

Tech Specs

SE 2 Channel Amp	SE 50 Watt	SE 30 Watt	SE 20 Watt
Max Power Usage	250 Watts	250 Watts	250 Watts
Pre Amp Tubes	3 each 12AX7/ECC83 3 each 12AT7	3 each 12AX7/ECC83 3 each 12AT7	3 each 12AX7/ECC83 3 each 12AT7
Power Tubes*	2EA EL34	2EA 588I	2EA 6V6
Fuses			
120V 60Hz Main	T2A 250V Type IEC 5X20mm	T1.6A 250V Type IEC 5X20mm	T1.5A 250V Type IEC 5X20mm
100V 50/60Hz Main	T2A 250V Type IEC 5X20mm	T1.6A 250V Type IEC 5X20mm	T1.5A 250V Type IEC 5X20mm
230V 60Hz Main	T1A 250V Type IEC 5X20mm	T800mA 250V Type IEC 5X20mm	T630mA 250V Type IEC 5X20mm
Filament Fuses	2EA 10A 250V Type IEC 5X20mm	2EA 10A 250V Type IEC 5X20mm	2EA 6A 250V Type IEC 5X20mm
B+ Fuses	T1A 250V 250V Type IEC 5X20mm	T800mA 250V 250V Type IEC 5X20mm	T630mA 250V 250V Type IEC 5X20mm
Weight			
Head	34.2 lbs (15.5 kg)	32.6 lbs (14.8 kg)	29.6 lbs (13.5 kg)
1x12 Combo	57.6 lbs (26.2 kg)	56 lbs (25.5 kg)	53 lbs (24.1 kg)
Dimensions			
Head	21.5in X 10.5in X 9.5in 546mm X 241mm X 254mm	21.5" X 9.5" X 10" 546mm X 241mm X 254mm	21.5" X 9.5" X 10" 546mm X 241mm X 254mm
1x12 Combo	24" X 23" X 11" 610mm X 584mm X 279mm	24" X 23" X 11" 610mm X 584mm X 279mm	24" X 23" X 11" 610mm X 584mm X 279mm
Combo Speaker			
Combo	12 Inch, 16 Ohm, 100W	12 Inch, 16 Ohm, 100W	12 Inch, 16 Ohm, 100W
Speaker Cabinet 2 X 12" Cabinet, 100 Watts, 8 Ohm Input - Each Speaker: 12 Inch, 16 Ohm, 50W CA.			
Dimentions 30" x 19" x 13" (762mm x 482mm x 330mm)			
Weight 60 lbs (27.3 kg)			

* Power Tubes should be purchased as matched sets. Use only tubes in pairs that are factory-matched. Failure to use matched tubes can lead to tube failure and amplifier damage or abnormal operation.

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.

Instructions for Qualified Service Technician:

To install the tubes, check that the power cord is not plugged in, then remove the metal back panel with a screwdriver and notice the tube sockets. Looking from the back, install the Power tubes (EL34, 588I, etc.) in the sockets. In each case, align the center pin guide correctly with the socket, making sure that the pin guide key fits with the corresponding slot in the socket. The preamp tubes can then be placed in the smaller 9-pin sockets. Please refer to the tube chart in this manual (inside panel 4) for proper tube locations. Be aware of the pin alignment with these, as there is only one way they can fit. We utilize tube sockets that allow relative ease of tube installation, but never force tubes into the sockets if there becomes a problem. Also, never torque the tubes, only gently rock them from side to side during insertion or removal. After preamp tube installation, place the cylindrical spring tension preamp tube covers over the tubes.

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.

Suggested Tube Biasing:

SE 20 - 6V6, 21mV

SE 30 - 588I, 35mV

SE 50 - EL34, 37mV

Note to set your meter to millivolts for your reading. Failing to do so could cause the amp to be incorrectly biased and could damage the tubes and/or the amp.

Fuses

There are 4 fuses installed in the amplifier. One of these fuses is accessible on the back panel, the main fuse. The B+ fuse is located on the bottom side of the chassis. There are two fuses internally for added safety. The B+ fuse is a high voltage fuse, and two internal fuses are for the lower filament voltages. In all cases, labels indicate the type and rating of the fuse. Replacement fuses MUST BE THE SAME TYPE AND RATING. If they are not, you can permanently damage your amplifier. Please contact your local PRS dealer or the PRS accessories web site for information on ordering replacement fuses.

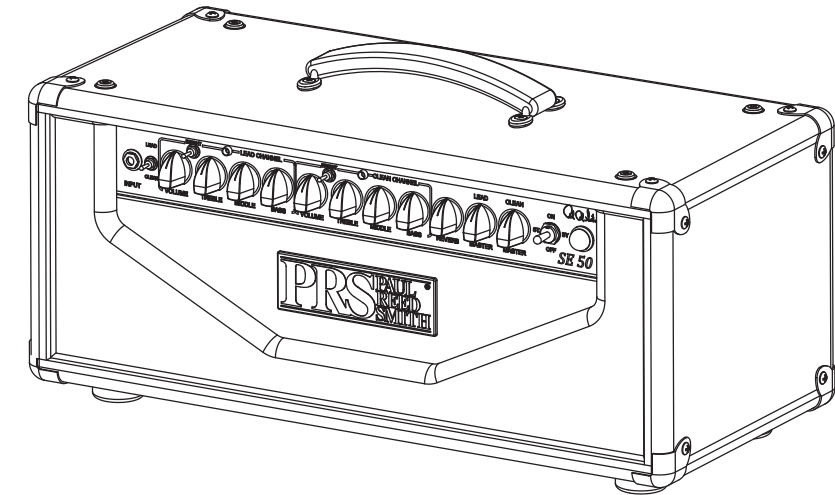
Instructions for Qualified Service Technician: Replacement of internal fuses requires removal of the back panel and removal of the chassis. First, ensure the power cord is not plugged in, then remove the back panel with a screwdriver. Loosen the 4 bolts holding the chassis to the top of the cabinet. Check that all components are cool so that burns do not occur. Then, by holding onto the transformers, carefully pull the chassis out.

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!!!!

Locate the fuse holders, remove fuses, and check for continuity. Blown fuses can indicate a failure condition and should be treated as though a problem exists. Check the label for the proper type and rating. After all fuses have been replaced and the amp is tested as acceptable and safe, reinstall the chassis by working in reverse. Be sure to replace the reverb pan and hardware, then plug the reverb cords back into place.



SE 2 Channel Guitar Amplifier User's Manual



In the summer of 2010, we started talking about how to expand our amplifier offerings to satisfy a new customer. I knew that PRS had a great business model already with the SE guitar line and that the price/quality ratio was in my opinion the highest in the industry. So, by applying well-developed concepts from the SE line, we set about the process of bringing a lower cost yet high quality amp line to market.

The features we wanted to offer were somewhat of a departure for us. We wanted two channels with separate EQ, an effects loop, and reverb. After several weeks of tweaking, we had a working prototype that was extensively field-tested, and we were very happy with our results. This hand wired prototype with high-end components and fairly labor intensive layout was used as a tonal “quality” and functional baseline for the actual SE amp models. At this point things became interesting as the prototype was so impressive we decided to offer it as a model. We called it the 2 Channel “C” and offered it at the 2010 PRS Experience. The “C” and the “H” subsequently became very popular models.

Working with consultants and experts completely versed in cost effective tube amplifier design, we designed a “manufacturing friendly” clone of the prototype. After many weeks of tweaking and developing their own tonal signatures, the final family of PRS SE amps was approved for manufacture. There is a great boutique attitude pervasive with the design and construction of these amps that make me very proud to be part of the project. Some of the features include custom wound transformers, .090 aluminum chassis, high-end “on-on-on” switches, the best sounding NNS tubes at any price, custom-voiced speakers, custom knobs, etc.

I cannot effectively describe the sense of teamwork, passion, and hard work associated with this endeavor but I feel it will be very evident in the final product. I would like to commend everyone that worked on it-- each person did a fantastic job. The process has been delightful from start to finish and I personally cannot wait until I can purchase my own, or more realistically one of each!

Thanks for your support,

Doug Sewell



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 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 6 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. 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.
4. To increase the life of the tubes, set the “On/Standby/Off” switch to the STANDBY position before powering on. Let the amp warm up for 2 minutes before setting the 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 On/Standby/Off switch to ON. Wait a few seconds for the bias to settle. Bring the volume up and play some tunes.

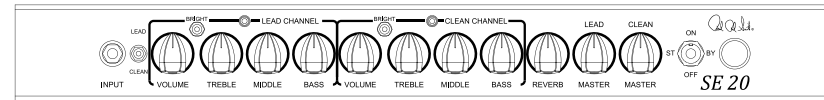
Over view of Amplifiers:

The **SE 20** is a little amp with a chip on its shoulder. It is perfect for home recording and small venues due to its ability to achieve powerful, rich tones at lower volumes. The SE 20 uses 6V6 tubes and 20 watts of power for the ideal mix of lullaby cleans and rude, crunchy grit.

The **SE 30** offers the time-tested, perfect power and volume for live club performances and pro recording. The 588l tubes and 30 watts give you a thick British crunch and sparkly American clean.

The **SE 50 is the screamer of the bunch.** Pro traveling musicians will love the extra clarity and punch that the EL34 tubes and 50 watts of power provide. The SE 50 can handle just about any live performance you can imagine in a simple package.: Before using your amplifier, refer to the IMPORTANT SAFETY INSTRUCTIONS insert supplied with the product.

SE 2 Channel Amplifier Front Panel Controls



Input: 1/4” standard guitar cord.

Lead/Clean Selector: Select your channels when not using your footswitch. Up for leads, down for cleans. This switch is bypassed when using the footswitch.

Lead Channel

Volume: This is a vital control on the lead channel. It will add gain to allow you to go from subtle crunch to full on “in your face” distortion. Each guitar will react differently, and exploring this control should be a source of great enjoyment.

Bright Switch: Adds extra shimmering highs to cut through a mix. Turn off for a round, warm crunch.

Treble: The treble control is very sensitive. Let your ears guide you to the appropriate amount of highs to suit your style and performance.

Middle: Valuable control to go between scooped 80’s metal, or vocal solo sounds.

Bass: Use this control sparingly. Back off to 9 o’clock when experimenting with overdrive. Consider the maximum setting around 3 o’clock.

Clean Channel

Volume: The volume control allows a ton of headroom for sparkly, chimey cleans tones. If you prefer your cleans dirty, push the control past 1 o’clock or so. This will let you experiment with some great overdrive.

Bright Switch: The Clean channel’s bright switch is most responsive at lower volumes. It lets extra highs to stay in the mix as you go down the sweep of the volume.

Treble: Back off for warm, smooth tones. Dial up for more spank and cut.

Middle: On the clean channel, dial down the mids for classic blues scoop. Dial up to find unique placement in a mix.

Bass: The Clean channel’s bass control crucial to finding just the right fatness in your clean tones. The sweep is very sensitive, and the sweet spot seems to be around 1 o’clock.

Global Reverb: Adds universal depth to both channels at your discretion. Adjust to taste.

Lead Master: Increases the overall volume and output of your lead channel. Find just the right setting before the neighbors call the cops!

Clean Master: Gives you incredible control to find the perfect balance of volume compared to your Lead channel

On/Standby/Off: When this switch is in STANDBY, the amplifier tubes are effectively turned off, but are still being warmed by the filaments. Keep this switch set to STANDBY when powering on the amplifier for at least 2 minutes to allow the tubes to warm up. This also helps extend the life of the tubes. When set to ON, the tubes are turned on, and the amplifier can be used.

Jewel Power Indicator: If the jewel is lit, the amp is on. NOTE: An amplifier may be plugged in and “on”, but a malfunctioning or burnt-out indicator will not show the amp is on. Check the power cord and Power Switch if the jewel light is not on. If these are connected correctly, then check the main fuse. If the main fuse burns out, check for proper speaker connections. If the fuses continue to blow, the amplifier may need servicing.

Rear Panel Controls



Fuses: Blown fuses may indicate that the amplifier needs servicing. Use only the type and rating specified on the back of the amplifier. See the section on Service Notes for proper fuse servicing and replacement.

B+ Fuse: High Voltage Fuse - located on the underside of the chassis near the bias adjustment.

Fuse: Main Fuses (See Technical Specs for Proper Fuse Type and Rating) - located in the power inlet module.

Effects Loop Description and Tips: The 2 Channel features an Effects Loop that is integral to the overall sound of the amp. This lets your amp’s tone stay pure whether you choose to use and effects chain, or plug straight in and rock. There is no need for a bypass.

Loop Return: Input for the end of your effect chain.

Loop Send: Input for the front of your effects chain.

Loop Level Switch: Select ‘instrument’ for typical foot pedals/stomp boxes (-20db) and ‘line’ for 0db studio gear.

Bias Jacks: For reading and adjusting the bias of your power tubes (6V6, 588l, EL34). 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.

Ext Jack: Output for an auxiliary speaker cabinet. Only use high-quality speaker cables. Never use a guitar cord to connect speakers. See “Impedance Selector” instructions below.

Spkr Out: Main output for primary speaker cabinet. Make sure to use a high-quality speaker cable. Never use a guitar cord. See “Impedance Selector” instructions below.

Impedance Selector: Use this switch to match the amp to the impedance of your speaker cabinet(s). The total speaker impedance must be determined before connecting to the amp. It is not recommended to exceed 2 total speaker cabinets. Be sure to only use cabinets with the same impedance rating. Failure to do so can damage the amp. The combined value of 2 matching cabinet impedances is half of the value of one cabinet’s impedance.

Examples: Two 8 ohm cabinets combine to create a 4 ohm combined impedance. If using two 16 ohm cabs, set the Impedance Selector to 8. When using a single cab with an 8 ohm impedance, set the Impedance Selector to 8.

Note: Confirm the total impedance of your choice of cabinets, and adjust your Impedance Selector accordingly. Failure to do so can cause arcs on the tube sockets, failure of power tubes, or even failure of the amp.

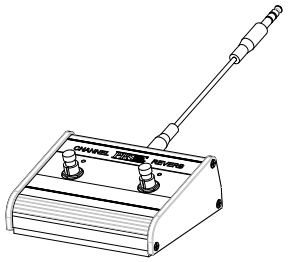
Footswitch Jack: Connect the included footswitch to control channel switching and global reverb. This bypasses your Lead/Clean Selector on the front of your amp. The footswitch cables is a “TRS” Stereo 1/4 inch M-M cable.

Footswitch Operation

The footswitch is used to control 2 things. The left switch controls which channel is active. The right switch is used to control the reverb as either on or off.

When the LED above the left switch is on, the Gain Channel is selected. Then the LED above the left switch is off, the Clean Channel is selected.

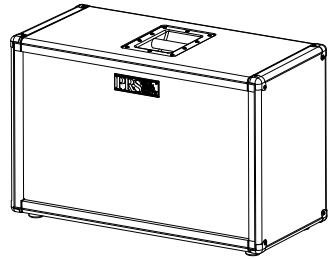
When the LED above the right switch is on, the reverb is turned on. When the LED above the right switch is off, the reverb is bypassed.



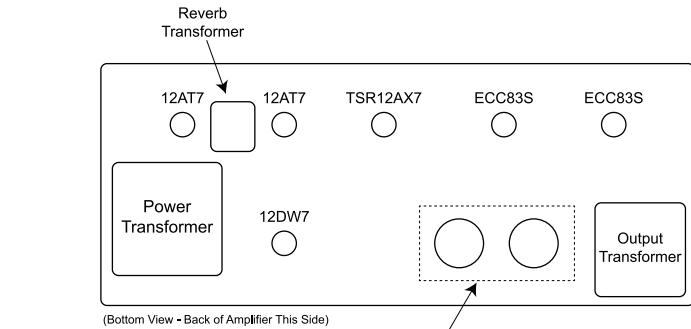
Speaker Cabinet

Speakers: 2 each 12 inch, 16 ohm, 50 Watt.

Speaker cabinet is a 100 Watt Cabinet at 8 Ohms



Tube Chart - 2 Channel C and H



Power Tubes:
2 Channel H = 6L6
2 Channel C = EL34

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