

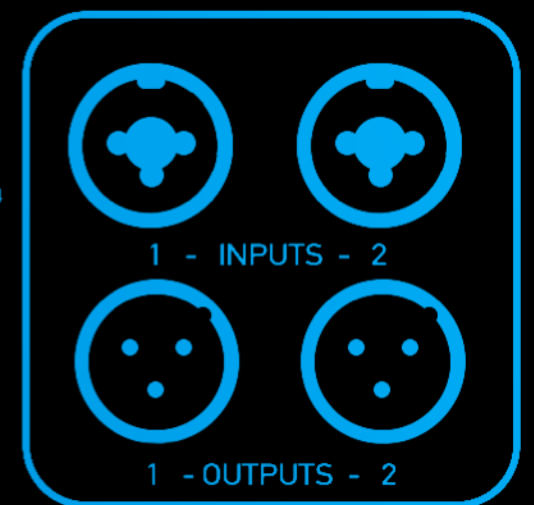
PATCH^{xt}



USER MANUAL

V.1.0.0

flock
audio



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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.

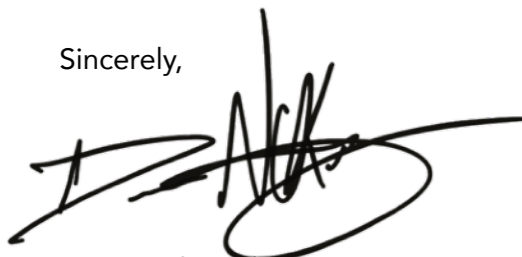
After 2 years of strenuous work and constant focus, Flock Audio the company I started, created the worlds first and most advanced digitally controlled analog audio routing system with features never before possible in conventional analog audio routing.

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^{xt}

INTRODUCTION TO THE PATCH^{XT} SYSTEM...

The Flock Audio PATCH XT System is a digitally controlled, 100% analog audio patch bay routing system. A combination of Software known as the PATCH APP and a 192 Point Connection (96 Inputs & 96 Outputs) PATCH XT Hardware component 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 XT's Hardware component. This analog audio equipment is cataloged in the Hardware Index located to the left side of the PATCH APP.

The PATCH XT Hardware component is a 3U rack mountable unit that acts as the centerpiece hub of an audio equipment processing setup. Utilizing digital control over analog audio signals is what makes the PATCH XT 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 XT 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 XT System. There are no self-repairable or removable parts in the system. If your Flock Audio PATCH XT 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 XT System, avoid having liquids &/or spills near your PATCH XT System. If accidental spill occurs, safely shut off your PATCH XT 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. Proper Rack mount Ventilation Requirements

Proper mount spacing and rack mount ventilation is required to ensure your Flock Audio PATCH XT 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 XT 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.

#4. Use Properly Grounded IEC Power Cables

It is recommended that you always use a properly shielded and grounded IEC Power Cable (110V/220V) with your PATCH XT 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.

#5. 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 XT System, it is not recommended to leave that 48V source active for a lengthy period of time.

#6. Discontinue Use During Electrical Storms

Never use your Flock Audio PATCH XT 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 is safe to continue use. It's also recommended to keep the system unplugged if not in use for long extended periods of time.

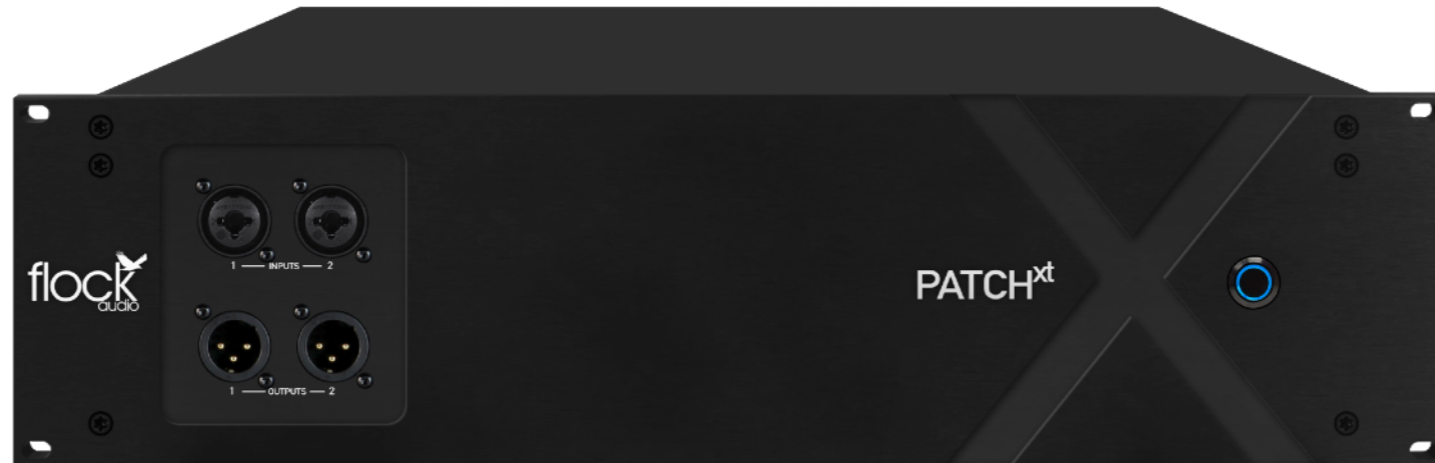
#7. Disclaimer Notice

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.

#8. Certifications



WHAT'S INCLUDED IN THE BOX



PATCH XT 3U HARDWARE



IEC POWER CABLE
(110V or 220V)



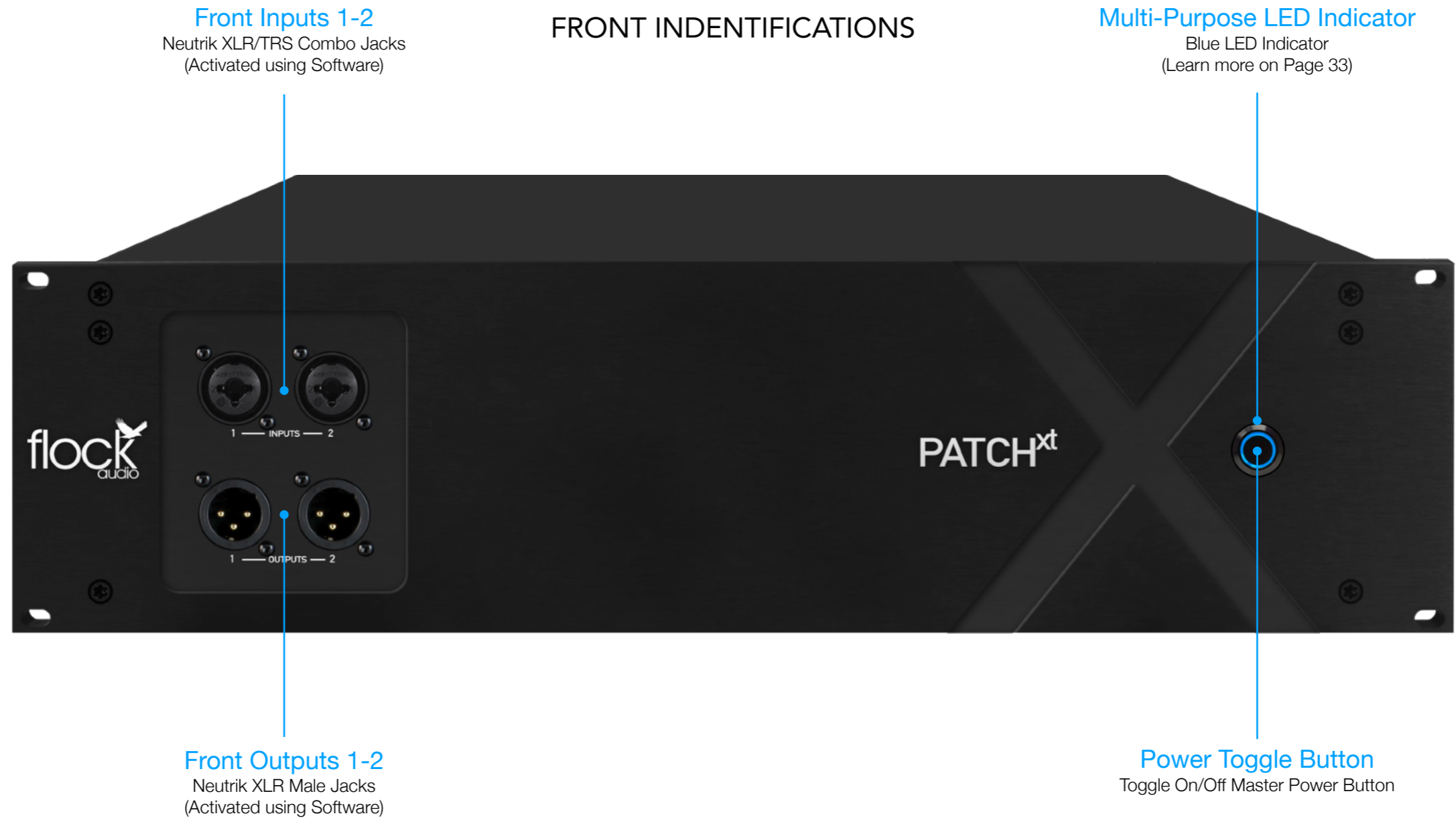
USB-A TO USB-B (6FT LOCKING)



6 STEP QUICKSTART GUIDE



HARDWARE INDEX
SETUP QR CODE



REAR PANEL IDENTIFICATIONS

Ethernet Host Connector

Long-Distance Host Cable for Long-Distance Computer Control

USB-B Host Connector

USB-B to USB-A Cable
(Threaded locking USB 2.0 Connector)

Inputs & Outputs (1-2)

Channels 1-2 can be routed to the Front Panel Inputs & Outputs using the PATCH APP Software.



IEC Power Connection

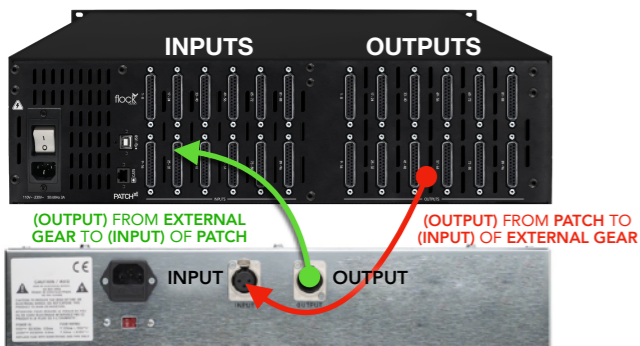
IMPORTANT: Always ensure that the Power Connector is inserted securely into the Power Input of the PATCH XT System Hardware.

Rear Inputs 1-96

DB-25/D-SUB Connectors
Inputs: 1-8, 9-16, 17-24, 25-32, 33-40, 41-48, 49-56, 57-64, 65-72, 73-80, 81-88, 89-96
(8 Balanced Audio Channels per Connector)
Tascam 25 Pinout Wiring Standard

Rear Outputs 1-96

DB-25/D-SUB Connectors
Outputs: 1-8, 9-16, 17-24, 25-32, 33-40, 41-48, 49-56, 57-64, 65-72, 73-80, 81-88, 89-96
(8 Balanced Audio Channels per Connector)
Tascam 25 Pinout Wiring Standard



PROFESSIONAL +4 LINE LEVEL

NOTE PATCH XT 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 XT 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.

REQUIRED CABLES FOR OPERATION



IEC Power Cable
(Included In Box)



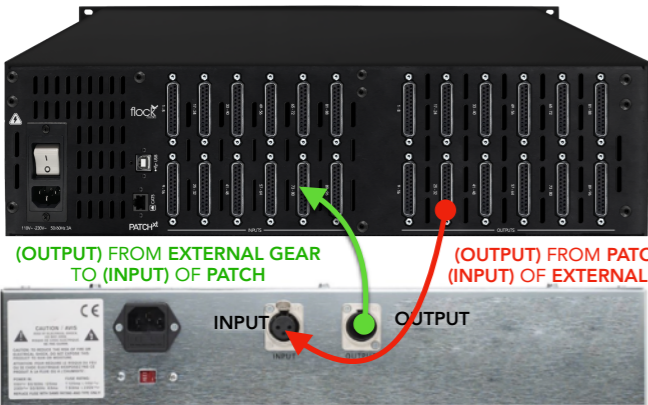
REAR VIEW



USB-A To USB-B (Cable)
(6' 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)



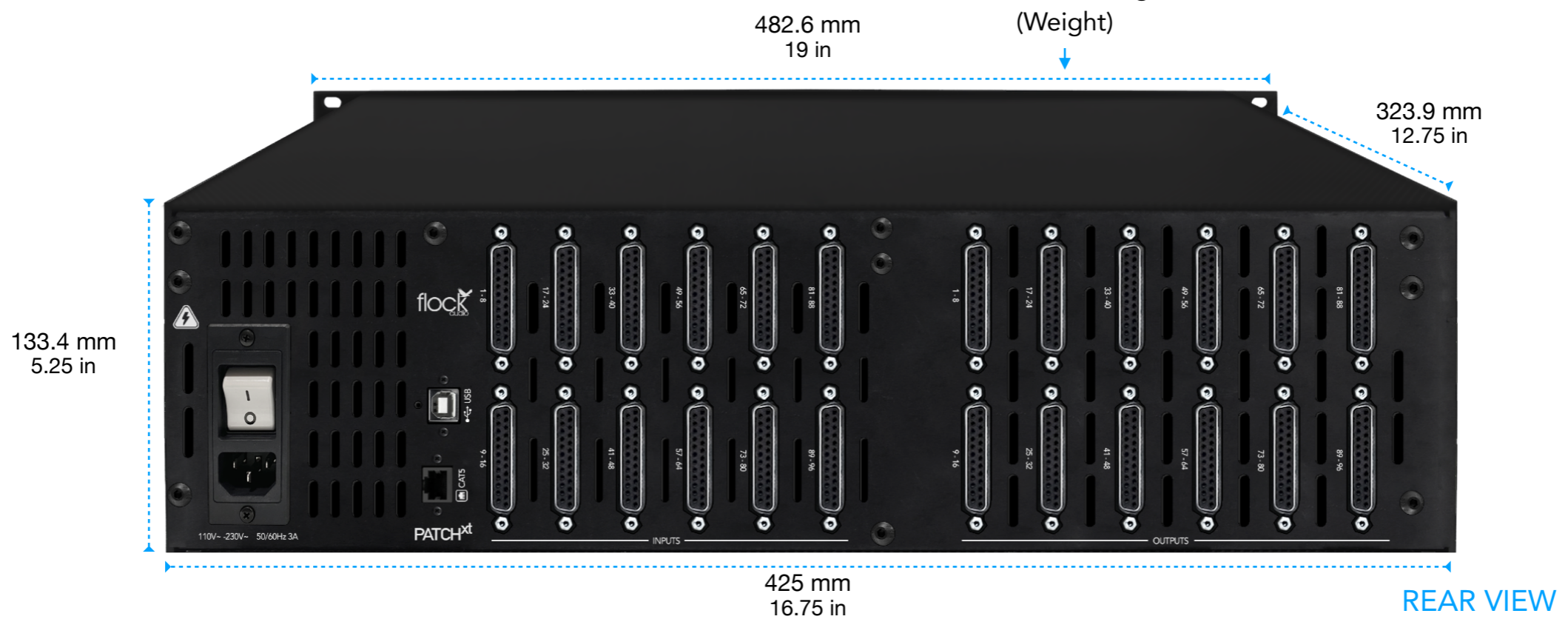
CONNECTING PATCH XT TO EXTERNAL HARDWARE EXAMPLE.

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

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

HARDWARE CHASSIS MEASUREMENTS

CHASSIS DIMENSIONS



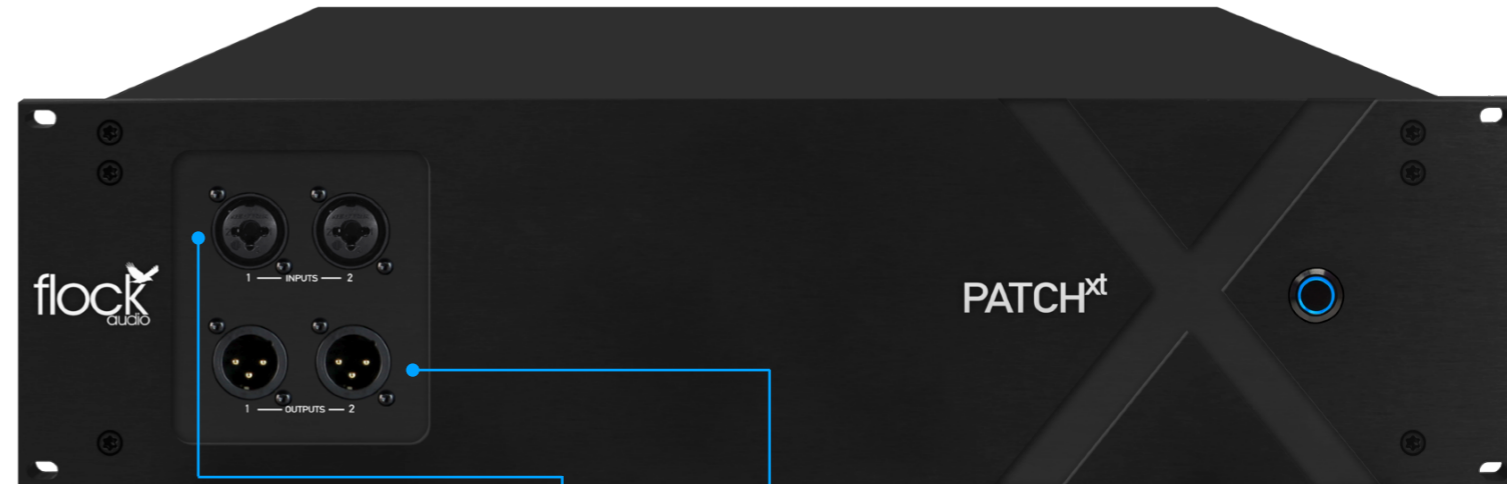
Toggle & Control Center Features (Within the PATCH APP 3.0 Software)

FRONT PANEL INPUTS & OUTPUTS

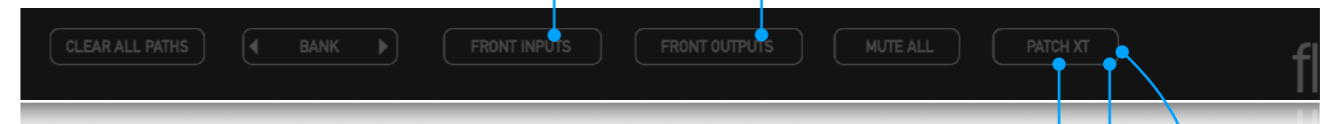
The PATCH XT Hardware will allow a user to redirect Inputs and/or Outputs 1-2 from the rear side of the system to the front panel for easy access and integration of outside analog audio equipment.

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 the corresponding Inputs &/or Outputs will no longer be actively functioning on the rear side of the PATCH XT Hardware unit when the Front Inputs or Outputs are activated in the application.

Note: Inputs 1-2, 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.



Toggle Front Inputs & Outputs 1-2 rerouted from rear connections to Front Panel

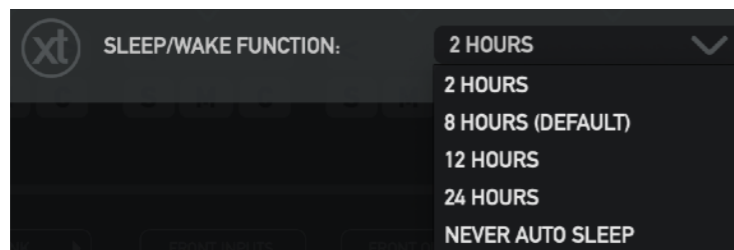


PATCH XT OPTIONS

When a PATCH XT unit is connected to the user's computer, this button will appear. When right-clicked, it will show two XT-specific options: "Sleep/Wake Settings" and "Audio Detection".

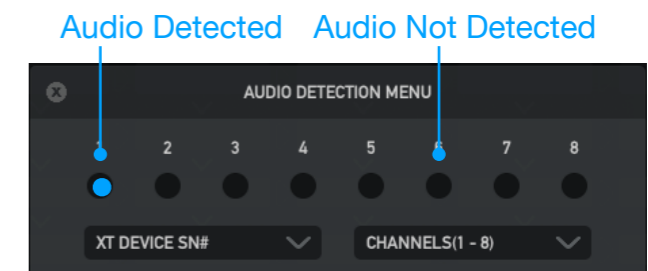
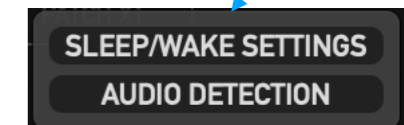
SLEEP/WAKE SETTINGS

This feature lets the user choose a time interval after which PATCH XT will automatically go to sleep if it doesn't receive any new routing commands during that time. The default time interval is 8 hours.

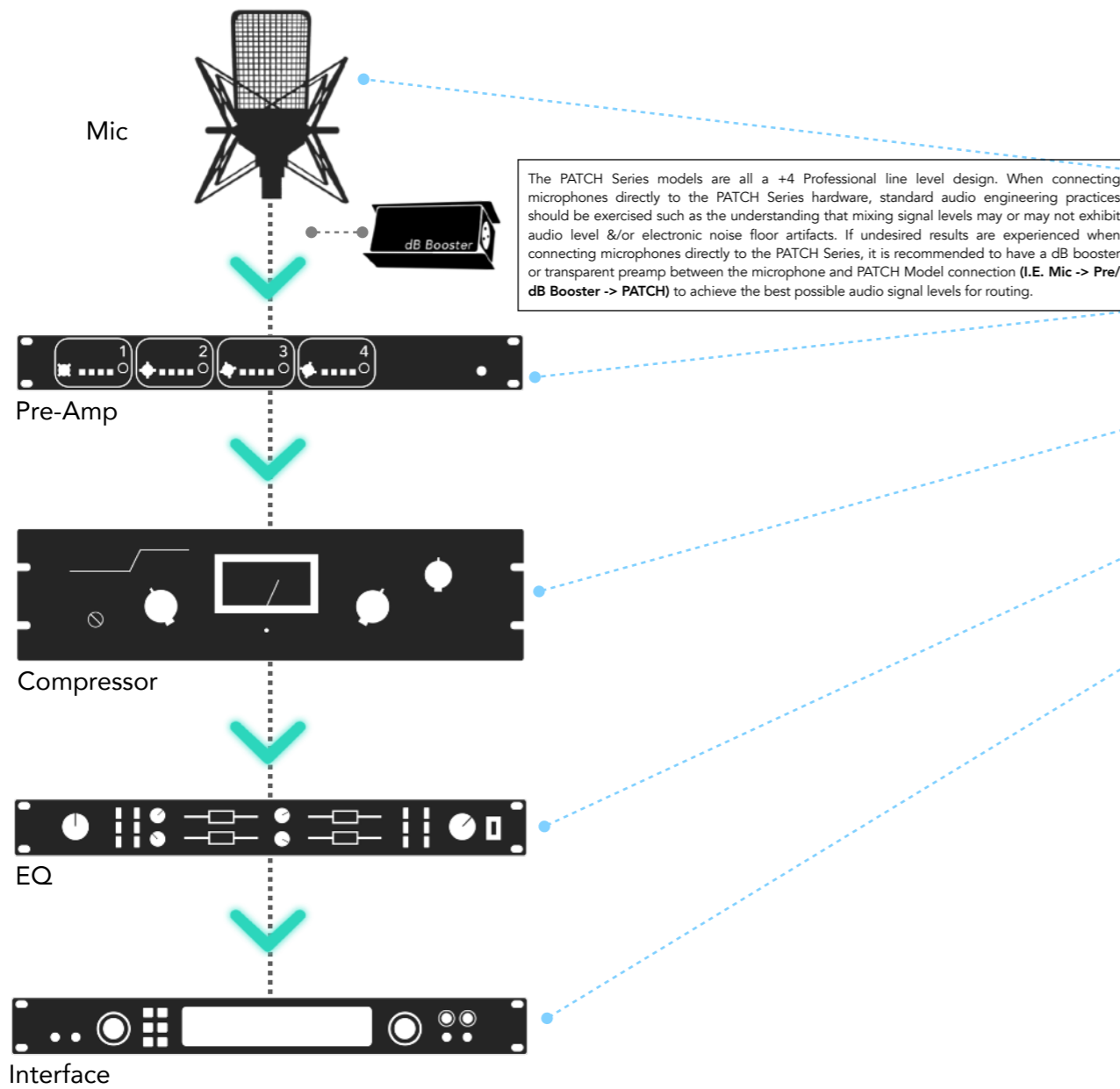


AUDIO DETECTION

This feature launches a menu where the user can choose a set of any eight corresponding input channels (DB25/D-SUB) to monitor and confirm incoming signals. The channel indicators will illuminate when an audio signal is detected on the specified channels.



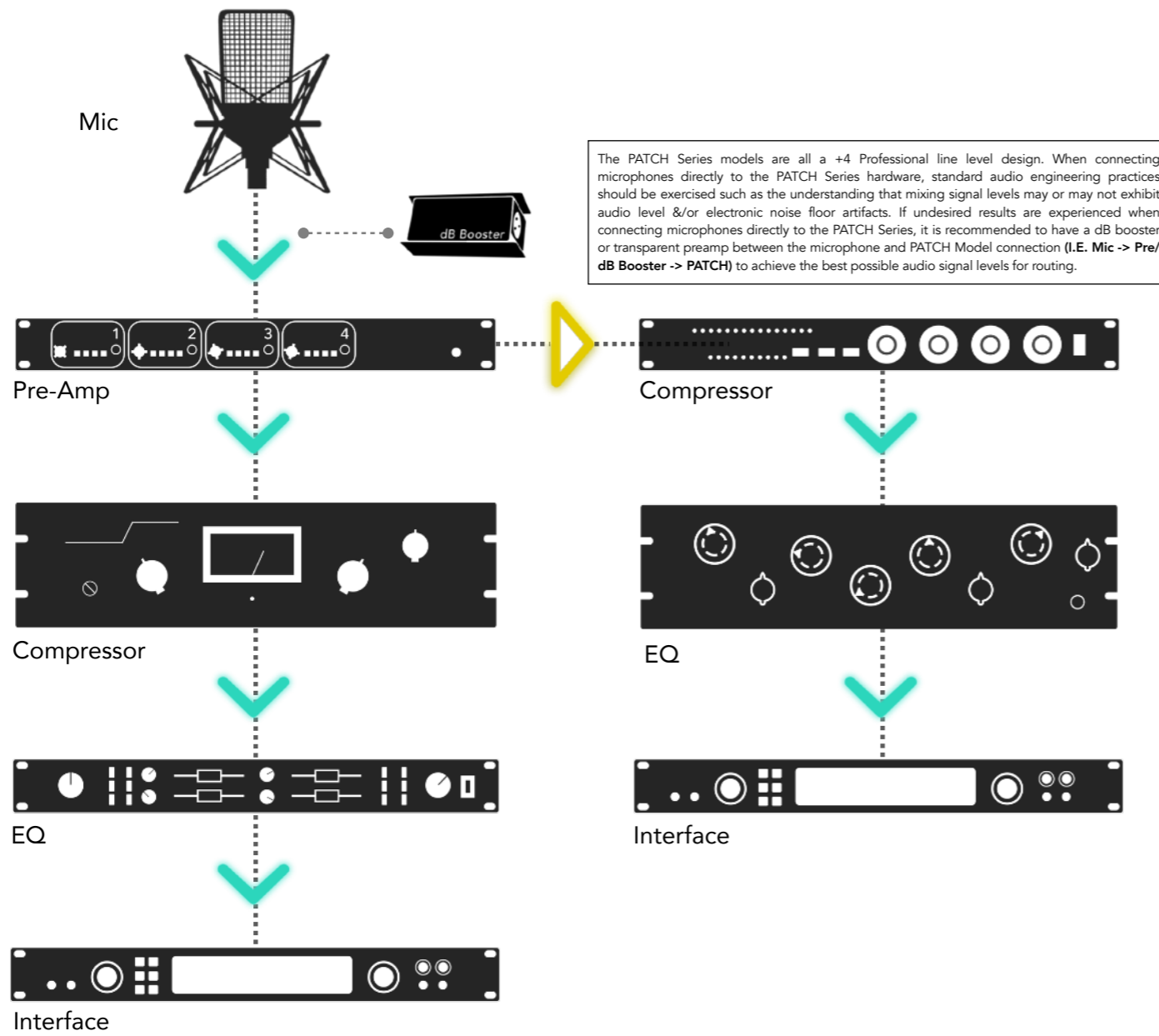
Standard Microphone Routing Example



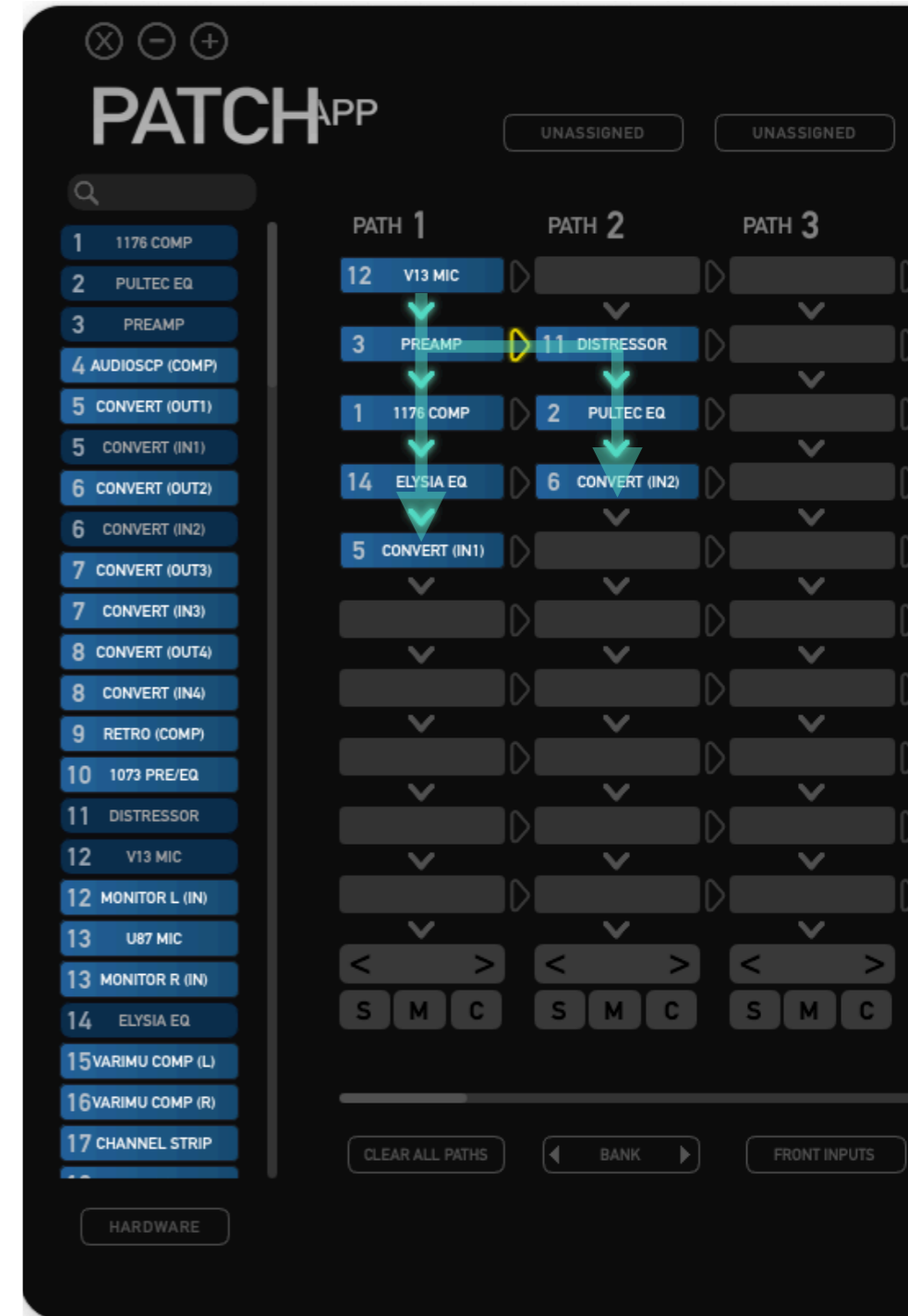
The PATCH Series models are all a +4 Professional line level design. When connecting microphones directly to the PATCH Series hardware, standard audio engineering practices should be exercised such as the understanding that mixing signal levels may or may not exhibit audio level &/or electronic noise floor artifacts. If undesired results are experienced when connecting microphones directly to the PATCH Series, it is recommended 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.

The screenshot shows the PATCH APP interface with a routing matrix. The left sidebar lists modules 1 through 17. The main area shows five paths (PATH 1 to PATH 5) with various modules assigned to them. Path 1 is highlighted with a green arrow, showing the sequence: 1176 COMP, V13 MIC, PREAMP, 1176 COMP, ELYSIA EQ, and CONVERT (IN1). Other paths are currently unassigned.

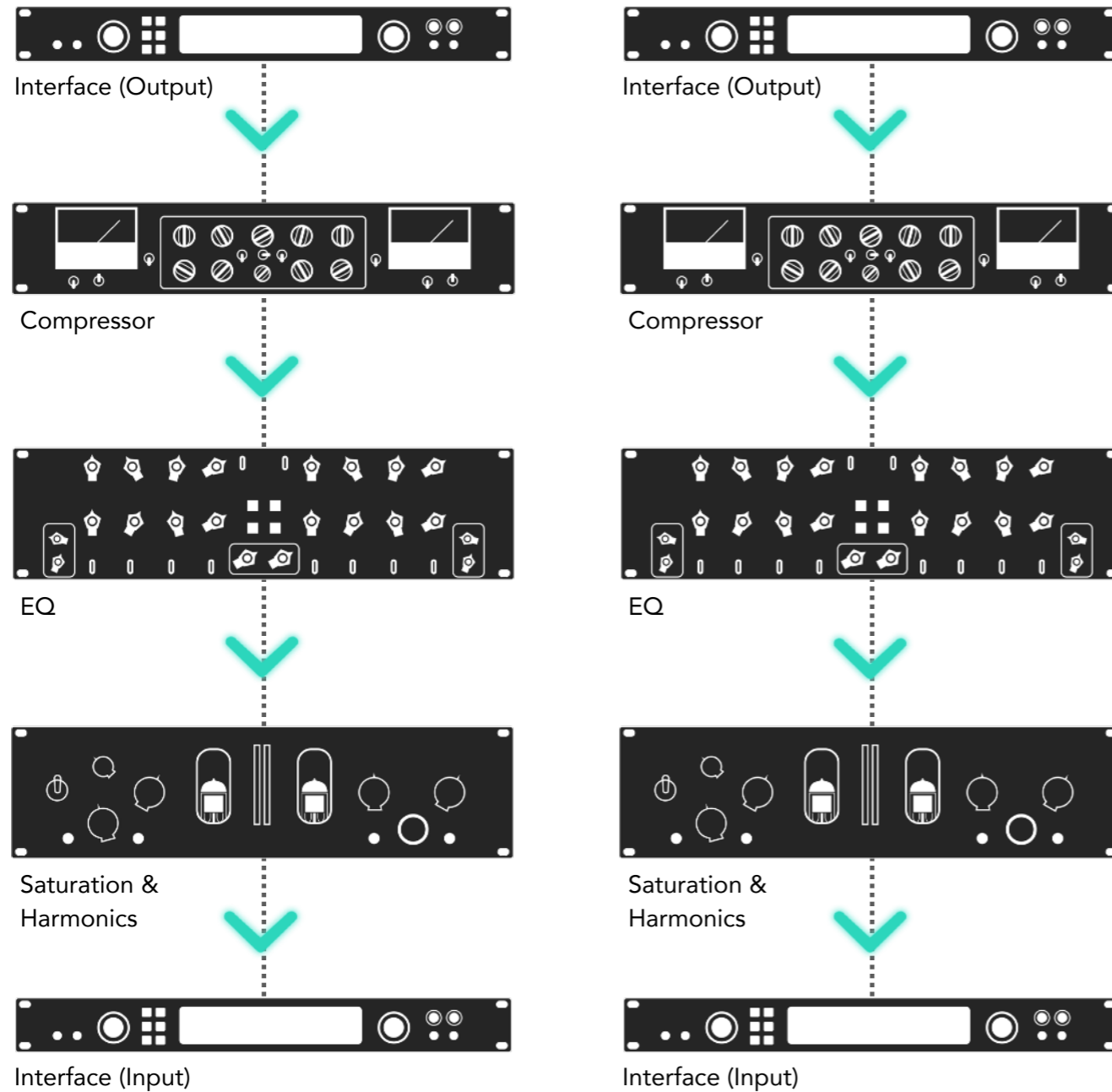
Multing Routing Example



Hardware & Software Routing Overview



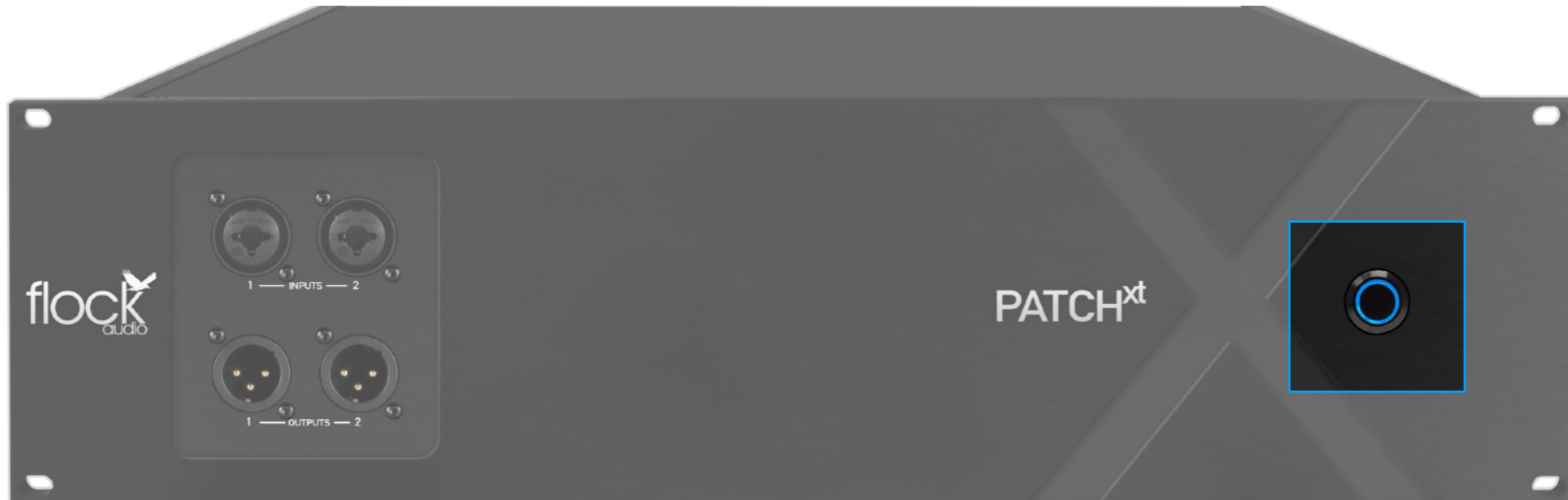
Mixing/Mastering Routing Example



Hardware & Software Routing Overview



LED Indicator Legend



- **(Solid Illuminated)** Powered On, Active Connection to Host



- **(Slow Fade In/Out)** Powered On, Active Connection, But In Idle/Stand-By Mode



- **(2x Fast Fade Flashes w/ Pause Between)** Powered On, Looking for Host Connection
Details: Fade On/Off Fade On/Off (Quickly back to back). ...Pause.... Repeat



- **(Flash On/Off Repeatedly Fast)** System Error/Fault/Overheated etc.



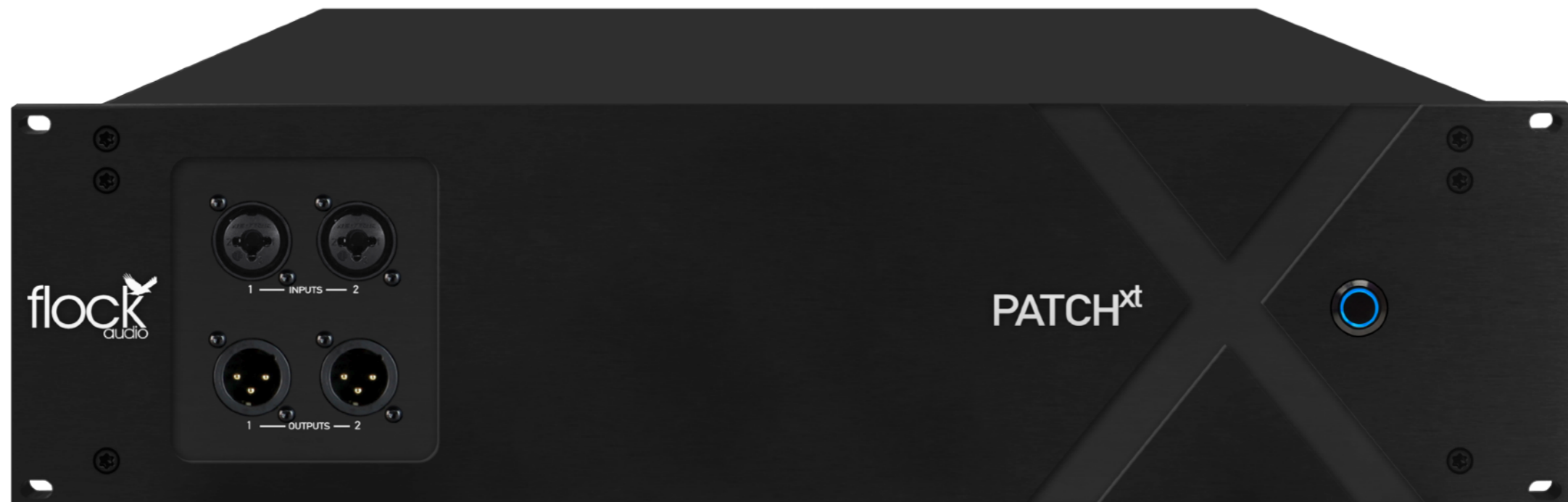
- **(No Illumination)** System Powered Off

HOST SIGNAL

- **Solid Blue** (Host Signal Text In PATCH APP)

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

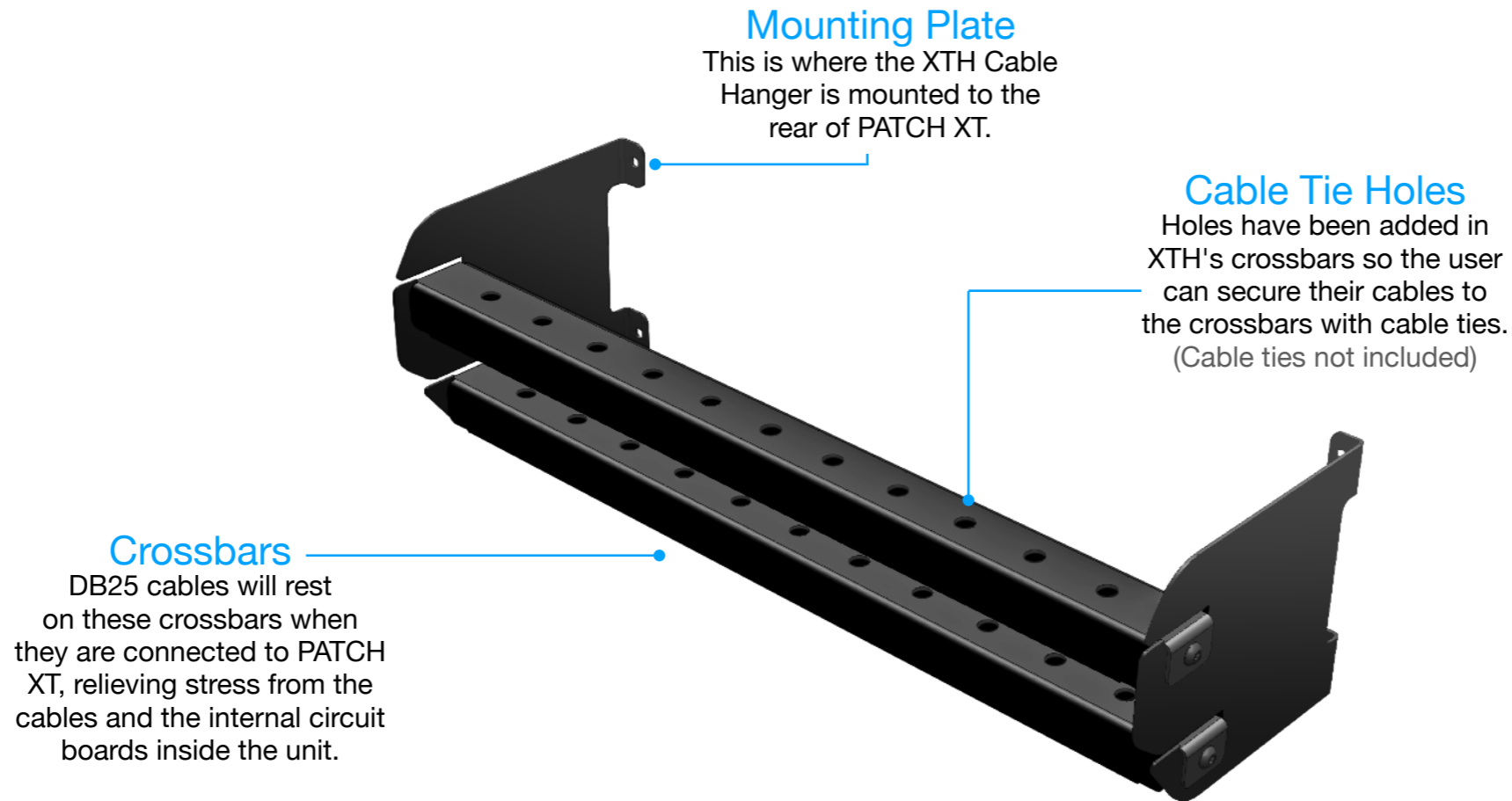
Perform the following steps to successfully update your system's firmware.

Step #1. Download the latest available firmware from the "Downloads" tab at www.flockaudio.com

Step #2. Follow the process and prompts on the firmware installer application on your computer to complete the firmware installation. Once complete, restart your PATCH XT System and the PATCH APP to complete the installation process. **Note:** *If there are any issues installing the new firmware, please contact Flock Audio Support.*

INTRODUCING THE PATCH XT CABLE HANGER

Introducing XTH



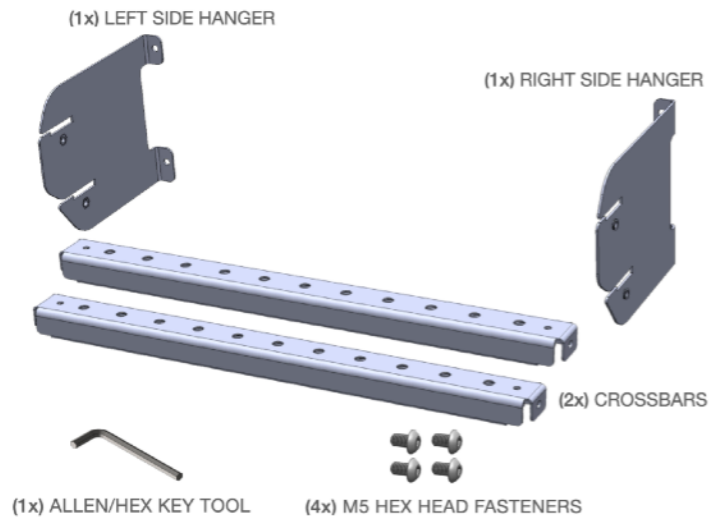
CABLE HANGER XTH

The PATCH XT Cable Hanger (XTH) mounts to the rear of any PATCH XT unit. Its purpose is to relieve stress on the connected DB25 cables and the circuit boards inside PATCH XT. Users can also choose to secure their cables to the Cable Hanger by running cable ties through the holes in the crossbars.

[ASSEMBLY INSTRUCTIONS ON PAGE 18](#)

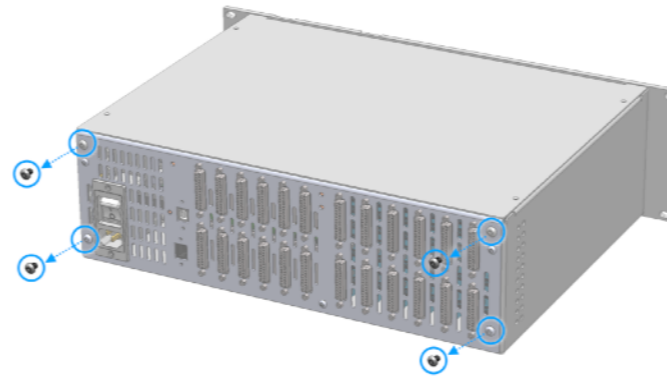
How To Assemble XTH

1 UNBOXING THE XTH KIT PARTS



REMOVE & IDENTIFY ALL PARTS INCLUDED IN THE XTH CABLE HANGER KIT

2 PREPARE THE PATCH^{XT} REAR PANEL



LOCATE & REMOVE (4x) M5 HEX SCREWS FROM THE REAR PATCH^{XT} PANEL USING THE INCLUDED ALLEN/HEX KEY TOOL

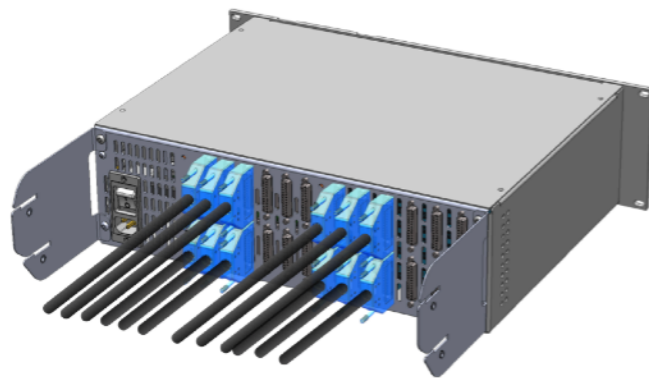
WARNING: DO NOT REMOVE ANY OTHER SCREWS

3 INSTALL THE CABLE HANGERS



INSTALL BOTH (LEFT) & (RIGHT) XTH CABLE HANGERS ONTO THE REAR PATCH^{XT} PANEL USING THE PREVIOUSLY REMOVED (4x) M5 HEX SCREWS WITH THE INCLUDED ALLEN/HEX KEY TOOL

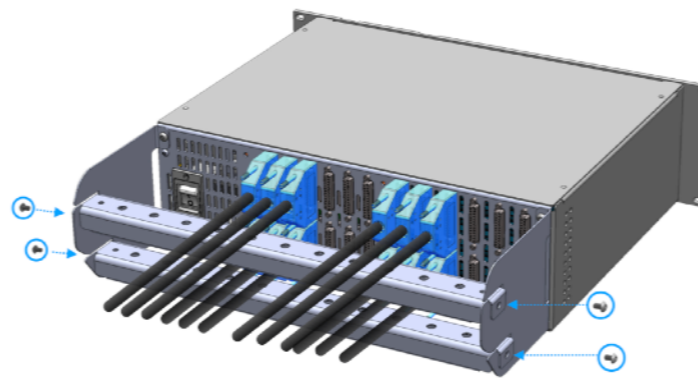
4 CONNECT THE DB-25/D-SUB CABLES



CONNECT & INSTALL ALL DB-25/D-SUB CABLE CONNECTORS TO THE REAR PATCH^{XT} PANEL **BEFORE** INSTALLING THE CROSSBARS

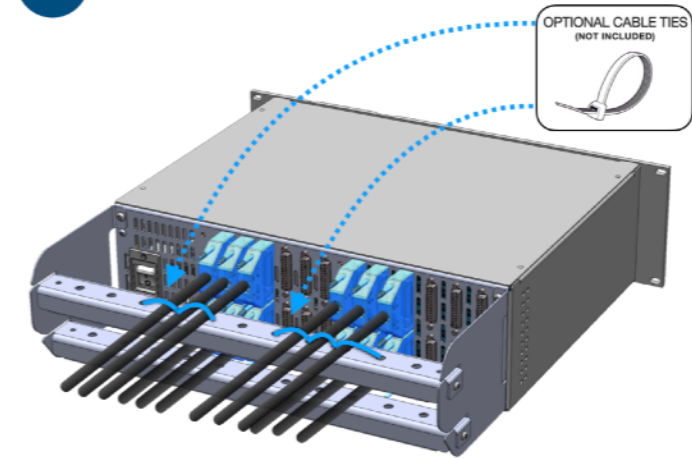
IMPORTANT NOTICE: DON'T FORGET TO REGISTER YOUR XTH CABLE HANGER ACCESSORY FOR WARRANTY PURPOSES: WWW.FLOCKAUDIO.COM/DOWNLOADS

5 SET & INSTALL THE XTH CROSSBARS



CAREFULLY LIFT ALL DB-25/D-SUB CABLES TO SLIDE & INSTALL THE **XTH CROSSBARS** IN PLACE. ONCE LOCKED INTO PLACE SECURE THE CROSSBARS WITH THE INCLUDED M5 HEX FASTENERS USING THE ALLEN/HEX KEY TOOL

6 ADD CABLE TIE SECUREMENTS



YOUR XTH CABLE HANGER ASSEMBLY IS **COMPLETE**. (OPTIONAL) ADD CABLE TIES TO SECURE THE DB-25/D-SUB CABLES IN PLACE ON THE CROSSBARS

flock audio **CABLE HANGER XTH**

Troubleshooting Tips

<p>PATCH XT Unit doesn't power on.</p>	<ul style="list-style-type: none"> - Confirm IEC power cable is securely inserted into your PATCH XT - Confirm the "Rear White Switch" is in the ON Position and that the PATCH XT's Toggle Switch Ring is Illuminated Solid Blue. - Confirm that wall power source is working by plugging in another device.
<p>PATCH XT 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 XT Hardware Unit and corresponding CPU controller. - Confirm whether the Multi-Purpose LED is illuminated Solid Blue or Flashing. - Close the PATCH APP Software and turn off the PATCH XT Hardware Unit. Wait 30 seconds and turn on the PATCH XT Hardware Unit & Reopen PATCH APP Software. - If the Multi-Purpose 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 XT 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 from properly installing. 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 or 48V-powered unit 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" (Windows) or navigate to "File > Reset Window Size" (Mac OSX) to reset the PATCH APP's screen position
<p>There is a light humming or whirring noise coming from the right side of my PATCH XT System.</p>	<ul style="list-style-type: none"> - The PATCH XT Hardware Unit is equipped with two cooling fans that are mounted on the Right Side of the Hardware Unit. These cooling fans are 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". The fans are mounted deep inside the chassis, not near any exterior-facing panel. - Never block or restrict airflow to the PATCH XT 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 XT system.
<p>The PATCH XT System self-shutdown and/or rebooted itself during use.</p>	<ul style="list-style-type: none"> - The PATCH XT 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 XT Hardware unit mounted directly near any hot or tube-based hardware units as this may result in tripping the failsafe temperature sensor. - The PATCH XT Hardware unit is also equipped with two internal fans to help assist with internal heat removal.
<p>Experiencing a noise floor increase when using certain microphones directly connected to PATCH XT.</p>	<ul style="list-style-type: none"> - The PATCH XT System is a Professional +4 Line Level device, not a microphone level device. Most microphones directly connected to the PATCH XT 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 XT. (I.E. MIC -> dB Booster or Transparent Preamp -> PATCH XT).
<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 XT 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 XT 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

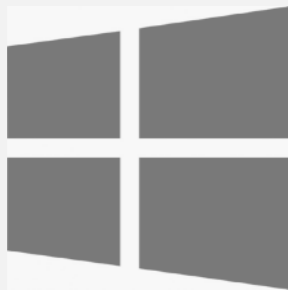
USB: 1x USB 2.0/3.0 Port (Per PATCH Series System)

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 Series 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 XT 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.

POWER SUPPLY INFORMATION

The PATCH XT system has an input voltage range of 110VAC to 230VAC at 50/60Hz, and has a combination switch breaker rated of 3A at the power input.



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 XT 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 XT System.

REPAIRS

If you are having trouble with your PATCH XT System and troubleshooting 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 XT System or expose the internal components by opening the unit. Risk, Injury &/or Death may occur if you open a Flock Audio PATCH XT System and will void any active warranty immediately. The PATCH XT System does not contain any user replaceable or removable 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 XT 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.



www.flockaudio.com



PATENT PENDING