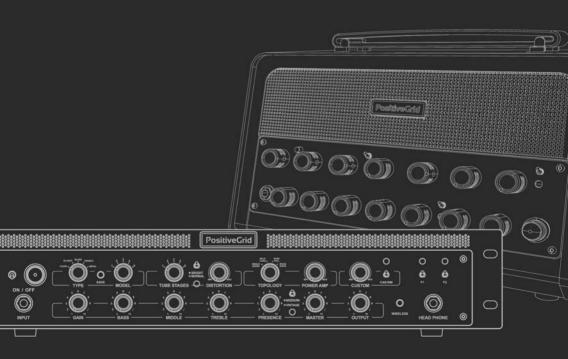
Positive Grid[®]

BIAS HEAD / RACK

Product Manual



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INTRODUCTION

BIAS Head is the first cross-platform, 600-watt-RMS amplifier that allows you to design your dream amp tone, component by component right in the amp's front panel. You can achieve further customization using Amp Match and ToneCloud, included in BIAS Amp Pro for Mac/PC.

For the first time in history, guitar players can easily design, modify and capture the most unique, expressive and soulful tones, and use them for any recording and live performance application.

BIAS Head represents an entirely new concept in guitar sound. Its engine has the most authentic tube modeling that seamlessly integrates with desktop and mobile apps. BIAS Head makes it possible for guitar players to edit more deeply and create the tones they could only have imagined before. Additionally, our Amp Match Technology allows users to capture their favorite tube amplifier (or someone else's!), then share that amp and download other amp models on ToneCloud

BIAS Head is perfectly suited for both guitar and bass players and has been tested extensively to make sure your experience is the best we can provide in all settings - live, studio and home use.

PLEASE NOTE: THIS MANUAL OFTEN USES THE NAME "BIAS GEAR" TO REFER AT ONCE TO FOUR DIFFERENT POSITIVE GRID PRODUCTS THAT SHARE COMMON FEATURES AND FUNCTIONS: BIAS HEAD, BIAS RACK, BIAS HEAD PROCESSOR AND BIAS RACK PROCESSOR. WHERE "BIAS GEAR" IS DISCUSSED, YOU CAN ASSUME THAT THE INFORMATION APPLIES EQUALLY TO ALL FOUR PRODUCTS.

Support and Documentation

Buying a new piece of hardware can seem daunting at first, but we find the best way to learn is by using the product yourself. We've broken down the information into sections to help you find exactly what you want to know, when you need to know it. There is a wealth of knowledge on every parameter of the BIAS Head via our Help Center, and should we have missed something, our support team is always on hand to help solve any problems you may have.

Software

The Digital Age is wonderful in so many ways - one of which is the power of the Internet. Because the BIAS Head is driven by firmware inside the unit, and by BIAS Amp Professional (desktop software), we will be updating regularly to advance the use of the head in so many ways. Each time you connect your head, there will be a notification at the top of the BIAS Head software and the BIAS Amp Professional software - along with regular updates to our iOS versions as well when an update is available.

GETTING STARTED

Within the box

Please carefully review each item in the box:

- BIAS Head Power Cable Power Cable Adapter USB Type-B to Type-A Cable
- · Quick Start Guide · Redeem card for BIAS Amp Desktop Professional

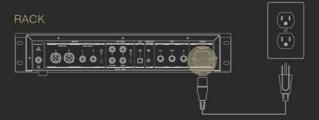
Starting using the BIAS Head

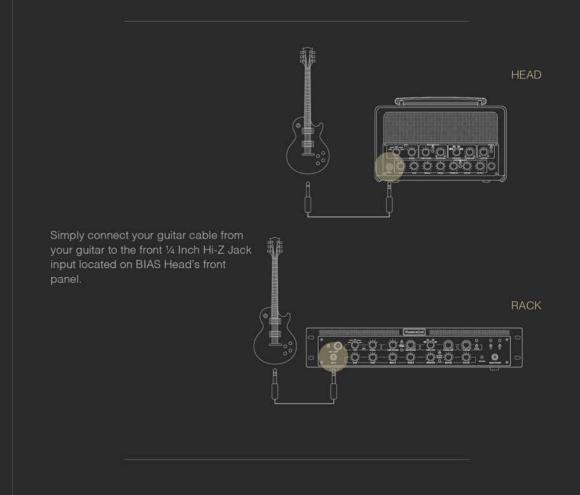
Basic Connection

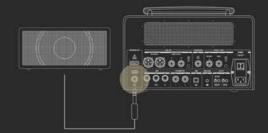
HEAD



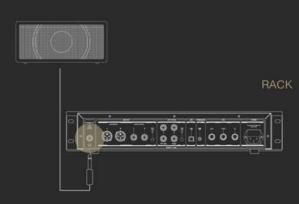
Plug in the power cable, and connect it to the power outlet in the wall.



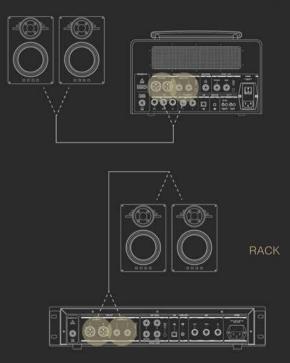




Then patch a speaker cable from the powered Speaker output on the back panel to a cabinet rated 8 or 16 ohm.



If you're looking to go DI (Direct Out) straight out of the head using the built-in Cabinet Simulation, plug an XLR cable (or two cables for stereo) into the XLR line output(s) on the rear panel, and connect the other end into a powered speaker /PA System. If you're connecting to a powered monitor or external power amp (or simply don't have an XLR cable handy), then please connect to the unbalanced TRS ¼"



Choosing A Preset

BIAS Head comes with 25 pre-installed presets to get you started straight out of the box. These are separated into 5 banks:

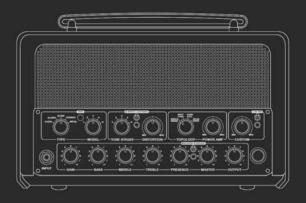




- Glassy for all your crystal, sparkling tones with lots of headroom.
- Clean for the warm tones, with very subtle tube saturation.
- Blues for the classic sounds of the 50's & 60's.
- Crunch for those about to rock... with crisp gain and warm leads!
- Metal for the Hi-Gain, saturated leads and huge rhythm sounds.

These presets are fully customizable, and you can save your preset into ANY bank of your choosing; For example - a Hi-Gain in the Glassy Bank if you're out of room in the Metal Bank.

FRONT PANEL - OPERATION AND EDITING





Instrument input



Dynamic range : 110dB Input: 1/4" TS jack

Preset section

HEAD



RACK



TYPE

To select a preset, simply turn the "Type" knob in a clockwise or anticlockwise fashion to select the type of sound you would like from the 5 banks available. There are 5 Models within each bank, giving you 25 presets in total to use with the head.

MODEL

To select a model, make sure you've first chosen the "Type", then turn the "Model" dial to select a model from your Type selection. Once you've found a model you like, simply leave the dials set and play!

SAVE BUTTON

You found a preset you like, there are a couple parameters you've since changed, and now it sounds perfect. That's awesome! Now, let's make sure you don't lose your hard work. Save your edited preset for when you want to use it again.

HEAD



Start adjusting the parameters on the front panel: maybe add some more bass or trebl. You'll notice that the 'Save' button lights up to alert you that your edits have not yet been saved.

The 'Save' button will stay lit until you press it.





Once you're happy with the tone that you have, press the 'Save' button once, and the preset will be overwritten with the new tone.

Preamp Section



TUBE STAGES

The number of tube stages provides a straightforward yet effective way to instantly manage the overall gain amount. The more tube stages, the more cascading gain stages and the more gain.

RACK



DISTORTION

The DISTORTION knob is an extra control that adjusts the amount of distortion in the selected tube stages. It provides greater resolution to fine-tune the distortion to match various amp designs.

BRIGHT/NORMAL SWITCH

Engaged adds more high frequencies in the Preamp section.

Power Amp section



TOPOLOGY

Topology allows you to choose among the Power Amp section's four models, including Class A single-ended, Class A/B push-pull with split-load phase splitter/long-tail pair phase splitter, and solid-state.

RACK



POWER AMP

The POWER AMP knob is an extra control for adjusting the amount of distortion in the power amp tube stages. It provides greater resolution to allow fine-tuning the distortion to match that in various amp designs.

CUSTOM KNOB (NOISE GATE)

HEAD



The CUSTOM dial allows you to allocate ANY parameter of the BIAS Amp Software to it. The default assignment is to have the dial control the threshold of the Noise Gate, to determine when the Noise Gate starts to close and cut out unwanted noise.

To use the "CUSTOM" dial as the threshold for the noise gate, start at the minimum (anticlockwise) setting. Slowly turn the knob clockwise, and then roll back anticlockwise if needed for the perfect gate response.

You can change the parameter you want the "CUSTOM" dial to control by using the BIAS Amp (desktop) software included with your purchase (see the Software section).

Cab Sim

HEAD



RACK



The "CAB SIM" (cabinet simulation) function places into the signal path either your own custom IR (Impulse Response) that you've imported or one of the cabinets included in your BIAS Amp Professional desktop (and iOS) software. The associated "CAB SIM" switch turns the cab sim function on or off. Turn it off when you're using an external cabinet and don't need the cab simulation. Turn it on when you want to record the head's output without miking an external cab (such as in a recording session in which you intend to reamp at a later time).

Flick the "CAB SIM" switch DOWN to disengage the simulated cabinet. The LED will be turned OFF, indicating that Cabinet Simulation is now off. Simply flick the switch UP to engage Cabinet Simulation. The LED will turn ON, indicating that Cabinet Simulation is now active.

Please be aware that the CAB SIM will affect different outputs in BIAS Head's Serial and Parallel modes. For more information about Serial and Parallel modes, please refer to the Serial / Parallel section.

Cab Sim in Serial Mode (Red LED Colour)

In Serial Mode, the CAB SIM switch will affect the sound coming from all audio output jacks, INCLUDING the Powered 4-16 Ohm Speaker Output.

Cab Sim in Parallel Mode (Blue LED Colour)

In Parallel Mode, the CAB SIM switch will affect the sound coming from all audio output jacks EXCEPT the Powered 4-16 Ohm Speaker Output.

RACK



Main Control Panel

HEAD



RACK



GAIN

GAIN sets the overall amount of input level to the preamp. It's the master gain and distortion control for the preamp section.

BASS, MIDDLE, TREBLE

Boosts or cuts the bass, mid and high frequencies after the tube-simulation stages.

PRESENCE

The **PRESENCE** knob boosts or cuts upper frequencies in the power amp stage by altering the negative feedback's frequency response.

MODERN/VINTAGE SWITCH

MODERN mode creates a sound that is more aggressive, especially with higher-gain amp types. VINTAGE mode delivers a more classic and balanced upper-frequency range.

MASTER

The MASTER knob was originally designed to simply control the input signal driving the power amplifier. But since the power amplifier is a highly dynamic beast, it's no surprise there is much more to it than just being a volume control. The MASTER knob provides one way to control how much power amp distortion you would like for your amp, as it defines the breakup of the power amp distortion. By using it together with the preamp GAIN knob, you can adjust the balance of preamp distortion and power amp distortion.

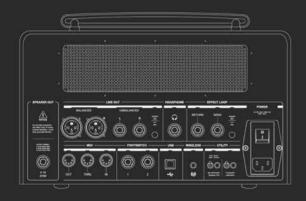
OUTPUT

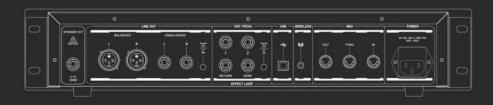
Adjusts the overall output volume. The tone will not change color by adjusting this knob.

POWER LED

Illuminated - Power is On

REAR PANEL - FUNDAMENTAL CONNECTIONS





POWER INPUT

Specification

Voltage: 100 ~ 240V AC

Frequency: 50 ~ 60Hz, single phase

HEAD



RACK



Protection

Fuses protect against overcurrent events by melting its elements and opening the circuit, BIAS GEARS use dual 250V/8A fuses.

Power Standby Mode

When plugging the power cable into your BIAS GEAR, you might heard a click sound from the relay; that means the gear has entered the standby mode. The standby mode avoids the 'pop' noise caused by sudden electric current. Please make sure the power switch is turned off before you plug in the power cable.

UTILITY SWITCHES



F1 Switch - Footswitch Calibration and Assignment

BIAS GEAR are compatible with I2C and one button latch-type footswitches. Please note Footswitch jack 1 is only compatible with I2C Protocols for Positive Grid Products ONLY, whereas Footswitch jack 2 is for all other latch-type footswitches. To connect, plug in your footswitch and follow the steps below; you'll need to calibrate the footswitch before using it.

Calibration

18

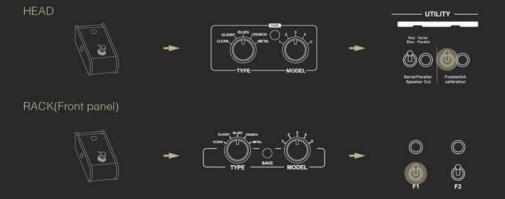
- 1. Hold the calibration switch on BIAS Head's rear panel for 3 seconds, until the LED lights up in Blue color.
- 2. Step on your footswitch to record the OFF status, or minimum value.
- 3. Flick the calibration switch to record the OFF status, or minimum value; the LED will turn Red.
- 4. Step on your footswitch to record the ON status, or maximum value.
- 5. Flick the calibration switch to record the **ON** status, or maximum value; the LED will flash a few times.

HEAD UTILITY Ref Serial SerialPartial Speaker Out Footback Spea

Assignment

Once calibrated, you can assign a particular preset to the footswitch by following the steps below:

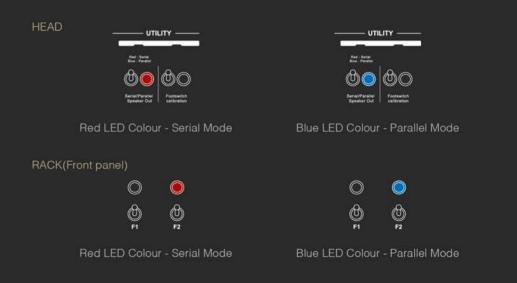
- 1. Step on the footswitch and leave it at the position you want to assign the preset to (on or off).
- 2. Choose the preset that you would like to switch with the footswitch from BIAS Head's front panel.
- 3. Flick the calibration switch on BIAS Head's rear panel, and the current preset will be saved with the footswitch assignment.



F2 Switch - Serial & Parallel Modes

20

Some bands will sometimes run a wet and dry signal when they're playing live or in a studio; by this, we mean there is a cabinet simulation or IR (Impulse Response) being used along with a cabinet onstage or in a live room in the studio. The wet signal is the onstage or live room output, and the dry signal is the desk-fed output or direct monitor in the studio. We implemented these two separate modes to accommodate every user, whether they're playing live or in a studio. Switch between them depending on what's needed at the time, by simply flicking the Utility switch:



Serial Mode is the factory default setting. Below we note the difference between the two modes.

Serial Mode

— UTILITY —

RACK(Front panel)

(b) F2

(b)

- · Utility switch LED = Red
- The color of CAB SIM LED = Red
- · This mode CAN NOT use the Speaker Out and Line Outs at the same time
- The CAB SIM switch affects the sound coming from all audio output jacks INCLUDING the Powered 4-16 Ohm Speaker
 - The Send/Return works properly with all audio output jacks

Parallel Mode



RACK(Front panel)

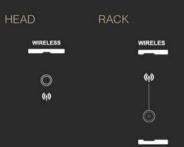
⊕ F2

0

(b) F1

- Utility switch LED = Blue
- The color of CAB SIM LED = Blue
- · You can use the Speaker Out and Line Outs AT THE SAME TIME
- The CAB SIM switch WILL NOT affect the 4-16 Ohm Speaker
- The Send/Return will only work with Line Outs when using Parallel Mode

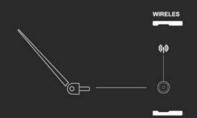
WIRELESS



BIAS GEAR uses the wireless Bluetooth 4.0 Protocol to connect with the BIAS Amp iOS app. Bluetooth can be turned off by simply pressing the WIRELESS button. Please note that Bluetooth will be turned off automatically if you connect BIAS GEAR to your desktop device via a USB cable. You can not use USB and WIRELESS connections at the same time.

Antenna (Rack only)

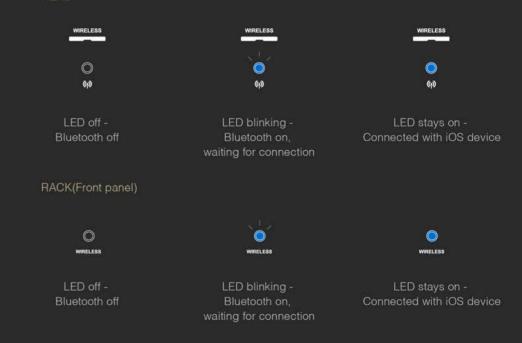
To ensure the best wireless connection to the BIAS Rack series, a bundled antenna in the accessory box needs to be installed into the "WIRE-LESS" connector on the back panel of your BIAS Rack. It's designed to be easily screwed in by hand without using any additional tools.



LED status

The following are the different displays of LED status:

HEAD



Compatible iOS devices

The following are the supported iOS devices. Please note that only the iOS devices which come with a Bluetooth 4.0 module can be connected with BIAS GEAR.







iPhone iPhone 4s / 5 / 5s / 6 / 7 iPhone SE iPhone 6 plus, 7 plus

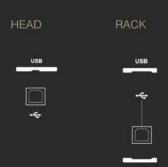


iPod Touch iPod touch 5th and 6th generation

USB TYPE-B INPUT

iPad Air and Air 2

iPad Pro



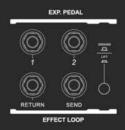
BIAS GEAR can also connect to BIAS Amp (desktop) software via a USB cable. To connect, locate the included USB Type-B to Type-A cable and simply plug it in to the BIAS GEAR and your computer. Please note that Bluetooth will be turned off automatically if you connect BIAS GEAR to your desktop device by using a USB cable. You can not use USB and WIRELESS connection at the same time.

FOOTSWITCH

HEAD



RACK



BIAS GEAR is compatible with I2C and one-button latch-type footswitches. You can use the footswitch to switch presets. The FOOTSWITCH jack 1 is compatible with I2C Protocols for Positive Grid Products ONLY, whereas FOOTSWITCH jack 2 is for all other latch-type footswitches.



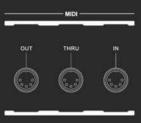
To set up the footswitch, please refer to the UTILITY SWITCHES section.

MIDI

HEAD

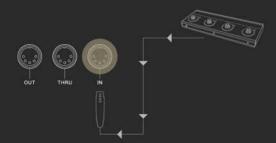


RACK



MIDI In

To connect to a MIDI Controller, please use a DIN 5-pin MIDI cable to connect the **MIDI In** on the rear of your BIAS GEAR to the **MIDI Out** of your controller, to control preset changes. The MIDI Program (controlling BIAS Head's current preset or control settings) can be changed via the desktop or iOS app. Below are the factory default MIDI assignments:



Program Change - MIDI in

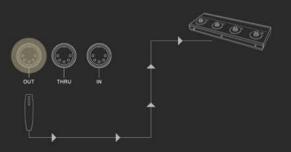
Туре	Model	Program Number	Receive Channel
Clean	1, 2, 3, 4, 5	0, 1, 2, 3, 4	Channel 1
Glassy	1, 2, 3, 4, 5	5, 6, 7, 8, 9	Channel 1
Blues	1, 2, 3, 4, 5	10, 11, 12, 13, 14	Channel 1
Crunch	1, 2, 3, 4, 5	15, 16, 17, 18, 19	Channel 1
Metal	1, 2, 3, 4, 5	20, 21, 22, 23, 24	Channel 1

Control Change - MIDI in

Controls	Control Number	Value	Receive Channel
Gain	7	0~127	Channel 1
Bass	8	0~127	Channel 1
Middle	9	0~127	Channel 1
Treble	12	0~127	Channel 1
Presence	10	0~127	Channel 1
Master	11	0~127	Channel 1
Output	13	0~127	Channel 1
Custom Knob	6	0~127	Channel 1
Tube Stages	2	1 Tube = 0~15 2 Tubes = 16~47 3 Tubes = 48~79 4 Tubes = 80~111 5 Tubes = 112~127	Channel 1
Distortion	3	0~127	Channel 1
Topology	4	Single Ended = 0~21 Split Load = 22~62 Push Pull = 63~104 Solid State = 105~127	Channel 1
Power Amp	5	0~127	Channel 1

MIDI Out

If you are looking to control another MIDI device, patch the MIDI Out of your BIAS GEAR to the MIDI In of the next device. MIDI messages will be sent to the connected MIDI device when you tweak the knobs on the BIAS GEAR. The MIDI setting can be changed using the desktop software or iOS app. Below are the factory MIDI assignments:



Program Change - MIDI out

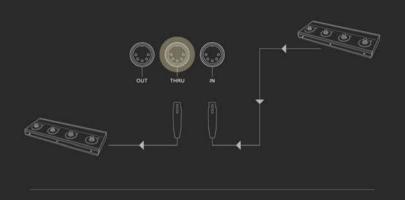
Туре	Model	Program Number	Send Channel
Clean	1, 2, 3, 4, 5	0, 1, 2, 3, 4	Channel 2
Glassy	1, 2, 3, 4, 5	5, 6, 7, 8, 9	Channel 2
Blues	1, 2, 3, 4, 5	10, 11, 12, 13, 14	Channel 2
Crunch	1, 2, 3, 4, 5	15, 16, 17, 18, 19	Channel 2
Metal	1, 2, 3, 4, 5	20, 21, 22, 23, 24	Channel 2

Control Change - MIDI out

Controls	Control Number	Value	Send Channel
Gain	7	0~127	Channel 2
Bass	8	0~127	Channel 2
Middle	9	0~127	Channel 2
Treble	12	0~127	Channel 2
Presence	10	0~127	Channel 2
Master	11	0~127	Channel 2
Output	13	0~127	Channel 2
Custom Knob	6	0~127	Channel 2
Tube Stages	2	1 Tube = 0 2 Tubes = 31 3 Tubes = 64 4 Tubes = 96 5 Tubes = 127	Channel 2
Distortion	3	0~127	Channel 2
Topology	4	Single Ended = 0 Split Load = 42 Push Pull = 86 Solid State = 127	Channel 2
Power Amp	5	0~127	Channel 2

MIDI Thru

If you are looking to control an additional MIDI device, patch the MIDI Thru of BIAS GEAR to the MIDI In of the additional device. The MIDI Thru port sends a copy of the MIDI command received at its MIDI In port.



SPEAKER OUT



4-16 OHM The SPEAKER OUT is made for working with a physical guitar/bass speaker cabinet or a passive speaker. BIAS Head and Rack models provide 600 watts of power at 8 Ohms, or 300 watts of power at 16 Ohms. Please DO NOT connect to powered speaker or grounded equipment such as effect units (pedals), DI boxes, audio interfaces or mixers, as that might cause serious damage to the unit.



Connection

The connection for a class-D power amplifier is not like that for a traditional tube amp, as it will not provide multiple SPEAKER OUTS for cabinets presenting different impedances (ohms). To connect with your cabinet, simply plug in to the cabinet with a TS (tip-sleeve) speaker cable. BIAS Head's built-in power amplifier will provide different power (watts) by detecting the impedance of your cabinet.

Power Amplifier Global Protection

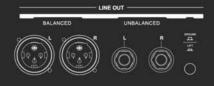
The built-in power amplifiers in BIAS Head and BIAS Rack are equipped with protection features to prevent serious damage to your unit in case of an overload. If your guitar cabinet has been driven to a point of being overheated, the power will shut down automatically in order to protect both the cabinet and power amplifier.

There are two global protection features in the built-in power amplifier - an **over-temperature protection** and an **overcurrent protection**. The temperature protection will be activated if the absolute temperature of the circuit is too high. This can be caused by high ambient temperature or from running the **Speaker Out** for an extended period of time (high load), or a combination of these factors. The maximum ambient operating temperature is 45°C / 113°F.

The overcurrent protection will be activated if the output current to the **Speaker Out** and/or other output exceeds safe limits. In normal use, the power amplifier will not shut down if properly connected.

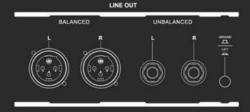
LINE OUTS

HEAD



RACK

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Connection

There are both Balanced (3-pin XLR) and Unbalanced (1/4-inch TS jack) outputs on the rear panel of the BIAS GEAR. Unbalanced connections are usually adequate for home studio use and stage rigs where there are no long cable runs. But if you need lengthy cables in your setup, balanced connections will help keep your output signal noise-free.

Ground Lift

There is also a **Ground Lift** function available to reduce or eliminate any unwanted hum from ground-related noise (which usually occurs if two or more pieces of equipment are connected).

Reamping

When reamping, a reamp box is usually necessary to match the level from your interface's output to the input of the amp that you'd like to use. The diagram below explains the signal chain needed in order to achieve this:



HEADPHONE OUTPUT

HEAD RACK (Front panel)

HEAD PHONE

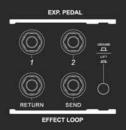
Headphone Output supports stereo (¼-inch TRS jack) headphones. To achieve the best quality, we recommend that you use headphones with 32 - 55 ohms.

EFFECT LOOP

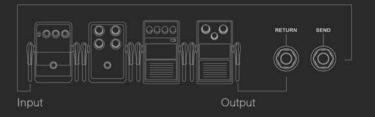
HEAD



RACK



Before working with the Effect Loop, please make sure you have read up on the Serial and Parallel Modes we have included in the UTILITY SWITCHES / F2 Switch - Serial & Parallel Modes section.



Connection

The **Effect Loop** is designed for users who want to put their effect units AFTER the preamp. To use the **Effect Loop** on the rear of your BIAS GEAR, please follow these steps:

- 1. Please select either Serial or Parallel Mode by flicking Utility Switch F2.
- 2. Use two mono 1/4-inch TRS jacks with the right cable length to connect to your external unit.
- 3. Connect Send to the input jack of your effect unit.
- 4. Connect the output jack of the effect unit to the Return of the BIAS GEAR.

Ground Lift

There is also a **Ground Lift** function available to reduce or eliminate any unwanted hum from ground-related noise (which usually occurs if two or more pieces of equipment are connected).

SOFTWARE

BIAS GEAR features the cross platform app BIAS Amp and BIAS Amp Professional desktop software, which allow you to visually design the amps in your BIAS GEAR. With the included BIAS Amp Professional software, you can easily create amp models by swapping out the tubes, preamp, transformer, tone stacks, cab and mic to create your own custom amps and unique signature sound. You can also share and download thousands of Amp Match models and save them right in BIAS Head and BIAS Rack. By pairing up BIAS Head or BIAS Rack with the BIAS Amp Professional software, you'll open up greater customization options for tone creation.

BIAS Amp also provides the functionality to remotely control the BIAS GEAR, manage the amp models, and change the MIDI/CUSTOM Knob settings.

Additionally, BIAS Amp is also available as an audio plugin. You can use the tone of BIAS Amp in your favorite Digital Audio Workstation (DAW) without using BIAS GEAR.

System Requirements

Mac OS

- OS X 10.9 or later
- · 4GB of RAM minimum, 8GB or more recommended
- · Audio plug-in formats: Audio Units, VST 2, RTAS, AAX Native
- · 1GB free disk space
- An Internet connection is required to activate your license and access ToneCloud. All Positive Grid software products do not support offline activation at this moment. Offline mode is available after software activation.

Windows

- · Windows 7 (SP1), Windows 8, and Windows 10
- 4GB of RAM minimum, 8GB or more recommended
- 1.5GHz Dual core processor minimum, 2.0GHz Dual core or more recommended
- · Audio plug-in formats: VST 2, RTAS, AAX Native
- 500MB free disk space (32- or 64-bit version)
- An Internet connection is required to activate your license and access ToneCloud. All Positive Grid software products do not support offline activation at this moment. Offline mode is available after software activation.

iPad

- · Requires iOS 9.0 or later
- Compatible with iPad 3rd and 4th generation, iPad mini 1/2/3/4, iPad Air/Air 2 and iPad Pro
- · Audiobus and Inter-App Audio supported
- · An Internet connection is required to access ToneCloud

iPhone and iPod Touch

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- · Requires iOS 9.0 or later
- Compatible with iPhone 4s / 5 / 5s / 6 / 7 / SE / 6 plus / 7 plus, iPod Touch 5th and 6th generation
- · Audiobus and Inter-App Audio supported
- · Internet connection is required to access ToneCloud

Digital Audio Workstation(DAW)

Digital Audio Workstation	Required Version	Supported plug-in format
Ableton Live	8.0 or above	Audio Unit, VST2
Avid Pro Tools	10 or above	RTAS, AAX Native
Apple Logic Pro	9.0 or above	Audio Units
Apple GarageBand	6.0.5, 10.0 or above	Audio Units
Bitwig Studio	1.0 and above	VST2
Cakewalk Sonar	X2 or above	VST2
Cockos Reaper	3.4 or above	Audio Units, VST2
Steinberg Cubase	5.0 or above	VST2
Steinberg Nuendo	4.3 or above	VST2
PreSonus Studio One	Producer/Professional 2 or above	Audio Units, VST2

Download & Install Software and License Activation

Desktop version

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The BIAS Amp Professional version for Windows and Mac is bundled with your BIAS GEAR. To download and install the software and redeem the license, please follow the steps below:

- Please log in with your ToneCloud account. If you don't have an account, please sign up here on our store page: https://store.positivegrid.com/ (skip this step if you're already logged into your account).
- Once you have logged in, go to https://store.positivegrid.com/redeem to redeem the code.
- Enter the redemption code from the printed card included in the package, and click the Redeem button. The redemption code should be a serial number consisting of 12 characters with digits and letters.
- 4. Once your code has been redeemed, the download page will load automatically. If you are using the Windows platform, please download the version that is compatible with your DAW. (For example, if you would like to run BIAS Amp in Ableton Live 64-bit, please download the 64-bit version.)
- Once the download is finished, please double-click the installer, then follow the instructions to complete the installation.
- 6. After the installation has completed, launch the BIAS Amp standalone software to log into your ToneCloud account. For Mac users, the software can be found in Launchpad or your Applications folder. For Windows users, the location depends on where you installed it during installation.

Once you have BIAS Amp open, click the Upgrade button at the top panel to bring
up the login window. Enter your account and password and login to activate. Your
BIAS Amp license is now activated. Please note that an Internet connection is
required to activate the license.

iPad and iPhone version

- 1. Open the App Store app on your iOS device.
- Search for the keywords "BIAS Amp".
- Download and install the BIAS Amp app. Please note that the iOS apps and in-app purchases (IAP) are sold separately.

Overview and Basic Operation

BIAS Amp is available both as a standalone app and an audio plug-in. You can test and edit your presets when you don't have your BIAS GEAR with you, or use the BIAS Amp plug-in to record or reamp with your DAW (Digital Audio Workstation) software. It's very useful if you want to tweak your tone on the fly, do rehearsals and band practices, or even record your guitar without using the BIAS GEAR.

Desktop version



- A Location Selector
 Click here to switch between ToneCloud or Local View.
- B Preset Menu

Manage your local presets for BIAS Head or Rack here. Choose the "HEAD" or "RACK" tab to see the existing presets in your BIAS Head or Rack. Choose the "AMPS" tab to see the presets that are in the BIAS Amp software.

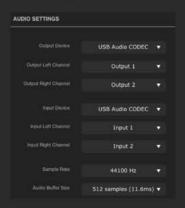
For saving presets or sending presets to your BIAS Head/Rack, please select the arrow symbol to see more actions.

C Global Settings

Updates

When there is an update available, the Settings icon will show a red badge. Please click on 'Settings icon -> update available' to go to the download page. To update to the latest version, just simply download and install the new version, and the update will overwrite the old version and keep all your presets and settings intact.

Audio Settings (software only)



Before using the BIAS Amp software, you have to set up your audio I/O (input and output). Please note the audio settings option is for software only. The audio settings option will be disabled when connected to your BIAS GEAR.

- Input / Output device
 Locate your input and output device from the drop-down lists. Your audio interface will be shown in the lists.
- Input / Output channel Locate your input and output channels from the drop-down lists. Typically we recommend setting both input channels to the same input assignment if you are using guitar or bass as a mono input. If you want to input a stereo signal, please set the input channels to different inputs.
- Audio device type (Windows version only)
 If you are using BIAS Amp on Windows, we strongly recommend using ASIO / ASIO4ALL as your device type. MME/DirectX is not suited for audio software and would cause high latencies.
- Sample Rate The sample rate is the number of samples of a sound that are taken per second to represent the event digitally during the A/D and D/A process. The more samples taken per second, the more accurate the digital representation of the sound can be. The standard setting is 44100 Hz (44.1kHz).

For higher sample rate, please check the sample rate capabilities of your audio interface to make sure it will work properly. Please note that higher sample rates require more CPU power.

— Audio Buffer Size

The audio buffer size setting determines how quickly the sound card (audio interface) processes the audio data as you play your guitar, which in turn determines the latency or time it takes for you to hear the sound come out of your speakers or headphones. The bigger the audio buffer size, the more latency. If you hear noticeable latency, you can adjust the buffer size to a smaller setting, but it will require more CPU power to handle the additional load.

To ensure the best performance, we recommend starting from 512 samples, then adjust to a smaller setting if the latency is noticeable.

Help Center

Click here to visit our online help center: https://help.positivegrid.com/hc/en-us.

App Information

This option contains the information about the software, including software version, DSP engine, build version, and license tier.

Factory Reset

Please refer to the Factory Reset section.

Unlock Sigpath

Under normal usage, the amp modules (Preamp, Tone Stack, Power Amp, Transformer, Cab) can not be bypassed since a guitar/bass amp are usually comprised of these key components. But if you wish to, for example, use a real guitar cabinet to replace the corresponding software module, you can enable this option and bypass the Cab/Mic module by dragging the module out of the signal chain.

Log In / Log Out

Click here to log in to or log out of your ToneCloud account. When using the software for the first time, the software license will be activated automatically after logging into ToneCloud.

D Amp Signal Chain (Amp Modules)

BIAS Amp software features the ability for you to visually design the amps; that is, to create amp models by swapping out the tubes, preamp, transformer, tone stacks, cab and mic to create your own custom amps and unique signature sound. Select the module which you would like to adjust here.

Control Panel

Once the amp module has been selected, the controls will be displayed here. You can adjust any of the controls by simply clicking the tubes/switch or turning the knobs.

Input Level / Output Level (software only)

You can control the overall input and output volume using these knobs. Adjust the input volume knob to optimize the input level for your particular guitar pickup. To get the best signal-to-noise ratio, drag the input knob so that when you play your guitar at the loudest level the LED indicator in the input level meter peaks at 0 dB. Please note the input and output level settings are for the software only. These settings will not affect the BIAS GEAR.

Hum Reduction (software only)

Hum Reduction reduces the humming sound at 60Hz ~ 120Hz (low) frequencies. Please note that Hum Reduction is only available in the software.

DEPTH

Depth sets the amount of hum reduction.

Noise Gat

The Noise Gate reduces noise from an input such as a microphone or electric instrument. It is particularly useful for reducing electrical noises.

THRESHOLD

Turn the threshold knob until the noise stops or decreases to an acceptable level.

DECAY

Decay sets the rate at which the Noise Gate will attenuate the signal once it drops below the threshold. Higher values will make the signal fade faster once it drops below the threshold

Quick Snap

BIAS Amp offers 8 quick presets for instantly saving the current global settings. Just click the camera button, then click one of the 8 slots to save. This is a useful tool to help you do A/B comparisons during your sound development or store your favorite amp settings for instant recall.

Room Control (software only)

Room Control simulates a nice room, small to large in size. This gives a better listening experience as it simulates a real world-like environment, so you can develop your sound easier. Please note the Room Control is only available in the software.

SIZE

Size controls the virtual size of a room simulation. Increase the size value to add more room ambience to the sound.

DAMPING

Damping controls the decay rate of the room reflections.

COLOR

Color adjusts the amount of high-frequency absorption, for a darker or brighter reverb tail.

MIX

Mix sets the ratio of wet (room) and dry (guitar) sound.

iPad version



- A Location Selector

 Tap the icons to switch between ToneCloud, Local, or BIAS GEAR view.
- B Actions Icon
 Tap here to save presets, send presets to BIAS Head/Rack, or upload presets to
 ToneCloud to share them.
- C Global Settings

Connect

Tap here to connect to BIAS Head or Rack. For more detail, please refer to Connect to BIAS Head / Rack section.

Input channels

Choose whether BIAS Amp receives input from the left channel, right channel or both (stereo input).

Knob gesture

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BIAS provides three knob gestures:

- Linear (Vertical)
 The knob will respond when you drag up or down.
- Rotary
 The knob will respond when you drag in a rotating manner.
- Auto Detect
 The knob will automatically switch to Linear or Rotary mode by detecting your most recent gesture.

Run in Background

Enabling the Run in Background option allows BIAS Amp to continue processing audio when the app is in the background. Disable this option to stop processing when BIAS Amp enters the background.

Latency

The audio buffer size setting determines how quickly the sound card (audio interface) processes the audio data as you play your guitar, which in turn determines the time it takes for you to hear the sound come out of your speakers or headphones. The bigger the audio buffer size the more latency (longer time delay). If you hear clicking or popping noises when the latency setting is set to Low, it means the CPU might not be able to process the data at the low latency setting. Please turn it up to Normal or close other apps that are running in the background.

Unlock Sigpath

Under normal usage, the Amp Modules (Preamp, Tone Stack, Power amp, Transformer, Cab) can not be bypassed since a guitar/bass amp are usually comprised of these key components. But if, for example, you intend to use a physical cabinet to replace the cab in software, you can enable this option and bypass the module you want.

Feedback

Tap here to visit our online help center: https://help.positivegrid.com/hc/en-us if you would like to provide feedback or report issues.

App Information

— Factory reset

For factory reset, please refer to the Factory Reset section.

— Log In / Log Out

Tap here to log in to or log out of your ToneCloud account. You can also log in using your Facebook account.

Version Info

This option contains information about the software, including software version, DSP engine, build version, and license tier.

Help Center

Tap here to visit our online help center: https://help.positivegrid.com/hc/en-us.

Preset menu

The types of genres and their models will be shown here; tap the thumbnails to choose the Type and Model.

Amp Design Mode and Amp Signal Chain (Amp Modules)

Tap here to enter Amp Design mode. In Amp Design mode, you can swap out the tubes,

preamp, transformer, tone stacks, cab and mic to create your own custom amps and unique signature sound.

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App Integration

BIAS Amp, BIAS FX and JamUp were developed together and are seamlessly integrated. Each amp model in BIAS Amp can be imported into (opened in) BIAS FX or JamUp with one finger tap. Alternatively, press and hold the Integration icon to select the app you want to integrate BIAS Amp with.

Once imported, the BIAS Amp model will be saved as one of the amp models listed inside BIAS FX or JamUp. You won't need to reopen BIAS Amp to run that same BIAS Amp model with BIAS FX or JamUp again, and you can freely use all the BIAS FX or JamUp features with BIAS Amp.

G Control Panel

Once the amp model has been selected, the controls will be displayed here. In the Amp Design mode, the control panel for amp modules will be displayed here. You can adjust any of them by simply clicking the tubes and switches or dragging the knobs.

(H) Input Level / Output Level (software only)

You can control the overall input and output volume using these knobs. Adjust the input volume knob to optimize the input level for your particular guitar pickup. To get the best signal-to-noise ratio, drag the input knob so that when you play your guitar at the loudest level, the LED indicator in the input level meter peaks at 0 dB. The lock switch for the input volume slider prevents you from changing the input volume accidentally. Please note the input and output level settings are for software only, as the settings will not affect the BIAS GEAR.

Moise Gate

The Noise Gate reduces noise from an input such as a microphone or electric instrument. It is particularly useful for reducing electrical noises.

THRESHOLD

Turn the threshold knob until the noise is eliminated or decreases to an acceptable level.

DECAY

Decay sets the rate at which the Noise Gate will attenuate the signal once it drops below the threshold. Higher values will make the signal fade in level faster once it drops below the threshold.

Quick Snap

BIAS Amp offers 8 quick presets for instantly saving the current global settings. Just press and hold one of the 8 slots to save to or overwrite it. This is a useful tool to help you do A/B comparisons during your preset development or store your favorite amp settings for instant recall

Room control (software only)

Room Control simulates a nice room, small to large in size. This gives a better listening experience, as it simulates a real world-like environment so you can develop your sound easier. Please note the Room Control feature is only available in the software.

SIZE

Size controls the virtual size of a room simulation. Increase the size value to add more room ambience to the sound.

DAMPING

Damping controls the decay rate of the room reflections.

COLOR

Color adjusts the amount of high-frequency absorption, for a darker or brighter reverb tail.

MIX

Mix sets the ratio of wet (room) and dry (guitar) sound.

iPhone version



- Location Selector
 Tap the icons to switch between ToneCloud, Local or BIAS GEAR view.
- B Actions Icon
 Tap here to save the preset, send a preset to BIAS Head/Rack or upload a preset to
 ToneCloud to share it
- C Global Settings

Connect

Tap here to connect to BIAS Head or Rack. For more detail, please refer to Connect to BIAS Head / Rack section.

Input level / Output level (Software only)

This optimizes the input level for your particular guitar pickup. To get the best signal-to-noise ratio, drag the input knob so that when you play your guitar at the loudest level, the LED indicator in the input level meter barely hits 0 dB. The lock switch for the input volume slider prevents you from changing the input volume accidentally. Please note the input and output level settings only affect levels in the software; the settings will not affect the BIAS GEAR.

Noise Gate

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The Noise Gate reduces noise from an input such as a microphone or electric instrument. It is particularly useful for reducing electrical noises.

THRESHOLD
 Turn the threshold knob until the noise is eliminated or decreases to an acceptable level.

DECAY

Decay sets the rate at which the Noise Gate will attenuate the signal once it drops below the threshold. Higher values will make the signal level fade faster once it drops below the threshold.

Room Control (software only)

Room Control simulates a nice room, small to large in size. This gives a better listening experience as it simulates a real world-like environment, so you can develop your sound easier. Please note the Room Control is only available in the software.

· SIZE

Size controls the virtual size of a room simulation. Increase the Size value to add increased room ambience to the sound.

— DAMPING

Damping controls the decay rate of the room reflections.

— COLOR

Color adjusts the amount of high-frequency absorption, for a darker or brighter reverb tail.

— МІХ

Mix sets the ratio of wet (room) and dry (guitar) sound

Input channels

Choose whether BIAS Amp receives input from the left channel, right channel or both (stereo input).

Knob gesture

BIAS Amp provides three knob gestures:

Linear (Vertical)

The knobs will respond when you drag them up or down.

— Rotary

The knobs will respond when you drag them in a rotating manner.

— Auto Detect

The knobs will automatically switch to Linear or Rotary mode by detecting your most recent gesture.

Run in Background

Enabling the Run in Background option allows BIAS Amp to continue processing audio when the app is in the background. Disable this option to stop processing when BIAS Amp enters the background.

Latency

The audio buffer size setting determines how quickly the sound card (audio interface) processes the audio data as you play your guitar, which in turn determines the time it takes for you to hear the sound come out of your speakers or headphones. The bigger the audio buffer size the more latency (time delay) you get. If you hear clicking or popping noises when the latency is set to Low, it means the CPU might not able to process the data at the low latency setting. Please set it to Normal or close other apps that are running in the background.

Unlock Sigpath

Under normal usage, the amp modules (Preamp, Tone Stack, Power Amp, Transformer, Cab) can not be bypassed since a guitar/bass amp is usually comprised of these key components. But if you wish to use a physical component to replace the visual software module (for example, a real guitar cabinet), you can enable this option and bypass the Cab/Mic module by dragging the module out of the signal chain.

Feedback

Tap here to visit our online help center: https://help.positivegrid.com/hc/en-us if you would like to provide feedback or report issues.

App Information

- Factory reset
 For factory reset, please refer to the Factory Reset section
- Log In / Log Out
 Tap here to log in or log out of your ToneCloud account. You can also log in using your Facebook account.
- Version Info
 This option contains information about the software, including software version,
 DSP engine, build version, and license tier.

Help Center

Tap here to visit our online help center: https://help.positivegrid.com/hc/en-us.

D Preset menu

The Types/genres will be shown here. Tap the thumbnails to choose the Type and Model vou wish to use.

- E Amp Design Mode and Amp Signal Chain (Amp Modules)

 Tap here to enter the Amp Design mode. In Amp Design mode, you can swap out the tubes, preamp, transformer, tone stacks, cab and mic to create your own custom amps and unique signature sound.
- App Integration

BIAS Amp iPhone and JamUp iPhone were developed together and are seamlessly integrated. Each amp model in BIAS Amp iPhone can be imported into (opened in) JamUp iPhone with one finger tap. Or press and hold the Integration icon to change the destination.

Once imported, the BIAS Amp model will be saved as one of the amp models listed inside JamUp. So, you won't need to reopen BIAS Amp app to run that same BIAS Amp model with JamUp again, and you can freely use all the JamUp features with BIAS Amp.

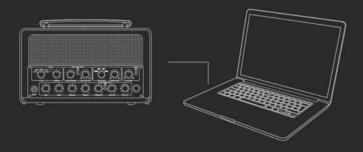
G Control Panel

Once an amp model has been selected, its controls will be displayed here. In Amp Design mode, the control panel for amp modules will be displayed here. You can adjust any of them by simply clicking the tubes and switches or dragging the knobs.

Connect to BIAS GEAR

Please see the steps below on how to connect your BIAS Head or BIAS Rack to BIAS Amp.

Desktop version



- Locate the USB Type-B to Type-A cable supplied with your unit and plug it into the back of your BIAS Head or BIAS Rack. Then plug the other end fo the cable into a USB port on your computer.
- Open BIAS Amp Professional desktop standalone software, and turn on the power for BIAS Head or Rack.
- Once a connection is established, BIAS Amp Professional will automatically recognize that the BIAS Head or BIAS Rack is connected.
- Click the settings cog in the top right corner of the screen. The device information for your BIAS Head or Rack will be shown under the Device Info option.
- 5. To eject the BIAS Head / BIAS Rack, simply open the settings menu and click "Eject".

iPad and iPhone version

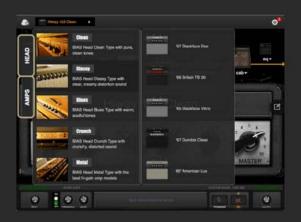


- Turn on the power for BIAS Head or Rack and make sure the 'Wireless' button is flashing blue.
- 2. Turn on the Bluetooth function for your iPad or iPhone/iPod touch.
- 3. Open the BIAS Amp app and tap the settings icon in the top right corner.
- 4. Tap the 'Connect' icon; your device will begin to search for your BIAS Head/BIAS Rack.
- While BIAS Head/BIAS Rack is connecting, please do not disconnect or turn off the Bluetooth function.
- Once connected, you'll notice the new BIAS Amp icon will appear in the top panel, right
 next to the Amp List and ToneCloud icons. Once you see the BIAS Amp icon appear, the
 connection has been established.
- 7. In your iPad, the color indicator in the lower bar will show the signal strength. Green = strong signal. Orange = weak signal. Red = little to no signal.

- 8. Tap the Settings icon in the top right corner. The device information for your BIAS Head or Rack will be shown in the Device Info option.
- To eject the BIAS Head / BIAS Rack, simply open the Settings menu and tap "DISCON-NECT".

Preset Management and Editing

Desktop version



- Access the amp list within BIAS Amp desktop software in the drop-down menu located in the top panel, when connected to BIAS Head or Rack.
- 2. Click the "HEAD" or "RACK" tab to switch to the preset menu of BIAS Head or Rack. In the preset menu of BIAS Head or Rack, you'll be able to access all your presets, edit their order and arrange your banks of presets.
- 3. To edit the presets' order, simply drag and drop a preset to the slot you want.
- 4. To edit a particular preset, please click the preset slot in the preset menu. When you select a local preset from the "AMPS" tab in BIAS Amp, the selected preset will be loaded into your BIAS Head or Rack temporarily, allowing you to preview the preset from your BIAS Head or Rack before you save the preset to the unit.

- Once you're happy with the tone that you have, please click the arrow symbol located next to the drop-down preset menu, and click "Save to Head/Rack".
- 6. Enter the name of your preset, choose the Type and the model number and select OK to finish. Your preset has now been saved to your Head/Rack.

iPad and iPhone version



- Tap the BIAS GEAR icon when connected to BIAS Head or Rack. Here you can see the preset types/genres that are currently saved in your BIAS Head or Rack.
- Tap on a type/genre category to see its presets. Here, you'll be able to access your presets and edit their order.
- To edit the order of presets, please tap the edit button/icon, then drag and drop the presets to change their order. Finally, tap the Done button/icon to apply the new order, or tap Cancel to discard the changes.
- 4. To edit a particular preset, please tap the preset thumbnail. By tapping on a local preset in the "AMPS" icon in the BIAS Amp app, the selected preset will be loaded into your BIAS Head or Rack temporarily, allowing you to preview the preset from your BIAS Head or Rack before you save the preset to the unit.

- Once you're happy with the tone that you have, please tap on the Action icon, and choose "Save to Head/Rack".
- 6. Enter the name of your preset, choose the Type and the model number and select OK to finish. Your preset has now been saved to your Head/Rack.

Backup and Restore

Desktop version



- Locate the Settings icon in the top right corner of the screen when connected to BIAS Head or Rack, and select Backup and Restore.
- 2. Then click on Backup.
- 3. Name your backup file. We recommend giving it a unique name or adding the date of creation to the name. Once you're done, click OK and your backup file will appear in this section. If you decide to restore this preset, you can do so at any time by selecting it and following the same steps again.

iPad and iPhone version



- First, tap on the settings icon in the top right corner of the screen when connected to BIAS
 Head or Rack.
- 2. Scroll down and select Backup and Restore.
- 3. Select the BACKUP NOW button at the bottom of the settings menu.
- Enter the name of your backup we recommend giving it a unique name and to make it memorable
- 5. Once named, tap OK and the save point will appear in the list. If you decide to restore this preset, you can do so at any time by selecting it and following the same steps again.
- Finally, if you have reached the maximum backup points (five maximum), you can always delete any of the existing backups by selecting the one you would like to delete. Then swipe left and select Delete.

Firmware Update

Desktop version



- Locate the main settings cog in the top-right corner when connected to BIAS Head or Rack.
- Click on Device Info, and the information about your BIAS Head or Rack will appear.
 Towards the bottom of this drop-down box, you'll see the firmware version. Click the Refresh icon next to the firmware version to check if there is an update available.
- 3. Click OK to update when there is a new version available.

iPad and iPhone version



- Tap on the Settings icon in the top-right corner of the screen when connected to BIAS Head or Rack.
- Tap on BIAS Head/Rack Info, and the information about your BIAS Head/Rack will appear. Then tap on Firmware Upgrade to check if there is an update available.
- 3. Tap OK to update when there is a new version available.

Factory Reset

We all can sometimes lose our way a bit in all aspects of life. The same applies to new gear, and if you want to start afresh, a factory reset is sometimes the best way to go. The Factory Reset function will reset the items below to their factory defaults:

- All presets
- MIDI settings
- CUSTOM knob setting
- Device name

Reset from BIAS Head/Rack

- 1. First, make sure the power is off.
- 2. Hold both the Utility Switches (F1 and F2) 'Up' and turn the power On hold them until they start flashing in an alternating fashion.
- Once they are flashing, hold the Wireless button until it stays lit up in Blue. This will allow it to factory-reset.
- 4. If at any point you decide to not factory-reset after holding both the utility switches, simply tap the Wireless Button to exit.



Reset from Desktop App



- Connect your BIAS Head or Rack via USB to your desktop computer, then select Factory Reset from the settings menu.
- On the next screen you will see a message explaining what the Factory Reset will do and asking if you want to go ahead with the reset. If you do, then select Reset and the factory reset will begin.

Reset from iOS App



- Connect via Bluetooth to the BIAS Head or Rack and access the Settings > Reset Factory Default command.
- 2. A box will appear, letting you cancel should you decide not to go ahead. If you do wish to proceed, select Reset and the factory reset will begin.

TROUBLESHOOTING

BIAS Head or Rack doesn't power on.

If you have turned on the power switch on the back of the BIAS Head or Rack and the power LED isn't lighting up, make sure to first check that your cable connections are all firmly plugged in. If all your cable connections are indeed secure and the unit is still not powering on, it is possible that the unit's internal global protection has been activated. If that's the case, turn off the unit, disconnect the power cable from the electrical outlet and unplug the power cable from the back of the unit. Wait for about two minutes. Then reconnect the power cable and try to power up the unit again.

The unit's failure to turn on could also be caused by overheating. Please make sure to place the unit in a clear space, away from other electrical devices, to allow sufficient air circulation.

The sound from BIAS Head or Rack cuts abruptly, and the sustain is poor to nonexistent.

In the factory default setting, the CUSTOM knob is assigned to control the threshold value of the Noise Gate. Please turn the CUSTOM knob all the way down and see if the sustain improves.

I can hear the noise floor when using certain high gain presets

If the noise floor is at an unacceptable level, it might be related to several factors. Please follow the steps below to identify the root cause.

- 1. Backup all presets and settings in the software.
- 2. Perform a factory reset.
- 3. Try the factory presets in each category after the factory reset.
- 4. If the noise floor in the factory presets is acceptable but it isn't in your custom presets, it means the noise is caused by too much gain.
- 5. To reduce the noise floor, you can try to lower the gain of the Preamp module (Gain, Tube Stages, Distortion), or the levels in the EQ module. Most likely, the noise in the signal before the preamp has been amplified too much.

Unpredicted behavior

If you experience any unpredictable behavior, such as outputs that don't operate as you'd expect, please follow these steps to troubleshoot:

- 1. Backup all presets and settings in software.
- 2. Do a factory reset.
- 3. Try the stock presets after the factory reset, and see if the issues still occur.
- 4. Restore presets and settings from software and try again.

WARRANTY

PLEASE READ THIS DOCUMENT CAREFULLY. IT CONTAINS IMPORTANT INFORMATION ABOUT YOUR RIGHTS AND OBLIGATIONS, AS WELL AS LIMITATIONS AND EXCLUSIONS THAT MAY APPLY TO YOU. BY ACCEPTING DELIVERY OF POSITIVE GRID PRODUCTS, YOU AGREE TO ACCEPT AND BE BOUND BY THESE TERMS AND CONDITIONS.

Limited Warranty:

Positive Grid warrants that your new Positive Grid product, when purchased at an authorized Positive Grid retailer or reseller, shall be free of defects in materials and workmanship for a period of One (1) Year from the original date of purchase. Positive Grid may, in its sole discretion, require proof of the original purchase date in the form of a dated copy of the original authorized dealer's invoice or sales receipt.

During the Warranty Period:

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- Positive Grid shall, in its sole discretion, either repair or replace any product that proves to be defective upon inspection by Positive Grid.
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