

## Tech Specs

<b>Sweet 16 Amp</b>	<b>16.5 Watt</b>
<b>Power usage</b>	200 Watts
<b>Pre Amp Tubes</b>	2 each 12AX7, 2 each 12AT7
<b>Power Tubes*</b>	2 each 6V6

\*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.

<b>Main Fuses</b>	
<b>100V 50Hz/60Hz</b>	2A 250V Type 5mm x 20mm
<b>120V 60Hz</b>	2A 250V Type 5mm x 20mm
<b>230V 50Hz</b>	1.25A 250V Type 5mm x 20mm
<b>Filament Fuses</b>	2 each 10A 250V Type 3AG
<b>B+ Fuses</b>	2 each 500mA 440V Type 3AG
<b>Reverb</b>	3 Spring, Medium Decay, Tube Driven
<b>Weight</b>	
<b>Head</b>	27.5 lbs (12.5kg)
<b>1x12 Combo</b>	40 lbs (18.1kg)
<b>2x10 Combo</b>	48 lbs (21.8kg)
<b>Dimensions</b>	
<b>Head</b>	19in X 9in X 9.5in
<b>1x12 Combo</b>	19in X 19in X 9.5in
<b>2x10 Combo</b>	24in X 19in X 9.5in

## 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 (6V6s) in the left 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 12AX7 and 12AT7 preamp tubes can then be placed in the smaller 9-pin sockets to the right of the power tubes. Please refer to the tube chart inside the amplifier for proper pre-amp 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.

Since all the tubes in this model are self-biasing, replacing power and preamp tubes will not require any adjustment under normal circumstances. However, 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 although very rare, if the power tubes show any signs of over-current they should be replaced.

### Fuses

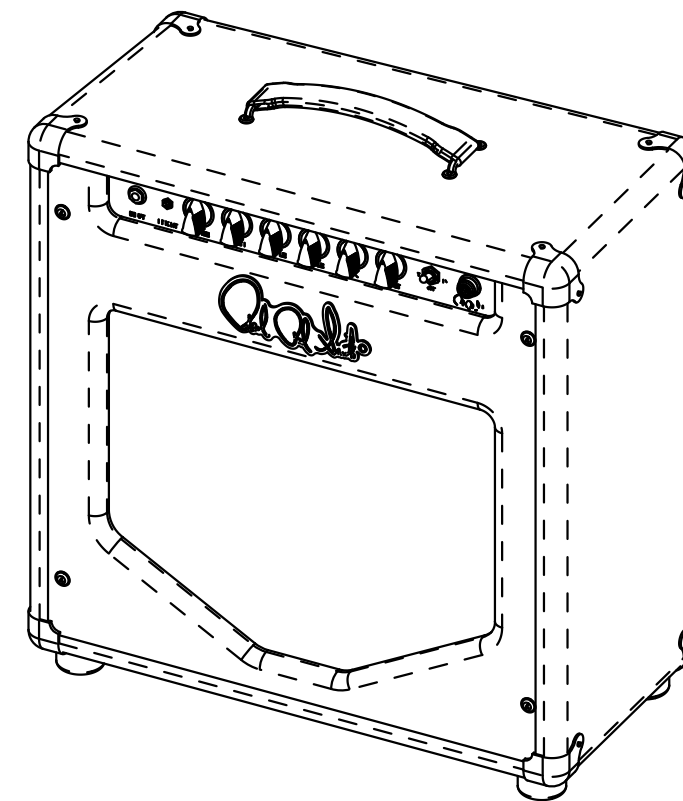
There are 5 fuses installed in the amplifier. Only 1 of these, the main input fuse, is accessible and replaceable by the user. There are 4 fuses internally for added safety. 2 of these fuses are high voltage fuses, and 2 fuses are for the lower filament voltages. In all cases, labels indicate the type 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.

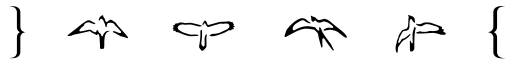
Instructions for Qualified Service Technician: Replacement of internal fuses requires removal of the back panel and removal of the chassis. First, ensure the power cord is not plugged in, then remove the back panel with a screwdriver. Loosen the 4 screws holding the chassis to the top of the cabinet. Ensure the reverb cords are unplugged, then check that all components are cool so that burns do not occur. Then, slide the chassis straight out of the back of the cabinet.

**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 and remove them, 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 plug the reverb cords back into place.

## Sweet 16 Guitar Amplifier User's Manual





A few years ago, I was at the Dallas Vintage Guitar Show and my band was scheduled to perform a few times. A friend said, “Hey. You need an amp to play through, and I have a friend who makes great amps.” He took me to the booth of a Texas amp builder, Doug Sewell. I loved the way his amps sounded, and after barely saying hello, Doug and I were inside rewiring the amp I was going to play through. Since that day, Doug and I have spent years rewiring and listening to every single possible variation to finalize the circuits. Our goal was to have highly usable and musical amplifiers.

I am not an amp collector. I am an amplifier user who keeps the amps I am presently playing through. That said, after Doug and I got several of the prototypes finalized, I sold some of my old coveted live and studio amps because ours sounded considerably better. The next step was to take the prototypes to musicians who are known for their amplifier tone as well as their playing. What’s interesting is that when I spoke to these artists about trying the amps, they all said the same thing. “Sure I’ll use them, if I love them.”

In a real way, amplifiers are musical instruments. They are the devices that “amplify” the sound of the player’s hands, the guitar and possibly the pedal board. They must share many qualities. They must work - they have to have a beautiful balance of bass, midrange, and treble; the highs should be sweet - not harsh; they should be easy to operate and be highly musical. In addition, amps should clean up really well when you turn your guitar down. The final quality that Doug and I looked for are amps that sound good no matter where the knobs are. It is a rare quality that we insisted on.

I hope this hand-crafted amplifier gives you years of enjoyment, musical results, and pride in ownership. I appreciate your confidence.



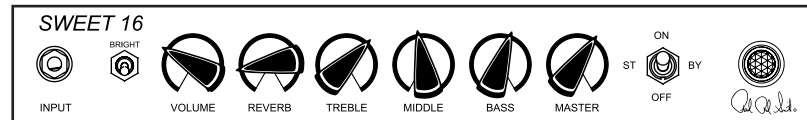
## Using your PRS Amplifier

**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, 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.

## Sweet 16 Amplifier Front Panel Controls



**Input:** 1/4” standard guitar cord.

**Bright Switch:** The bright switch adds shimmer in the clean settings. It allows high frequencies to be unattenuated by the volume pot. As previously stated, to achieve bell-like cleans, back off the treble and employ the bright switch. Also, if you are using a distortion pedal, use the bright switch with discretion because it will add sizzle to the higher frequencies. If you are trying to achieve smooth, fat, lead tones, the bright switch should be off.

**Volume:** The volume is one of the most important controls on the amp. Depending on the output of your pickups, you can find your sweet spot at various locations on the sweep. There will be a point in which actual volume stops increasing and the tone becomes thicker and more compressed. Each guitar will react differently and exploring this control should be a source of great enjoyment.

**Reverb:** The reverb knob controls the amount of reverb added to the guitar signal at the output. Adjust to your liking.

**Treble:** The treble control is very sensitive and should be used with discretion. Like all three knobs, there are no numbers to encourage you to set the amp with your ears. It affects the gain and distortion of the amp and can work effectively with the bright switch to produce more mid-60’s American “scooped-mid/bell tones.” Just roll back the treble to say 11 o’clock and flip on the bright switch.

**Middle:** Controls the Mid-EQ tone.

**Bass:** The bass control is more useful in clean settings and should be used a little more sparingly when overdriving the amp. Back off the bass to say 9 o’clock when initially experimenting with overdrive. Another thing to explore is to turn this control all the way up to phase cancel certain frequencies for interesting tonal effects. Consider the bass “all the way up” at about 3 o’clock. If you like to hang in that “sweet spot,” try the control at about 1 o’clock and adjust the treble to taste.

**Master:** Controls the overall volume of the amplifier.

**On-Standby-Off Switch:** 3 position switch to ramp up the power on the amplifier. Turn the amp off in the down position, then switch to standby in the middle position, then switch up to turn the amp on.

**Jewel Power Indicator:** Power indicator. If the jewel is lighted, the amp is on. This does not indicate the standby setting of the amp. 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



**Fuse:** 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.

**Speaker Jacks:** Get into the habit of checking these first. The jacks include a connection for 4, 8 and 16 ohm loads. There is an extension (EXT) included in parallel with the “speaker out” jack. Use the extension speaker jack for adding a like speaker load, being careful to calculate the total impedance for the two loads. For example, two 16 ohm loads would total 8 ohms and two 8 ohm loads would total 4 ohms. Do not connect an 8 ohm load along with a 4 ohm or 16 ohm load in the jack. This procedure halves the reflected impedance of each and will not allow ideal operating conditions. If you are using more than one speaker, they must be the same impedance. For example, use two 4-ohm speakers, or two 8-ohm speakers. Never use 2 different speaker impedances - You should not mix and match. The maximum number of speakers you can safely connect is 2. Always ensure that the speaker impedance matches the correct impedance selection, since this amp is designed to be played “wide open.” Mismatching impedances from a lower tap to a higher speaker impedance stresses the amp more than going into a lower impedance mismatch, and can cause arcs on the tube sockets, failure of power tubes, or even failure of the output transformer.

Confirm that the speaker cabinet you are using matches to the correct impedance selection on the back of the amp. Note: The total speaker impedance must be determined before connecting to the speaker jacks.

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