

# Quilter

the **POWER** of music

[www.quilterlabs.com](http://www.quilterlabs.com)

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# 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.

## Forward by Patrick Quilter

Congratulations on your purchase of the **Tone Block 202**, combining the best features of prior 200-series models with many new enhancements. It provides an “even better” link between any good loudspeaker and the musician’s instrument or electronic tone source (pedal board, digital processor, or keyboard). Despite its small size and streamlined controls, this little powerhouse can replace almost any stage amp ever made.

The **INPUT** has a high impedance for maximum pickup response. The **GAIN** adjusts a wide range of signals from clean to overdrive. Turning up the **LIMITER** progressively cushions overdrive distortion while maintaining low-level sustain. A traditional **3-BAND EQ** provides full control of the instrument’s tonal balance, and a **VOICE** switch selects either an active “**FullIQ**” voicing or a classic “tone stack” response. The **REVERB** is post **FX LOOP** and expands your sound stage with a nicely voiced wash of smooth decay. The **MASTER** control adjusts the overdrive threshold of the amplifier from 0 to 200 watts, offering clean headroom and/or rich overdrive at will. The **VOICE** switch programs the amp in 3 powerful ways: **FRFR** supports modeling rigs with external cab sims. **FULLQ** brings guitar speakers to full life while preserving the honest voice of your instrument. **VINT** selects a traditional tone stack voicing with the classic “electric” guitar sound everyone recognizes. An **FX LOOP** supports sweeteners such as Delay or Chorus, and also supports external inputs such as tracks. The **SIG OUT** is a dual purpose TRS Balanced Line Out or Headphone jack, depending on the **PRE/POST** switch setting. On the rear you will find the **UNIVERSAL AC INLET**, twin **SPEAKER** outputs. (4-8 ohms), and our traditional **XLR DIRECT OUT**. Please consult this manual to obtain the best results with all these features.

Quilter Labs uses modern high-efficiency power technology to maximize warmth and dynamics without the weight and drawbacks of classic tube 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. May your new amplifier deliver many years of flawless service and provide a source of inspiration and creativity.

### Carton Contents

1 Quilter Tone Block 202 Amplifier  
1 IEC AC Power Cord  
1 Owner’s Manual

## FRONT PANEL SIGNAL CONNECTIONS AND SETTINGS:

**VOICE:** Selects three major amp profiles:

- **FRFR:** engages an active EQ system with flat response on 5, and “pro audio” speaker damping for minimum speaker coloration and more accurate reproduction of modeling rigs with external cab sims, as well as keyboards, bass, and acoustic instruments.
- **FULLQ:** combines the active EQ system with a high impedance amplifier, unlocking the full warmth and tone of guitar speakers while preserving the honest voice of your instrument.
- **VINT:** adds a traditional Fender-style tone stack voicing, with added chime and bass, delivering the classic “expanded electric” guitar sound everyone recognizes.

*Pro Tip: amplifier overdrive is very raw and fizzy sounding in FRFR mode. A good guitar speaker emphasizes the musically valuable harmonics and tones down the “fizz”, which is also the job of a good cab-sim function, as provided on FULLQ and VINT settings.*

**INPUT:** Accepts standard guitar or any other signal, with a higher than normal impedance that opens up the sound of standard pickups.

*Pro Tip: extreme EQ settings may reduce input headroom, but should still support the loudest electric guitars without premature breakup. Input headroom will exceed 5V with EQ in the middle of its range.*

**FX SEND:** Sends post-overdrive signal to external effects, at approx. 1V peak. Thus, sweeteners are applied to both clean and overdrive tones, just like in the studio.

*Pro Tip: try a good delay on top of a smooth overdrive, yielding clean layers of delay cascading over the underlying distortion.*

**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 6dB to allow headroom for the tracks. Use the source’s volume to set the relative balance. Reverb will be applied equally to tracks and instrument, and the Master still controls overall volume of the mix. To disconnect the preamp and raise the FX Return impedance to 47K, insert a dummy plug in FX SEND to fully open the circuit (this happens automatically when using the full Loop as usual).*

• **SIG OUT and PRE/POST switch:** In PRE position, SIG OUT sends a balanced, TRS line-out that is not affected by the MASTER setting, making this a good “house feed” that is independent of stage volume. In POST position, it sends a mono headphone signal controlled by the MASTER, to obtain a comfortable listening level. In both cases, the signal is flat with the Input switch on the FRFR position, and has cabinet simulation (cab-sim) on FULLQ and VINT positions, which is independent of any speaker connection.

*Pro Tip: In the PRE position, the Master may be turned all the way off to silence the speaker without affecting the SIG OUT level. Unplug the speaker to use headphones silently in the POST position.*

## FRONT PANEL CONTROLS:

**GAIN:** The bottom third of the range is suitable for line-level signals such as keyboards, mixer outputs, or external pre-amps. The upper half of the range will produce increasing amounts of overdrive, depending on the inherent loudness of the guitar pickups and playing attack.

**LIMITER:** The limiter acts like a “governor” on the signal peaks, monitoring the output level and reducing the gain just enough to prevent overdrive, and immediately restoring gain as the note dies away. This preserves the sustain associated with high Gain settings, while putting a soft “cushion” in front of the usual hard breakup.

*Pro Tip: Limiter settings around 3-4 will limit overdrive to a “rolling boil” while settings above 5 will intervene at or below the point of breakup. The limiter is not a “brick wall” and preserves some dynamics, so its action can be subtle and can be “pushed through” with enough Gain. To hear its effect, have a friend turn the knob while you play, especially on high Gain and lower Limiter settings. Note that the Limiter does not affect soft passages, only peaks near breakup.*

**THREE-BAND EQ SECTION:** All 3 tone controls have high selectivity and over 20dB range for maximum effect. On FRFR and FULLQ settings the response is flat on 5, giving a neutral starting point for electronic signals, keyboards, bass and steel guitar. The VINT setting adds a “mid scoop” based on the classic “tone stack” response curve, for more chime and less midband clutter, producing the classic “electric” tone associated with typical 6-string guitar styles.

**REVERB:** The Tone Block 202 uses a specially designed reverb processor with analog voicing, inspired by the classic “spring reverb tank”, but minus its bulk and mechanical instability. The Reverb is post-FX-Loop for better results with delays and other dynamic effects.

**MASTER:** Regulates overall level, and sets the breakup threshold (peak power) of the amplifier, from zero to 200 watts, approximately as shown on the panel.

*Pro Tip: the Master Power ratings apply to 4 and 8 ohm speakers when using the correct output jack, and should generally be set equal or less than the speaker ratings to prevent burnout on heavy overdrive. 16 ohm speakers will allow more voltage swing on FULLQ and VINT settings, so the Master setting should be reduced to about half of the indicated values to deliver the appropriate peak power.*





## REAR PANEL – AC POWER, SPEAKERS

**INTERNATIONAL POWER SUPPLY:** The Tone Block works with all known worldwide AC voltages (100-250V), which allows you to play just about anywhere on the planet.

### **LOCKING IEC POWER CORD:**

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

**SPEAKER OUTPUTS:** 8 and 4 ohm jacks support optimum matching of single or dual 8-ohm speakers, or single 4 ohm cabs. 16 ohm loads may be used in the 8-ohm jack by setting the Master control at about 50% of the desired peak power (see MASTER, Pro Tip above). The amp is protected against no-load and abnormal loads; thermal protection may reduce power somewhat after prolonged, severe overloads.

**DIRECT OUT:** Provides a mic-level, isolated signal that may be used instead of placing a microphone in front of the speaker. The signal matches the level of typical mics, and uses the speaker as part of the tone-shaping system, so it is intended for live performance. For “silent stages” where the speaker is not desired, use the front panel SIG OUT in PRE mode, as described above.



## USING WITH A DIGITAL AUDIO WORKSTATION OR PA MIXER:

For best results when going direct without a speaker, use the front panel SIG OUT with the adjacent switch in PRE mode. Use the console's Line Input (not a Mic Input). The signal will be at full line level regardless of Master setting, which may therefore be turned down. Set the TB202's Input switch for the desired profile (FRFR, FULLQ or VINT). Normally, the FULLQ or VINT settings will sound the best with overdrive, since the built-in cab-sim will shape the harmonics like a good guitar speaker. Try FRFR when using an external cab-sim processor.

The POST position converts SIG OUT to a headphone driver, with level controlled by Master, putting identical signals on Tip and Ring terminals (center-mono signal). This will not work into a balanced input, which rejects this common mode signal. An unbalanced (mono) cable will work, if it is necessary to use the Master volume to reduce SIG OUT level.

Set your console input to "line level" and turn the "trim" or "gain" knob (usually at the top of the channel) to minimum, or use a separate line input if available (which usually matches the 1/4" TRS cable). To confirm gain-staging when using the PRE setting, establish a mild chewy overdrive, using a speaker at low Master levels, and confirm that there is no harsh input overload distortion when monitoring through the console. Especially when using FULLQ or VINT settings, the guitar speaker and workstation monitors should sound fairly similar both clean and distorted.

If the amp is played through a speaker at normal stage volumes (to get feedback or a more exciting performance), the XLR Direct Out on the back may also be a good alternative, and should go to a Mic input. This signal uses the speaker as part of an "organic" cab-sim system and doesn't sound as good without a speaker load.

For live performance the "PRE" setting allows musicians to change stage volume in their speaker without altering the house volume, which will make the sound operator very happy. This may well be a good setting for recording as well, since the Master can be turned up slightly into a speaker to monitor just the guitar.

*Pro Tip: to record silently with headphones, plug them into the workstation since you will use the SIG OUT as a guitar-signal feed.*

For silent practice, switch the Pre Post switch to POST, plug headphones into the SIG OUT jack, and don't connect a speaker. Adjust headphone volume with the MASTER. Tracks may be inserted into the FX RETURN as described in that section above.



## CARING FOR YOUR AMPLIFIER:

Clean the outer surfaces with a clean, damp cloth or vacuum with a soft brush. Avoid abrasives, harsh cleaners or solvents. The padded carrying case will protect your amp when transporting.

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 use overdrive at high Master volumes, use multiple loudspeakers to share the load, and protect your hearing.

Quilter amplifiers are 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 dangerous voltages inside the enclosure, and no user-serviceable parts inside. Any repairs should be performed by a trained service professional.





## SPECIFICATIONS:

<b>ELECTRONIC PERFORMANCE</b>	
INPUT	¼" Mono, 2 meg impedance, 1.5-5Vpk (depending on EQ)
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, 2V full scale
HEADPHONE (POST)	¼" TRS, 40 ohms each channel, 0-6Vpk (depending on Master)
DIRECT OUT	XLR, 0-300mV full scale (per Master), balanced, 600 ohm gnd lift
SPEAKER OUT	0-200W (depending on Master setting), 8 ohms lower jack, 4 ohms upper jack, 8+8 ohms both jacks
AC POWER	100-240Vac, 50-60Hz, 300W maximum
<b>DIMENSIONS</b>	
H x W x D	Height: 2.75" (+ 0.4" feet)(6.99cm+1cm feet) Width: 8.6" (21.8cm) Depth: 7.3" (18.5cm)
WEIGHT	4 lbs (1.8kg)

## 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 CUTS OUT	<ul style="list-style-type: none"> <li>• If the power LED goes out, check AC connections for looseness or tripped breakers.</li> <li>• If the power LED stays on, check all audio connections for bad cables or devices.</li> <li>• If amp overheats severely, audio will reduce power and then cut out if not corrected. Audio should resume when cooled down.</li> </ul>
NO AUDIO (USING A GUITAR)	<ul style="list-style-type: none"> <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> <li>• If headphones work normally on POST, check speaker and speaker cable.</li> </ul>

## TROUBLESHOOTING:

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>• GENTLY wiggle any cable connections. Replace any that fluctuate when touched.</li> </ul> <p><b>If the hum goes away when you turn down the guitar:</b></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. Some guitars have a mode where two pickups are in reverse polarity to each other. This mode can often reduce hum.</li> <li>• Check that the guitar's cavities are well shielded.</li> </ul>
EXCESSIVE NOISE	<ul style="list-style-type: none"> <li>• At high gain settings, some audible hiss or whoosh is normal.</li> <li>• Check your cables, guitar and other effects in the signal chain, especially for hum or buzz.</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> <li>• Try plugging instrument directly into the amp, bypassing outboard processing. If sound is then clean, check outboard processing for problems.</li> </ul>
DESIRE CLEAN TONE, GETTING TOO MUCH OVERDRIVE	<ul style="list-style-type: none"> <li>• Turn down the GAIN and turn up MASTER.</li> <li>• Unplug FX LOOP, and plug straight into amp. If this relieves distortion, track down the external cause.</li> <li>• If headphones sound clean, the speaker may be bad.</li> </ul>
NOT GETTING ENOUGH OVERDRIVE	<ul style="list-style-type: none"> <li>• Turn down MASTER, increase GAIN, and turn GUITAR up fully.</li> <li>• Turn down LIMITING, which limits overdrive.</li> <li>• Increase EQ settings, especially if they are all below "5"</li> </ul>
HEADPHONE LOUD, ONLY IN ONE EAR.	<ul style="list-style-type: none"> <li>• Set PRE switch to POST to drive both sides. MASTER now controls volume.</li> </ul>
<p><b>AMPLIFIER REQUIRES SERVICE</b></p> <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 (Wall breaker)</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).**

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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