

Limited warranty

This product is guaranteed to be free of functional defects for a period of 1 year from original purchase date. Proof of purchase is required for any warranty claim. Return shipping costs are covered by Boredbrain Music within the first 30 days of purchase only. Products with obvious signs of abuse or that have been modified by the end user, may not be covered under this warranty, at the discretion of Boredbrain Music.

service & inquiries

If you experience a problem with your Boredbrain product, or just want to share something interesting with us, please contact us at the link below and be sure to include your name, original purchase date, and a description of the problem you are experiencing. Then just hold tight, as we return most inquiries within 48 hours. We want to work with you to resolve your issue as soon as possible. Thanks.

boredbrainmusic.com/contact

Designed and Built in Richmond, VA USA



calibration procedures

PEAK LED INDICATOR

Using a 1/4-inch headphone adaptor, plug a 1 kHz sine wave or similar source signal into the INST IN jack. Turn the DRIVE knob down to about 1. Use an oscilloscope to measure the peak-to-peak voltage from the OUT jack, and set the LEVEL knob so the signal output is exactly 10 Vpp. Now adjust the PEAK LED trimpot on the module's right side until the RED LED just barely turns on.

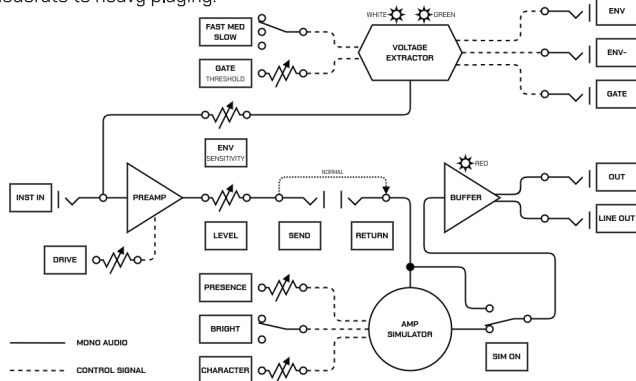
ENVELOPE ZERO VOLTAGE

Unplug or mute your instrument from the INST IN jack. Adjust the ENV ZERO trimpot on the module's left side until the WHITE LED just barely turns off. You can also precisely measure the voltage from the ENV jack and adjust the trimpot until it outputs exactly 0 V.

Instrument Preamp

Injectr's high-impedance instrument input, **INST IN**, feeds straight into a variable gain circuit which can produce a range of tonal responses, from clean to heavily overdriven. The smooth character of the **DRIVE** parameter is made possible by a soft-clipping topology using a classic 4558 op amp and four diodes, two silicon and two germanium.

A post-drive **LEVEL** control is provided to trim the output of the preamp stage, which is accompanied by a **RED LED**, indicating that the signal is reaching the typical eurorack audio level of 10 Vpp. Because stringed instruments tend to have strong transients, it is suggested to adjust the **LEVEL** control so that the LED is illuminated with moderate to heavy playing.



CV Extractor

Buffered directly from the instrument input is a responsive envelope follower circuit, which produces a control voltage signal at the **ENV** output jack based upon the input's volume dynamics. The **ENVELOPE** parameter adjusts the sensitivity of the circuit, depending on how the instrument is being played. The adjacent **WHITE LED** is a visual indicator of the envelope follower's output. The switch labeled **SLOW MED FAST** selects the follower's response time, affecting both the rise (attack) and fall (release). An inverted copy (negative going voltage) is present at the **ENV-** output jack.

Additionally, a 0-5 V gate control signal is present at the **GATE** output jack, which is derived from the envelope signal and is indicated by the **GREEN LED**. The sensitivity of the gate extractor circuit is adjusted using the **GATE** parameter, and essentially sets the threshold at which the gate signal is triggered on and off.

boredbrain injectr

Injectr is a fully-equipped electric guitar and bass interface for eurorack synthesizers. The module features an overdrive-capable preamp, versatile amp simulator, and control voltage extractors designed to inject stringed instrument signals directly into the modular environment.

- High-impedance input for electric instruments
- Preamp drive circuit with germanium diodes
- Amp simulator with analog tone shaping controls
- Envelope follower and gate voltage extractors
- Dedicated eurorack-level FX loop
- Eurorack and line-level audio outputs

technical specs

- **Width:** 11 HP
- **Depth:** 1.06 in [27 mm]
- **Weight:** 4.5 oz [128 g]
- **Input impedance:** 1 M ohms
- **Power:** +12 V 38 mA, -12 V 30 mA



injectr

ELECTRIC GUITAR INTERFACE

USER GUIDE

Amp Simulator

One of Injectr's most useful features is the Amp Simulator circuit. Using a complex arrangement of analog filters, it imparts an amplifier-like quality to the signal.

The **CHARACTER** parameter alone can dramatically alter the sound, giving the user combined control over the middle "dip" frequency and bandwidth. The **PRESENCE** parameter adjusts the low-end response, thickening or thinning the overall tone, whereas the **BRIGHT** switch enhances high frequencies. In combination with pickup selection and tone controls of the guitar itself, these parameters provide a wide range of tones all while staying within the eurorack system. If preferred, the Amp Simulator can also be toggled off by disengaging the **SIM ON** switch.

FX Loop

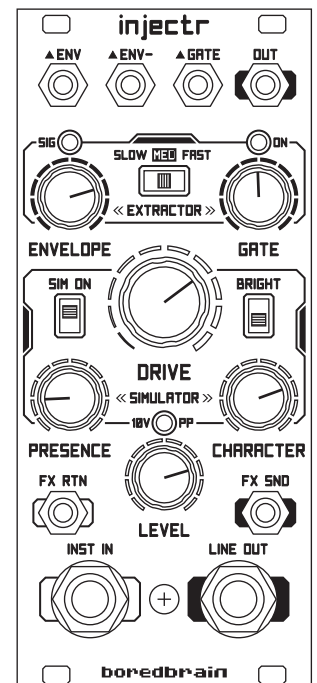
The module is equipped with a eurorack-level effects loop, **FX SND** and **FX RTN**, serving as an access point to process the signal after the Preamp/Drive circuit but before the Amp Simulator. It is also useful to process the signal with eurorack modules before taking the signal back out using the **LINE OUT**.

High-gain modules such as overdrive/distortion and intense compression may cause unwanted feedback in the FX Loop, and so are best patched after Injectr from the **OUT** jack.

Outputs

The **OUT** jack provides a post-simulator eurorack-level audio signal, which is useful when it is to remain in the system to be processed or mixed with other signals.

The **LINE OUT** jack provides the same signal at line-level, which is suitable for sending the signal out to external gear, interfaces and amplifiers.



11 HP