

# BULLHEAD 1K

## Operation Manual



**Thank you** for choosing Trickfish, we hope you fall in love with your new amp and enjoy a lovely life together. The Bullhead 1K is a truly dynamic piece of gear and nothing will take the place of spending time playing and experimenting with it as you learn about the amp, your basses and maybe yourself.

This manual contains valuable safety instructions, operational information, some insights we've gained over the years and some suggested settings that may help you get where you want to be just a bit quicker. Who needs a manual, right? Humor us and look through it – you might be surprised!

**About us:** Trickfish Amplification is dedicated to delivering a collection of killer products that will serve as valuable tools for discriminating bassists as they seek inspiration for their artistic vision. We share a common vision of intelligent design, precision, delectable tone and rugged durability in everything we build and we're committed to providing impeccable customer service, service that's commensurate with the quality we strive to deliver in every design we offer.

Trickfish products are designed and manufactured for discerning musicians looking for accuracy, power and reliability while in pursuit of their artistic vision. We strive to deliver intelligently designed product that is easy to operate, is beautiful to look at and yet without compromise, reveals the nuance and subtlety of the player and their instrument. We have a passion for what we do and that love is channeled through strong principles and ideals. We demand the best out of ourselves because without that resolve, the product would be only average – we are not striving to be average.

**Quality:** We believe that the best quality products only come to fruition when the time is taken to ensure that the concept, design, components, manufacturing processes, testing and packaging are the best they can be – regardless of the price.

**Passion:** We love our work. We believe that work should be fun and that all creative work is an adventure and a challenge. Our real rewards come when the challenges we set are met and our customer's expectations are exceeded.

**Vision:** While we are pragmatic about the work of the day we don't forget to dream, to explore the stream of consciousness and most importantly, to listen. Creativity is elusive and at times you have to stop and just listen to the world around you to find inspiration. This is where the new realities, ideas and concepts reveal themselves.

**Originality:** We're not afraid to do things differently than others have in the past. We're not trying to just meet the standards that have come before us – at our best we hope to set new standards. We may do things differently and that may not sit well with those who are comfortable with the status quo – so be it. If we choose to do something different it's because it's a better way.

**Intelligence:** We push our minds every day. We learn new things every day. We possess an insatiable, natural curiosity for technology (Geeks) and we simply live to grow because we believe you live well when you grow.

**Honesty:** We embrace complete honesty and integrity in all we do.

**Respect:** We respect our customers and practice the golden rule in all aspects of our day-to-day business.

**Excellence:** We believe that excellence isn't a destination, but a way of life and we bring that to work every day. It permeates all that we do and is a prerequisite to becoming a strategic partner or an employee. And we expect this standard when we communicate with our dealers, distributors and customers.

**Diligence:** We're diligent, hardworking and will accept only the best efforts from ourselves as well as our strategic partners.

**Gratitude:** We believe that we are privileged to have customers for what we love to do - that philosophy is the basis for our mission statement:

## Unpacking your unit

**IMPORTANT NOTE:** Your Trickfish Amplification product was originally packaged in a specially designed carton and included special packing materials. Please save these items. They should be used when shipping your Trickfish Amplification product.

**Please inspect the shipping carton** - If the packaging seems damaged please return this item to the shipper.

### **Warning:**

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

### **Caution:**

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO A QUALIFIED SERVICE PROFESSIONAL



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) in the literature accompanying this device.

## Important Safety Instructions

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- Read these instructions.
- Keep these instructions
- Heed all warnings.
- Follow the instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- Do not defeat the safety purpose of the grounding type plug. A grounding type plug has two blades and a third grounding prong and is used for your safety.
- Protect the power cable from being walked on or pinched particularly at the plugs or at the point where they exit the device.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Object and Liquid entry: Never push any foreign objects of any kind into the openings as they may touch dangerous voltage points that could result in fire or electric shock. The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids such as a beverage shall be placed on top.
- When the apparatus exhibits a distinct change in performance this indicates a need for service.
- There are NO USER SERVICABLE PARTS
- Refer servicing to all qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power cable has been damaged or liquid has been spilled or objects have fallen into the apparatus or the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
- Damage requiring service: Unplug the apparatus from the wall outlet and refer servicing to qualified service personnel under the following conditions.
  - a) When the power supply cord has been damaged.
  - b) If liquid has been spilled, or objects have fallen into the apparatus.
  - c) If the apparatus has been exposed to rain or moisture.
  - d) If the apparatus does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the apparatus to its normal operation.
  - e) If the apparatus has been dropped or damaged.
- Connecting: When you connect the Amplifier Unit to other equipment, turn off the power and unplug all of the equipment from the supply source. Failure to do so may cause an electric shock and serious personal injury. Read the User's Manual of the other equipment carefully and follow the instructions when making the connections.
- Sound Volume: Reduce the volume to minimum before you turn on the amplifier to prevent sudden high levels of noise which may cause hearing or speaker damage.
- SpeakON connectors: **WARNING:** speakON connectors marked with the lightning flashes indicate high voltages that are potentially life threatening. Wiring to these terminals requires installation by an instructed person and the use of ready-made leads or cords.
- Custom wiring should only be carried out by qualified personnel.
- To prevent electric shock, do not operate the product with any of the conductor portion of the speaker wire exposed.
- NOTE: For reasons of safety and performance, use only high-quality fully insulated speaker cables of stranded copper wire. Use the largest wire size that is economically and physically practical, and make sure the cables are no longer than necessary.

## EC Declaration of Conformity in accordance to EC Directives

Electro-magnetic compatibility (Council Directive 89/336/EEC, as amended by Directives 92/31/EEC and 93/68/EEC);

Low-voltage electrical equipment (Council Directive 73/23/EEC)

This product conforms to the following standards:  
EN55103-1 Emission  
EN55103-2 Immunity



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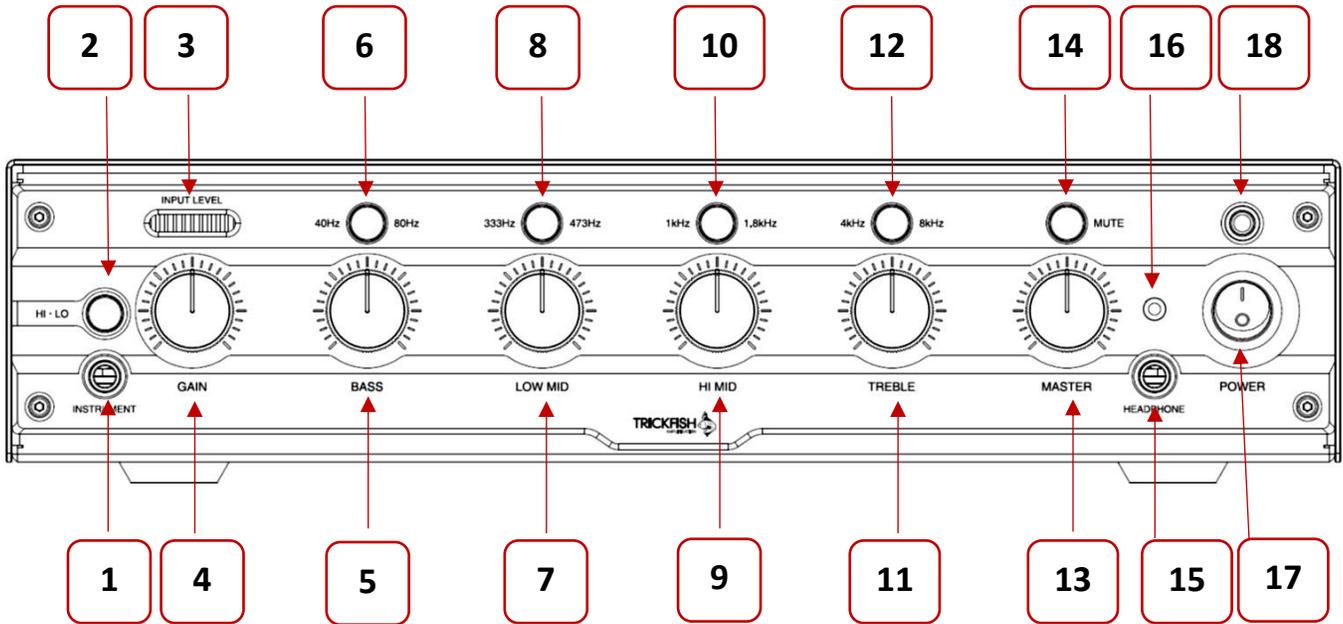
## FCC Part 15 Class B Compliance

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

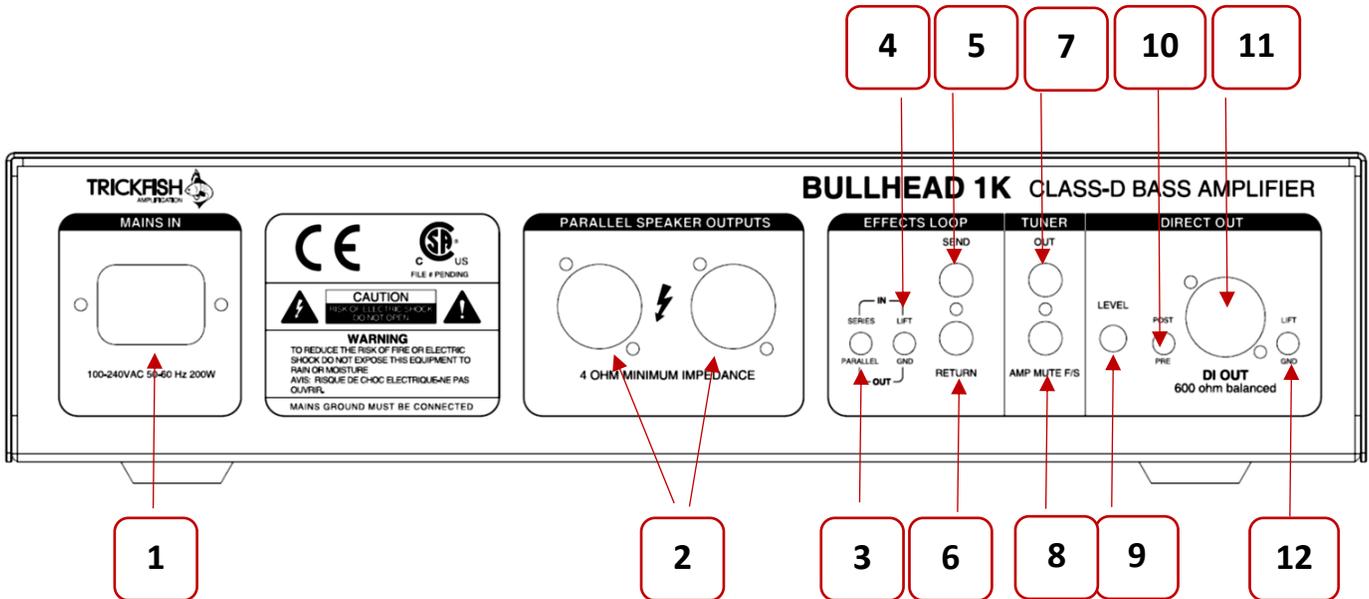
This equipment has been verified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

## Bullhead 1K Front Panel Features



1. **Instrument Input:** 1/4" phone plug line input
2. **Input Attenuator:** +/- 9db of gain to accommodate active or passive inputs
3. **Input Level Indicator:** 10 segment LED ladder indicates amount of gain after EQ circuit
4. **Input Gain:** Input level adjust
5. **Bass EQ Cut/Boost:** Center detent is flat. Counter clockwise cuts, clockwise rotation boosts
6. **Bass EQ Frequency Select:** Selects frequency for the shelving bass EQ
7. **Low Mid Cut/Boost:** Center detent is flat. Counter clockwise cuts, clockwise rotation boosts
8. **Low Mid Frequency Select:** Selects the frequency for the Low-Mid Bandpass EQ
9. **Hi Mid Cut/Boost:** Center detent is flat. Counter clockwise cuts, clockwise rotation boosts
10. **Hi Mid Frequency Select:** Selects the frequency for the Hi-Mid Bandpass EQ
11. **Treble EQ Cut/Boost:** Center detent is flat. Counter clockwise cuts, clockwise rotation boosts
12. **Treble EQ Frequency Select:** Selects the frequency for the shelving Treble EQ
13. **Master Volume:** Controls the overall volume of the amplifier
14. **Amplifier Mute:** Mutes the signal to the amplifier
15. **Headphone Output:** 1/4" stereo phone plug for headphone monitoring
16. **Line Input:** 1/8" mini plug accommodates MP3 players and any other input sources
17. **AC Mains on/off:** Power on/off
18. **Power on/off LED indicator:** Illuminated blue LED indicates power is on no light means power is off

# Bullhead 1K Rear Panel Features



1. **AC Mains Input:** Attach supplied cable firmly into socket
2. **Parallel Speaker Outputs:** Neutrik Combi-connectors accommodate both Speakon and ¼" phone plugs
3. **EFX Loop Series/Parallel select switch:** Switches the EFX Loop from parallel operation to serial operation
4. **EFX Loop Ground Lift:** Ground lift dedicated to EFX Loop
5. **EFX Loop Send:** ¼" phone jack routes the signal TO the destination device
6. **EFX Loop Return:** ¼" phone jack returns the signal FROM the destination device
7. **Tuner Out:** ¼" phone jack sends signal to tuner
8. **Amplifier Mute Footswitch Jack:** ¼" phone jack accommodates a latching footswitch and mutes the amp when activated
9. **Direct Out Level Control:** Rotary knob controls the level of output to the intended destination
10. **Direct Out Pre/Post select switch:** Switches between a Pre-EQ or Post-EQ send
11. **Direct Out XLR:** Balanced Female XLR connection
12. **Direct Out Ground Lift Switch:** Ground lift dedicated to Direct Out

## Connections:

1. Remove the AC cable from the package and firmly insert the female end in the AC receptacle located on the back panel of your amp.
2. With the amplifier in the "OFF POSITION" plug the male end of the AC cable into the wall outlet.
3. Connect the speaker using Neutrik Combi-Connectors on the rear panel (they will accommodate either Speakon or ¼" phone plugs). *\*Make sure that you are using an "unshielded" speaker cable and that the polarity of the cable is correct. Do not use a shielded instrument cable to connect speakers to an amplifier. Ensure that the cable is good quality and that there are no nicks or abrasions of the insulation that could expose people or equipment to the electrical potential that is present on the speaker conductors. Never allow speaker connections to short or contact other metal objects. Do not connect output to anything other than a proper speaker load. Do not use a shielded instrument cable to connect speakers to an amplifier.*
4. Now you can connect your instrument to the amplifier. Make certain that you are using a "shielded" instrument cable to connect your instrument to your amplifier. If you are unsure of the type of cables you currently own, we advise you take a trip to your local music store and purchase the appropriate cables.
5. If you have a passive instrument plug it into the instrument input and select the "HI" setting on the attenuator switch (no blue light). If you have an active instrument then depress the attenuator switch until you see the blue light come on, indicating "LO" gain.

## Powering Up:

1. When the Bullhead 1K is powered up by switching the AC Mains on the right hand side of the head, it will go through a power-up sequence. The lights will blink and you'll see one of the red LED's in the "Input Level Indicator" flash. The amplifier is giving itself a test to make certain everything is functioning correctly. If the amp is functioning properly the all of the blue LED's will be on.
2. The Bullhead 1k always comes up in mute to protect your speaker system and your friendly audio engineer. Be certain all is as you expect before you press the mute button – this helps to prevent your speakers from being abused – and your friendly sound engineer will love you for it.
3. Turn the volume on your instrument to the loudest position.
4. Next, set the EQ controls (*bass, mid, and treble*) to zero (*twelve o'clock position*) and begin playing aggressively while turning up the **Gain** control of the appropriate channel (*as indicated by the LED bar graph*). When the LED meter lights are **green to yellow** there is still potential to increase the Gain. When the graph gets into the **red** your input is probably too hot and your signal will distort.
5. Next, disengage the "MUTE" button and slowly turn the Master Control clockwise to the desired listening volume. At this point you should be hearing your instrument amplified through the system.
6. As you ADD EQ you are also adding gain and so, once you've turned up the Master and start to EQ, be aware that the signal will INCREASE as EQ is added. You may have to re-adjust the "Input Gain" once you've added EQ.
7. Read the next section for some details on how to maximize the experience with the Bullhead 1K.

## Bullhead 1K

Your amplifier is essentially the brain and brawn of your rig. The head determines the potential volume and dynamic range before distortion, let's you shape and contour the sound, and routes the signal to multiple locations. A good head layout should be logical and easy to operate on stage. And when on you're on the gig you shouldn't have to compromise your playing style to accommodate the shortcomings of the amp. We've all experienced that moment in the middle of a tune when you're staring at the amp and thinking "*What knob can I possibly turn to make this sound good?*"

The Trickfish team has put all of our experience and skill into making the **Bullhead 1K** a truly musical piece of equipment. The design goals were modest: build a pre-amp that had the lowest noise floor possible so when we record it's nice and quiet, employ powerful EQ's so we can shape the sound in the most musical way possible and utilize a stout, no-nonsense power amp that delivers when you're digging in and pouring on the heat. We kept it simple and clean so that it would be easy to operate on stage – big knobs that are easy to grab and full size switches to minimize fumbling.

We spent the money on very high quality components and deliberately skipped many of the on-board effects and signal processing features found on a lot of amps because to add them would raise the overall price. As players ourselves if we want compression we'll go buy a really good compressor; if we want an octaver or analog filter, we'll go buy the real deal. It's actually pretty simple – great tone in a lightweight, durable package that's at home on any stage or in any studio. When you have a chance to get familiar with this head we hope you'll agree that we've met our goals and built something pretty unique.

### How the Bullhead Works

There's just 3 meaningful sections to any bass head:

#### 1. The Instrument Input and Gain section:

- a. A common misconception is that this is just a jack where you plug the bass in and volume knob – it is, but it's really much more. This is the first block in building what is commonly called "Gain Structure". The signal (your instrument) plugs into the jack and depending on where you adjust the input sensitivity - in the case of our amps it is labeled "HI/LOW", and here is where you set the first block of gain in the amplifier. The Bullhead input is designed to accept a wide range of sources from passive to active instruments as well as from a piezo acoustic bass pickup. This input is AC coupled to prevent unknown sources from damaging the input circuitry with DC or spikes.
- b. The **Gain Control** sets the gain level into the EQ. If you under-power the signal into the EQ section you just won't have enough voltage to get the EQ to work to its fullest potential and you'll add noise. Over-power the input to the EQ section and you'll simply have distortion. By adding EQ you also increase the Gain. On the Bullhead we've included a multi-segment LED ladder that shows you just how much gain created after you've adjusted the input attenuator, gain knob and EQ. *\*Tech Geek Stuff) Input gain is staged in a special multiplicative arrangement. The first stage is a fixed gain multiplier and the second is a continuously variable gain control. The gain OR attenuation in the input stage is achieved actively. As the Input gain control is increased, the gain produced is multiplied by the fixed gain in the first stage. The advantage is that neither stage is burdened with the duty of producing all of the input gain. This allows the already high performance circuits to operate very comfortably without strain. The gain components chosen are capable of performance that exceeds those found in the majority of bass preamps on the market by factors of 10, and often by 100. The result is a super quiet, super clean signal path.*

2. **The EQ Section:** Before we dissect the EQ circuit it should be noted that there are a couple schools of thought on running the EQ section of any audio device but for simplicity sake, let's discuss bass amps.

Some suggest that you should first set the instrument tone controls where you like them then adjust the EQ to suit the cabinet and room characteristics. Others suggest that you leave the bass in a flat position (this presumes you have an active EQ on the bass) and dial in the amplifier EQ first. It should be noted that as you add volume (by turning up the master) you are changing the perceived tonality of the system. You'll hear more low frequency at higher volumes (research "Fletcher and Munson Curves") so when you're setting up your amp you should try to approximate the volume levels at which you'll be playing – a good time to do this is at the sound check. When you add EQ you are also adding gain (the reverse is true as well – cut EQ and you're reducing gain). Think about this when judging the Gain Structure of the amp.

- a. **Bass Control:** On most bass amplifiers and on the Bullhead 1K the bass filter is a shelving type of EQ. In the 12:00 position there is no cut or boost on the Bullhead so essentially you're just passing a signal through. The Bullhead offers two low shelving frequencies" meaning that when you add or subtract bass you are affecting a range frequencies below that frequency. On the Bullhead those frequencies are 40Hz and 80 Hz – very musical frequencies as the low E string fundamental frequency is 41.2 Hz. By selecting the 40Hz setting you're essentially adding deep bass and by selecting the 80Hz frequency you are affecting a warmer, punchier bass. As with shelving EQ the frequency band that is controlled raises and lowers without affecting the out-of-band frequencies.
- b. **Low-Mid Control:** This filter could be characterized as a Variable Gain, Band-Pass filter. As with all of the EQ controls when you have the knob in the 12:00 position you are simply passing a signal through the circuit and leaving the signal unaffected. The Low-Mid control has a fixed width depending on the frequency point you select – either 333Hz or 473 Hz and the Q of these filters has been tuned for the most musical range. These frequencies were selected for their particular sonic characteristics and are very "Bass Instrument" specific. If you've owned P-basses or J-Basses you know that there are mid-range frequencies that make them ridiculously musical or just difficult to listen to and when you experiment with cutting or boosting this filter you'll appreciate the control.
- c. **Hi-Mid Control:** Just like the Low-Mid control this is a Variable Gain, Band-Pass filter and as with all of the EQ controls when you have the knob in the 12:00 position you are simply passing a signal through the circuit and leaving the signal unaffected. Unlike the bass and Lo-Mid controls, the range of frequencies covered by the Hi-Mid and Treble include ONLY the harmonics, finger and string noise and other "character" qualities of your bass signal. The Hi-Mid control has a fixed width depending on the frequency point you select – either 1kHz or 1.8kHz. These frequencies were selected for their particular sonic characteristics and again, are very "Bass Instrument" specific. More often than not you'll be cutting these frequencies to soften up the sound or, if you slap and pop, scoop out the nasty bits. Cutting helps to eliminate string noise without losing mid-range punch. This control can really help shape your sound.
- d. **Treble:** Like the bass control, the treble control is a shelving type EQ and covers a wide swath of frequencies and like the bass control, in the 12:00 position there is no cut or boost on the Bullhead so essentially you're just passing a signal through. Unlike the bass and Lo-Mid controls, the range of frequencies covered by the Hi-Mid and Treble include ONLY the harmonics, finger and string noise and other "character" qualities of your bass signal. The Bullhead offers two "hi-pass frequencies", 4kHz and 8kHz, and when you add or subtract treble you are affecting a range of frequencies above the selected frequency. Most bass amp treble filters land in the 4kHz range and is most likely a default position amplifier designer's chose when most basses were passive. With the advent of full-range bass instrument speaker cabinets and sophisticated on-board

active EQ circuits, basses now can reproduce very high frequencies. For an airy, glassy high-end select the 8kHz setting. Want a bit more edge then you should select the 4kHz setting.

- 3. Power Amplifier/ Master Volume:** The Master Volume is essentially the volume control for the power amplifier – which is the engine of the head. When you turn up the Master you are sending a signal to the input of the power amplifier and telling the amplifier to do its job, make things louder! The output of the amp sends the signal to the speaker outputs. On the Bullhead 1K we feature a “mute switch” that interrupts the signal to the power amp so that you can tune silently when your tuner is plugged into the corresponding jack in the back.

**Routing:** The ability to route a signal to various places is essential if you’re to use the amp in the real world. Digital tuners, effects, MP3 players, headphones – much of the technology we can use as musicians needs to integrate with the amp. The Bullhead 1K offers the following integration options:

- Auxiliary line in for MP3 players, drum machines – any audio source. Note that the Aux input is not routed to the DI but it IS routed to the speaker and headphone output. You can share that tune the band is working on through your speaker. None of the volume or EQ controls affect the level of the Aux input; you’ll control it via the volume on your audio source.
- Headphones for listening privately to practice sessions or for acoustic tuning
- Tuner out
- Amplifier Mute Jack – requires a latching switch. A latched foot switch will turn on when you press the switch, and remain on after you release it (i.e., the "on" status is maintained after the switch is released). When you press the switch again, it will turn off and stay off (i.e., the "off" status is maintained after the switch is released). – Best practice with a mute pedal:
  - Plug the mute pedal into the amplifier
  - Turn amp on, wait for self-test.
  - Un-mute amp from front panel
  - Now mute pedal has control of the mute function
  - If you press the mute on the front panel again, it will take control of the mute function for muting but you will still have to unmute via the pedal
- Selectable Series/Parallel EFX loop - Interrupt the signal path to insert signal processing like a compressor or limiter or run effects like reverb alongside the pure signal.
  - **Series** operation cuts 100% of the signal off at the EFX Send. Once a cable is plugged into the send jack when operating in Series mode there is no signal routed to the power amplifier until you complete the circuit by returning the signal back into the circuit at the EFX Return jack. Running the EFX loop works well when you want to integrate a *signal processing device* like a compressor/limiter, an external EQ or an expander.
  - **Parallel** operation splits the signal and routes one of the splits to a destination of your choosing and keeps the dry signal routed to the amplifier. This works best when using an effects device like a reverb or delay. When using an effect in a parallel it’s optimal to return a desired percentage of the wet signal to the amplifier. Typically this is an adjustment on the effect device. If you are recording and don’t have an XLR input available you can take the split off the EFX send and plug it into your recording interface
- **Balanced Direct Output:** Very low-noise, balanced output for routing the signal to a live console, recording console or computer interface.

- **Direct Output Level Control:** Use this to determine an optimal output volume for the destination device
- **Direct Output Pre/Post:** In rare cases it's best to send an unprocessed signal to a recording or live console where the engineer can adjust the EQ of the bass signal. The input gain and EQ does not affect the "Pre" Direct Out signal. Conversely, the "Post" Direct Out signal is affected by input gain and EQ.
- **Direct Output Ground Lift:** Use this if you hear a hum or buzz in the output signal. This can happen when there is discrepancy between the power ground of the Bullhead 1k and the house sound system or recording system.

## **BULLHEAD 1K Specs (preliminary)**

**Power Output:** (8 Ohms) 1000 Watts Peak .05% THD, 4 Ohm minimum load

**Power Amplifier:** Class D

**Power Supply:** Switch-Mode Power Supply

**Pre-Amp:** Low noise solid state

**Input:** ¼" Phone with switchable attenuation and rotary gain control

**Input Level Indicator:** 10 Segment LED Ladder

**EQ: 4 Band Switchable**

- Shelving Bass and Treble with selectable Hi-Pass frequencies
- Low-Mid and Hi -Mid - Variable Gain, Band Pass EQ with selectable frequency/ bandwidth options

**Master Volume:** Rotary Control

**Line In:** 1/8" mini jack

**Headphone Out:** Stereo ¼" Phone jack

**Mute Switch**

**AC Mains Power Switch with LED Indicator**

**EFX Loop:** Series/Parallel selectable, w/ground lift

**Tuner Out:** ¼" Phone Jack

**Mute Footswitch:** ¼" Phone Jack, Latching type switch

**Direct Out:** 600 Ohm Balanced, XLR, Pre/Post, Ground Lift and Level control

**Speaker Outputs:** 2 x Neutrik Combi-Connectors accept NL2, NL4 or ¼" Phone

**Chassis:** Aluminum

**Removable Rubber Feet:** Adhesive backed

**Rack Ears (Optional)**

<b>Size:</b> (H x W x D in.)	3.3 x 15.1 x 8
(H x W x D mm)	86.06 x 384.15 x 203.2

**Weight:** Net 6.2 lbs. Gross 9 lbs.

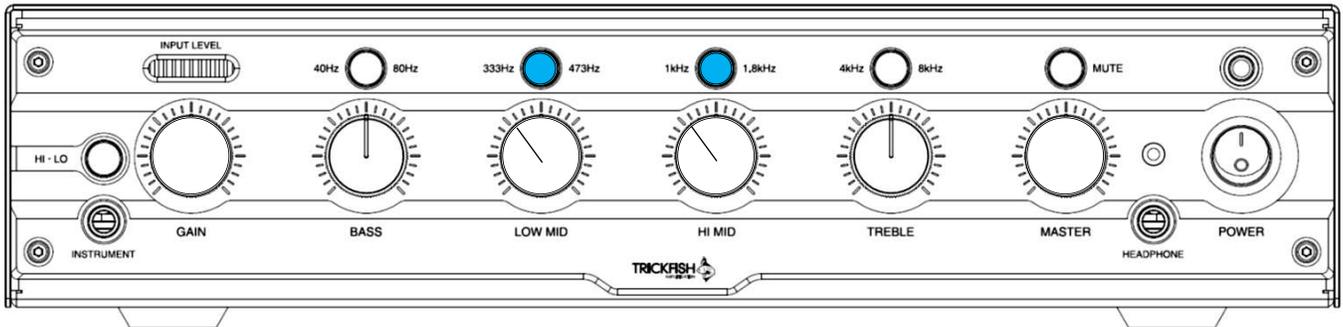
### Additional Notes:

- Please remember that the BH1K will handle a minimum 4 Ohm load and is warrantied as such. Failure to adhere to this impedance can void the manufacturer's warranty
- The BH1K is passively cooled through the use of side panel vents and is constructed from aluminum which is a metal that provides excellent heat transfer. Our heat tests revealed that the BH1K runs extremely cool under normal circumstances but, the vents must remain clear for the heat to dissipate. Do not block these vents as the over-stress of heat buildup will cause the amplifier to shut down until it has cooled to safe operating temperature. When using the optional rack-ears leave enough room on the sides of the amp for the heat to dissipate (Don't pack foam, cables or use the space for storage of personal items.)
- ALWAYS use quality unshielded speaker cables (16GA pair minimum) and keep the runs as short as possible
- Never use an unshielded cable for the instrument input, EFX loops or the DI out.
- Clip Indicators: The Bargraph on the BH1K is very quick and may pop into the red even though you don't hear distortion – this is an OK situation. However, the last red LED in the input bargraph acts as a clip indicator for both the pre-amp and power amp and if it glows brighter than the rest, you are clipping and should back off the gain. If you are running the pre-amp cleanly and the last red LED glows brighter than the rest you are most likely clipping the power amp and should turn down the master volume until the condition disappears.

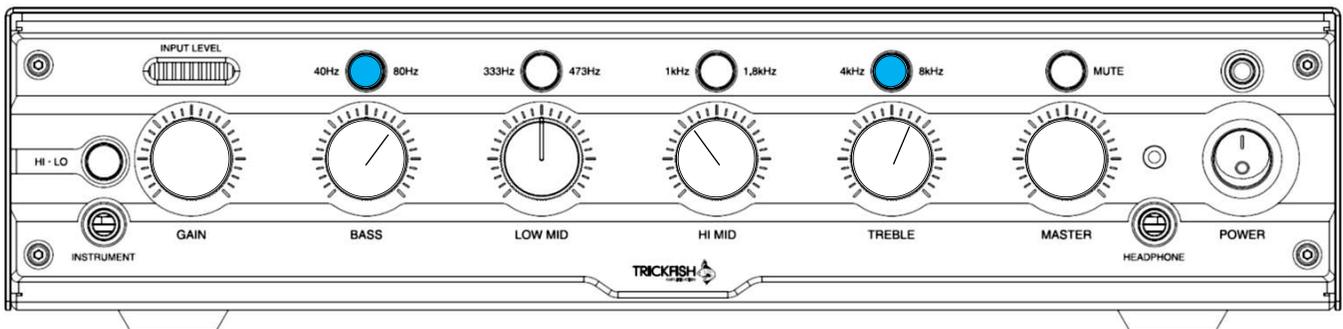
### Warranty:

We proudly stand behind our products with a 5 year warranty against manufacturer defects with one exception; drivers are warrantied against manufacturer defect for 90 days. This warranty extends to the original owner of the product and the product must have been purchased from an authorized Trickfish Amplification dealer. The owner must present to us the sales invoice that clearly shows the dealer's name, store location or website, product model and date of purchase. We do not warranty against abuse, water damage, fire, physical force, modification, improper installation, power surges or brownouts, or any other damage caused by a third party. Please contact [service@trickfishamps.com](mailto:service@trickfishamps.com) or call us at 281-220-7248 to obtain a **Return Authorization** number for the repair. Depending on the nature of the repair we may have the unit sent to us or have the owner take it to a local repair facility. The owner will be responsible for freight charges to the repair facility and if it is deemed, at our discretion, that the repairs needed fall under the guidelines of the warranty, we will pay the return freight.

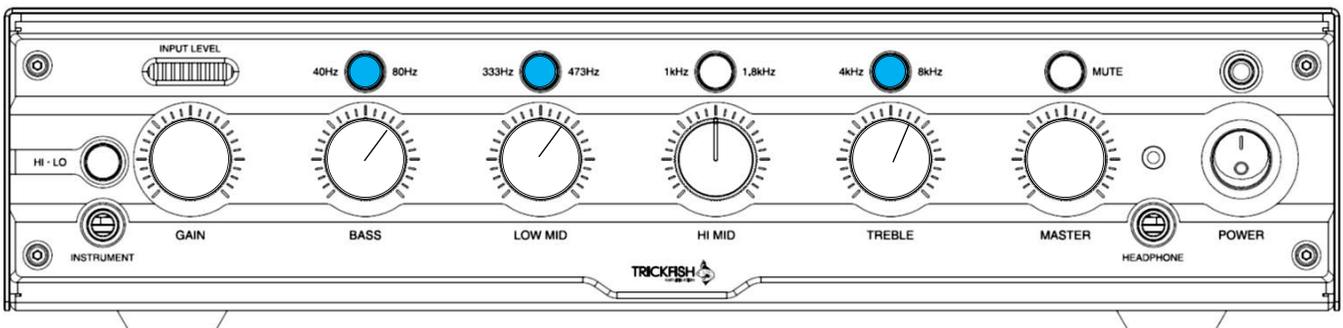
## Suggested Settings



Just a simple cut of the mids will deliver a round, balanced tone. From there you can use the active tone controls on your bass to dial in your tone. This is a great place to start when first getting familiar with the BH1K. *\*Remember, when you cut you can add amp gain to make-up the loss in volume*

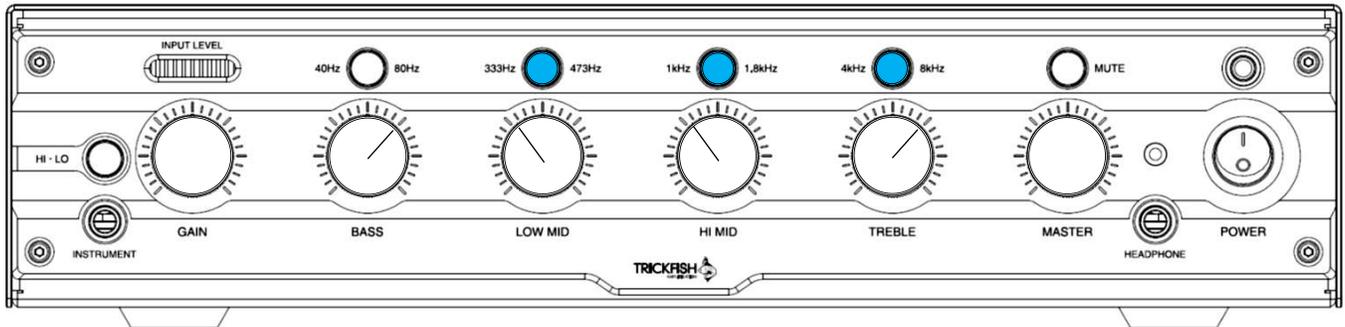


For a very present finger and slap tone you can add bit of bass with the 80Hz button in, cut a little of the mid-range at 1kHz and get some airy highs by selecting the 8kHz setting and adding a little gain. *\*Remember, when you add gain in the EQ section you're also adding overall gain to the signal path and you should take a look at the bargraph to see if you're not overdriving the circuit.*

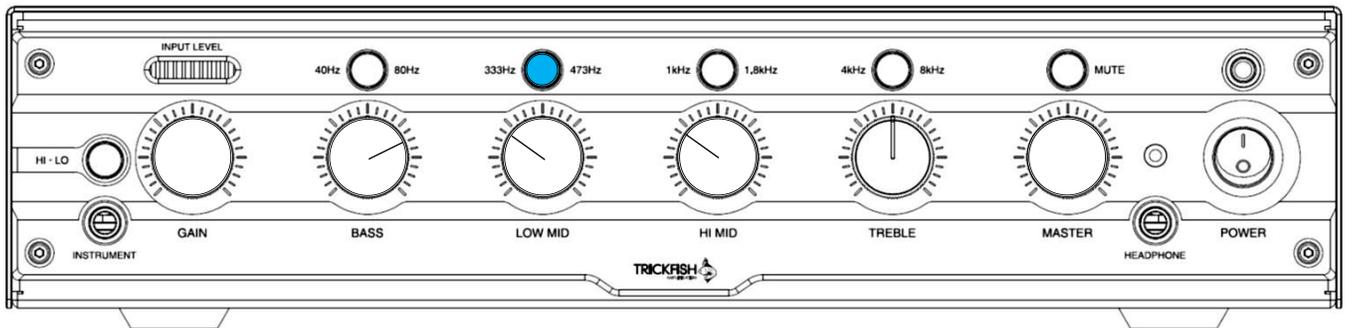


This setting achieves a good, aggressive tone and sounds great with a P-Bass and a pick. The Bass setting gives you enough bottom to still be the bass player and the Low Mid setting gives you the growl and attack. By selecting the 8kHz setting on the Treble EQ you get a glassy high end that brings out the chimes if you play a chord. *\*Remember, when you add gain in the EQ section you're also adding overall gain to the signal path and you should take a look at the bargraph to see if you're not overdriving the circuit.*

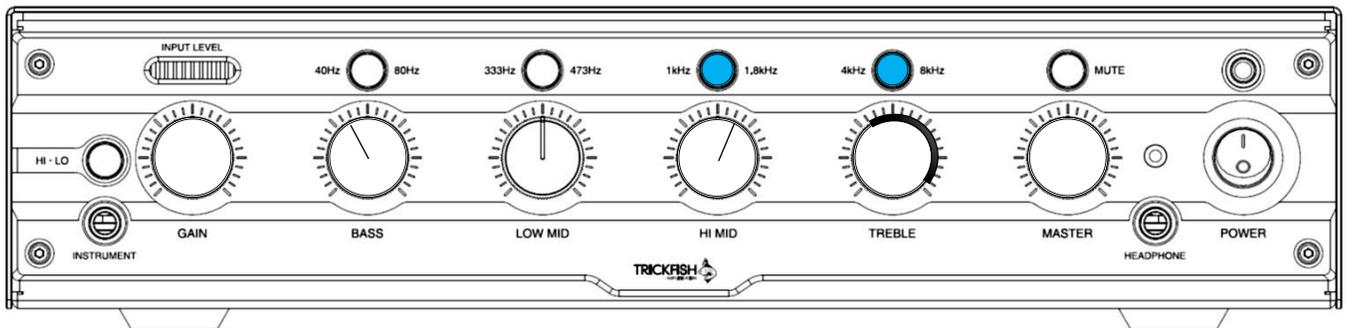
## Suggested Settings



This is the “lite” version of the classic scooped bass tone preferred by slap & pop players. The Bass control is on the 40Hz setting for true low-frequencies, both Mid-Range controls are cut and the Treble is on the 8kHz setting for a sophisticated “pop” sound. This setting also warms up the back pick-up tone of a J-Bass without killing the growl. *\*Remember, when you cut you can add amp gain to make-up the loss in volume*

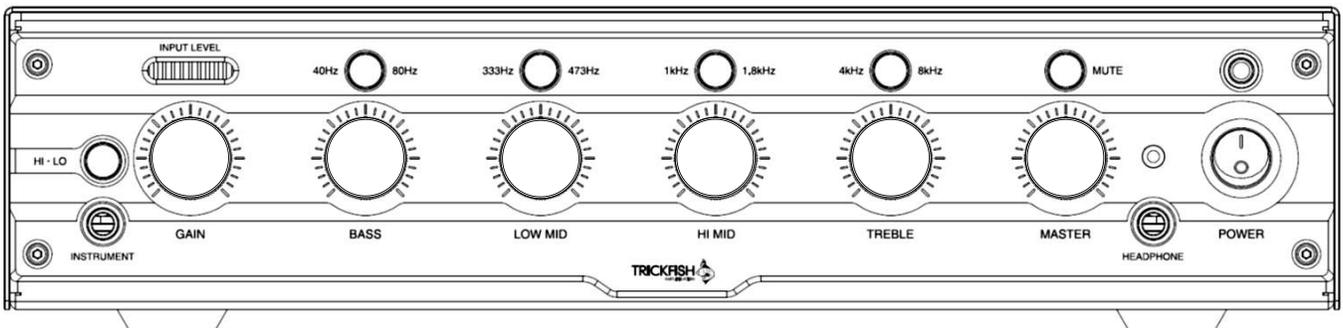
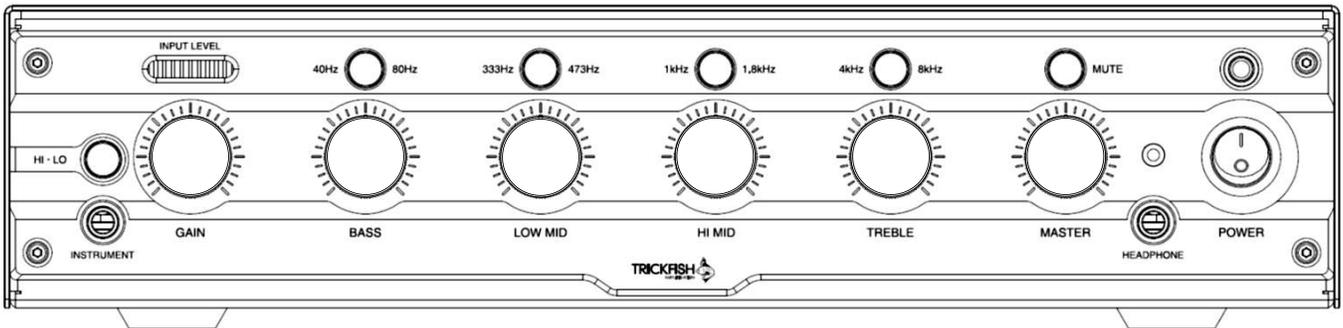
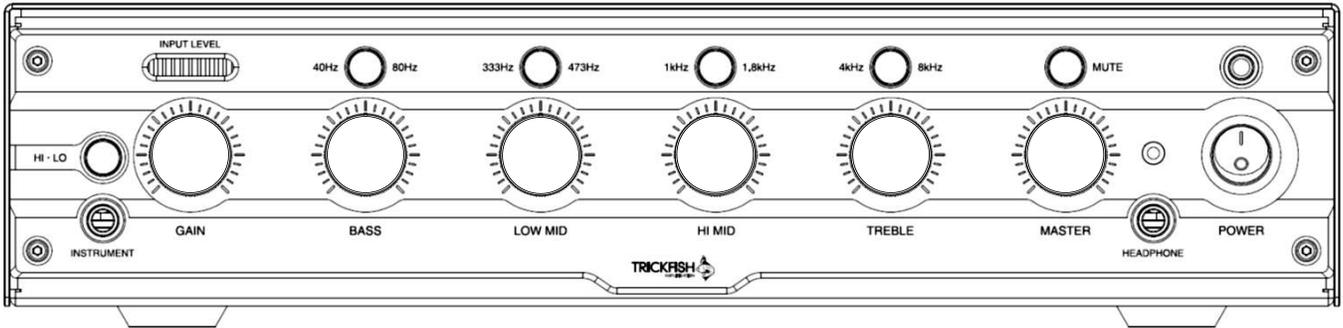
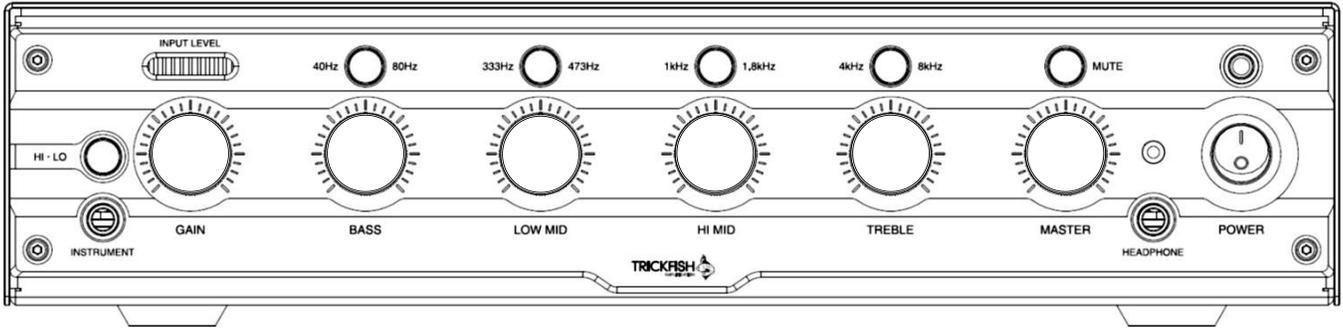


This is a very bass heavy setting that works nicely for Reggae, Salsa etc. where that velvety, almost blurry tone fits the music. *\*Remember, when you add gain in the EQ section you’re also adding overall gain to the signal path and you should take a look at the bargraph to see if you’re not overdriving the circuit.*



Mike Pope’s setting for his **Acoustic Bass**: The LF on an acoustic bass can get out of control quickly and as the setting shows we’re cutting the Bass a bit at the 40Hz setting. Mike adds a little cutting, punchy goodness at the 1.8kHz setting on the Hi-Mid EQ and suggests that the Treble frequency at 8kHz can be adjusted to taste. Acoustic basses differ dramatically so your settings may be radically different.

## Personal Settings



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