

BULLHEAD .5K

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 .5K 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, and some insights we've gained over the years. 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 new 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 we feel 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 is damaged immediately 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

- 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



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

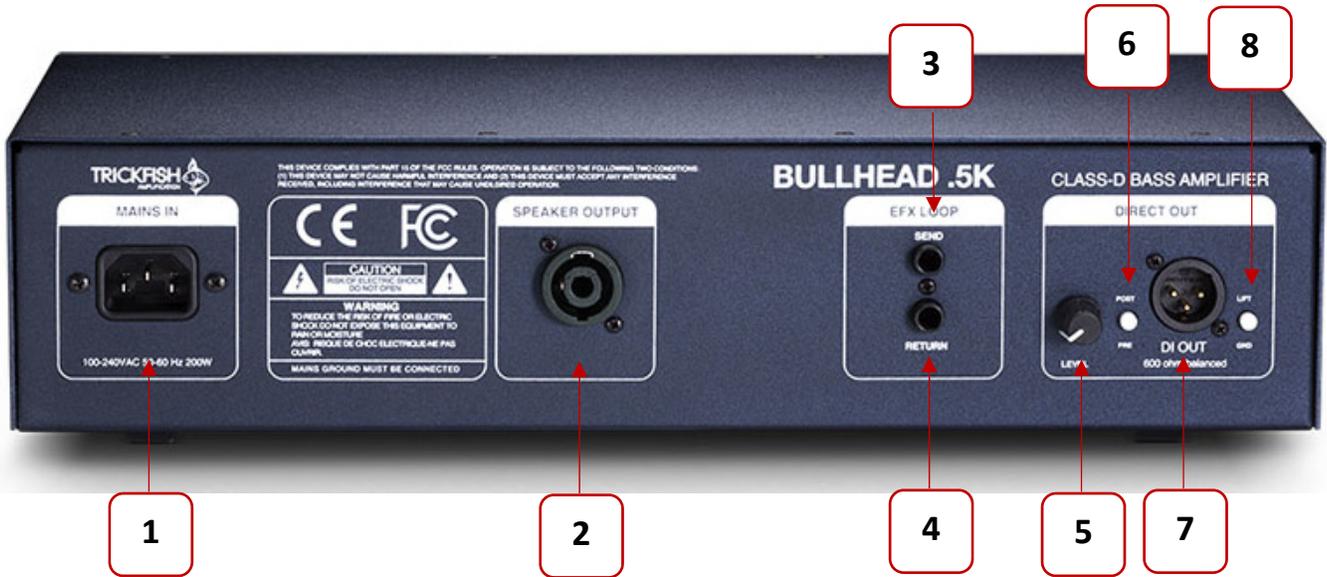
This equipment has been verified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference 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 .5K Front Panel Features



1. **Instrument Input:** ¼" phone plug line input
2. **Input Attenuator:** 0,+9db of gain to accommodate active or passive inputs
3. **Input Level Indicator:** 2 segment LED ladder indicates amount of gain after EQ, FX 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 and to the DI
15. **Headphone Output:** ¼" 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 .5K Rear Panel Features



1. **AC Mains Input:** Attach supplied cable firmly into socket
2. **Speaker Output:** Neutrik Combi-connector accommodates both Speakon and 1/4" phone plugs
3. **EFX Loop Send:** 1/4" phone jack routes the signal TO the destination device
4. **EFX Loop Return:** 1/4" phone jack returns the signal FROM the destination device
5. **Direct Out Level Control:** Rotary knob controls the level of output to the intended destination
6. **Direct Out Pre/Post select switch:** Switches between a Pre-EQ/FX or Post-EQ/FX send
7. **Direct Out XLR:** Balanced Female XLR connection
8. **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-Connector on the rear panel **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. If you have an active instrument then flip the attenuator switch to the "LO" gain setting.

Powering Up:

1. Turn the volume on your instrument to the loudest position.
2. Place the amp in the "mute" position
3. 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 indicators*). When the top LED stays in the **red** your input is probably too hot and your signal will distort. A little bit of the red LED on the peaks is OK.
4. Next, disengage the "mute" switch 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.
5. 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.
6. Read the next section for some details on how to maximize the experience with the Bullhead .5K.

Bullhead .5K

Your amplifier is essentially the brain and brawn of your rig. The head determines the potential volume and dynamic range before distortion. It lets 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 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?*"

We kept it simple and clean so that it would be easy to operate on stage – big knobs that are easy to grab and ergonomic toggle switches to minimize fumbling.

When we designed the BH.5K we spent the money on very high quality components and deliberately skipped the on-board effects and signal processing features found on many amps because to add them would raise the overall price. We kept it clean and simple with an emphasis on creating a great, powerful tone.

How the Bullhead Works

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

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

- a. **Input Attenuator:** 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", 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. Overpower the input to the EQ section and you'll simply have distortion. By adding EQ you also increase the Gain.

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 (us included) suggest that you leave the instrument 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 .5K 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.
- 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 center frequency 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.
- 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. The Hi-Mid control has a fixed width depending on the frequency point you select – either 1kHz or 1.8kHz. 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. The Bullhead offers two "hi-pass frequencies", 4kHz and 8kHz. 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 .5K we feature a “mute switch” that interrupts the signal to the power amp and the DI so that you can tune or warm up silently.

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 .5K offers the following integration options:

- **Auxiliary 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 or practice with a track. ***None of the volume or EQ controls affect the level of the Aux input; you’ll control the volume via the volume on your audio source.***
- Headphones accommodate private listening, listening to the Aux In, or for silent acoustic tuning.
- **Series EFX loop:** Interrupt the signal path to insert a signal processing like a compressor or run effects like reverb alongside the pure signal.
- **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, FX 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 .5K and the house sound system or recording system.

BULLHEAD .5K Specs (preliminary)

Power Output:

8 Ohms: (Continuous Power - 253W @ .13% THD, 365W @1% THD), (Peak 506W @ .13% THD, 730W @1% THD)

4 Ohms: (Continuous Power - 312W @ .13% THD, 702W @1% THD), (Peak 625W @ .13% THD, 1404W @1% THD)

Power Amplifier: Class D with Switch-Mode Power Supply

Pre-Amp: Low noise, all analog, solid state

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

Input Level Indicator: Signal level and Clip LEDs (green/red)

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: mini toggle

AC Mains: 85-132V, 195-264V, 45-65 Hz, 1000VA (Worldwide usage)

AC Mains Indicator: Blue LED

EFX Loop: Series

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

Speaker Output: 1 x Neutrik Combi-Connectors

Chassis: Aircraft grade aluminum w/removable rubber feet

Rack Ears (Optional)

Size: (H x W x D in.) 3.3 x 15.1 x 8 (inches)

Shipping Carton Size: (H x W x D in.) 18 x 12 x 8 (inches)

Weight: Net 5.0 lbs. Gross 7.6 lbs.

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 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.

**We should laugh
every day...**

Q. What's the difference between a bass and an onion?

A. Nobody cries when you chop up a bass

A Bass Teacher is excited about getting a new, young student. The kid is comes in for his first lesson and learns all the notes on the E string. Next week he comes in and the instructor shows him all of the notes on the A string. The third week comes, the teacher is waiting, but the kid never shows up. Annoyed, he calls him to see where he is. The kid picks up and says, "Oh, sorry man, I got a gig..."



Q. Why do some people have an instant aversion to bass solos?

A. It saves time in the long run.

Q. Why are upright basses like elderly parents?

A. Both are unforgiving and hard to get into and out of cars.

A bassist wins the lottery grand prize of 3 million dollars. During an interview by the local TV station, the reporter asked, "What are you going to do with all that money?" Without missing a beat, he replied, "I'll just keep playing until the money runs out!"

After years of hiding the fact that the love is gone, the last child moves out of the house and Mom and Dad announce they're getting a divorce. The kids are distraught and hire a marriage counselor as a last resort at keeping their parents together. The counselor works for hours, tries all of his methods, but the couple still won't talk to each other. Finally, he goes over to a closet, brings out a beautiful upright bass and begins to play. After a minute or so, the couple starts talking and they discover that they're not actually that far apart and decide to give their marriage another try. The kids are amazed and ask the counselor how he managed to do it. He replies, "I've never seen a couple that wouldn't talk through a bass solo."

