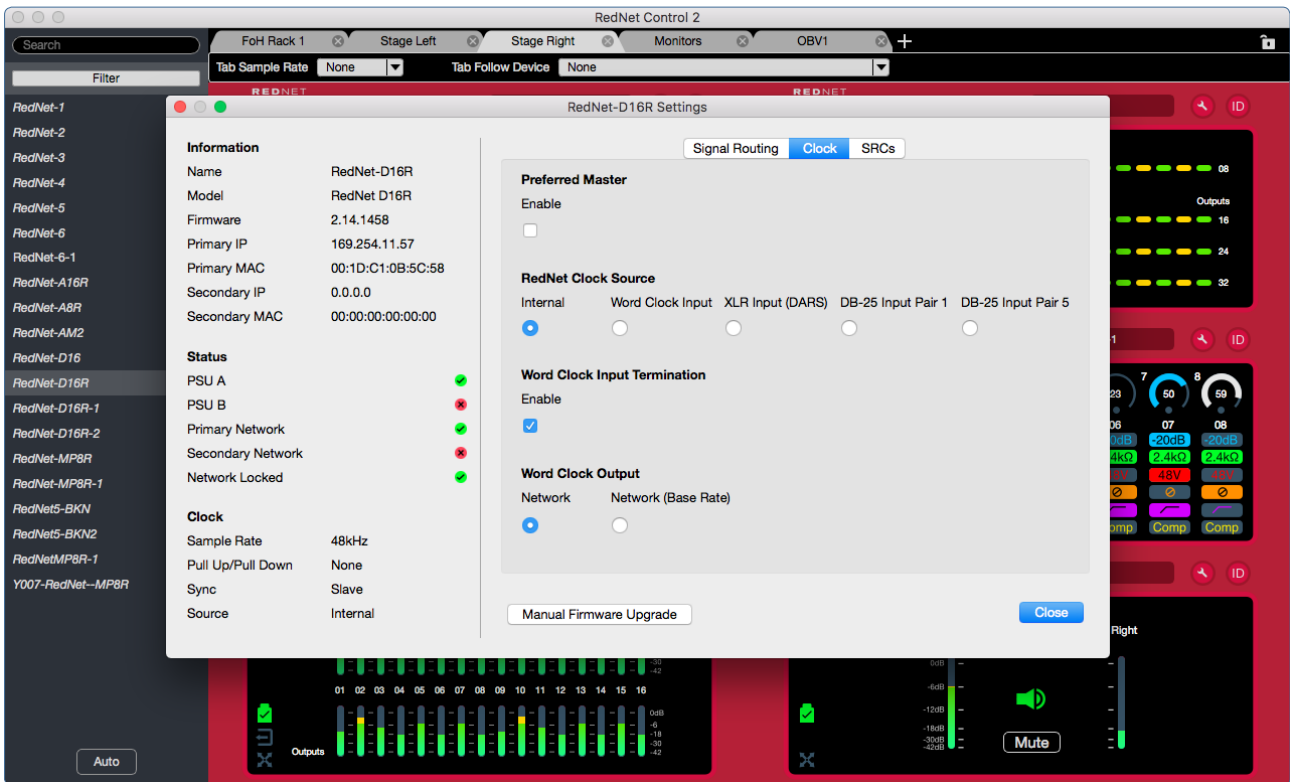
ID can be enabled either by clicking on the appropriate ID icon  or by right-clicking on a device's name in the Device List.

When enabled, ID will identify the physical device being controlled by flashing its front panel LEDs. The device GUI will also flash (the black background behind the meters/switches) to confirm that ID is active.

The device background will also flash when the Reverse ID function is activated via the front panel of devices such as RedNet AM2.

Device Settings

Click the Settings icon  to open the Settings window for the unit. Note that some devices will have multiple settings page functions grouped into tabs (as for the RedNet D16R shown).



Device function settings can be configured/toggled directly, in real time using these pages. Click **Close** to exit the Settings window.

At the left of all Settings windows is an overview for each device showing its hardware **Information**, its power supply & network **Status** and its **Clock** configuration.

For further information, please refer to the 'Tools Menu' section in a device's User Guide.

Red Range Control

Graphical control for the Red 4Pre, Red 8Pre and Red 16Line units is separated into five pages:

- I/O Control & Metering
- Output Routing
- Monitor Control
- Custom Mixes
- Input Routing

I/O Control and Metering

In this view, control functions, gain settings and signal levels are shown for all inputs and outputs. Image shown below is for the Red 8Pre.



Analogue Input – Channel controls operate in the same manner as RedNet devices – See page 9 for details. For channels with gain controls and input functions, the level meter indicates the post-processing signal.

Analogue Output – Shows the level setting, signal level, and Mute/Dim status for each channel. To adjust individual levels, click & drag the sliders. Click a Mono or Stereo button to toggle between mono and stereo output.

ADAT / S/PDIF / Loopback / Dante I/O – Signal level meters are shown for each input channel (top row) and each output channel (lower row).

Monitor and Headphone levels – Output levels can be adjusted using the sliders. Click a Mono or Stereo button to toggle between mono and stereo output.

Monitor Control

The Monitor Control page assigns analogue output channels to the rotary output encoder.

Add or remove channel pairs using the individual checkboxes. Note that linked faders will be shown in blue on the Input Control and Metering page.

The Output Encoder level can be set using the slider.



All – Selects all channel pairs. Individual channel pairs can then be deselected as required.

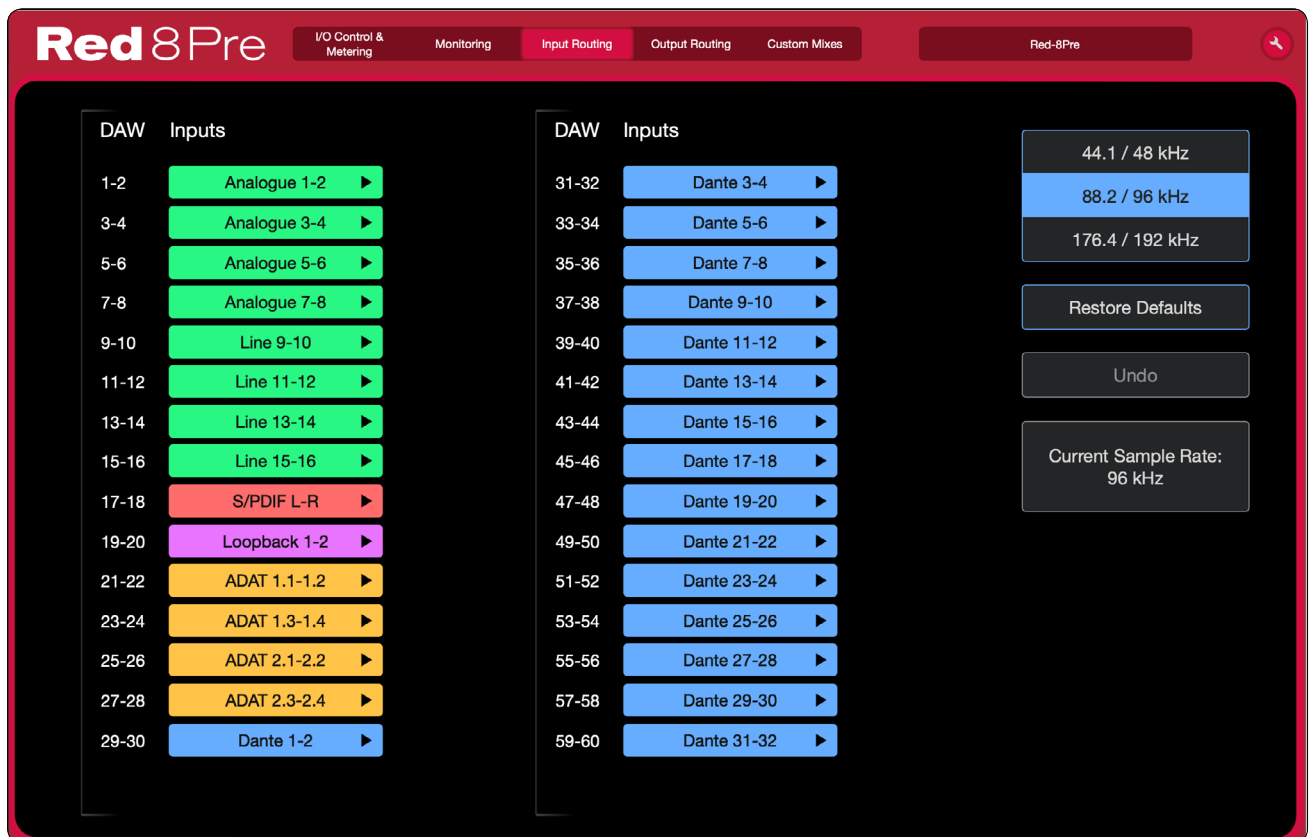
Input Routing

Because the number of channels available reduces when operating at higher sample rates, Input Routing allows the channel order to be re-arranged so that all input signals required can be accessed by a DAW.

Use each drop-down list in the table to move input channels in pairs. For example, in the image below, ADAT inputs 2.5-2.6 are being sent to DAW channels 25-26. This means that when selecting inputs 25-26 on a track in a DAW, ADAT inputs 2.5-2.6 on the Red device will be recorded.

Each DAW input channel pair can be allocated independently.

The default routing can be modified independently for each of the three sample rates.



Restore Defaults – Returns the routing (at the currently selected sample rate) to the layout defined in the unit's standard routing table.

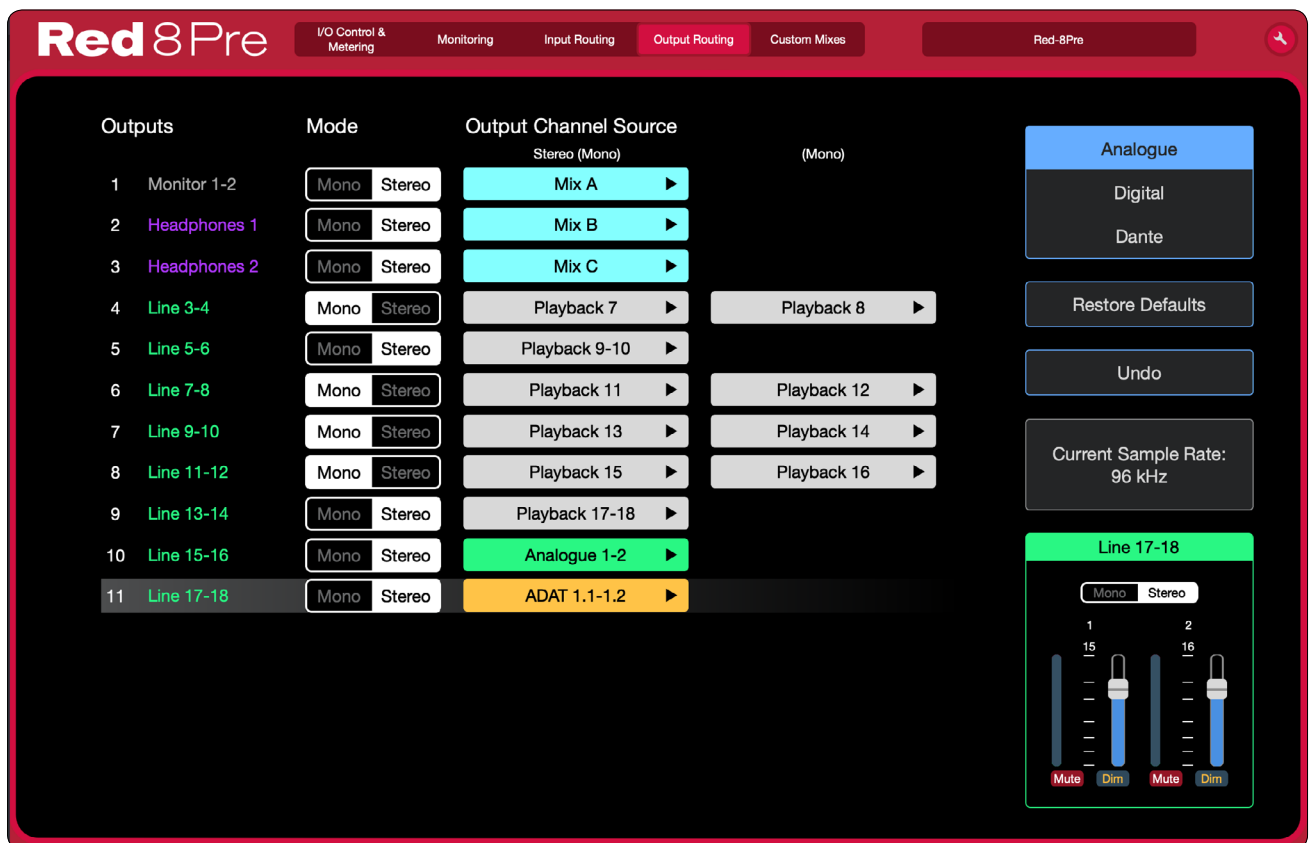
Undo – Cancels the change made to the last input selection.

Output Routing

Provides control of output channel routing and DAW allocation.

Use the drop-down menus to allocate a destination to each channel output. Selecting MONO splits a channel pair into two signals which can be routed independently.

Use each slider to set the output level of the currently selected channel.



Restore Defaults – Returns the routing (at the currently selected sample rate) to the layout defined in the unit's standard routing table.

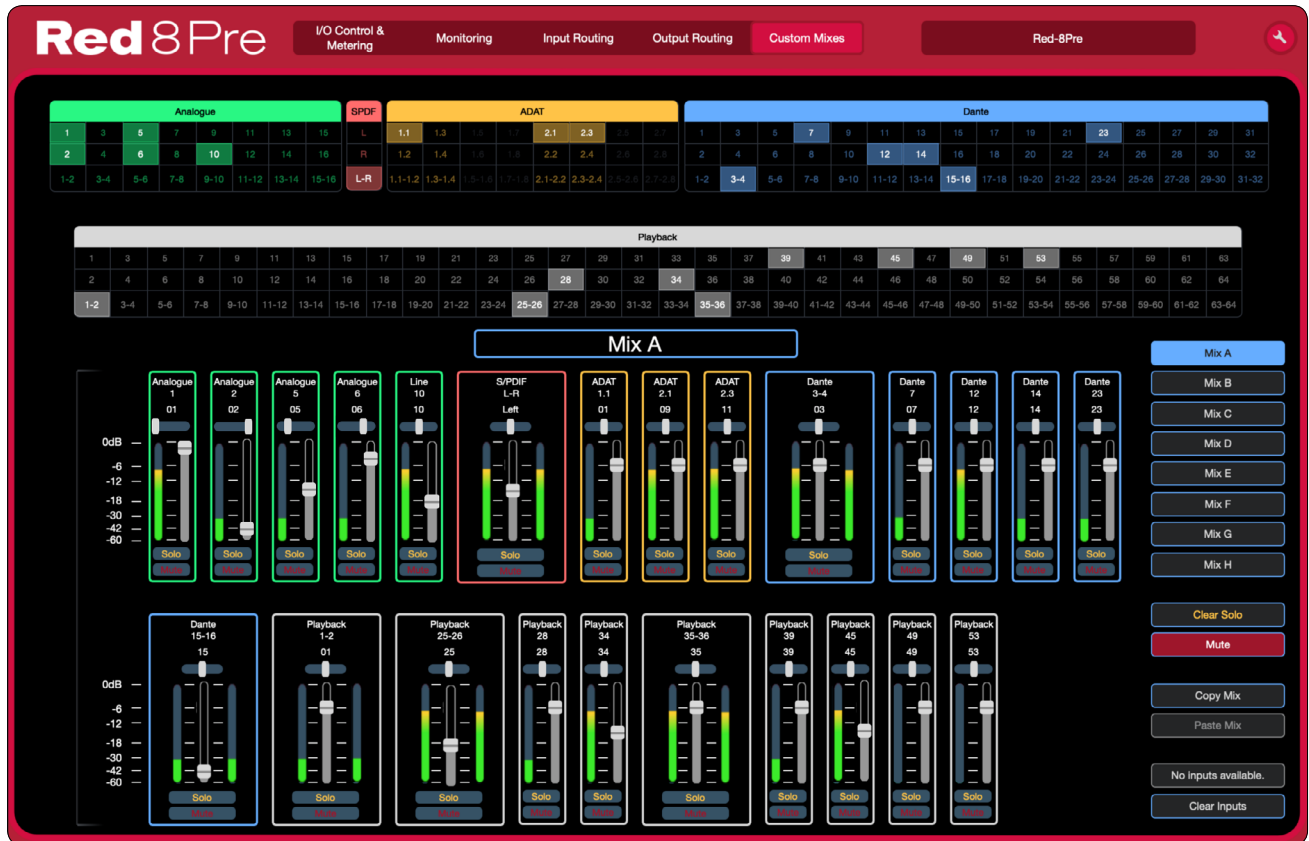
Undo – Cancels change made to the last input selection.

Custom Mixes

The internal audio mixer allows you to create up to eight separate mono or stereo sub-mix signals.


Up to 30 of all the available inputs can be selected as sources for the mixer. Once selected, these input signals will then become available to all mix outputs. Tailored mixes, with individual levels, can easily be created by muting unwanted channels.

Each mixer output can have an individual balance of fader levels, mute and channel pan settings.



The upper part of the window shows the available inputs. Select up to 30 signals which will become the sources for the mixer.

Click on a Mix button **Mix C** to recall its channel fader, mute and pan settings.

Use the channel faders to set the required signal level for each source signal. Press **Mute** to deselect signals that are not required. The pan slider  sets the L/R position on mono channels and the L/R balance on stereo channels. Click on **Solo** to audition channel signals.

Clear Solo – Deselects all active channel Solo buttons.

Mute – Mutes the selected mix output.

Copy Mix/Paste Mix – Copies/pastes all fader and pan settings from one mix to another.

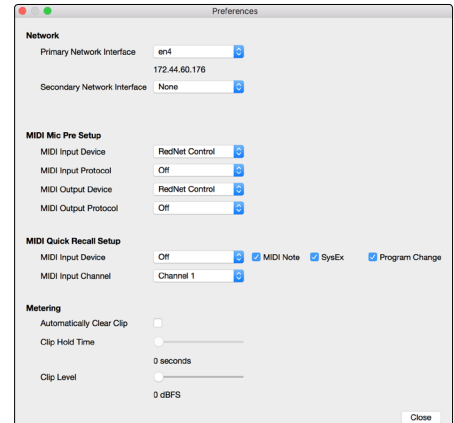
Toolbar Menus

Use your OS's '**File**' menu to access system and hardware settings, manage available devices, save and load sessions and view the session Log.

Preferences* – Pop-up window:

- Select the Ethernet network interface(s)
- Set the MIDI Mic Pre Input & Output device and control protocols
- Set the MIDI Quick Recall device and channel numbers and select which messages are to be read
- Metering: **Clip Hold** sets the time for which a clip flag remains highlighted and **Clip Level** sets the dBFS level above which clipping will be indicated

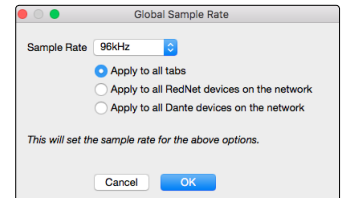
**Mac 'Preferences' are located under the 'RedNet Control 2' menu*



Global Sample Rate – Opens the Global Sample Rate window:

- Choose a global rate from the drop-down
- Select applicable devices

Global Follow Device – Selects all tabs to follow a device.

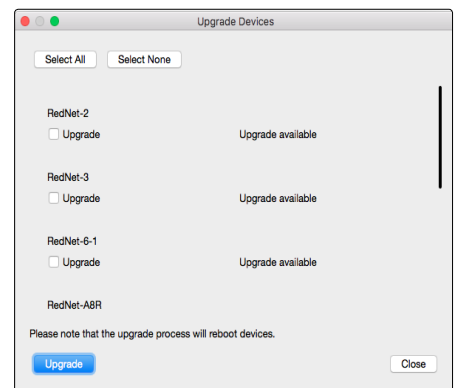


Note that the Global Sample Rate and Global Follow Device are one-time settings of devices/upgrades to tab ribbon values – any new devices/tabs added afterwards will not conform to the applied Sample Rate.

PCIe Card Settings (PC) Audio/MIDI Setup (Mac) – Audio I/O format and MIDI setup.

Refresh Device List – Removes devices no longer available and adds new device names on the network to the Device List.

Upgrade Devices – On start-up, RedNet Control will prompt the user if there is a newer firmware version available. The Upgrade Devices window can be used to update the firmware later-on; it will indicate any devices for which an update is available.

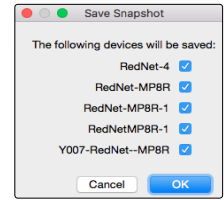


Dante Controller – Switches to or launches the Dante Controller application.

Session Save / Load – Will save and return to previous state: tabs, tab names, device location in tabs, the grid plus filters and searches (*but not the Preferences or Device Settings*).

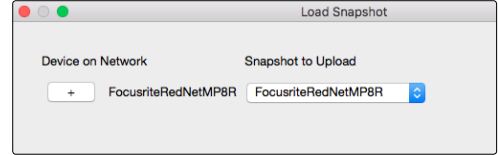
Note that RedNet Control can be launched by double-clicking on a session file.

Device Save (*Applicable only to devices with mic pres*) – Select which mic preamp settings you wish to save - a snapshot window will confirm the selection. A file will be created for the selected preamp type.




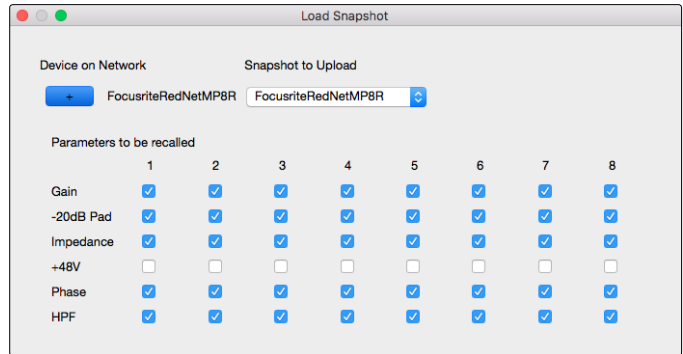
Device Load (*Applicable only to devices with mic pres*) –

Lists the devices on the network and the drop-down list shows snapshots that can be uploaded to the device.



Note that the same snapshot can be uploaded to multiple devices of the same type.

Pressing the  button expands the window to allow individual recall parameters to be selected or deselected for each channel.



Log Messages – Opens the Log messages window which displays diagnostic, network, system and hardware status information.

The message display can be filtered by un-ticking individual checkboxes in the header. *Note that the logging of deselected parameters continues in the background.*

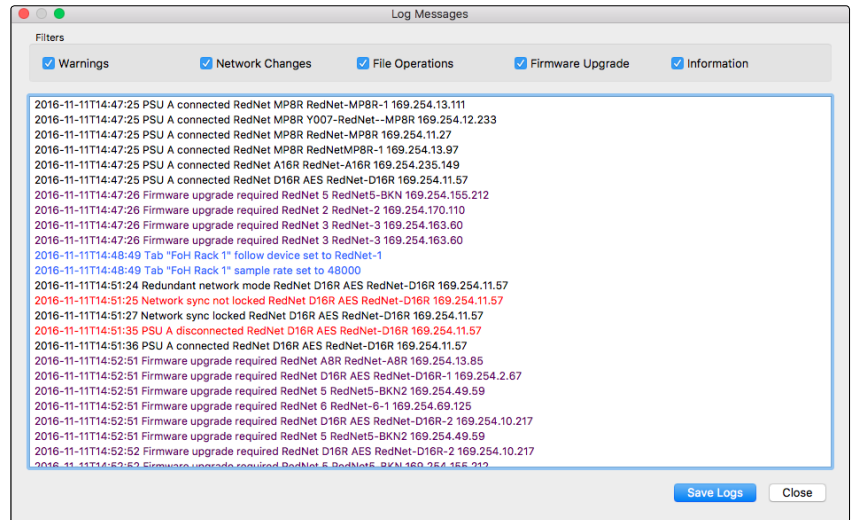
Black - indicates standard device changes

Red – indicates major issues

Blue – indicates important network changes

Green – indicates important save

Purple - indicates firmware update status



Quit RedNet Control 2 – Closes the application.

Mac 'Quit RedNet Control 2' is located under the 'RedNet Control 2' menu.

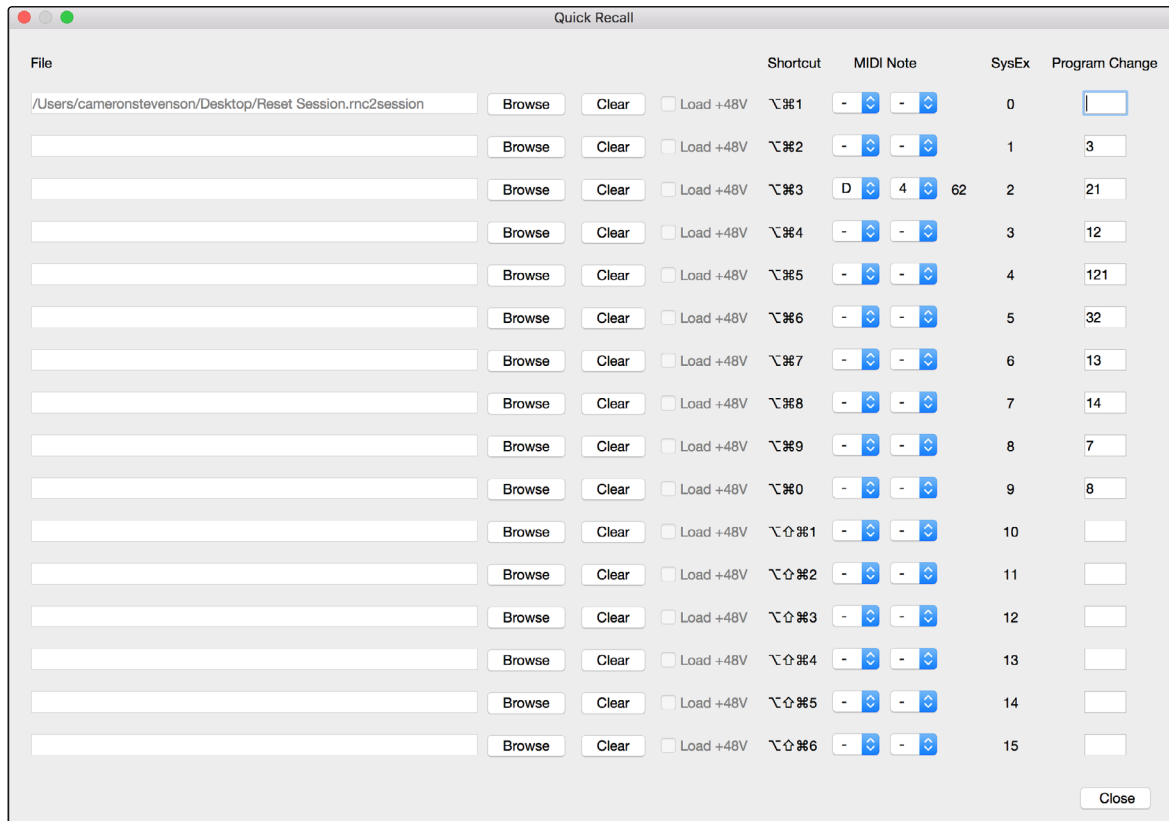
Use your OS's **Quick Recall** menu to access the MIDI file, shortcut, note and program settings.

Setup Quick Recall – Opens the Quick Recall window.

Note that if you have snapshots allocated to any of the 16 Quick Recall slots, the menu will extend to include:

Recall 1 (<File location & Name>)

Recall 5 (<File location & Name>)



- Select a MIDI Note using the dropdown lists (ISO Standard: C-1 = 0 to G9 = 127). The associated MIDI number will be displayed next to the Note
- SysEx is static from 0 to 15 (Value). The SysEx message structure is shown below:

	Start SysEx	Manufacturer ID			SW	RedNet Control	Version	Device Type	Device Index	Mic Pre Channel	Parameter	Value	End SysEx
Hex	F0	00	20	29	7E	02	00	7F	7F	7F	00	?	F7
Dec	240	0	32	41	126	2	0	127	127	127	0	?	247

The number under 'Value' is the variable (recall) 0 to 15 which aligns to the Quick Recall Menu

- Program Change can be any value from 0 to 127

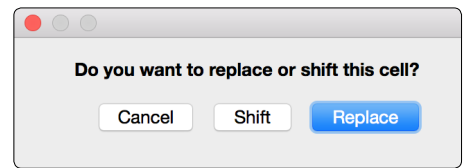
You cannot have duplicates of a Program Change number or MIDI Note settings.

Hot Swap Device – Allows a device in the grid to adopt a missing device's parameters.

To replace a device: drag its image on top of another; the replacement device must be of the same type.

After activation:

- New device should adopt all parameters
- New device should adopt all tool menus
- New device should adopt all channel names
- New device should adopt all MIDI settings (RN4/ MP8R)
- New device should adopt Yamaha ID (RN4/ MP8R)



Appendices

1. Keyboard Shortcuts

Organisation

Add Tab	Cmd/Ctrl-T	<i>Grid size retains previous selection</i>
Delete Tab	Cmd/Ctrl-W	
Next Tab	Tab	
Previous Tab	Shift-Tab	
Lock/Unlock Grid	Cmd/Ctrl-L	<i>Or click 'Lock' symbol</i>
Rename Next Tab	Tab	<i>First, double-click name to edit</i>
Rename previous Tab	Shift-Tab	

Device Control/Settings

Change Gain (Mouse/Trackpad)		<i>Click+drag or scrollwheel</i>
Precision/Slow Gain, Levels & Pan	Cmd/Ctrl	<i>Whilst changing gain, levels and pan</i>
Change Gain (keyboard)		<i>Double-Click inside gain knob to enter dB value, 'Enter' to accept</i>
Device global function setting	Option/Alt-click	<i>Applies setting to all channels on current device</i>
Clear all clip indications in a tab	Cmd/Ctrl-Shift-C	
Clear all clip indications globally	Cmd/Ctrl-Shift-Alt-C	
Locate a device in any tab		<i>Double-Click its name in the Device List – Device will ID for several seconds</i>
Remove plugins from Tab*	Cmd-Backspace	<i>For a device no longer on the network</i>
Remove plugins from all Tabs*	Cmd-Shift-Backspace	

**Mac only. Only applies when in the Device Settings window*

Device Specific

RedNet MP8R – PAD	Shift-click on the gain dial	<i>Toggles PAD on/off</i>
Clear Custom Mixes	Cmd/Ctrl-N	<i>Red range devices</i>
Move between page views	Arrow Keys	<i>Red range; RedNet 4; RedNet MP8R RedNet PCIe and RedNet PCIeR</i>
I/O Routing – Cascade channels	Cmd/Ctrl-Option/Alt-Shift	<i>Red range devices</i>
Faders to minimum	Option/Alt-click	<i>Red range devices</i>
Faders to maximum	Shift-Option/Alt-click	<i>Red range devices</i>

Appendices...

2. Customer Support

You can contact our dedicated RedNet Customer Support team free of charge:

Email: focusriteprosupport@focusrite.com

Phone (UK): +44 (0)1494 836384

Phone (USA): +1 (310) 450-8494