MMSR 3 Knob 2 Band

MM Style Volume, Bass & Treble Preamp

The BTB-MMSR has been designed with characteristics very similar to the original MM Stingray© 2 Band EQ, but is not a copy of the original circuit. The original used a single op-amp chip (single amplifier stage in the form of a chip) for both bass and treble circuits, whereas this unit utilises a moremodern dual op-amp chip (two amplifiers stages in a chip).

- **BASS & TREBLE CONTROLS**

  The design of the 2 band EQ in the early Stingray© basses is unusual in that it does not follow the types of topologies around which the majority of equalisers are designed. It would seem that Leo Fender designed it to create a particular sound rather than follow any conventions, such as symmetrical EQ curves. Consequently the figures shown may appear unusual to those familiar with such specifications. In fact it's not easy to portray what this EQ does with a few numbers, but in any case some figures, based around a flat response input signal, are quoted as reference points.

  NOTE: *Like the original, this circuit does not have a flat response when the controls are set midway. This unit is not designed as a clinical tool, where what goes in, comes out at some reference setting.*

- **TREBLE (+20dB / -16dB @ 10 kHz)**

  There is more boost than cut, giving rise the characteristic 'sizzle' associated with the Stingray© style of EQ.

- **BASS (+14dB / -7dB @ 40Hz)**

  The bass control has a little more boost than the original. The boost curve continues to rise towards the lower frequencies, without flattening out at any frequency within the normal bass guitar range. Conversly the cut characteristic is shelving, having an essentially flat response from 30 - 100Hz, when fully cut.

- **VOLUME**

  Sets the level from the preamp, feeding the output jack directly, like the orignal. This means that the pickup feeds the preamp directly, allowing the best possible transfer of signal, and full interraction of the pickup with the preamp.

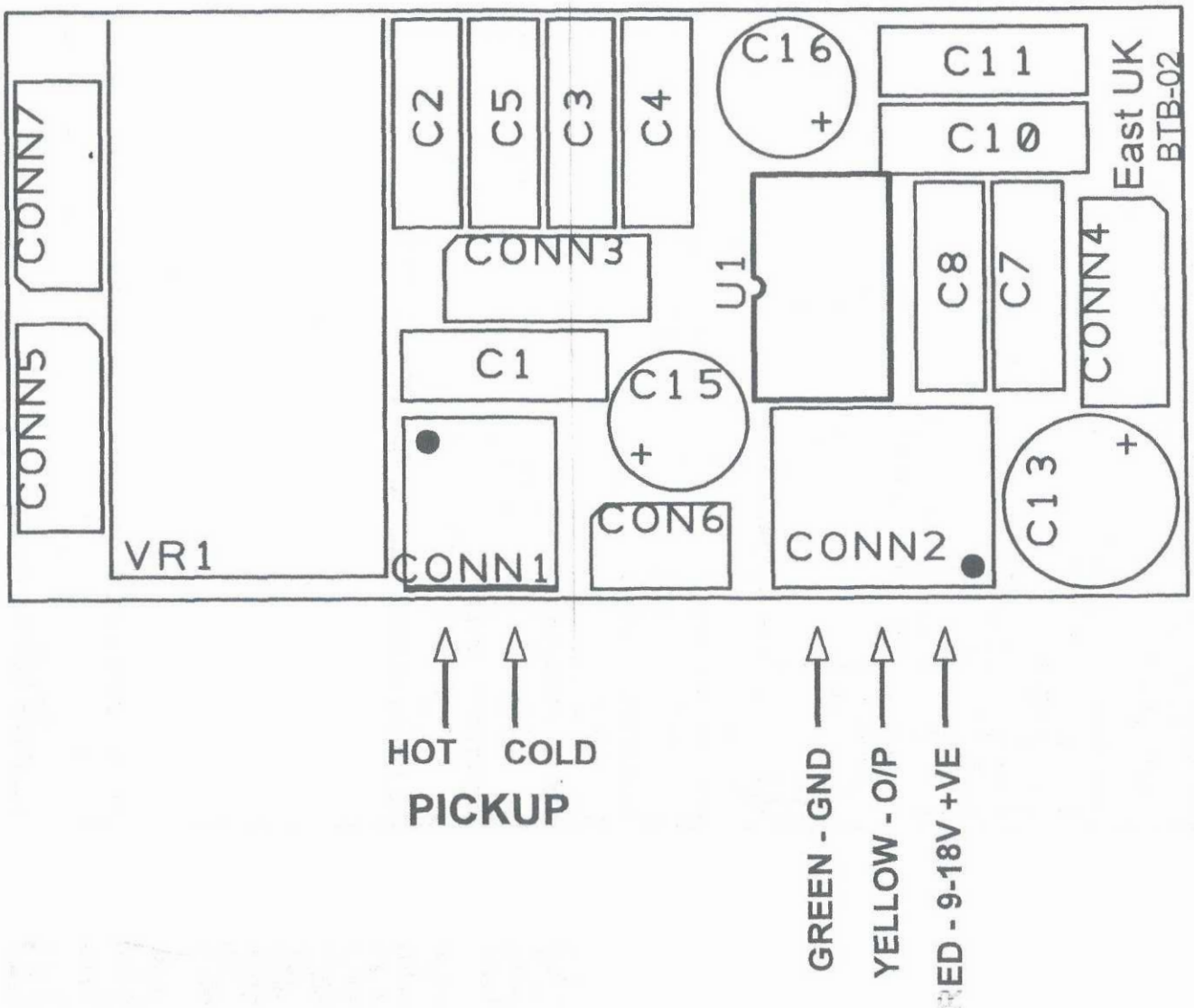
- **POWER**

  This unit can be powered from 9 - 18 Volts DC.

- **INSTALLATION**
  - The pots aremarked: V = Volume, B = Bass, T = Treble
  - The pot threads are 7.0mm size. Fit them into their holes leaving the rubber spacer rings in place if the holes are the original larger size. Tighten them once they are in place.
  - Mount the preamp on the rear faces of the bass and treble pots using the foam tape on the rear of the preamp.
  - Connect the pickups wires to the bass/treble circuit board, according the the BTB-MM diagram.
  - A battery clip is provided with the preamp allowing it to be powered directly. But most basses will have a separate battery compartment. In which case, cut of the battery clip and join the red and black wires from the the preamp to those in the bass. Before joining the wires, slip the heatshrink sleeves over the joints. The sleeving can be heated with a hot soldering iron, or other localised heat source, held in close proximity. (The heatshrink sleeves can be found threaded on the black ground wire)
  - Connect the black ground wire from the jack to any ground wires in the bass, such as the bridge.

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BTB MMSR 02


CONN7
CONN5
VR1
C2
C5
C3
C4
C16
C11
C10
East UK
BTB-02
CONN3
U1
C8
C7
CONN4
C1
C15
C13
CON6
CONN1
CONN2
HOT
COLD
PICKUP
GREEN - GND
YELLOW - O/P
ED - 9-18V +VE