

Service Notes

Tubes

Tubes are consumables, as they have a given usable lifespan. They are part of the heart of the tone, so keeping correctly operating tubes is essential. Tubes can fail catastrophically or gradually, and it's good to know what to look for if they start to go bad. Periodically inspect them and look to see if anything inside the tube is glowing cherry red other than the normal orange glow of the filament. This would indicate a situation where the tube is conducting more current than it is capable of handling and most likely about to fail. Two other conditions to observe are: 1) filaments not glowing or 2) a miniature fireworks display inside the tube. Any of the above conditions indicate serious problems with the tube and should be taken care of immediately. Tubes quite often are the cause of spurious noise in the amp. Microphonic tubes will squeal or rattle with the vibrations of the cabinet. If suspected, tap each tube lightly with a pencil with the amp powered up—the suspect tube will let you know. Note that there is a normal metallic clinking when doing this, but a microphonic tube will be quite loud.

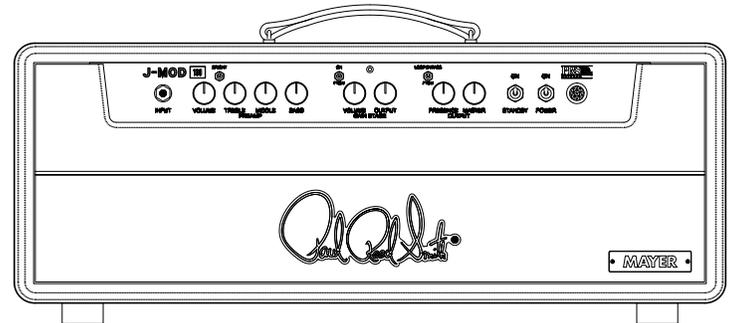
Replacing preamp tubes will not require any adjustment, but the power tubes will need rebiasing to assure proper operation. After power tube replacement, initially inspect the tubes often to assure there are no “cherry red” components within the tube. Tubes today can have a wide variety of tolerances and a re-bias is highly recommended with new ones.

Power tube bias should be adjusted to 30 mV, +/- 5 mV. If power tubes are mismatched by less than 5 mV, average the two around 30. Mis-matched tubes beyond 5 mV will induce noise and may cause a degradation of tone.

NOTE! Capacitors may retain an electric charge and can be dangerous even when the unit is off, unplugged, and has not been played for an extended period of time. USE CAUTION!!!!

The image shows the Paul Reed Smith signature logo in a stylized, cursive script. The letters are interconnected and fluid, with a registered trademark symbol (®) at the end.

John Mayer J-MOD 100 User's Manual



Using your PRS Amplifier

IMPORTANT: Before using your amplifier, refer to the **IMPORTANT SAFETY INSTRUCTIONS** insert supplied with the product.

Powering Up:

1. Make sure your speaker or speaker cabinet is connected to the correct speaker output impedance jack with a high quality speaker cable. Do not use guitar cords.
2. Make sure the power cord is connected to the correct grounded outlet.
3. Make sure there is at least 12 inches of clearance behind the amplifier to allow for proper cooling. Never place the amplifier against a wall or other equipment, and keep it clear of other heat sources, such as other amplifiers or stoves. Make sure there are no flammable items, such as curtains, behind the amp. Do not drape items over the amps that can prevent proper cooling. Do not set drinks or other liquids on top of the amp that can spill into the amp.
4. To increase the life of the tubes, set the "Standby" switch to the STANDBY position before powering on. Turn the POWER switch on and let the amplifier warm up for 2 minutes before setting the standby switch to "ON". If this is the first time you are turning on the amp, check to see if all of the tubes are glowing.
5. Plug in the guitar cable, turn the volume knob down, and turn the standby switch on and wait a few seconds for the bias to settle. Bring the volume up and play some tunes.



This equipment is capable of very high sound pressure levels. Prolonged exposure may cause hearing damage.

This equipment contains no user-serviceable parts. Refer all repairs to qualified service personnel.

Ensure that the mains plug is easily accessible to allow the unit to be switched off.

Only connect this unit to an earthed supply socket.

THIS UNIT IS CLASS I CONSTRUCTION AND MUST BE EARTHED!

J-MOD 100 Amplifier Front Panel Controls

Input: 1/4" Standard Mono Guitar Cable.

Volume: Controls the overall volume of the amp. At extreme settings the amp will begin to overdrive and distort.

Bright Switch: Adds high end to the overall tone with a capacitor bypassing the input of the volume pot to the output. Brightness is more evident at lower volume control settings.

Treble Control: Adjusts the high frequencies within the overall tone. This adjustment allows the tone to become warmer at low settings and brighter at higher settings.

Middle Control: Adjusts the midrange frequencies within the overall tone. This adjustment allows the user to add fullness or body to the sound, or create a "scooped", crisp sound.

Bass Control: Adjusts the low frequencies within the overall tone. Lower settings will sound tighter, especially with more gain and higher settings will add deep fullness and thump.

Gain Stage Switch: Activates the gain stage circuitry. Set switch in the down position when using the footpedal to switch in the gain stage.

Gain Stage Volume: Increase this control to add volume, distortion and overdrive.

Gain Stage Output: Serves as a master volume control for the Gain Stage. Use this control to set the relative volumes with the Gain Stage switched in and out.

Loop Bypass Switch: Set this switch up to bypass the loop circuitry and any effects in the loop. Set switch in the down position to engage the loop use this function on the footswitch.

Presence Control: Works in the power amp portion of the circuitry to add high end sparkle.

Master Control: Sets the overall volume of the amp.

Power On/O and Standby Switches: Power on the amp first with the Standby Switch in the OFF position. This effectively allows the tube filaments to warm up without applying high voltage to the tubes. Wait about 2 minutes, then switch the Standby Switch in the ON position to play the amp. The Standby can be used when not playing the amp for several minutes.

Rear Panel Controls

Mains Socket: Always use the mains lead supplied. Your sales outlet can provide a lead suitable for your country. Always disconnect the equipment from the mains and ancillary units before moving.

Fuses: This amplifier is equipped with multiple accessible fuses. Replacement fuses must be of the same type and rating as indicated. Failure to comply may result in permanent damage to the product, and/or create a safety hazard. Always disconnect the equipment from the mains supply before replacing a fuse.

Mains Fuses: These are located in the mains socket.

B+ Fuse: This fuse is located next to the mains socket and is accessible via a screwdriver-turn fuse holder.

Bias Jacks and Pot: These jacks measure the power tube current draw in milliVolts. $1mV=1mA$. Review the information on the back of this manual for guidance on replacing tubes. Biasing and tube replacement should be performed only by a qualified technician. Bias adjustments can be made with a small flat blade screwdriver.

Speaker Jacks: These are the main outputs for your combo speaker or cabinet(s). There are 3 total jacks to use. A 4 ohm or 8 ohm selector switch is assigned to two jacks in parallel, and there is a dedicated 16 Ohm jack. Determine beforehand what your total speaker loading will be and use the appropriate jacks. Never use the 16 Ohm jack with the 4 or 8 Ohm jacks at the same time. Examples of loads include two 8 ohm speakers combine for 4 ohms. Set the selector switch to 4 Ohm and use the two parallel jacks. For two 16 ohm cabinets creating an 8 Ohm load, set the selector switch to 8 Ohms. Failure to correctly match the speaker load to the appropriate output jacks can cause tube socket arcs, blown power tubes, or failure of the amp.

Effects Loop: This amplifier features a series effects loop that is integral to the overall sound of the amp. Connect the Send jack with a 1/4" mono instrument cable to the input of your pedal(s). Connect your pedal(s) output to the Return jack also using a 1/4" mono instrument cable. Use the loop Send and Return level controls to adjust the signal to and from your pedals for minimum distortion. To minimize your cables picking up hum, arrange the cables together for the first few feet away from the amp, and move them away from the power transformer and mains power cable.

Footswitch Jack: Connect the included PRS footswitch to control Gain Stage switching and Effects Loop Bypass. Do not use other footswitches as they can possibly damage the amp. When attached, place the Gain Stage and Effects Loop Bypass front panel switches in the correct positions to allow the footswitch to function correctly.

Safety Symbols: The following symbols mean:



Warning: read instructions to understand possible hazard



Danger: electrical shock hazard



Warning: This equipment is capable of very high sound pressure levels. Prolonged exposure may cause hearing damage.