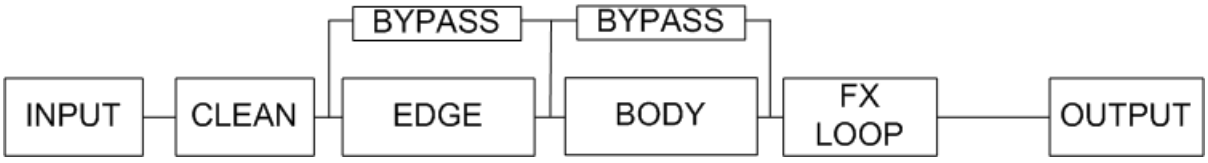
- Amps That Sing -

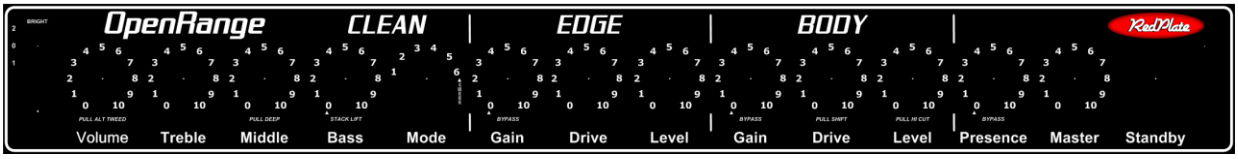
OpenRange
Operations Manual

Welcome to the RedPlate Family, thank you for your purchase of a RedPlate OpenRange 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 OpenRange models produced after 01/21/2012. Check the **Addendum Section** for model differences.

Signal Path Block Diagram:

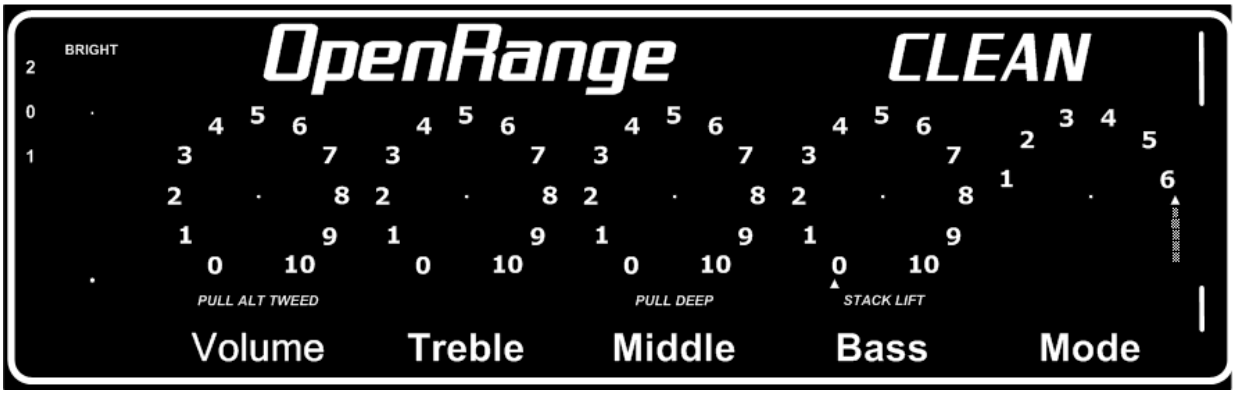


FRONT PANEL:



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 OpenRange.

CLEAN PREAMP SECTION



The Clean Preamp is designed to imitate (and surpass) all of the “classic” guitar amp preamps. The OpenRange gives the player the ability to do two unique things:

1. Shift the midrange center point frequency.
2. Select the amount of Bass gain appropriate to your guitar choice (via Humbucker/Single coil switch covered in the **Rear Panel** Section of this manual).

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. Pulls to switch the Tweed Boost to a more conventional Mid Boost (this topic is covered in the **Other Features** Section of this manual).

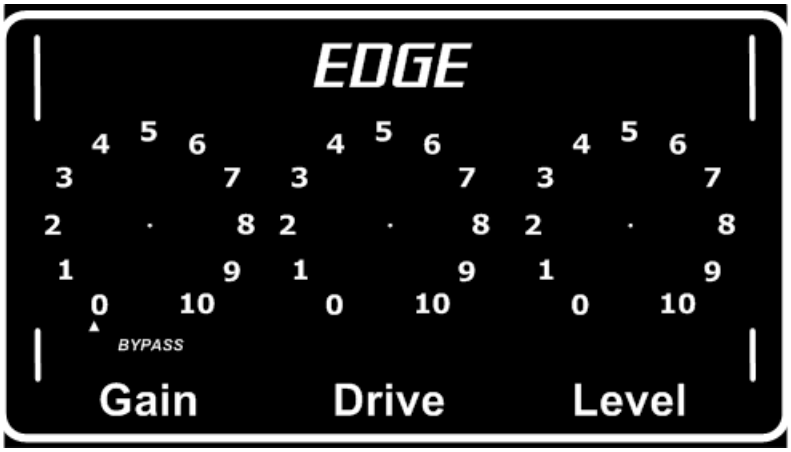
Treble Control - Adjusts highs (also upper midrange when the Tweed Boost is engaged).

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 achieves maximum fat midrange by engaging Tweed Boost in position 6 (see the **Other Features** section of this manual for details).

EDGE DRIVE SECTION



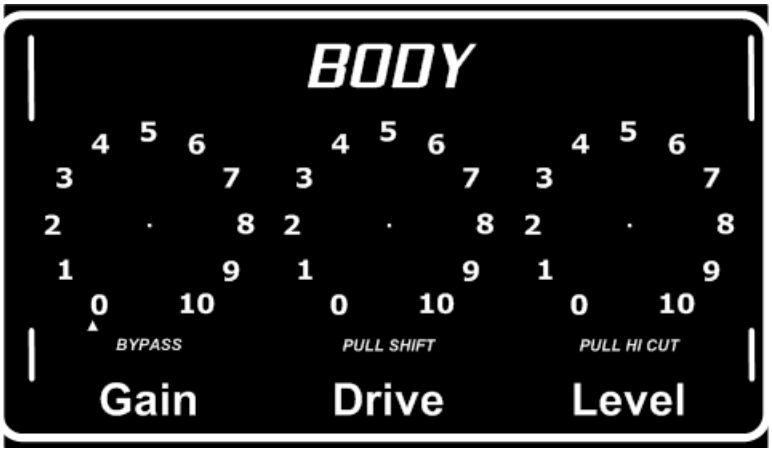
The EDGE Drive section is used to add character to the clean tone. The section’s range of effect can be just a hint of early break up or a full on aggressive heavy metal rock style distortion.

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.

Level Control – Sets the output volume of the section. Higher settings are "bigger" and more 3 dimensional.

BODY DRIVE SECTION



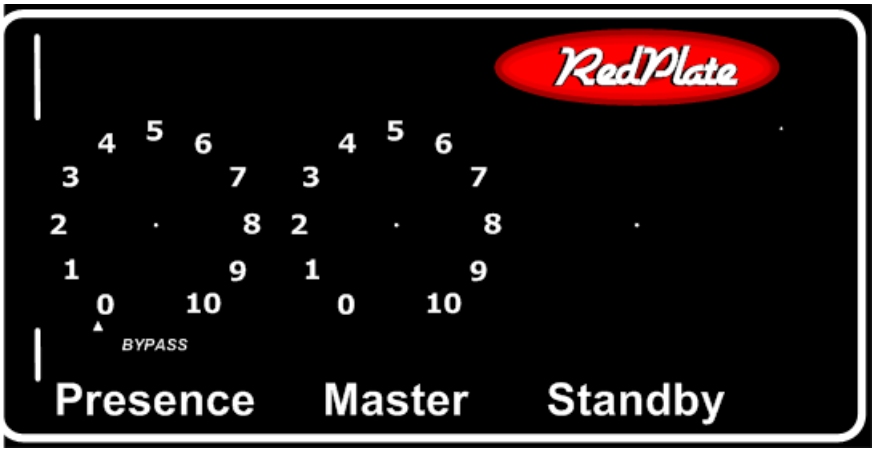
The BODY Drive section can also add character to the clean tone. The section's range of effect can be just a hint of early break up to full on aggressive distortion.

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. Pull this control to shift into more gain and girth for the distortion.

Level Control – Sets the output volume of the section. Higher settings are "bigger" and more 3 dimensional. Pull this control to engage a high frequency roll off.

MASTER SECTION



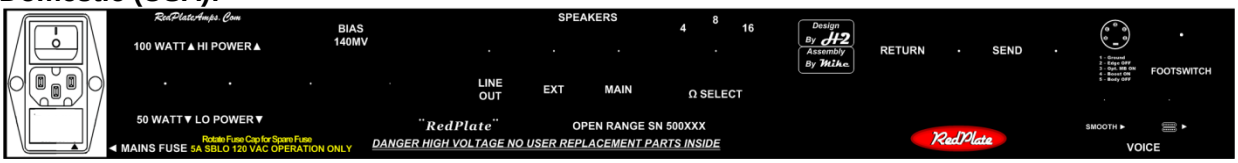
Presence Control – The presence circuit uses global negative feedback to remove low frequencies which frees up bandwidth for more midrange and highs. Think of it as a tone control to balance the relationship between highs and lows, especially when the amplifier is naturally producing increased low end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

Master Volume – This is an active control and actually adds gain at the higher settings. The cleanest tones are achieved at settings below 7.

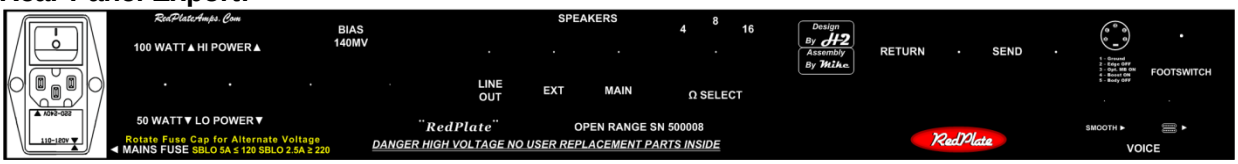
Standby Switch – This switch allows the tubes to warm up before operating the amplifier. Wait 1 minute after power on to move it up to the operate position. For improved tube life and performance do not leave the amplifier in Standby position for longer than 20 minutes (better to just leave it in operate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

REAR PANEL SECTION

Domestic (USA):



Rear Panel 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 OpenRange can accept both the larger (3AG footprint) or smaller European (5mm X 20mm) fuses. A time delay variety (SLO-BLO) is recommended. Follow the recommended amperage ratings on the panel. 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.

100 WATT / 50 WATT Switch – (4 6L6 models) This switch lifts the center two output tubes (V7 & V8) to effectively remove them from having any audio impact. The impedance of the amplifier remains unchanged.

HI/LO POWER Switch – Changes the voltage on the power amp input stage (Phase Inverter tube) so the amplifier breaks up sooner.

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. Example usage would be for recording or connection to a PA or slave amp.

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.

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.

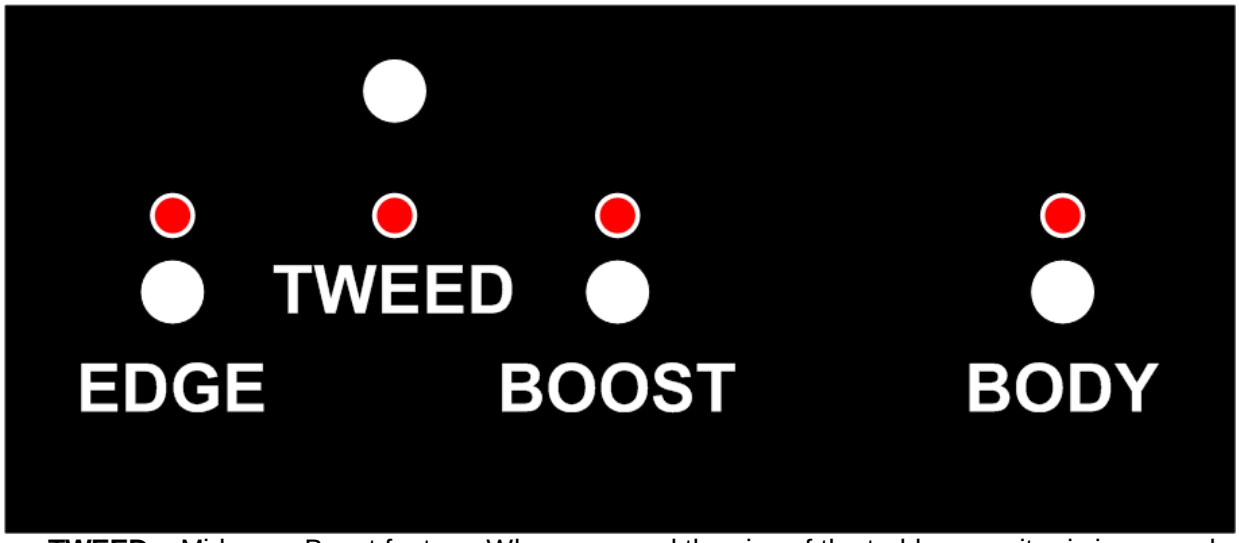
SMOOTH Switch – Employs local negative feedback in the clean preamp for a hint of compression.

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

OTHER FEATURES

The OpenRange comes complete with a 4 button footswitch and a footswitch cable. The cable used is a regular MIDI cable and is readily available in any length at most music stores.

FOOTSWITCH



TWEED – Midrange Boost feature. When engaged the size of the treble capacitor is increased to allow for more upper midrange, at the same time it does a lift of the midrange control for maximum midrange. The effect can be lessened by pulling the front panel Volume control which eliminates the midrange control lift. The footswitch button does not work when position 6 of the rotary MODE switch on the front panel is selected because it is a duplicate function.

EDGE – Character Boost 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 EDGE Gain control is rotated to zero because it is a duplicate function.

BOOST – Girth Boost feature. When lit, adds volume and tone by doing a partial tone stack lift. The footswitch button does not have any affect when the front panel Bass control is rotated to zero because it is partially a duplicate function.

BODY – OverDrive Section. When lit, the Body section of the amplifier is active, not lit, means the section is bypassed. The footswitch button does not work when the front panel BODY Gain 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

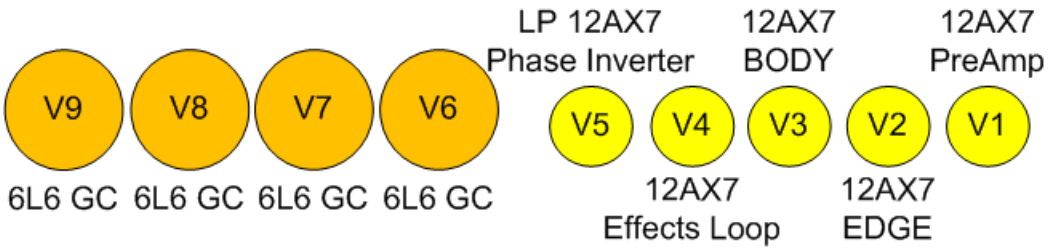
1. Check the Standby switch to make sure it is toggled downward for Standby operation (the Standby switch is located far right side of the front panel).
2. Toggle the main power switch to the up position (this switch is located at the top of the IEC input module). The front panel pilot light should be 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 OpenRange 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 LAYOUT



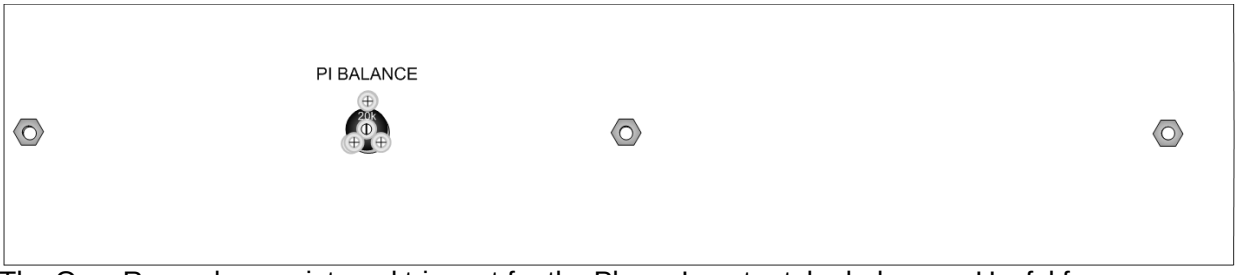
All tube brands are acceptable, a long plate is preferred in the V5 (Phase Inverter) position.

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

BIAS PROCEDURE

1. When new output tubes are installed it is important to re-bias the amp for optimal performance.
2. <u>ALWAYS HAVE A SPEAKER CONNECTED</u>.
3. Use a digital 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 100 WATT/ 50 WATT switch to the 100 WATT position. (ex. 100 Watt 6L6 amp)
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 to match the recommended value printed on the rear panel ± 5 MV. The reading is the sum of the idle current for all output tubes.
8. Recheck the reading after 10 minutes of operation, and again after a week or two of operation.

INTERNAL TRIM POT



The OpenRange has an internal trim pot for the Phase Inverter tube balance – Useful for working with unmatched 12AX7 tubes in the phase inverter position. Refer to qualified personnel for proper setting.

ADDENDUM

Re: **OpenRange45 (6V6 output section)**

This manual is applicable for the above model with the following changes:

1. OpenRange45 uses cathode bias on V6 &V9 and lifts V7 & V8 for the 18 watt mode with no change in the impedance selector needed.
2. OpenRange45 can use 2 6L6GC with no change in the impedance selector. (all 6V6 tubes MUST be removed – insert the 6L6 tubes in V6 & V9 for cathode bias or V7 & V8 for fixed bias) Only two 6L6 tubes may be inserted.

NOTE: Observe the Bias settings and Fuse ratings written on the rear panel(s) for operating and biasing the OpenRange45.

RedPlateAmps Warranty

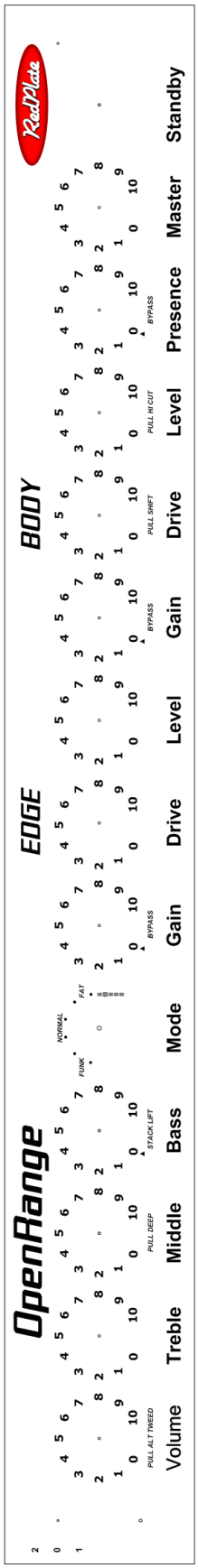
At RedPlateAmps we pride ourselves making products that are built to last. The workmanship in your RedPlate amplifier is warranted to be problem free for the lifetime of the original owner. The actual electrical components in your amplifier are warranted for a period of 3 years. Exclusions are vacuum tubes, reverb tanks, cables, speakers and cosmetics which are warranted for 30 days. Improper handling 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.

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

Thanks again for joining the RedPlate Family – Henry

Blank Template:

Copy or print the next page to record your own favorites. Once you've zeroed in on your signature setting please email the completed template to Info@RedPlateAmps.com – we may include your favorite in the online version of this manual.


OpenRange
EDGE
BODY
RedPlate
Volume
Treble
Middle
Bass
Mode
Gain
Drive
Level
Gain
Drive
Level
Presence
Master
Standby
PULL ALT TWEED
PULL DEEP
STACK LIFT
NORMAL
FUNK
FAT
BYPASS
PULL SHIFT
PULL HI CUT
BYPASS
100
HI
50
LO
SMOOTH
VOICE
TWEED
EDGE
BOOST
BODY