

Two-Rock

Crystal

22/40/50/100

OWNER'S MANUAL

Dear Customer,

Thank you for your purchase of a **Two-Rock** amplifier!

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.

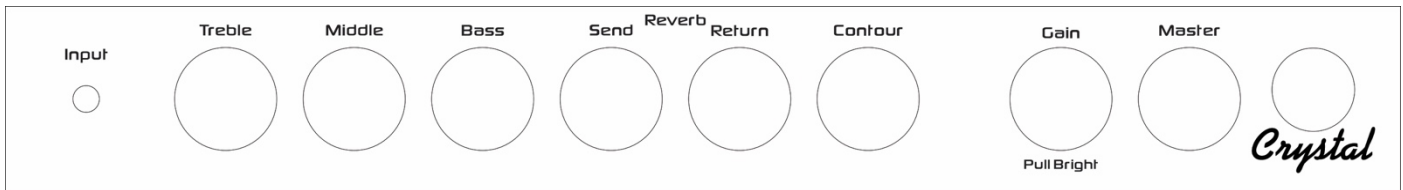
Please take the time to read this manual. We hope it will answer any questions that you may have.

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

Important Safety Instructions

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water
6. Clean only with dry cloth
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions
8. Do not install near any heat sources such as radiators, heat registers, plugs, and the point where they exit from the apparatus
9. Protect the power cord from being walked on or pinched particularly at plugs and the point where they exit from the apparatus
10. Only use attachments/accessories specified by the manufacturer
11. Unplug this apparatus during lightning storms or when unused for long periods of time
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped
13. CAUTION: To disconnect the unit completely from the MAINS, unplug the unit. Turning the power switch off does not disconnect the unit completely from the MAINS.

Front Panel Functions



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

TREBLE - Adjusts the high frequency response. At lower settings of this control the tone will be warmer and smoother. As you turn this control up the highs become more prominent and aggressive adding gain to the signal as well. This control is very interactive with the Bright switch, Middle control, and Deep switch. 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.

MIDDLE - Adjusts the midrange response. At low settings of this control the tone will be “scooped” of midrange response, emphasizing the highs and lows. As this control is turned up, the midrange frequencies are increased. This creates the “body” of your guitar’s tone and is very critical to both the tonality, feel and overall response of the amplifier. Higher settings of this control also help your tone to cut through the mix in both a live band situation as well as when playing the amp outdoors. In the full clockwise position, mid-range frequencies are allowed to pass to the next gain stage.

BASS - Adjusts the bass response. In the full counter-clockwise position, low frequencies are cut and the response of the treble and mid-range controls is greatly reduced. As this control is turned up, the bass frequencies are increased and allowed to pass to the next gain stage.

REVERB SEND - The reverb send control determines the amount of signal applied to the reverb tank. Low settings will create short decay times. Advancing the control clockwise increases the signal applied to the tank for longer decay times. Use this control in conjunction with the Reverb Return control.

REVERB RETURN - This is the reverb return control which mixes the reverb effect signal with the dry signal. At full counterclockwise rotation, the reverb effect is defeated. Use this return control in conjunction with the Reverb Send control to create a wide range of natural reverb effects.

CONTOUR - The contour control is an active wide band sweep. In the 12 o’clock position, the amp’s frequency response is flat. Counterclockwise rotation reduces high end response and increases low frequencies. Clockwise rotation decreases low end and increases the high frequency response. This control is very useful for maintaining preamp tone control settings, while allowing a global adjustment to compensate for differences in room acoustics, speaker cabinets, or bright to dark guitars (single coils to humbuckers, for example). This control also actively reduces the articulation available, allowing a softer setting, or extremely open and revealing, depending on your individual style and requirements.

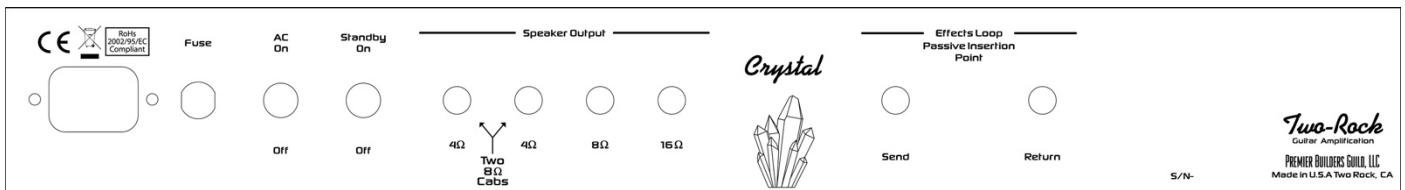
GAIN with Pull Bright switch - Adjusts the overall gain of the amplifier. Start with this control in the 12 o'clock position then adjust to taste. This control determines the initial character of your tone, from cleaner/brighter tones at low settings to fatter/warmer tones at higher settings. As you turn this control up it also introduces more gain and bass into the signal path, and reduces the amount of available clean headroom especially when the master volume is set higher.

Pull Bright Switch Boosts the high frequency response. This is most effective when the Gain control is set at 12 o'clock or lower. This is great for adding sparkle to clean tones. The effect is less dramatic as the Gain control is adjusted past the 12 o'clock position.

MASTER - Adjusts the overall output level of the amplifier. At lower settings on this control the amp will be much cleaner sounding as well as lower in volume. As this control is turned up the power section of the amp begins to work harder which increases sustain, fullness, and touch dynamics as well as raising the volume of the amplifier. At higher settings on this control the power section will be pushed into natural overdrive especially if the Gain control is set higher.

Indicator Lamp - This lamp will illuminate when the power switch is in the "up" position, indicating the unit is receiving A/C power.

Rear Panel Functions



A/C Input - Connects the amplifier to A/C power via the power cable supplied. Unless otherwise specified, your amplifier is designed to operate on 120 volts A/C, 60 cycles, ONLY.

Fuse- See Fuse Chart

Power Switch- Turns power on.

STANDBY - This switch should be in the down/STANDBY position before you place the Power switch to the up/ON position. After 20 seconds or more, place the Standby switch in the “up” position to play the amplifier. When you are taking a break from playing the amp you can leave the amp “powered up” and simply switch to the “stand-by” position to mute the output of the amplifier and prolong power tube life.

Speaker Output Jacks- There are 4 speaker output jacks; 2x4, 8, and 16 ohms.

The dual 4 ohm jacks can be used to take two 8ohm speaker loads and combine them in parallel to create a 4 ohm load.

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.

Effects Loop –

The effects loop on this amplifier is a passive type of loop, see FAQ on two-rock.com

Effects Send - Use this jack to send the amplifiers signal to outboard effects.

Effects Return - Use this jack to connect the output of your effects to the amplifier.

S/N- Your serial number is located here. We strongly suggest that you record this number and have it handy in case you need service, or in the event that your amp is lost, stolen, or damaged.

Fuse Chart

All Fuses are 3AG Type 250 Volt, SLO-BLO

Export 100V:

2A – 22/35/40 Watt
2.5A - 50 Watt
3.2A - 100 Watt

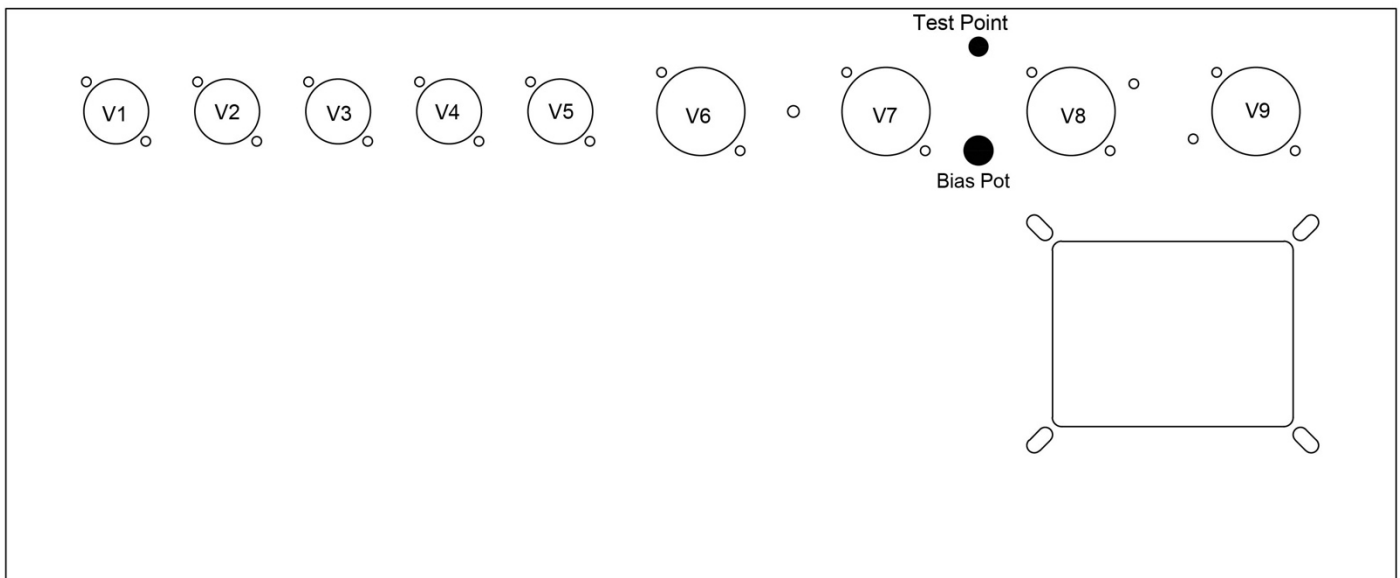
Domestic 120V:

2A – 22/35/40 Watt
2.5A - 50 Watt
3.2A - 100 Watt

Export 220V, 230V, 240V:

1A - 22/35/40 Watt
1.6A - 50 Watt
2.5A - 100 Watt

(Tube Complement)



V1- 12AX7, Input and Gain

V2- 12AX7, Reverb Send

V3- 12AT7, Reverb Drive

V4- 12AX7, Mixing Stage

V5- 12AX7, Phase Inverter

Power Tubes:

22 Watt- V6 & V7 6V6GT, V8 5AR4 Rectifier

40 Watt- V6, V7, V8, V9, 6V6GT

50 Watt- V6 & V7 6L6GC-STR, V8 & V9 optional 5AR4 rectifiers tubes

100 Watt- V6, V7, V8, V9, 6L6GC-STR

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 multi-meter and small screwdriver are required for bias adjustment.

BIAS PROCEDURE:

Make sure the speaker is connected properly, then power up the amplifier.

Set the rear panel power mode switch to Full or Hi

DO NOT apply any signal to the input during the biasing procedure!

Insert volt meter's positive probe into the bias test point socket (located underneath the chassis)

Connect volt meter's negative probe to chassis ground

Switch amp out of standby and allow a few seconds for the circuit to stabilize

Set voltmeter to millivolt scale (or lowest volt scale 60 millivolts =.060 volts.)

Observe the display on the meter to see the current bias setting

If an adjustment is needed, use a small flat blade screwdriver inserted into the bias adjust pot and adjust by turning bias screw **SLOWLY** in very small increments until the desired setting is achieved on the meter. Then wait a few moments for the bias to stabilize and re-adjust if necessary. You may need to repeat this procedure a couple of times. It is ok to play test the amp with the meter connected.

Below is a limited list of comparable tube types:

6L6: 6L6GC, 7581, 5881

6V6: 6V6S, 6V6GT

EL-34: 6CA7

**6L6 and EL-34 type tubes: .060V to .070V for 50 watt
.120V to .140V for 100 watt**

Factory Setting: .064V

Factory Setting: .126V

6V6: 22 watt amplifiers: .044V to .058V

Factory Setting: .044V

6V6: 40 watt amplifiers: .088V to .100V

Factory setting: .090V

NOTE: For 6V6 output tubes Installed in 22watt versions with tremolo, bias must not be set higher than .044V as it will cause tube failure.

Do not set bias higher than recommend levels as it can lead to tube failure or failure within the amplifier!

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

LINE CORD- For your safety connects to grounded A/C receptacle only.

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 that you may have. We look forward to hearing from you!

PHONE: 1(707)584-TONE (8663) (M-F 9am-5pm PST)

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ROHNERT PARK, CA 94928

707-584-8663

www.two-rock.com

SERIAL NUMBER: _____



DECLARATION OF CONFORMITY
According to EC Directive

Manufacturer: Premier Builders Guild LLC
Address: 201 S. Highland Ave., Suite 204
Pittsburgh, PA 15206 USA
Phone: 412-362-0309

Product Name: Audio Power Amplifier
Brand Name: Two-Rock
Model No: Crystal
Studio Pro
Cardiff
Sensor
Coral

Has been designed and manufactured in accordance to the following technical regulation:
Directive Device:

Low Voltage Equipment 2006/95/EC
Electromagnetic Compatibility 2004/108/EC
Conformity with the following standards:

The measurements made in accordance with the procedures according to the European Council Directive and EN Standards.


Council Directive and EN Standards:

- EN 55103-1:2009+A1:2012
- EN 55103-2:2009
- EN61000-3-2:2006+A1:2009+A2:2009
- EN61000-3-3:2013
- EN60065:2002+A1:2006+A11:2008+A2:2010+A12:2011

CE mark was affixed on the product: 2007

The product(s) which are defined herein was (were) manufactured under the conditions of the European Union directive and standards. Also, this product(s) responsibility is under our firm's guarantee.

Manufacturer
Stamp & Signature


Name surname: BERNSTEIN
Title: CEO
Date: 8/14/2015