

*Two-Rock  
Jade*

Owner's Manual

*Thank you for your purchase of a  
**Two-Rock** amplifier from **K&M Analog Designs, LLC**.*

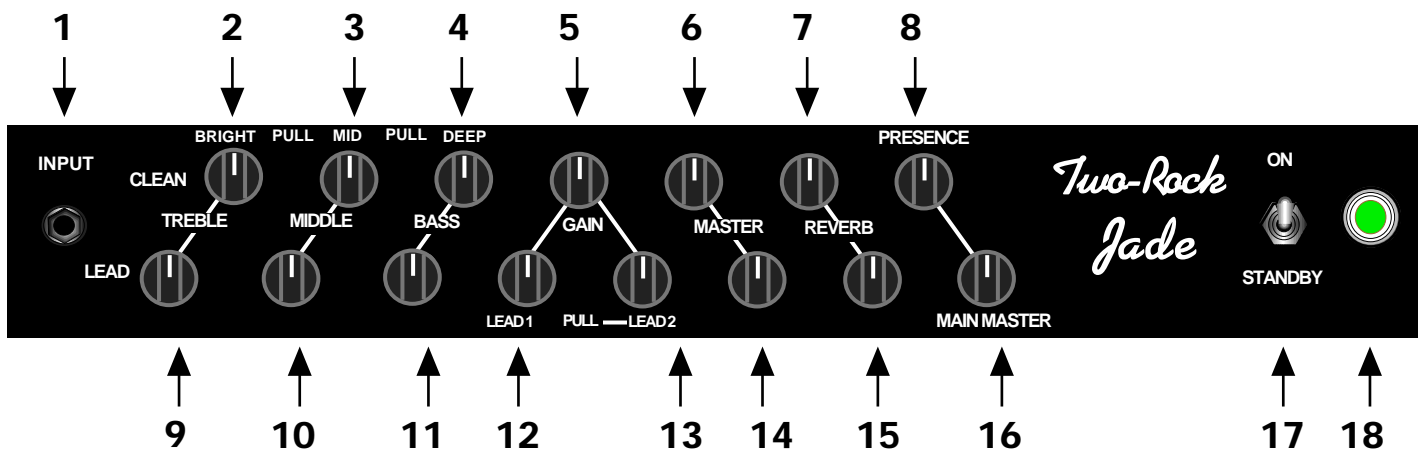
*As a discerning guitarist, you know the road to great  
tone begins with great components.*

*Our classic design, carefully selected parts and hand-built  
approach combine to make an extremely versatile instrument.*

*Please take the time to read this manual. We hope it will  
answer any questions you may have.*

*We extend a warm welcome to you as a member of a select  
group of musicians who have chosen a **Two-Rock** amplifier.*

# FRONT PANEL FUNCTIONS



1. **INPUT JACK**- High impedance input to the amplifier. Plug in your instrument here.

THERE ARE 2 ROWS OF CONTROLS. THE TOP ROW AFFECTS ONLY THE CLEAN CHANNEL. THE BOTTOM ROW IS IDENTICAL TO THE TOP ROW. THE BOTTOM ROW AFFECTS ONLY THE LEAD CHANNEL.

- 2/9. **TREBLE CONTROL**- Adjusts the high\_frequency response. In the full counter\_clockwise position, high frequencies are bypassed to ground. In the full clockwise position, high frequencies are allowed to pass to the next gain stage.

PULL BRIGHT\_ When the treble control(2) is in the OUT position, the BRIGHT function is enabled. This increases the high frequency response of the clean channel.

- 3/10. **MIDDLE CONTROL**- Adjusts the mid\_range response. In the full counterclockwise position, the tone will be somewhat "scooped" of mid\_range response, emphasizing the highs and lows. In the full clockwise position, mid\_range frequencies are allowed to pass to the next gain stage.

PULL MID

When the middle control(3) is in the OUT position, the MID boost function is enabled .This increases the midrange frequency response of the clean channel.

- 4/11. **BASS CONTROL**- Adjusts the bass response. In the full counter\_clockwise position, low frequencies are cut. In addition, the response of the treble and mid\_range controls is greatly reduced. In the full clockwise position, low frequencies are allowed to pass to the next gain stage.

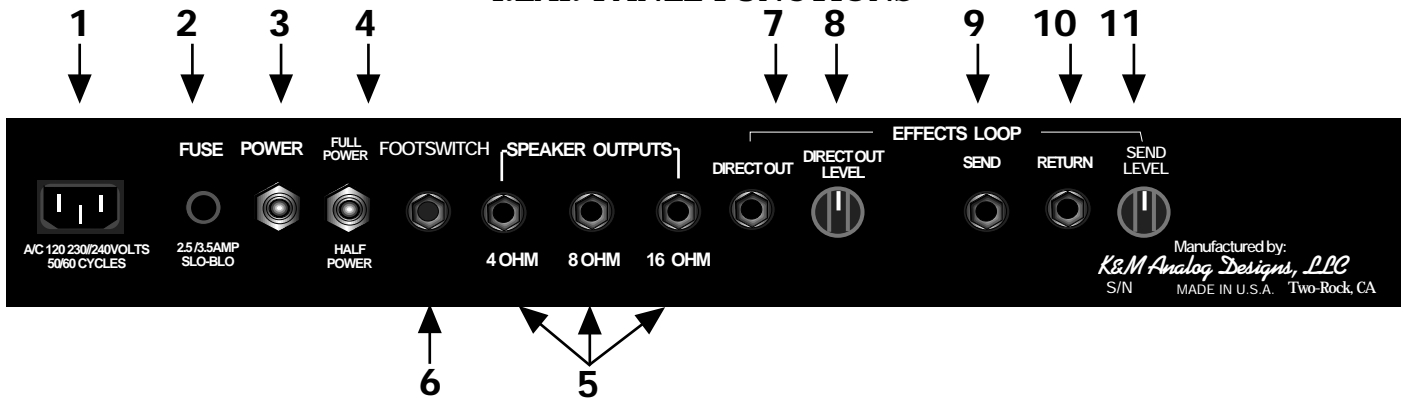
## PULL DEEP

When the bass control (4) is in the OUT position, the DEEP function is engaged.

This increases the low frequency response of the clean channel.

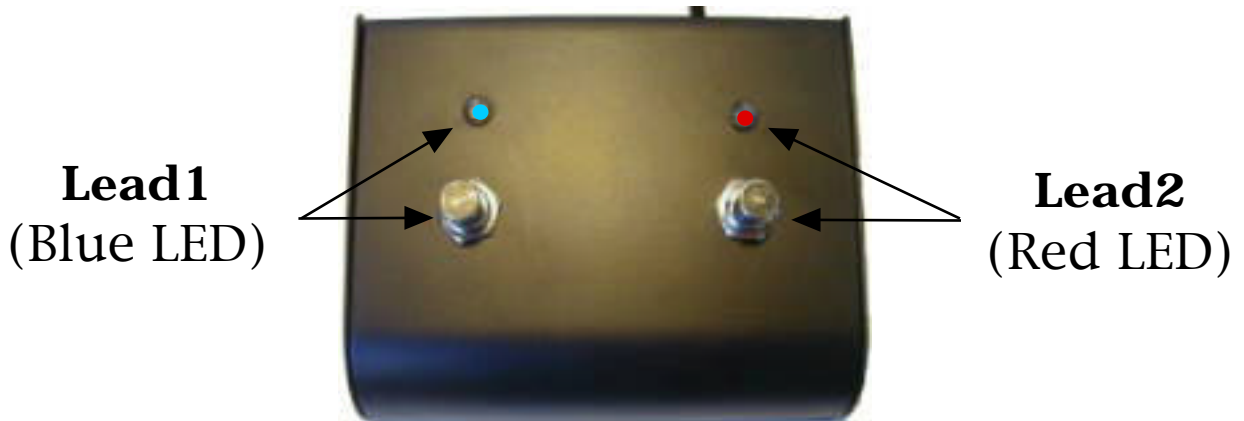
5. **GAIN**- this adjusts the gain of the clean channel.  
Start with this control in the 12 o'clock position.
12. **LEAD 1- GAIN**\_ this adjusts the gain structure of LEAD 1. To enable the LEAD 1 function, PULL LEAD 1. Or engage via footswitch (Blue, or Left button).  
Footswitch is defeated by PULL
13. **LEAD 2- GAIN**\_ this adjusts the gain of LEAD 2. To, enable LEAD 2 function, PULL LEAD 2 with LEAD 1 ENGAGED. Or engage via footswitch (Red, or Right button).  
Footswitch defeated by PULL LEAD 2.
- 6/14. **MASTER** - Adjusts the output level of clean channel(6) and the lead channel (14 )
- 7/15 **REVERB- MIXES**- the dry signal with a high quality spring\_type reverberation effect.  
This effect is defeated with the control in the full counter\_clockwise position. The reverb levels are completely independent.
8. **PRESENCE CONTROL**- Adjusts the contour of high-frequency response. The high-frequency response will increase as you advance the control clockwise.
16. **MAIN MASTER** - Adjusts the overall output of the amplifier.
17. **STAND-BY SWITCH**- Should be in the "down" or "stand-by" position when you apply power to the unit. After a few seconds, place the switch in the "up" position to use the amplifier. You may leave the unit "powered up" and place this switch in the "stand- by" position to mute the output.
18. **INDICATOR LAMP**- This lamp will illuminate when the power switch is in the "up" position, indicating the unit is receiving A/C power.  
NOTE: All switches are ON in the "up" position.

## REAR PANEL FUNCTIONS



1. **A/C INPUT-** Connects the amplifier to A/C power via the power cord supplied. Unless otherwise specified, your amplifier is designed to operate on 120 volts A/C, 60 cycles.
2. **FUSE-** 3 AG Type, slow blow fuse. Refer to the legend below the fuse holder for the proper fuse rating for your amplifier. (50 watt-2.5 amp /100 watt-3.5 amp)
3. **POWER SWITCH-** Turns the power on.
4. **FULL/ HALF POWER -**If your amp is equipped with 2 power settings (optional), this switch selects low power(down position) or high power(up position).
5. **SPEAKER OUTPUT JACKS-** There are 3 speaker output jacks- 4,8 and 16 ohm. NEVER OPERATE YOUR AMPLIFIER WITHOUT A PROPER SPEAKER LOAD CONNECTED. Be sure to match the impedance of your cabinet with the impedance (output) of the amplifier.
6. **FOOTSWITCH JACK-** Connect the foot switch assembly here to enable remote switching of the lead/rhythm and bypass functions.
7. **DIRECT OUT-**this is a direct signal output, taken from the power amp section. This is an excellent signal source for recording, or to supply signal to the mixing board in larger venues.
8. **DIRECT OUT LEVEL-**Controls the output level of the Direct Out jack. This level is adjustable from approximately 0\_5 VP\_P.
9. **EFFECTS SEND-** Use this jack to send the amplifiers signal to outboard effects.
10. **EFFECTS RETURN-** Use this jack to connect the output of your effects to the amplifier.
11. **EFFECTS LEVEL-** Adjusts the return signal level. It also acts as a master volume control. Do not set fully counter-clockwise, as this will shut off signal to the output section, resulting in no output level. Normally this control should be set at the 12 o'clock position.

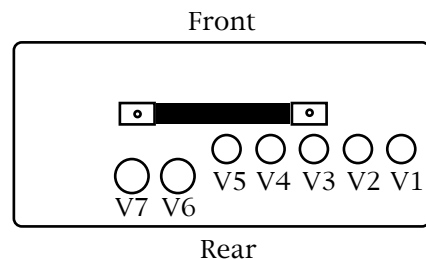
## FOOT SWITCH



## TUBE COMPLEMENT

- V1- 12AX7, Rhythm channel
- V2- 12AX7, Lead channel
- V3- 5751/12AT7, Reverb driver
- V4- 12AX7, Reverb / effects
- V5- 12AX7, Phase inverter
- V6, V7- 6L6GC, Output

### The Tube Location



Each fine production tube is tested and matched to our exacting specifications. External bias adjustment and test points are located on the chassis near the output tube sockets.

A digital voltmeter and small screwdriver are required for bias adjustment. BIAS ADJUSTMENT\_Power up unit. Connect proper speaker load. Set master volumes and effects return controls to zero.

Do not apply any signal to the input during the biasing procedure!

Take unit off STANDBY. Allow a few seconds for the circuit to stabilize.

Set meter to millivolt scale.( Or lowest volt scale.60 millivolts = .060 volts.) With meter grounded to chassis and + probe at test point, measure voltage. A reading of .055 to .060 volts is normal. If not in this range,adjust by turning bias screw SLOWLY a small amount. Do not set above .070!

For other tube types(5881, 6550, EL34) check with manufacturer or contact us for recommendations.

Settings higher than .065 with 6L6 tubes may cause premature tube wear and possibly damage the amplifier. Keep in mind that tubes vary in quality, and some tubes can handle upwards of 40 ma each ( a reading at the test point of .080 !) However, to be on the safe side, use the above as a guide.

**WARNING!** No user serviceable parts inside! Refer service to qualified service person only.

**LINE CORD-** For your safety, connect to grounded A/C receptacle only.

*K&M Analog Designs* amplifiers are brought to you by Bill Krinard and Joe Mloganoski. We know your new *Two-Rock* amplifier will provide many hours of enjoyment and inspiration in the years to come.

*This manual is a resource for some of your questions. Please contact us with any other questions or comments you may have. We look forward to hearing from you!*

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**PRECAUTIONS:**

Do not expose to rain or any other moisture

Do not use cleaning solvents. Wipe exterior with a clean, dry cloth only.

Refer servicing to a qualified service technician.



*This is a product of*

*K & M Analog Designs, LLC*

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Rohnert Park, CA 94928

**Serial Number:** \_\_\_\_\_