# **Proamps** Multi-zone Amplifier



# USER MANUAL

## **P8-PROAMP8**





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## INTRODUCTION

Pulse-Eight's ProAmp8 is a powerful and versatile 8-Zone Power Amplifier that delivers excellent audio performance with robust and reliable Class D amplification in a compact form factor. The ProAmp8 is the all-in-one ideal solution for both surround sound and distributed audio systems.

The ProAmp8 offers a wide range of feature sets such as: full audio DSP and EQ settings; Multi-Zone Mode; and, Dolby Digital 5.1 Surround Sound Mode. This level of versatility allows for a 5.1 "home theatre" alongside a multi-room whole-house distributed audio system all in one box.

The amplifier is the perfect partner to Pulse-Eight's ProAudio DSP pre-amp range and latest neo matrices.

## **FEATURES**

- 8-Zone Power Amplifier delivering up to 100 watts per channel.
- 1x Dolby 5.1 Digital (SPDIF) Input mappable to 6 surround sound channels
- 8 Stereo (L/R) analog inputs
- 8x Stereo Phoenix Connector Outputs
- 1x RCA Subwoofer Line Level Output
- Full DSP and Equalizer (EQ) control.
- 12V Trigger
- Bridgeable outputs zones to create flexible power configurations
- Web based "user friendly" management
- Remote monitoring support
- Low-energy consumption in standby

## INSIDE THE BOX (KIT)

- 1x ProAmp8, 8-Zone Power Amplifier
- 1x IEC Power Cable (Region Specific)
- 8x Phoenix Speaker Connectors
- 1x Micro-Phoenix RS232 Connector
- 1x Rack Mounting Kit
- 1x Quick Start Guide

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Micro-Phoenix RS232 Connector





Rack Mounting Kit

ProAmp8

Pro**Amp**8

Quick Start Guide

Power Cord



# SPECIFICATIONS

Audio Inputs	16 x Analog Inputs (8 x Stereo L/R Channels) 1 x Digital S/PDIF (Coax/Optical) with Dolby 5.1 Support
Audio Outputs	8 x Stereo Phoenix Connectors (configurable)
Active Subwoofer	1 x Line-Level Active Output (RCA Style)
12V Trigger	1 x 3.5mm (Input)
Control	TCP/IP (RJ45) or RS232 (Phoenix Connector)
Power Modes per Zone	Always On / Standby / 12V Trigger / Auto-Sense (Stereo multi-zone mode only)
Trigger Voltage	+4.5V to +12V
Trigger Wake-Up Time (from Standby)	< 1 second
Audio-sense Wake-Up Time (from Standby)	< 1 second
Rated Power @4 $\Omega$ load	100 watts per channel @1% THD+N 80 watts per channel @0.1% THD+N
Rated Power @8 $\Omega$ load	50 watts per channel @1% THD+N
Rated Bridged Power @8 $\Omega$ load	200 watts @1% THD+N 160 watts @0.1% THD+N
Minimum Impedence Load(Per output port)	3.2Ω single-ended 6.4Ω bridge tied load
Frequency Response	10Hz-20kHz +/- 0.4dB (4Ω, 8Ω, Unloaded, Power=1W)
THD+N	0.003% (4Ω Unbridged, f=100Hz, Power=1W)
Sensitivity	0.4Vrms to 2.1Vrms
Analog Input Impedance	10ΚΩ
Thermal Dissipation	2x 60mm Axial Fans
AC Mains	100 - 240VAC, 50 - 60 Hz, • 120W Nominal consumption • 430W Max consumption (all outputs fully driven)
Fuse Rating	3.15A 250V 5mm x 20mm SLOWBLOW
Configuration Modes	<ul> <li>Stereo Multi-zone Mode:</li> <li>8 Stereo Zones</li> <li>Dolby Multi-channel Mode:</li> <li>1 Dolby Digital 5.1 Audio (6-channel)</li> <li>Up to 5 Stereo Zones</li> </ul>
Inputs (Per Zone)	2x Analog Inputs – RCA style
Volume (Per Zone)	Range: 0 – 100. Adjustable (Full Range: -99.5dB to +24dB)
Mute (Per Zone)	On/Off
Inputs	1 x S/PDIF (Coax and Optical) with Dolby Digital 5.1
Outputs	Left, Right, Center, Rear-Left, Rear-Right, Subwoofer
Additional Dolby Output (Optional)	Subwoofer in bridge-tied load (BTL) mode
Line Level Output	Line level subwoofer. (Always On in Dolby Mode)
Bass & Treble	+/- 12dB
EQ Settings (Per Zone)	+/- 12dB. Bands: 100Hz, 330Hz, 1kHz, 3.3kHz, 10kHz
Delay Settings (Per Zone)	0-50ms



Stereo Channel Up-mix	Auto up-mixing of stereo digital (2-channel PCM) audio into all speakers.
Operating Temperature	0°C ~ 45°C (32°F ~ 113°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Certification	UKCA, CE, FCC (SDoC), RoHS
ESD Protection	Human Body Model: 8kV air, 4kV contact
Included Accessories	Power Cord, Phoenix Speaker Connector, Rack Mounting
Dimensions (W x H x D)	44cm x 8cm x 22cm
Weight	3kg
Box Dimensions (W x H x D)	55cm x 15cm x 30cm



# SAFETY PRECAUTION

#### **Please read the instructions before attempting to install or operate this equipment.** Please keep the following in mind as you unpack and install this equipment:

## • Always follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.

- To prevent fire or shock hazards, do not expose the unit to rain, or moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Please use the included mounting kit where applicable, avoid blocking any vents on the product and follow best
  practices in rack design to help avoid overheating.
- Only use the supplied power supply adapter.
- Never push any objects into this product through any openings or empty slots in the unit as you may damage parts inside and/or cause an electrical shock.
- Do not allow anything to rest on the power cabling and avoid putting the weight of any kind on it.
- To protect the unit from overheating do not block any vents or openings in the unit housing that provides ventilation. Allow sufficient space for air to circulate around the unit.
- This product is intended for use in a clean (dust-free) residential environment.

#### Ventilation

It's important to keep the product well ventilated when installing this Pulse-Eight amplifier.

Any electronic equipment will generate heat. A well-ventilated area helps to disperse the heat. If placed in a poorly ventilated area, your equipment may heat up and cause irreparable damage to the circuitries. Allowing systems to run for prolonged periods under high temperatures will break down circuitry and electrical component. It also applies if the device is left in the path of direct sunlight or near any heat source.

Dust tends to accumulate and will disrupt any fan and/or electronics system. Dust particles contain various compositions like water, oil, and other minerals or chemicals. Having them in your electronic device can sometimes cause a signal error or degradation to the internal chips and circuitries. Because we cannot accurately predict how or when they can affect your device, we highly recommend that you keep Pulse-Eight products not only in a well-ventilated area but also as clean as possible.

In some cases, insects or reptiles can make nests near or inside the electronic casing. Whilst we design our products to maximize the protection of internal electronics, please be aware that insects and reptiles can be drawn to these types of habitats. In the unlikely event, this does happen, this will lead to poor ventilation inside the unit, and it will be unable to disperse heat effectively.

Finally, whenever possible, do not stack audio and video matrices and amplifier together. Leave enough space in between each unit in order to provide good airflow.

#### FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



# PANEL DESCRIPTIONS



A Zone Status LEDs (1-8) - Indicate the state of operation for each of the output zones.

- OFF: Zone is disabled/turned Off.
- GREEN: Zone is working and healthy (no audio clipping).
- YELLOW: Zone is working but audio is close to clipping.
- RED: Zone audio is clipping.
- RED (Flashing): Zone over heating

**B** System Health LED indicates amplifier health. RED - It is powering on or fault found.

GREEN - The system is healthy.

Network LED indicates the amplifier network connection.
 RED - No network cable is connected.
 AMBER (Flashing) - It discovers the IP address.
 AMBER (Solid) - The network has the IP but cannot ping the router.
 GREEN (Flashing) - The network cannot reach the internet.

GREEN (Solid) - The network is healthy.

Cloud LED indicates the amplifier connection to the Pulse-Eight Cloud.
 RED - It is not connected to the cloud.
 GREEN - It is connected to the cloud.



- **E** Power Connector: is used with the supplied power cord to connect the power.
- **(F) Ethernet:** Port Ethernet option to connect to third party control systems.
- **G Digital Audio Input**: Optical and Coax inputs supporting multi-channel digital audio, including Dolby Digital 5.1. The digital inputs support standard S/PDIF protocol (IEC 60958 type II).
- **( Analog Inputs**: Connect analog input source devices.
- **I** RS-232 Control Port: Micro phoenix connector can be utilized for API control using ASCII commands (UART).
- **12V Trigger Port:** Designed to turn on or perform its function when it receives a signal with a voltage level of 12V.
- **K** Active Subwoofer Output: Line-level subwoofer active output. RCA style connector.
- **()** Speaker Zone Outputs: Phoenix connectors for speaker wiring connections for each zone.



# CONFIGURATION MODES

The ProAmp8 can be connected in two ways: **Stereo Multi-Zone Mode** and **Home-Theatre Multi-Channel Mode**. Following is a detailed explanation of each configuration:

## 1. Stereo Multi-Zone Mode

In this configuration, the Analog Stereo Inputs are mapped one-to-one with the Speaker Zone Outputs. There will be 8-zone stereo inputs routed to 8-zone stereo outputs.

During installation, a range of configurations can be set, including the min/max volume range and enabling a bridge-mode output per zone.

The Digital Input Port is disabled and not used in this mode.

To select this mode, go to Dolby Audio Tab and choose 'Off' for Dolby mode and Save Changes.

## 2. Dolby Multi-Channel Mode

In this mode, the Digital Input Port input will be active and capable of accepting Dolby Digital 5.1 which will be mapped to 6-surround sound output channels. The speaker outputs zones can be assigned according to the two sub-modes of operation in Dolby Multi-Channel Mode:

• Dolby 3-Zone (and 5 Stereo Zone)

In Dolby 3-Zone Multi-channel mode, stereo multi-zone inputs 1, 2, and 3 are disabled.

Zone 1: Front Right (FR) and Front Left (FL) channels
Zone 2: Rear Right (RR) and Rear Left (RL) channels
Zone 3: Center (assigned to Left output) and Passive Subwoofer (assigned to Right).
Zone 4-8: Mapped one-to-one to Analog Stereo Inputs 4-8.

To select this mode, go to Dolby Audio Tab and choose 'On (3 Zones)' for Dolby mode and Save Changes.

#### • Dolby 4-Zone (and 4 Stereo Zone)

In Dolby 4-Zone Multi-channel mode, stereo multi-zone inputs 1, 2, 3, and 4 are disabled.

Zone 1: Front Right (FR) and Front Left (FL) channels
Zone 2: Rear Right (RR) and Rear Left (RL) channels
Zone 3: Center (assigned to Left output)
Zone 4: Bridged Subwoofer
Zone 5-8: Mapped one-to-one to Analog Stereo Inputs 5-8.

To select this mode, go to Dolby Audio Tab and choose 'On (4 Zones)' for Dolby mode and Save Changes.

Dolby 4-zone setting is only required for Dolby Multichannel Mode setups requiring a bridged output for the passive subwoofer. However, this requires an extra speaker zone output (zone 4) from the amplifier.

The Active Subwoofer Output is always enabled in any of the Dolby Multi-channel Mode settings.

Enabling Stereo PCM Upmix will ensure that any 2-channel audio input on the Digital Input will automatically be converted to a 5.1 channel so that there is an audio output on all home-theatre surround sound outputs.



## POWER MODES

The ProAmp8 can manually configure each of its output zones to be turned on/off individually. It is also possible to set an automatic power-saving operation for each zone output, either to Auto-sense mode or 12V trigger mode.

## 1. Off Mode

The OFF mode will turn OFF the output zone of the ProAmp8.

## 2. On Mode

The ON mode will turn ON the output zone of the ProAmp8.

## 3. 12V Trigger Mode

Each of the assigned Speaker Zone Outputs will only turn ON when a 12V signal is present on the 12V Trigger Input jack.

Note: 12V Trigger is only connected via a 3.5mm termination.

## 4. Auto Sense Mode

The ProAmp8 will detect when there is no audio signal (below an assignable dB threshold) on its analog input within a time period, and it will automatically turn OFF the corresponding Speaker Zone. Both the input threshold and time period can be configured within the WebUI.

INote: Auto-sense currently is not supported on the Dolby Digital Input.

Both Auto-sense and 12V Trigger Mode have an incredibly fast wake-up time from standby (under 1 second) for the audio zone to turn on; ideal for time-critical applications.



## INSTALLATION

#### Installing In A Rack

- 1. Attach the rack ears to the front sides of the amplifier using the provided screws.
- 2. Install into the rack and connect cabling according to the mode of operation as described below.



△ WARNING: To prevent damage, it is important to ensure adequate ventilation space on the sides of the amplifier, especially on the ventilation openings on the side of the product enclosure.

The ProAmp8 can be connected in two ways: **Stereo Multi-Zone Mode** and **Home-Theatre Multi-Channel Mode**. Each mode has two ways to connect the audio output: **bridged mode** and **non-bridged mode**.

#### Stereo Multi-Zone Mode

#### Connecting The ProAmp8 Analog Audio Inputs

1. Connect audio cables to the Analog Stereo Inputs (1-8) RCA inputs.





Note: In Stereo Multi-Zone Mode, the ProAmp8 Amplifier accepts stereo line-level audio connections to all its 8-zone analog audio inputs jacks (Analog Stereo Inputs). Each zone input will pass amplified audio to the respective Speaker Zone Outputs.



### Connecting The ProAmp8 Audio Output to Speaker

**2. For non-bridged outputs**, remove the speaker connectors and connect the wires to the phoenix-style terminal blocks provided. Then, connect the phoenix-style terminal blocks into the ProAmp8 respective Speaker Zone Outputs.



Figure 1: Connecting the audio output in non-bridged mode.

**3. For bridged outputs**, remove the speaker connectors and connect the wires to the phoenix-style terminal blocks provided. Then, connect the phoenix-style terminal blocks into the ProAmp8 respective Speaker Zone.



Figure 2: Connecting the audio output in bridged mode.



#### Home-Theatre Multi-Channel Mode

In Home-Theatre Multi-Channel Mode, the ProAmp8 Amplifier accepts a S/PDIF signal (including Dolby Digital) and maps it to 3 or 4 zone outputs on the amplifier, depending on Dolby zone setting - see section Configuration Modes in this manual for more information.

#### Connecting The ProAmp8 Digital Audio Inputs

1. Connect the digital cable (coaxial or optical) to the Dolby Digital Audio input, and the audio cables to the Analog Stereo Inputs (4-8) RCA inputs for zone 3 Dolby mode and the Analog Stereo Inputs (5-8) RCA inputs for zone 4 Dolby mode.







Figure 4: Connecting the audio input for 4 Zone Dolby Mode



### Connecting The ProAmp8 Audio Output to Speaker

**2. For non-bridged outputs**, remove the speaker connectors and connect the wires to the phoenix-style terminal blocks provided.



**3. For bridged outputs**, remove the speaker connectors and connect the wires to the phoenix-style terminal blocks provided.



4. Connect the phoenix-style terminal blocks into the ProAmp8 respective Speaker Zone Outputs.



Figure 5: Connecting the audio output for 3 Zone Dolby Mode



Figure 6: Connecting the audio output for 4 Zone Dolby Mode



## Connecting The ProAmp8 To The Network

It is necessary to connect a standard Ethernet cable (Category 5e/6/7) from the ProAmp's 'Ethernet' port to your router or network switch. Crossover cables are not supported.



INote: A network connection is required for supporting full control/remote monitoring features of the product.

## Turning On The ProAmp8

PULSE <b>EIGHT</b>		
	Pro <b>Amp</b> 8	
· · · · · · · · · · · ·		POTEMICALINI • NETRIORI • CLOUD •

- 1. Insert the supplied power cord and plug into the AC mains.
- 2. Turn ON the power switch.
- 3. As it powers ON, the front panel LEDs (System Health, Network, Cloud) will illuminate momentarily before it begins its initialization sequence.
- Note: The initialization process takes between 20 seconds and up to 2 minutes. However, it is possible that a firmware update may be available the first time the unit is powered ON in this instance, the ProAmp8 may take longer to initialize. If both the System Health and Network LEDs flash quickly together (green); then a firmware update is being applied. Please wait and do not disconnect the power until this update has been completed.
- 4. Once initialization has been completed, the System Health, Network and Cloud LEDs should all appear ON (green).



## WIRING GUIDELINES



This is an example of a wiring diagram of the ProAmp8 Amplifier with a dedicated audio matrix switch (e.g. ProAudio1632) and video matrix (neoX+).



This is an example of a wiring diagram of the ProAmp8 amplifier without an external Audio Matrix Switch.



## PROAMP WEB INTERFACE

The ProAmp web interface's front page displays all available inputs and outputs. The steps below show how to access and customise this for the end user. The Web User Interface (WebUI) end-user controls, as shown below, are touch-screen friendly.

Pro <b>Amp</b>			PULSE <b>EIGHT</b>
CONTROL	CONFIGURATION		
A Configuration			
NETWORK	Inputs	Outputs	
Solution Cloud Connection	-==())	(IIII) Output 1	
QUICK ACTIONS	-==()	الله Output 2	
😃 All Zones Mute		■創 Output 3	
		■初 Output 4	
	- <b></b>	(IIII) Output 5	
		■1前 Output 6	
	-==()	■(1) Output 7	
	-=4100 - Input 8	الله المعالم المعالم (المعالم المعالم المعالم المعالم المعالم المعالم المعالم المعالم (معالم المعالم المعالم ا	
	DIGITAL Dolby 5.1		
	© 2023 PULSE-EIGHT All rights reserved		

#### Accessing The Admin Area

When setting up the amplifier, it is important that the installer can access the admin menu on the Web Interface to configure the amplifier according to the installation's requirements.

The Web Interface can be accessed using a computer connected to the same router/network as the amplifier and by visiting www.gotomymatrix.com in your web browser. Navigate to the Cloud Connection tab (on the left-hand side) and then click on '[Admin]' link at the foot of the page. Insert your password to log in and access all options.

Note: The default password is "**admin**". It is recommended that this is changed to a unique and memorable password once setup has been completed.

Pro <b>Amp</b>		PULSEEIGHT
CONTROL	MONITORING	
Configuration	hourly health check of your system	
NETWORK	Serial P8SN1190983	
Cloud Connection	System Status Healthy	
QUICK ACTIONS		
0 All Zones Mute	CLOUD CONNECTION	
	Connection Status Connected	
	© 2023 PULSE EKGHT AI rights reserve Photon	



#### Link The Installer Account

On the Cloud Connection page, insert your Pulse-Eight Installer ID (4-digit) into the box and save changes - this will enable the ProAmp to be linked to your monitoring account.

Note: If you do not already have an Installer ID then you will need to register for a new account. Please contact your local representative or visit monitoring.pulse-eight.com/Account/Register.

Once you have entered your Installer ID, you will be able to gain access to the Cloud Monitoring Service to monitor all of your Pulse-Eight installations remotely in one place.

For more information, refer to the "Accessing the Monitoring Portal" section in this manual.

Pro <b>Amp</b>		PULSE <b>EIGHT</b>
ADMINISTRATION	MONITORING	
# Configuration	keep your system up to date and get notified automatically if a problem occurs	
III Dolby Audio		
System Health	System Salus Healing	
Cloud Connection	Last Monitoring Pulse Sent Tue Jun 06 2023 13:20:21 GMT+0800 (Malaysia Time)	
>_ Network Settings	Installer Id XXXX Save Changes	
Front Panel		
A Hardware Details	Send Monitoring Pulse Now	
	CLOUD CONNECTION connection to the Pulse-Eight device cloud	
	Connecton Status Connected	
	© 2023 PULSE-EIGHT All rights reserved [User] [Admin]	

#### Input and Output Options Setup

To access the Input and Output Setup options, click on the 🗮 symbol for changing the selected Input settings and the 🏟 symbol for changing the selected output settings.

Pro <b>Amp</b>			PULSEEIGHT
ADMINISTRATION	CONFIGURATION		
# Configuration			
IIII Dolby Audio™	Inputs	Outputs	
System Health	-=4;;;:=- 1> Input 1	■(3) 1 > Output 1	•
Cloud Connection     Network Settings	-=(******=- 2> Input 2	■(1) 2 > Output 2	٠
Front Panel	-=();;;=- 3>input 3	■(1) 3 > Output 3	۵
A Hardware Details	-==(***********************************	■(1) 4 > Output 4	٠
	-==(;;;;=- 5> Input 5	■(1) 5> Output 5	٠
	-=(;;;== 6> Input 6	■(1) 6> Output 6	٠
	-=(;;;)- 7> Input 7	■(1) 7 > Output 7	٠
	-=(************************************	(ii) 8 > Output 8	٥
	DIGITAL 9> Dolby 5.1		
	Restore Volume On Startup		
	© 2023 PULSE-EIGHT All rights reserved [User] [Admin]		



#### **Input Setup Options**

Input 9		×
Name	Input 9	
Linked Device	Not Linked Not Linked FF66SA P8SN1226077	✓ Not Linke ✓
		Close Save changes
Input 9		×
Name	Input 9	
Linked Device	FF66SA P8SN1226077	✓ Not Linke ✓ Not Linked
		Output 1 Output 2 Output 3 Output 4 Output 5 Output 6

Name: Change the name of the selected input.

Linked Device: A dropdown list displaying the devices with the list of output that can be linked with the ProAmp8.

#### **Output Setup Options**

Output 2				×
Name	Output 2			
Volume Range	Min -80.0dB - M	lax 12.0dB		
Current Volume	84%			
Bridged	$\bigcirc$			
Identify	Left Tone	Right Tone	Left Noise	Right Noise
Power Mode	On			~
			Close	Save changes

Name: Change the name of the selected output.

Volume Range: A volume slider with range of -80.0dB to 12.0dB.

**Current Volume:** A volume slider to control the current volume.

**Bridged:** The toggle switch can be turned on when connecting the speaker in bridged mode.

**Identify:** Identify the speaker by choosing the Left Tone, Right Tone, Left Noise and Right Noise. (To stop the sound, adjust or mute the volume)

Power Mode: A dropdown list displaying the power mode setting.

INote: Ensure that after any changes you click the 'Save Changes' button.



#### **Dolby Audio**

Pro <b>Amp</b>			PULSE <b>EIGHT</b>
ADMINISTRATION	DOLBY AUDIO <sup>TM</sup> manage Dolby and PCM 5.1 modes		
Doby Audo <sup>14</sup> System Health     Cloud Connection     Network Settings      Front Panel     Hardware Details	Clobal Settings Dotty Mode Off PC M Upmix Off PC M Upmix Othurs Range Min -90.068 - Max 0.0d8 Warning Warning Min -90.068 - Max 0.0d8 Warning Stave Unime to 100% could result in auto cloping. This can be resolved by limiting the value range to 10d8 of lower.	Bass Trebe Volume	
	Front Left + Front Right	100Hz 330Hz 10Hz 330Hz 10Hz 330Hz 10H4z 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Rear Left + Rear Right	100H2 330H2 110H2 330H2 10H42 0 0H3 0.04B 0.04	
	Center	100H2 330H2 10H2 330H2 10H2 Detay Level	
	Subwoofer	100H2 330H2 10H2 3.30H2 10H12 Delay Level	

Set Dolby multi-channel mode, PCM Upmix setting, digital min/max volume range, equalizer (EQ) levels settings.

#### • Dolby Mode:

- Off (Stereo Multi-zone Mode)
- On 3-zone (Dolby Multi-channel Mode)
- On 4-zone (Dolby Multi-channel Mode with bridged subwoofer)
- **PCM Upmix** Select to enable upmixing of 2 channel audio to the stereo sound
- Volume Range min/max dB from -99.5 dB to 24.0 dB (default -58.5 dB to 12.0 dB)
- Bass from -12.0 dB to 12.0 dB (default -2.5 dB)
- Treble from -12.0 dB to 12.0 dB (default -2.5 dB)
- Volume from 0% to 100%

The Front Speakers, Rear Speakers, Center and Subwoofer can also be individually set for the following:

- 5-band DSP (digital signal processor) filter at 100Hz, 330Hz, 1KHz, 3.3KHz and 10KHz
- Delay up to 50 ms
- Volume Levels (left and right) from Mute to 24.0 dB



#### System Health

Pro <b>Amp</b>		
ADMINISTRATION	SYSTEM HEALTH	
Gonfiguration	how your hardware is performing	
III Dolby Audio™	System Status	Healthy
System Health	-	Descent & LineMax
Cloud Connection	Power Suppry	riesent & neariny
>_ Network Settings	Inputs	All Present & Healthy
Front Panel	Outputs	All Present & Healthy
A Hardware Details	Network Connectivity	Healthy
	Temperature Sensor 1	33 °C (91.4 °F)
	Temperature Sensor 2	35 *C (95 *F)
	Temperature Sensor 3	37 °C (98.6 °F)
	Temperature Sensor 4	44 °C (111.2 °F)
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Under the System Health tab, information about the hardware's performance is displayed. The colour-coded boxes(Green = Good, Orange = Warning, Red = Issue) will indicate if it is performing correctly along with the reading of the internal temperature sensor that will indicate if the system is overheating.

#### **Cloud Connection**

P	ro <b>Amp</b>		● ●●IIII PULSEEIGHT
ADM	INISTRATION	MONITORING	
#	Configuration	keep your system up to date and get notified a	utomatically if a problem occurs
0þ	Dolby Audio™		
Ψ	System Health	system status	Heatry
9	Cloud Connection	Last Monitoring Pulse Sent	Tue Jun 06 2023 13:20:21 GMT+0800 (Malaysia Time)
>	Network Settings	Installer Id	Save Changes
0	Front Panel		
8	Hardware Details		Send Monitoring Pulse Now
		CLOUD CONNECTION connection to the Pulse-Eight device cloud	
		Connection Status	Connected

Under the Cloud Connection tab, you will have basic monitoring information:

**System Status:** This colour-coded status(Green = Good, Orange = Warning, Red = Issue) will notify you if the system is healthy or if there is an issue.

Last Monitoring Pulse Sent: This will indicate the date and time when the amplifier last 'phoned home'.

**Installer ID:** Enter your Pulse-Eight Installer ID to link to the Pulse-Eight Monitoring Portal.

**Connection Status:** This will detail if the amplifier is connected to the Pulse-Eight Monitoring Portal.



#### **Network Settings**

Pro <b>Amp</b>			• • • • • • • • • • • • • • • • • • •
ADMINISTRATION	NETWORK SETTINGS		
# Configuration	how your hardware connects to the internet an	nd the rest of your control systems	
III Dolby Audio M			
System Health	Network Connectivity	Healthy	
Cloud Connection	Mode	Static	
> Network Settings	IP Address	172.16.154.87	
Front Panel	Subnet Address	255.255.255.0	
Hardware Details	Gateway Address	172.16.154.254	
	Primary DNS Server	10.20.0.200	
	Secondary DNS Server	172.16.154.254	
	Save Settings	I	
	© 2023 PULSE-EIGHT All rights reserved [User] [Admin]		

Under the Network Settings tab you will find details about the system's connection to the internet and the rest of your control systems:

**Network Connectivity:** This colour-coded status(Green = Good, Orange = Warning, Red = Issue) will notify you if the system is connected to a network or if there is an issue.

**Mode:** Dropdown menu to either set a static IP and DHCP.

IMPORTANT: Ensure that after making any changes to network settings, that you click Save Settings button.

#### Front Panel Settings

Pro <b>Amp</b>		PULSE <b>EIGHT</b>
ADMINISTRATION	FRONT PANEL	
# Configuration	Control the way your hardware looks in the rack	
u∥u Dolby Audio™		
System Health	Status LEDs These are in the bottom right of the front panel, these LEDs will always appear during powerup and turn off after 30 seconds if set to <b>Off</b>	
Cloud Connection		
> Network Settings		
Front Panel		
A Hardware Details		
	© 2222 PULSE-EBCHT All rights reserved [User] [Admin]	

Under the Front Panel tab, you will find options for the front panel of the ProAmp for turning off the status LEDs.

Note: The status LEDs are in the bottom right of the front panel, these LEDs will always appear during power up and turn off after 30 seconds if set to Off.

# PULSE**EIGHT**

#### Hardware Details

Pro <b>Amp</b>		PULSE <b>EIGHT</b>
ADMINISTRATION	HARDWARE DETAILS	
# Configuration	Manufacturing information about your product, you may be asked for this information if you request help or support	
u∥i Dolby Audio™	Model PROAMP8	
System Health	Serial P8SN/1190983	
Cloud Connection	MAC 00:15/82:12:2C:47	
>_ Network Settings	Hardware Revision 0	
Front Panel	Firmware version 3.10.1-1	
A Hardware Defails		
	0 2023 PULSE-EIGHT AI rights reserved [User] [Admin]	

Under the Hardware Details tab, you will find manufacturing information about your product such as model, serial number, MAC, hardware revision, and current firmware version installed. You may be asked for this information if you request support.

Note: The design and features of the Web Interface are ever-evolving and may be subject to changes at any time without warning.



## MONITORING PORTAL

#### Accessing The Monitoring Portal

Cloud Monitoring Service	PULSE <b>EIGHT</b>
Account - My Installs My Products Documentation & Drivers - Web Shop	
(0000) ADMINISTRATOR	
Hi ADMIN	0000 My installer Id
3.10.1 Firmware Update By Laura Parr/08 June 2022	
This firmware is available for the following products:	
neo:X+ neo:X	
Changed:	
Audio volume will only be controllable in Sink Active mode.	
Please be aware updating to this firmware will override your existing audio settings and you will need to set these up in a applied.	gotomymatrix.com again once the update has been

To access the monitoring portal please visit monitoring.pulse-eight.com, click 'Login' in the top left corner, and sign in with your registered details.

Once logged in, the dashboard will display your details including your Installer ID.

Note: If you do not already have an Installer ID then you will need to register for a new account. Please contact your local representative or visit monitoring.pulse-eight.com/Account/Register.

#### My Install

Under the My Installs tab you can add projects and assign your installed systems in order to easily access and monitor certain installations.

To create an install, click the 'Add New' button and insert the details on the following screen.

Cloud Monitoring Servic	e		PULSE <b>EIGHT</b>
A Dashboard Account - My Installs My	Products Documentation & Drivers - W	eb Shop	
(0000) ADMINISTRATOR Home > My Installs			_
INSTALLS			ADD NEW
Name	Status	Last Checked	
Mike Long Neo 4B Demo	Healthy	20 July 2021 06:11:48	
Demo Room HQ - Setup 1	0/2 Healthy	06 April 2022 12:12:44	
Marc's Desk	Healthy	16 October 2020 11:07:16	
Smiths House	0/2 Healthy	20 August 2020 05:46:03	



Once created, you will then be able to assign systems to the install by clicking the 'Add' button in the 'Products' section. This will then bring up a page with a dropdown menu to select a system.

Clou	ud Mo	nitorii	ng Ser	vice				PULSE <b>EIGHT</b>
*	Dashboard	Account -	My Installs	My Products	Documentation & Drivers -	Web Shop		
(0000) Home >	ADMIN My Installs >	STRATO New Install	R					
	NEWINST	ALL						
Testing				Suad			0123456789	
NOTES								Θ
		ADD						



#### **My Products**

Under the My Products tab, all your assigned Pulse-Eight systems will be listed.

Note: If the system you are looking for is not listed, please make sure you have added your Installer ID into the web interface of the system.

When you click on a system, an overview page will appear with details of the unit such as:

- Serial Number
- Model Number
- Status
- System Temperature
- Firmware Version
- Current Uptime
- System Status Inputs
- System Status Outputs
- External Network Details
- Local Network Configuration
- System Commands
- Reboot Function

Cloud Monitorir	ng Service			PULSE <b>EIGHT</b>
Account -	My Installs My Products	Documentation & Drivers - Web S	hop	
(0000) ADMINISTRATO	DR 763			
CONFIGURATION	P8SN1155763			
OVERVIEW	Status:	Inputs:	Outputs:	System Temperature:
PORT DETAILS	Healthy	All Present & Healthy	All Present & Healthy	44°c
Inputs	Model: neo:X	Firmware Version: 3.2.20	1130 c	nt Uptime: lays, 16 hours, 41 minutes
Input 1 (Input 1)	SYSTEM STATUS			
Input 2 (Input 2)	01012110171100			
Input 3 (Input 3)	Inputs			
Input 4 (Fire TV Stick)	1) Input 1	2) Input 2	3) Input 3	4) Fire TV Stick
Input 5 (Input 5)	5) Input 5	6) UBP X500	7) Input 7	8) Input 8
Input 6 <i>(UBP X500)</i>	-,	-,	.,	-,
Input 7 (Input 7)				
Input 8 (Input 8)	Outputs	0.0010/77/		
Outputs	1) Output 1	2) SUNY IV	3) Output 3	4) Output 4
Output 1 (Output 1)	5) Output 5	6) Output 6	7) Output 7	8) Output 8
Output 2 (SONY TV)	9) Output 9	10) Output 10		
Output 3 (Output 3)	.,			



On the left hand side, a navigation bar features more options:

- Port Details allows you to individually monitor all inputs and outputs.
- Health displays information about the system's health plus a visual history of the system's temperature over the previous month.
- Updates display the current software version and detail any updates available for the system. There is also a toggle switch to turn on 'Hotfix Updates' whereby updates are delivered automatically to the system.
- Installation Report displays all crucial information about the installation on one page. We recommend you print this page once the installation is complete to ensure the installation is correct.

Cloud Monitorin	g Service			PULSE <b>EIGHT</b>
Account -	My Installs My Products D	ocumentation & Drivers - Web Shop		
(0000) ADMINISTRATO Home > My Products > P85N11557	R 63 > Installation Report			
CONFIGURATION		INSTALLATION	REPORT	
OVERVIEW	SYSTEM HEALTH			
PORT DETAILS	Status: Healthy	Inputs: All Present & Healthy	Outpu All Pre	i <b>ts:</b> :sent & Healthy
Inputs	Model:	Firmware Version:	Curre	nt Uptime:
Input 1 (Input 1)	neo:X	3.2.20	1130 0	days, 16 hours, 48 minutes
Input 2 (Input 2)	🖿 Temperature, Day Tre	nd		
Input 4 (Fire TV Stick)	38			
Input 5 (Input 5)	37			
Input 6 (UBP X500)	36 35			
Input 7 (Input 7)	) 580 34			
Input 8 (Input 8)	32 32			
Outputs	31 8 9 10 11	2 13 14 15 16 17 18 19	20 21 22 23 0	1 2 3 4 5 ¢ 7
Output 1 (Output 1)				
Output 2 (SONY TV)		0	UTPUTS	
Output 3 (Output 3)				
Output 4 (Output 4)	Input Name	Signal Received C	Output Name	Manufacturer

#### **Documentation & Drivers**

Under the Documentation and Drivers tab you will find links to the latest third party control drivers, manuals and troubleshooting guides alongside API information.

Cloud M	Ionitori	ng Ser	vice				PULSE <b>EIGHT</b>
Dashboa	rd Account -	My Installs	My Products	Documentation & Drivers	Web Shop		
DRIVERS		DOWN	LOADS	DOCUMENTATION		API	
Bitwise Control 4 Crestron Crestron Home	Elan RTI Savant URC	Discover	ry Tool	Visit our Documentation Hub		Overview CEC EDID IR Monitoring	Network Port System Misc
By Laura Parr / 08 Ju This firmware is ava neo:X+ neo:X	ine 2022 ailable for the follo	wing products:					
Changed:							
Audio volume will o	only be controllable	e in Sink Active r	node.				

Please be aware updating to this firmware will override your existing audio settings and you will need to set these up in gotomymatrix.com again once the update has been applied.



## TROUBLESHOOTING

Should you encounter installation difficulties or issues with device communication, the following checklist of common issues and causes should help resolve your issues. If you still continue to experience issues, please contact your local representative for further assistance.

#### No Sound on Speaker

Make sure that you are setting the matrix to Sink or Source mode and that the wiring is correct.

- For a Linked Device (ProAmp8), check the following:
- 1. When you first install the matrix, the unit is in Sink mode passive. You need to change it to 'active' to get control of volume.
- 2. Make sure the port is linked to the correct one.
- 3. Toggle the ARC settings between HDMI, Optical & Disabled.

INote: This occurs only when using S/PDIF & Digital Coax outputs. Analog Stereo outputs are not affected.

#### Can't See Other Unit When Going to Link The Devices

- 1. Make sure both the matrix and the ProAmp8 are connected to the local network. The system needs to detect each other to make the linking possible.
- 2. If both units are on the latest firmware and it's still not visible, please try the following:
  - A hard refresh (CTRL + R or CTRL F5)
  - Run on another web browser
  - Or, clear the cache for your web browser.

#### Linked Device Option Is Not Available or Visible

Update both ProAmp8 & the matrix to the latest firmware and perform a power cycle (reboot both).

## MANUAL VERSION HISTORY

- V2.0 21st July 2022. Update existing manual to new format
- V2.1- 28th October 2022. Further updates.
- V2.2 5th July 2023. Included Revision History section.
- V2.3 9th February 2024. Minor update on the Safety Precaution.



## WARRANTY PROCEDURE

The following policies covers all Pulse-Eight products.

Unless otherwise instructed, please do not open any of our products. Doing so will invalidate your warranty. As part of the troubleshooting procedure, you may be instructed to open the device, but you can only proceed with this once consent has been given.

To open a support ticket, please visit: www.pulse-eight.com/support.

**Please Note:** Warranty cover for ALL products starts from date of receipt of goods NOT date of installation. Should we find that your product does need replacing, we will send your replacement directly to the distributor you purchased from, if not purchased directly from Pulse-Eight.

From 1st April 2022, any products purchased will have new warranty lengths. The length of warranty is determined by the type of product purchased. Our cover can be broken down into 3 categories:

#### Gold, Silver, and Bronze.

#### GOLD: Pulse-Eight Audio and Video Matrices

- 5-year warranty as standard
  - 3-year advanced replacements
  - 2-year return to base for repair

#### SILVER: Pulse-Eight Amps, Extender Sets, and Accessories

- 3-year warranty as standard
  - 1-year advanced replacements
  - 2-year return to base for repair

#### BRONZE: IR, Cables, Brackets, and our Tech Tools

• 1-year advanced replacements

#### Pulse-Eight Current Product—Within the advanced replacement warranty year(s)

- 1. Contact support via phone or a support ticket. Pulse-Eight will try to help troubleshoot and resolve the issue remotely.
- 2. If unable to resolve the fault remotely and the unit needs replacing an advanced replacement will be raised with the installer who purchased it. If you purchased from a distributor you will need to return to your distributor and they will contact Pulse-Eight to get the RMA raised. All distributor advanced replacements will be sent to the distributor and cannot be sent directly to their installer.

#### Pulse-Eight Current Product—Within return to base warranty

- 1. Contact support via phone or a support ticket. Pulse-Eight will try to help troubleshoot and resolve the issue remotely.
- 2. If unable to resolve the fault remotely and the unit needs to be repaired, an RMA will be raised with the installer if purchased direct from Pulse-Eight. Or if purchased from a distributor, the installer will be directed back to their distributor who will raise an RMA.

#### Pulse-Eight Products Purchased Before 1st April, 2022.

Please visit: Warranty Page. Or Contact support via phone, opening a support ticket or emailing support@pulse-eight.com.



# WARRANTY TERMS & CONDITIONS

# IMPORTANT INFORMATION ABOUT YOUR RIGHTS AND OBLIGATIONS, AS WELL AS LIMITATIONS AND EXCLUSIONS THAT MAY APPLY TO YOU. YOUR RIGHTS AND THIS LIMITED WARRANTY

This Limited Warranty gives you specific legal rights. You may also have other legal rights that vary by state, province, or jurisdiction. The disclaimers, exclusions, and limitations of liability under this Limited Warranty will not apply to the extent prohibited by applicable law. For a full description of your legal rights, you should refer to the laws applicable in your jurisdiction and you may wish to contact a relevant consumer advisory service.

#### 1. WHAT THIS LIMITED WARRANTY COVERS; PERIOD OF COVERAGE

Pulse-Eight Limited ("Pulse-Eight"), 8-12 Alder Hills, Poole, BH12 4AL, UK, warrants to the owner of the enclosed product that the product contained in this box ("Product") will be free from defects in materials and workmanship for a period of three years from the date of delivery following the original purchase (the "Warranty Period"), or if this product has been professionally installed, the warranty start date is from the date your installer purchased the item, not your system commissioning date. Please check with your installer for their purchase date. If the Product fails to conform to this Limited Warranty during the Warranty Period, Pulse-Eight will, at its sole discretion, either (a) repair or replace any defective Product or component; or (b) accept the return of the Product and refund within 45 days of return the money actually paid by the original purchaser for the Product. Repair or replacement may be made with a new or refurbished product or components, at Pulse-Eight's sole discretion.

If the Product or a component incorporated within it is no longer available, Pulse-Eight may replace the Product with a similar product of similar function, at Pulse-Eight's sole discretion. This is your sole and exclusive remedy for breach of this Limited Warranty. Any Product that has either been repaired or replaced under this Limited Warranty will be covered by the terms of this Limited Warranty for the longer of ninety (90) days from the date of delivery or the remaining Warranty Period. This Limited Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer.

#### 2. TOTAL SATISFACTION RETURN POLICY

If you are the original purchaser of the Product and you are not satisfied with this product for any reason, you may return it in its original condition within thirty (30) days of the original purchase and receive a full refund. If this is a professionally installed product, you must check with your installer regarding their own returns policy.

#### 3. WARRANTY CONDITIONS; HOW TO GET SERVICE IF YOU WANT TO CLAIM UNDER THIS LIMITED WARRANTY

Before being able to claim under this Limited Warranty, the owner of the Product must (a) notify Pulse-Eight of the intention to claim by emailing support@pulse-eight.com during the Warranty Period and providing a description of the alleged failure, and (b) comply with Pulse-Eight's return shipping instructions, and (c) ship the Product at owner's cost (except where prohibited by applicable law) to Pulse-Eight for repair or replacement. Pulse-Eight will have no warranty obligations with respect to a returned Product if it determines, in its reasonable discretion after examination of the returned Product that the Product is an Ineligible Product (defined below). Pulse-Eight will bear all costs of return shipping to the owner, except with respect to any Ineligible Product, for which the owner will bear all shipping costs.

#### 4. WHAT THIS LIMITED WARRANTY DOES NOT COVER

This warranty does not cover the following (collectively "Ineligible Products"): Products marked as "sample" or sold "AS IS"; or Products that have been subject to: (a) modifications, alterations, tampering, or improper maintenance or repairs; (b) handling, storage, installation, testing, or use not in accordance with the Installation Guide or other instructions provided by Pulse-Eight; (c) abuse or misuse of the Product; (d) breakdowns, fluctuations, or interruptions in electric power or the telecommunications network; or (e) Acts of God, including lightning, fire, flood, tornado, earthquake, or hurricane. This warranty does not cover consumable parts, including batteries unless damage is due to defects in materials or workmanship of the Product, or software (even if packaged or sold with the product). Pulse-Eight recommends that you use only authorized service providers for maintenance or repair. Unauthorized use of the Product or software can impair the Product's performance and may invalidate this Limited Warranty. Pulse-Eight does not warrant that operation of the Product will be error-free or uninterrupted or that the Product will in every case process all data correctly.



#### 5. DISCLAIMER OF WARRANTIES

Except as stated above in this limited warranty, and to the maximum extent permitted by applicable law, Pulse-Eight disclaims all express, implied, and statutory warranties and conditions with respect to the product, including the implied warranties of merchantability, fitness for a particular purpose. To the maximum extent permitted by applicable law, also limits the duration of any implied warranties or conditions to the duration of this limited warranty.

#### 6. LIMITATION OF DAMAGES

In addition to the above warranty disclaimers, in no event will Pulse-Eight be liable for any consequential, incidental, exemplary, or special damages, including any damages for lost data or lost profits, arising from or relating to this limited warranty or the product, and Pulse-Eight's total cumulative liability arising from or related to this limited warranty or the product will not exceed the amount actually paid for the product by the original purchaser.

#### 7. LIMITATION OF LIABILITY

Pulse-Eight disclaims all liability of any kind of Pulse-Eight's suppliers. The Pulse-Eight online services ("services") may provide you with information ("product information") regarding your product's performance and/or peripherals connected to your product ("product peripherals"). The type of product peripherals that may be connected to your product may change from time to time. Without limiting the generality of the disclaimers above, all product information is provided for your convenience, "as is", and "as available". Pulse-eight does not represent, warrant, or guarantee that product information will be available, accurate, or reliable. You use all product information, the services, and the product at your own discretion and at risk. You will be solely responsible for (and Pulse-Eight disclaims) any and all loss, liability, or damages, including to your HVAC system, plumbing, home, product, product peripherals, computer, mobile device, and all other items and pets in your home, resulting from your use of the product information, services, or product. The product information provided by the services is not intended as a substitute for direct means of obtaining the information.

#### 8. VARIATIONS THAT MIGHT APPLY TO THIS LIMITED WARRANTY

Some jurisdictions do not allow limitations on how long an implied warranty lasts or exclusions/limitations on incidental or consequential damages, so some of the limitations set out above may not apply to you.

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# NOTES
