

# RP-5

Vacuum Tube Preamplifier



## Owner's Manual

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## INTRODUCTION

Congratulations on your purchase decision! We at Rogue Audio truly believe that our equipment provides the “smartest” value in high-end audio. If you have never owned a vacuum tube preamplifier you will be thrilled by the silky-smooth sound and incredible detail that only a tube preamplifier can provide. And with the RP-5 preamplifier, you can be sure that you are getting the very best in tube amplification. We at Rogue Audio are extremely proud of our products and want you to enjoy them to their fullest potential. So please, take the time to read through this short manual so that you can be confident that you have set up your preamplifier properly.

## UNPACKING YOUR PREAMPLIFIER

**Tools required:** none

**WARNING - This preamplifier uses voltages that could cause injury or death. Never open the preamplifier while it is plugged in, and always wait at least 30 minutes after turning the unit off before unplugging the electrical cord and opening the unit. *Lethal* voltages can remain in the electronics after the unit is unplugged.**

Your new preamplifier has been painstakingly inspected for cosmetic flaws during and after assembly. In order not to damage the cosmetic appearance of your preamplifier it is important that you follow the unpacking instructions carefully.

1. Open the shipping carton and remove the box containing the remote control and power cord from the carton.
2. Carefully lift the preamplifier out of the carton, and remove the foam pads and plastic bag.
3. Save the packing materials. The packing materials and box have been carefully designed to protect your valuable equipment during shipping so you don't want to throw them away.

## INSTALLING THE RP-5 INTO YOUR SYSTEM

Place the RP-5 on a flat stable surface with at least 1” of airspace above the preamplifier for ventilation. Do not place any other electronic components or any other objects on top of the preamplifier.

Insert the IEC end of the detachable power into the rear of the preamp ( shown in Figure ). Plug the opposite end of the power cord into an appropriate power outlet. It is recommended that both the preamplifier and power amplifier are plugged into the same wall outlet if possible (perhaps using a power outlet strip) in order to avoid creating a ground loop.

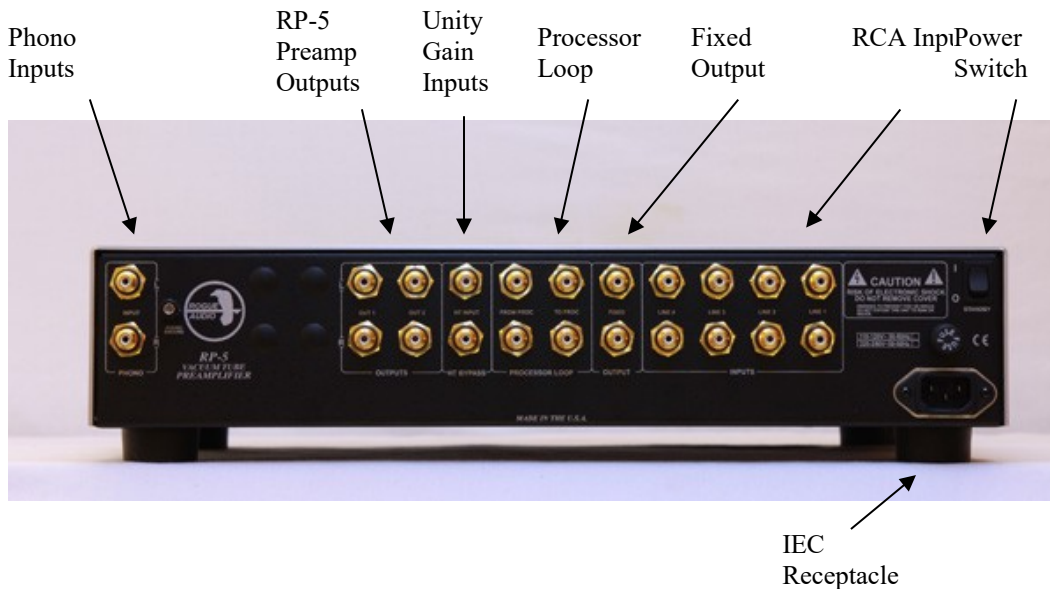


Figure 1

### Connecting sources to the RP-5 preamplifier:

Connections are made to the inputs on the rear panel of the preamplifier shown in Figure 1. Line level (CD player, tuner, DAC, etc...) connections are made via the four pairs of RCA inputs. If you are using a turntable connect it to the RCA phono inputs. There is also a grounding lug for the turntable adjacent to the phono inputs. If you are not using a turntable or you wish to use an external phono preamp the phono inputs are configurable as line level inputs (see phono setup).

### Connecting a home theater processor or surround receiver:

The RP-5 features unity gain bypass inputs that allow you to integrate your two channel music system into a multichannel home theater system. This conveniently enables you to share speakers and amps between the two without changing interconnect or speaker cables.

Simply connect the left and right front preamplifier outputs from your processor to the HT inputs on the RP-5. When the RP-5 is turned off, these inputs automatically route the home theater signal directly to the power amp completely bypassing the active circuitry in the RP-5. When turned on, the RP-5 controls your sources and outputs the audio signal to your power amp. Note that no additional buttons or switches need to be changed.

**Connecting an audio processor to the RP-5:**

The RP-5 has a processor loop which allows various types of processors (equalizer, room correction, bass enhancement, etc.. ) to be used. There are two sets of RCA jacks on the rear of the preamp labeled “in” and “out”. Connect the processor “out” on the rear of the RP-5 to the inputs on your processor. Connect the outputs of the processor to the jacks labeled “in on the rear of the RP-5. When the processor button is pushed a blue LED below the button will indicate that the source signal is going through the processor. With the button out the signal bypasses the processor. Note that if no processor is connected and the button is pushed then the signal is interrupted and there will be no output from the preamplifier. This feature is also accessible via the hand held remote.

**Connecting the RP-5 to the power amplifier:**

There are two pairs of variable (preamplifier) outputs on the RP-5. These volume controlled outputs are used to connect the RP-5 to your power amplifier and any other device requiring a variable output (e.g. a subwoofer). Unless you are biamping you will only need the first pair of outputs (labeled “out 1”) to connect the RP-5 to your amp.

**Connecting a subwoofer:**

The second set of preamplifier outputs labeled “out 2” can be used for connecting a subwoofer to the RP-5. The signal to these outputs is identical to the signal going to the power amp and varies with the volume control. Note that these outputs can also be used for biamping or running a second power amp located elsewhere.

**Connection to the fixed outputs:**

The RP-5 has one pair of fixed outputs. These outputs are connected to the source and will output whatever signal is being used for the preamp. The volume is “fixed” and does not vary with the volume control. You can use these to feed a signal to an external headphone amp or a cd burner, etc....

## OPERATION OF THE PREAMPLIFIER

### Powering up the System:

After all your connections have been made, you are now ready to turn the preamplifier on. A primary power switch is located on the rear of the unit and is shown in figure 1. You can leave this switch on all the time and it will keep the solid state portions of the RP-5 energized even though the unit is powered down. Very little power is used in standby and the RP-5 will sound its best shortly after turn on. The power button located on the front panel is shown in figure 2 and is used to power the RP-5 on and off between listening sessions. Your preamplifier features soft-starting to prolong tube life as well as to suppress turn-on transients. A countdown timer on the display shows the time remaining before the RP-5 is ready to use. A ten second software lockout prevents turning the unit on and off in quick succession. After turning on the preamplifier, turn on the power amplifier and source material and you are ready for listening. The first time that your preamp is turned on (and anytime it has been unplugged from the power outlet) it is best to let the solid state components charge up for a few moments before turning on the preamp. To do this, simply plug the RP-5 in and turn on the rear power switch. Wait a minute or so and then power on at the front panel. This only needs to be done when the RP-5 has been disconnected from the wall or the rear switch has been turned off for a prolonged period.

**NOTE – The RP-5 will not play music for approximately 45 seconds after power on while the preamp goes through its sequential start-up.**

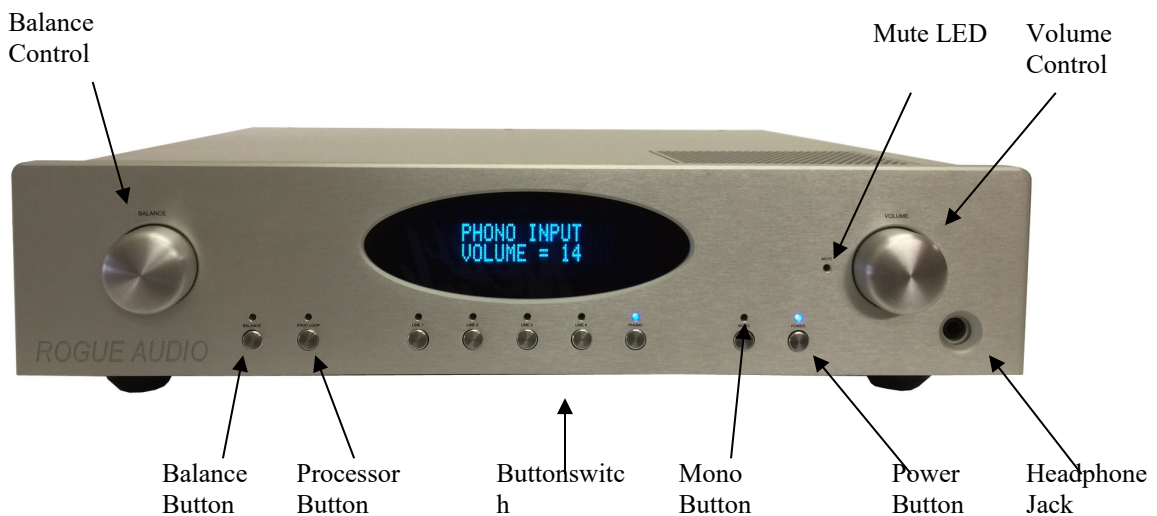


Figure 2

### **Switches and Controls:**

The RP-5 is a full function preamplifier. The volume and balance controls are extremely accurate stepped attenuators which change in 1 dB increments. The preamp also has a processor loop, mono button, mute function (on remote), power on/off button, 4 line level select buttons and a phono button. All of these functions are conveniently accessible on the hand held remote. A high quality VFD (vacuum fluorescent display) indicates the input and volume. When using the balance the relative volumes of the two channels are displayed. The following sections discuss operation of these controls.

### **Volume Control**

The volume control has 60 steps which vary in 1 dB increments. At turn on the RP-5 defaults to a relatively low volume. The volume can be turned continuously until reaching a reading at either 0 (min) or 60 (max).

### **Balance Control**

The balance control has 66 steps which vary in 1dB increments. At turn on the RP-5 defaults to a left/right balanced output. When the balance knob is turned in either direction, the relative volume of the attenuated channel is shown in negative dB. Either channel can be attenuated down to -65dB with the final step being down -90dB (mute). A tactile switch (button) to the lower right of the balance knob conveniently rebalances the two channels automatically. When the balance is shifted on either channel a blue LED above the balance button is lit.

### **Tactile Switches (buttons)**

- Power - If the RP-5 is turned off, pressing the power button will initiate the start-up sequence and the blue LED above the button will light. If the unit is on, the turn off sequence will begin and the blue LED will be extinguished.
- Mono – Combines the left and right channels. When activated the blue LED above the button will be lit.
- Selector buttons – Pressing any of these will engage the chosen input aux1 through aux4 or the phono input. A blue LED above the button indicates the chosen input which is also displayed on the screen.
- Processor - activates the processor loop. When activated the blue LED above the switch will light. Please note that if there is no processor connected pushing this button will interrupt the signal (no sound will be heard).
- Balance button – If the balance is shifted to either channel, the blue LED above this button is lit. pushing this button will balance the two channels.

## Remote Control

The RP-5 hand held remote contains all of the functions located on the front panel. In addition, the remote also features a mute button that mutes the output of the preamplifier. The balance operation on the remote is slightly different than the knob on the faceplate. The remote balance operates in 1dB increments down to -15dB and then jumps to -90dB. This allows fine adjustment where it is most typically needed yet facilitates the extinguishing of the channel without going through all of the intermediate steps.

## Headphone Jack

The RP-5 includes a tube based headphone amplifier that uses a ¼" (6.35 mm) standard headphone jack. For performance reasons the jack does not include a switch to break the audio signal. To mute the output from the preamp either mute the preamp or turn off your power amp.

## Phono Preamplifier

The RP-5 includes a high performance phono section that is suitable for the vast majority of phono cartridges available today. It is user configurable and has adjustments for gain, capacitance and resistive loading. **The RP-5 is shipped with the gain set at 45 dB and the loading set at 47K.** This set up is appropriate for most high output cartridges. Before removing the cover to make any loading or gain adjustments, power off the RP-5 and let it drain off any voltages for at least 30 minutes. Leave the RP-5 plugged into the wall during this time so that the voltages can drain down properly. After the RP-5 has sat for at least 30 minutes disconnect the power cord from the wall or rear of the unit.

**WARNING - This preamplifier uses voltages that could cause injury or death. Never open the preamplifier while it is plugged in, and always wait at least 30 minutes after turning the unit off before unplugging the electrical cord and opening the unit. *Lethal* voltages can remain in the electronics after the unit is unplugged.**

Remove the 10 cover screws using a #2 Phillips screwdriver and pull off the cover.

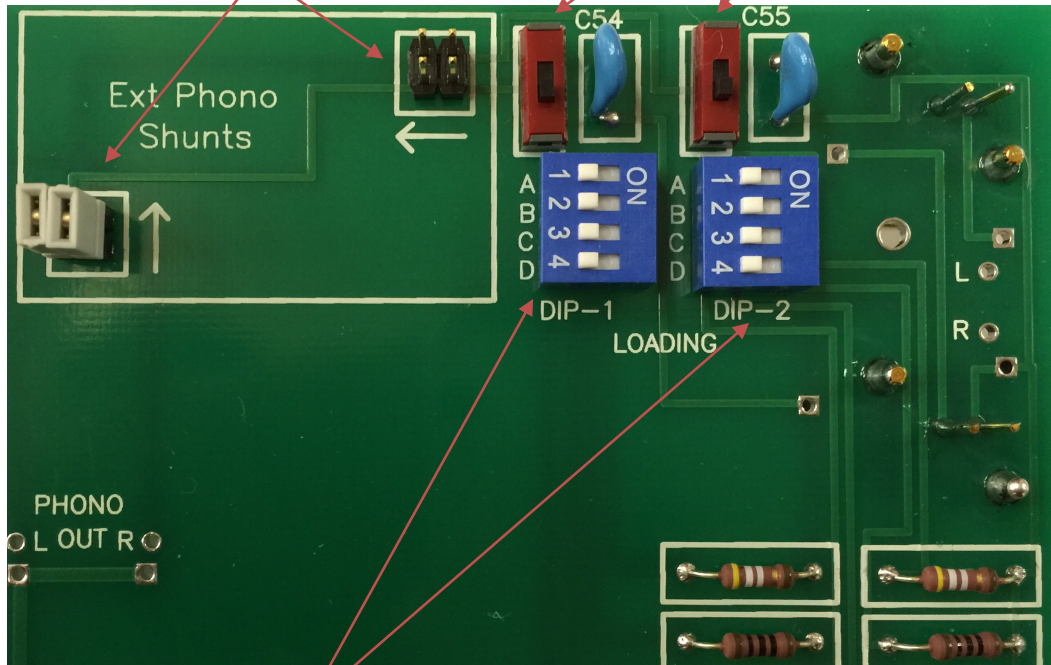
**Setting the cartridge loading** – The cartridge loading switches are located on the right hand side of the rear circuit board adjacent to the phono inputs (figure 3). It is important to point out that the cartridge manufacturers recommended loading should be considered as a starting point and not an absolute. Systems and turntable setups vary significantly and if you want to get the most out of your analog setup, take the time to find the settings that sound best in your system.



**Phono capacitance** - There are two (red) slide switches to add capacitance (150pF) to the phono input. With the two switches in the down position there is no added capacitance. When the switches are in the up position 150 pF (picofarads) are added at the phono input. The RP-5 ships with these switches set to zero capacitance. Note that for many cartridges this will not affect the sound in either setting.

**Shunts for bypassing phono section**

**Slide switches for capacitance**



**DIP switches for resistive**

Figure 3

**Resistive loading** – There are two sets of DIP switches for setting the resistive loading (one for each channel). The four switches are labeled A,B,C and D. Figure 3 shows the A switch in the on position. The loading options are shown in Table 1:

| A   | B   | C   | D   | resistance |
|-----|-----|-----|-----|------------|
| on  | on  | on  | off | 30 Ω       |
| on  | off | off | off | 50 Ω       |
| off | on  | on  | off | 75 Ω       |
| off | on  | off | off | 100 Ω      |
| off | off | on  | on  | 230 Ω      |
| off | off | on  | off | 300 Ω      |
| off | off | off | on  | 1K Ω       |
| off | off | off | off | 47K Ω      |

Table 1

**Setting the phono gain** - The two DIP switches for setting the gain are located on the right rear corner of the main circuit board as shown in Figure 4.

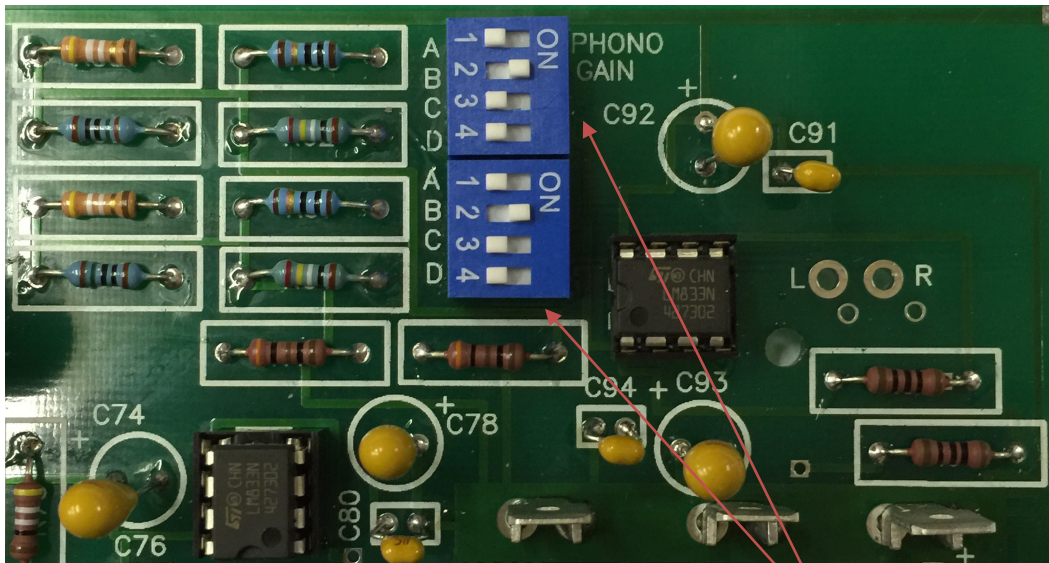


Figure 4

Gain setting DIP switches

**Phono gain settings are as follows:**

| Switch | Gain  | Cartridge Output | Cartridge Type |
|--------|-------|------------------|----------------|
| A      | 40 dB | 4mV and up       | high output MM |
| B      | 45 dB | 1.0 to 3.0 mV    | high output MC |
| C      | 50 dB | 0.6 mV to 1.0 mV | medium output  |
| D      | 60 dB | below 0.6 mV     | low output MC  |

A setting of 45 dB is shown in Figure 4.

Please note that the gain settings recommended for the various cartridge outputs will vary somewhat depending on the sensitivity of other components in your system. These are “typical” settings and are a good starting point. If you feel like you want a bit more or less gain try the setting above or below the value in the table.

**Bypassing the internal phono section** – If you have an external phono preamp or you wish to bypass the internal phono so that it can be used a line level input, simply move the two shunts from the arrow up position to the arrow left position (see Figure 3). Please note that the direction of the shunts must follow the direction of the arrow. If you are using an external phono or a line level device on this input be sure to turn all the loading switches to the off position.

## TROUBLESHOOTING

### *Speaker Hum*

- If hum can be heard from more than a few inches from the loudspeaker, there is probably a ground loop. Be sure to have the amp and all sources plugged into the same outlet if possible. If this fails to cure the hum, call customer service at Rogue Audio for further advice 570-992-9901.

### *Unit does not turn on*

- Check that the power cord connection is secure and that the rear power switch is turned on
- Turn off the main power switch on the rear of the RP-5. Wait one minute then turn the rear panel switch back on. Wait 30 seconds then press the power button on the front panel (e.g. reboot).

### *Unit does not play*

- Check that the interconnects are connected to the proper input or output.
- Check that the interconnects are connected securely.
- Processor button is pushed in with no processor or with the processor turned off.
- Tape monitor button is pushed in with no signal.

### *One channel does not play*

- Check that the balance pot is centered.
- Check that the tubes are seated correctly and securely

For further problems, please call Rogue Audio Technical Support at 570-992-9901.

## OWNER AND WARRANTY REGISTRATION FORM

Included with this manual is an Owner and Warranty Registration Form. Please take a minute to fill out this card and return it to Rogue Audio. This card must be returned within 30 days of purchase to validate the warranty.

## FUSE VALUES

One 1 A slow Blow Type Fuse located on left rear of chassis.

## RP-5 SPECIFICATIONS

|                      |                          |
|----------------------|--------------------------|
| Tube Complement      | Four 12AU7/ECC802 tubes  |
| Frequency Response   | 1Hz – 100KHz +/- 1dB     |
| THD                  | <0.1%                    |
| Gain                 | 10dB                     |
| Rated Output         | 1V RMS                   |
| Output Impedance     | 500 Ohms                 |
| Maximum Output       | 27 V rms                 |
| Phono Gain           | 40dB, 45dB, 50 dB, 60 dB |
| Main Unit Dimensions | 18.5" W x 17" D x 4.5" H |
| Weight               | 30 Lb                    |
| Shipping Weight      | 45 Lb                    |
| Power Requirements   | 115/230V – 50/60Hz       |

## LIMITED WARRANTY

## Warranty Period

This product has been manufactured under the highest standards of quality and workmanship. Rogue Audio Inc. (hereinafter "Rogue Audio") warrants this product against defects in material or workmanship as follows:

With the exception of vacuum tubes, Rogue Audio warrants to the original purchaser of this product all parts of this product against defects in material and workmanship for a period of three years from the date of retail purchase. Rogue Audio warrants the vacuum tubes for a period of six months from the date of retail purchase. Any defective parts will be replaced free of charge, excluding shipping and handling.

Proof of purchase in the form of a bill of sale or recited invoice which indicates that the product is within the warranty period must be presented to obtain warranty service. Rogue Audio suggests that the purchaser retain the dealer's bill of sale as evidence of the date of retail purchase.

## What's Not Covered

This warranty does not cover cosmetic damage or any damage that results from product misuse, product abuse, installation error, connection to an improper voltage supply, accident, improper maintenance, alterations, modifications not authorized in writing by Rogue Audio, lightning, power surges, or acts of God. Use of any other than Rogue Audio factory parts may void this warranty.

This warranty does not cover the cost of parts and labor which would be otherwise provided without charge under this warranty, obtained from any source other than Rogue Audio.

This warranty applies only to consumer use of this product and does not cover any product that is used in any trade or business, or in an industrial or commercial application.

This warranty applies only to the original purchaser of this product when purchased from an Authorized Rogue Audio dealer.

This warranty is valid only in the United States.

### YOUR RIGHTS

ROGUE AUDIO LIMITS ITS OBLIGATIONS UNDER ANY IMPLIED WARRANTIES UNDER STATE LAWS TO A PERIOD NOT TO EXCEED THE WARRANTY PERIOD. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, AND SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

## To Obtain Service

To obtain service, you must contact Rogue Audio and obtain a return authorization number. The product must be delivered to Rogue Audio in its original packaging prepaid at the following address:

**Rogue Audio Inc.  
545 Jenna Dr.  
Brodheadsville, PA 18322**