

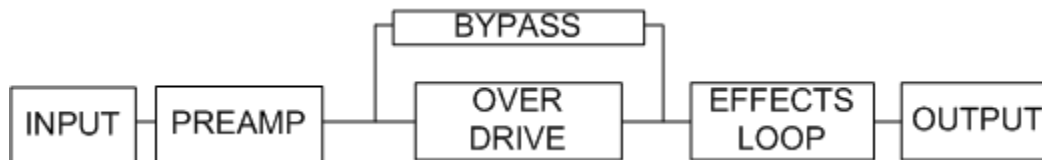


- Amps That Sing -

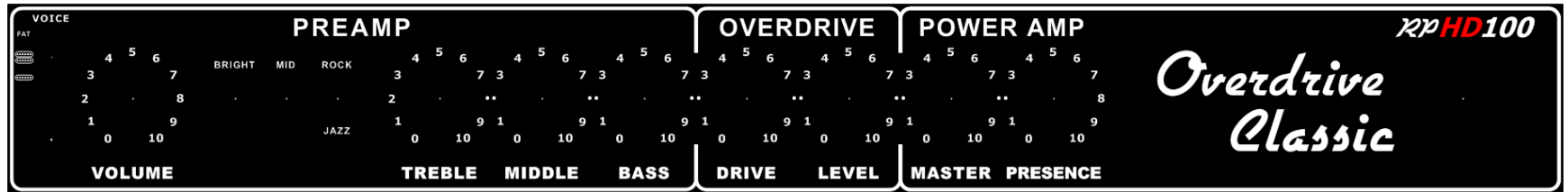
RPHD100 (Overdrive Classic) Operations Manual

Welcome to the RedPlate Family, thank you for your purchase of a RedPlate RPHD100 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 RPHD100 models produced after 11/01/2015.

Signal Path Block Diagram:



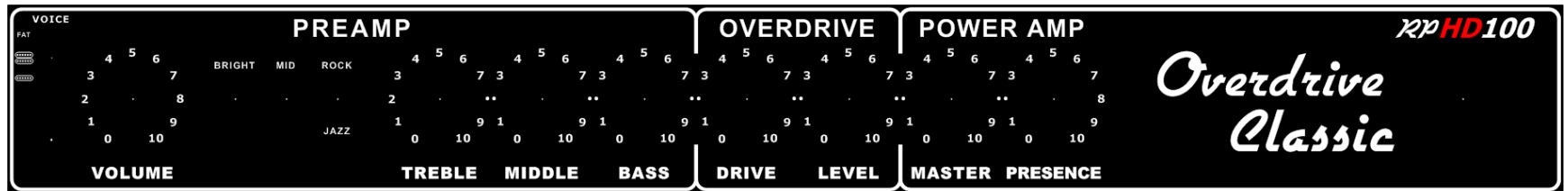
FRONT PANEL:



Input Jack = Typical High impedance input to the amplifier.

Voice = Three position switch to match your guitar type to the amplifier.

CLEAN PREAMP SECTION



Volume Bright Mid Rock/Jazz Treble Middle Bass

Volume – Preamp volume control typical setting is between 4 and 6 but experimentation is encouraged.

Bright Switch – Up = Increase in the higher treble frequencies.

Mid Switch – Up = Increase in the upper midrange frequencies.

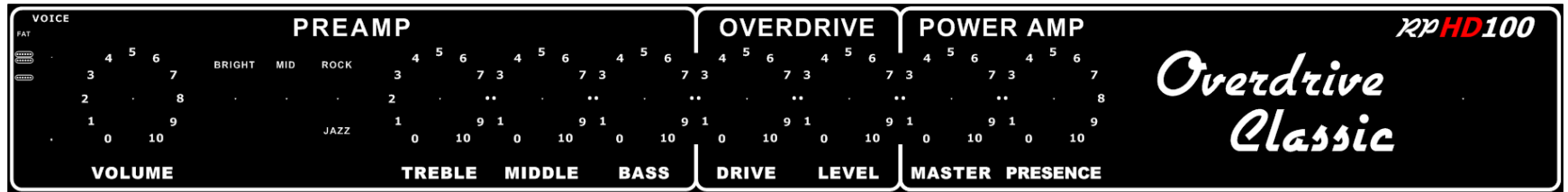
Rock/Jazz Switch – Up = Normal, Down = less lower midrange frequencies.

Treble Control - Adjusts high frequencies (also upper midrange when the Mid switch is engaged).

Middle Control – Controls the amount of Midrange frequencies, somewhat interactive with the Bass Control.

Bass Control – Sets the amount of low end.

OVERDRIVE SECTION



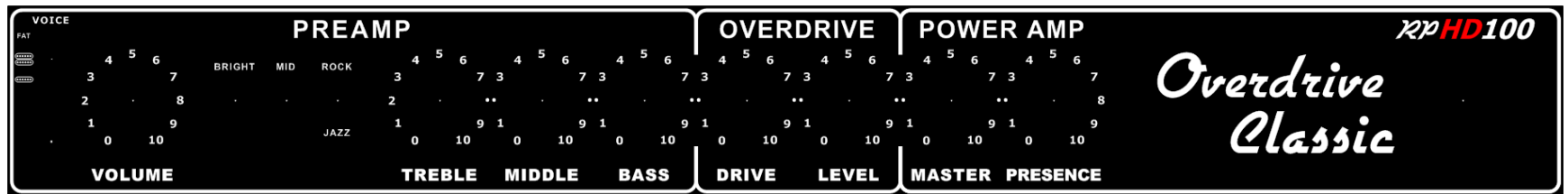
DRIVE LEVEL

The Overdrive 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 more aggressive distortion.

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.

MASTER SECTION

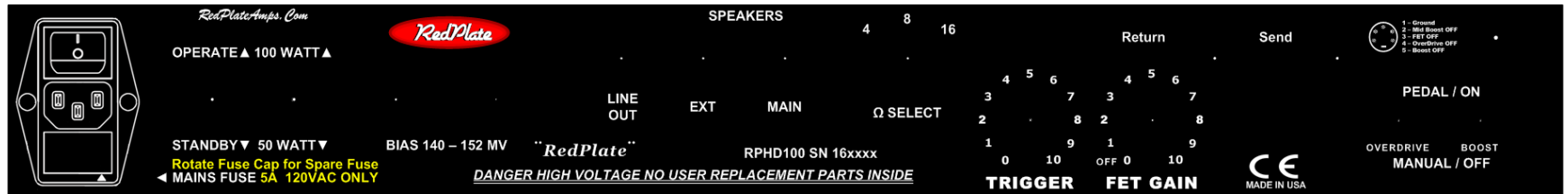


MASTER PRESENCE

Master Volume – This control sets the overall volume of the amplifier.

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.

REAR PANEL SECTION



IEC Module – contains the main power switch, power cord inlet connector and the fuse drawer. To access the fuse 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 RPHD100 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.

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).

100 WATT / 50 WATT Switch – 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.

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.

Trigger 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.

FET Gain – This control sets the amount of gain for the FET input of the amplifier. The FET can be turned off by rotating the control to zero – must be above zero for the footswitch to work.

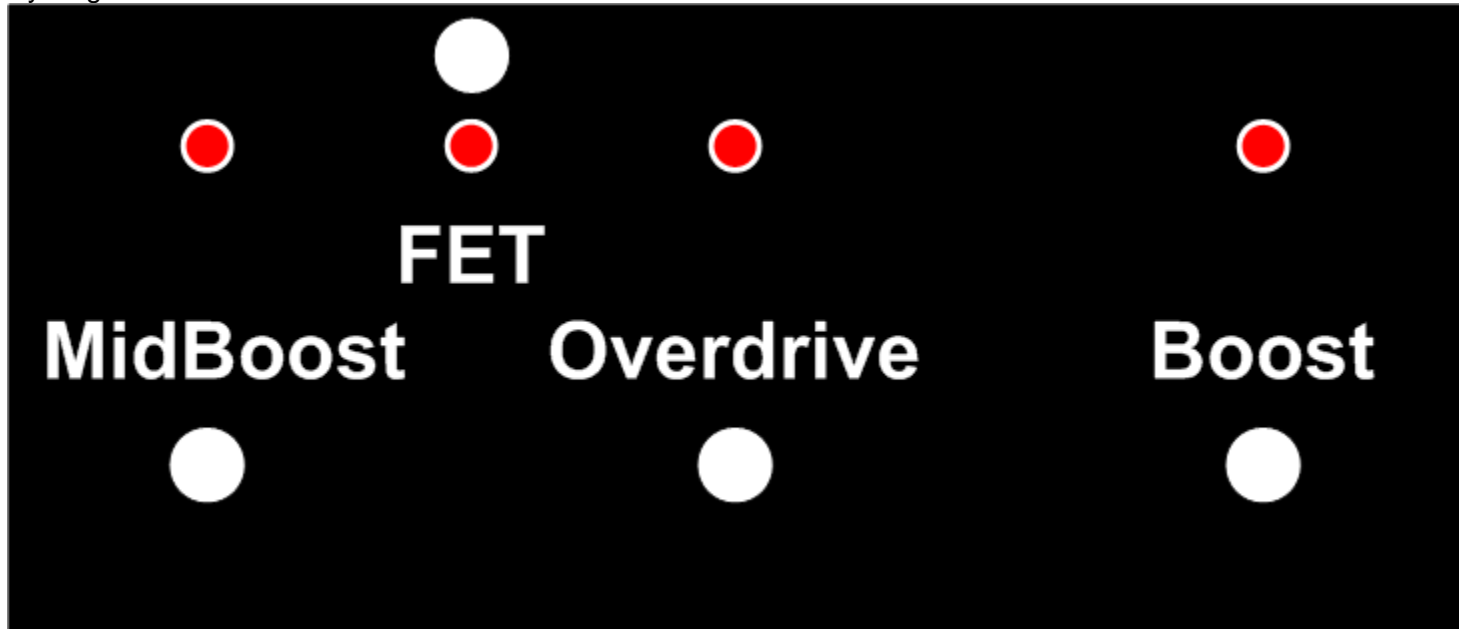
Footswitch Jack - This is a standard 180 degree 5 pin DIN jack for footswitch connection. If a replacement cable is needed, make sure all 5 wires are supported. The pinout is conveniently located on the rear panel for use with automated switcher conversion boxes.

Overdrive Switch – UP = Overdrive on when the footswitch is not connected. Make sure switch is up for footswitch usage.

Boost Switch – UP = Preamp boost on when the footswitch is not connected. Make sure switch is up for footswitch usage.

OTHER FEATURES

The RPHD100 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.



MidBoost – Girth Boost feature. This button increases the size of the treble capacitor for more upper midrange. The front panel MID switch must be on (UP) for proper footswitch operation.

FET – Switches the input jack to use the FET circuit. The footswitch button does not have any affect when the rear panel FET gain control is set to zero (off).

Overdrive – 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 rear panel Overdrive switch is in Manual position.

BOOST – Preamp Boost feature. The footswitch button does not have any affect when the rear panel Boost switch is in Manual position

POWER ON/OFF PROCEDURE


1. Check the Standby switch to make sure it is toggled downward for Standby operation (the Standby switch is located next to the Mains power switch on the rear 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 RPHD100 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), do not use on front and rear panels.

TUBE CHART




Model/Type:
RPHD
 Overdrive Classic

Tube Chart

12AX7 PreAmp	1
12AX7 OverDrive	2
12AX7 Effects Loop	3
12AX7 Phase Inverter	4
6L6 GC	5
6L6 GC	6
6L6 GC	7
6L6 GC	8

Bias Instructions:
 Volt meter set to DC volts at lowest scale (MV) Amplifier in 100 watt mode standby in operate mode with Master at zero. Red meter lead in tip jack hole, Black meter lead touching metal tube clip. Use a small flat blade screwdriver to turn the Bias Adjust control for 140 MV ± 10MV.
ALWAYS HAVE A SPEAKER CONNECTED

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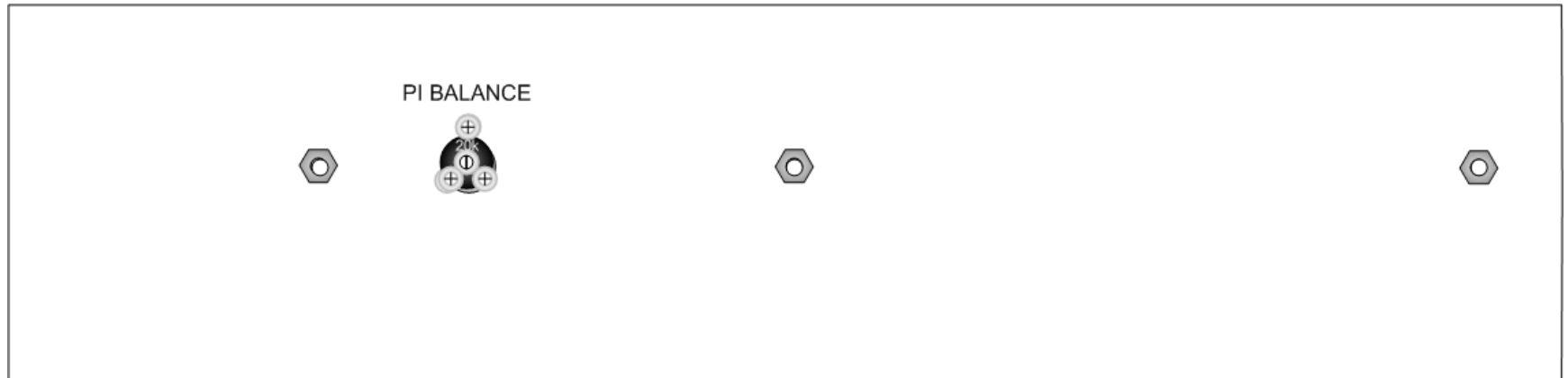
All tube brands are acceptable, a long plate is preferred in the V4 (Phase Inverter) position.

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 output tubes are installed it is important to re-bias the amp for optimal performance.
2. **ALWAYS HAVE A SPEAKER CONNECTED.**
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.
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 \pm 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 POTS



The RPHD100 has one internal trim 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.

NOTE: Observe the Bias settings and Fuse ratings written on the rear panel(s) for operating and biasing the RPHD100.

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 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