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PATCH^{lt} •



USER MANUAL

V.1.0.1



16 INPUT



16 OUTPUT

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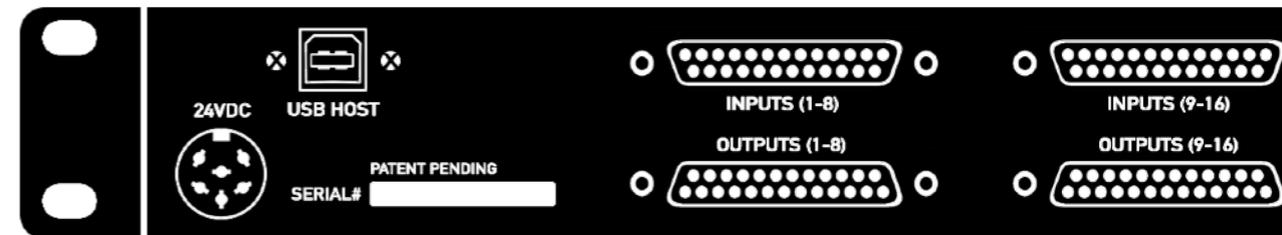
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Certifications:



Thank you...

Where do I begin to start by saying Thank you for your support...

I started working on a conceptual design known as "PATCH" in early 2016 when I decided to leave my stable career and chose to pursue the path less travelled of designing and developing a better & more efficient process for professional audio recording engineers in the depths of my basement home recording studio.

In need of a better solution other than the available 1870's technology known as a traditional patch bay, the concept was born to create a fully digitally controlled but 100% analog circuit routing system that wouldn't color or alter the audio signals passing through it.

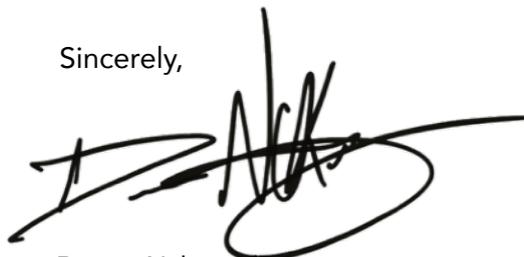
After 2 years of strenuous work and constant focus, Flock Audio the company I started, created the worlds first and most advanced digitally controlled analog audio routing system with features never before possible in conventional analog audio routing.

I'm honoured to have so many customers believe in what Flock Audio stands for...Innovations above Expectations. We have an incredible team of professionals from engineers, software developers & everyone in-house who helped create this one of kind piece of professional audio history.

We look forward to providing the pro audio world with more innovations and excellent service to help assist aspiring and seasoned professionals to create masterpieces for years to come.

Thank you again for choosing to make Flock Audio a part of your professional audio identity.

Sincerely,



Darren Nakonechny
(CEO/Director/Founder)



PATCH APP



PATCH Lt

INTRODUCTION TO THE PATCH LT SYSTEM...

The Flock Audio PATCH LT System is a digitally controlled, 100% analog audio patch bay routing system. A combination of Software known as the PATCH APP and a 32 Point Connection Hardware component, combined allows users to easily route and control analog audio routings without having to resort to the use of manual patch cables.

The PATCH APP software application (OSX & Windows Compatible) is designed with familiarity in mind. PATH's in the application represent audio signal flows from top to bottom. Signal flows are divided up into single vertical columns allowing users to drag + drop available analog audio equipment connected to the PATCH LT's Hardware component. This analog audio equipment is cataloged in the Hardware Index located to the left side of the PATCH APP.

The PATCH LT Hardware component is a 1U rack mountable unit that acts as the centrepiece hub of an audio equipment processing setup. Utilizing digital control over analog audio signals is what makes the PATCH System unique and unlike anything else in the audio industry.

This manual will go more in-depth into the functions, features and recommended usage of the Flock Audio PATCH System.

IMPORTANT SAFETY NOTICES

#1. Do Not Self-Service

To avoid risk of electric shock, injury or death, it is recommended to never attempt to self-service a Flock Audio PATCH System. There are no self-repairable or removable parts in the system. If your Flock Audio PATCH System requires repairs, please contact our support center to arrange for a Flock Audio Certified Repair Technician. (www.flockaudio.com/support)

#2. Avoid Liquid &/or Spills

To avoid risk of damage to your PATCH System, avoid having liquids &/or spills near your PATCH System. If accidental spill occurs, safely shut off your PATCH System using the front power toggle switch, unplug the wall outlet and disconnect the 6-pin power supply from the system. Once completed please contact Flock Audio Support to arrange for a Certified Repair Technician to remove and repair if required.

#3. Use Only Recommended Power Supplies & Cables

It is not recommended to use any other alternative power supply sources other than your included Flock Audio TRUM Power 24VDC Power Supply with your Flock Audio PATCH System. Use of other power supplies may cause damage and void your warranty agreement. Use of 3rd party USB & DB-25 Cables are of no concern and should be chosen based upon the preference and needs of the user.

#4. Proper Rack mount Ventilation Requirements

Proper mount spacing and rack mount ventilation is required to ensure your Flock Audio PATCH System does not overheat. It is recommended that the rear of the rack is open for proper ventilation and that the user DOES NOT mount the PATCH System above any tube-related audio equipment. If necessary, there should be a 1/2 - 1U Rack Space between the PATCH System and any warm or tube-related audio equipment to avoid unexpected shutdowns or internal damage.

#5. Use Properly Grounded IEC Power Cables

In addition to your supplied Power Supply brick, it is recommended that you always use a properly shielded and grounded IEC Power Cable (110V/220V) with your PATCH System. The Chassis is designed to work with the earth ground inside the box for both a safe & quiet audio operation. Never remove or use a IEC cable accessory without the grounding pin.

#6. External 48V Phantom Power (I.E. Connected Preamp)

Although no damage or immediate danger will occur if 48V Phantom Power is engaged on a Preamp connected to the Input of the PATCH System, it is not recommended to leave that 48V source active for a lengthy period of time. The PATCH System is equipped with its own 48V capabilities and once it detects an externally connected active 48V source, it will prompt the user both in the PATCH APP & Red Flashing LED on the Hardware to disable it.

#7. Discontinue Use During Electrical Storms

Never use your Flock Audio PATCH System during any electrical or dangerous lightning storms. Calmly shutdown your System, Unplug the IEC power cable from the wall outlet or power conditioner until it's safe to continue use. It's also recommended to keep the system unplugged if not in use for long extended periods of time.

#8. Disclaimer Notice

Flock Audio Inc. reserves the right to revise or change the information contained within this manual without notice. All revisions or changes will be noted by the Version Number located on the front title page of this manual and the latest digital manual will be provided via web link in the PATCH APP Software Application.

#9. Certifications



WHATS INCLUDED IN THE BOX



PATCH 1U HARDWARE



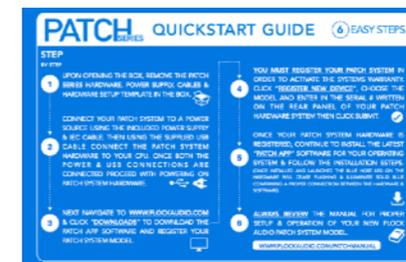
IEC POWER CABLE
(110V or 220V)



24VDC POWER SUPPLY



USB-A TO USB-B (10FT)



6 STEP QUICKSTART GUIDE



HARDWARE INDEX
SETUP SHEET

FRONT IDENTIFICATIONS



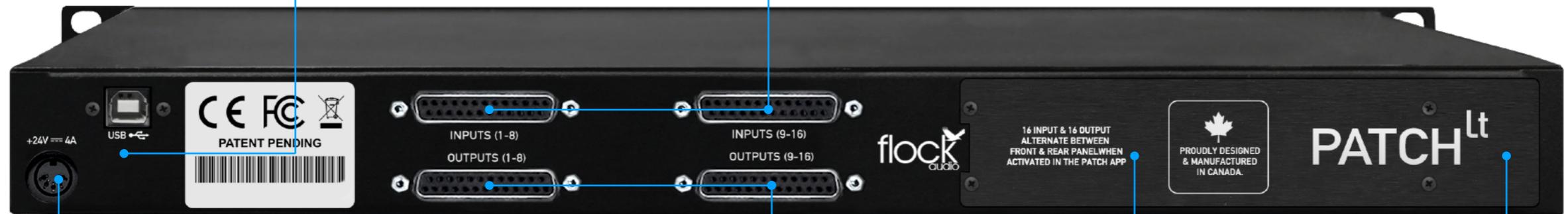
REAR IDENTIFICATIONS

USB-B Host Connector

USB-B to USB-A Cable
(USB 2.0 Connection)

Rear Inputs 1-16

DB-25/D-SUB Connectors
Inputs: 1-8 & 9-16
(8 Balanced Audio Channels per Connector)
Tascam 25 Pinout Wiring Standard



24VDC Power Connection

6 Pin Connector with threaded locking sleeve



IMPORTANT: Always ensure that the Power Connector is fastened snugly into the Power Input of the PATCH System Hardware.

Rear Outputs 1-16

DB-25/D-SUB Connectors
Outputs: 1-8 & 9-16
(8 Balanced Audio Channels per Connector)
Tascam 25 Pinout Wiring Standard

Input & Output (16 & 16)

Channels 16 & 16 can be routed to the Front Panel Input & Output using the PATCH APP Software.

Do Not Remove Plate
Do Not Remove Rear Plate. This is **Not** an Expansion Plate.

PROFESSIONAL +4 LINE LEVEL
NOTE PATCH IS DESIGNED WITH A FIXED PROFESSIONAL LINE LEVEL OF +4 TO WORK IN ACCORDANCE WITH OTHER INDUSTRY STANDARD OUTBOARD PROCESSING HARDWARE. WHEN USING OTHER TYPES OF LEVELS FOR SIGNAL ROUTING, YOU MAY NEED TO HAVE ADDITIONAL ACCESSORIES CONNECTED INLINE.



REAR PANEL CABLE CONNECTIONS

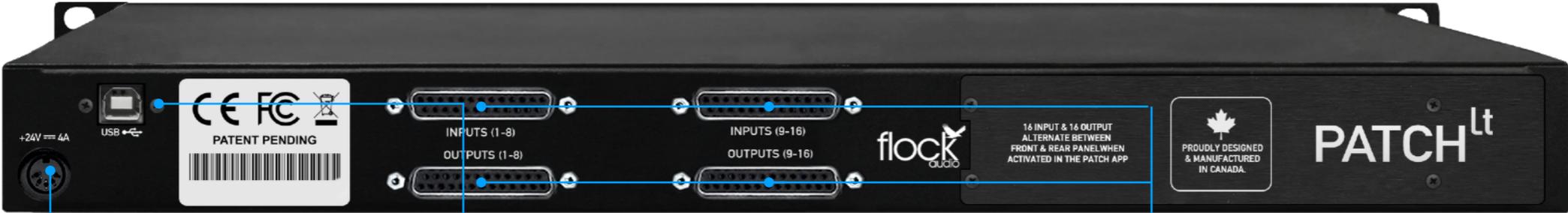
⚠ INPUTS & OUTPUTS NOTICE

NOTE INPUTS & OUTPUTS ON THE REAR PANEL OF THE PATCH SYSTEM ARE SEPARATELY DESIGNATED. YOU CANNOT USE AN OUTPUT AS AN INPUT OR VICE VERSA. PLEASE ENSURE TO AVOID RISK OR DAMAGE TO THE PATCH SYSTEM OR OTHER EXTERNAL HARDWARE THAT IS CONNECTED THAT YOU MAKE THE PROPER CONNECTIONS ACCORDINGLY. TO LEARN MORE OF ABOUT PROPERLY CONNECTING EXTERNAL HARDWARE TO THE PATCH SYSTEM SEE THE BOTTOM OF THIS PAGE.

⚠ ATTENTION:

NOTE THAT THE DB-25 CONNECTORS ON THE REAR PANEL ARE ALTERNATE ORIENTATIONS. DO NOT TRY TO FORCE THE DB-25 CONNECTOR TO CONNECT IF ITS NOT EASILY CONNECTING. REVIEW ORIENTATION THEN TRY AGAIN.

REQUIRED CABLES FOR OPERATION



REAR VIEW



24VDC Power Supply (6 Pin)
(Included In Box)



USB-A To USB-B (Cable)
(10' USB 2.0 - Cable Included In Box)



DB-25/D-SUB Cable Snakes
(Female/Male XLR & TRS Options Available)
(Cables Not Included)
(Cable examples courtesy of Pro Audio LA)

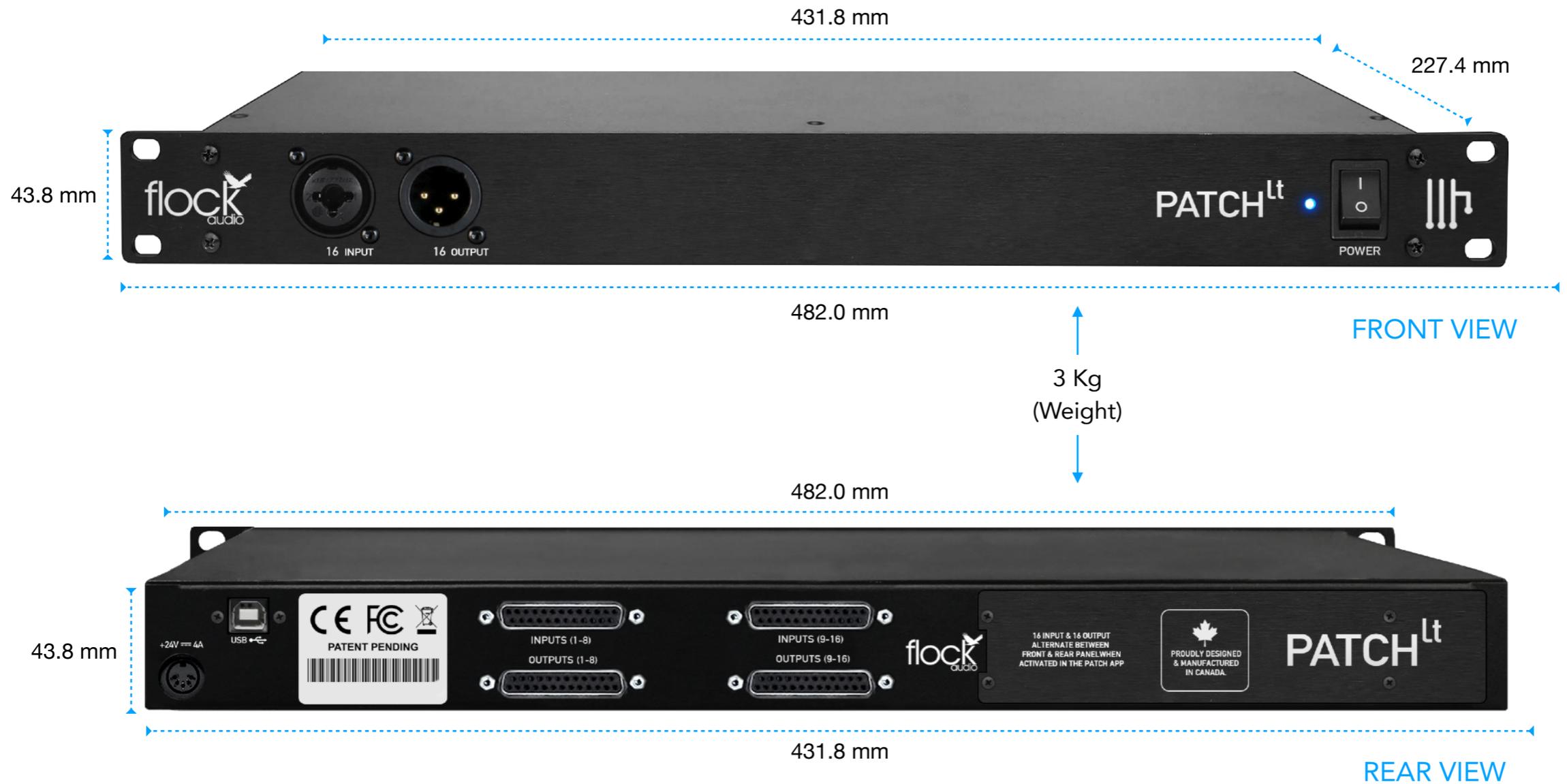
CONNECTING PATCH TO EXTERNAL HARDWARE EXAMPLE.

NOTE ALL EXTERNAL HARDWARE MUST BE CONNECTED IN THIS METHOD SHOWN TO THE LEFT SIDE OF THIS DESCRIPTION.

PATCH (OUT) → EXTERNAL HARDWARE (IN)
EXTERNAL HARDWARE (OUT) → PATCH

HARDWARE CHASSIS MEASUREMENTS

CHASSIS DIMENSIONS





SOFTWARE CONTROLLER OVERVIEW

PATCH APP 2.1



Hardware Index

All external audio equipment connected to the PATCH System Hardware will be cataloged in this Index.

PATH

All signal flows in the PATCH APP are referred to as PATH's. PATH's represent an active signal flow chosen by the user. All PATH's are shown vertically in the active routings section of the PATCH APP. PATH signal flows go from top to bottom in each PATH routing column.

"M" Mute Paths

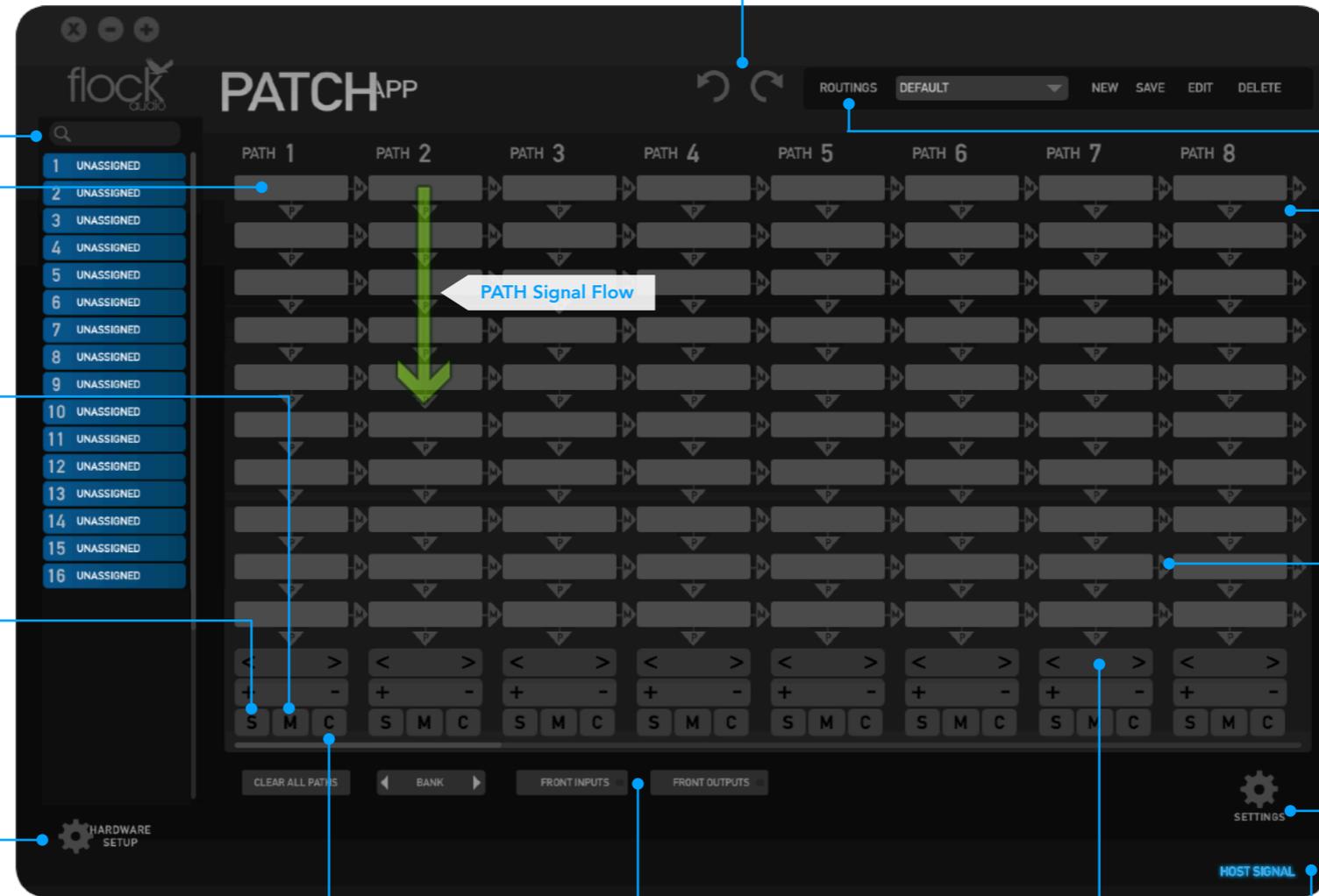
Users can easily Mute entire PATH's by Clicking the "M" at the bottom of each PATH.

"S" Solo Paths

Users can Solo entire PATH's by Clicking the "S" at the bottom of each PATH. Note: If you have Multiple PATH's Soloed, Un-Solo All PATH's by Holding Command + Clicking "S".

Hardware Setup Menu

This menu is where all external audio equipment connected to the PATCH System's hardware is managed and named accordingly to the users preference. This Hardware Setup Menu also includes various other setting controls Including: 48V Safeguard Toggles, Master 48V Bypass Toggles, Digital Rack Number Toggles, Digital Rack Number Controls and Link/Unlinking controls.



"C" Clear Single PATH

Clicking the "C" at the bottom of each PATH can Clear individual Routings on each PATH.

Toggle & Control Center

The Toggle & Control Center allows users to quickly control viewing options and manage active analog audio routing signals. The Toggle section allows users to redirect 31-32 Inputs & Outputs from the rear side of the PATCH Hardware to the Front Panel Inputs & Outputs.

Movable PATH Arrows

These arrows allow the user to move entire populated PATH's (Signal Chains) Left or Right throughout the Active Routing Grid.

Undo/Redo

Users can quickly Undo/Redo a routing choice or use the Undo/Redo Buttons as a quick A/B Reference.

Routings Menu

Create, Store, Recall & Manage all existing analog routings from the Routings Menu. This menu allows the user to store & recall desired analog audio routings.

48V Phantom Power

32 Channels of individually controlled 48V Phantom Power will Appear on the first slot of each Digital Rack Space when a "48V Allowed" Mic is placed in the first slot.

Multing

By clicking "M" located to the right-side of each Digital Space it will enable Multing capability, effectively allowing you to split a signal processing chain into multiple PATH's.

Settings Menu

User preference settings, support, updates & multiple unit setup parameters are located in the Settings Menu.

Host Signal

This indicator will illuminate "Blue" when the PATCH APP is properly communicating with the PATCH Hardware. If Host Signal is "Red" the connection between the Software & Hardware needs to be reconnected.

Digital Rack Space Legend

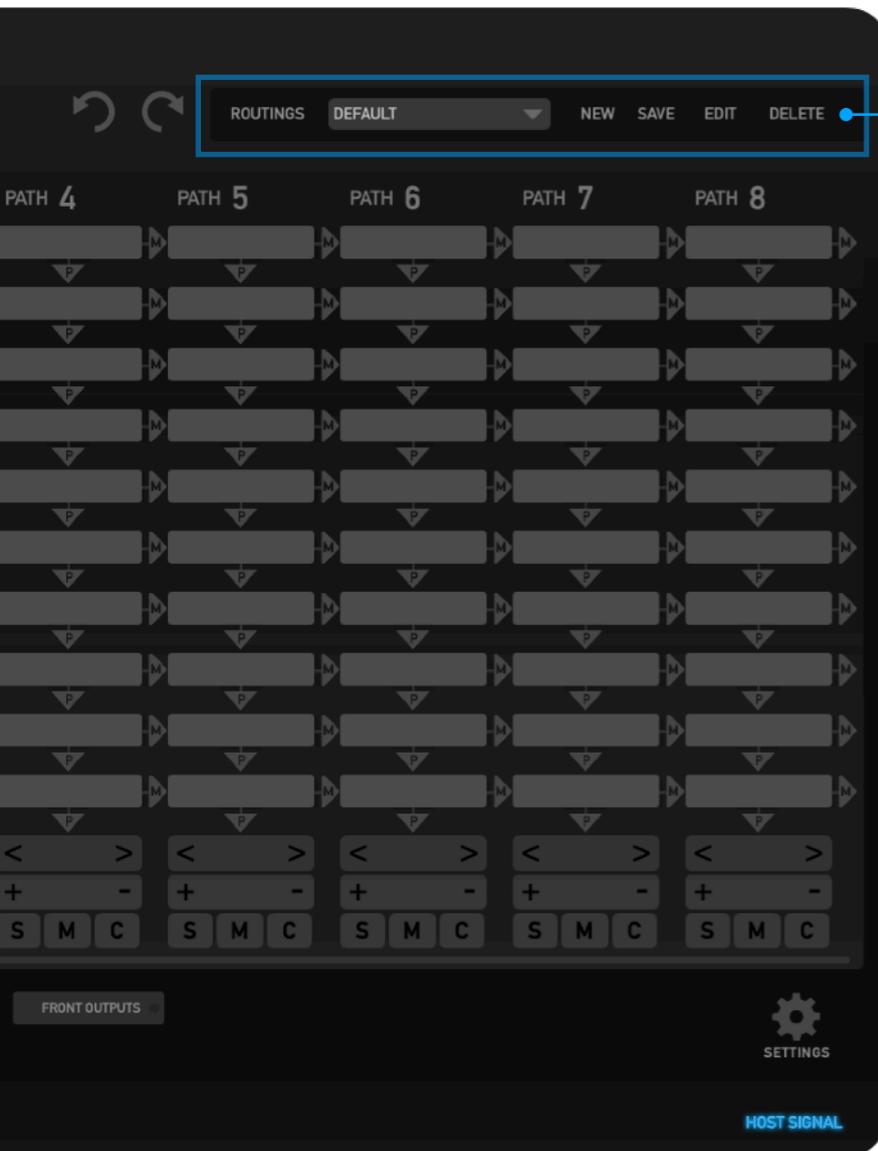
HARDWARE INDEX

Users will catalog all of their external audio equipment physically connected to the PATCH Hardware system with-in one easily organized index list. The Hardware Index allows the user to scroll through and Drag + Drop “Digital Rack Spaces” into desired signal flow PATH’s in the active routings section of the app. The Hardware Index is equipped with a search field located at the top of the Hardware Index, allowing users to search for desired analog audio equipment.

Preferred user preferences for the Hardware Index are located in the Hardware Setup Menu below the Index, which will be covered later on in this user manual.



Routings Menu Overview



ROUTINGS MENU

Create, Store & Recall routings from the PATCH APP's Routing Menu. Users can create active routings and store them for later recall with this simple and easy to use user menu. The Menu is a dropdown accessible menu.

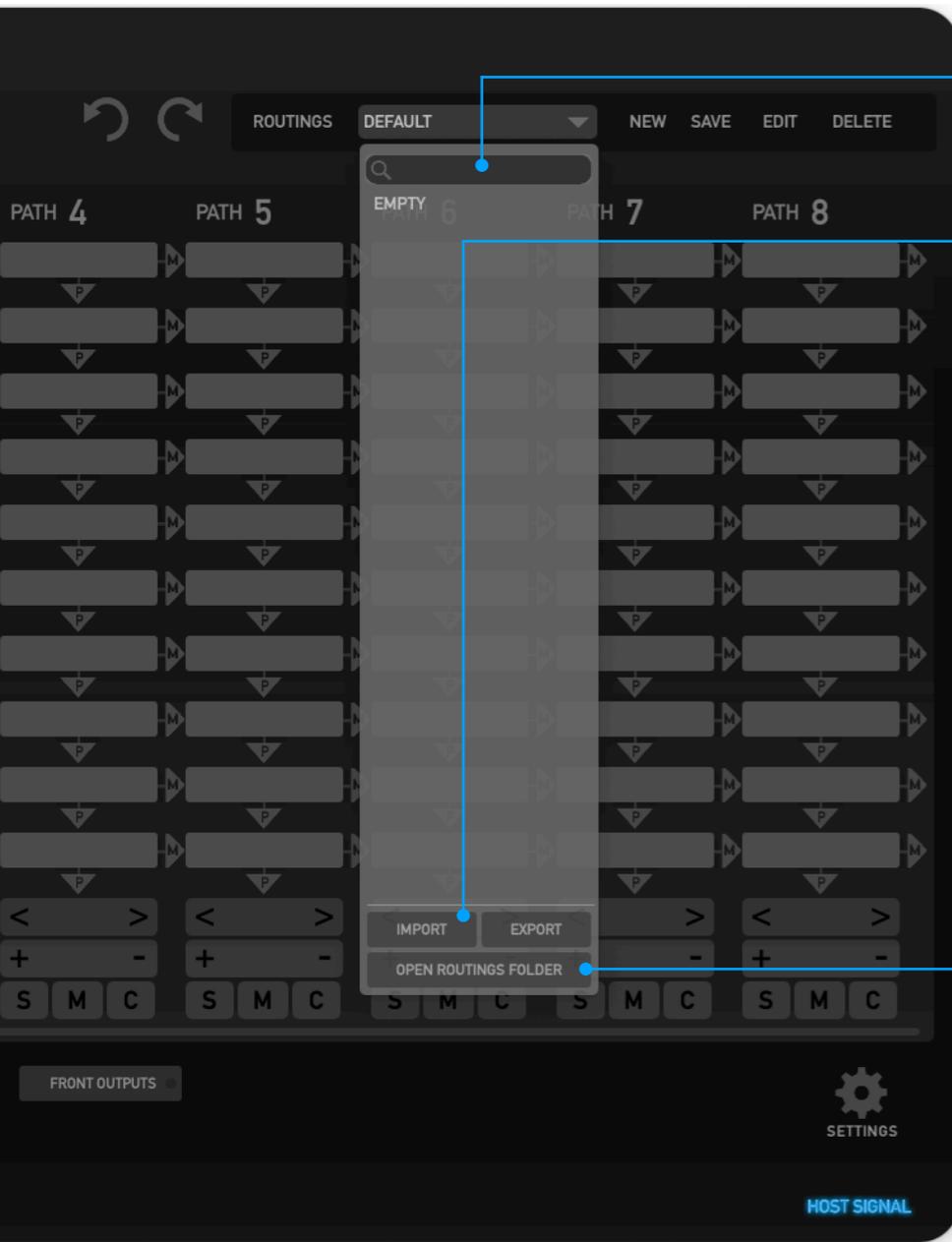
New - Clicking "New" will open a Save-As window allowing the user to save a desired active routings in the the Routings Menu Folder.

Save - When a previously stored routing is active and changes are made to the routing by the user, Clicking "Save" will update the previously stored routing in the Routings Folder with the modified changes.

Edit - If a user chooses to change the name of their previously stored routing, clicking "Edit" will open a Save-As window allowing the user to rename and store the existing or modified routing.

Delete - When an active stored routing is present, a user will be able to delete this stored routing from the Routings Menu by clicking delete.





ROUTINGS MENU OPTIONS

SEARCH FIELD

Searchable Field for "Saved" Routing Configurations.

IMPORT & EXPORT ROUTINGS

Users can easily Import or Export selected routings by opening the Routings Dropdown Menu. Once a Routing is "Saved" or "Stored", users can select to "Export" this routing into a clients session or desired folder of choice for further archiving.

Once the Routing is "Exported" into a another folder, users can choose "Delete" in the Dropdown Menu to avoid taking up space in the Routings Dropdown Menu. "Deleting" this routing in the Dropdown Menu after "Exporting" to a separate folder will not delete the new copy in the new desired folder location.

Users can also Import saved routings from other folder locations by selecting "Import" to add it into the Routings Dropdown Menu.

OPEN ROUTINGS FOLDER

By Default all routings "Saved" are stored in a community routings folder that is easily accessible with-in the PATCH APP Routings Dropdown Menu. By selecting "Open Routings Menu" it will open a dialog window, allowing the user to remove or modify any "Saved" routings. Note: all PATCH APP routings are saved in a ".flock" format.



Active Routings Section Details

“S” Solo Paths

Users can Solo entire PATH's by Clicking the “S” at the bottom of each PATH. Note: If you have Multiple PATH's Soloed, Un-Solo All PATH's by Holding Command + Clicking “S”.

ACTIVE ROUTINGS SECTION

The Active Routings Section of the PATCH APP is where users will drag + drop preferred analog audio equipment cataloged in the Hardware Index in the form of digital racks into desired PATH signal flows. All PATH signal flows go from top (start) to bottom (end).

Each active digital rack space inserted into a PATH will illuminate a Green “P” below it (P=PATH) showing that the connection of that desired signal flow is active. 

MOVABLE PATH ARROWS

Movable PATH Arrows allows users to move entire populated PATHs throughout other various available PATH columns in the Active Routing Section of the PATCH APP Software.



ADD OR SUBTRACT DIGITAL RACK SPACES

Add or Subtract digital rack spaces by clicking the (+ or -) icons below the last digital rack space. By default the PATCH APP's Active Routings Section always displays 10 digital rack spaces but can be further increased if desired by the user.

SOLO SINGLE PATH'S

Soloing entire PATH's by clicking the “S” Button positioned at the bottom of each Individual PATH. **Note:** When Multiple PATH's are Soloed, you can Un-Solo all PATH's by Holding.

-  “Command + Click S” - To Un-Solo All Racks
-  “Cntrl + Click S” - To Un-Solo All Racks

MUTE SINGLE PATH'S

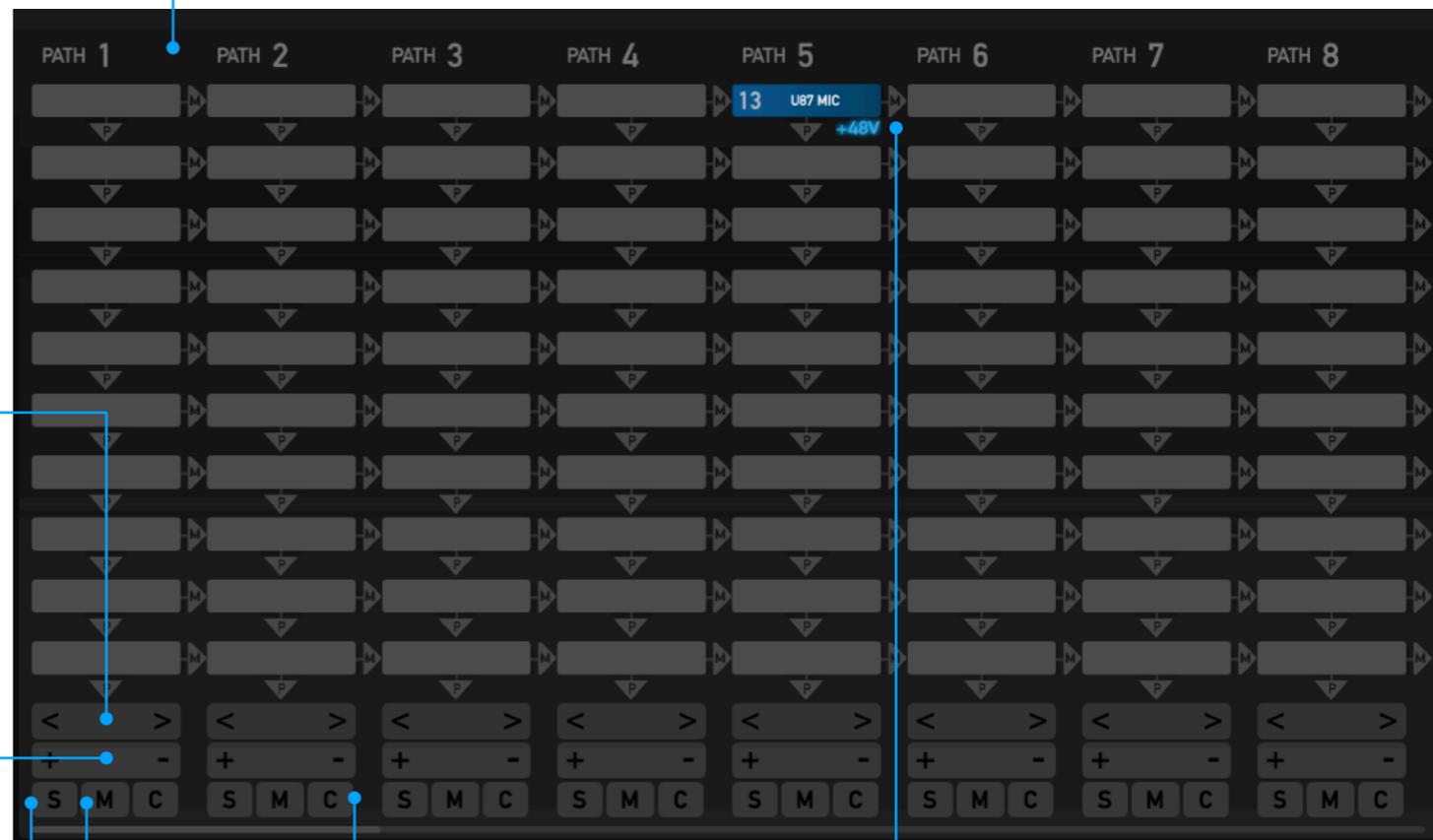
Users can easily Mute entire PATH's by clicking the “M” Button positioned at the bottom of each individual PATH.

CLEAR SINGLE PATH

You can clear single PATH signal flows by clicking the “Clear” button at the bottom of each PATH signal flow. When clicking the “Clear” button the system will prompt a user to notify them that they are deleting a single active PATH signal flow.

48V PHANTOM POWER

The top Digital Rack Space/Slot of each PATH is equipped with a Hidden 48V Icon that appears when a 48V enabled device is inserted into the first slot. Users can enable 48V by clicking the 48V icon. **Note:** 48V can only be enabled if permission is granted in the Hardware Setup Menu



PATH Details

PATH'S

PATH'S are signal flows that go from Top to Bottom. As shown in the right hand side example a green arrow illustrates the analog audio signal flow as follows...



PATH Icon Indicator

USED DIGITAL RACKS

Digital Rack Spaces that are already designated or in-use will show up "darker" or "greyed out" in the Hardware Index. This means this specific Digital rack space is already in use (i.E. Routed) in the active routings section of the PATCH APP.

WHEN CONNECTING MICROPHONES TO PATCH

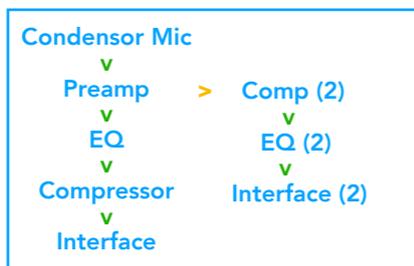
The PATCH Series models are all a +4 Professional Line Level Design. When connecting Microphones directly to the PATCH Series Hardware, Standard Audio Engineering Practices should be exercised such as the understanding that mixing Signal Levels may or may not exhibit audio level &/or electronic noise floor artifacts. If undesired results are experienced when connecting Microphones directly to the PATCH Series, it is recommend to have a dB Booster or Transparent Preamp between the Microphone and PATCH Model Connection (I.E. **Mic -> Pre/dB Booster -> PATCH**) to achieve the best possible audio signal levels for routing.



PATH Multing Details

MULTING

Multing capability allows a user to split an active routing signal flow from a desired Digital Rack Space and process the analog signal through other available analog audio equipment listed in the Hardware Index. The PATCH System does not introduce any impedance load issues to the Mult'd signal flows no matter the chosen amount of Mult's. Simply Click the "M" Icon to enable a Mult (Split Signal).



Multing Toggle Switch



WHEN CONNECTING MICROPHONES TO PATCH

The PATCH Series models are all a +4 Professional Line Level Design. When connecting Microphones directly to the PATCH Series Hardware, Standard Audio Engineering Practices should be exercised such as the understanding that mixing Signal Levels may or may not exhibit audio level &/or electronic noise floor artifacts. If undesired results are experienced when connecting Microphones directly to the PATCH Series, it is recommend to have a dB Booster or Transparent Preamp between the Microphone and PATCH Model Connection (I.E. Mic -> Pre/dB Booster -> PATCH) to achieve the best possible audio signal levels for routing.

User Operation Instructions

DRAG & DROP OPERATION

In order to create an analog routing configuration the user will Click + Drag a preferred Digital Rack Space into the desired PATH space of their choice. Once hovering over the chosen empty rack space, the user will release the mouse button allowing the Digital Rack Space to snap into place, activating the desired routing connection.

As previously mentioned earlier in the manual, all signal flow PATH's go from top to bottom as shown in the example to the right side of this description. If the Active Digital Rack Space is inserted into an incorrect empty rack space, the user can simply just Click + Drag it into the preferred empty rack space, following the same instructions as previously mentioned.

RIGHT + CLICK OPTIONS

Once a Digital Rack Space is in its desired PATH, the user can Right + Click on the activate Digital Rack Space and choose between the options of "Remove" or "Bypass".

Remove - Choosing Remove will disconnect the the activate Digital Rack Space routing configuration and return the Digital Rack Space to the Hardware Index for future routing possibilities. Users can also Click + Drag the Active Digital Rack Space back to the Hardware Index to remove it.

Key Commands: "Option + Click" - To Remove a Rack Space
 "Alt + Click" - To Remove a Rack Space

ByPass - Choosing Bypass will disable the selected Active Digital Rack Space allowing the signal flow to bypass this specific Rack Space without being affected or processed. Once a Digital Rack Space is Bypassed, it will show in a darker color shade. The user will be able to UnBypass this Digital Rack by Right + Clicking again and choosing UnBypass.

Key Commands: "Command + Click" - To Bypass a Rack Space
 "Cntrl + Click" - To Bypass a Rack Space



Visual Representation of a Bypass Signal Chain.



Hardware - Choosing Hardware on any empty or active Digital Rack Space/Slot will open a separate menu allowing the user to add or change a Hardware selection.

Toggle & Control Center Features

CLEAR ALL PATHS

The PATCH APP Toggle & Control Center will easily allow a user to Clear (I.E. Delete) all active routing PATH's previously set by the user. Note: When choosing "Clear All Paths" the system will prompt the user notifying them all their active routing data will be lost if they choose to proceed without storing the active routings for a later date.

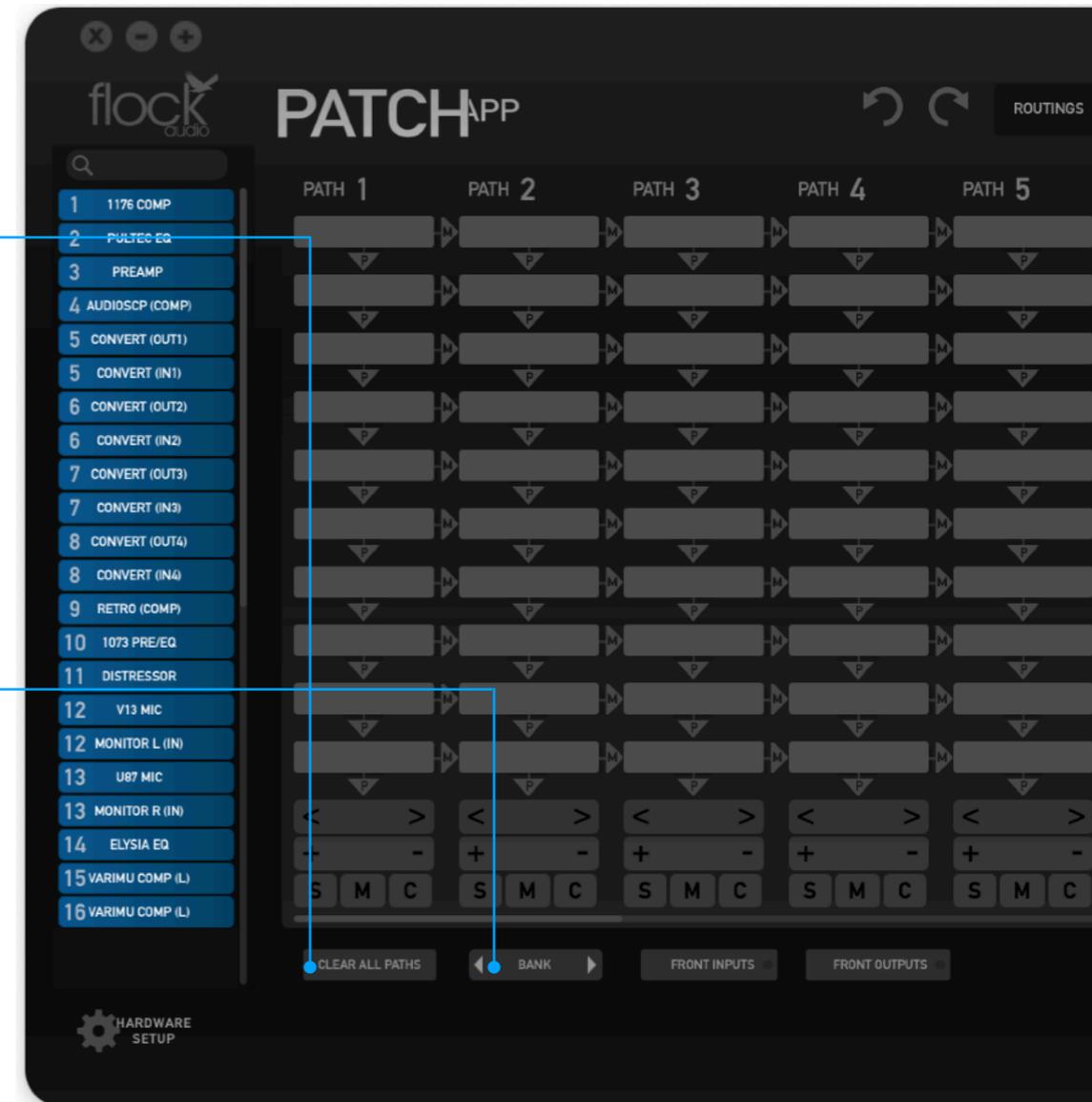
BANK

Users can easily Bank between "8 PATH's" for quick viewing within the active routings section of the PATCH Application. Alternatively, users are also able to use the bottom scroll bar &/or a touch sensitive mouse to move between various PATH's.

By clicking the "Bank" button when scrolling between various active PATH's, the PATCH APP will realign the user interface with the closest 8 PATH's available.

BANK THROUGHOUT THE ROUTING GRID

  "Banking with the following Key Commands"



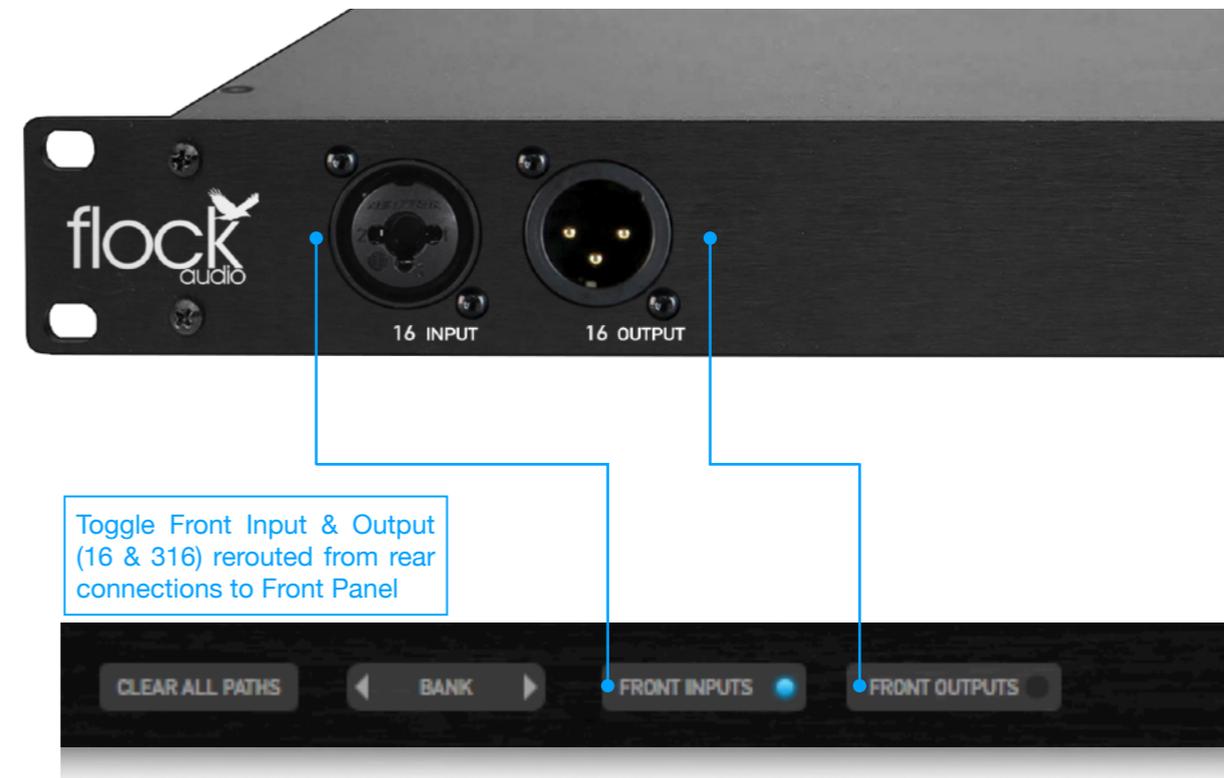
Toggle & Control Center Features

FRONT PANEL INPUTS & OUTPUTS

The PATCH LT System Hardware will allow a user to redirect Input 16 or Output 16 from the rear side of the system to the front panel for easy access and integration of outside analog audio equipment.

This function can be engaged by clicking the “Front Inputs” or “Front Outputs” toggle buttons located in the bottom section of the software application. A prompt notification will alert the user that Inputs &/or Outputs 16 &/or 16 will no longer be actively functioning on the rear side of the PATCH Hardware unit when the Front Input 16 or Output 16 is activated in the application.

Note: Inputs 16 IN / 16 OUT when redirected to the front panel Input Connectors will have the ability to have 48V Phantom Power supplied to them when using the PATCH APP software controller.



Hardware Setup Menu Overview

HARDWARE SETUP MENU

The Hardware Setup Menu is where all of the physically connected analog audio equipment is organized by the user. The Hardware Setup Menu provides personal preferences for each Input & Output allowing the user to customize the specific digital rack spaces according to their needs.

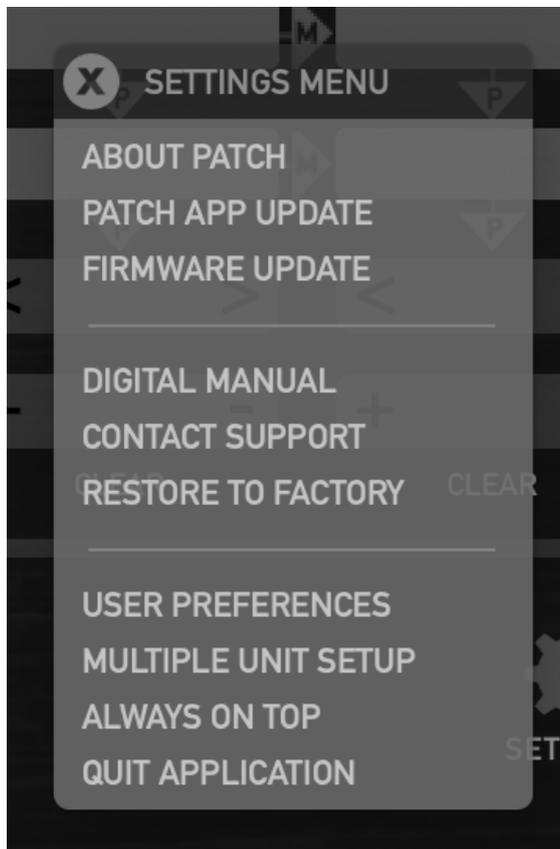
-  **Deny / Allow** - Each Input on the PATCH Hardware is protected with a Safeguard Switch that prevents accidental 48V Phantom Power engagements on incompatible external audio equipment. By default the PATCH APP Deny's all connected external audio equipment from having 48V Phantom Power. In order to use 48V you must select "Allow" which will grant permission for the user to engage 48V Phantom Power on this Input connection. Note: This switch does not turn on 48V it only allows the user to turn on 48V with-in the Active Routings Section of the application.
-  **Unlink / Link** - The Lock icon allows the user to link both the Input & Output of a corresponding channel together to display only 1 - Digital Rack Space in the Hardware Index or Unlink the channels to display 2 - Digital Rack Spaces for separate routing configurations. When "Unlinked" the 2 - Digital Rack Spaces will show in the Hardware Index, by default the Top corresponding numbered rack will represent the Input and the Bottom corresponding numbered rack will represent the Output.
-  **Stereo Pairing** - This pairing Icon when activated allows the user to connect/link the corresponding I/O together to control them simultaneously within the active routing grid. Selecting this Stereo Paring option between Digital rack spaces allows for easy Stereo BUSS Processing Control. More Information On Page (29)
-  **48V Master** - The 48V capability for the entire PATCH System can be turned off with the use of the 48V Master Toggle Switch. When "Off" is selected, 48V will not be possible to engage on the entire system. When "On" is selected by default, the System will be able to provide 48V Phantom Power to any granted permission Input.
-  **Digital Rack Numbers** - This toggle allows a user to remove the Digital Rack Numbers embedded on the left side of each digital rack space. This toggle is a visual user preference only and does not affect the connections of the PATCH Hardware.
-  **Input/Output Text Label** - Each Input and Output connection on the PATCH System Hardware is represented by a Text Label Field in the Hardware Setup Menu. Users can easily label and revise audio equipment names by simply opening the Hardware Setup Menu. Note: Always choose "Save Hardware" to store Labels.

- IMPORT LIST
- EXPORT LIST
- SAVE HARDWARE

Import/Export/Save Hardware - The PATCH APP has the ability to Import &/or Export existing Hardware lists. When travelling to other recording studios that use a PATCH System, an engineer can export the existing hardware list from the chosen studio and send it to the travelling audio engineer user allowing the user to import the list and review available analog audio equipment while creating various routings before arriving at the studio.



Settings Menu Overview



SETTINGS MENU

Manage all your Software User Preferences from the Settings Menu, located at the bottom right side of the PATCH APP.

About PATCH - Selecting “About PATCH” will open an information window stating the active installed versions of both the PATCH APP Software and Firmware.

PATCH APP Update - This option will notify a user when an available update is present for the PATCH App. Selecting this option from the menu will open a web browser and navigate to the PATCH Downloads Webpage.

Firmware Update - This option will notify a user when an available update is present for the PATCH Hardware. Selecting this option from the menu will open a web browser and navigate to the PATCH Downloads Webpage.

Digital Manual - To view this Manual directly from the PATCH APP a user will be able to select this option and open the most recent version of the User Manual.

Contact Support - The PATCH APP allows you contact Flock Audio Support right from the Settings Menu of the application. Selecting this menu option will open a web browser and navigate to the Flock Audio Support webpage.

Restore to Factory - If you ever require a complete Factory Reset on your PATCH System, selecting “Restore to Factory” will revert your PATCH APP to Factory Default Settings. **Please Note:** This function cannot be undone and will delete all of the user inputted information and settings. Its recommended to Export/Save: Routings & Hardware Index Setups prior to Restoring to Factory.

User Preferences - The Preferences menu will allow a user to select a preferred language & Hardware Fan Controls to use with-in the PATCH APP. **Please Note:** Some languages may not appear aesthetically formatted correctly due to various character lengths.

Multiple Unit Setup - When using more than one PATCH System with-in the PATCH APP a user must select and open the Multi-Unit Setup menu. Further details on the operation of this menu is located further in this manual.

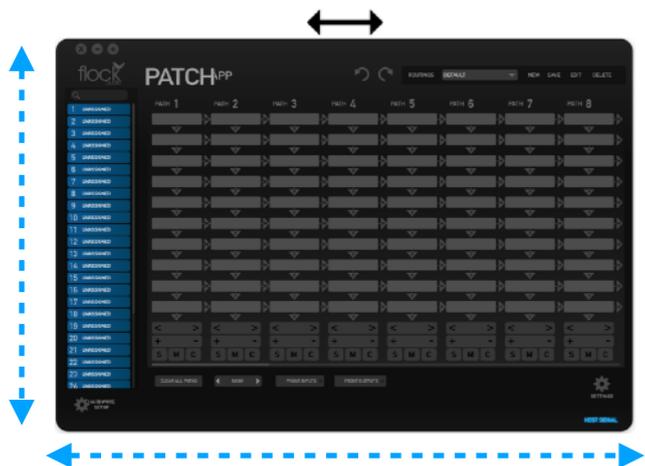
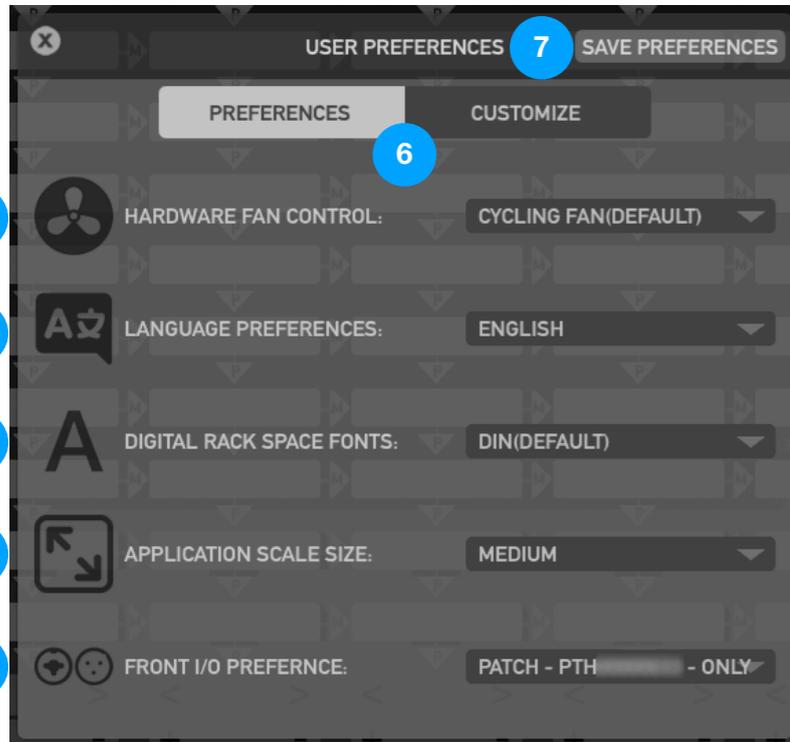
Always On Top - Selecting “Always On Top” will keep the PATCH APP above all other applications open with-in the present viewing display.

Quit Application - This will close the PATCH APP and stop any activate routings from being connected. **Please Note:** If you have an activate routing present, the PATCH APP will prompt you to Save or Continue prior to closing the PATCH APP.

USER PREFERENCES

User Preferences Menu

The User Preferences Menu is where you can customize your Flock Audio PATCH System and PATCH APP Software for that unique user experience.



Simply Hover Over any Edge of the PATCH APP to Click + Drag out the PATCH APP Horizontally or Vertically to Resize it to the Users personal preference.

1 Hardware Fan Control - The PATCH System is equipped with a Cooling Fan built into the right side of Hardware. The fan is designed to ensure the lifespan and quality of its internal components of the unit. Users can choose the best Fan Option Parameters for their studio Environment. By default, the PATCH APP will be set to **“Cycling Fan”** which controls the PATCH Hardware to cycle the fan periodically ensuring appropriate cooling is performed. However, if you find the Fan is cycling on/off to often, you can choose **“Emergency Fan Only”** which will only active the Fan if the Unit’s thermostat is detecting its internal temperature has exceeded the allowable amount & requires a cool down. *Note: That any of the options will not void or affect your units warranty or performance.*

2 Language Preferences - The PATCH APP is now includes Language Preference options which will be periodically updated with new languages each update.

3 Digital Rack Space Fonts - Adding to the User Experience, the PATCH APP now allows users to choose between various Font Types for easier and personalized viewing experiences.

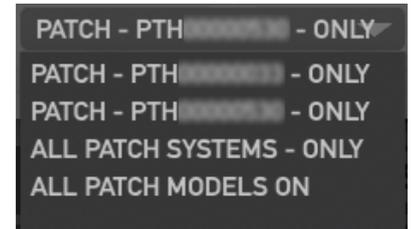
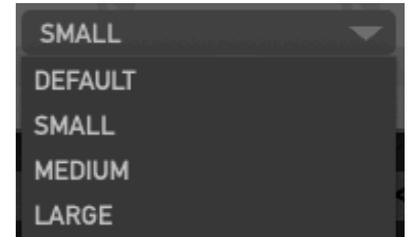
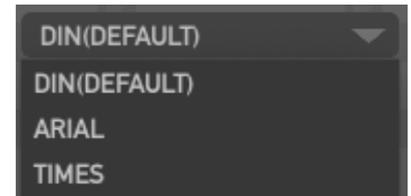
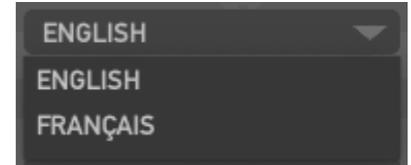
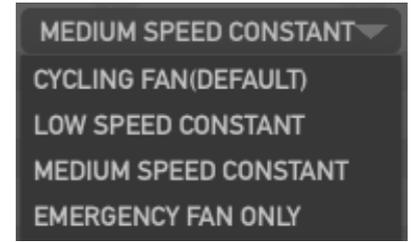
4 Application Scale Size - No matter the screen size or resolution, the PATCH APP allows users to customize their view for the optimal experience.

5 Front I/O Preference - When setting up Multiple Unit Systems, Users can control how the Front I/O Operates on each or all connected PATCH Models.

6 Preferences / Customize Options - The User Preferences Menu has both **“Preferences”** and **“Customize”** Tabs where Users can setup their PATCH APP Software & Hardware for their personal preference.

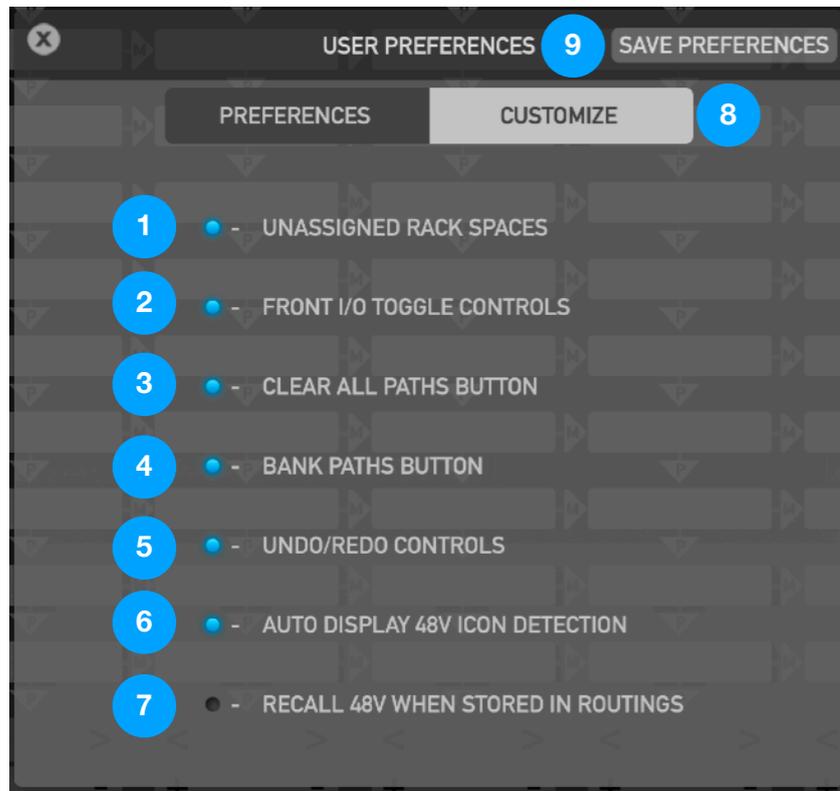
7 Save Preferences - Once the User has chosen their preferred User Preferences, ensure that the **“Save Preferences”** button is selected so that the preferences are stored for future Software Launches.

8 Application Scale Size [RESIZING] - Once the User has chosen the PATCH APP’s Application Size, the user can take it a step further by Resizing the App to their preferred screen height and width. Simply hover over the edges of the PATCH APP and once the cursor switches to the resizing arrows, you can resize the APP Window to your preferred view. This will automatically be saved for the next time the User launches the PATCH APP Software.

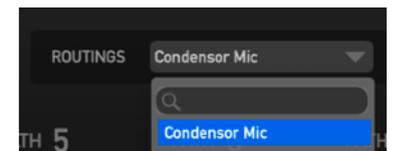
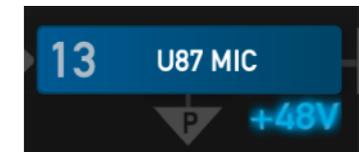
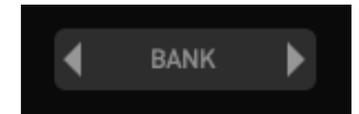
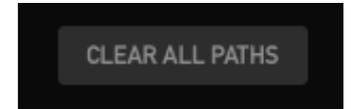


User Customize Tab

The User Preferences Menu is where you can customize your Flock Audio PATCH System and PATCH APP Software for that unique user experience.



- 1 **Unassigned Rack Spaces** - Users can Toggle the Display or to Hide "Unassigned" Undesignated Digital Rack Spaces in the Hardware Index by toggling them On (Blue) or Off (Dark Grey) in the Customize Tab.
- 2 **Front I/O Toggle Controls** - Users can Toggle the Display or to Hide the **Front Input(s)** and **Front Output(s)** Controls by toggling them On (Blue) or Off (Dark Grey) in the Customize Tab.
- 3 **Clear All PATH's Button** - Users can Toggle the Display or to Hide the "**Clear All Paths**" Control by toggling them On (Blue) or Off (Dark Grey) in the Customize Tab.
- 4 **Bank PATH's Button** - Users can Toggle the Display or to Hide the "**Bank**" Controls by toggling them On (Blue) or Off (Dark Grey) in the Customize Tab.
- 5 **Undo/Redo Controls** - Users can Toggle the Display or to Hide the "Undo / Redo" Controls by toggling them On (Blue) or Off (Dark Grey) in the Customize Tab.
- 6 **Auto Display 48V Icon Detection** - Users can Toggle the 48V Auto Display upon Drag + Drop of 48V Enabled Devices or Permanent display of the "48V Icon" Controls by toggling them On (Blue) or Off (Dark Grey) in the Customize Tab.
- 7 **Recall 48V When Stored In Routings** - By Default the PATCH APP Software will not permit the Stored Recall of Active 48V enabled devices. Users can choose to Allow the Recall of 48V Enabled Devices upon User Recall. **[WARNING]** If a change has occurred with-in the physical connection setup to PATCH, authorizing a recallable stored routing with 48V Enabled may can cause serious irreversible damage to Devices that cannot accept 48V Phantom Power.
- 8 **Preferences / Customize Tabs** - The User Preferences Menu has both "**Preferences**" and "**Customize**" Tabs where Users can setup their PATCH APP Software & Hardware for their personal preference.
- 9 **Save Preferences** - Once the User has chosen their preferred User Preferences, ensure that the "Save Preferences" button is selected so that the preferences are stored for future Software Launches.



Multiple PATCH System Setup Menu (Pt.1)

Multiple PATCH System Setup Menu (Pt.1)

MULTIPLE UNIT IDENTIFICATIONS

When using a multiple PATCH unit setup(s), users must designate specific connection configurations between PATCH units in order to send analog signals from one system to the next. PATCH Systems are identified in the PATCH APP according to their registered serial numbers. Rearranging the systems to a specific desired order is as simple as clicking + dragging on the serial numbers into a preferred order. I.E. Which PATCH Hardware is the 1,2,3 etc.

Drag to ReArrange PATCH Units in the Multi-Unit Setup

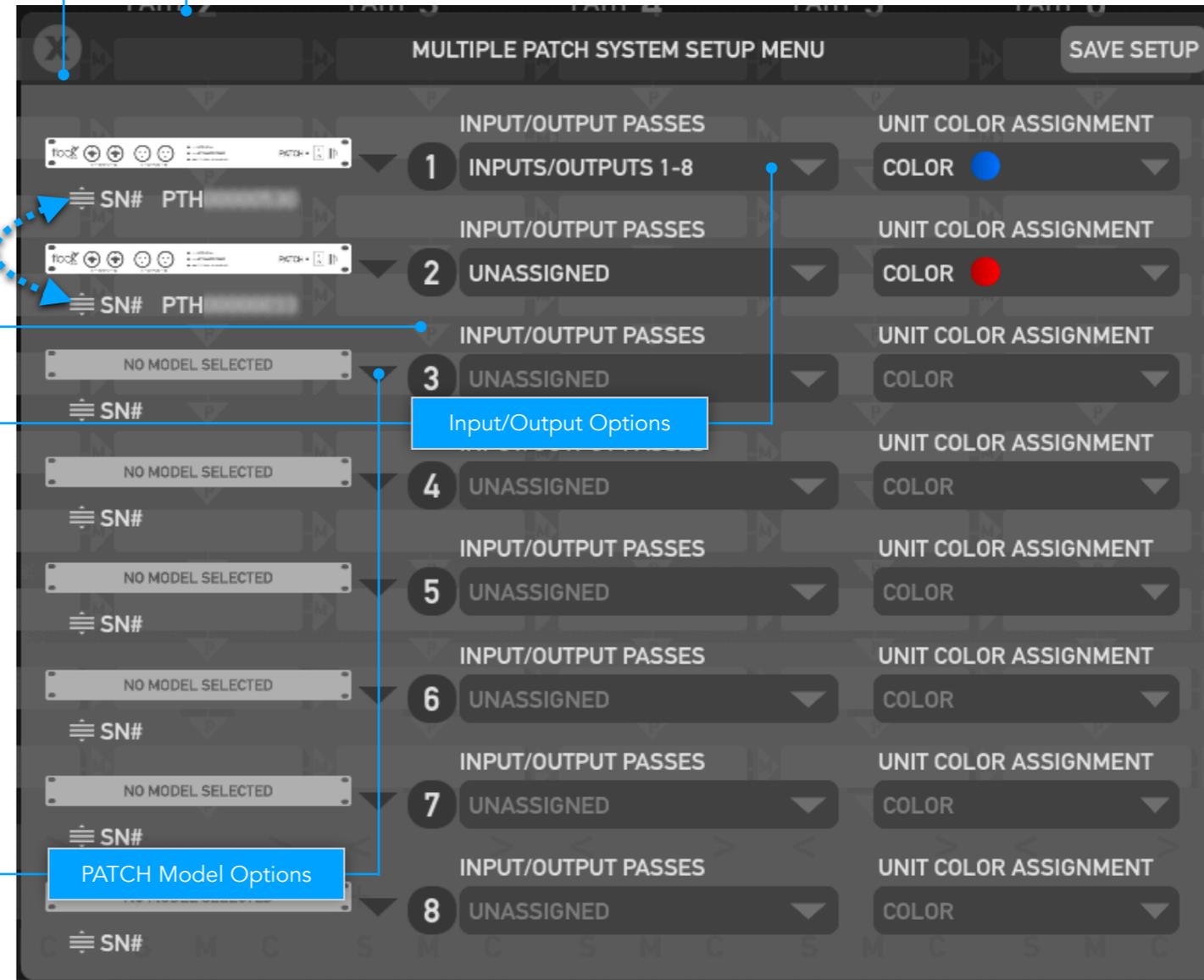
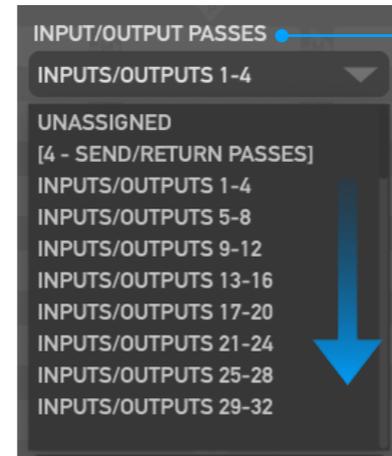
INPUT/OUTPUT PASSES

Input & Output Passes represent physical connections between PATCH Systems in the application. In order to Send or Receive audio signals between PATCH Units, a specific Send &/or Receive must be chosen with-in the Input/Output Passes section of the Multiple Unit Setup Menu.

This menu has multiple options for recommended suggestions such as Inputs & Outputs (1-8), (9-16), (17-24), (25-32) etc + More which will generate 4-16 available sends & receives between PATCH units, or a user can choose "Custom I/O" which will allow the user to designate their own Sends &/or Receives

PATCH MODEL SELECTION

Users can select additional PATCH System Models by clicking the Drop Down Arrow that are not physically connected to the CPU in order to explore larger I/O Configurations possibilities.



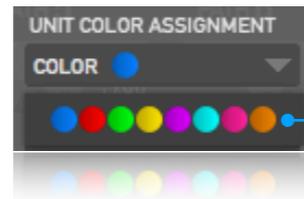
Multiple PATCH System Setup Menu (Pt.2)

SAVE SETUP

Once a desired Multiple Unit Setup configuration is established, a user must save their setup in order to properly operate their multiple system setup from the PATCH APP.

UNIT COLOR ASSIGNMENT

When using Multiple PATCH System units, Each PATCH System Hardware Unit is identified by a coloured outline or border around all available Digital Rack Spaces in the Hardware Index.



By default the specified colors are indicated from left to right. However, a user can change the color assignment of each PATCH Unit based upon the users preferences by selecting the Unit Color Assignment drop down in the Multiple Setup Menu.



MULTIPLE UNIT ANALOG CONNECTIONS

When connecting multiple hardware units together for Multi-Unit configurations, a user must choose which connections to configure in order to Send &/or Receive analog audio signals between multiple PATCH Hardware Units.

As shown in the right side example, 2 - PATCH Hardware Units are connected with 8 Sends and 8 Returns. This configuration example allows a user to Send 8 analog audio signals from one PATCH #1 to PATCH #2 and return 8 analog audio signals to PATCH #2 (if required).

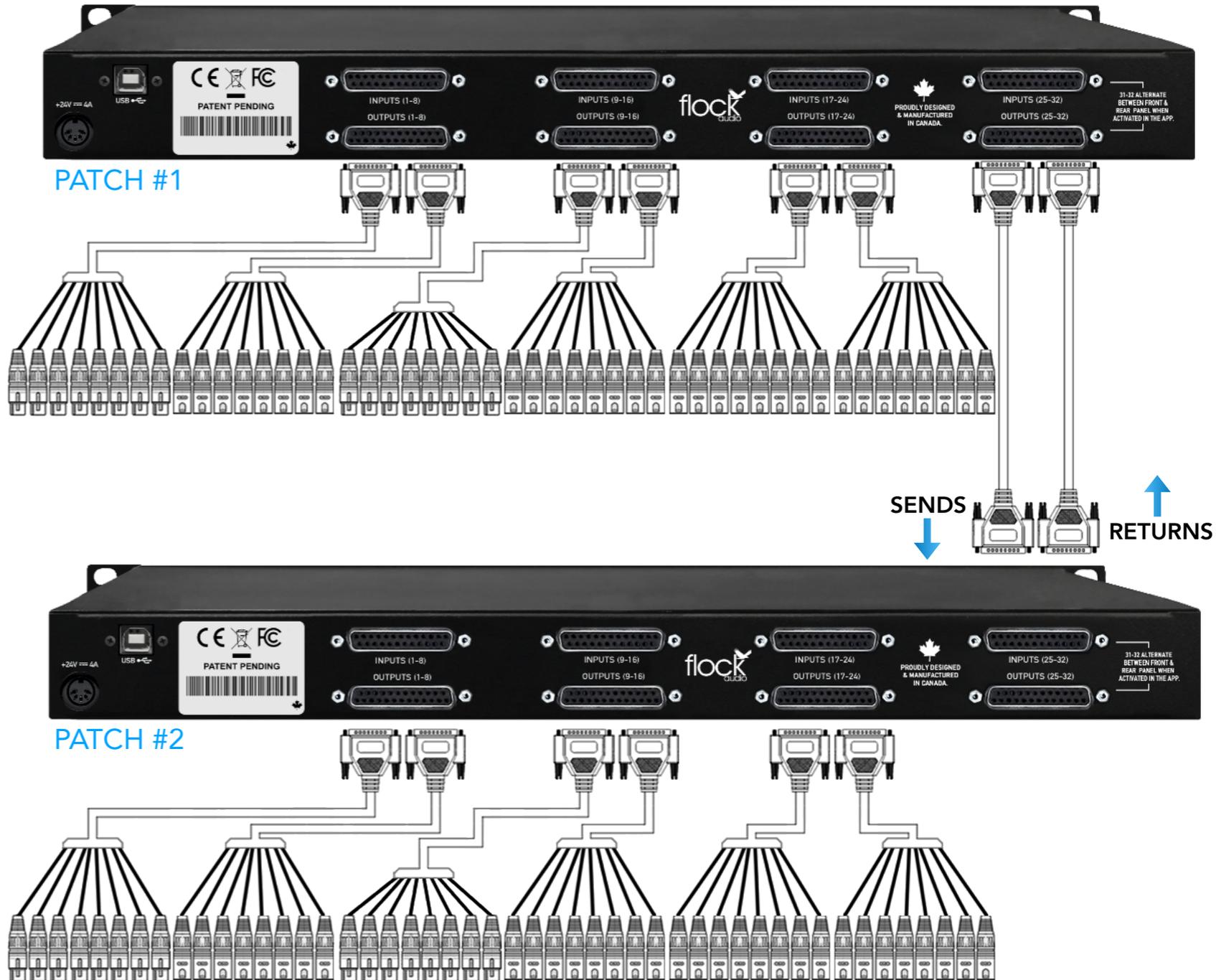
This is only an example of the possible Multi-Unit routing configurations and is not restrictive of other user desired configurations. Users may choose to have more or all sends then equal returns.

The below example shows a simple PATCH APP Software view of what an Multi-Unit Hardware setup would appear like in the PATCH APP when routing from PATCH #1 to PATCH #2.

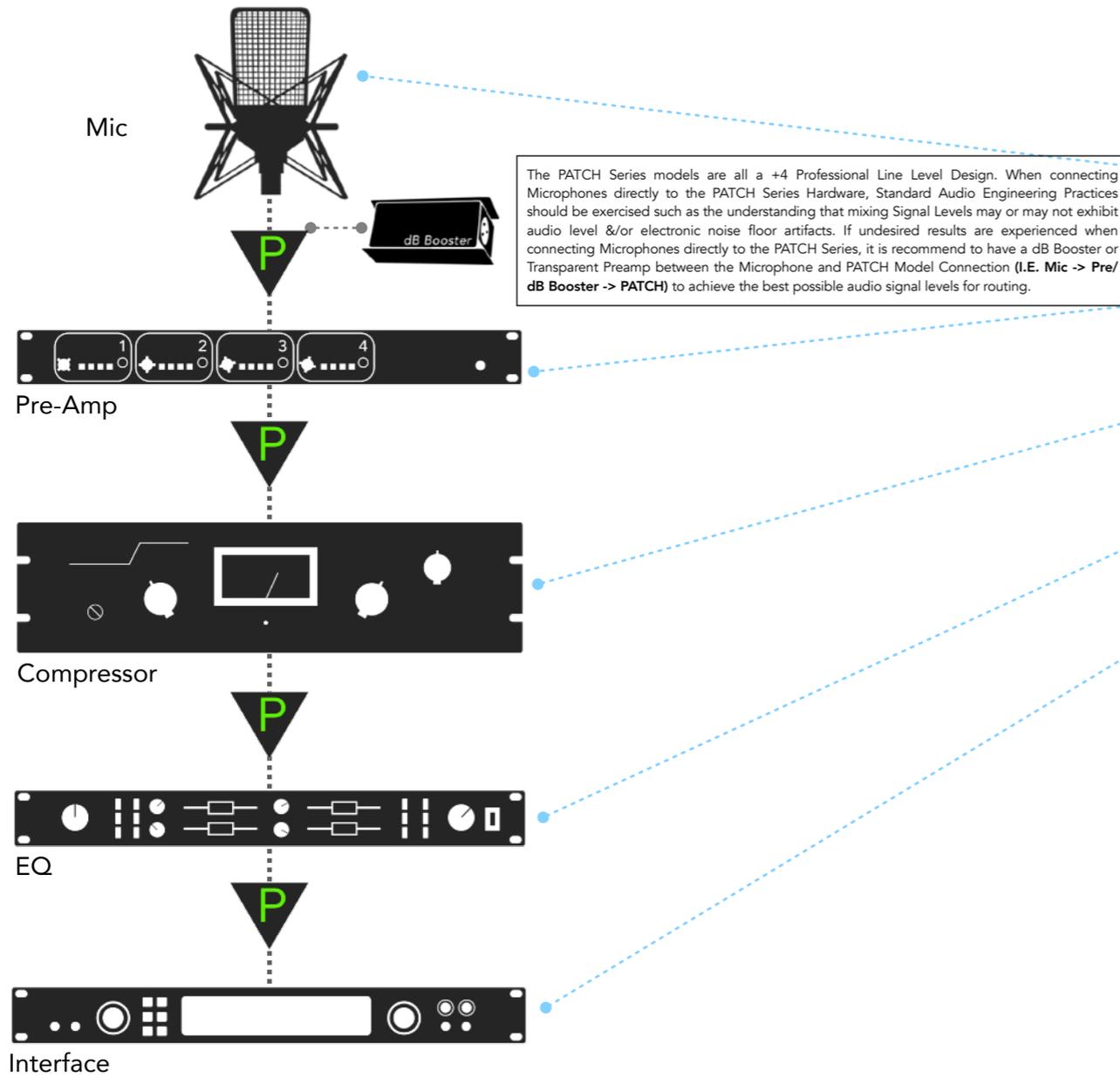


When Dragging + Dropping a SEND "Pass" into a signal flow digital rack space that is empty, the PATCH APP will populate both SEND & RECEIVE Digital Rack Spaces with color coded outlined Racks to allow the user to easily distinguish which PATCH unit is which.

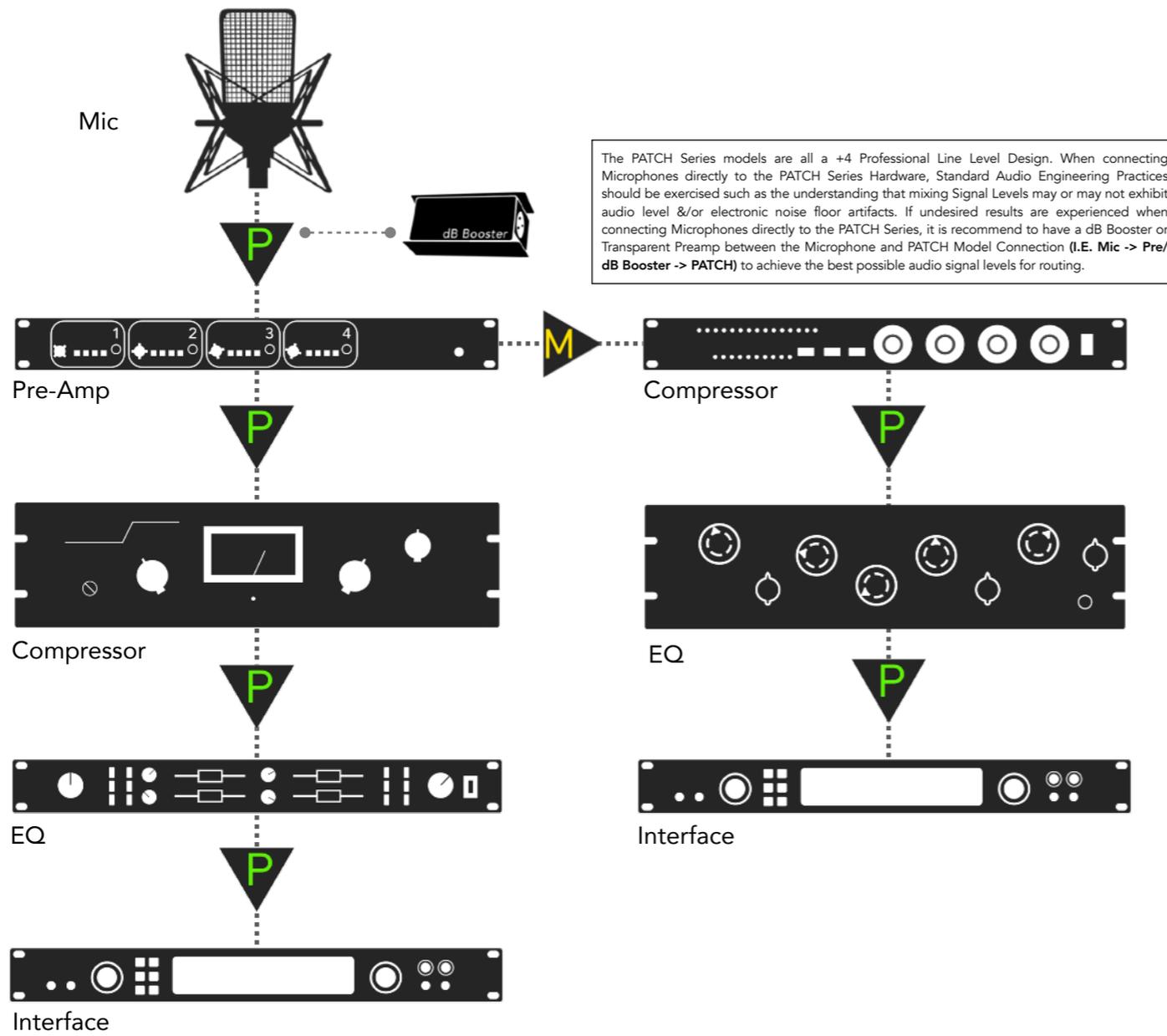
Multiple PATCH System Setup Menu (Pt.3)



Standard Microphone Routing Example



Multing Routing Example

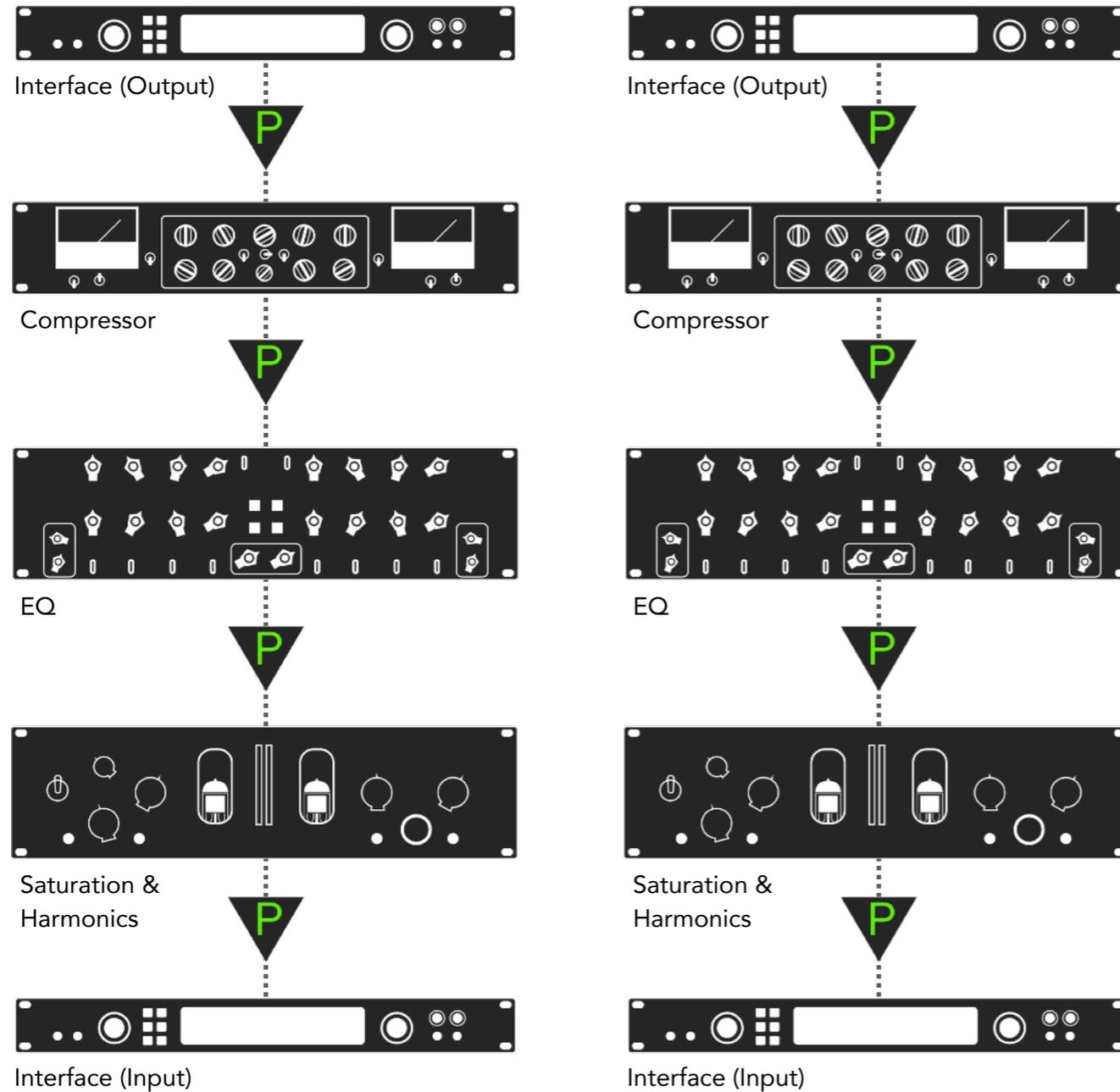


The PATCH Series models are all a +4 Professional Line Level Design. When connecting Microphones directly to the PATCH Series Hardware, Standard Audio Engineering Practices should be exercised such as the understanding that mixing Signal Levels may or may not exhibit audio level &/or electronic noise floor artifacts. If undesired results are experienced when connecting Microphones directly to the PATCH Series, it is recommend to have a dB Booster or Transparent Preamp between the Microphone and PATCH Model Connection (I.E. Mic -> Pre/ dB Booster -> PATCH) to achieve the best possible audio signal levels for routing.

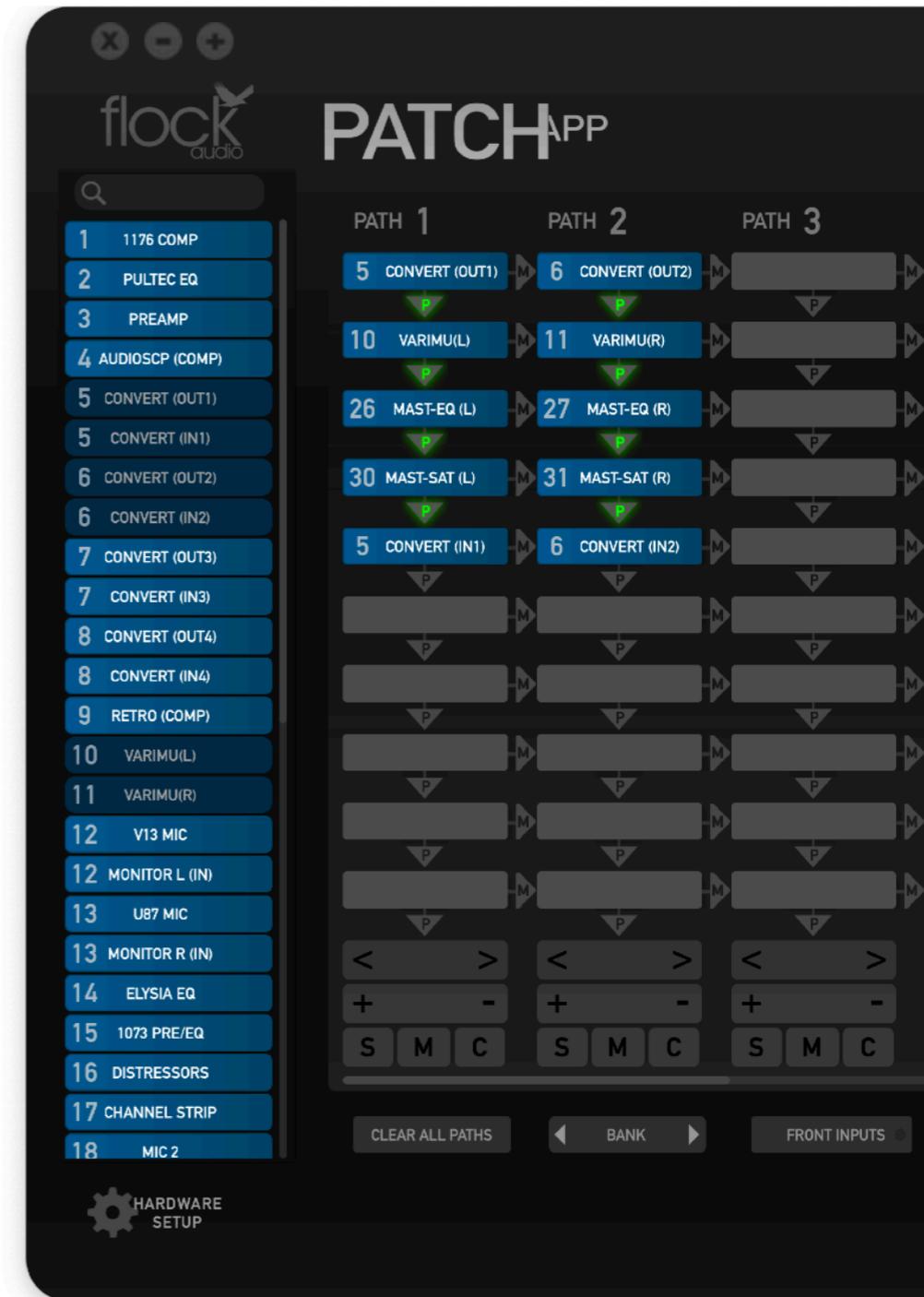
Hardware & Software Routing Overview



Mixing/Mastering Routing Example



Hardware & Software Routing Overview

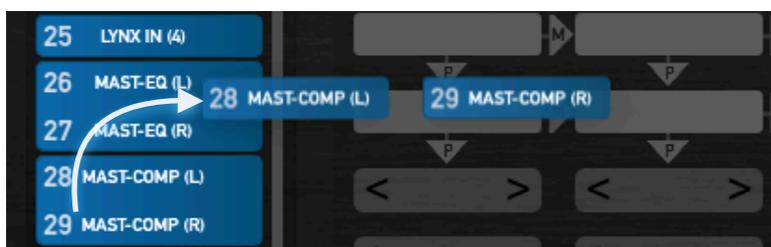


Stereo Pairing

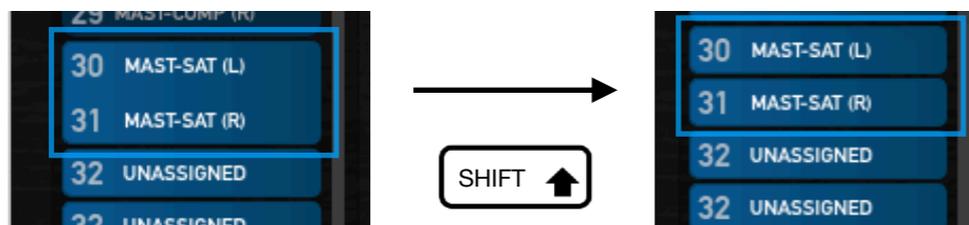
Introduced in PATCH APP v2.0 as one of the systems most highly anticipated features. Stereo Pairing allows users easy integration of pairing any corresponding channels together for optimizing your workflow.

Pairing two or more channels together will instruct the system to treat any Paired channels to behave as if it was one single mono channel. By Clicking the "Pair" Icon/Checkbox Pair \rightarrow Pair between any corresponding channels in the PATCH APP will pair these and identify them as a Stereo Pair in the Hardware Index.

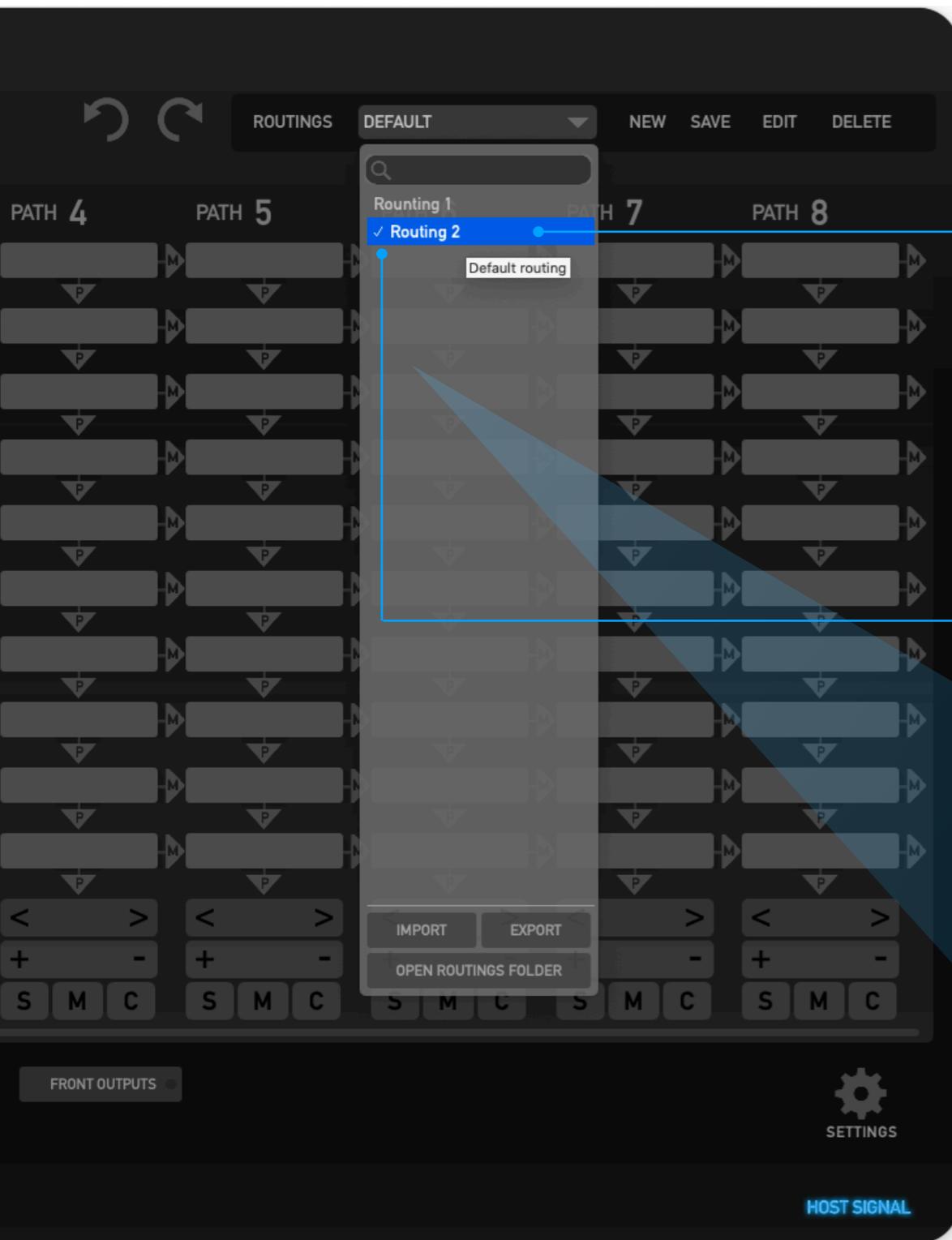
Stereo Paired channels will be identified in the Hardware Index by appearing taller than a single or mono channel rack space. When selecting and dragging these Stereo Paired channels into the active routing grid, they will separate and appear as they will when populating into the active routing grid.



You can quickly separate any Stereo Paired channels by holding the "Shift" key down so you can use any Stereo Paired channels as individual mono channels within the active routing grid. When depressing the "Shift" key you will see the Stereo Paired channels in the Hardware Index separate, identifying that they can now be used as individual mono channels. Once the mono channel is cleared from its active path, it will return to being a Stereo Paired item.



Watch "Stereo Pairing" In Action TUTORIAL VIDEO

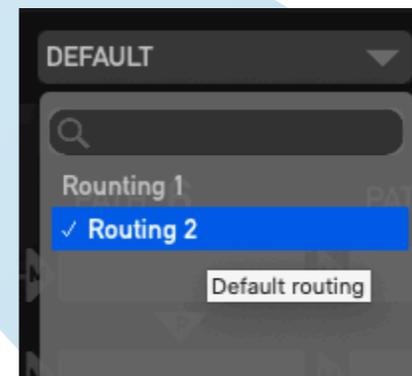


SETUP A DEFAULT LAUNCH ROUTING

Setting up a “Default Launch Routing” can save time and increase efficiency when using your analog equipment with PATCH. By creating a desired routing and saving it, you can have your PATCH System launch this routing by default with just a few easy steps every time you open the PATCH APP.

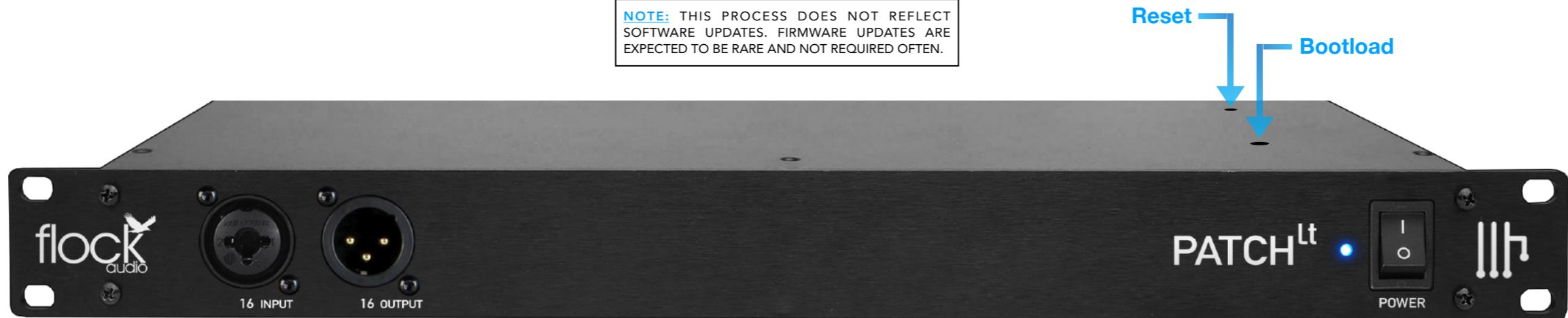
- #1. Create & Save a desired routing in the Stored Routings Menu.
- #2. Once this Routing is Saved, Click the drop down menu and hover over the preferred Default Launch Routing.
- #3. Simply Right Click over this routing and immediately a small Checkmark “✓” will appear next to this routing.
- #4. The next time to launch your PATCH APP Software, the Software will instantly recall this routing.

Note: To Remove or Change the desired Default Launch Routing, just simply Right Click again on the current Default Launch Routing or select a different one.



How-to Install new PATCH Firmware

NOTE: THIS PROCESS DOES NOT REFLECT SOFTWARE UPDATES. FIRMWARE UPDATES ARE EXPECTED TO BE RARE AND NOT REQUIRED OFTEN.



Step by Step Install Process for New Firmware

In order to properly install new available Firmware onto the Flock Audio PATCH LT System Hardware, you will require access to the top side of the hardware unit. Located on the top lid on the right hand facing side there are 2 small holes in the chassis lid. These holes provide access to the **Bootload** Button and **Reset** Buttons. **REMINDER: NEVER OPEN THE LID** to avoid electric shock causing injury or death. There are no user serviceable parts inside the PATCH system and opening the lid will result in voiding any active manufacturers warranty.

Perform the following steps to successfully update your systems Firmware.

Step #1. Download the latest available Firmware from your "Downloads" at www.flockaudio.com

Step #2. Gently pull the PATCH System slightly out of the rack case to gain access to the top right side of the hardware.

Step #3. Using 2 Paperclip's or similar size tools, insert one through the first hole "**Bootload**" and while pressing & holding the button down, use the other Paperclip or similar size tool to quickly press & release the "Reset" button to initiate the system into Bootload Mode making it ready for new Firmware installation. **Note:** You can also perform the same process by using a single Paperclip or similar size tool to insert through first hole "**Bootload**" and while pressing & holding the button down, quickly toggle the system off for 3 seconds using the front power switch and toggle it back on while holding and then releasing the Bootload button.

Step #4. Follow the remaining process and prompts on the Firmware Installer Application on your computer to complete the Firmware Installation. Once complete, restart your PATCH System and the PATCH APP to complete the installation process. **Note:** If there are any issues installing the new firmware, please repeat the process starting with Step #3 and if the problem persists please contact Flock Audio Support.

Quick User Tips & Tricks

AUDITIONING MICROPHONES

The PATCH System will allow you to quickly audition various microphones including 48V Phantom Power capable microphones.

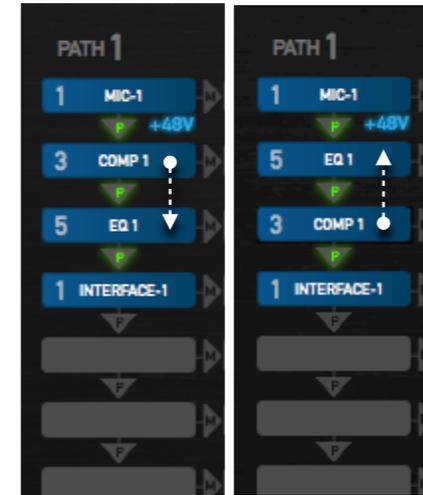
Example: Once a user has selected a desired signal chain with a microphone in the first digital rack space, the user can quickly click and drag other microphones overtop into that first slot to replace and audition different connected microphones during a recording session.



REARRANGE ACTIVE RACKS

Clicking and Dragging an Active Digital Rack Space overtop of an already placed Digital Rack Space will initiate a flip or alternating signal flow between the 2 Active Digital Rack Spaces.

This allows for quick review and A/B comparisons when selecting your preferred signal flows.



QUICK KEYBOARD SHORTCUTS

BYPASS DIGITAL RACK SPACES

- Apple "Command + Click" - To Bypass a Rack Space
- Windows "Cntrl + Click" - To Bypass a Rack Space

REMOVE DIGITAL RACK SPACES

- Apple "Option + Click" - To Remove a Rack Space
- Windows "Alt + Click" - To Remove a Rack Space

UNSOLO ALL SOLOED PATHS

- Apple "Command + Click S" - To Un-Solo All Racks
- Windows "Cntrl + Click S" - To Un-Solo All Racks

BANK THROUGHOUT THE ROUTING GRID

- Banking with the following Key Commands

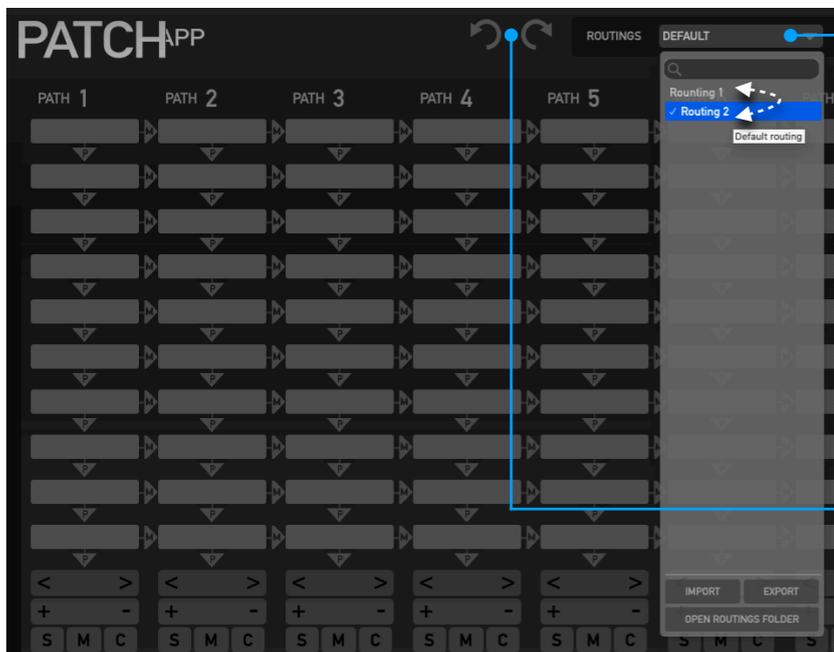
SCROLL PATH BY PATH IN THE ROUTING GRID

- Scroll Per PATH with the following Key Commands

A/B FULL SIGNAL CHAINS

Using the Routings Dropdown Menu, a user can easily flip between various stored routings for quick A/B or even C comparisons. These signal chain comparisons can be performed during playback of any audio signals passing through the system or while playback is stopped.

Users can also alternate between 2 different routing signal chains by utilizing the Undo/Redo buttons located to the left side of the Routings Menu.



Troubleshooting Tips

<p>PATCH Unit doesn't power on.</p>	<ul style="list-style-type: none"> - Confirm 24VDC Power supply pin insertion is properly connected and threaded locking sleeve is hand tightened. - Confirm front panel rocker switch is pushed in upwards position showing vertical line "I" icon & blue LED power indicator is illuminated. - Confirm that wall power source is working by plugging in another device.
<p>PATCH Hardware & Software not communicating.</p>	<ul style="list-style-type: none"> - Confirm that supplied (USB-A to USB-B) cable is fully inserted into the rear side of the PATCH Hardware Unit and corresponding CPU controller. - Confirm whether the Signal Host Blue LED is illuminated Solid Blue or Flashing. - Close the PATCH APP Software and turn off the PATCH Hardware Unit. Wait 30 seconds and turn on the PATCH Hardware Unit & Reopen PATCH APP Software. - If the Host Signal LED on the Hardware Unit is solid but the Host Signal Indicator in the PATCH APP is flashing, you must click Settings > Multiple Unit Setup and ensure that your PATCH Serial Number is in the first slot, then click Save Setup. - Try different USB-A to USB-B Cable.
<p>PATCH APP Download & Install error.</p>	<ul style="list-style-type: none"> - Confirm that your CPU Security/Privacy (&/or) Firewall are not restricting the PATCH APP Software to properly install. Mac OSX users may experience an "Unrecognized developer error" that requires opening "User Preferences > Security & Privacy > Open Application Anyways"
<p>48V Phantom Power is not working.</p>	<ul style="list-style-type: none"> - Confirm that 48V icon is illuminated in Blue & your microphone is placed in the first Digital Rack Space Slot. - Confirm that the 48V Master Bypass Switch in the Hardware Setup Menu is placed in the "On" position. - Confirm that your microphone is connected to the proper Input # on the rear side of the unit with the corresponding Digital Rack Space #.
<p>PATCH APP Software is launching but not appearing on screen</p>	<ul style="list-style-type: none"> - If your PATCH APP Software is not appearing on your chosen display screen. Use the Key Command "Shift + F1" to reset the PATCH APP's screen position
<p>There is a light humming or whirring noise coming from the left side of my PATCH System.</p>	<ul style="list-style-type: none"> - The PATCH Hardware Unit is equipped with a small cooling fan that is mounted on the right side of the Hardware Unit. This small cooling fan is controlled by a thermostat that will engage and disengage during the use of your System & change speeds depending on the amount of cooling required. Fan Controls can be customized by going "Settings > User Preferences > Hardware Fan Controls" - Never block or restrict airflow to the PATCH Hardware Unit. Always Ensure this Fan is not blocked by cables or anything else restrictive.
<p>Slight popping or clicking sometimes when rearranging Active Racks.</p>	<ul style="list-style-type: none"> - It is completely normal to sometimes hear, slight popping or clicking when rearranging active digital rack spaces during play back. This popping or clicking is a result based upon the type of audio signal currently being played through the PATCH system.
<p>The PATCH System self-shutdown and/or rebooted itself during use.</p>	<ul style="list-style-type: none"> - The PATCH Hardware Unit is equipped with a failsafe temperature sensor that will shut the system down to avoid any internal damage if overheating is present. It is not recommended to have the PATCH Hardware unit mounted directly near any hot or tube based hardware units as this may result in tripping the failsafe temperature sensor. - The PATCH Hardware Unit is also equipped with a small internal fan to help assist with internal heat removal.
<p>Experiencing a noise floor increase when using certain microphones directly connected to PATCH.</p>	<ul style="list-style-type: none"> - The PATCH System is a Professional +4 Line Level device not a microphone level device. Most microphones directly connected to the PATCH System will not exhibit any noise floor increases but if you are experiencing an increased noise floor (I.E. Auditable Hiss) we recommend boosting the microphone level prior to connecting to PATCH. (I.E. MIC -> dB Booster or Transparent Preamp -> PATCH).
<p>Front Inputs or Outputs are not working.</p>	<ul style="list-style-type: none"> - Confirm that the "Front Inputs" or "Front Outputs" toggle switches are engaged. When engaged there will be a Blue dot located next to the switches in the PATCH APP Software. - (If) using Multi-Unit setup, confirm that "Front I/O Toggle Controls" in the bottom right side corner is selected to all units.
<p>The PATCH System is not responding properly or behaving unexpectedly.</p>	<ul style="list-style-type: none"> - Export all previously "Saved" routings and "Hardware Setup Menu" settings. Ensure these are stored in a safe back-up folder. Open the Settings > Restore to Factory and allow the System to completely restore back to Factory Default Settings. Once performed, turn off the PATCH Hardware System, Close and Delete the PATCH APP application. Reinstall the latest PATCH APP Software version and turn on the Hardware, followed by reimporting all Saved Routings & Hardware Setups. - (If) problem persists, please contact Support (www.flockaudio.com/support)

Software Compatibility & System Requirements



OSX: 10.12 Sierra or Newer

Disk Space: Minimum 512 MB available disk space

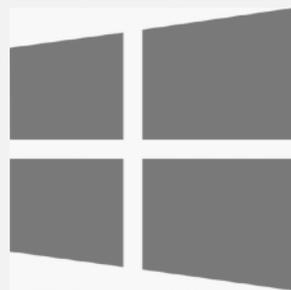
USB: 1x USB 2.0/3.0 Port (Per PATCH System)

Required USB bandwidth: 5%-10%

Memory(RAM): 4GB Minimum (8GB or more recommended)

CPU: Intel Core 2 Duo (Minimum) Intel Core i3™ or higher (Recommended)

Internet Connection: Internet Connection is required for download and updates.



OS: Windows 7 or Newer

Disk Space: Minimum 512 MB available disk space

USB: 1x USB 2.0/3.0 Port (Per PATCH System)

Required USB bandwidth: 5%-10%

CPU: Intel or AMD equivalent CPU with at least 2GHz operating frequency

Memory (RAM): 4GB Minimum (8GB or more Recommended)

Internet Connection: Internet Connection is required for download and updates.

User Notices & Warranty

WARRANTY



Depending on the warranty service chosen by the user at the time of purchase, the Flock Audio Support Warranty Programs will differ as per below. **PLEASE NOTE: IN ORDER TO PROCESS WARRANTY CLAIMS YOU MUST KEEP THE ORIGINAL BOX & PACKAGING FOR SHIPPING, DO NOT DISCARD BOX & FOAM INSERTS!**

STANDARD LIMITED WARRANTY

All PATCH Systems include a 1 Year Standard Limited Warranty that covers all manufacturer defects and/or failures from factory. This warranty program comes standard with all Flock Audio PATCH System purchases once the hardware is registered at (www.flockaudio.com/myaccount). The Warranty can be upgraded from the Standard Limited Warranty program to the premium Flock Audio SECURE up to one month after the registered activation.

IMPORTANT NOTICE RE: POWER SUPPLY

The PATCH System hardware is to be powered by a certified CSA/UL 60950-1 +Am1 + Am2 or CSA/UL 62368-1 (Edition 2) external power adapter with a rated output of 24VDC, 4.17A, 100W max or equivalent specifications.



EXTERNALLY CONNECTED HARDWARE RISK

It is at the risk of the user to follow the proper usage instructions of this device as dictated in this manual. It is important to follow the proper recommended connection methods in order to successfully route and operate the PATCH System. Flock Audio Inc. cannot be held liable for any damages caused to other connected audio hardware or injury due to improper use of the PATCH System.

REPAIRS

If you are having trouble with your PATCH System and trouble shooting suggestions did not work, please visit (www.flockaudio.com/support) for further details & to contact our Technical Support Team.

USER MAINTENANCE

It is **NEVER RECOMMENDED** to self service a Flock Audio PATCH Series System or expose the internal components by opening the unit. Risk, Injury &/or Death may occur if you open a Flock Audio PATCH Series System and will void any active warranty immediately. The PATCH Series System doesn't contain any user replaceable or removal parts.

Any User Maintenance &/or Repairs are required to be performed by a Certified Flock Audio Support repair service technician. These Certified Support Technicians can be located by visiting Flock Audio Support (www.flockaudio.com/support).

SIMPLE USER CARE

When mounting your Flock Audio PATCH System, it is recommended to use a Nylon or Plastic Rack Screw Washer to avoid scratching or damaging the rack ears on the front panel faceplate.

To keep your front panel clean of dust and debris, it is recommended to use canned air to remove dust and/or a lightly damp microfibre cloth to gently wipe the front panel face plate. **Do Not** apply pressure to the LED Indicators or other protruding components on the faceplate (*I.E. Power Switch etc.*)





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PATENT PENDING