

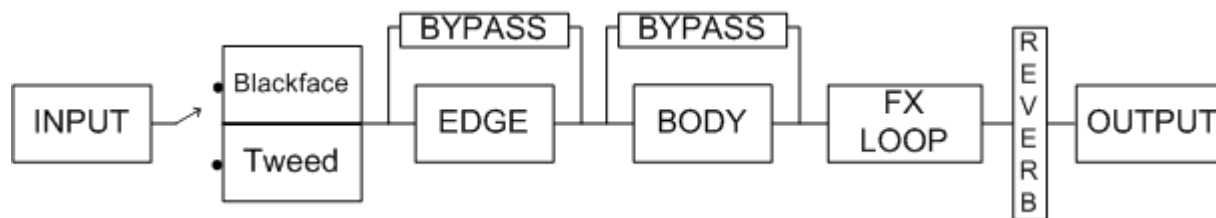


- Amps That Sing -

RP50DUO (RP50D) Operations Manual

Welcome to the RedPlate Family, thank you for your purchase of a RedPlate RP50D amplifier. Please take a moment and review this manual for an understanding of all the available features (or just put all the knobs at noon and play). This Manual applies to RP50D models produced after 02/01/2014.

Signal Path Block Diagram RP50D:



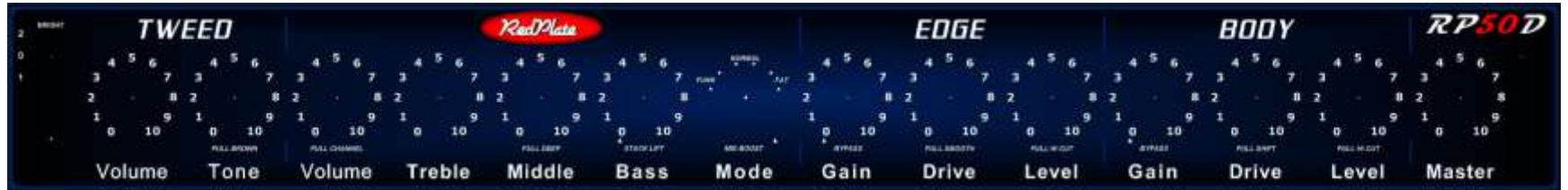
FRONT PANEL:



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 RP50D.

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

TWEED PREAMP SECTION



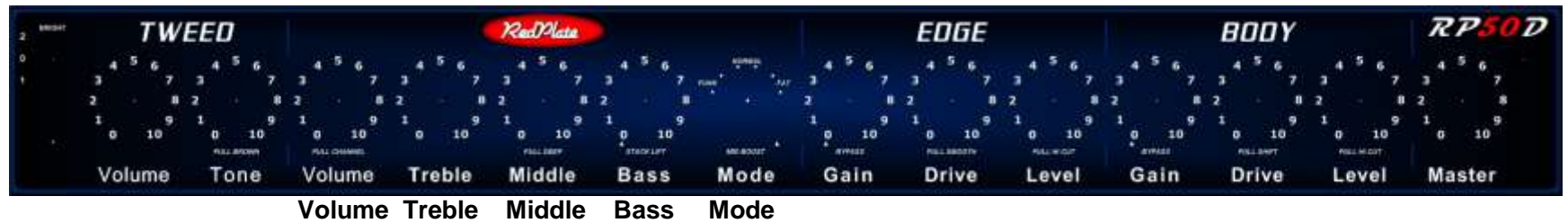
Tweed Volume & Tone

The first 2 controls make up the Tweed Preamp section which is designed to produce the classic Tweed tone.

Volume – This control sets the break up point and volume level of the Tweed channel.

Tone – Treble is emphasized at settings past 5, more bass at the lower numbers. When pulled it reduces girth for the Brownface era tone. The tone control can be bypassed for a girth/volume jump by pressing the Boost button on the footswitch (see the **Other Features** section of this manual).

BLACKFACE PREAMP SECTION



Volume – Volume level for the Blackface preamp. Pulls to enable the channel when the footswitch is not connected (see the **Other Features** Section of this manual).

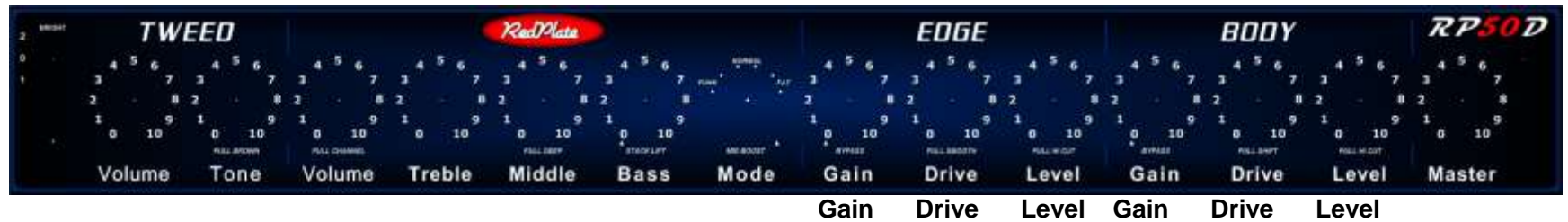
Treble Control - Adjusts highs (also upper midrange when the Mid Boost is engaged).

Middle Control – Controls the amount of Midrange frequencies, somewhat interactive with the Bass Control. Pulls to enable “Deep” which scoops some midrange frequencies and emphasizes Bass (makes your electric sound more 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 adds an upper midrange boost for even more midrange in position 6.

DRIVE SECTIONS



The Drive sections controls the amount of character to add to the preamp tone. Edge is a more rock flavored overdrive and Body is a smoother overdrive. Both section’s range of effect can be set for just a hint of early break up or a full on aggressive distortion.

Gain Control – Bypasses the section when rotated to zero, 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.

Drive Control – Sets the amount of distortion by controlling the level between the 2 gain stages of the section. EDGE - Pull this control to reduce treble gain in the stage. BODY - Pull this control to shift into more gain and girth for the distortion (SHIFT).

Level Control – Sets the output volume of the section. Higher settings are “bigger” and more 3 dimensional. EDGE and BODY - Pull the control for a reduction of extreme highs (HI CUT feature).

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.

REAR PANEL SECTION

Domestic (USA):



Export:



IEC Module – contains the main power switch, power cord inlet connector and the fuse drawer which doubles as the voltage selector on export models. To access the fuse(s) use a small flat blade screwdriver in the notch at the bottom of the power cord inlet connector, the drawer snaps out in a rearward direction. The RP50D can accept both the larger (3AG footprint) or smaller European (5mm X 20mm) fuses. A time delay variety (SLO-BLO) is recommended. A fuse in the range of 2.5 to 3 Amps is fine for domestic use (110 – 125 VAC) and 1.25 to 1.5 amps is fine for Export use (220 – 240 VAC). The fuse drawer can be rotated on the export models for voltage selection, make sure the correct value fuse is located on the same side of the fuse drawer as the desired selection arrow. Line up the appropriate arrow on the fuse drawer with the arrow on the bottom right of the module for the proper VAC selection.

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).

FIXED/CATHODE (50 WATT / 40 WATT) Switch – This switch changes the bias architecture of the output tubes from fixed bias (50 WATT) to cathode biased (40 WATT). The 40 WATT position allows the use of 6V6 tubes for lower power output (~18 Watts with 6V6).

Bias adjustment and bias test point – Allows external access for bias adjustment (see bias procedure in the **Maintenance** section).

LINE OUT – A line level signal jack derived from the speaker output which contains the whole tone of the amplifier.

Speaker Jacks – The MAIN and EXT jacks are wired in parallel. The MAIN jack must be used first because it has a protection device. ALWAYS HAVE A SPEAKER CONNECTED TO AVOID PERMANENT AMPLIFIER AND OUTPUT TUBE DAMAGE.

Impedance Selector Ω - Set this to the total impedance of all attached speakers.

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 return jack interrupts the signal path so the external effects unit must mix the wet and dry signals.

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.

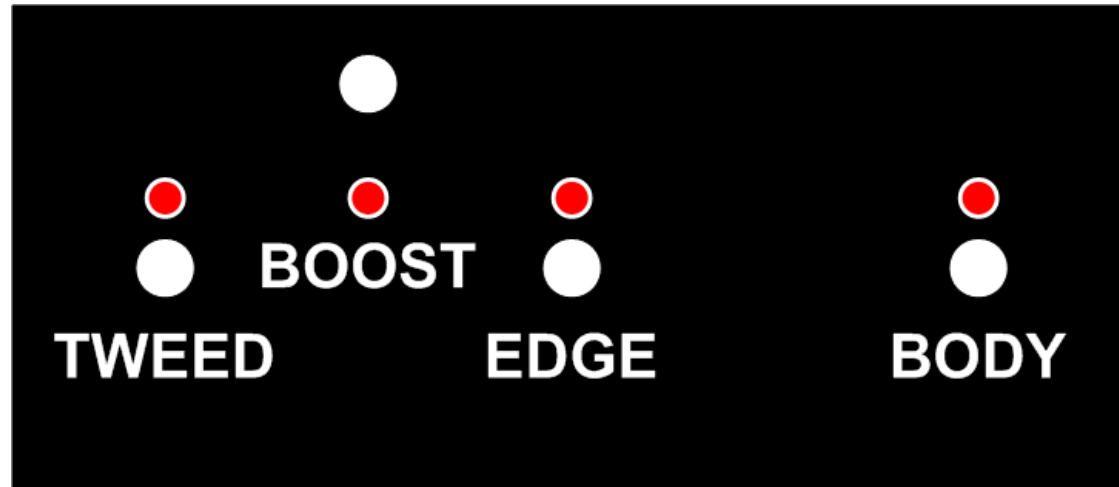
Reverb Control - Sets the amount of reverberation effect, takes the reverb out of circuit when rotated to zero (there will be a slight volume and tone change).

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.

Fat/ Humbucker / Single coil Switch – Sets the amount of bass gain in the input of the clean preamp stage, useful for matching the amplifier to the guitar type.

OTHER FEATURES

The RP50DUO comes complete with a footswitch and a footswitch cable. The cable used is a regular MIDI cable and is readily available in any length at most music stores.



TWEED – When engaged (lit) the guitar input is routed to the Tweed channel. The footswitch button does not work when the Blackface Channel’s volume control is pulled because it overrides the footswitch.

EDGE (Drive1) – Character Boost feature. When lit, the Edge Overdrive section of the amplifier is active, not lit, means the section is bypassed. The footswitch button does not work when the Edge section’s Gain control is rotated to zero because it is a duplicate function.

BODY (Drive2) – Character Boost feature. When lit, the Body Overdrive section of the amplifier is active, not lit, means the section is bypassed. The footswitch button does not work when the Body section’s Gain control is rotated to zero because it is a duplicate function.

BOOST – Girth Boost feature, it, adds volume and tone by doing a partial tone stack lift on the Blackface channel or a full tone control lift on the Tweed channel. The footswitch button does not work when the Blackface channel is active and the Blackface preamp’s Bass control is rotated to zero (because it is a duplicate function).

THE EDGE AND BODY SECTIONS CAN BOTH BE ENABLED FOR EVEN MORE GAIN.

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 top 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 RP50DUO 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 control 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), do not spray on the control panels.

TUBE CHART

RedPlate

6L6GC 6L6GC

**Tube Chart
RP50DUO**

www.RedPlateAmps.com

All 9 pin tubes are 12AX7
Except RevDrive 12AT7

Phase Inv RevDrive Rev Amp FX Loop Body Edge Preamp(s)

All tube brands are acceptable; a long plate is preferred in the Phase Inverter position.
CAUTION - NEVER MIX 6L6 AND 6V6 TUBES AND ALWAYS HAVE A SPEAKER CONNECTED.

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

BIAS PROCEDURE

1. When new 6L6 GC output tubes are installed it is important to re-bias the amp for optimal performance in the FIXED (50 WATT) mode. No biasing needed for 6V6 tubes because they can only be used in cathode bias position.
2. ALWAYS HAVE A SPEAKER CONNECTED.
3. Use a volt meter set to DC volts at lowest scale (MV). Makes sure the black lead is the common terminal of the meter and the read lead is the DC voltage terminal of the meter.
4. Place the Amplifier in operate mode with the Master Volume and Reverb controls set to zero.
5. Set the 50 WATT/ 40 WATT switch to the 50 WATT position.
6. Place the red meter lead in the test point hole (red tip jack) And touch (or clip) the black meter lead on one of the metal output tube retainer clips.
7. Use a small flat blade screwdriver to adjust the bias pot for a reading of $72\text{MV} \pm 5 \text{ MV}$ (FYI - the plate voltage is 470 volts). The reading is the sum of the idle current for both tubes.
8. Recheck the reading after 10 minutes of operation, and again after a week or two of operation.

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, or in the event of resale a onetime transfer to a new owner for warranty coverage for 3 years from the original manufacture date (please inform us of an ownership change to insure coverage). 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 or product misuse or product abuse or unauthorized repair work or unauthorized modifications may nullify your warranty. Eligibility for coverage and covered items are at the sole discretion of RedPlateAmps.

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Thanks again for joining the RedPlate Family – Henry