

# Quilter™

Amplification est. 1968

## OWNER'S MANUAL



# IMPORTANT SAFETY INSTRUCTIONS

- 1 – Read and keep these instructions.
- 2 – Heed all warnings and follow all instructions.
- 3 – **WARNING:** To prevent fire or electric shock, do not expose this equipment to rain or moisture. Do not use this apparatus near water.
- 4 – Clean only with a dry cloth.
- 5 – **WARNING:** To prevent excessive temperature rise, operate product only in free air with unrestricted ventilation. Do not install in confined spaces or near heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 6 – Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for the replacement of the obsolete outlet.
- 7 – Protect the power cord from being walked on or pinched, particularly plugs, convenience receptacles, and the point where they exit from the apparatus.
- 8 – Unplug the apparatus during lightning storms or when unused for long periods of time.
- 9 – The appliance coupler (or attachment plug) is the mains disconnect device and should remain readily accessible when amplifier is in use.
- 10 – Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 11 – This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- 12 – Changes or modifications made by the user that are not expressly approved by the manufacturer may void your authority to operate the amplifier.

## Explanation of symbols



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 humans.



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



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.**



**WARNING:** To prevent fire or electric shock, do not expose this equipment to rain or moisture.

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# THE QUILTER BASS BLOCK 802

## NEW STANDARDS IN HIGH PERFORMANCE BASS AMPLIFICATION

The Bass Block 802 compact bass head provides exceptional power and tone for the modern bass player. The proprietary 800-watt power section provides a “big stick” to get full performance from any speaker, with a quiet, variable-speed fan for heavy duty usage. A new 4 band EQ, fine tuned for modern bass voicing, combined with uniquely effective internal limiting, gives the 802 a feeling of “bottomless” power reserves and dynamic response.

The GAIN control regulates drive and sensitivity. The 4 EQ knobs, DEPTH, WOOF, BARK, and SNAP (100, 300, 1K and 2K) regulate key frequencies for expanded bass voicings. The MASTER controls the overall peak power delivered to the speaker, for matching any size and speaker rating.

Below the controls, an expanded jack bay provides improved system connectivity. The high impedance INPUT is next to the MUTE-ACTIVE-PASSIVE switch, which selects correct levels for traditional passive pickups, as well as hotter active pickups. An EFFECTS LOOP supports outboard effects, and the EFFECTS RETURN can be used as a “stealth input” for external tracks. The Effects Loop is also active during MUTE, for silent tuning. The SIG OUT jack can be switched from balanced LINE OUT (pre-Master) or mono HEADPHONE (post Master). The AC POWER LED also acts as a thermal warning light, “winking” if the amplifier is limiting due to thermal overload.

The rear panel provides DUAL SPEAKON™ COMBO connectors, for compatibility with all popular bass cabinets. The XLR LINE INPUT accepts electronic signals from outboard devices, bypassing all controls except the Master. A LOCKING AC CORD ensures uninterrupted service. Please consult this manual for further details on these features, to obtain the best results.

Quilter Labs uses the latest high-current Class-D power technology to maximize warmth and dynamics without the weight and drawbacks of traditional technology. We receive advice from musicians far and wide, but our constant goal is to make products that we ourselves are proud to use. The result is a serious professional tool with performance that meets or beats handmade amps costing several times as much.

We hope you enjoy your new amplifier. May it give you many years of flawless service and provide a source of inspiration and creativity.

**CARTON CONTENTS:**

- QUILTER BASS BLOCK 802
- IEC AC POWER CORD
- OWNER'S MANUAL

## SIGNAL INPUT

The Bass Block 802 has a 1-meg input with two switchable input sensitivities (ACTIVE/PASSIVE).

## MUTE/ACTIVE/PASSIVE SWITCH (3-WAY)

MUTE: blocks signal prior to the SPEAKER and SIG-OUT jacks, for noise-free instrument changes, with a bright red MUTE LED. The FX LOOP remains active, allowing for silent tuning. The ACTIVE position should give full volume for an active bass with average GAIN settings, while the PASSIVE switch position has 10dB more gain to match typical passive pickups.

## GAIN CONTROL AND LIMITING

The GAIN control regulates the overall volume and sensitivity of the bass. To prevent “bottoming out” at high Gain settings, the Bass Block 802 incorporates a specially designed, musically transparent limiter that prevents “hard bottoming” while preserving musical dynamics. Depending on your playing style and pickup volume, limiting sets in when playing in the upper half of the Gain control’s range, as indicated by mild flashing of the MUTE LED. To get the “feel” of it, set the MASTER very low, and increase GAIN until you see the LED flashing, and sense the volume holding back on peaks. You will notice a tendency to “auto-equalize” the tonality of the bass when pushed well into limiting. All these behaviors can be used as musical effects, or can be avoided by reducing GAIN below the limiting threshold. Once you have found the sweet spot that works for your tone, adjust the MASTER for the desired overall volume.

## ACTIVE EQ CONTROLS

The Bass Block starts with a flat response curve with the EQ knobs on “0” (straight up). Up to 10-15dB of cut or boost is available, as shown on each knob. The DEPTH control adjusts frequencies below 100Hz, acting mainly on the lowest strings of the bass guitar’s range. Boosting DEPTH will produce a deep rounded tone. If pushed into limiting, the overtones and higher strings will “catch up” with the bass foundation, preserving a sense of effort without bottoming out. The WOOF control centers on 300 Hz and provides warm “punch” to the middle strings. The BARK control centers on 1Khz, regulating “round-wound” overtones, and SNAP controls crisp treble above this range, centered at 2Khz.



## **MASTER CONTROL - MATCHING AMP TO YOUR SPEAKER POWER**

After adjusting your tone as described above, use the MASTER control to match the overall output power to your speaker's capacity. The wattage markings will provide initial guidance, but if you hear any popping or other signs of speaker overload, reduce the Master wattage until the speaker is operating comfortably. This allows the amp to be matched to a wide range of speaker ratings. On full Master, the amplifier can be driven to mild clipping at 800W/4 ohms by using sufficient gain, although limiting will begin to cushion the peaks at about 80% of full power. If you are unable to achieve the desired bass output with only one speaker, consider adding an additional speaker for more capacity.

### **FX SEND:**

Sends the final preamp signal to external effects, at 1K impedance and 1V peak. External effects can be added, but will not affect signals from the XLR Line Input on the back. The Master regulates overall volume as usual.

### **FX RETURN:**

Returns external signals to the Master and then to the power amplifier.

***Pro Tip:** to play with tracks or external audio, connect the media source to Effects Return. The amplifier level will drop 4dB to allow headroom for the tracks. Use the source's volume to set the relative balance. The MASTER still controls overall volume of the mix. XLR signals may also be connected on the rear, leaving the FX LOOP available for normal use.*

## **USING HEADPHONES**

Headphones may be plugged into the SIG OUT jack located on the front, with the Sig-Out switch in the POST/H-PHONE position. The speaker may be unplugged for silent practice. The Master controls the headphone volume; it will normally be more comfortable to keep the Master below about 50%.

## **USING THE LINE OUT**

Set the SIG OUT switch to PRE/LINE. A fixed level +4dB balanced Line Out can be connected to consoles for recording or PA reinforcement. The Line Out is not affected by Master settings, which only controls the speaker volume.

## **THERMAL LIMITING AND FAN CONTROL.**

A thermal sensor is embedded in the heat sink to monitor temperature rise. As the amp is worked increasingly hard, the fan will gradually speed up to improve cooling. If temperature continues to rise, either due to extreme power demands, or lack of ventilation, the amp will eventually reduce volume until temperature recovers. Thermal limiting is indicated by the POWER LED "winking". Ensure that side vents are clear and the amp has access to cool air.





**SPEAKER CONNECTIONS** (rear panel)

The Bass Block 802 provides dual "combo" speaker jacks (SPEAKON™ and ¼-inch) for compatibility with all popular bass cabinets. The Bass Block 802 is safe for all load impedances including no-load, but is optimized for driving 4-8 ohm loads. 16 ohm loads draw less power, and 2 ohm loads may trigger amplifier overcurrent clipping if driven hard enough. Be sure to monitor speakers for signs of distress and reduce MASTER level if required to prevent popping or bottoming.

**LINE IN** (rear panel)

An XLR balanced line input may be connected on the rear of the amp. The signal enters prior to the Master control, but bypasses all preamp EQ and limiting. Thermal limiting and short circuit protection are still effective.

**LOCKING IEC POWER CORD**

The power cord that comes with your amplifier is designed to lock into the AC inlet to prevent it falling out during use. Press the yellow button on the cord to release it. Any normal 3-prong IEC cord may also be used, with a non-locking friction fit. Always ensure that the ground contact is intact on both the cord and receptacle.

**UNIVERSAL AC POWER** (rear panel)

The Bass Block can be used on all known worldwide AC voltages (100-250V), which allows you to play just about anywhere on the planet. There is nothing to change but your AC cord type.



## CARING FOR YOUR AMPLIFIER:

Clean the outer surfaces with a clean, damp cloth or vacuum with a soft brush. Never use any abrasives, harsh cleaners or solvents, and keep moisture out of the amp. The Tone Block amplifier is manufactured with high quality components using modern industrial processes that greatly reduce production defects. Each amplifier goes through an intensive testing process before it leaves the factory ensuring that your amplifier will give you years of flawless service. There are no user-serviceable parts inside the amplifier. Any repairs should be performed by a trained service professional. Always use the amplifier in a well-ventilated environment and protect from external heat sources such as furnaces or direct sunlight. Prolonged high-volume playing causes heat buildup in the speaker which reduces its working lifetime. If you find it necessary to consistently use the amp at full volume, we recommend using an extension speaker to prolong speaker life and improve sound coverage.





## SPECIFICATIONS:

<b>AMPLIFIER MODULE SPECIFICATIONS</b>	
Power Output:	250W-16 ohm, 450W-8 ohm, 800W-4 ohm
AC Power Req.:	100–240Vac, 50–60 Hz, 250 W typical, 1000W peak.
Input Connections:	¼" mono, 2 meg LINE INPUT: XLR 10K balanced, 1V full scale.
FX Loop:	¼" mono, 1V full scale, 1K out, 47K inp (with FX Send lifted)
SIG OUT (PRE)	¼" TRS, balanced line, 40 ohms each leg, 6V full scale
HEADPHONE (POST)	¼" TRS, 40 ohms each channel, 0-6Vpk (depending on Master)
Speaker Output:	4-8 ohms, 90V, 25A peak
<b>DIMENSIONS</b>	
H x W x D	3"(76mm) x 8.5" (218mm) x 7.8" (200mm)
Weight	4.5 lbs (2kg)

## TROUBLESHOOTING:

<b>Symptom</b>	<b>Action</b>
No power, no lights	<ul style="list-style-type: none"> <li>• Ensure that the AC cord is fully seated and connected to a live source.</li> <li>• Check the AC source by trying another device such as a lamp.</li> </ul>
Amp shuts off then after a short time, turns back on	<ul style="list-style-type: none"> <li>• Automatic thermal protection is activating. Reduce the volume at least 30% and keep the amplifier out of direct sunlight or tightly enclosed spaces.</li> </ul>
No audio (using a guitar)	<ul style="list-style-type: none"> <li>• Check the MUTE switch: confirm that the red LED over the MUTE button is not illuminated.</li> <li>• Confirm that the MASTER control and the GAIN controls are turned up.</li> <li>• Ensure the guitar plug is inserted fully at each end.</li> <li>• Try using a different guitar cable.</li> <li>• Check that the pickup selector switch and volume on the guitar are set correctly.</li> <li>• Ensure that the rear panel speaker plug is fully inserted into the SPEAKER jack.</li> </ul>

## TROUBLESHOOTING:

Volume level slowly reduces.	<ul style="list-style-type: none"> <li>• Thermal protection may be activating. The Power LED “winks” every 1-2 seconds when thermal protection is active. Check that side vents have full air flow, check the load impedance and look for cable shorts. If everything is normal, reduce Master about 25% to reduce overload.</li> </ul>
Background hum	<ul style="list-style-type: none"> <li>• Ensure the guitar plug is fully inserted.</li> <li>• Try using a different guitar cable. Make sure it is properly shielded.</li> <li>• Connect AC powered accessories to the same receptacle as the amplifier to avoid ground loops.</li> </ul> <p>IF HUM GOES AWAY WHEN GUITAR IS TURNED DOWN:</p> <ul style="list-style-type: none"> <li>• Single coil pickups can be a source of hum, especially if near RF sources like light dimmers or neon lights.</li> <li>• Check that the guitar’s cavities are well shielded.</li> </ul>
Bass is too thin or thick	<ul style="list-style-type: none"> <li>• Adjust the DEPTH control.</li> </ul>
Harmonics or high notes don’t sound right	<ul style="list-style-type: none"> <li>• Adjust the WOOF, BARK, SNAP controls</li> </ul>
Amp sounds garbled at all volumes	<ul style="list-style-type: none"> <li>• Check speaker by temporarily trying an external speaker. Caution: reduce MASTER volume until sound level has been confirmed.</li> </ul>
Desire clean tone, getting too much overdrive	<ul style="list-style-type: none"> <li>• Turn down the GAIN control and turn up MASTER.</li> <li>• Select ACTIVE position on switch.</li> </ul>
"Razzy" clipping	<ul style="list-style-type: none"> <li>• The speaker impedance is too low or shorted.</li> </ul>
Desire overdrive tone, not getting enough overdrive	<ul style="list-style-type: none"> <li>• The Bass Block is designed to remain clean but the limiting system can be overdriven with extreme Gain settings.</li> <li>• Using an active bass on the PASSIVE input will provide more gain.</li> <li>• “Lead bass” players should consider a Quilter Tone Block or Pro Block which are designed to produce vintage-style overdrive tones.</li> </ul>
Tone sounds “dull” with no high frequencies	<ul style="list-style-type: none"> <li>• Confirm EQ settings.</li> <li>• Check your guitar’s tone controls.</li> <li>• Check speaker tweeter</li> </ul>
<b>Amplifier Requires Service</b>	<p>If any of the below occur, immediately unplug the amplifier and refer to a service technician.</p> <ul style="list-style-type: none"> <li>• Amplifier or AC cord emits smoke</li> <li>• Amplifier is dropped or chassis is dented or bent</li> <li>• Liquid has been spilled into the amplifier</li> <li>• Loose parts inside the amplifier are heard</li> <li>• AC service breaker trips</li> </ul>

## **Important Information for Owners:**

### **Factory Service**

Please retain the shipping carton and packing materials in the unlikely event your Quilter product needs servicing.

To return a product to Quilter Labs for service under the warranty policy, please contact Quilter Labs by phone or email. Mail can be sent to Quilter Labs at 1700 Sunflower, Suite A, Costa Mesa, CA 92626. Please include the serial number of the product and a copy of your sales receipt. Instructions on how to send your product will be provided.

Do not attempt to open the product and service it yourself. Any attempt to service the product by a non-authorized service technician may void your warranty.

### **Warranty**

For warranty or service information visit us online at [www.quilterlabs.com](http://www.quilterlabs.com).

### **FCC NOTICE:**

Note: 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 product 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.

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Quil

GAIN



0 10

DEPTH



-15 +15

100

WOOF



-10 +10

300



MUTE

Quilter

MUTE ACT PASS

INPUT



FX SEND



RE

