



Cortex Control

Version 1.0.0 for Windows® and macOS®

User Manual

2024



Contents

Introduction 3

Getting Started 4

Basic Requirements 4

File Locations 5

Installing Cortex Control 5

Updating Cortex Control. 5

Uninstalling Cortex Control 5

Startup Process 6

Global Features 7

Contact Shortcut 7

Main Section Modules. 7

Undo & Redo Buttons 7

Quad Cortex Master Volume Knob 7

Profile Avatar 7

Main Contextual Menu 8

Utility Bar 8

Tuner 9

Tempo 9

Preset MIDI Out 10

Gig View. 11

CPU Meter. 12

GRID Section 13

Device List. 14

Stereo & Mono Devices 15

Audition Mode 16

The Grid. 17

Working in The Grid. 18

Parameter Editor Menu 20

Parameter Editor Layouts 21

Expression Pedal Assignment 26

Expression Bypass 27

Preset Explorer. 28

Preset Browser. 28

Saving Presets 29

Scene Blocks 30

Modes Configuration 30

Hybrid Mode 31

DIRECTORY Section 32

Quick Actions 32

Working in The Directory 33

Presets Directory. 35

Neural Captures Directory. 36

Impulse Responses Directory 37

Recent & Favorites Presets 38

Sort Items 38

Search Items 39

Bulk Actions 40

I/O Settings 43

Analog Audio Ports 44

USB & MIDI Ports 44

Expression Pedal Range Calibration . . 45

Global EQ 46

Neural Capture 47

Connection Diagram 48

Capture Audio Settings 50

Capture Process 51

Device Settings 52

My Account 52

Backups. 53

Quad Cortex Settings 54

Keyboard Shortcuts 58

Support 60

Corporate Contact 60



01

Introduction

Cortex Control is a fully integrated desktop controller that lets you manage every feature and setting of your Quad Cortex effortlessly in a sleek and intuitive desktop interface.

- **Boots in seconds**

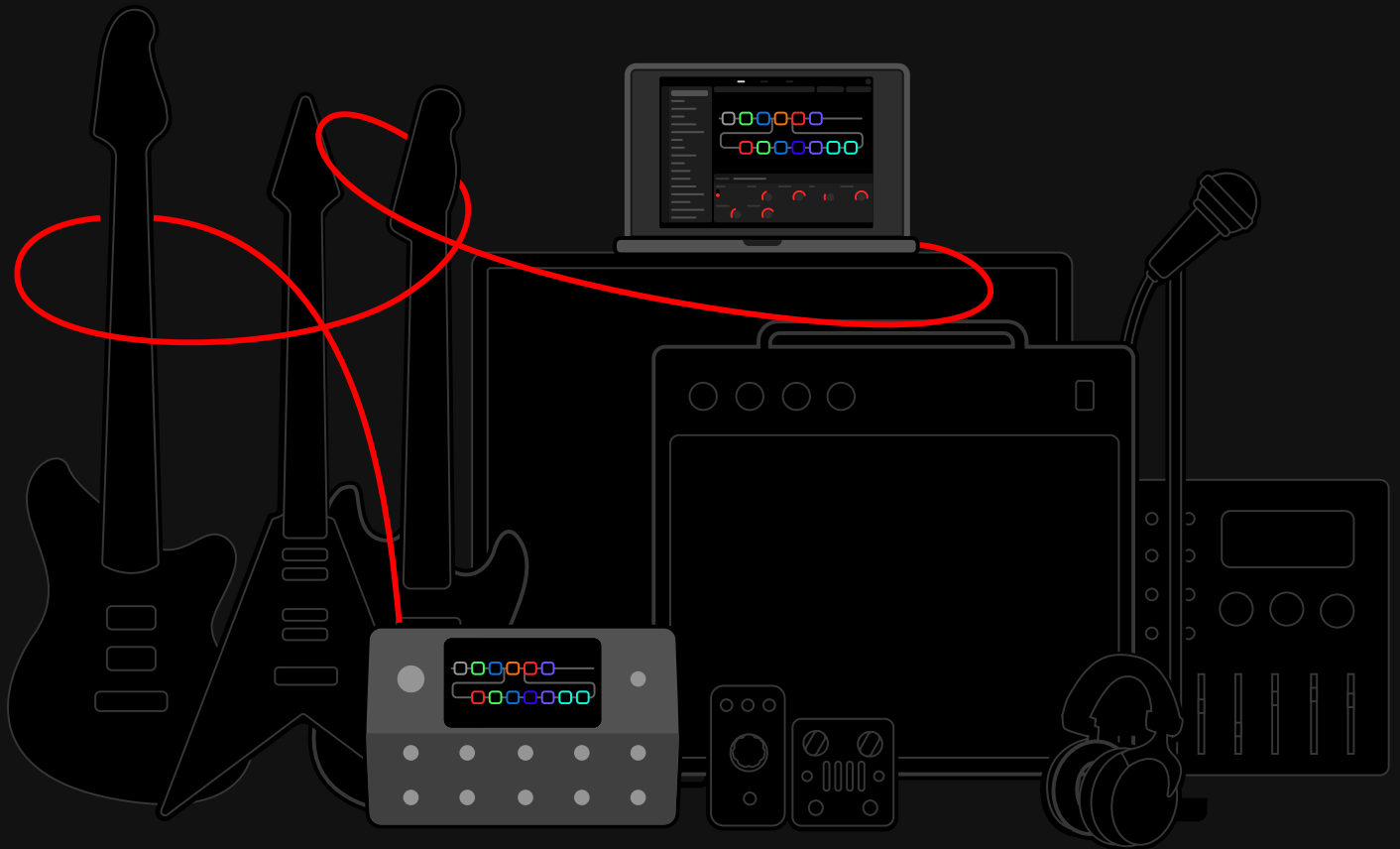
Cortex Control boots in seconds and instantaneously syncs your Quad Cortex's current state. Pick up where you left off without any interruptions in your workflow.

- **Optimized workflow**

Intuitive mouse actions and keyboard shortcuts ensure that tweaking parameters, managing files, carrying out tasks, and navigating is smooth and efficient.

- **Available for free for macOS® and Windows®**

Download Cortex Control today for macOS and Windows computers.





02

Getting Started

New to Cortex Control and have a lot of questions?
This is your guide to the basics.

Basic Requirements

Getting set up is very simple, but there are a few things you will need before you begin.

• Cortex Control App

Make sure the Cortex Control app is properly installed and up to date. You can [download the latest version from our website](#).

• Quad Cortex unit

Operation without a Quad Cortex connected via USB to the computer is not supported. On Windows® computers, the [Quad Cortex ASIO® Driver](#) has to be installed first. Driver installation is not necessary on Mac® computers.

• Computer

Any Windows® PC or Apple Mac® capable of audio processing. Make sure your machine meets the minimum required specifications:

Mac® minimum requirements

- Intel Core i3 Processor (i3-4130 / i5-2500 or higher)
- Apple Silicon (M1 or higher)
- 8GB of RAM or more
- macOS 11 Big Sur (or higher)

Windows® minimum requirements

- Intel Core i3 Processor (i3-4130 / i5-2500 or higher)
- AMD Quad-Core Processor (R5 2200G or higher)
- 8GB of RAM or more
- Windows 10 (or higher)

• Instrument or Microphone

The instrument you wish to use the Quad Cortex with, and an instrument or microphone cable.

• Studio Monitors or Headphones

Once the instrument signal is being processed by the Quad Cortex, make sure your studio monitors, FRFR Cabinet, Poweramp, or headphones are connected to the Quad Cortex.



Cortex Control requires a Quad Cortex to work properly.



Download the latest Quad Cortex ASIO Driver from [our website](#).



Cortex Control requires 100MB of free storage space.



Cloud features require Internet connection.



File Locations

Cortex Control will be installed in default directories unless a different custom location is selected in the process.

• macOS®

By default, the app files are installed in the following directories:

- **Standalone App:** Macintosh HD/Applications/Neural DSP/
- **Settings Files:** <User Folder>/Library/Application Support/Neural DSP/Cortex Control
- **Local Backups:** <User Folder>/Library/Application Support/Neural DSP/Backups
- **PDF Manual:** Macintosh HD/Library/Application Support/Neural DSP/Cortex Control

• Windows®

By default, the app files are installed in the following directories:

- **Standalone App:** C:\Program Files\Neural DSP\Cortex Control
- **Settings Files:** C:\Users\<Your Profile>\AppData\Roaming\Neural DSP\Cortex Control
- **Local Backups:** C:\Users\<Your Profile>\AppData\Neural DSP\Backups
- **PDF Manual:** C:\Program Files\Neural DSP\Cortex Control

Installing Cortex Control

To install Cortex Control, download the latest version available from our website and install it by running the installer.



Download Cortex Control from [our website](#).

Updating Cortex Control

To update Cortex Control, download the latest version available from our website and install it by running the installer. There is no need to uninstall the previous version as the app files will be overwritten during the process.

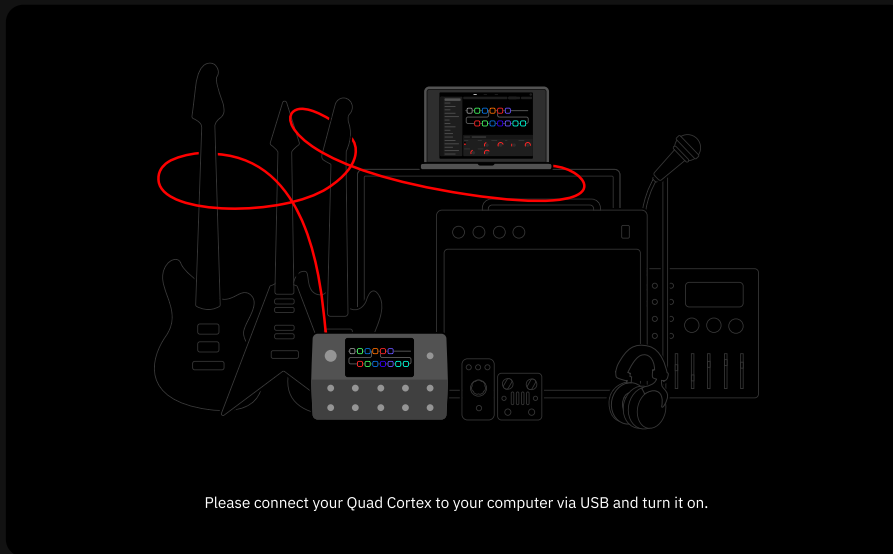
Uninstalling Cortex Control

To uninstall Cortex Control on macOS®, delete the files manually in their respective folders.

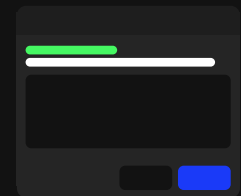
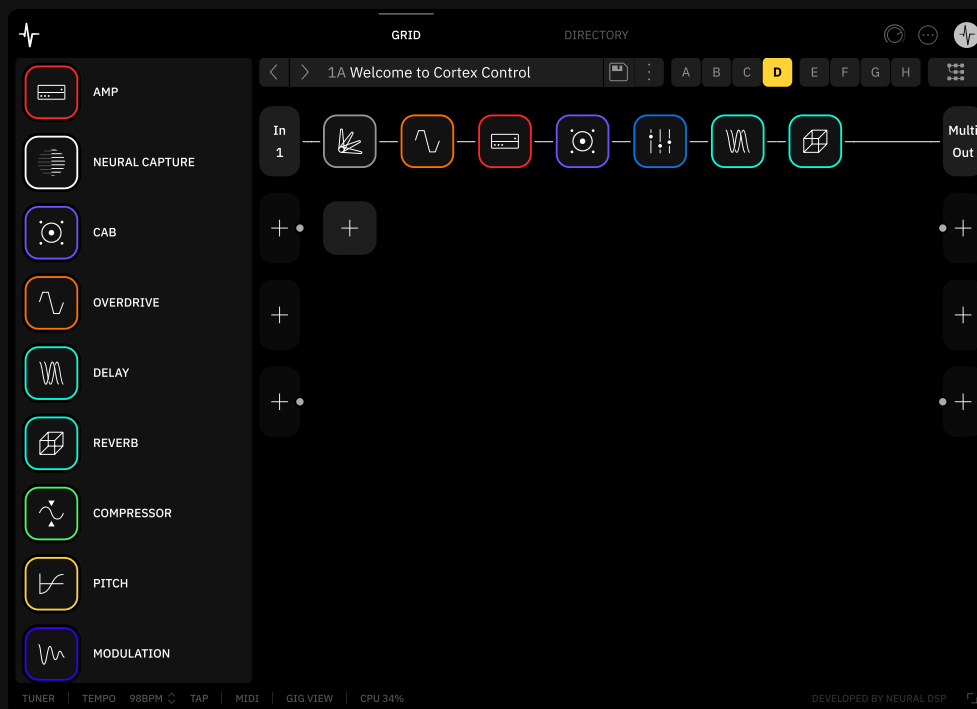
On Windows®, Cortex Control can be uninstalled either from the Control Panel or by selecting the “Remove” option from the installer.

Startup Process

When you first launch Cortex Control, the app checks if a Quad Cortex unit is connected to your computer via USB.



To access the **GRID**, make sure your Quad Cortex is turned on and connected to your computer via USB.



At startup, Cortex Control checks automatically if your Quad Cortex is up to date. In case of a version mismatch, a popup window will offer the option to download the latest version available.

The GRID section shows the layout of the Preset currently loaded on your Quad Cortex. Here you can add device blocks to customize your Preset or create a new one from scratch.



03

Global Features

Familiarize yourself with the user interface, which is broken down into different sections accessible by modules at the top and bottom of the app window.

Contact Shortcut

“Contact and About Us” section shortcut.



Main Section Modules

Cortex Control is organized in two main sections called GRID and DIRECTORY.

GRID

DIRECTORY

Click on a section to access it.

Undo & Redo Buttons

Click it to reverse/redo the last action performed in a main section.



Quad Cortex Master Volume Knob

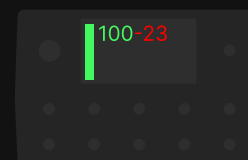
Quad Cortex volume control. Click-and-drag it up to turn it clockwise and raise the volume. Moving the cursor down will turn the knob counterclockwise, therefore lowering the volume.



The current volume can be different from the actual Quad Cortex's volume wheel position. How do they sync?



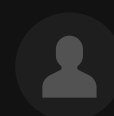
The Quad Cortex's volume wheel will be deactivated whenever the current volume is higher or lower than its current position. Turn the Quad Cortex's volume wheel until it matches the current volume selected in the Cortex Control app to re-sync.



Profile Avatar

“My Account” section shortcut.

Use it to access the Device Settings or Link/Unlink your Quad Cortex with your Neural DSP account.





Main Contextual Menu

Click to quick access multiple sections and features.



- **NEW NEURAL CAPTURE:** Click to create a new Neural Capture. Your Quad Cortex must be on GRID view to complete this operation.
- **UNDO & REDO:** Click to reverse or redo the last action performed on a main section.
- **DEVICE SETTINGS:** Click to access the Quad Cortex settings.
- **I/O SETTINGS:** Click to access the Quad Cortex's I/O Settings menu.
- **MODE CONFIGURATION:** Click to access the Quad Cortex's Modes Configuration screen where you can re-order modes as well as create a Hybrid Mode.
- **ABOUT CORTEX CONTROL:** Click to access Software information such as CorOS version, App version, Quad Cortex's Serial Number, etc.
- **HELP:** Click to display useful information such as keyboard shortcuts and support articles.
- **CHECK FOR UPDATES:** Click to check if an official CorOS update is available for your Quad Cortex.

Utility Bar

Click to quick access useful tools and features.

TUNER | TEMPO 98BPM  TAP | MIDI | GIG VIEW | CPU 34% DEVELOPED BY NEURAL DSP 

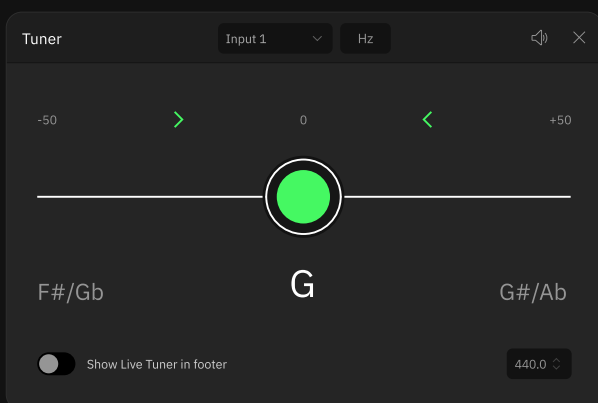
- **TUNER:** Click to open the Quad Cortex's Tuner interface.
- **TEMPO:** Click to access the Quad Cortex's Tempo screen. Use it to set different tempo BPM values for each SCENE, PRESET, or globally. The Quad Cortex's tempo LED also can be turned On/Off on this screen.
- **BPM:** Displays the current Quad Cortex's tempo value. Click to enter a custom BPM value with the keyboard. Click-and-drag it vertically to increase/decrease the the BPM value.
- **TAP:** Controls the Quad Cortex's tempo by clicking. The tempo is set as the interval between the last two clicks.
- **MIDI:** Click to access the "Preset MIDI Out" menu.
- **GIG VIEW:** Click to open/close the Gig View on both Quad Cortex and Cortex Control window.
- **CPU:** Click to toggle the CPU monitor. It shows the overall CPU usage of the current Preset, usage per device block, and also the Global EQ and Input Gate's bypass status.
- **WINDOW SIZE:** Click to resize the Cortex Control window to three fixed sizes (Small, Medium & Large). When closing and re-opening the app, the window size will default to the latest selected option.



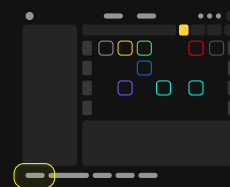
Drag the edges of the app window to continuously resize it.

Tuner

You can access the Quad Cortex's built-in chromatic tuner from the bottom utility bar in Cortex Control. It works by detecting the pitch of the note that is being played and then displaying it on the screen.



- **TUNING Display:** Displays the note that is being played and its current pitch.
- **INPUT Combo Box:** Click to determine which input the tuner will pick the signal from (Input 1 by default).
- **MODE Switch:** Toggles the pitch value between Cents and Hz.
- **MUTE Button:** Click to toggle the signal monitoring while the tuner is enabled (Muted by default).
- **LIVE TUNER Switch:** Click to enable/disable the Live Tuner in the footer (Utility Bar).
- **FREQUENCY Selector:** Adjusts the reference pitch (400-480Hz).



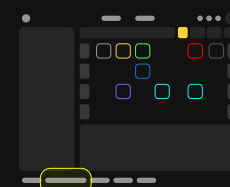
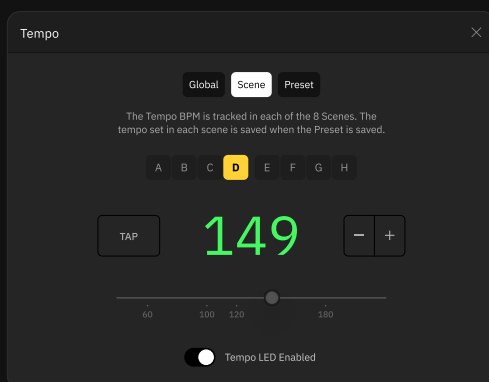
The meter lights stream toward the left if the input pitch is flat, or toward the right if the input pitch is sharp.



CMD/CTRL + Click on the TUNER tab in the Utility Bar to toggle the Live Tuner.

Tempo

Quad Cortex Tempo configuration. Click the TEMPO tab in the bottom utility bar to access it.



- **TEMPO Modes:** Click to change the Quad Cortex's Tempo behavior. In Scene and Preset modes, the BPM value will be saved when the current active Preset is saved.
- **TAP Button:** Controls the Quad Cortex's tempo by clicking. The tempo is set as the interval between the last two clicks.
- **BPM Controls:** Click on the green digits to enter a custom value with the keyboard. Click the +/- buttons or Click-and-drag the slider to control the BPM speed.

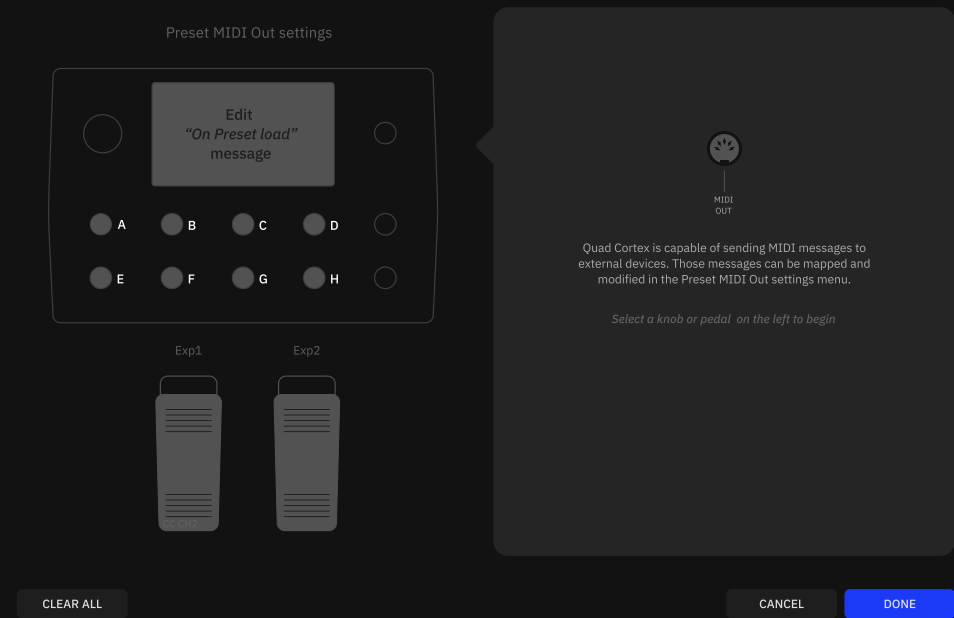



Tempo LED Switch

Click to activate/deactivate the blinking Tempo LED light on Quad Cortex.

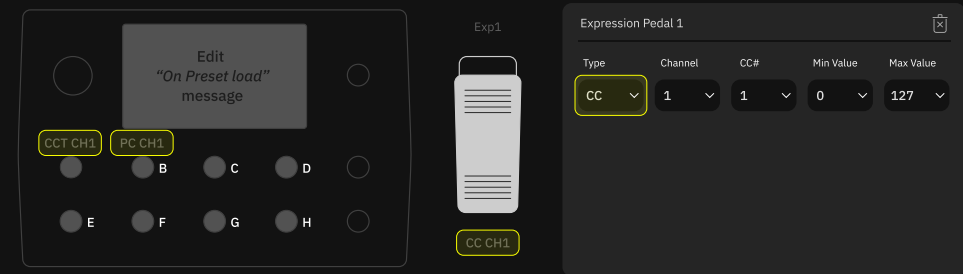
Preset MIDI Out


Quad Cortex can send MIDI messages to external devices. Those messages can be mapped in the Preset MIDI Out menu. Click the MIDI tab in the bottom utility bar to access it.



 Saving the changes made in a Preset will save the “Preset MIDI Out” messages as well.


Click on a **Knob** or **Expression Pedal** to map a MIDI message.



 Click the trash icon to delete the current assigned message(s).

- **ON PRESET LOAD MESSAGE Module:** Click to setup up to 12 MIDI messages that will be sent simultaneously once the current Preset is loaded.
- **A-H Footswitches:** Click to assign a MIDI message. Once assigned, you can modify its Type, Channel, and Program values.
- **1 & 2 Expression Pedals:** Click to assign a CC MIDI message. Once assigned, you can modify its Channel, CC#, and Program values.

 CC and PC MIDI messages can only be sent when SCENE or STOMP modes are active. HYBRID modes also can send PC and CC messages.

Click  to return to the GRID.

ON PRESET LOAD MIDI messages will be sent upon loading a Preset.

Gig View

The Gig View editor allows to instantly visualize what the footswitches are assigned to. Click on the GIG VIEW tab in the bottom utility bar to open its interface.

• PRESET Mode

⋮ Gig view	A	B	C	D
PRESET	Brit 2203	Brit Plex100 Normal	US TWN Vibrato	Rols Jazz CH120
A/B C/D SCENE	E	F	G	H
STOMP	California Tremo Red	EV101III Red	Freeman 100 Rhythm	D-Cell H4 Ch3
Parameter Editor				

The editor displays the Preset assigned to each footswitch slot. Click on any slot to immediately load its assigned Preset. Double-click on a User Preset slot to edit its **Preset Name**.

• SCENE Mode


⋮ Gig view	A	B	C	D
PRESET	British 2203	+MX ClassicOD	+Brit Governor	+Rodent Drive
A/B C/D SCENE	E	F	G	H
STOMP	Dry Amp	+MX & Dlvs	Solo Boost	Juicy Low Gain
Parameter Editor				

The editor displays the Scene assigned to each footswitch slot. Scenes can be copied, swapped, and renamed via Gig View. It's also possible to change the colors assigned to each Scene.

• STOMP Mode

⋮ Gig view	A	B	C	D
PRESET	Bad Horse	Room	Compulsive Drive	Brit Plexi 100 Bright
A/B C/D SCENE	E	F	G	H
STOMP	Empty	Multiple	Digital Delay	Empty
Parameter Editor				

The editor displays the device blocks assigned to each footswitch slot. Multiple blocks can be assigned to a single footswitch slot.

Click  to clear an assignment. Double-click a footswitch slot assigned to multiple blocks to change its **name**.

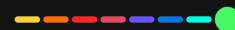


Clicking the GIG VIEW tab in the bottom utility bar will open/close its interface on both Cortex Control and Quad Cortex.



Click the contextual menu and select “Visible on QC, click to hide” to close the Gig View on Quad Cortex.

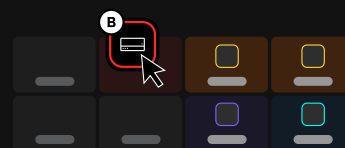
Custom Scene Name



Double-click on a Scene slot to customize its **name** and **color**.



Drag-and-drop a Scene slot to another to swap their placement. **Hold ALT** to copy and paste a Scene to the target slot.



Drag-and-drop device blocks from the GRID to slots in the Gig View Editor to assign them.

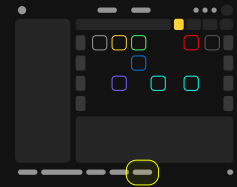


Parameter Editor:

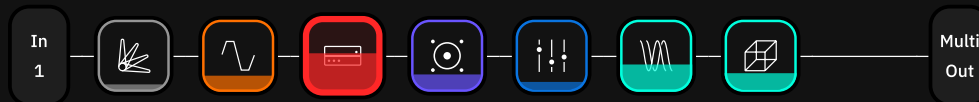
Click to expand or collapse the blocks' Parameter Editor menu whenever the Gig View interface is opened.

CPU Meter

The CPU Monitor displays the overall CPU usage of the current Preset, usage per device block, and also the Global EQ and Input Gate's bypass status.



Click the CPU tab in the bottom utility bar to activate it.



Device blocks on the grid fills up to represent its influence on the CPU usage.

CPU 34%



CPU 83%



The **Global EQ** as well as the **Input Gates** are **automatically disabled** when a resource-intensive Preset is loaded.



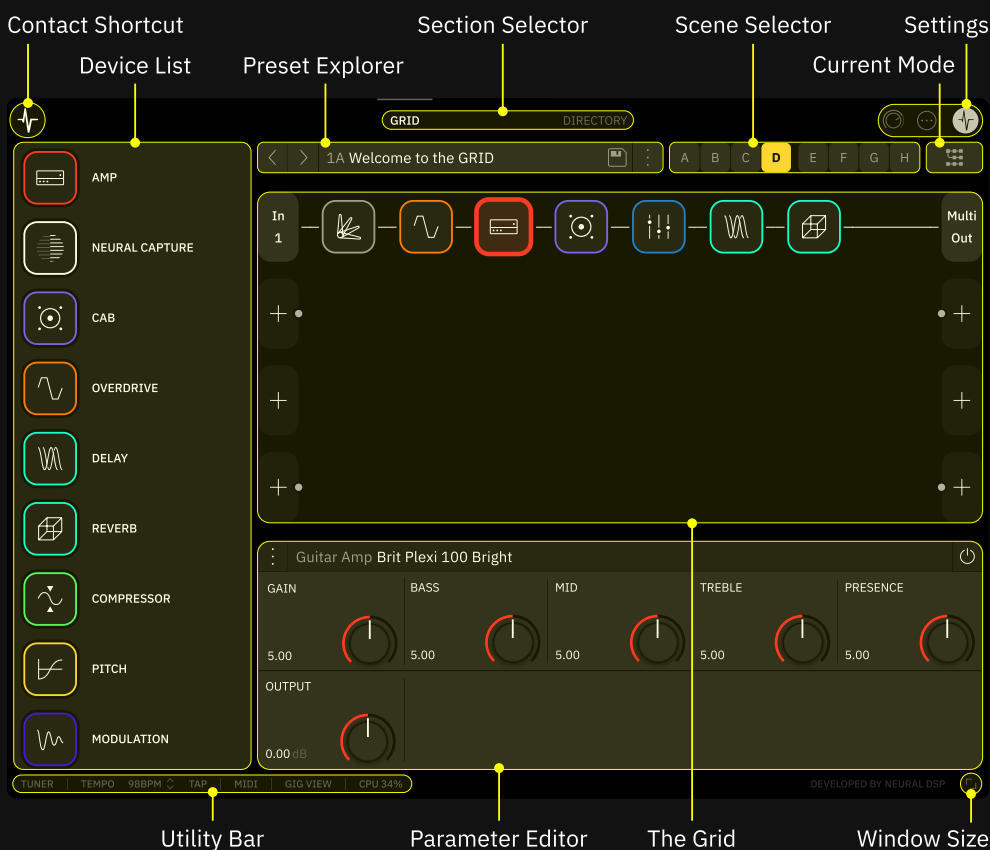
Bypassing or Muting device blocks does not decrease the CPU consumption.

Items in the **Device List** will be disabled when there is not enough CPU to load them.

04

GRID Section

Cortex Control features an intuitive and expanded version of The Grid: The place where you can add multiple device blocks to build a virtual rig effortlessly.



Click on the GRID tab to access its interface.

The GRID section displays virtual devices, signal flow, parameters, active Scene, Tempo, and CPU usage of the current Preset loaded on your Quad Cortex in a single easy-to-use interface.

Start building your Preset by **clicking a free slot** on The Grid to add your first device block from the Device List. Dragging-and-dropping devices from the Device List directly onto The Grid is also possible.

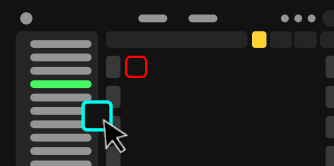
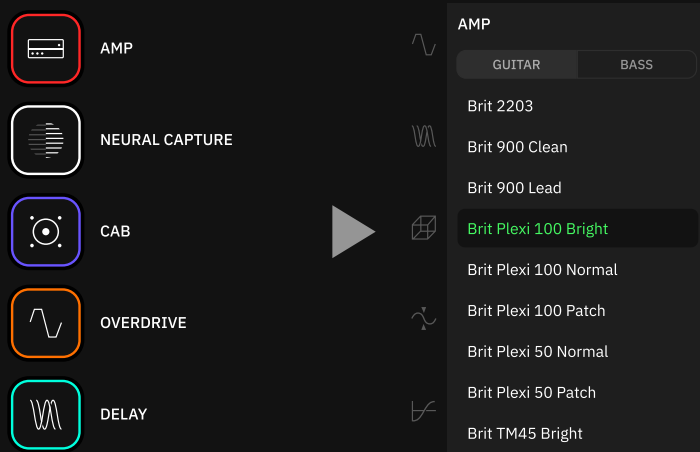
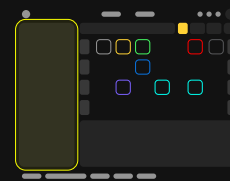


The GRID user interface will adapt depending on which item is currently selected. Parameter Editor menus will expand or collapse accordingly, always leaving the Grid visible for ultimate workflow performance.

Device List

The Device List displays all the virtual devices in a single multi-level browser organized in different categories.

Click on an empty slot on The Grid  to access its interface.



You can also **drag-and-drop** virtual devices from the Device List directly to any available slot in The Grid.

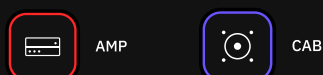
Choosing a category will expand its virtual devices in place. Once you **click** any virtual device in the Device List, it is automatically loaded onto the selected slot in The Grid.

Use the **mouse-wheel** to scroll through categories and virtual devices within the Device List.



• Special Filters

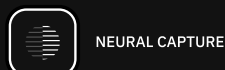
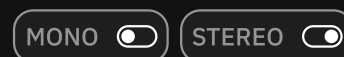
Certain categories contain **subcategories** at the top of the Device List.



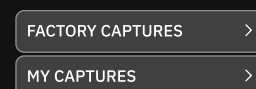
Click the **Tabs** at the top of the Amp category to switch between GUITAR and BASS amp devices.



Click the **Mode Switch** at the top of the CAB category to toggle between *MONO* and *STEREO* Cab blocks.



Click the **FACTORY CAPTURES** and **MY CAPTURES** subcategories to expand/collapse them.



Use the **Search Box** at the top to find a Neural Capture by typing.



Use the **Capture Filter** to filter by *Time Added*, *Preferred Instrument*, or *Type of Capture*.



Click the **Sort Button** to sort Neural Captures by *Name*, *Date Added*, *Author*, *Gain*, and more.





Stereo & Mono Devices

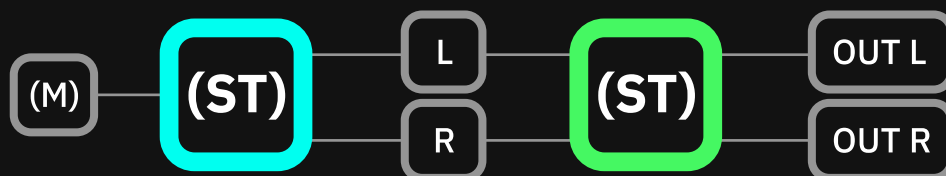
Some virtual devices are available in **MONO (M)** and **STEREO (ST)** variants. Selecting one or another will change how your signal is processed once they are loaded onto The Grid.

- **MONO (M) Devices**



Mono virtual devices process the signal in mono, collapsing the stereo output of any preceding block to mono.

- **STEREO (ST) Devices**



Stereo virtual devices process left and right signals independently, maintaining the output of any preceding block as stereo.

- **MONO (M) Cab & IR Loader**



Mono Cab/IR Loader blocks process the signal in mono. Left and Right sides of the stereo output of any preceding block will be assigned to the left and right Mic/IR slots accordingly.

- **STEREO (ST) Cab & IR Loader**



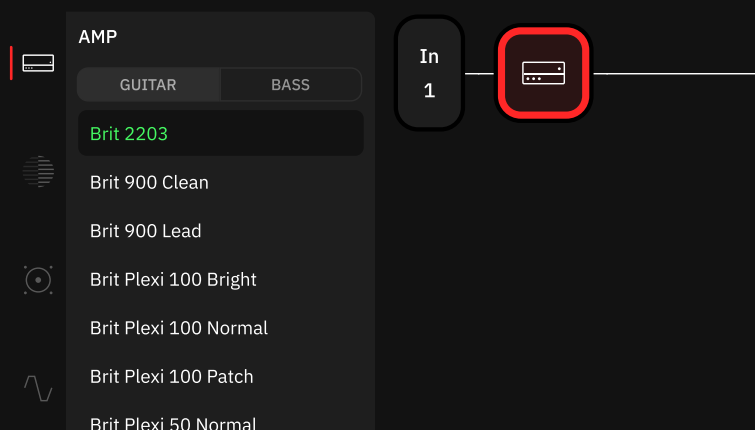
Stereo Cab/IR Loader blocks process left and right signals independently, maintaining the output of any preceding block as stereo. Each side of the signal will be processed by both Mic/IR slots.

Audition Mode

Cortex Control allows you to preview new device blocks without loading them onto The Grid. Therefore, unsaved parameter values of previously loaded blocks will not be affected. This feature is useful for testing blocks without the risk of losing unsaved changes.

• How to use Audition Mode?

First off, **click** on a device block on The Grid. The Device List will show the category of the selected block accordingly.



Then, single-click on another device from the list. The **block** will blink as well as the **virtual device name**. Meaning that the selected device is being auditioned.



You can also audition devices from **different categories**.



Press **Esc** while auditioning a virtual device to cancel this action and return to the previously loaded block.

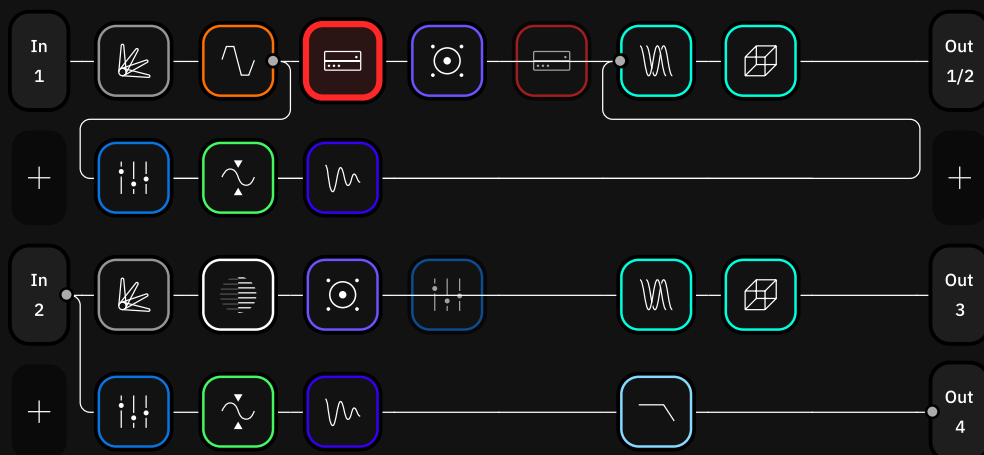


Click an **auditioned virtual device** a second time to load it onto The Grid, replacing the previously loaded block.



CA 1Star Clean 100W Normal

The Grid



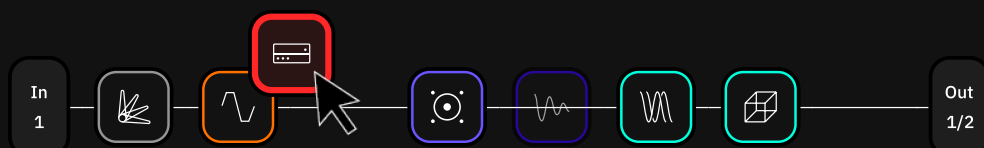
The Grid has four rows of eight slots where you can add, move, and delete device blocks to customize your Preset. All the actions made on The Grid will be reflected on Quad Cortex in real time and vice versa.



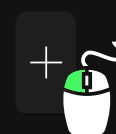
Start building your Preset by **clicking a free slot** on The Grid to add your first device block from the Device List. Dragging-and-dropping devices from the Device List directly onto The Grid is also possible.



Build your virtual rig from left to right. Dragging-and-dropping blocks after you have added them to The Grid is effortless.



Inputs and **Output blocks** are located on either sides of The Grid. **Click** to assign or unassign physical and virtual ports of the Quad Cortex to them.



The Device List will display the Quad Cortex's ports organized into two subcategories: **MONO** and **STEREO**.

- | | | |
|-----------|---------------|-----------------|
| XLR/Combo | USB | Unassigned Port |
| TRS | Grid's Row | Port in use |
| Send | Multiple Outs | Assigned Port |
| Return | Not In Use | |



You can also assign an empty I/O block by clicking on any port from the Parameter Editor menu below The Grid.

Clicking on any port on the Device List will automatically assign it to the selected I/O block.

Working in The Grid

Click on an empty slot on The Grid to display the device categories in the Device List.

...

Single-click a device block to select it. Selecting a block will open its Parameter Editor menu below The Grid.

...

Double-click a device block to bypass it.

...

Right-click a device block to access its contextual menu where you can Set/Reset its parameters' default values, assign expression pedals to its parameters, assign stomp-bypass, and Copy/Paste it.

...

CMD+Click (*CTRL+Click on Windows®*) on multiple device blocks to multi-select them.

CMD+C (*CTRL+C on Windows®*) to copy the selected blocks.

CMD+V (*CTRL+V on Windows®*) to paste the selected blocks into another Preset.

...

Drag-and-drop a device block onto a free slot on The Grid to move it.


...

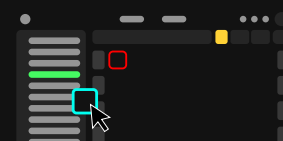
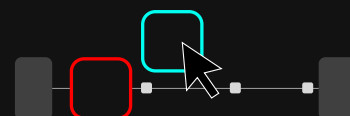
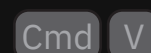
Dragging-and-dropping a device block onto another device block will take its place in The Grid.

...

Dragging-and-Dropping a virtual device from the Device List to The Grid will load it in place.

...

Mouse hover a device block and **click**  to delete it.





Click an I/O block to select it. Selecting an I/O block will display the Quad Cortex's ports in the Device List as well as its Parameter Editor menu below The Grid.

...

I/O Blocks will **light up in red** whenever they are fed beyond the maximum peak level.

...

Mouse hover the Splitter/Mixer nodes to identify them on The Grid.

Click on them to open their Parameter Editor menus below The Grid.

Clicking-and-holding a free slot in The Grid will also open the Splitter/Mixer Parameter Editor menus.

...

Drag-and-drop Splitters and Mixers to any available slot between blocks in The Grid.

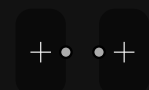
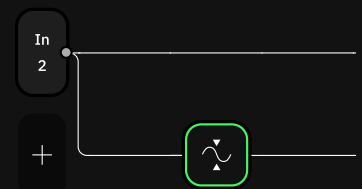
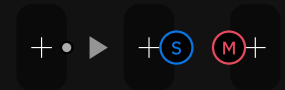
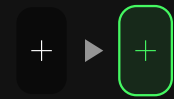
...

Moving a block from Row 1 to Row 2 will create a Splitter/Mixer path automatically.

Moving a block from Row 3 to Row 4 will create a Splitter/Mixer path automatically.

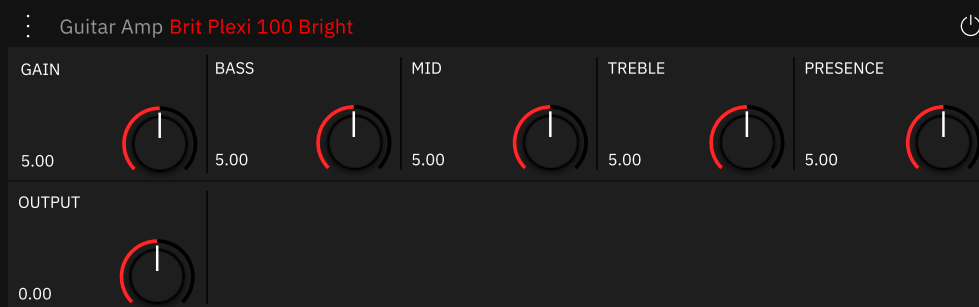
...

Press Backspace to return the selected Splitter/Mixer to its default position.




Parameter Editor Menu

Clicking on any item in The Grid will open its Parameter Editor menu.



The Parameter Editor field will adapt its interface depending on the item selected in The Grid.

• Device block's Contextual Menu

Click  at the top-left corner of the Parameter Editor to access its contextual menu.

- **RESET TO DEFAULTS:** Recall the device's default values.
- **SET PARAMETERS AS DEFAULTS:** Set the current parameter values as defaults.
- **ASSIGN EXPRESSION PEDAL:** Click to open the ASSIGN EXPRESSION PEDAL menu, where you can choose which parameters can be controlled by an expression pedal connected to the Quad Cortex ([Expression Pedal Assignment Instructions](#)).
- **CHANGE BYPASS TO MUTE:** Determines whether the current device block is bypassed or muted when it's deactivated.
- **COPY DEVICE:** Copies the device and its current settings to the clipboard.
- **PASTE DEVICE:** Pastes the device and its current settings to the selected slot in The Grid.



Device Versioning

Some blocks feature multiple versions of the same device. When available, **Legacy** and **New** versions can be switched from the Block's Contextual Menu.

• Parameter Tabs


In most cases, the Parameter Editor menu will expose up to 10 parameters on the screen.



Click the numbered tabs at the top-right corner to navigate through different parameters pages within the same device block.



• Device block's Bypass Switch

Click  at the top-right corner of the Parameter Editor to bypass the current device block.

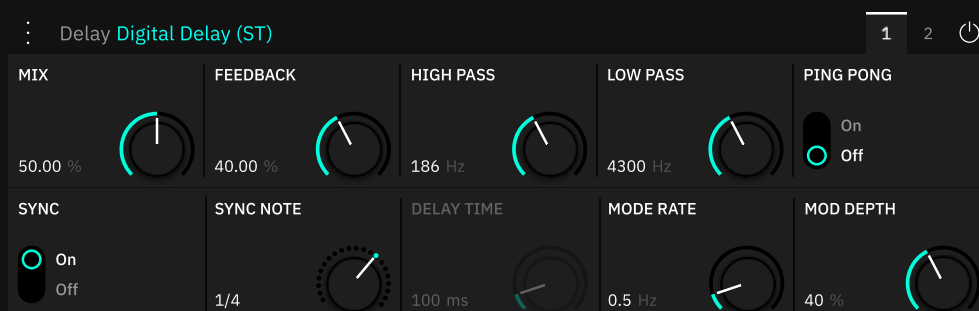
A red stripe will indicate whenever a block is muted instead of bypassed.



Parameter Editor Layouts

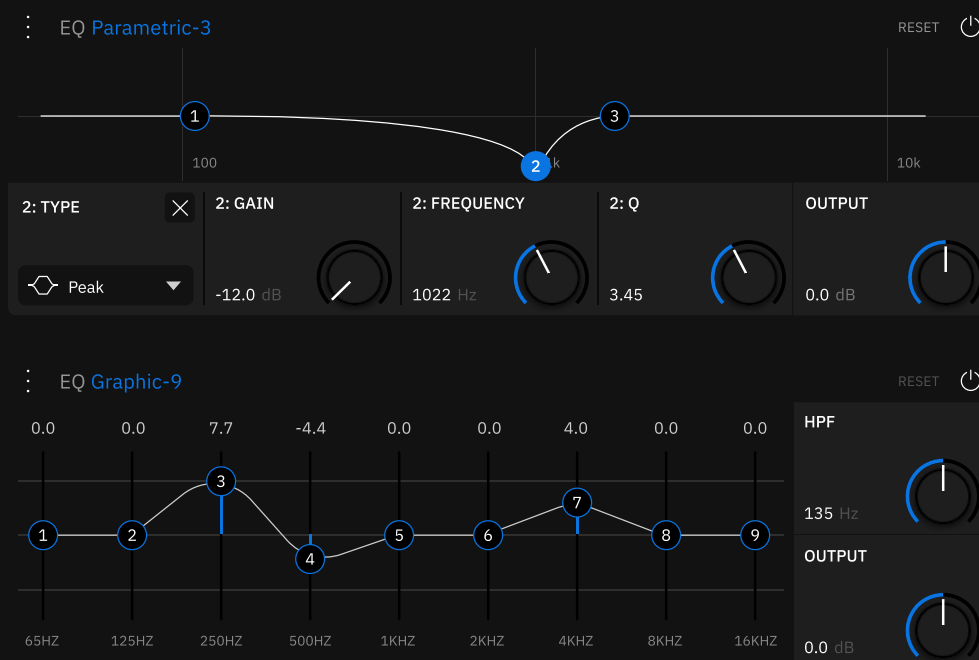
The Parameter Editor field will adapt its interface depending on the item selected in The Grid.

• Simple blocks



Amp and Effect blocks are controlled by **knobs** and **switches**. These are arranged in two rows of five parameters each. Additional controls are organized in tabs.

• EQ blocks



EQ blocks feature **sliders** and **bands**, giving you precise control over different frequency ranges.

Levels are measured in **dB** (Decibels). Positive numbers indicates a boost and negative numbers indicates a cut.

Parametric EQs offer additional settings per band such as **filter type**, **frequency**, and **Q factor (Range)**. Click-and-drag frequency bands with the mouse. The GAIN and FREQUENCY parameters will reflect these changes and vice versa.



Knobs and Sliders are controlled with the **mouse**.

Click-and-drag a Knob up to turn it clockwise. Moving the cursor down will turn the Knob counterclockwise. **Double-click** to recall default values.

While hovering your mouse cursor directly over any parameter, use the **mouse wheel** to adjust it.

To fine-tune values, **hold down the “Option” (macOS®) or the “Control” key (Windows®)** while dragging the cursor.



Click on switches to toggle their state.

Time-based blocks include **SYNC** switches. Depending on their state, certain parameters within the same block could be disabled (greyed-out).



• Cab blocks



Microphones' position can also be controlled by dragging the microphones to the desired spot with the mouse. The POSITION and DISTANCE knobs will reflect these changes accordingly.



Click-and-drag the High and Low Pass Filters with the mouse to the desired frequency.

Cab blocks are a comprehensive cabinet simulation module that features virtual microphones which can be positioned around the speakers. Additionally, in these blocks, you can load your own Impulse Response files.

- **MIC Combo Box:** Dropdown menu for selecting factory microphones and loading your own Impulse Response files.
- **LEVEL Knob:** Controls the volume level of the selected microphone.
- **PAN Knob (M):** Controls the output panning of the selected microphone (Mono Cab blocks only).
- **BALANCE Knob (ST):** Controls the output balance of the selected microphone (Stereo Cab blocks only).
- **POSITION & DISTANCE Knobs:** Control the position and distance of the selected microphone around the speaker cone.
- **PHASE Switch:** Inverts the phase of the selected microphone.
- **HPF Knob:** EQ control that reduces low frequencies from the signal. The higher its value, the less low-frequency content.
- **LPF Knob:** EQ control that reduces high frequencies from the signal. The lower its value, the less high-frequency content.
- **OUTPUT VOLUME Knob:** Adjusts the output level of the block.



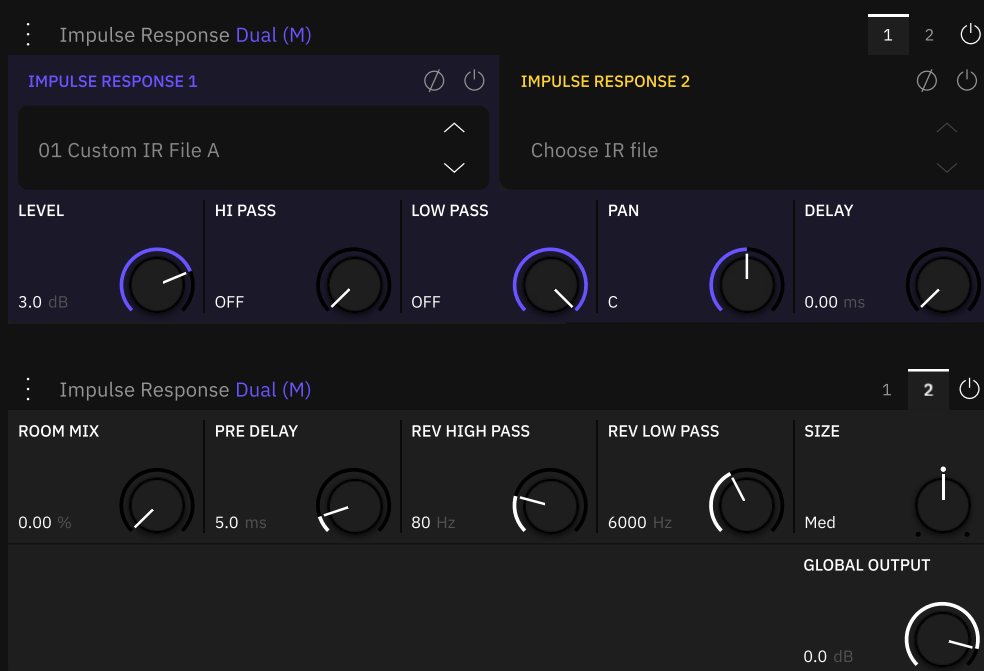
Click on the switches next to the Mic slots to enable or disable the speakers.



POSITION and DISTANCE knobs are disabled when loading custom IR files.



• IR Loader blocks



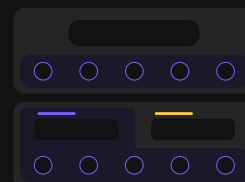
Adding Impulse Responses

Cortex Control allows to add IR files to your Quad Cortex and Cortex Cloud profile ([Page 37](#)).

The IR Loader make it much easier to use third-party Impulse Response files.

PAGE 1

- **IR Slots:** Click to access the IR files stored in your Quad Cortex.
- **PHASE Switch:** Inverts the phase of the selected IR.
- **BYPASS Switch:** Click to bypass the selected IR slot.
- **UP & DOWN Navigation Arrows:** Click to cycle through the IR files stored in your Quad Cortex.
- **LEVEL Knob:** Controls the volume level of the selected IR.
- **HI PASS Knob:** EQ control that reduces low frequencies from the signal. The higher its value, the less low-frequency content.
- **LOW PASS Knob:** EQ control that reduces high frequencies from the signal. The lower its value, the less high-frequency content.
- **PAN Knob:** Controls the output panning of the selected IR.
- **BALANCE Knob (ST):** Controls the output balance of the selected IR.
- **DELAY Knob:** Increase to delay the selected IR up to 25ms.
- **OUTPUT VOLUME Knob:** Adjusts the output level of the block.



Single and Dual IR Loader blocks are available.

PAGE 2

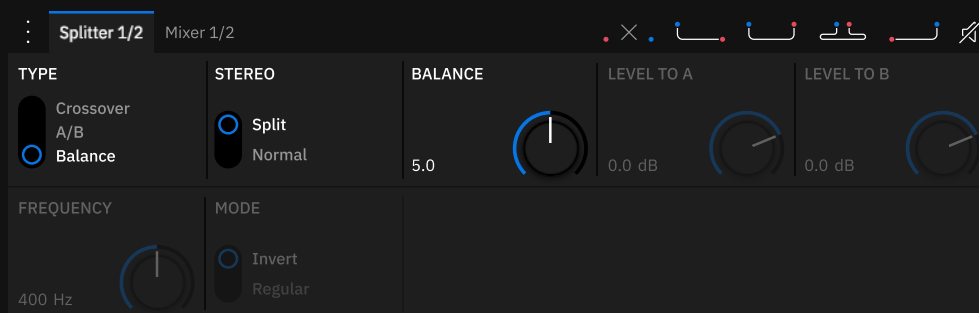
- **ROOM MIX Knob:** Adjusts the amount of room reverb effect that is added to the signal.
- **PRE DELAY Knob:** Delays the reverb's first reflection up to 100ms.
- **REV HI PASS & LOW PASS Knobs:** Control the frequency range of the reverb's high and low-pass filters, accordingly.
- **SIZE Switch:** Determines the size of the room reverb.
- **GLOBAL OUTPUT Knob:** Output volume control for the IR Loader block.



“Lite” versions of the Mono and Stereo IR Loader blocks are also available. The Room reverb has been removed from these versions to reduce CPU consumption.

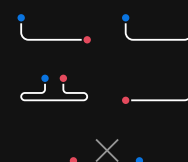
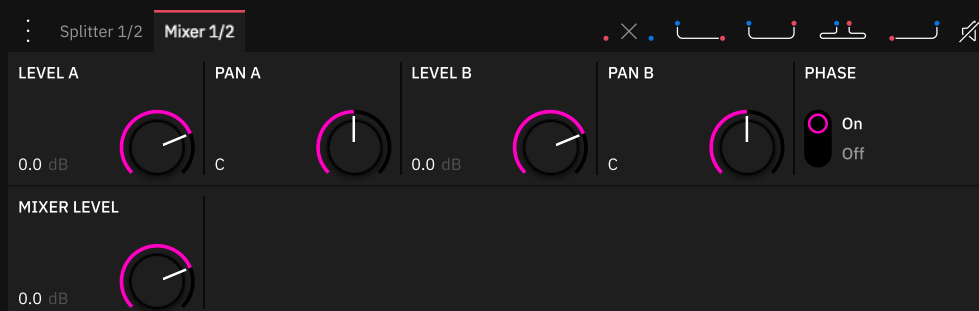


• Splitters/Mixers Nodes



Splitter 1/2 Mixer 1/2

Click the tabs at the top-left of the parameter editor to access the Splitter and Mixer menus quickly.



Click on the **Quick Splits** to update them in The Grid.

Splitters and Mixers allow you to split and merge the signal chain, creating independent audio paths in The Grid.

BALANCE SPLITTER

- **STEREO Switch:** Click to toggle the Stereo Split feature, assigning Left and Right sides of the stereo output of any preceding block to the Main Row (A) and the Splitter/Mixer path (B) accordingly.
- **BALANCE Knob:** Determines the output balance between the Main Row (A) and the Splitter/Mixer path (B).



The STEREO Switch is available for all the Splitter types.

A/B SPLITTER

- **LEVEL TO A Knob:** Determines the Main Row (A) level.
- **LEVEL TO B Knob:** Determines Splitter/Mixer path (B) level.

CROSSOVER SPLITTER

- **FREQUENCY Knob:** Determines the frequency cut value.
- **MODE Switch:** Click to swap the band assignment.



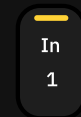
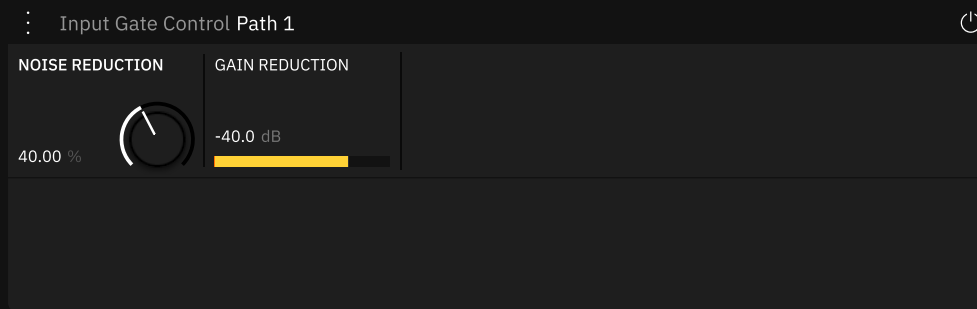
Clicking the MUTE button either in the Splitter or in the Mixer parameter editor will mute the whole Splitter/Mixer path.

MIXER SETTINGS

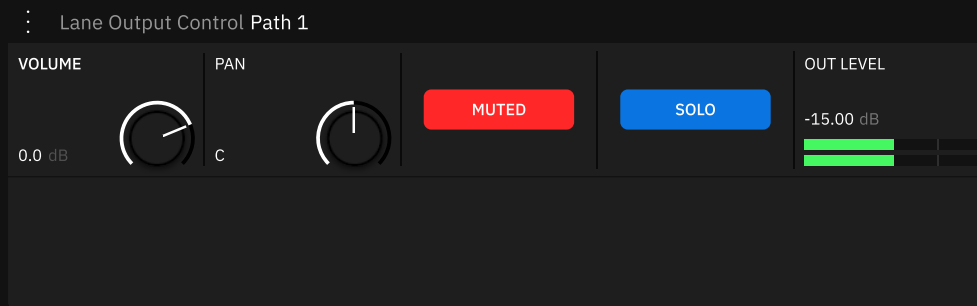
- **LEVEL A Knob:** Main Row (A) volume control.
- **PAN A Knob:** Main Row (A) output panning control.
- **LEVEL B Knob:** Splitter/Mixer (B) volume control.
- **PAN B Knob:** Splitter/Mixer (B) output panning control.
- **PHASE Switch:** Click to invert the phase of the Splitter/Mixer path.
- **MIXER LEVEL Knob:** Main output volume control.



• Input & Output blocks



A colored strip on the Input blocks reflects the current Gain Reduction value.



Colored strips on the Output blocks reflect the current MUTE and SOLO state.

Click on the Input and Output blocks in The Grid to access their parameters.

INPUT GATE CONTROL

- **NOISE REDUCTION Knob:** Increase to increase the Input Gate reduction value. The noise gate helps to reduce unwanted noise or *hum* in your signal.
- **GAIN REDUCTION Meter:** Gain reduction vuv meter (dB).



Click to activate/deactivate the Input Gate.

LANE OUTPUT CONTROL

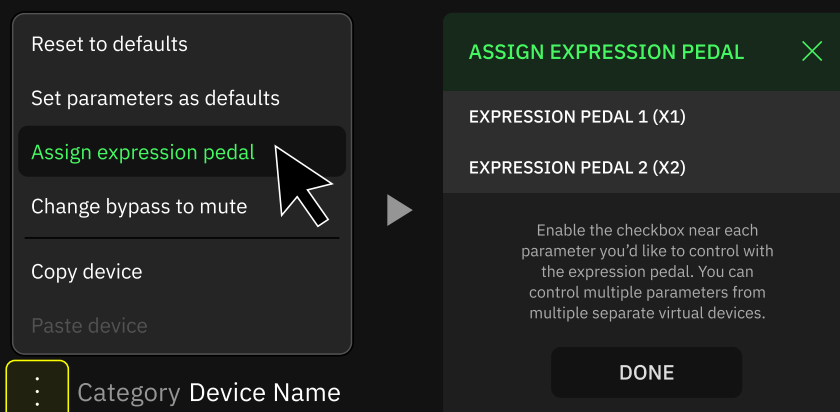
- **VOLUME Knob:** Adjusts the level of the Output block.
- **PAN Knob:** Controls the output panning of the Output block.
- **MUTE Switch:** Click to mute/unmute the Output block.
- **SOLO Switch:** Click to solo-in-place the Output block.
- **OUTPUT Meter:** Output level meter (dB).



Click on an empty I/O block to assign it to a Quad Cortex port.

Expression Pedal Assignment

Expression Pedals connected to Quad Cortex can be assigned to any virtual device parameter. Multiple parameters can be controlled simultaneously.



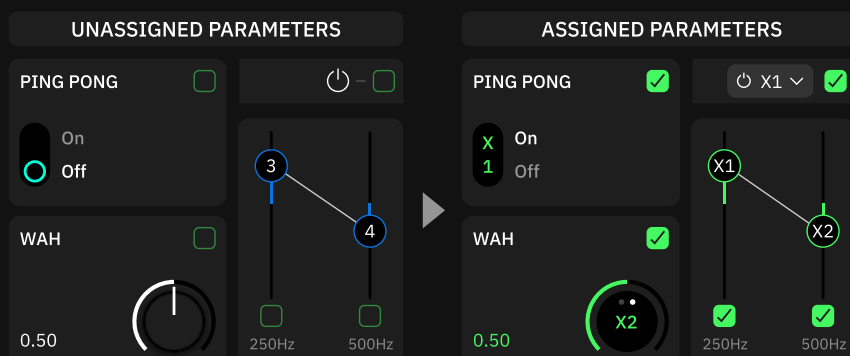
Select a block on The Grid, access its contextual menu and click on “**Assign expression pedal**”. The Expression Pedal assignment menu will appear on the left.

Click the ☐ near each parameter you would like to control with an expression pedal. You can control multiple parameters from multiple separate virtual devices.

Once a parameter has an expression pedal assigned, click on it to toggle between **Expression Pedal X1** and **X2**.



You can also right-click a block on The Grid to access the Expression Pedal assignment menu.

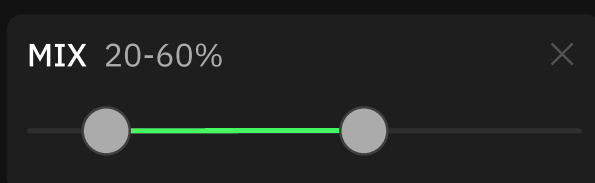


You can also assign expression pedals to I/O blocks as well as Splitter/Mixer nodes.

Use the sliders below each parameter to modify its minimum and maximum range values. The minimum setting equates to the pedal’s “**heel-down**” value, and the maximum to its “**toe-down**” value.



Room




You can “reverse” the behavior of a controlled parameter by setting its **minimum value to 100%** and its **maximum value to 0%**, such as to make an assigned Wah pedal work backward.

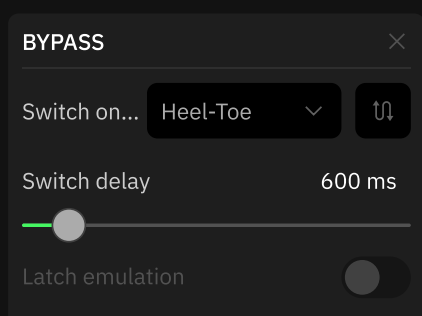
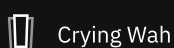
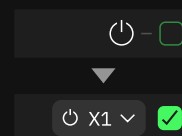
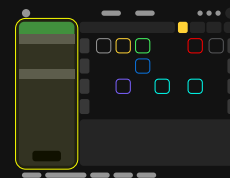
Click **DONE** to close the Expression Pedal Assignment menu.

Expression Bypass

The Expression Bypass feature allows device blocks to be toggled on/off via expression pedals.

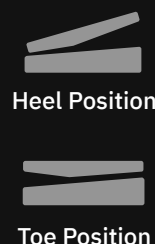
Select a block on The Grid, access its contextual menu and click on “**Assign expression pedal**”. The Expression Pedal assignment menu will appear on the left.

Click the  next to the bypass switch you would like to control with an expression pedal. Click on **X1** to switch the expression pedal input.



“SWITCH ON...” Combo Box

- **HEEL-TOE Mode:** Heel down the expression pedal to bypass the device block. When the INVERT RANGE switch is enabled, the device block will be bypassed at toe position.
- **SWITCH Mode:** Pressing the toe-switch of the expression pedal will bypass the device block.
- **STOP Mode:** The device block will be bypassed as long as the expression pedal doesn't move.



INVERT RANGE Switch (Heel-Toe and Switch Modes)

- **ON/OFF Switch:** Reverses the value where the bypass is engaged.



SWITCH DELAY Value (Heel-Toe and Stop Modes)

- **TIME Slider:** Determines the time it takes for the device block to be bypassed (Up to 5000ms).



LATCH EMULATION Switch (Switch Mode)

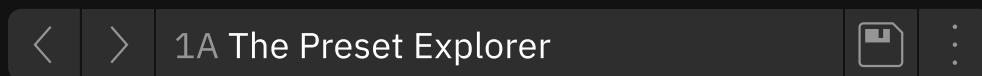
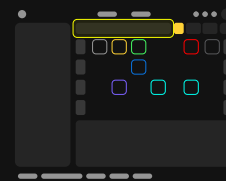
- **ON/OFF Switch:** Modifies momentary toe-switches behavior to emulate latching response.



Click  to close the Expression Pedal Assignment menu.

Preset Explorer

The Preset Explorer is located at the top of The Grid. It provides tools for saving and navigating through Presets quickly, negating the need to go to the DIRECTORY section.



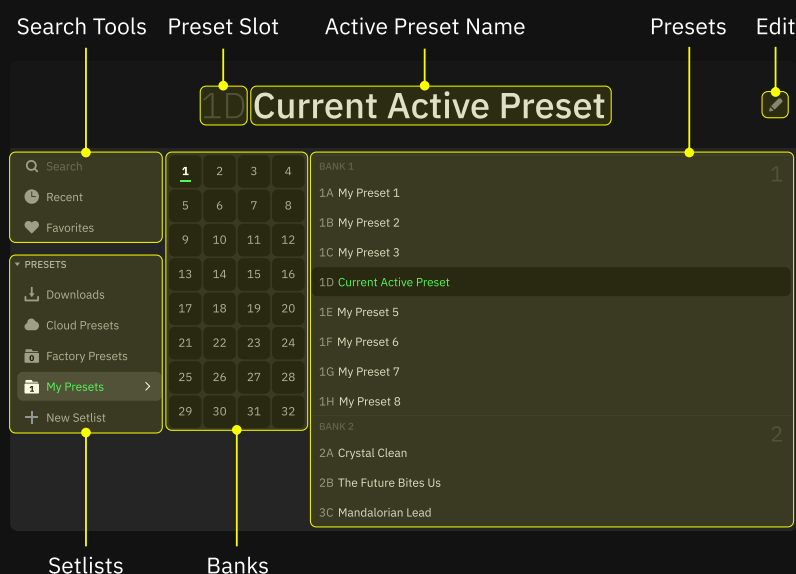
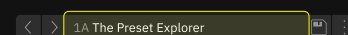
- **LEFT & RIGHT Navigation Arrows:** Click to navigate through Presets.
- **ACTIVE PRESET Combo Box:** Displays the slot and name of the current active Preset on The Grid. Click to access the Preset Browser screen.
- **SAVE Button:** Click to save your changes and overwrite the current active Preset. Clicking this button when using a Factory Preset will open the Preset Explorer screen (Save as...).
- **CONTEXTUAL MENU Button:** Click to access the Preset Explorer contextual menu.

1A *Unsaved Changes**

Whenever the current active Preset has unsaved changes, the Preset's name font will be *Italic*.*

Preset Browser

Click the Active Preset name to access the Preset Browser screen.



Quad Cortex organizes Presets in folders called **Setlists**. A Setlist contains 32 Banks of 8 Presets. Including the Factory Presets, up to 12 Setlists can be stored in a single Quad Cortex.

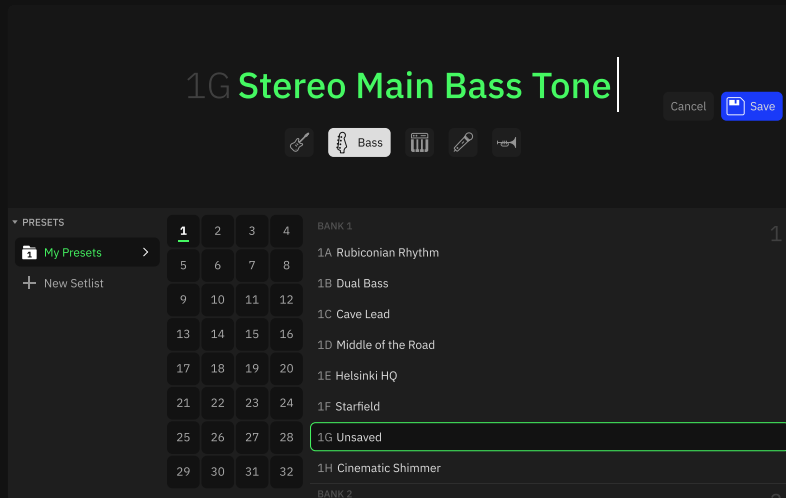
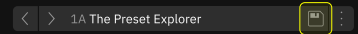
Use the mouse to navigate through Setlists and Banks. Clicking on a Preset will load it onto The Grid immediately.

Click anywhere else in the Cortex Control interface or press ESC to close the Preset Browser screen.



Saving Presets

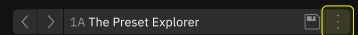
Click the SAVE button to save the latest changes made on The Grid as a new Preset.




Type a **Name** for your Preset. It must contain at least 4 characters. Selecting a **preferred instrument** will categorize it, making it easier to find in the DIRECTORY section.



Factory Presets can also be modified and stored as new Presets in any of your Setlists by using the “**Save as...**” feature in the Preset Explorer contextual menu.



Create or select a Setlist where you would like to store the Preset.

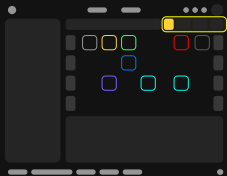
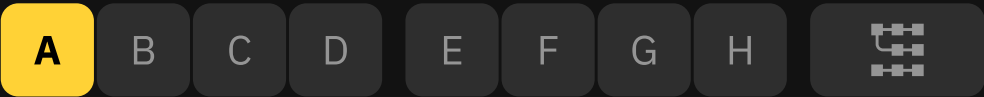
Choose an empty slot in a Bank and click  Save. Choosing an existing Preset will overwrite it.

• Hybrid Mode Bank Display




When Preset Mode is part of a **Hybrid Mode**, the Banks are split into two.

Scene Blocks




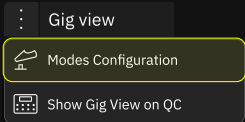
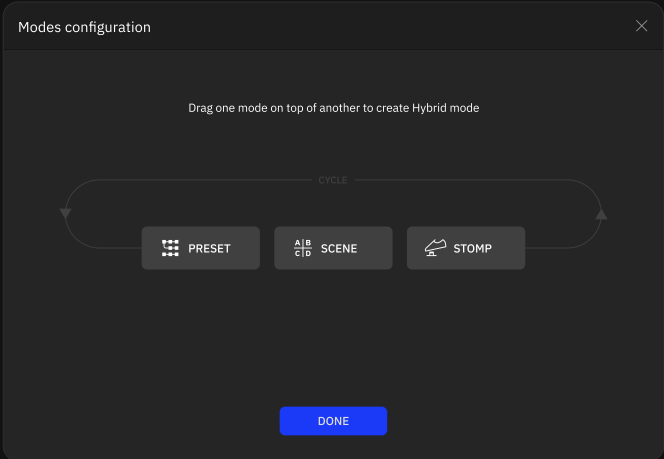
Switch Scenes by clicking the Scene blocks at the top-right of The Grid. A Scene block **lights up in yellow** when it's active.

Click on  to cycle through the modes set in the **Modes Configuration** screen.



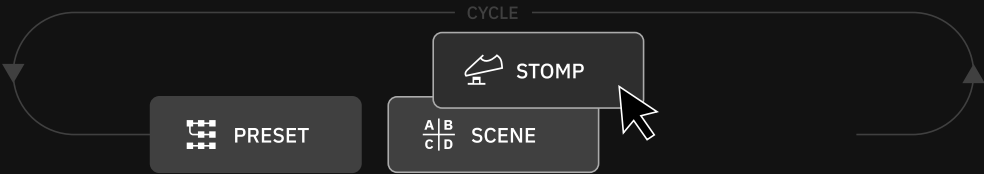
Modes Configuration

Right-click on  to access the Modes Configuration screen.





You can access the Modes Configuration screen from the Gig View's contextual menu as well.

Drag-and-drop Modes between slots to change their order when cycling through Modes on The Grid.




Single Mode

It's not possible to remove all the Modes. There must be at least one Mode active.

Click  to remove a Mode from the cycle. Removed Modes can be added again by Pressing .


Click [Reset to Defaults](#) to restore the default cycle.

Click  to close the Modes Configuration screen.

Use the Modes Configuration screen to re-order modes as well to create a **Hybrid Mode**.

Hybrid Mode

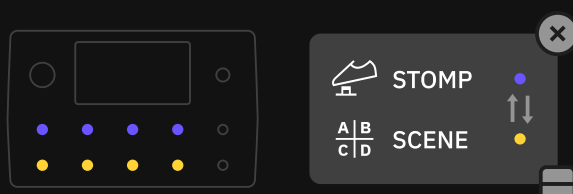
Hybrid Mode is ideal for people who want to quickly access new Presets while being able to have granular control within them, or for people who want to have both Scene and Stomp control within an active Preset.


Right-click on  to access the Modes Configuration screen.

Drag-and-drop a Mode on top of another to create a Hybrid Mode.





Once a Hybrid Mode is created, the footswitch configuration is displayed below the cycle diagram.



Click  to flip the footswitch configuration.

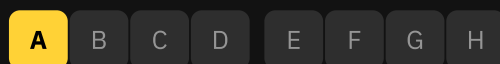
Click  to break a Hybrid Mode apart.

Click  to remove a Mode from the cycle. Removed Modes can be added again by Pressing .

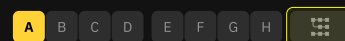
Hybrid Mode Gig View Display

	A	B	C	D
PRESET	Brit 2203	Brit Plexi100 Normal	US TWN Normal	Rols Jazz CH120
SCENE	Dry Amp	+MX & Dlys	Solo Boost	Juicy Low Gain
STOMP				
Parameter Editor				

The Gig View also reflects the footswitch split when a Hybrid Mode is active.



Use the **Scene blocks** to recall Scenes that are hidden due to the footswitch split.



Quad Cortex Footswitch Split

When Preset Mode is part of a Hybrid Mode, the Banks in the Preset Explorer as well as in the DIRECTORY will be split into two.

This happens because either the **Top** or **Bottom** footswitch rows no longer recall Presets.

Up and **Down** footswitches will navigate through Banks made of four Presets rather than eight:

STOMP/SCENE Hybrid Mode:

- 1A Brit 2203
- 1B Brit Plexi100 Normal
- 1C US TWN Vibrato
- 1D Rols Jazz CH120
- 1E California Tremo Red
- 1F EV101III Red
- 1G Freeman 100 Rhythm
- 1H D-Cell H4 Ch3

PRESET Hybrid Mode:

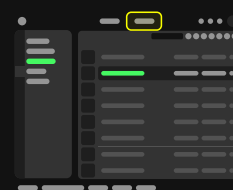
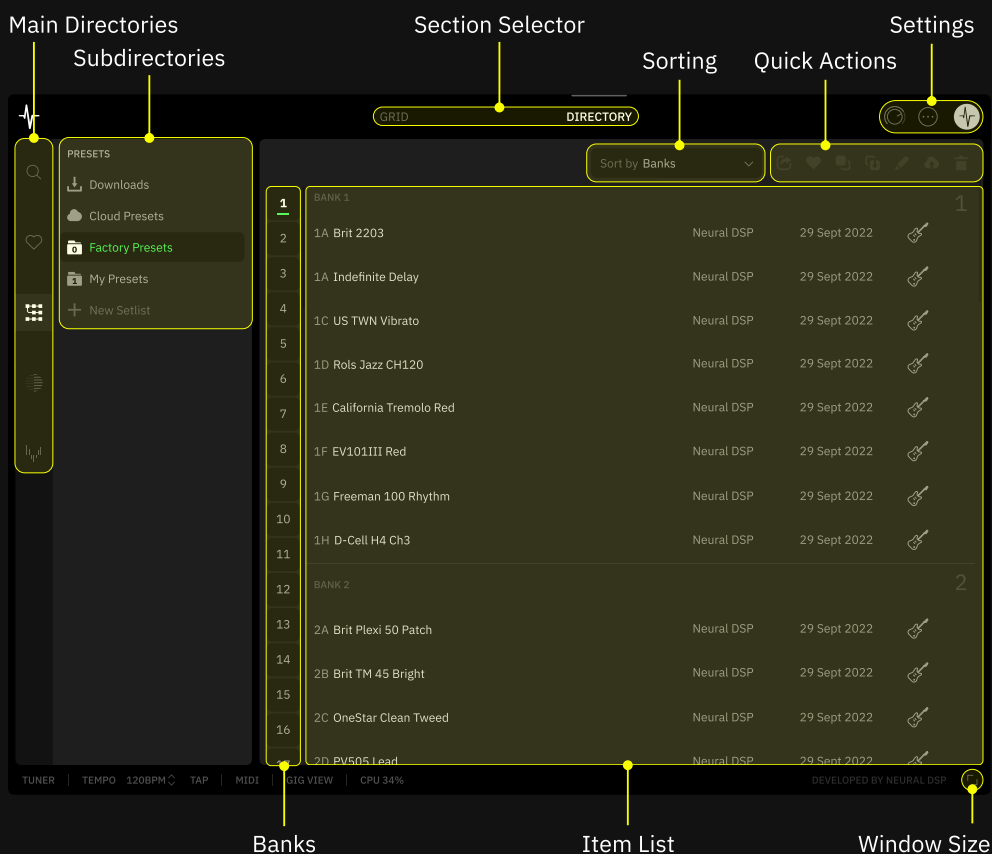
- 1A Brit 2203
- 1B Brit Plexi100 Normal
- 1C US TWN Vibrato
- 1D Rols Jazz CH120

- 2A California Tremo Red
- 2B EV101III Red
- 2C Freeman 100 Rhythm
- 2D D-Cell H4 Ch3

05

DIRECTORY Section

The Directory is the place where you can manage the items stored on your Quad Cortex and Cortex Cloud account.

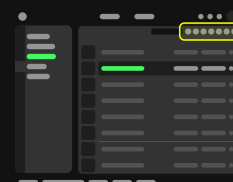


Click on the DIRECTORY tab to access its interface.

Here you can find all the items stored on your Quad Cortex and Cortex Cloud account. Presets, Neural Captures, and Impulse Responses are organized in different directories.

Quick Actions

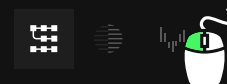
- | | | |
|----------|--------|--------|
| Upload | Like | Locate |
| Download | Unlike | Filter |
| Edit | Copy | Delete |
| Sort | Paste | Update |



Depending on the item(s) selected in the Directory, Quick Actions will be available at the top-right corner of the Item List.

Working in The Directory

Click on the main directories on the left to navigate through different item categories.



Click on the subdirectories on the left to navigate through different folders within the same category.



Use the **mouse-wheel** to scroll through the Item List.



Single-click an item to select it. Selecting an item will enable Quick Actions at the top-right of the Item List.

1C US TWN Vibrato
1D Rols Jazz CH120



Double-click an item to load it onto The Grid.

1F EV101III Red **ACTIVE**



Right-click an item to access its contextual menu.

1A Brit 2203



CMD+Click (*CTRL+Click on Windows®*) on multiple items to multi-select them.

4/256 selected

2A Brit Plexi 50 Patch

2B Brit TM45 Bright

2C OneStar Clean Tweed

2D PV505 Lead

2E Solo 100 Lead

2F Unsaved

CMD+C (*CTRL+C on Windows®*) to copy the selected items.

CMD+V (*CTRL+V on Windows®*) to paste the selected items to the selected location.

Drag-and-drop a Preset onto a free slot in the Item List to move it.

1A Brit 2203

Brit 2203

Move

1B Unsaved

Drag-and-drop a Preset onto another Preset to swap their position.

1C US TWN Vibrato

US TWN Vibrato

Swap

1D Rols Jazz CH120

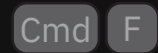
Drag-and-drop Presets to the subdirectory panel to move them to any other User Setlist.






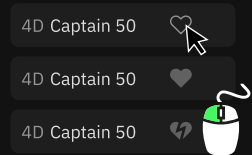
...

CMD+F (*CTRL+F on Windows®*) to search Presets, Neural Captures, or Impulse Responses in the Directory.




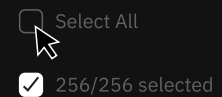
...

Mouse hover a Preset and **click**  to like/unlike it. This action will add/remove the Preset from the Favorites category.



...

Mouse hover above the Item List and **click**  to select all the items in the current subdirectory.




...

SHIFT+Click two items to select all the items in between at once.

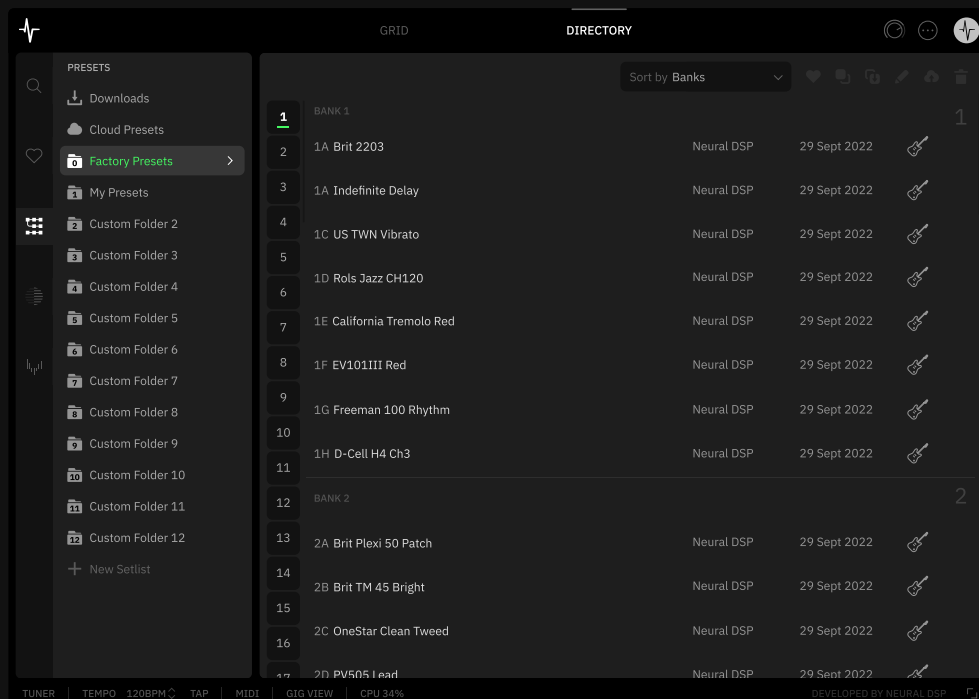


...

Press  to delete a selected item.

Presets Directory

Presets are organized in folders called **Setlists**. A single Setlist can store up to 256 Presets.



- **DOWNLOADS Library:** This folder stores all the Presets from other users you have downloaded on Cortex Cloud.
- **CLOUD PRESETS Library:** This folder stores all the Presets you have uploaded to your Cortex Cloud profile.
- **FACTORY PRESETS Setlist:** Factory Presets made by Neural DSP (non-deletable).
- **MY PRESETS Setlist:** Default User Presets Setlist (non-deletable).
- **NEW SETLIST Button:** Click to create a new User Setlist. You can create up to 10 User Setlists (deletable).

By default, Presets will be stored in the current active Setlist. When saving Presets, you can also choose a different Setlist or create a new one.

Editing Preset Details

Edit Preset Details

Name

My custom Preset Name

Preferred Instrument

Not specified

CREATED SEP 06, 2023

Cancel

Save and Edit Next

Save

Right-click on a Preset and select **Edit details**. Picking a **Preferred Instrument** will make it easier to find when searching for items.



Mouse hover a User Setlist to Edit its name or Delete it.



Deleting a User Setlist will also remove all Presets stored within it.



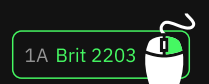
Quad Cortex can store up to 13 Setlists, including the **Factory Presets** and **My Presets** Setlists.



A Setlist has **32 Banks** of 8 Presets slots (A-H).

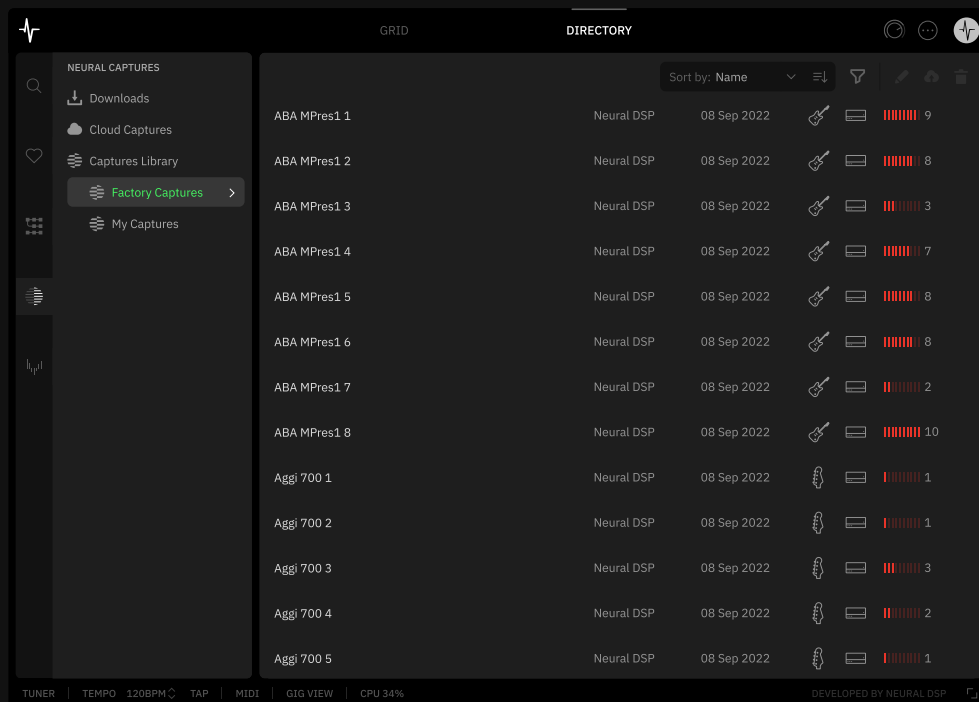
Save and Edit Next

Clicking “**Save and Edit Next**” allows you to edit the next Preset’s details instantly.



Neural Captures Directory

Neural Captures are organized in Libraries. Along with the Factory Captures, you can store up to 2048 Neural Captures.



- **DOWNLOADS Library:** This folder stores all the Neural Captures from other users you have downloaded on Cortex Cloud.
 - **CLOUD CAPTURES Library:** This folder stores all the Neural Captures you have uploaded to your Cortex Cloud profile.
 - **FACTORY CAPTURES Library:** Factory Neural Captures made by Neural DSP (non-editable).
 - **MY CAPTURES Library:** User Captures library (2048 Slots).
- **Editing Neural Capture Details**

Edit Neural Capture Details

Name

My Capture Name

Preferred Instrument

Not specified

Capture Type

Default

CREATED SEP 06, 2023


Cancel

Save and Edit Next

Save

Right-click on a Neural Capture and select **Edit details**. **Preferred instrument** and **Capture Type** tags will make it easier to find when searching for items.

Filtering Neural Captures

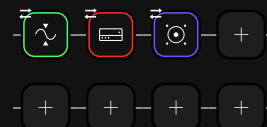
Click  to filter Neural Captures by Type: *Amp*, *Combo Amp*, *Amp+Cab*, *Cab*, *Pedal*, and *Default*. It's also possible to show only Neural Captures made by you.



Gain Metadata

The gain value is automatically calculated by the Quad Cortex after creating a Neural Capture.

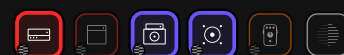
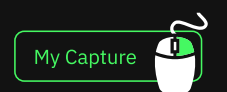
Quad Cortex determines how saturated a Neural Capture is, giving it a ranking of **1-10**; 1 being a clean tone and 10 being the most saturated distortion.



Double-click on a Capture to load it onto The Grid as a device block. Once in The Grid, pick an empty slot for it or a device block to replace it.

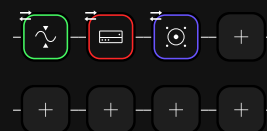
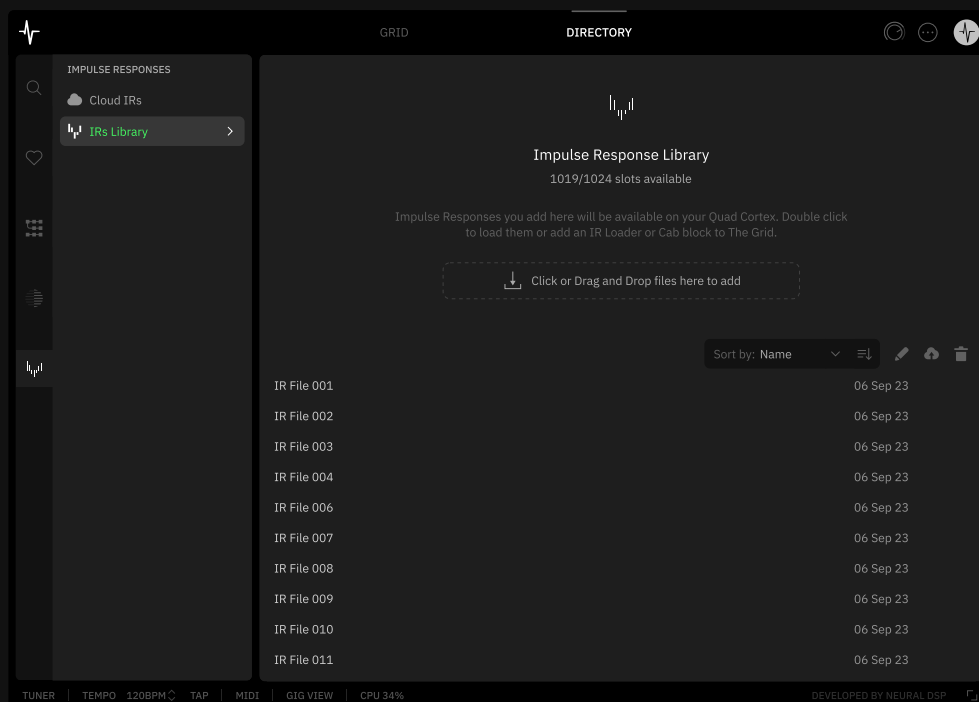
Save and Edit Next

Clicking **“Save and Edit Next”** allows you to edit the next Preset's details instantly.



Impulse Responses Directory

Impulse Responses are organized in Libraries. You can store up to 1024 Impulse Responses on both Quad Cortex and Cortex Cloud.

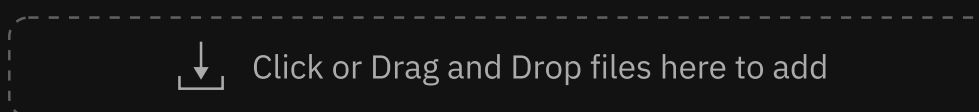


Double-click on an IR file to load it onto The Grid as a IR Loader block. Once in The Grid, pick an empty slot for it or a device block to replace it.

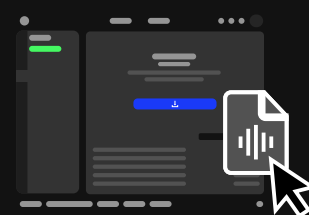
- **CLOUD IRs Library:** This folder stores all the Impulse Responses you have uploaded to your Cortex Cloud profile (1024 slots).
- **IRs Library:** Local Impulse Response storage (1024 slots).

• Adding Impulse Responses

Cortex Control allows to add Impulse Responses to your Quad Cortex and Cortex Cloud profile.

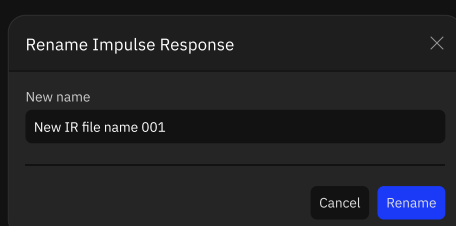


Click on the field above to add IR files. Use the browser window to search and load IR files stored on your computer. IR files you add to the **Cloud IRs** and **Impulse Responses** libraries will be available on your Cortex Cloud account or Quad Cortex, respectively.



As long as the **Cloud IRs** or **Impulse Responses** libraries are open, you can **drag-and-drop** IR files directly onto the Cortex Control window to add them.

• Editing Impulse Response Details




Right-click on a IR file and select **Edit details** to change its name.



Recent & Favorites Presets




Liked Presets are stored in the **Favorites** screen. **Mouse hover** a Preset and click  to like/unlike it. Presets in the Favorites screen are sorted in alphabetical order.

Previously loaded Presets are listed in the **Recent** screen.

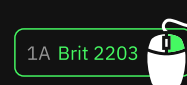
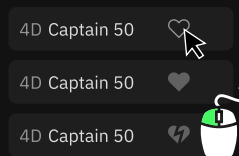
Recent and **Favorites** can store up to 51 Presets. Newest Presets will replace older presets after reaching the limit.

• Show in Setlist

Single-click a Preset listed in **Recent** or **Favorites** and click  to show its location in the Directory.



The located Preset will be selected automatically.



“**Show in Setlist**” is also an option in the Preset’s contextual menu (*Right-click*).

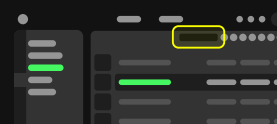
Sort Items

Sorting options are available for all the items in the Directory:



PRESETS

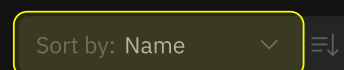
- **BANKS Order:** Sorts Presets by Banks (1-32).
- **NAME Order:** Sorts Presets by alphabetical order.
- **DATE ADDED Order:** Sorts Presets by date added.
- **AUTHOR Order:** Sorts Presets by author name.
- **INSTRUMENT Order:** Sorts Presets by preferred instrument.



Sorting options are located above the item lists.

NEURAL CAPTURES

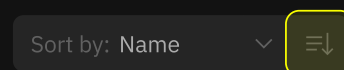
- **NAME Order:** Sorts Neural Captures by alphabetical order.
- **DATE ADDED Order:** Sorts Neural Captures by date added.
- **AUTHOR Order:** Sorts Neural Captures by author name.
- **GAIN Order:** Sorts Neural Captures by gain value (1-10).



Click the dropdown menu to pick a sort option.

IMPULSE RESPONSES

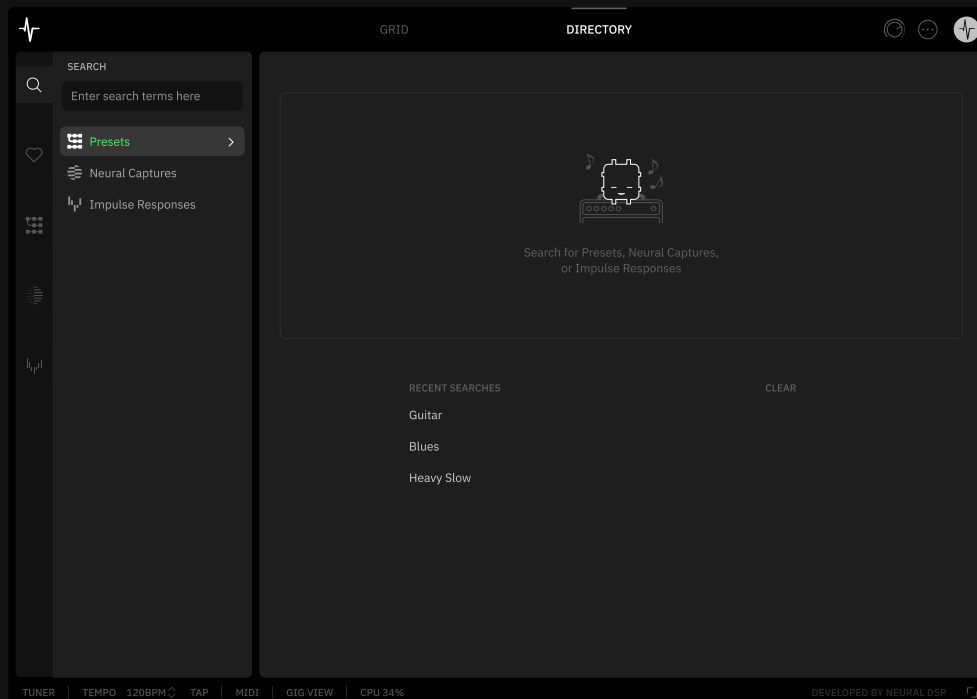
- **NAME Order:** Sorts IR files by alphabetical order.
- **DATE ADDED Order:** Sorts IR files by date added.



Besides Preset Banks, all items can be sorted in **descending** or **ascending** order.

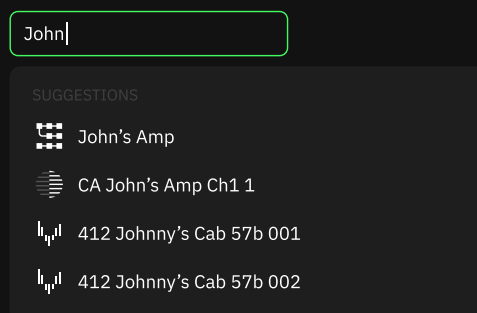
Search Items

The Directory's Search feature ensures that you get the right item at the right time, effortlessly.

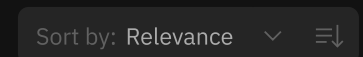


The latest three searched terms are listed beneath the result list.

Search results are separated into different categories for Presets, Neural Captures and Impulse Responses. **Sorting options** are also available for each category.



Neural Capture results can also be filtered.

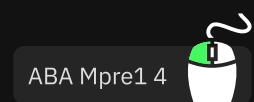


Search results are sorted by **Relevance** by default, meaning that the items most relevant to your search are displayed at the top of the search results list.

Search displays **suggestions** beneath the text entry as you type. Press **Enter** to get the results. Clicking on a suggested item will show its location in the Directory.

• Show Item Location

Single-click an item listed in the Search Results to show its location in the Directory.



The located item will be selected automatically.



Bulk Actions

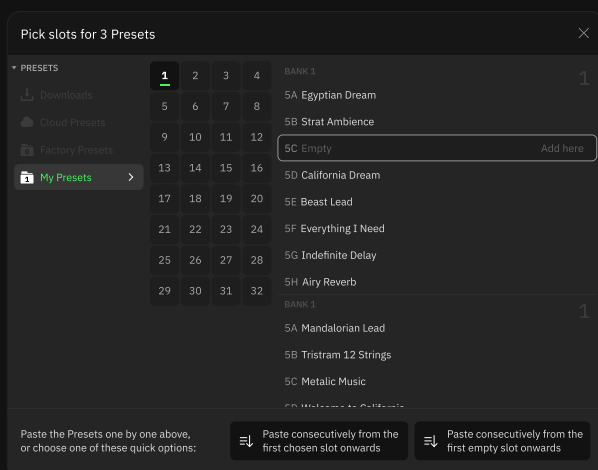
Bulk actions in Cortex Control allow you to perform certain operations on multiple items at the same time. Bulk actions can be performed on both main sections: The Grid and Directory.

• PRESETS

Cortex Control allows you to **Like/Unlike**, **Copy/Paste**, **Upload/Download**, and **Delete** multiple Presets at once.

BULK COPY/PASTE

Once you have selected multiple Presets in the Directory, press **CMD+C** (*CTRL+C on Windows®*) to copy them to the clipboard. Then, **click** on an Preset slot and press **CMD+V** (*CTRL+V on Windows®*) to pick slots for them.



You can paste the Presets in any User Setlist. Clicking the Bank slots will paste the Presets in the clipboard one by one. **Clicking on existing Presets will overwrite them.**



You can also paste all the Presets consecutively from the first chosen slot onwards. **Existing Presets in range will be overwritten.**

Additionally, you can paste all the Presets consecutively from the first empty slot onwards. **This action will not overwrite existing Presets.**


LIKE/UNLIKE MULTIPLE PRESETS

Click   to like/unlike the selected Presets.


BULK UPLOAD/DOWNLOAD

Click   to upload/download multiple Presets (Cortex Cloud).

BULK DELETION

Click  to delete the selected Presets.



 4/256 selected

2A Brit Plexi 50 Patch

2B Brit TM45 Bright

2C OneStar Clean Tweed

2D PV505 Lead

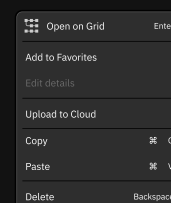
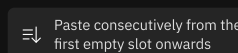
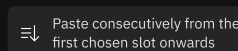
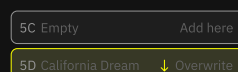
2E Solo 100 Lead

2F Unsaved

CMD+Click (*CTRL+Click on Windows®*) on multiple Presets in the Directory to multi-select them.



SHIFT+Click two Presets in the Directory to select all the items in between at once.



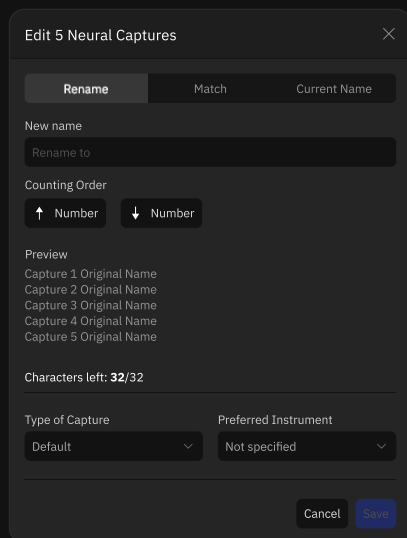
Bulk actions are also available in the contextual menu. Right-click on multiple selected Presets to access it.

• NEURAL CAPTURES

Cortex Control allows you to **Edit details**, **Upload/Download**, and **Delete** multiple Neural Captures at once.

BULK EDITING



Once you have selected multiple Neural Captures in the Directory, right-click on them and select “**Edit Details**” to edit their metadata.



- **RENAME Feature:** Rename Neural Captures adding ascending or descending numbers to them.
- **MATCH Feature:** Replaces specific characters across all the selected Neural Captures. Leaving the “**Replace with**” text field empty will delete the characters typed in the “**Match**” text field.
- **CURRENT NAME Feature:** Adds characters to the Neural Captures’ names. Characters can be added before and/or after the original names.


Selecting a **Type of Capture** and/or **Preferred Instrument** will update the metadata for all the selected Neural Captures.







BULK UPLOAD/DOWNLOAD

Click   to upload/download Neural Captures (Cortex Cloud).

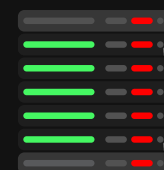
BULK DELETION

Click  to delete the selected Neural Captures.

 4/256 selected

Capture 1		9
Capture 2		8
Capture 3		7
Capture 4		8
Capture 5		8
Capture 6		3

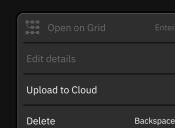
CMD+Click (*CTRL+Click* on Windows®) on multiple Neural Captures in the Directory to multi-select them.



SHIFT+Click two Neural Captures in the Directory to select all the Neural Captures in between at once.

 **Characters left: 0/32**

Neural Capture names allow up to 32 characters.



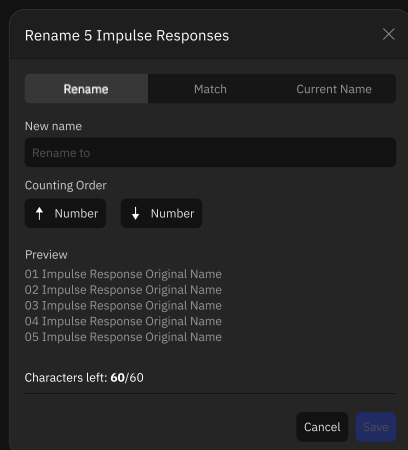
Bulk actions are also available in the contextual menu. Right-click on multiple selected Presets to access it.

• IMPULSE RESPONSES

Cortex Control allows you to **Rename**, **Download from Cortex Cloud**, and **Delete** multiple Impulse Responses at once.

BULK RENAMING

Once you have selected multiple Impulse Responses in the Directory, right-click on them and select “**Edit Details**” to rename them.




- **RENAME Feature:** Rename IR files adding ascending or descending numbers to them.
- **MATCH Feature:** Replaces specific characters across all the selected IR files. Leaving the “**Replace with**” text field empty will delete the characters typed in the “**Match**” text field.
- **CURRENT NAME Feature:** Adds characters to the IR files’ names. Characters can be added before and/or after the original names.

BULK DOWNLOAD

Click  to download the selected IR files to the Quad Cortex.

BULK DELETION


Click  to delete the selected IR files.

• DEVICE BLOCKS

Cortex Control allows you to **Copy/Paste** multiple device blocks in The Grid. Press **CMD+C** (*CTRL+C on Windows®*) to copy them to the clipboard.

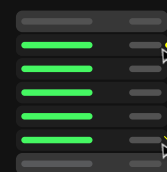


Load a new Preset and press **CMD+V** (*CTRL+V on Windows®*) to paste all the device blocks from the clipboard including their settings, Scene assignments, and place in The Grid.


 4/256 selected

Impulse Response 0001
Impulse Response 0002
Impulse Response 0003
Impulse Response 0004
Impulse Response 0005
Impulse Response 0006

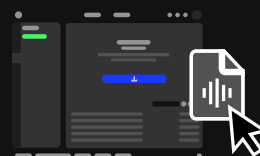
CMD+Click (*CTRL+Click on Windows®*) on multiple IR files in the Directory to multi-select them.



SHIFT+Click two IR files in the Directory to select all the IR files in between at once.

 **Characters left: 0/60**

Impulse Response files’ names allow up to 60 characters.



You can **drag-and-drop** IR files directly onto the Impulse Response sections on Cortex Control.

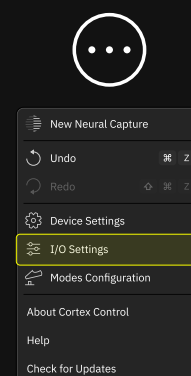
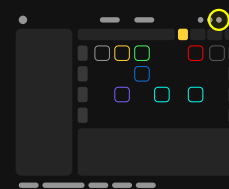


CMD+Click (*CTRL+Click on Windows®*) on multiple device blocks in The Grid to multi-select them.

06

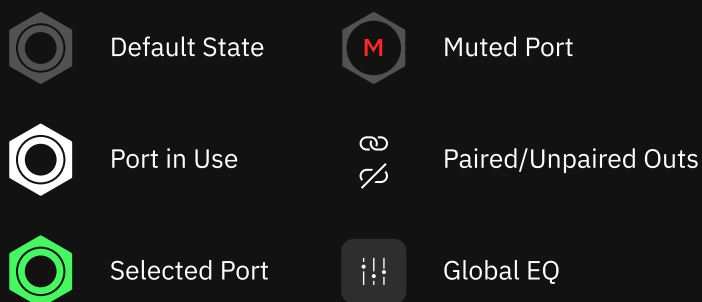
I/O Settings

The I/O Settings screen provides an overview of the physical inputs and outputs of the Quad Cortex and their current settings.



Click on the Main Contextual Menu to access the I/O Settings screen.

Click on an port from the I/O Panel to open its editor panel. Use the mouse to interact with the parameters.



Outputs 1/2 and **3/4** can be paired, meaning that their LEVEL, GROUND LIFT, and MUTE parameters are grouped together. Click the link between the output ports to toggle their pair state.



The **Global EQ** can be accessed from the I/O Settings screen. You can also toggle its bypass state by clicking the ON/OFF switch.



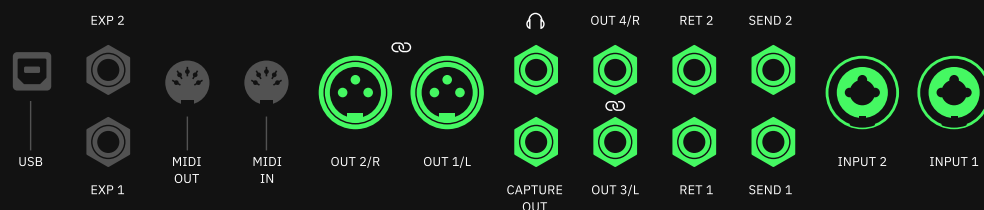
Changes made in the I/O Settings and Global EQ are automatically saved as **global settings**, meaning that they are not affected by any Preset or Scene recall.





Analog Audio Ports

Quad Cortex features multiple audio inputs and outputs. The parameters in the editor panel will adapt according to the selected I/O.



- **LEVEL Knobs:** Determine the gain level of the selected I/O (0.0dB by default).
- **TYPE Switches:** Determines the combo inputs' mode. Set them to "Mic" when using XLR cables ("Instrument" by default).
- **IMPEDANCE Knobs:** Determine the combo inputs' impedance value (1MΩ by default). Disabled when the TYPE switches are set to "Mic".
- **PHANTOM 48V Switches:** Turns On/Off the phantom power for the combo inputs. Disabled when the TYPE switches are set to "Instrument".
- **GROUND LIFT Switches:** Turn On/Off the ground lift of the selected I/O. They help to reduce noise caused by ground loops coming from audio cables or other sources.
- **MUTE Switches:** Click to mute/unmute the selected I/O.

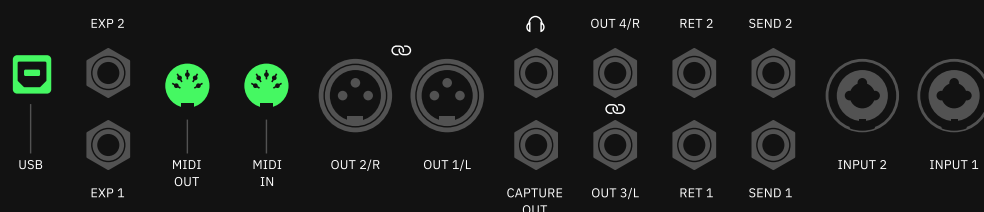


Combo Inputs

Inputs 1/2 allow either XLR and instrument cables. Click the TYPE switch to toggle their mode. **IMPEDANCE** and **PHANTOM 48V** parameters will be disabled depending on the TYPE position.

USB & MIDI Ports

Quad Cortex features 16 USB audio channels (8 Inputs/8 Outputs). Each channel is mapped to a specific host source or Quad Cortex's analog audio port.



- **USB LEVEL Knob:** USB master volume control.
- **HP SOURCE Knob:** Determines which USB audio channels are routed to the Quad Cortex's Headphones output.
- **DRY-WET Switch:** Swaps between Clean DIs or processed signal fed into USB Outs 1/2 or 3/4.
- **MIDI THRU Switch:** Click to enable/disable the MIDI Thru feature.

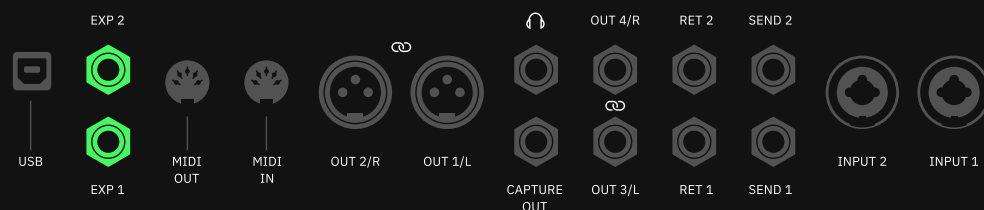
• MIDI Thru behavior

MIDI Thru allows Quad Cortex and other devices to have their MIDI connections "daisy chained" together all being driven by a common MIDI source.



Expression Pedal Range Calibration

Quad Cortex features two expression pedal ports. To ensure the pedals respond to their full sweep range, it might be necessary to calibrate them during the first use.

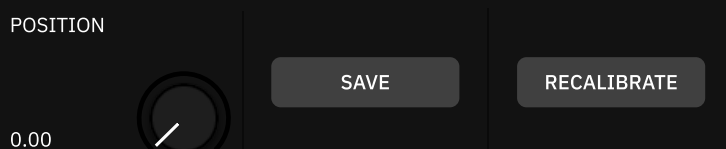


• Calibration Procedure

Place the expression pedal on the surface where it will be used and connect it to one of the Quad Cortex's EXP inputs using a **TRS cable**.



Ensure the expression pedal is sitting flat on the surface then go to the I/O Settings menu. **Click** on the EXP input in use to access its calibration panel.



Click on **RECALIBRATE**. Then, rock the expression pedal all the way back to heel position and all the way up to toe position. Make sure that the **POSITION** knob respond accordingly, being able to sweep from 0.00 to 1.00.



Heel Position



Toe Position

After that, click on **SAVE**. The calibration procedure is complete.

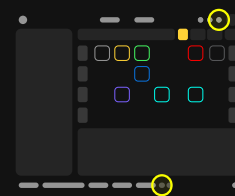
Click **DONE** to close the I/O Settings screen.




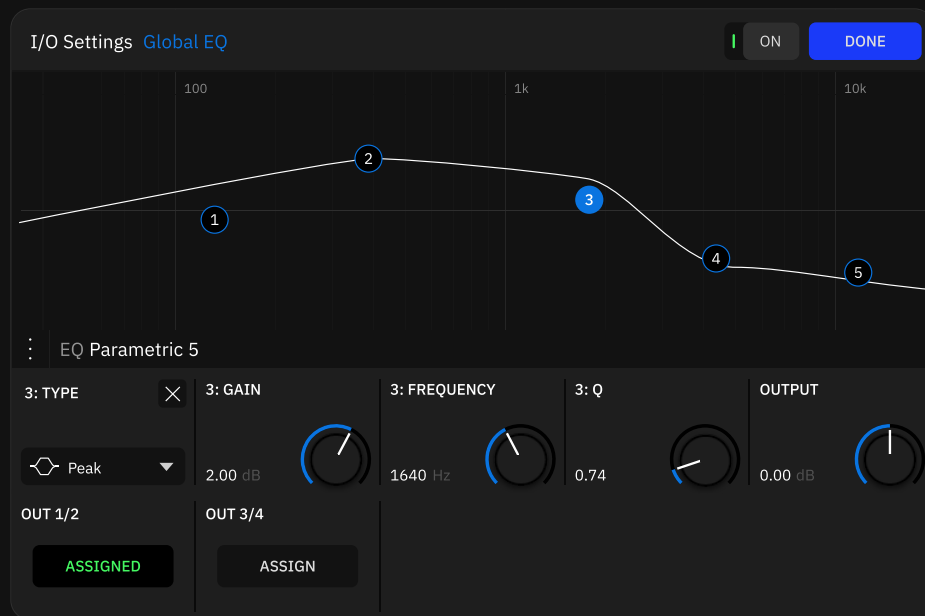
Expression Pedal calibration settings are automatically saved as **global settings**, meaning that they are not affected by any Preset or Scene recall.

Global EQ

The Global EQ, accessed from the I/O Settings screen, is a 5-Band parametric style equalizer, situated after all other processing device blocks in The Grid, allowing for sculpting your overall tone just before it is sent out the Quad Cortex.



Click  in the I/O Settings screen to open the Global EQ interface.



The Global EQ is especially handy for fine-tuning your tone to compensate for a venue's stage or room sound without having to go in and tweak all your Presets one by one.

The Global EQ offers precise control over five customizable frequency bands. Use the mouse to interact with them.


- **BAND Tokens:** Click to select a band and access its parameters. Click-and-drag tokens around the spectrum grid to determine its GAIN and FREQUENCY values.
- **TYPE Combo Box:** Determines the filter type of the selected band.
- **GAIN Knob:** Determines the gain of the selected band (+/-12dB).
- **FREQUENCY Knob:** Controls the center frequency of the selected band (20Hz/20000Hz).
- **Q Knob:** Determines the bandwidth of the selected band. The higher the Q value, the narrower the frequency range.
- **OUTPUT Knob:** Controls the output level of the Global EQ.
- **OUT 1/2 Switch:** Click to assign/unassign the Global EQ settings to the Output 1/2.
- **OUT 3/4 Switch:** Click to assign/unassign the Global EQ settings to the Output 3/4.



Changes made in the Global EQ are automatically saved as **global settings**, meaning that they are not affected by any Preset or Scene recall.



The **Global EQ** as well as the **Input Gates** are **automatically disabled** when a resource-intensive Preset is loaded.

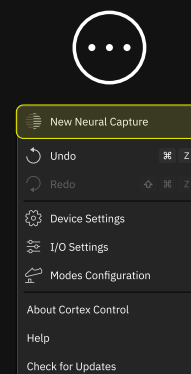
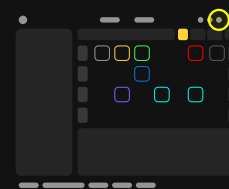
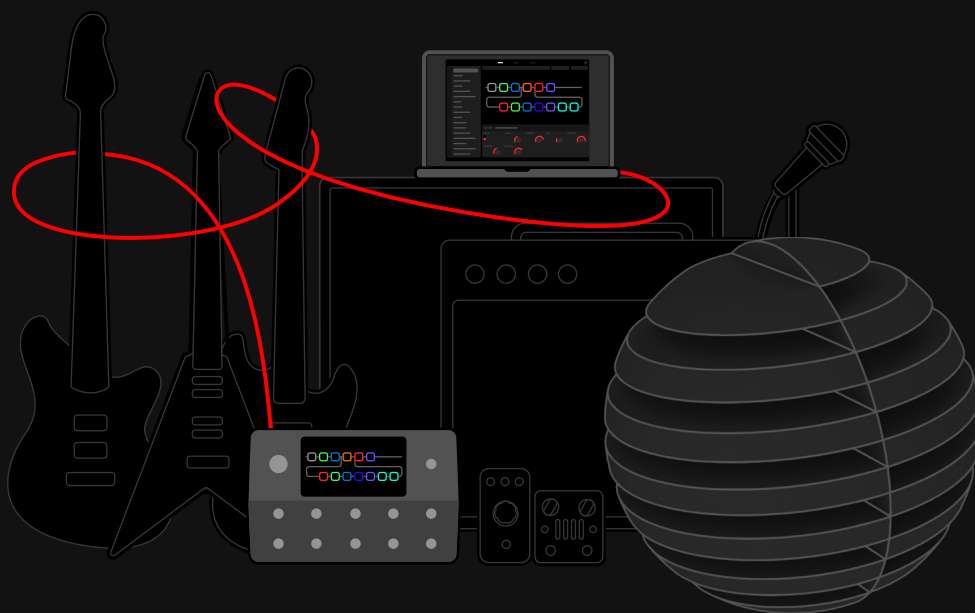
Click  to close the Global EQ interface and return to the I/O Settings screen.

Click on the ON/OFF switch to enable or disable the Global EQ.

07

Neural Capture

Neural Capture is a powerful tool that can learn and replicate the sonic characteristics of any amplifier, cabinet, or overdrive pedal with unprecedented accuracy and realism.



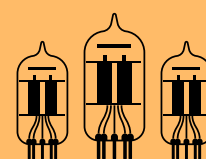
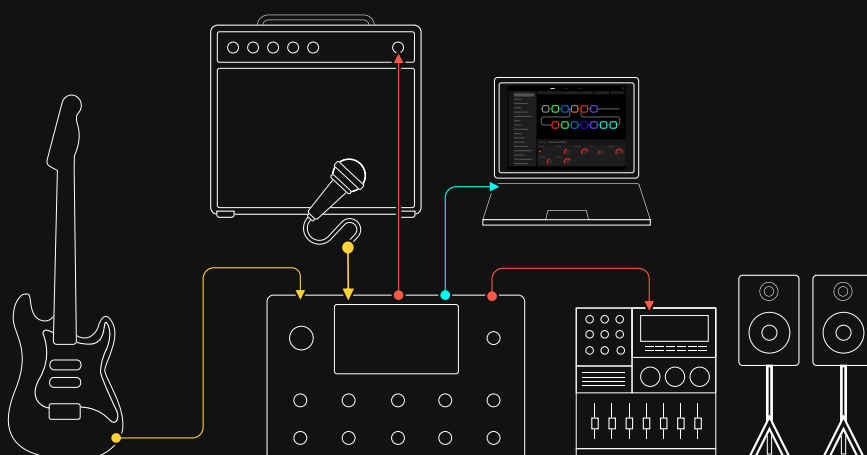
Click on the Main Contextual Menu to access the Neural Capture screen.

Creating a new Neural Capture is a procedure that can be completed on Cortex Control as well. **The Quad Cortex Quad Cortex must be on Grid's view to be able to complete this operation.**



To create a Neural Capture, you will need to be able to mic up a cabinet or connect an amplifier to a reactive load box.

No special microphone is needed. Neural Capture is a global snapshot of a real device setup including the microphone, therefore the placement of the microphone with respect to the cabinet is also taken into account.

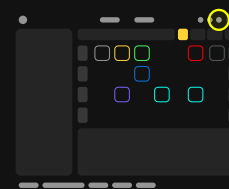


TUBE AMPLIFIER WARNING

Connecting the speaker output from a tube amplifier directly to a Quad Cortex input could **damage** both devices. Ensure you are using either the **Amp D. I. Out** and your amplifier is still connected to a cabinet or use a **Reactive Load Box**.

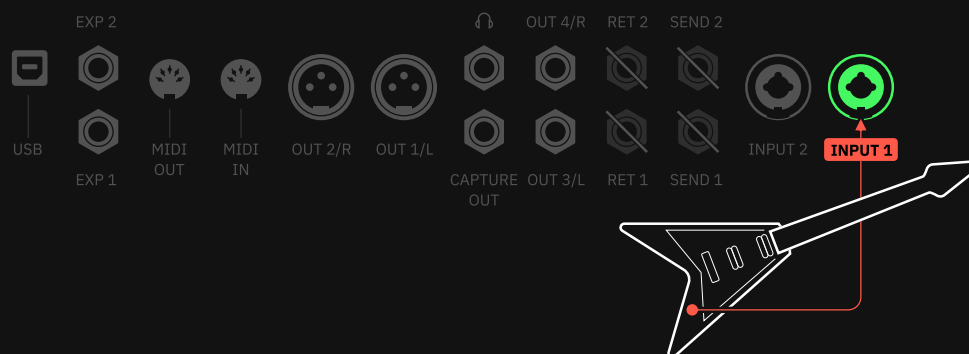
Connection Diagram

Open the Main Contextual Menu and click on “**New Neural Capture**” to access the Connection Diagram.



01 REFERENCE INSTRUMENT

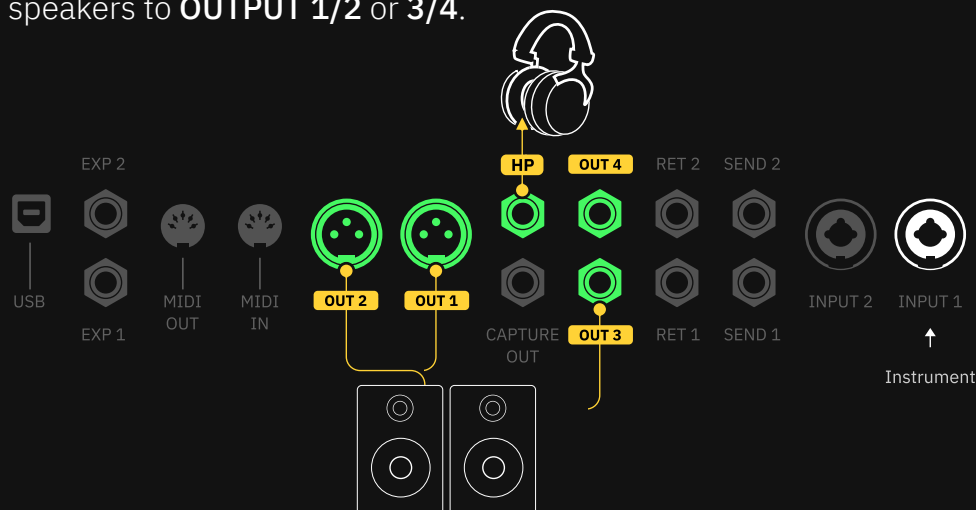
Plug your instrument into **INPUT 1**.



For best results, disconnect any devices from **SEND 1**, **SEND 2**, **RETURN 1**, and **RETURN 2**.

02 MONITORING DEVICES

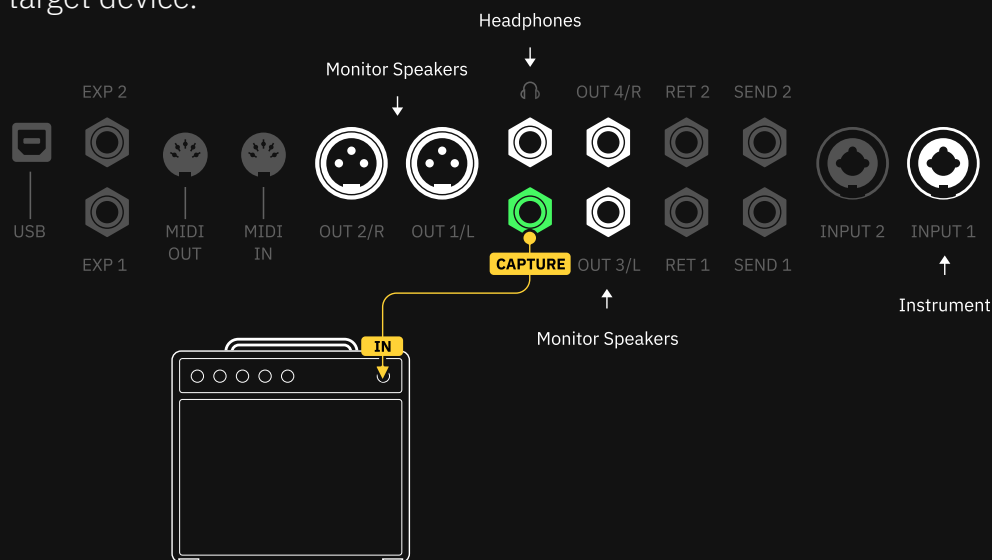
Connect your headphones to the **HEADPHONES OUTPUT** or monitor speakers to **OUTPUT 1/2** or **3/4**.


[PREVIOUS](#)
[NEXT](#)
[SKIP](#)

Click the buttons at the bottom to navigate through the Connection Diagram slides.

03 TARGET DEVICE

Connect the Quad Cortex’s **CAPTURE OUTPUT** to the INPUT of your target device.





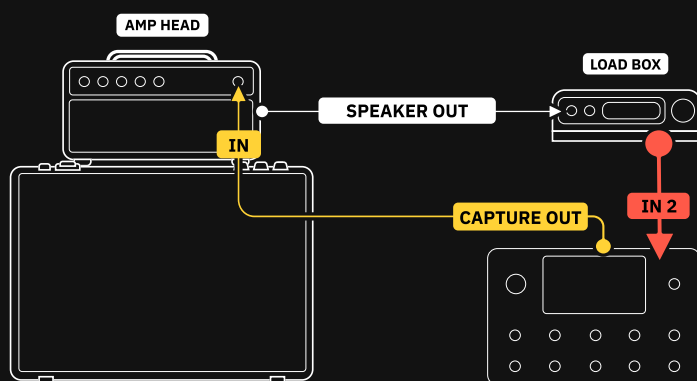
04 RETURN TO QUAD CORTEX

Position a microphone in front of the cabinet speaker and connect it to the Quad Cortex's **INPUT 2**.

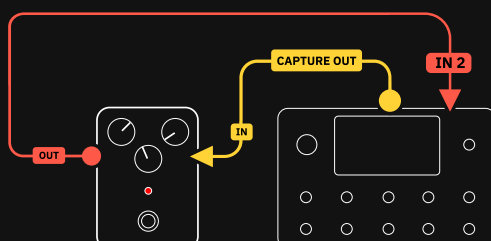


Some amplifier heads feature a DI Output. Connecting it directly to Quad Cortex via TRS or XLR is safe as long as the speaker output remains connected to a cabinet.

If you are capturing an amplifier without built-in speakers or just an amp head, connect its **SPEAKER OUTPUT** to a **Reactive Load Box**. Then, connect the Load Box's **OUTPUT** to the Quad Cortex's **INPUT 2**.

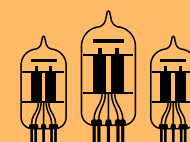


If you are capturing an overdrive pedal, connects its **OUTPUT** directly to the Quad Cortex's **INPUT 2**.



05 SETUP REVIEW

Once everything is connected correctly, click [NEXT](#) to proceed with creating your Neural Capture.

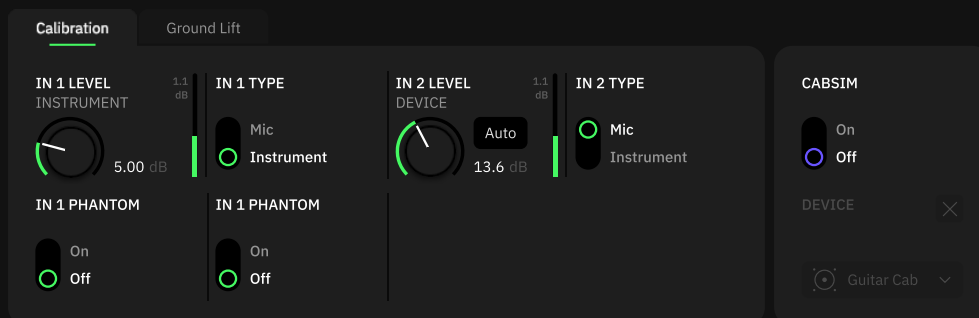


TUBE AMPLIFIER WARNING

Connecting the speaker output from a tube amplifier directly to a Quad Cortex input could **damage** both devices. Ensure you are using either the **Amp D. I. Out** and your amplifier is still connected to a cabinet or use a **Reactive Load Box**.

Capture Audio Settings

Make sure the microphone position and the target device's settings are set to your liking. Reduce levels if any of the meters are clipping.

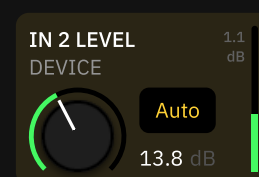


The **Headphones** and **Master Volume** controls are at the top right corner of the Capture Audio Settings screen. Click **X** to return to The Grid.

- **LEVEL Knobs:** Determines the input gain for the combo inputs (0.0dB by default).
- **TYPE Knobs:** Determines the combo inputs' mode. Set them to "Mic" when using XLR cables ("Instrument" by default).
- **GROUND LIFT Switches:** Turn On/Off the ground lift of the selected I/O. They help to reduce noise caused by ground loops coming from audio cables or other sources.
- **PHANTOM Switches:** Turns On/Off the phantom power for the combo inputs. Disabled when the TYPE switches are set to "Instrument".
- **CABSIM Switch:** Click to enable/disable the cabsim module.

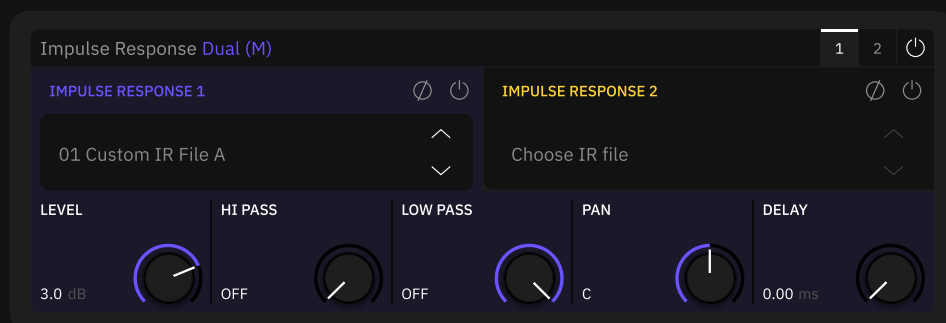
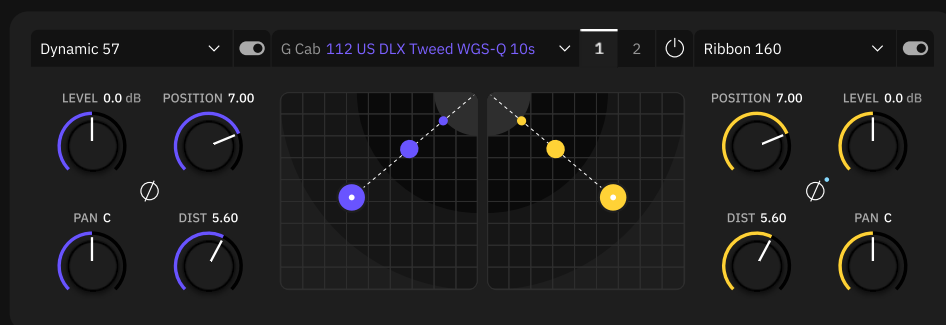
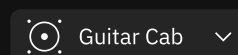
Cabsim Module

Enable the Cabsim switch to enable the cabsim module, allowing you to audition the target device with a **Cab** or **IR Loader** block.



AUTO SET Feature

Click on the "Auto" switch to sets the **IN 2 LEVEL** automatically. Then, play your instrument until the knob stops moving.

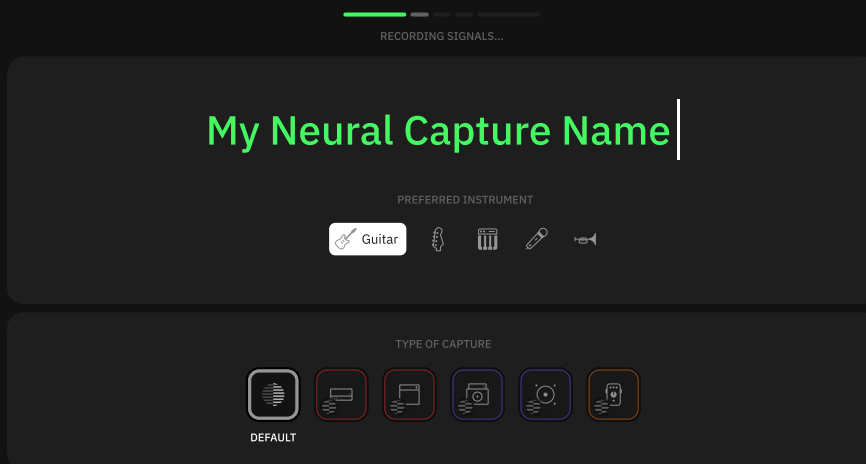


The Cab and IR Loader blocks will behave as they would on The Grid, and they can be bypassed in case you want to audition the target device without them.



Capture Process

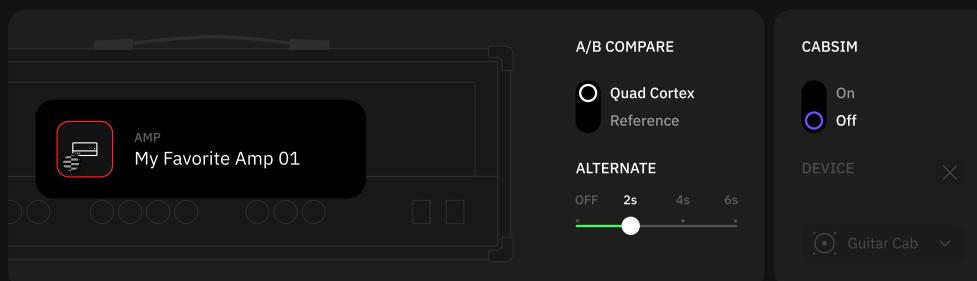
Click **START CAPTURE** to begin the Capture process.



The Quad Cortex will measure the latency of the target device and send recorded signals to it that will be used for modeling. After the sanity check, Quad Cortex will train a neural network to emulate the tone and dynamic response of the target device with unprecedented accuracy and realism.

When finished, click **NEXT** to proceed to the Test Screen.

• Test Screen



Click the **A/B COMPARE** switch to toggle between the target device signal and the Quad Cortex's Neural Capture. Additionally, you can drag the **ALTERNATE** switch to set an automatic switch every 2, 4, or 6 seconds.

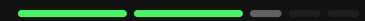
The Cabsim module is also available in the Test screen, allowing you to audition both the target device and the Quad Cortex's capture with a **Cab** or **IR Loader** block.

Click **SAVE NEURAL CAPTURE** to save your Neural Capture.



Neural Capture Metadata

While the Capture is in progress, you can modify its metadata (Name, Preferred Instrument, and Type).



TRAINING...

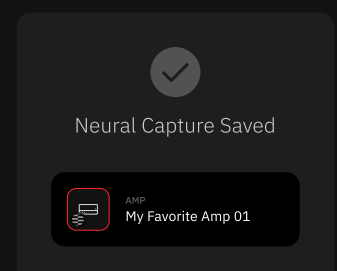


NEURAL CAPTURE READY



Gain Metadata

The gain value is automatically calculated by the Quad Cortex after creating a Neural Capture.



CREATE ANOTHER CAPTURE

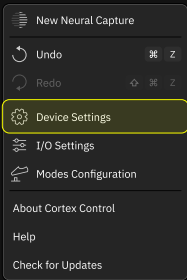
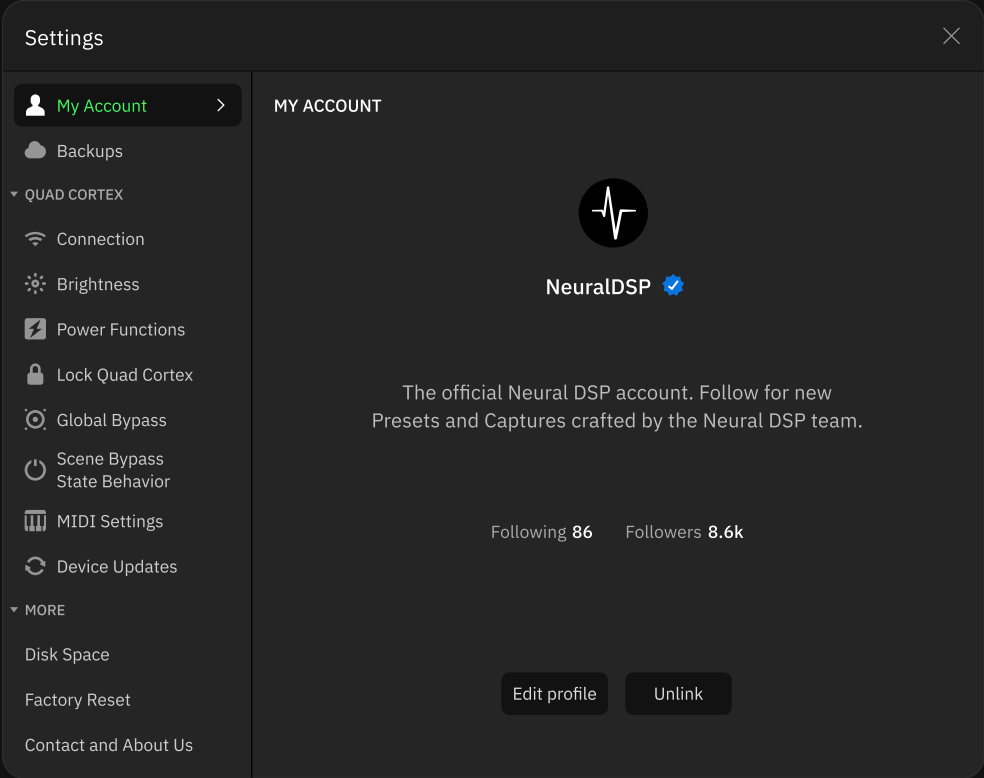
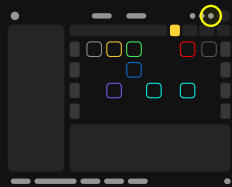
EXIT

Click on **CREATE ANOTHER CAPTURE** to return to the Capture Audio Settings screen. Click on **EXIT** to return to The Grid.

08

Device Settings

The Device Settings screen allows you to control most aspects of your Quad Cortex.



Click on the Main Contextual Menu to access the Device Settings screen.

My Account

Log in to link the Quad Cortex to your Neural DSP account. You can also sign up in case you don't have an account yet.

Email

neuraluser@email.com

Password

Forgot?

.....|

LOGIN



Once logged in, you can edit your profile bio details.

Avatar

Drop an image here, or click upload (maximum 1MB .jpeg file)

Username

Peter_Owner

Bio

Tell the community a few words about yourself.

Changes made in the Device Settings screen are automatically saved as **global settings**, meaning that they are not affected by any Preset or Scene recall.

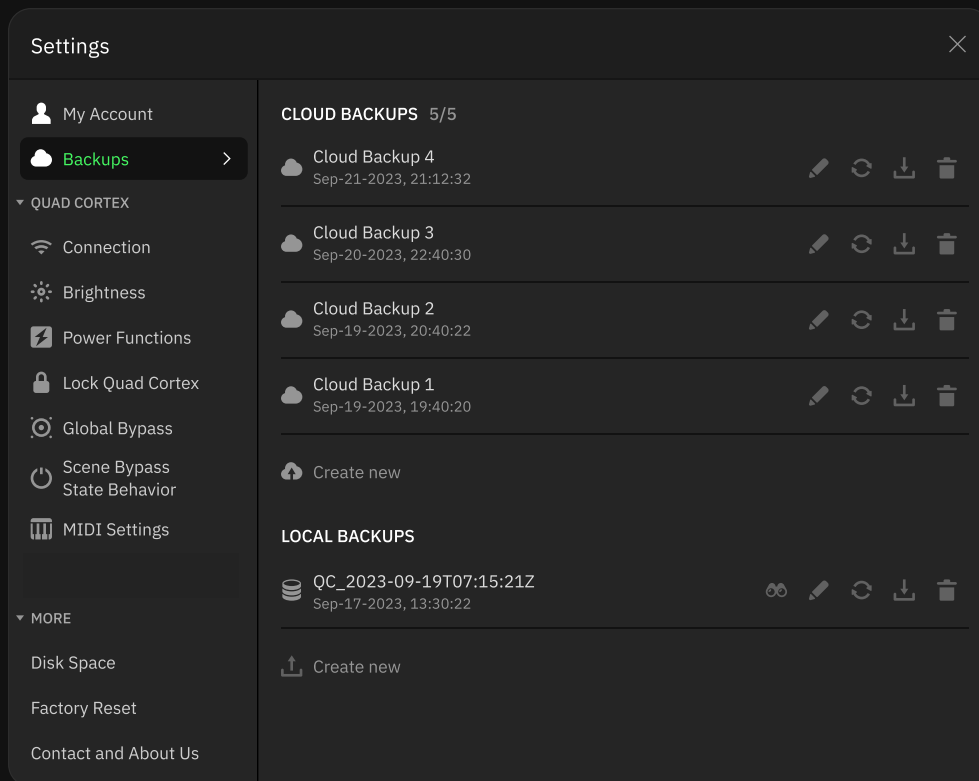
Click on

Unlink

 to log out and unlink your account from the Quad Cortex.

Backups

Cortex Control allows to create up to five cloud backups of the items and current settings of your Quad Cortex, including Presets, Neural Captures, and Impulse Responses. Additionally, you can create local backup files on your computer.



The Quad Cortex must be on Grid view to be able to perform backups.



Downloading a backup will replace the current Quad Cortex items.

• CLOUD BACKUPS

You can store up to five backups on your Cortex Cloud account. Downloading a backup will replace all the items and settings of the Quad Cortex. You need to be logged in to your Neural DSP account to create or download cloud backups.



Click to create a Cloud Backup.

• LOCAL BACKUPS

You can store as many backups as your computer's storage can save. The more items your Quad Cortex stores, the bigger the backup file size. You don't need to be logged in to your Neural DSP account to create or download local backups.



Click to create a Local Backup.

• QUICK ACTIONS

- **SEARCH Local Backup:** Click to open the local backups folder on your computer.
- **EDIT Backup:** Click to rename a backup.
- **UPDATE Backup:** Click to update a previously made backup with the current items and settings on your Quad Cortex.
- **DOWNLOAD Backup:** Click to download the backup content to your Quad Cortex (Replacing the current items).
- **DELETE Backup:** Click to delete a backup.



Local Backups Location


Mac®: <User Folder>/Library/Application Support/Neural DSP/Backups
Windows®: C:\Users\<Your Profile>\AppData\Neural DSP\Backups



Quad Cortex Settings



• CONNECTION

 Quad Cortex is using your computer's internet connection

As long as the Cortex Control application is open, the Quad Cortex will use your computer's internet connection via USB.

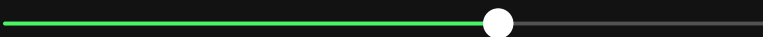
Click [Reset](#) to erase all the stored Wi-Fi networks.



The Internet speed via USB is 150kbps.

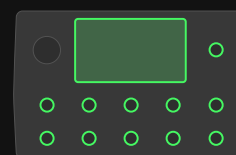
• BRIGHTNESS

Screen  16

LED lights  22

Drag the sliders to set the screen and footswitches' LED brightness of the Quad Cortex.

Click [Reset to defaults](#) to recall the default values (16 and 22).



• POWER FUNCTIONS

POWER FUNCTIONS



Shutdown

Reboot

Standby

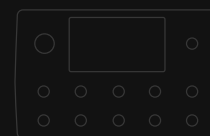
POWER BUTTON SENSITIVITY

Sensitivity  OFF LOW MEDIUM HIGH

Click on the different power functions to either shutdown or reboot the Quad Cortex. When in standby mode, all audio outputs will be disabled and the screen will be turned off.

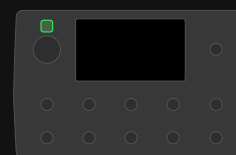
Drag the slider to set the power button sensitivity on the Quad Cortex. The higher the value, the more pressure needed to trigger the power button.

Z
z Z
z



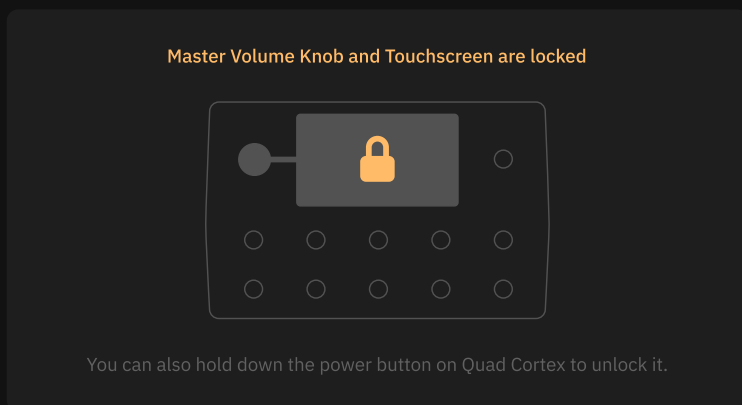
WAKE UP

Click on "WAKE UP" to manually recover from standby mode.





• LOCK QUAD CORTEX



Click the switch to lock/unlock your Quad Cortex.

You can disable the Master Volume knob and touchscreen of your Quad Cortex during live performances.

Hold down the power button on your Quad Cortex to unlock it.



• GLOBAL BYPASS



ROW 1

ROW 2

ROW 3

ROW 4



ROW 1

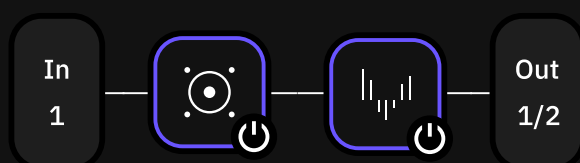
ROW 2

ROW 3

ROW 4



Click on the switches to bypass **Cabs** or **IR Loader** blocks on any row.



Globally bypassed blocks will display a bypass icon on The Grid.



• SCENE BYPASS STATE BEHAVIOUR



Always overwrite bypass state (default)




Do not overwrite bypass state when changing bypass state via footswitches in Stomp Mode (including Hybrid Stomp Mode) or MIDI. **Changes made with the touchscreen will be saved.**



Never overwrite bypass state when changing bypass state by any method.

This feature controls whether changes to the bypass state of a block in Scene Mode are automatically saved to the active Preset.

Click  to select a Scene Bypass State behavior.

• MIDI SETTINGS



MIDI Channel

1



MIDI Thru



MIDI over USB



Ignore duplicate PC



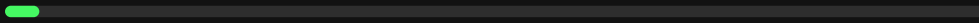
- **QUAD CORTEX BASE MIDI CHANNEL Combo Box:** Click to set the Quad Cortex's MIDI channel (1-16).
- **MIDI THRU Switch:** Click to enable/disable the MIDI Thru feature. MIDI Thru allows Quad Cortex and other devices to have their MIDI connections "daisy chained" together all being driven by a common MIDI source.
- **MIDI OVER USB Switch:** Click to enable/disable the MIDI communication via USB.
- **IGNORE DUPLICATE PC Switch:** When enabled, the current active Preset will not be reloaded if its corresponding MIDI PC message is sent to Quad Cortex. CC#0 and CC#32 messages will also be ignored.
When disabled, the current active Preset will be reloaded if its corresponding MIDI PC message is sent to Quad Cortex.



• DISK SPACE

Available storage space

25.7GB / 27.1G



Displays the available storage space of the Quad Cortex.

• FACTORY RESET

Click [Factory reset](#) to perform a Factory Reset. This action will remove all user data from the Quad Cortex.

At startup, Cortex Control checks automatically if your Quad Cortex is up to date. In case of a version mismatch, a popup window will offer the option to download the latest version available.

• CONTACT AND ABOUT US

Neural DSP Technologies LLC
Elimaenkatu 20A
00510 Helsinki
Finland



This page displays information about Neural DSP Technologies OY.

Click [Send Report](#) to submit a diagnostic report to our support team. The report can take up to a couple of minutes to send.



09

Keyboard Shortcuts

The following keyboard shortcuts are available to speed up tasks when working in Cortex Control.

• Global Shortcuts

COMMAND	MACOS®	WINDOWS®
Show GRID	Cmd + 1	Ctrl + 1
Show DIRECTORY	Cmd + 2	Ctrl + 2
Resize App Window	Cmd + 7, 8, 9	Ctrl + 7, 8, 9
Undo Action	Cmd + Z	Ctrl + Z
Redo Action	Shift + Cmd + Z	Shift + Ctrl + Z
Copy	Cmd + C	Ctrl + C
Paste	Cmd + V	Ctrl + V

• Directory's Shortcuts

COMMAND	MACOS®	WINDOWS®
Search Item (Directory)	Cmd + F	Ctrl + F
Load Selected Item on Grid	Enter	Enter

• Device List's Shortcuts

COMMAND	MACOS®	WINDOWS®
Toggle Device List	Cmd + Dot	Ctrl + Dot
Previous Virtual Device	Cmd + Up	Ctrl + Up
Next Virtual Device	Cmd + Down	Ctrl + Down



• Grid's Shortcuts

COMMAND	MACOS®	WINDOWS®
Grid's Slot Navigation	Left, Up, Right, Down	Left, Up, Right, Down
New Preset	Cmd + N	Ctrl + N
Save Preset	Cmd + S	Ctrl + S
Save as	Shift + Cmd + S	Shift + Ctrl + S
Edit User Preset Details	Cmd + E	Ctrl + E
Show/Close Gig View	Cmd + G	Ctrl + G
Bypass Selected Block	B	B
Bypass Block	Mouse Hover + B	Mouse Hover + B
Remove Selected Block	Backspace	Backspace

• Looper X Shortcuts

COMMAND	MACOS®	WINDOWS®
Record	Alt + 1	Alt + 1
Play/Stop	Alt + 2	Alt + 2
Reverse	Alt + 3	Alt + 3
Undo	Alt + 4	Alt + 4
Duplicate	Alt + 5	Alt + 5
One Shot	Alt + 6	Alt + 6
Half Speed	Alt + 7	Alt + 7
Punch In/Out	Alt + 8	Alt + 8

10

Support

Neural DSP Technologies is happy to provide professional technical support via email to all registered users, absolutely free of charge. Before contacting us, we recommend searching our support and knowledge base sections below to see if the answer to your question has already been published.

[SUPPORT](#)[KNOWLEDGE BASE](#)

If you cannot find a solution for your problem on the pages above, please contact **support@neuraldsp.com** to help you further.

Corporate Contact

Neural DSP Technologies OY
Merimiehenkatu 36 D
00150, Helsinki, Finland

neuraldsp.com