

D-Net **User Manual** Revision 1.3 Microsoft Windows, Apple Mac iOS & iPad App



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### THANK YOU

Thank you for choosing to download D-Net, by NST Audio, for your application. Please take some time to read through this manual, so that you can obtain the best from the software.

All NST products are carefully designed and engineered for cutting-edge performance and world-class reliability. If you would like further information about this, or any other NST product, please do not hesitate to contact us.

#### COMPATIBILITY

D-Net is compatible with: Microsoft Windows Vista or above Apple Mac OSX 10.10 Yosemite or above Apple iPad OS9 and above

#### INSTALLATION

The latest version of D-Net, for Microsoft Windows or Apple Mac, is available for download from the software page of the NST Audio website. (The iPad version is available from the Apple app store – there is also a link to this from the NST Audio website).

Save the download to a known location and run the file from there.

Your computer may warn you or ask you about running installation file; accept / ignore any warnings or choose the '**More Info**' link from within the warning dialogue box to proceed.

Read and follow the on-screen instructions to complete the installation.

Various shortcuts will be placed on your computer allowing you to launch the software from there.

#### **OVERVIEW**

D-Net is an Ethernet based computer control platform that gives you the ability to not only control all the devices on a network, but also to store presets and configure systems offline.

Compatibility with Microsoft Windows, Apple Mac and Apple iPad app too, you can control your system the way that suits you.

USB connection\* is also available on some devices, allowing quick connection to a single device.

[\* Microsoft Windows only]

### MAIN SCREEN OVERVIEW



The default view of D-Net will look similar to the image above\*.

The very top of the application will show the application name, followed by the current file name, if one is in use.

Below this is the menu bar that allows various features to be accessed, detailed later in the manual.

Below this is the toolbar that allows quick access to common commands and features, detailed later in the manual.

To the left of the screen is the 'Virtual Rack' that shows all the devices in the current system. The devices can be named, rearranged and placed into various racks – double clicking / tapping a device in the rack will open a detailed window allow adjustment of all parameters, detailed later in the manual.

The main part of the application's screen is home to the System Monitor page. This shows all current devices along with real-time metering - double clicking / tapping a device in this screen will open a detailed window allow adjustment of all parameters, detailed later in the manual.

[\*The Apple iPad app will differ slightly to this]

# File Edit Device Tools Help

The Menu Bar is pictured above\* and allows the commands and features to be accessed. [\*The menu bar on a Mac will differ slightly from this, but contain all the same functions - The iPad app does not feature this menu]

The menu bar functions, from left to right, are as follows:

#### File

New: Starts a new D-Net (\*.NST) file. This option is only available while offline.

**Save:** Saves the current system to file.

Save As...: Saves the current to file, asking for a file name to be entered.

**Open:** Opens a dialogue box allowing location and opening of existing D-Net (\*.NST) files.

{Last Used Files}: This section of the menu shows the last used files, allowing for quick access.

Exit: Quits the D-Net application offering an opportunity to save the current system to file.

#### Edit

**Undo:** Reverts the last change made to its previous state. Note, this button can be pressed multiple times to undo multiple changes. **Redo:** Cancels the last undo command and reverts the setting to its previous state. Note, this button can be pressed multiple times to redo multiple changes.

Cut: Removes any highlighted text, including parameters, and places it in your computers Clipboard.

Copy: Copies any highlighted text, including parameters, and places it in your computers Clipboard.

Paste: Pastes the contents of your clipboard into the selected name or parameter box.

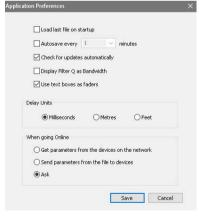
#### Device

**Add>:** Opens a menu, when the mouse pointer is hovered over it, allowing new devices to be added to the current system. **Go Online:** Toggles between online and offline modes.

#### Tools

#### Application Settings...:

Selecting this will open D-Net's application settings.



Load Last File on Startup...: Checking this option will cause D-Net to automatically load the last D-Net (\*.NST) that was used, when the application is opened.

**Autosave Every x Minutes:** Checking this option save the current file every x minutes, depending on what time is selected from the drop down menu options.

**Check for Updates Automatically:** Checking this option will cause D-Net to check the NST Audio software server for any updates / newer versions of the application and give the option whether to download and update the software.

**Display Filter Q as Bandwidth:** Checking this option will cause D-Net to display all filter width parameters in bandwidth instead of the default Q.

### MENU BAR DETAIL CONTINUED

**Use text boxes as faders:** This option either disables or enables the use of text boxes as faders. If enabled, the cursor can be used to select a text entry box and then dragged up and down to adjust the value.

Delay Units: Gives the option of displaying delay parameters in either Milliseconds, Metres or Feet.

When Going Online: Gives options for how D-Net behaves when selecting the Online function.

**Get Parameters from the Devices on the Network:** Selecting this option will cause D-Net to automatically retrieve the current settings, and any stored presets, from all connected devices when online is selected.

**Send Parameters from the File to Devices:** Selecting this option will cause D-Net to automatically send the parameters, and any stored presets, of all defined devices to connected units when online is selected.

**Ask:** Selecting the option (on as default) will cause D-Net to ask whether to send or retrieve settings, and any stored presets, to or from connected devices.

### Help

**Check for Updates:** Selecting this will connect to NST Audio's software server to check for any available updates. **About D-Net...:** Selecting this will open a dialogue box displaying the application version number and other details.

#### TOOLBAR DETAIL

The toolbar in D-Net allows quick access of common commands and displays system information.

The toolbar functions\*, from left to right, are as follows: [\*The toolbar will differ slightly on the Apple iPad app]

Application Preferences Button: Opens the application preference options screen.

File Save Button: Saves the current file or asks for a file name if the current settings have not previously stored.

File Open Button: Opens a dialogue box to allow locating of \*.NST files. Note, this button will be greyed out / disabled while online – go offline to enable opening of files.

**Undo Button:** Reverts the last change made to its previous state. Note, this button can be pressed multiple times to undo multiple changes.

**Redo Button:** Cancels the last undo command and reverts the setting to its previous state. Note, this button can be pressed multiple times to redo multiple changes.

Add Device Button: Opens a drop-down menu allowing a device to be added to the system.

**Delete Device Button:** Deletes the currently selected device. Note, this button will be greyed out / disabled while online – go offline to enable deletion of devices.

Add Rack Button: Adds a rack to the virtual rack, located on the left of the main screen.

**Delete Rack Button:** Deletes a rack from the virtual rack, located on the left of the main screen. Note, a device must be present in the rack for it to be deleted.

Show System Monitor Button: Displays the default overview screen, showing monitoring of all devices.

Show Link Manager Button: Displays the Link Manager screen, detailed later in the manual.

Show System Snapshot Manager Button: Displays the System Snapshot screen, detailed later in the manual.

Online / Offline Button: Toggles between online and offline modes.

Global Mute Button: Toggles a system wide mute to all connected devices when online.

#### GOING ONLINE

To connect D-Net to NST Audio devices, you will need a Cat5 cable or USB\* A to B style connector cable. (\*Windows only) To connect to multiple NST Audio devices, you'll need a network switch – these are available in varying port sizes, depending on how many devices you wish to connect to simultaneously.

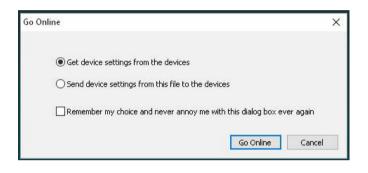
If using an iPad to connect D-Net to NST Audio devices, you will need a WiFi enabled router.

#### There are two ways to go online / connect to devices:

You can either retrieve settings and presets from connected devices, or you can define devices and presets offline and send the settings to connected devices.

To SEND settings to connected devices, define devices in D-Net, using the Device menu or toolbar Add Device button, and input the settings required.

Use the Device menu to go online, or use the toolbar Online button - choose to 'Send device settings from this file to the devices'.



If D-Net finds a matching device, it will ask whether to send the settings to the device, and also give options for identifying the device:

alog		
Found Device :		
Device 1		Flash ID
	Send Settings	
Or create a new d	levice and get the :	settings from it?
C	reate New Device	

To RETRIEVE settings from connected devices, use the Device menu to go online, or use the toolbar Online button – choose to 'Get device settings from to the devices'.

D-Net will then search for connected devices and display the devices found, along with their current settings and any stored presets.

### VIRTUAL RACK IN DETAIL

Main System	Δ
FoH AUDIO D48	
Monitors	$\triangle$
Monitors AUDIO ID48	•

The Virtual Rack shows all connected or defined devices.

If a device shows a red light, it is not connected (or hasn't been discovered yet) or D-Net is offline. This is also reflected on the main system monitor screen, whereby the device will have a red border.

If a device shows a green light, it is connected correctly when D-Net is online. This is also reflected on the main system monitor screen, whereby the device will have a green border.

Devices may show a yellow exclamation mark (!) accompanied by a message, such as alerting the user there is a firmware update available for the device. This is detailed later in the manual.

Double clicking devices in the rack will open the devices main window, allowing editing of all parameters, including the device name, detailed later in the manual.

Devices can dragged and dropped up and down to reorder them as desired.

Devices can also be placed into new rack sections – add new racks by using the toolbar button.

Racks can be renamed by double clicking / tapping on them.

Clicking on the triangle\*, located at the right of each rack, will collapse or expand the rack – this is useful when large quantities of devices are in use and the virtual rack becomes large. [\*This feature is not available on the iPad app]

The rack names are also displayed under the devices in the main system monitor screen.

#### **DEVICE EDITING**

To edit a device's settings, double click / tap a device either in the rack or in the main system monitor screen.

An NST Audio D48 device will be used from here on in, as it's one of the comprehensive devices, thus it will cover all the parameter editing you will come across.

At the top of this device window, the title bar will show the device type and then the device name – the device name can be edited by double clicking / tapping the text to the right of the NST logo.

The left-hand of this panel shows the input channels – the right shows the output channels and routing.

All parameters can be edited by dragging the cursor up and down, while holding down the left mouse button, originating over the desired parameter – direct text entry is also possible by clicking / tapping on the relevant box. Faders and control knobs work this way too!

Alternatively, you can select a parameter, e.g. delay, which will highlight the parameter box and then use the up / down cursor keys to adjust the parameter or press the enter key to enable editing by direct text entry.

Pressing the TAB key will move to the next parameter - press the enter key again to enter values.

#### **ROUTING PAGE**



#### Input Compressors

**Threshold:** Adjusts the input compressor's threshold (where it starts to come into effect).

Attack: Adjusts the compressors attack time (How fast the compressor reacts once the threshold has been exceeded).

Release: Adjusts the compressors release time (How fast the compressor releases compression once the threshold has been exceeded).

**Ratio:** Adjusts the ratio of compression once the threshold has been exceeded (I.E a ratio of 2 will halve the signals level above the threshold – so if the threshold is exceeded by 6dB, the compressor will limit this to 3dB).

#### **ROUTING PAGE CONTINUED**

**Knee:** Adjusts the 'knee' of the compressor / how hard the compressor reacts at the threshold. Higher knee values will give a softer compression around the threshold.

PLEASE NOTE: Fast attack and release times may cause excessive distortion – it is recommended that an attack time of 45ms and release time of 750ms is used for general broadband signal.

#### Input EQ Preview Window

This graphic shows any input EQ in effect – press the window to directly access the input EQ for that channel.

#### **Input Delay**

Adjusts the input delay from between 0ms to 1.3 seconds. The unit can be changed to metres of feet via the Application Settings found in the Tools menu on the menu bar.

Tip: you can enter delay values in metres (m) or feet (') and D-Net will convert these automatically to ms. Also, holding down the shift key, while using the cursor keys to adjust delay, will alter the delay in 1/10<sup>th</sup> steps.

#### Input Gain

Adjusts the input channel gain by either dragging the fader or dragging your cursor over the gain text box. Note that you can select / highlight the gain value box and use the cursor up and down keys to adjust the gain.

#### Input Mute Button

Toggles the channel mute - the channel is muted when the button illuminates in red.

#### **Input Phase Button**

Toggles the channel phase – the channel is 180 degrees out of phase when the button illuminates in yellow.

#### **Input Channel Name**

Double click the channel name to edit. The channel name will also be shown on devices with an LCD screen.

The right-hand side of this screen shows the output settings and routing...

The routing mode can be either a matrix mixer or routing grid. (Routing options can be accessed through the routing wizard, located at the top right of this screen).

Assuming the matrix mixer is in use, like the picture shows, channel levels can be adjusted dragging the rotary controls up and down to adjust level, or double clicked to mute or un-mute the input feed.

Matrix levels can also be directly entered by double clicking the text value under each matrix rotary control.

#### **Output EQ Preview Window**

This graphic shows any output EQ in effect – click the window to directly access the output EQ for that channel. This will be covered in more detail later in the manual.

#### **Output Delay**

Adjusts the input delay from between 0ms to 1.3 seconds. The unit can be changed to metres of feet via the Application Settings found in the Tools menu on the menu bar.

Tip: you can enter delay values in metres (m) or feet (') and D-Net will convert these automatically to ms. Also, holding down the shift key, while using the cursor keys to adjust delay, will alter the delay in 1/10<sup>th</sup> steps.

#### **Output Gain**

Adjusts the output channel gain by either dragging the fader or dragging the cursor over the gain text box. Note that you can select / highlight the gain value box and use the cursor up and down keys to adjust the gain.

#### **Output Mute Button**

Toggles the channel mute – the channel is muted when the button illuminates in red.

#### **Output Phase Button**

Toggles the channel phase - the channel is 180 degrees out of phase when the button illuminates in yellow.

#### **Output Channel Name**

Double click the channel name to edit. The channel name will also be shown on devices with an LCD screen.

# ROUTING WIZARD

Pressing the Routing Wizard button, located at the top right, will open a 3-tab window allowing various routing options, linking controls and a quick crossover setup page.

outing Linking Crossover	Routing Linking	Crossov	/er					Routing Linking	Crossove	er			
◯ Matrix Mixer	A Input A 🗹 Input B	B ( C C M C						HPF	10.0 Delay	Hz	24dB Linkwit Gain	z-Riley Limit	~ er
<ul> <li>Routing Grid</li> </ul>	Input C							LF	0.00	ms		B 0.0	dE
◯ 1 × 8 way Crossover	Input D							LF/LMF Xover	50.0	Hz	24dB Linkwit		~
2 x 4 way Crossover	Reset I	nput Links 2 3		5	6	7	8	LMF	Delay 0.00	ms	Gain	Limit B 0.0	er di
4 x 2 way Crossover 2 x 3 way Crossover + 2 Aux	Output 1 🗹							LMF/HMF	200	Hz	24dB Linkwit		~
	Output 3							HME	Delay 0.00	ms	Gain	Limit IB 0.0	er d
Use Auto Channel Naming	Output 4		$\checkmark$					HMF/HF Xover	4000	Hz	24dB Linkwit	10202010	~
	Output 5							HF	Delay 0.00	ms	Gain	Limit JB 0.0	er d
	Output 6 Output 7				$\checkmark$			LPF	20000	Hz	24dB Linkwit	z-Riley	~
	Output 8							Apply th	e above cri	ossove	er to current s	ettings	
	Reset O	utput Link	s					Reset th	e current s	etting	s to default		

### Routing Tab:

Choose between manual routing, Matrix Mixer mode or Routing Grid mode, or predefined crossover routing. The Use Auto Channel Naming check box will automatically generically name the outputs depending on the routing selected. The Reset the Current Settings to Default check box will reset the current settings to default with the routing selected.

Linking Tab:

This page allows input or output channels to be linked together, so any parameter changes will be immediately reflected onto the linked channels in real time.

NOTE: The left-hand channels are used to make the initial link, so if say output 1 and output 5 are linked, the settings from output 1 will be initially copied to output 5; they will then track together here on in.

# Crossover Tab:

This page allows for quick initial crossover setups – enter the various desired parameters and <u>check the Apply the Above Crossover to</u> <u>Current Settings box</u> and select OK.

### LIMITER PAGE

NST Audio D48 - Device 1										
AUDIO	Device 1 Routing Limiter	s EQ ( Vie	Presets) (Sy	stem) (Moni	tor) Routing	; Mode : Mix	Matrix	-	Rout	ID ing Wizard
A B Compressor Threshold 22.0 dB Attack 4.500ms Release 720.0ms Release 720.0ms Ratio Ratio 1 Knee 4.0 dB	essor hold dB ack Oms ack Attack Oms Release Oms Release 720.0ms Ratio Line Knee	D Campressor Threshold 22.0 dB Attack 4.500ms Release 720 0ms Ratio 1 Knee 4.0 dB	1 Limiter Auto Threshold 22.0 dB Attack 45.00ms Release	2 Limiter Auto Threshold 22.0 dB Attack 45 JUMS Release	3 Limiter Auto Threshald 22.0 dB Attack 45 Journs Release 15X	4 Limiter Auto Threshold 22.0 dB Attack 45.00ms Release 16x	5 Limiter Auto Threshald 22.0 dB Attack 45 OUMS Release	6 Limiter Auto Threshald 22.0 dB Attack 45 JOMS Release	7 Limiter Auto Threshold 22.0 dB Attack 45 Coms Release 15x	8 Limiter Auto Threshold 22.0 dB Attack 45 coms Release 16x
		EQ	EQ	EQ	EQ	EQ		EQ	EQ	EQ
Phase Delay 0.00ms 0.00	lay Delay	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms
	15 10 5 5 -5 -10 -5 -5 -10 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5	15 10 5 -5 -5 -7 -10 -20 -20 -20 -20 -20 -30	15 0 	15 0 	15 0 5 0 5 10 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5	. = 1		15 0 5 0 5 10 5 0 5 10 5 0 5 10 5 0 5 10 5 0 5	15 0 5 0 5 10 5 0 5 10 5 0 5 10 5 10 5	
0.0 dB 0.0 Mute Mut Input A Inpu	te Mute	0.0 dB Mute Input D	0.0 dB Milli Output 1	0.0 dB Mule Output 2	0.0 dB Mite Output 3	0.0 dB Mile Output 4	0.0 dB Mitte Output 5	0.0 dB More Output 6	0.0 dB Mile Output 7	0.0 dB Mutu Output 8

Pressing the limiter button will show the output limiters instead of the routing.

### Auto

Auto mode (on by default) will automatically set the limiter attack and release times based on the output channel's High Pass Filter frequency.

### Threshold

Adjusts the point at which the limiter comes into effect.

### Attack

The attack time can only be edited in manual mode (Auto off) - Adjusts the limiter's attack time (How fast the limiter reacts once the threshold has been exceeded).

### Release

Adjusts the limiter's release time (How fast the limiter releases once the threshold has been exceeded).

Note: The output meters are directly related to the limiter settings – the limiter threshold is represented by the 0dB mark and the ballistics of the meter are governed by the attack and release times. Once the threshold is exceeded, the gain reduction meter will show above the meter.

### EQ PAGE (INPUTS)



Clicking / tapping on the EQ buttons gives access to all the input EQ parameters. Use the input, A, B, C, D access buttons to edit the desired channel's EQ.

### Input HPF:

Clicking / tapping on the type box will allow selection of available filter shapes.

The frequency can either be typed in directly, by double-clicking on the frequency box, or the filter can be dragged by clicking and holding down the left mouse button on the frequency box, and dragging up and down to adjust.

### Input PEQs:

Each input has 6 parametric EQs – these can be edited by either be double-clicking on the frequency, Q or gain box, and entering the desired parameter, or the filter can be dragged by clicking and holding down the left mouse button on the frequency box, Q or gain, and dragging up and down to adjust.

Alternatively, the filter node, on the EQ graph, can be dragged around in real-time.

To change the EQ filter type, bypass the filter, by clicking on the filter's bypass button, and then clicking on the type box – this will then show the available filter types.

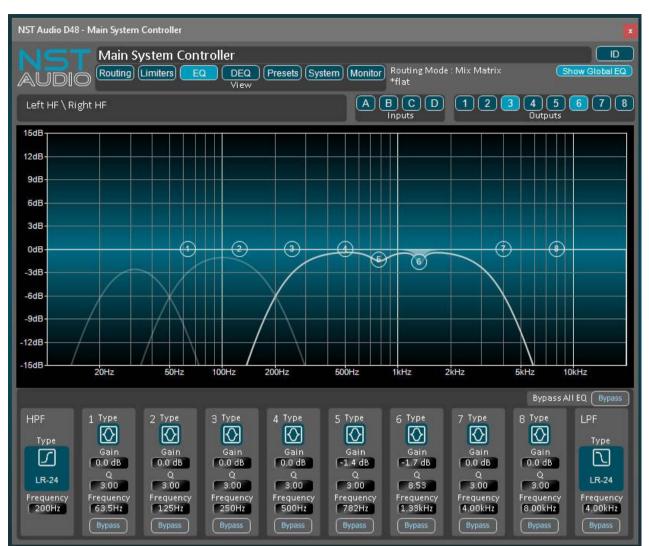
Note: Double clicking on the EQ graph will toggle the phase response display. The top of the screen is plus 180 degrees, whiles the bottom is minus 180 degrees.

Show Global EQ button:

This function toggles showing any other input EQ present on other input channels on the background of the EQ graph. Bypass All EQ button:

This function toggles the bypasses on all EQ, on the selected channel. (This does not bypass HPF and LPF filters).

### EQ PAGE (OUTPUTS)



Clicking / tapping on the EQ buttons gives access to all the output EQ parameters. Use the output 1, 2, 3, 4, 5, 6, 7, 8 access buttons to edit the desired channel's EQ.

### Output HPF and LPF:

Clicking / tapping on the type box will allow selection of available filter shapes.

The frequency can either be typed in directly, by double-clicking / tapping on the frequency box, or the filter can be dragged by clicking and holding down the left mouse button on the frequency box, and dragging up and down to adjust. Note: The HPF does not have a bypass feature for safety reasons.

### Output PEQs:

Each input has 8 parametric EQs – these can be edited by either be double-clicking / tapping on the frequency, Q or gain box, and entering the desired parameter, or the filter can be dragged by clicking / pressing and holding down the left mouse button on the frequency box, Q or gain, and dragging up and down to adjust.

Alternatively, the filter node, on the EQ graph, can be dragged around in real-time.

To change the EQ filter type, bypass the filter, by clicking / tapping on the filter's bypass button, and then selecting the type box – this will then show the available filter types.

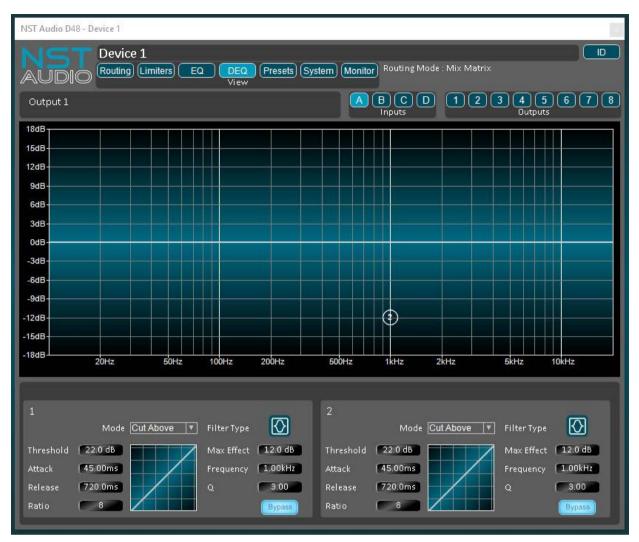
Note: Double clicking / tapping on the EQ graph will toggle the phase response display. The top of the screen is plus 180 degrees, whiles the bottom is minus 180 degrees.

### Show Global EQ button:

This function toggles showing any other input EQ present on other input channels on the background of the EQ graph. Bypass All EQ button:

This function toggles the bypasses on all EQ, on the selected channel. (This does not bypass HPF and LPF filters).

### DEQ PAGE\*



Clicking / tapping on the DEQ button gives access to all the input and output DEQ parameters. \*Note: Dynamic EQ filters are only available when the unit is in 48khz sampling mode (see System Page).

Use the input A, B, C, D and output 1, 2, 3, 4, 5, 6, 7, 8 access buttons to edit the desired channel's DEQ.

Each input and output channel has two DEQ filters - these can be edited by either be double-clicking / tapping on any of the parameter boxes, and manually entering the desired setting, or the parameters can be dragged by clicking / pressing and holding down the left mouse button on the text box and dragging up and down to adjust.

Alternatively, the filter node, on the DEQ graph, can be dragged around in real-time.

Note: If your mouse has a wheel, this can be used to edit the Q whiles dragging a DEQ node.

To change the DEQ filter type, bypass the filter, by clicking / tapping on the filter's bypass button, and then click on the type box – this will then show the available filter types.

Each DEQ filter can be put into one of four modes:

Cut above - This mode will attenuate the set frequency when the filter's threshold has is exceeded.

Cut Below - This mode will attenuate the set frequency when the signal is lower than the filter's threshold.

Boost Above - This mode will amplify the set frequency when the filter's threshold has is exceeded.

Boost Below - This mode will amplify the set frequency when the signal is lower than the filter's threshold.

#### PRESET PAGE

NST Audio D48 - Device 1	
AUDIO Device 1 Routing Limiters EQ DEQ Presets System	tem) (Monitor) Routing Mode : Mix Matrix
Presets	Current Settings
Store Recall Rename Delete	Reset Current Settings to Default
Mute On Recall Recall Inputs Recall Outputs Recall Outputs	
Mute On Recal Recal Inputs Recal Outputs Recal Outputs	Preset Library
1 2	
3, 4,	
5, 6, 7,	
10, 11,	
12 13 14	
14 15 16	
17 18	
19 20	
21 22 23	
24, 25,	
26 27	
28 29 30	

Clicking / tapping on the Presets button will show the presets settings - Up to 30 presets can be stored in each device.

Presets:

To store a preset, click / press a number allocation and then press the Store button. This will save the device's current parameters to memory, including in the device, if online.

Double click / tap the preset or use the Rename button to edit the name of the preset.

To recall a preset, select a number allocation; then use the selection boxes to select what to recall (detailed on the next page), and then press the Recall button. This will recall the saved parameters from memory, including on the device, if online.

Note: all outputs will mute upon a preset recall, unless the Mute on Recall option is de-selected – this is for safety reasons, as there's potential to damage speaker components, if a wrong preset with incompatible settings were to be recalled.

Current Settings\*:

Current settings can be saved to file, for back up or distribution purposes. Use the disk icon to save settings to file. Use the folder icon to locate and open previously saved files.

Reset Current Settings to Default – the button resets the current parameters to default.

Preset Library\*:

The entire preset library (shown on the left) can be saved to file, for back up or distribution purposes.

Use the disk icon to save settings to file.

Use the folder icon to locate and open previously saved files.

[\*Feature not included in the iPad app]

### PRESET PAGE CONTINUED

Preset recall options in detail...

Presets Store	Recall	Rename	Delete
31			Mute On Recall Recall Inputs Recall Matrix Recall Outputs
1. Preset 1 2. Preset 2 3. Preset 3			
4 5 6 7			

When recalling a stored preset, all contained parameters will recall by default (all boxes checked in white). However, it is possible to exclude certain parameter sections from being recalled, by deselecting any of the four boxes. This allows for greater flexibility, and simplifies the amount of presets possibly required, to achieve the same results.

There are many reasons why this functionality comes in useful; for example, you may wish to recall part of a preset that contains a set of particular input equalisation parameters, but for the recall not to affect the output settings and routing.

The example screenshot, displayed above, shows the following:

Recalling Preset 1 will not mute upon recall. Recalling Preset 2 will only load its output parameters. Recalling Preset 3 will only load its input parameters.

### SYSTEM PAGE

NST Audio D48 - Device 1	x
Device 1       Routing       Limiters       EQ       View       Nonitor       Routing Mode : Mix Matrix	D
Information IP Address : MAC Address : 0:0:0:0:00 Sample Rate : 48000 Firmware Version : 0.0.00 Lock Device Switch Sample Rate	
Input / Output Mode Inputs A&B Analogue  Inputs C&D Analogue Inputs 1&2 Analogue Inputs 3&4 Analogue Inputs 3&4 Analogue Inputs 5&6 Analogue Inputs 7&8 Analogue Inpu	

Clicking / tapping on the System button will show the device's System settings.

Information:

This section shows the IP and MAC address of the device, and the sample rate it is running at and the firmware version.

Switch Sample Rates:

To switch sample rates between 49kHz and 96kHz, use the Switch Sample Rate button. (You will need to reboot the physical device after switching sample rate). NOTE: If using 96kHz sample rate, DEQ filters and 48dB crossover slopes will not be available.

Input / Output Mode:

This section allows inputs and outputs to be either analogue or digital or a mixture. Please refer to the product user manual for wiring specifications.

Lock Device:

This feature allows locking of the device (and physical unit if online) with a 4-digit password. You will be given the option to allow preset recalls from the front panel(s), of the physical devices, and also the option of allowing user-defined restricted controls of the device in D-Net.

Continued overleaf ...

### SYSTEM PAGE CONTINUED

To lock the device, enter a 4-digit password and press OK or the enter key.

Enter PIN	×
Enter PIN to lock device	
Allow recall of presets from from	t panel
Allow restricted control panel ac	cess Edit
OK Cancel	

D-Net will then ask for confirmation of the password – enter the same password again to lock the device.

Once the device has been closed, it cannot be opened again without entering the password (unless restricted access has been defined) – the device will still appear on the system and show metering on the System Monitor page, but cannot be opened.

NOTE: Remember that the physical unit will also be locked - see the product user manual regarding locking on the device.

To allow restricted access of parameters, before locking the device, check the Allow Restricted Control Panel Access box, and select the Edit button to customise parameter access.

Doing this will open the Edit Control Panel Permissions screen – available parameter groups will be shown, along with the option to disable editing of the parameters and also the option of disabling viewing of the parameters.

NOTE: This is a D-Net feature only, and will not be reflected on the physical devices' front panel, which will remain locked out.

{pic}

Simply select the various parameter groups that are to be locked and press the OK button or enter key to confirm this. The PIN code screen, as shown above, is then shown – follow the instructions above to lock the device.

An example screen of Restricted Control Panel Access is shown below, where the input compressors and routing have had their editing disabled, and also the outputs have had their gain, mute, EQ & Xover, and delay editing and view disabled.

NST Audio	D48 - Debug										×
NST Debug           Routing         EQ         DEQ         Presets         System         Monitor         Routing Mode : Mix Matrix         Routing Weight           AUDIO         View         View         *FLAT         Routing Weight         Routing Weight									ID ting Wizard		
A Compress or	B Compressor	Compressor	D Campress ar								
Threshold 22.0 dB Attack 4.5 ums	Threshold 22 0 dB Attack 4 500ms	Threshold 22.0 dB Attack 4 500ms	Threshold 23.0 dB Attack 4 500ms								
Release 720.0ms Ratio	Release 720 ums Ratio	Release 720 Jms Ratio	Release 720.0ms Ratio			-45 D				-45 D	-45 D
Knee 4.0 dB EQ	Knee 4.0 dB EQ	Knee 4.0 dB EQ	Knee 4.0 dB EQ	-45 -45 -45	-45 -45	-45 -45 -45	-45 Minte	457 1457 1917 (e	457 K0		-45 -45
Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase	Phase	Phase	Phase	Phase	Phase	Phase	Phase
<b>T</b>				l	1	1	1	1	1	1	1
-5 -10 -19 -20 -20 -20 -20	-5 -10 -15 -20 -25 -30	-5 10 15 20 25 30									
0.0 dB Mute Input A	0.0 dB Mute Input B	0.0 dB Mute Input C	0.0 dB Mute Input D	ALF	A HF	BLF	B HF	CLF	C HF	DLF	D HF

# MONITOR PAGE

NST Audio E	148 - Device 1	8									
Device 1     ID       Routing Limiters     EQ     DEQ     Presets     System     Monitor     Routing Mode : Mix Matrix											
ЕQ	_ <u>в</u> _	С 	D	1 Limiter Threshold 22.0 dB EQ	2 Limiter Threshald 22.0.dB 	3 Limiter Threshold 22.0 dB EQ	4 Limiter Threshold 22.0 dB EQ	5 Limiter Threshald 22.0 dB 	6 Limiter Threshald 22.0 dB _EQ_	7 Limiter Threshold 22.0 dB EQ	8 Limiter Threshold 22.0 dB EQ
Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms	Phase Delay 0.00ms
0.0 dB Mute	0.0 dB Mule Input B	0.0 dB Mute	0.0 dB Mute Input D	0.0 dB Mais Output 1	0.0 dB Mule Output 2	0.0 dB Mine Output 3	O.O dB Mute Output 4	0.0 dB Muter Output 5	0.0 dB Mute Output 6	0.0 dB Muns Output 7	0.0 dB Mule Output 8

Clicking on the Monitor button will show a large monitor page.

This page has no exclusive controls; it's just a more visual page showing larger metering and access to common controls.

#### LINKING MANAGER IN DETAIL

Linking Manager	2 2	Ĵ
Add Device Link Delete Device Link	Link Properties	
Links	🔲 Link All	
Input Gain Link	Input Gains	Output Gains
	🛄 Input Delays	Output Delays
	Input Compressors	Output Limiters
	🔲 Input EQ	Output EQ
	🔲 Input DEQ	Output DEQ
	Matrix	
	Devices In Link	Available Devices
	Device 1 Device 2	Device 3
		>>

Linking Manager allows various parameter groups to be linked across multiple devices – this allows parameters specified in the link to be adjusted in real time on any device in the link - all devices in the link will respond together immediately to the desired parameter setting.

To access the Link Manager, click / tap on the chain link icon on the toolbar.

To set up a link, select the Add Device Link button.

This will cause a link name to appear in the Links window - double click / tap the device link to rename it, if desired.

Now choose the parameter group to link from the Link Properties section.

Link All will link all the parameters across specified devices.

Link All Accept will link only the parameter groups <u>not</u> selected from the options given.

Now choose which devices are to be contained within the link, by selecting a device in the right-hand Available Devices window and clicking on the << button to add it to the link window to the left. (Devices can be removed from a link by selecting it in the left Devices In Link window and clicking on the >> button).

Repeat this for all devices you wish to be contained in the link.

Once a link has been added, the chain link icon on the toolbar will glow green.

The example shown above will link the input gains on Device 1 and Device 2.

Note that you can set up multiple links, by clicking / tapping on the Add Device Link button to add another.

PLEASE NOTE: This feature does not allow for any offsets, so if any parameter in the link is adjusted, all devices 'jump' to this value initially!

#### SYSTEM SNAPSHOTS IN DETAIL



System Snapshots store all of the current settings on all devices defined to memory within the current D-Net (\*.NST) file. This allows quick storing and recalling of settings across the entire current system.

(Note that System Snapshots are not stored or sent to connected devices; the feature is specific to the D-Net software, so remember to save your file!).

To access System Snapshots, click / tap on the camera icon on the toolbar.

To store a System Snapshot, click / tap on the Store button - this will store all current settings to this snapshot.

Double click / tap a snapshot to rename it if desired.

To store multiple System Snapshots, click / tap on the Store button again, whereby you will be prompted whether to create a new snapshot or overwrite the snapshot highlighted in the snapshot list.

To recall a snapshot, click / tap on the snapshot you wish to recall and then click / tap the Recall button.

To delete a snapshot, click / tap on the snapshot you wish to delete and then click / tap the Delete button.

Once a System Snapshot is stored, the camera icon on the toolbar will glow green.

PLEASE NOTE: System Snapshots recall seamlessly and instantaneously, so please be aware of recalling a snapshot that may contain parameters or routing that may damage your equipment.

### SAVING AND LOADING, COPY AND PASTING PARAMETERS

NST Audio D48 - Device 1				
Device 1     Counting     Count				
Compressor Compressor			5 6 45 0.0 dB 0.0 dB 0.0 dB	
Threshold Threshold Threshold 22.0 dB 22.0 dB 22.0 dB 22.0 dB 4tack Attack 4tack 4500ms 4.500ms 4.500ms	IB 22.0 dB .45 0 k Attack 0.0 dB			-45 <sup>°</sup> 0 -45 <sup>°</sup> 0 0.0 dB 0.0 dB 0.0 db
Release         Release <t< td=""><td>ms 720.0ms .45 🖓</td><td></td><td>-45<sup>V</sup>0 -45<sup>V</sup>0 0.0 dB 0.0 dB</td><td></td></t<>	ms 720.0ms .45 🖓		-45 <sup>V</sup> 0 -45 <sup>V</sup> 0 0.0 dB 0.0 dB	
Knee Knee Knee Knee Knee Knee Knee Knee		-45 <sup>3</sup> 70 -45 <sup>3</sup> 70 -45 <sup>3</sup> 70 0.0 dB 0.0 dB 0.0 dB 0.0 dB		-45 0 0.0 dB EQ EQ EQ EQ
Phase Phase Phase Phase Delay Delay 0.00ms 0.00ms	y Delay Delay	Phase         Phase         Phase           Delay         Delay         Delay           0.00ms         0.00ms         0.00ms	Phase Phase Delay Delay 0.00ms 0.00ms	Phase Phase Delay Delay 0.00ms 0.00ms
		Load Output Channel Settings Save Output Channel Settings Copy Output Channel		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10 10	Copy Device	-10	5 15
0.0 dB Mute Input A 0.0 dB 0.0 dB Mute Input B	Mute Mute	0.0 dB 0.0 dB 0.0 dB Mater Mater Mater Output 2 Output 3 Output	Mute Mate	0.0 dB 0.0 dB Mule Mule Output 7 Output 8

To quickly copy channel settings, or save them to file, right mouse click\* on an output channel in either the Routing page or Monitor page. Right click an output channel again to paste or load the settings into the channel selected.

[\*If using the Apple iPad app version of D-Net, press and hold a channel to enable the copy and paste menu – Note: savings settings to file is not available on the app]

Alternatively, the entire device can be copied and then pasted into another. Once a channel has been copied, and another channel is right clicked, the paste options are shown as below:

Load Output Channel Settings Save Output Channel Settings Copy Output Channel Paste Output Channel Paste Output Channel EQ + Xover Only Paste Output Channel DEQ Only Copy Device

### What computer operating systems is D-Net compatible with?

- D-Net is compatible with Microsoft Windows Vista and above, Apple Mac and Apple iPad OS9 and above.

#### How do I make connections to multiple devices, so I can control them at the same time?

- You will need a multiple port network router or switch. These are very common, and are available from computer stores and many online shops. They are generally inexpensive, so we advise purchasing one from a leading manufacturer, such as Netgear. If you want the option of a WiFi connection too, then a multiport router is recommended. They generally come with four Ethernet ports, allowing a wired connection to your computer, and three ports to connect up to three devices – if a WiFi link is used, then all four Ethernet ports can be used.

If you require only a wired link, then network switches are available in many different Ethernet port sizes. Note: You can simply connect network switches and routers together, to expand the number of Ethernet ports required!

#### My computer hasn't got a physical CAT5 Ethernet port, so how can I make a connection?

- We recommend you use a USB to Ethernet adapter.

These are very common, and are available from computer stores and many online shops. They are generally inexpensive and work very well, but we obviously cannot guarantee that every model available will work, so we advise purchasing one from a leading manufacturer (such as Netgear, Belkin, Cisco, TP Link), as we have tested several of these devices, and found they work perfectly.

### Can I utilise a WiFi connection, to my router / hub to establish a connection?

- Yes. Just set-up a standard WiFi link, as you normally would between your computer and router, and D-Net will do the rest!

### Can multiple computers, running D-Net, be used at the same time?

- This is possible, but not recommended; as any changes made using one instance of D-Net will not be reflected on another computer (and vice-versa), unless the software is taken offline and then put back online, to fetch any changes.

#### Why won't D-Net connect to any units?

- Check that the computer or tablet is connected to the correct network that the units are connected to.

- Check your password matches what is set on the router (if applicable)
- Check that IGMP Snooping is disabled.
- Check that any Passthru features are enabled.

- Give the app ample time to locate all connected units. Depending on IP allocation etc, in rare cases, it can take up to a minute for some connected devices to appear on the app.

- Check the network lights on the units. The Link light should be on steady and the Activity light should be flashing...
- Check all units are physically connected to the router or switch with suitable CAT5 (or above) cables.
- Check all units are powered on.
- Check for faulty network cables / try replacing cables to units that are not responding.
- Check the port settings for any management if using a managed switch.

- Check the latest version of D-Net is installed, by clicking on the Help menu, then 'Check for updates...' or check the Apple App Store, if using an iPad. The latest versions are listed and available on our website too.

- Check the units contain the latest firmware. Firmware updates are included in D-Net, so if one is available, D-Net will show a warning triangle on devices in the rack, and also on the System page of devices.

### IPAD SPECIFIC FAQS (FREQUENTLY ASKED QUESTIONS)

### Can the iPad app be installed on any type of iPad?

- Yes, the app will run on any iPad running iOS 9.0 or later, but it is best suited to larger iPad screen sizes.

#### Can the iPad app be installed on an iPhone?

- No, the app is designed specifically for an iPad, due to available screen size and usability.

#### The iPad app doesn't appear to have installed on my tablet?

- Check the iPad has been synced with iTunes, if the app was downloaded on a computer.

- The iPad app icon will sometimes appear on a page other than the one you were expecting. Check any other pages that you may have in use or search for app to locate it.

#### Can a computer be used at the same time as using the iPad app?

- This is possible, but not recommended; as any changes made using the iPad app will not be reflected on the computer (and vice-versa) until the software is taken offline and then put back online, to retrieve any changes.

#### Is it possible to load or save files on the iPad app?

- This feature is not included in the app; the app is designed to be a live tool. Saving or loading files (including preset libraries and current settings files) must be done on a computer.

#### Why does the iPad app go offline when another app is used or the app is open in the background?

- This is done on purpose and the way the app is designed. Apple recommends this as running the app in the background would consume a lot of power, due to continuous communication, particularly if it was still running in the background by mistake.

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If you have any questions or comments about the information contained within this manual, or require further assistance, then please do not hesitate to contact us at: **www.nstaudio.com** 

Thank you

The NST Audio team