

*Two-Rock*

*Studio Pro*

*Plus*

*22/35/50*

OWNER'S MANUAL

Dear Customer,

Thank you for your purchase of a *Two-Rock* amplifier from Two-Rock Amplifiers, 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.

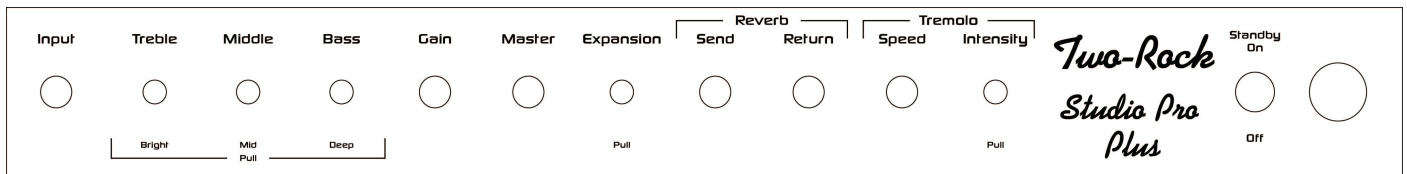
Please take the time to read this manual. We hope it will answer any questions that you may have.

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

#### **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** - High impedance input to the amplifier. Plug in your instrument here.

**TREBLE + Push/Pull BRIGHT** - 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. Pulling the knob to the “out” position: 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.

**MIDDLE + Push/Pull BOOST** - 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 and when playing the amp outdoors. In the full clockwise position, mid-range frequencies are allowed to pass to the next gain stage. Pulling the knob to the “out” position: EQ section is passively bypassed boosting the natural high and mid frequencies of the guitar. It also increases the amount of input signal that drives the gain stage.

**BASS + Push/Pull DEEP** - 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. It’s easiest to start with this control at noon, then adjust to taste. In the full clockwise position, low frequencies are allowed to pass to the next gain stage. Pulling the knob to the “out” position: Boosts the lower bass frequencies. This low frequency contour switch also shifts the emphasis from the upper bass and low mid frequencies to the lower bass frequencies which helps smooth out and clarify the midrange response.

**GAIN** - 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.

**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 increasing 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.

**EXPANSION** - This feature cuts the EQ section out of the signal path allowing more input signal to hit the gain stage. When engaged it will affect the natural highs and mids of the fed into the input gain stage of the amplifier. This adjustable control allows how much gain passes through, and as this control is turned up (clockwise) it will increase the amount of high and mid frequencies. (Expansion function is foot-switchable)

**REVERB SEND** - This reverb “drive” control determines the amount of signal applied to the reverb tank. Low settings will create a very open, small room reverb effect with a short decay time. Turning the control clockwise increases the signal applied to the reverb driver stage creating a very saturated effect with a sharp attack and a longer decay.

**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. Using this return control in conjunction with the reverb drive control on the rear panel, a wide range of natural reverb effects can be produced.

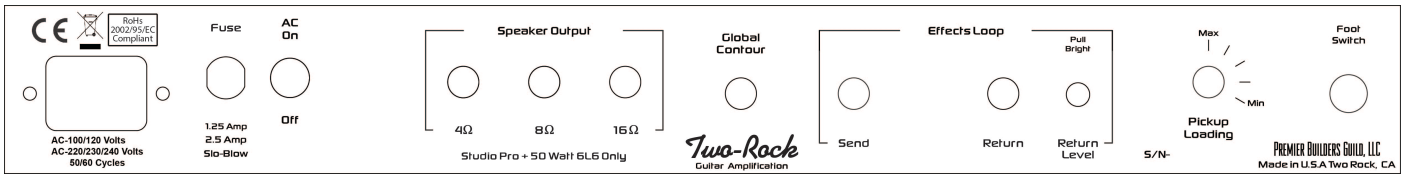
**TREMELO SPEED** - Adjusts the rate of the tremolo.

**TREMELO INTENSITY** - Adjusts the depth of the tremolo.  
(Tremelo function is foot-switchable)

**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.

**INDICATOR LAMP** - This lamp will illuminate when the rear panel 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.

**Fuse** - See Fuse Chart

**Power Switch** - Turns power on.

**Speaker Output Jacks** - There are 3 speaker output jacks; 4, 8, and 16 ohms.

**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.

**GLOBAL CONTOUR** – This control is an active wide band sweep. In the 12 o'clock position, the amp's frequency response is flat. Clockwise rotation reduces high end response and increases low frequencies. Counterclockwise 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. This control also actively reduces the articulation available allowing a softer setting or more open and revealing, depending on your individual style and preferences.

**Effects Loop –**

**The effects loop on this amplifier is a “half active” type of loop, see FAQ on two-rock.com**

**SEND** - Use this jack to send the amplifier's signal to the effects that you want to use in the loop.

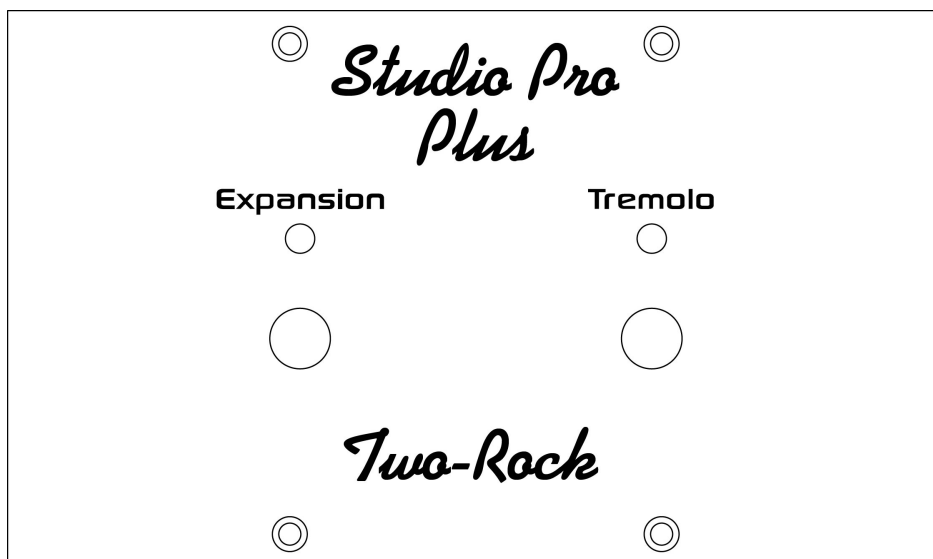
**RETURN** - Use this jack to connect the output from the effects in the loop back to the amplifier.

**EFFECT LEVEL + Push/Pull BRIGHT** – Adjusts the effects loop return level. The loop is active in the circuit even with no effects connected, so the level control also can be used as a additional master volume control. This function can be useful but also a bit confusing so as appoint of reference, set this control at 11:00 for unity gain when not using the effects loop. The pull-bright feature is useful when playing at a lower volume, or when connecting more than a few pedals into the loop, which sometimes causes high frequency insertion loss.

**PICKUP LOADING** - Loading the guitar pickup(s) to varying degrees changes the impedance relationship between the pickup and the amplifier's first gain stage. Loading reduces inductive "ringing" in the pickup coils. The result is a more controlled high frequency response and a reduction in high frequency artifacts produced when a pickup's magnets and coils feedback with each other, usually at or near the pickup's saturation point. The damping effect will also reduce the gain, which is normal. Tonally speaking, reducing these artifacts results in a cleaner waveform and an apparent lack of harshness in the upper frequencies. This control has 5 settings. In the first position (fully counterclockwise), there is no additional pickup loading, with 4 additional settings available. Fully clockwise (last position) is full loading.

**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.

**FOOTSWITCH JACK** - The footswitch connects here using a 1/4" TRS cable. The Expansion and Tremolo functions can be activated via the footswitch. The respective front panel Push/ Pull pots must be in the "off," or "in" position, to enable the footswitch functions.



# Fuse Chart

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

## Export 100V:

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

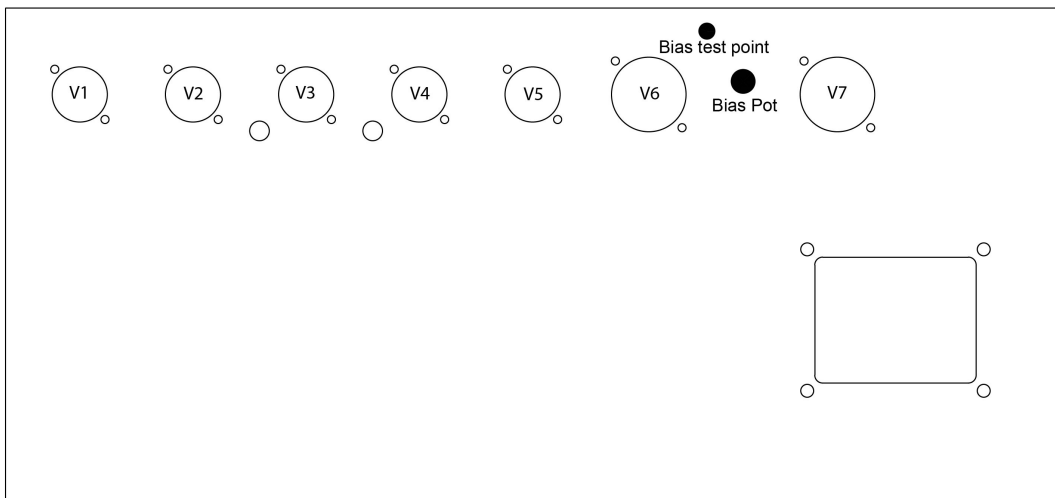
## Domestic 120V:

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

## Export 220V, 230V, 240V:

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

## (Tube Complement)



V1 - 12AX7, Input and Gain

V2 - 12AX7, Mixing, Reverb Send

V3 - 12AX7, Reverb Drive and Mixing Return

V4 - 12AX7WA- Tremolo circuit oscillator (high current tube required)

V5 - 12AX7, Phase Inverter

V6-V7 - 6L6 (35/50 watt) or 6V6 (22 watt) Power Tubes

Each fine production tube is tested and matched to our exacting specifications. When the time comes that the power tubes need replacing, it's very important to use high quality, matched sets of power tubes. It's also critical that the bias of the amp be reset after installing new, or NOS power tubes. External bias adjustment and test points are located on the bottom of the chassis near the output tube sockets. A digital voltmeter and small screwdriver are required for bias adjustment.

## **BIAS ADJUSTMENT PROCEDURE:**

- Power up amplifier and connect proper speaker load
- DO NOT have an instrument connected to the input during the biasing procedure!
- Switch the amp out of standby and allow a few seconds for the circuit to stabilize
- Set the voltmeter to read DC Volts
- With the meter grounded to the chassis and the meter's positive probe inserted into the test point, measure the voltage
- Using a small flat head screwdriver, insert into bias adjust pot and turn very slightly one way or the other to adjust the bias voltage

When replacing power tubes, it is necessary to only use a similar tube type that your amp's power section is designed for. Below is a limited list of comparable tube types:

6L6: 6L6GC, 7581, 5881

6V6: 6V6S, 6V6GT

EL34: 6CA7

*\*Bias ranges are measured and set in volts*

*\*Do not set bias higher than recommended levels as it can lead to tube failure and possible damage to other components in the amplifier!*

**6L6 and EL34 type tubes: .060V to .070V for 50watt - Factory Setting: .064V  
.120V to .140V for 100watt. - Factory Setting: .126V**

**6V6 22 watt versions only: .044V to .058V - Factory Setting: .044V**

**NOTE: For 6V6 powered 22 watt versions with tremolo; bias must not be set higher than .044V as it will cause tube failure.**

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

**LINE CORD-** For your safety, connect 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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619 Martin Avenue, Suite 5  
Rohnert Park, CA 94928

CONTACT: [info@two-rock.com](mailto:info@two-rock.com)

WEB: [www.two-rock.com](http://www.two-rock.com)

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707-584-8663

[www.two-rock.com](http://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.

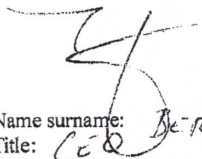
Council Directive and EN Standards:

- 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