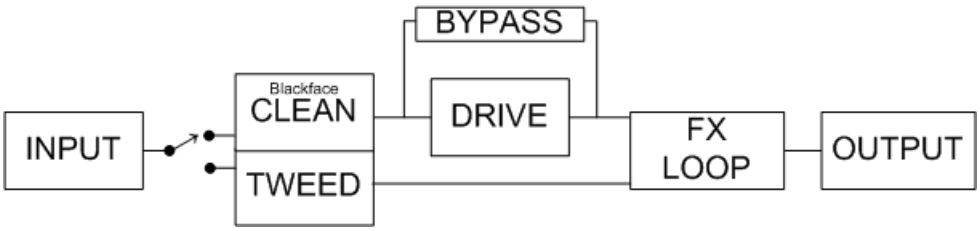
- Amps That Sing -

BTS2 – BlackTweedSpecial Version2 /CDS2 Operations Manual

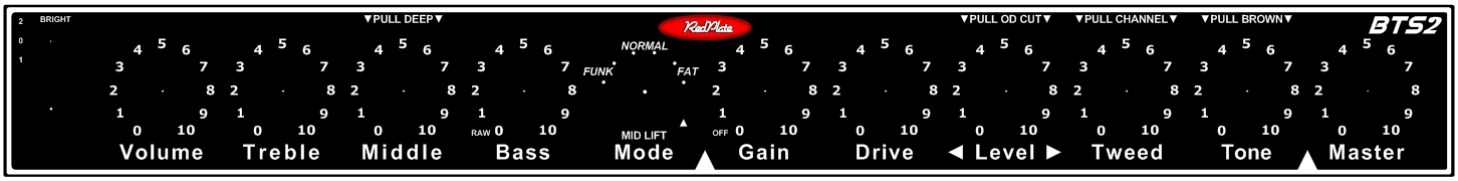
Welcome to the RedPlate Family, thank you for your purchase of a RedPlate BTS2 amplifier. Please take a moment and review this manual for an understanding of all the available features (or just connect the footswitch, put all the knobs at noon and play).

This Manual applies to BTS2 models produced after 11/1/2012.

Signal Path Block Diagram:

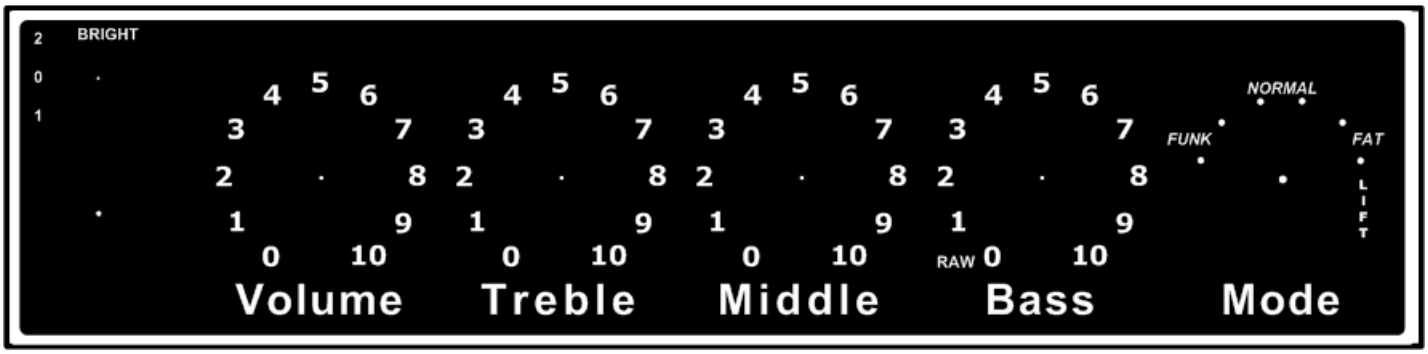


FRONT PANEL:



Input Jack – Typical High impedance input to the amplifier. Designed to be “Pedal Friendly” in the unlikely event you will ever use a pedal in front of the BTS2.

CLEAN PREAMP SECTION



The Clean Preamp is designed to imitate (and surpass) all of the "classic" guitar amp preamps. The BTS2 Mode control gives the player the ability to shift midrange center point frequency.

Bright Switch – Center = OFF, Down = sound of new strings, Up = normal Bright response.

Volume – Typical setting is between 3 and 5 but experimentation is encouraged.

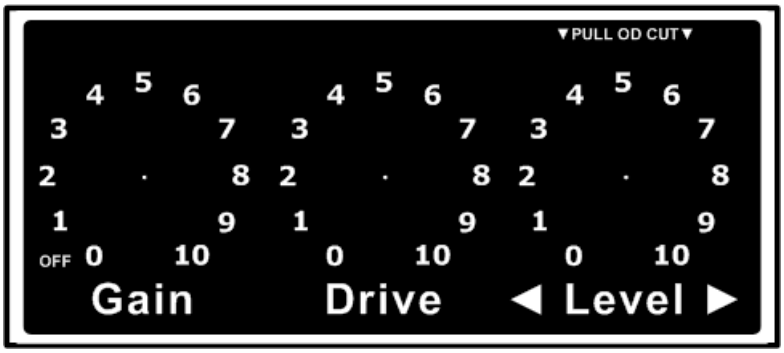
Treble Control - Adjusts highs (also upper midrange when the Boost footswitch is engaged, see the **Other Features** section of this manual for details).

Middle Control – Controls the amount of Midrange frequencies, somewhat interactive with the Bass Control. Pulls for even more scoop of the mids to make your electric sound like an acoustic.

Bass Control – Sets the amount of low end. Can be rotated to zero where it clicks off for a full tone stack lift.

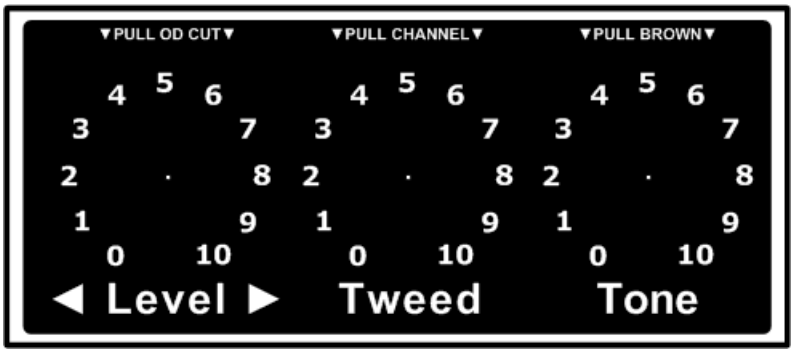
Mode Selector – A six position rotary switch, it steps through 5 progressively fatter positions of the midrange center frequency and achieves maximum fat midrange by lifting the Middle control in position 6.

DRIVE SECTION



The Drive section controls the amount of character to add to the Blackface channel's tone. The section's range of effect can be just a hint of early break up or a full on aggressive heavy metal distortion.
Gain Control –This control sets the amount of signal for the first gain stage of the section. Low settings are smoother and higher settings are more aggressive. When you rotate this control to zero it bypasses the overdrive section. Overdrive will *not* engage when the Tweed channel is manually enabled on the front panel.
Drive Control – Sets the amount of distortion by controlling the level between the 2 gain stages of the section. The interaction of the Gain and Drive controls affects the tone of the overdrive.
Level Control – Sets the output volume of the section. This control is shared with the Tweed Preamp. Pull this control to engage a high frequency roll off that only affects the overdrive tone.

TWEED SECTION



The Tweed Preamp is based on the classic Tweed Style design with two important differences:
1. Gets into the "sweet spot" at various volume levels for consistency of tone and character in both small and large venue sizes.
2. Can also imitate the soft breakup and rounded midrange of the Brownface era amplifiers.

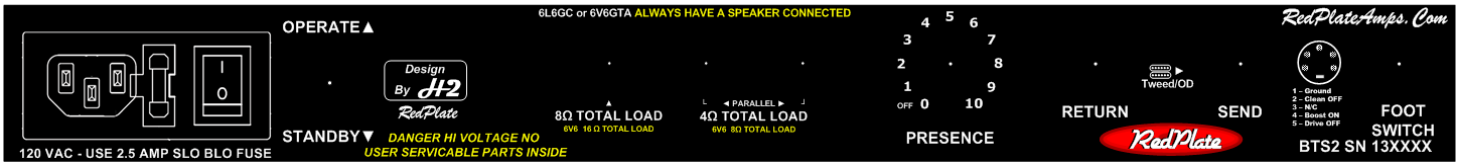
Level – This control sets the overall volume of the Tweed channel, its function is shared with the overdrive section.
Tweed –This control sets the "sweet spot" – adjust this for the amount of break up character you desire in your tone. Typical setting is between 5 and 8 but experimentation is encouraged. Pulls to enable the Tweed channel (handy when you don't have the footswitch connected) Enabling the Tweed Channel from the panel disables the overdrive.
Tone – Treble is emphasized at settings past 5, more bass at the lower numbers. When pulled it shifts the preamp into Brown mode. This tone control is lifted for a treble/volume increase when the Boost Button is pressed on the footswitch (see the **Other Features** section of this manual for details).

MASTER SECTION

Master Volume – This is an active control and actually adds gain at the higher settings. The cleanest tones are achieved at settings below 7. Pulls to enable a lower range for bedroom levels.
Presence Control – See the next section of this guide (Rear Panel).

REAR PANEL SECTION

Domestic (USA):



IEC Module – contains the main power switch, power cord inlet connector and the fuse drawer. To access the fuse(s) use a small flat blade screwdriver in the notch at the side of the power cord inlet connector, the drawer snaps out in a rearward direction. The BTS2 uses the smaller European (5mm X 20mm) sized fuses (also called GMA fuses). A time delay variety (SLO-BLO) is recommended.

Standby Switch – This switch allows the tubes to warm up before operating the amplifier. Wait 1 minute after power on to move it up to the operate position. For improved tube life and performance do not leave the amplifier in Standby position for longer than 20 minutes (better to just leave it in operate mode during performance intermissions).

Speaker Jacks – The amplifier has 3 speaker jacks. For typical operation with 6L6GC tubes there is one 8 OHM total load jack and two jacks in parallel for a 4 OHM total load. The 4 OHM jacks are wired in parallel so it doesn't matter if you use one or the other or both as long as the total equals 4 OHMS. Do not use the 8 OHM jack if either of the 4 OHM jacks are in use. If you have the combo version and want to add an 8 ohm extension cabinet plug the internal speaker into one of the 4 OHM jacks and the extension cabinet into the other 4 OHM jack. When 6V6GTA tubes are used the jacks become one 16 OHM total load jack and two jacks wired in parallel for an 8 OHM total load. ALWAYS HAVE A SPEAKER CONNECTED TO AVOID PERMANENT AMPLIFIER AND OUTPUT TUBE DAMAGE.

Presence Control – The presence circuit uses global negative feedback to remove low frequencies which frees up bandwidth for more midrange and highs. Think of it as a tone control to balance the relationship between highs and lows, especially when the amplifier is naturally producing increased low end at louder volumes. The control clicks off when rotated to zero for no presence.

SEND and RETURN Jacks – The send jack connects to the input of an external effects device and the return jack connects to the output of an external effects device. The send jack can also be used as a preamp out. The return jack interrupts the signal path so the external effects unit must mix the wet and dry signals. The return jack can also be used as a power amp in jack for slave applications. The Master and Presence controls are still active.

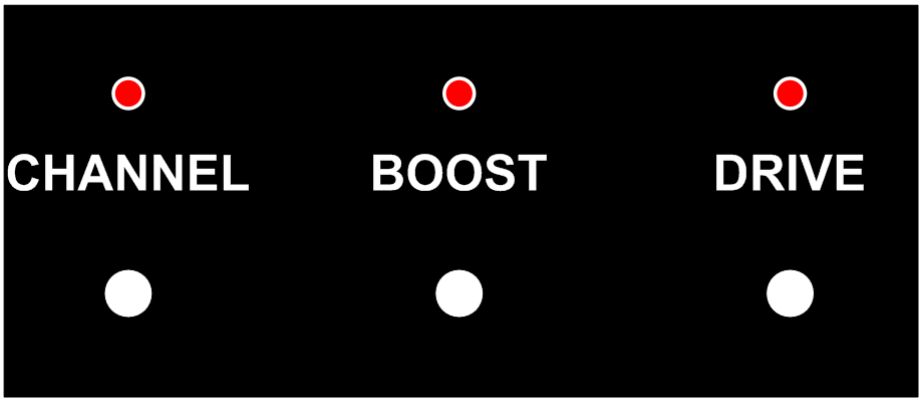
Tweed/OD  **Switch** – Reduces the girth and lightens the tone of the Tweed preamp and Overdrive functions. Useful for higher output pickups which may contribute to too much bass gain when using the Tweed or Overdrive channels.

Footswitch Jack - This is a standard 180 degree 5 pin DIN jack for footswitch connection. If a replacement cable is needed, make sure all 5 wires are supported. The pinout is conveniently located on the rear panel for use with automated switcher conversion boxes.

OTHER FEATURES

The BTS2 comes complete with a 3 button footswitch and a footswitch cable. The cable used is a regular MIDI cable and replacements are readily available in any length at most music stores.

FOOTSWITCH



For proper footswitch operation make sure the front panel Gain control is not at zero and the front panel Tweed control is not pulled.

CHANNEL – Switches between lit for Clean (Blackface) and unlit for Tweed channels. If the Tweed channel is enabled it will automatically be switched back to Blackface when the Drive button is lit and revert back when the Drive button is unlit. Channel will not be switched if the front panel Tweed control is pulled.

BOOST – Does 2 separate functions that are only available when using the footswitch.

1.When lit, the Blackface channel gets a Midrange Boost that increases the size of the treble capacitor allowing more upper midrange to flow through the Treble control. Great for the fat smooth overdrive tones.

2.When lit, The Tweed channel gets a stack lift which increases the volume and highs of the Tweed channel. The Boost is less effective at high settings of the Tone control.

DRIVE – Overdrive feature. When lit, the Drive section of the amplifier is active, not lit, means the section is bypassed. The footswitch button does not work when the front panel Gain control is rotated to zero because it is a duplicate function. Drive cannot be enabled if the front panel Tweed control is pulled.

POWER ON/OFF PROCEDURE

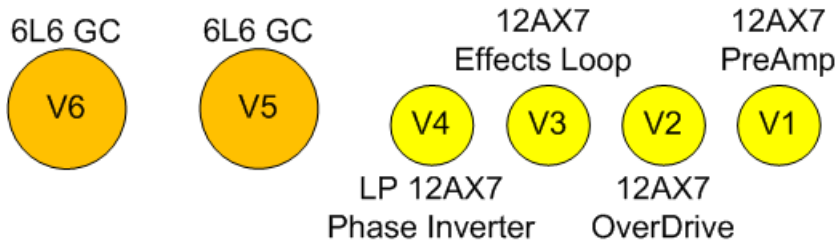
1. Check the Standby switch to make sure it is toggled downward for Standby operation.
2. Toggle the main power switch to the up position (this switch is located at the edge of the IEC input module). The front panel pilot light should be lit.
3. Wait one minute and then toggle the Standby switch upwards to the Operate position.
4. POWER OFF – Toggle the main power switch downward, there is no need to go into standby first although it will not hurt anything.

MAINTENANCE SECTION

Your BTS2 amp has been designed for years of trouble free operation. The vacuum tubes will need to be replaced over time. We recommend new output tubes every 160 - 240 hours and new preamp tubes every 320 - 480 hours.

The front and rear panels have a protective finish that can be easily scratched with abrasives so always use a damp soft cloth to clean them (never use paper towels). The cabinetry can be cleaned with our super secret tolex cleaner (on a paper towel - 2 squirts of WD-40 and 4 squirts window cleaner), let your keyboard player try it on his plastic keys, it replicates the feel of a brand new keyboard.

TUBE CHART



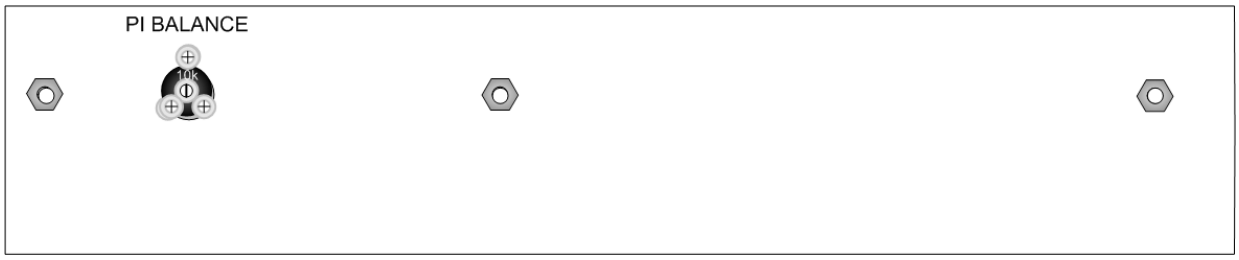
All tube brands are acceptable, a long plate is preferred in the V4 (Phase Inverter) position. The Overdrive tube is also the Tweed preamp tube. 6V6GTA can be substituted for the 6L6 GC tubes for less wattage but do not mix the 2 types.

Warning – No user serviceable parts inside so unless you know what you're doing please refer to a qualified service person only.

BIAS PROCEDURE

The BTS2 is a cathode biased amp so no biasing is required.

INTERNAL TRIM POT



The BTS2 has 1 internal trim pot for the PI Balance – Useful for working with unmatched 12AX7 tubes in the phase inverter position. Refer to qualified personnel for proper setting.

RedPlateAmps Warranty

At RedPlateAmps we pride ourselves making products that are built to last. The workmanship in your RedPlate amplifier is warranted to be problem free for the lifetime of the original owner. The actual electrical components in your amplifier are warranted for a period of 3 years. Exclusions are vacuum tubes, reverb tanks, cables, speakers and cosmetics which are warranted for 30 days. Improper handling, product misuse, product abuse, unauthorized repair work or unauthorized modifications may nullify your warranty. Eligibility for coverage and covered items are at the sole discretion of RedPlateAmps.

RedPlateAmps
www.RedPlateAmps.com
email: info@RedPlateAmps.com

Thanks again for joining the RedPlate Family – Henry