

# SQUARE STATE SOLID STATE EQUALIZER MODEL 1B USERS MANUAL

REVISION 1.0  
NOVEMBER 6, 2009

## 1 Welcome

Thank you for purchasing the Square State Solid State Model 1B equalizer. We are sure you will find it to be a useful sound shaping tool.

## 2 What's in the package

Contained in the package you will find the following

- The Model 1B equalizer unit.
- A 15 VAC external power pack.
- This manual.

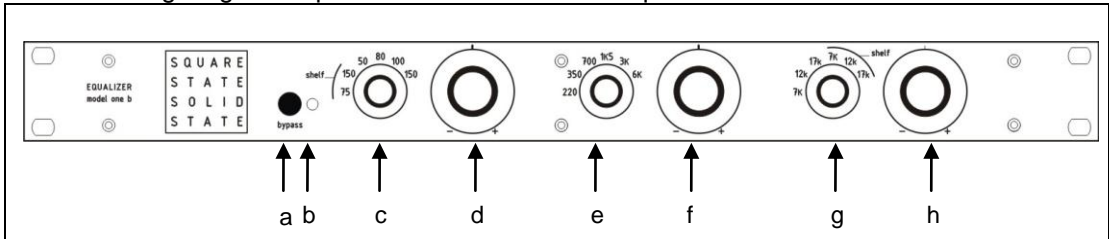
## 3 Quick Overview

The Square State Solid State Model 1B is a single channel, three band equalizer housed in a 1 RU chassis. The equalizer stages are comprised of inductor-capacitor filters, components commonly found in classic EQs. The EQ offers 6 frequency selections per band, each offering roughly 20 dB of cut/boost. The bell-shaped (bandpass) response curves are broader than similar equalizers, lending themselves to a very musical sound. Additionally, the high and low frequency bands offer both shelving and bell responses. Using the bells on the high and low frequencies allows the operator to address a more specific sonic region than a shelving filter – on the low end, the “boom” or “guts” frequencies can be boosted without increasing “rumble” or “mud.” Similarly, the highs can be “clear” without becoming “glassy.”

The Model1B is well suited to experimentation. It is easy to get to know the controls by running prerecorded tracks, such as CDs or MP3s, through it. Select a frequency with one of the small knobs then listen to the effect of turning the corresponding large knob. The small knob selects a portion of the audio spectrum, and the large knob affects a cut or boost of that portion. While many equalizers impart a sound that has led to the “cut only, never boost” guideline, we think you’ll be pleased by the musical boost offered by the Model 1B.

## 4 Front Panel Details

The following diagram explains the controls on the equalizer.



- Bypass pushbutton switch.
- Power/bypass LED indicator. Orange indicates the unit is bypassed, green means active.
- Low frequency selection knob. The 2 furthest counterclockwise positions are shelving filters, the other 4 are bells.
- Low frequency cut/boost knob. Rotate clockwise from the 12 o'clock position to boost the selected frequency, counterclockwise to cut.
- Mid frequency selection knob. All 6 positions are bell shaped filters.
- Mid frequency cut/boost knob. Rotate clockwise from the 12 o'clock position to boost the selected frequency, counterclockwise to cut.
- High frequency selection knob. The 3 furthest clockwise positions are shelving filters, the other 3 are bells.
- Low frequency cut/boost knob. Rotate clockwise from the 12 o'clock position to boost the selected frequency, counterclockwise to cut.

## 5 Rear Panel Details

From left to right, the rear panel offers the following connections:

- Power connector – this is a 2.1mm connector for connecting a wall-mount 15 VAC style external power supply. Should the original transformer be lost, please contact Square State Solid State to order a replacement. Please be aware that while they will not damage the unit, it will not function properly with common DC supplies.
- Input connector – electronically balanced input on TRS connector.
- Output connector – impedance balanced output on TRS connector

## 6 Connections

The input and output on the Model 1B are both balanced on ¼" TRS connectors.

## Equalizer Model 1B Manual

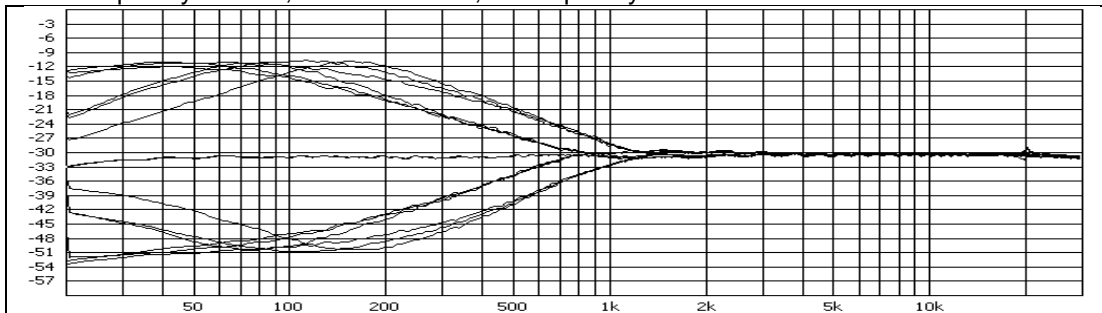
- For balanced operation, use a TRS connector wired such that the + signal is on the tip and the – signal is on the sleeve.
- For unbalanced connections, use a TS connector (or TRS with the ring tied to ground).
- It is possible to run the input balanced and the output unbalanced (or vice versa).

## 7 Specifications

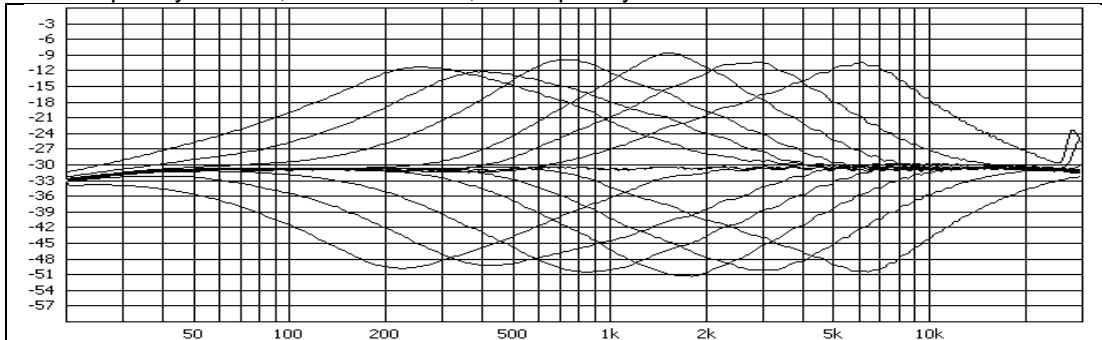
- Size – standard 1 unit rack enclosure: 19" wide, 1.75" tall, 6.375" deep overall (5.375" behind mounting rails).
- Weight – Approx 5 pounds.
- Connectors
  - Audio on standard balanced ¼" TRS connectors.
    - Electronically Balanced Input: 10K Ohm input impedance, each leg to ground.
    - Impedance balanced output: 47 Ohm Output impedance.
  - Power: 2.1 mm barrel connector for 15 VAC transformer.
- Controls
  - Bypass switch with LED
  - Low Frequency Band
    - Filter selector switch offering
      - 75 Hz and 150 Hz low shelving filters
      - 50 Hz, 80 Hz, 100 Hz and 150 Hz bell filters
    - Continuously variable cut/boost control, approximately +/- 20 dB range.
  - Mid Frequency Band
    - Filter selector switch offering
      - 220 Hz, 350 Hz, 700 Hz, 1.5 KHz, 3 KHz and 6 KHz bells
    - Continuously variable cut/boost control, approximately +/- 20 dB range.
  - High Frequency Band
    - Filter selector switch offering
      - 7 KHz, 12 KHz and 17 KHz bells
      - 7 KHz, 12 KHz and 17 KHz high shelving filters
    - Continuously variable cut/boost control, approximately +/- 20 dB range.

## 8 Frequency Response Plots

Low frequency section, full cut & boost, all frequency selections overlaid.



Mid frequency section, full cut & boost, all frequency selections overlaid.



High frequency section, full cut & boost, all frequency selections overlaid.

