SESSION 400/LTD

OWNER'S MANUAL

WARNING: To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture.

For years steel guitarists have looked for a high powered, compact amp that could handle the tremendous dynamic range produced by the steel guitar. Our engineers and musicians have spent years researching this particular problem and have designed and produced the most advanced amplifier on the market for the steel guitar, the Peavey "Session 400". The Session is adaptable to guitar, violin or any instrument that requires an extremely wide frequency range.

The Session 400 is a relatively small, highly portable unit that delivers 200 watts (RMS @ 1% THD). Powered by six high energy power devices on a massive heatsink providing both power and durability, the Session can handle anything a steel can reasonably dish out without distortion or "cracking". This new unit features controls for volume, presence, middle, middle shift, treble, bass, reverb, tremolo, and master sensitivity.

Tremolo and reverb are standard on the Session. As with any complex system, your Session must be adjusted properly to achieve the desired sound. Please read the explanation of each control and become familiar with the effect and capability of each function.

The **input jacks**(1) are arranged in a unique circuit that allows a wide range of input levels to be handled by the Session. Input "1" is the high gain input and should normally be used when plugging in your instrument. Input "2" is the low gain input and should be used if the signal from your instrument tends to overload (distort) the preamp. If two instruments are used and both jacks "1" and "2" are used, the circuit automatically balances the gain of the two inputs so that the sensitivity of both are identical.

The **volume control**(2) sets the gain of the input preamp, thereby controlling the **sensitivity** of the preamp, not the **power** of the amp. It is entirely possible for the amp to be driven to full power output at very low gain settings if the signal from your instrument is extremely high. Please remember that the volume control does NOT indicate power output, but the GAIN of the preamp.

The **treble control**(3) is part of an electronic crossover and may be considered as a level control for treble frequencies. These variable feedback type tone controls are capable of providing a cut, as well as, a boost. Because the treble control is a volume control for treble frequencies, it is a good practice to operate this control close to fully clockwise for maximum benefit and volume. Experimentation will allow the player to find the level that works best for his preference in tone.

The **bass control**(4) is also part of an electronic crossover that forms the tone circuit and works as a level for the bass frequencies. The bass control provides for both a boost and a cut in bass response. Like the treble control, the bass should be run near its full clockwise position for maximum volume from the amp.

The **presence control**(5) allows precise variation of the extreme top end (treble) and tends to bring out the upper harmonics generated by any instrument.

The **middle control**(6) is of the cut type and allows the musician to tailor the critical midrange frequencies to suit each individual's taste. This is perhaps the most difficult control to design, but its importance in tonal settings made this extra efffort necessary. Experimentation will illustrate the versatility of this control.

The **Middle shift control**(7) enables the musician to select the particular frequency range that he wants to cut in the midrange spectrum.

By experimenting with different combinations of settings between the middle control and the middle shift control, you will discover a variety of sounds never before available on any other brand of amplifier.

The **reverb control**(8) determines the amount of delayed signal (reverb) blended into the output. The reverb circuit of the Session features a full complimentary amplifier and is able to produce tremendous sustain and clarity by properly damping the driver coils of the reverb unit. The reverb effect is controllable from the remote footswitch.

The **depth control**(9) is used to vary the amount of amplitude modulation (tremolo) of the output signal. The operation of this control is conventional and should present no problem in adjusting for the desired effect.

The **rate control**(10) determines the speed with which the signal is modulated. This control varies the speed of the tremolo master oscillator and should provide any speed desired for modern music. The tremolo feature is controllable from the remote footswitch.

The **master sensitivity control**(11) is a unique innovation which allows the player to "cut" or "boost" sensitivity as he desires. This allows the musician to cut out noise for a perfectly quiet performance during recording sessions.

The **booster jack**(12) provides an output signal for driving additional booster power amplifiers. This is NOT A SPEAKER OUTPUT. This output is a low level signal of approximately one volt. Any booster amplifier can be used as long as its input will accept a one volt RMS signal and has input impedance of at least 10,000 ohms.

The **fuse**(13) is located within the cap of the fuse holder and should be replaced with one of the proper value if it should fail. It is necessary that the proper value fuse be used to avoid damage to the equipment and to avoid voiding the warranty. If your amplifier repeatedly blows fuses, the unit should be taken to a qualified service center for repair.

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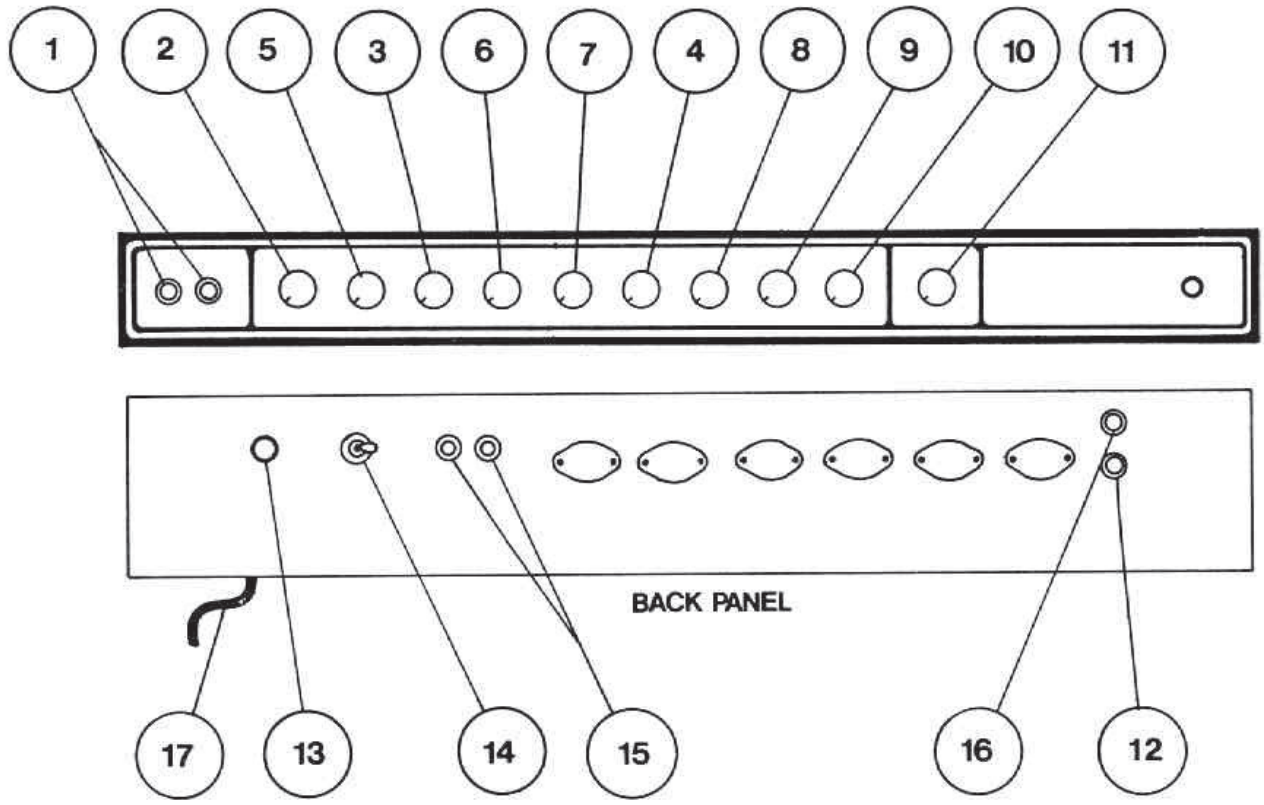
The **line power switch**(14) is of the three position type with the center position being off. The three position switch has two ON positions, one of which is used to ground the amplifier properly. One of the ON positions will yield the least hum or popping when the instrument is touched and this is the position that should be used.

For your safety, we have incorporated a three wire line (mains) cable(17) with a grounding lug. It is not advisable to remove the ground pin under any circumstances. If it is necessary to use the amp with the old, two prong sockets, a suitable adaptor should be used. Much less noise and greatly reduced shock hazard exists when the amp is operated with the proper grounded receptacle.

(15)The **main speaker output jack #1** must be plugged into before the external speaker jack #2 becomes functional. The output impedance of these amplifiers is 4 ohms TOTAL. Other load impedances can be used with a sacrifice in performance. It is not recommended that less than a 2 ohm load be used on these amps to avoid undue loading of the power amp.

The **footswitch jack**(16) is of the "stereo" type and is used to plug in the footswitch for remote control of the reverb and tremolo effects. Any footswitch with the standard stereo phone plug and a shielded cable can be used.



PRE-AMP:

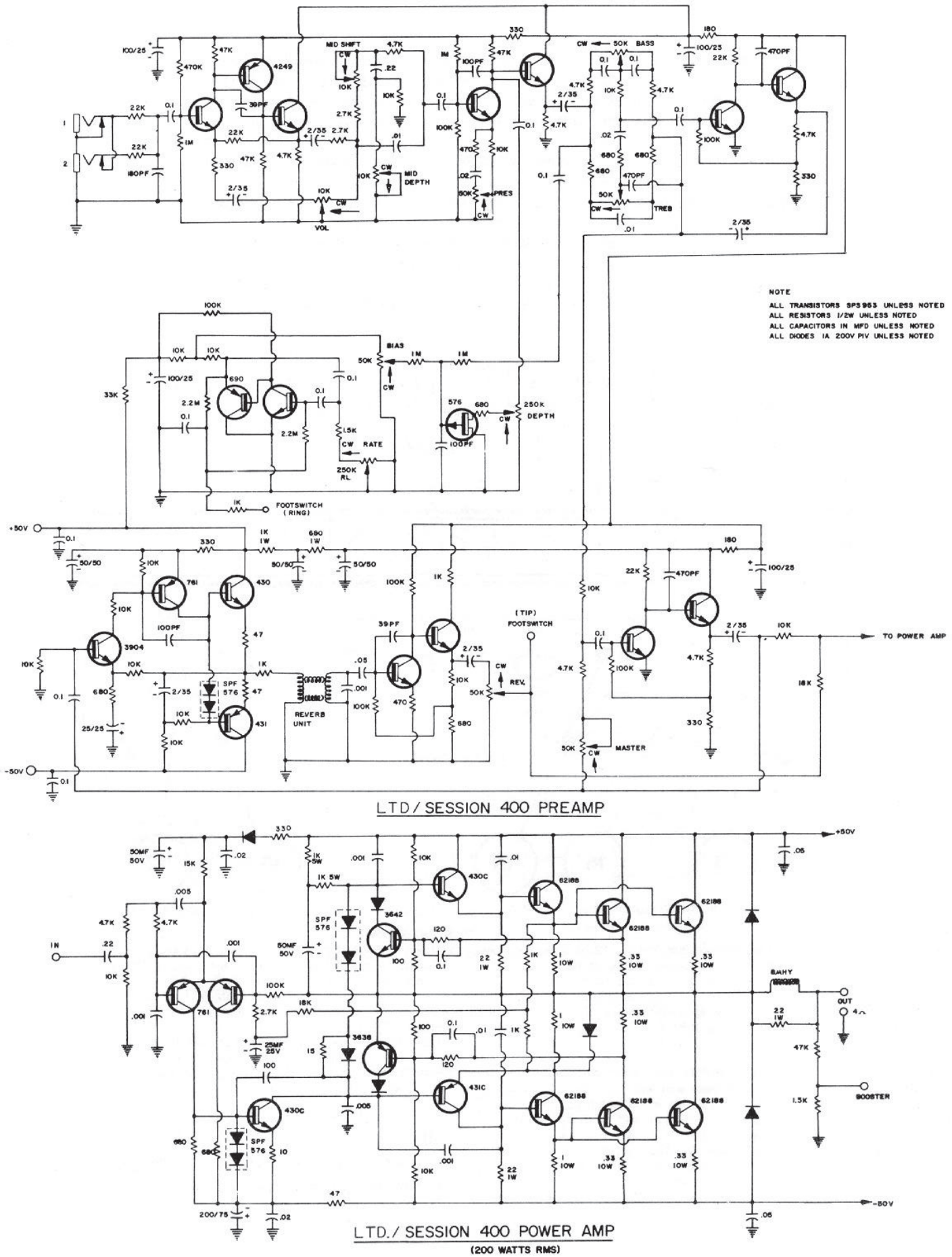
INPUT CHARACTERISTICS (Tone controls flat, Vol. @ 12:00, Sensitivity Max.)
Sensitivity: 50 mV @ 1 KHZ/Input Impedance: 330 K Ohms
Noise: 72 DB Open Ckt., 77 DB 50 K Ohms, 80 DB Short Ckt.*
DISTORTION @ 1 KHZ: Less than 0.1% THD @ Rated Output**
FREQUENCY RESPONSE: 3 DB Down @ 20 HZ & 30 KHZ
PRESENCE CONTROL: 15 DB Boost @ 8 KHZ
TONE CONTROLS: ± 20 DB @ 50 HZ, 2 KHZ
MIDDLE CONTROL: 15 DB cut
MIDDLE SHIFT CONTROL: Variable Middle Notch Frequency Shifter
REVERB CONTROL: Continuously variable with footswitch cut off
TREMOLO CONTROLS: Variable depth & rate w/footswitch cut off
SENSITIVITY CONTROL: Reduces over-all Gain and noise by 20 DB for studio usage
BOOSTER OUTPUT LEVEL: 1.0 V RMS into 10 K Ohms
REVERB DRIVE AMPLIFIER: 10 W Capability for distortion free reverb
*Signal-to-noise ratio in DB below rated output
**Measured with reverb & tremolo cut-off (Full CCW)

POWER AMP:

OUTPUT POWER @ 1 KHZ @ 120 VAC Line
Rated Power: 200 W RMS into Rated load: 4 Ohms
Power vs. Distortion:: 120 W RMS @ 1% THD into 8 Ohms
210 W RMS @ 1% THD into 4 Ohms
80 W RMS @ 1% THD into 2 Ohms
PEAK OUTPUT @ RATED LOAD: 10 Amps & 40 V, 400 Watts
MUSIC POWER OUTPUT @ RATED LOAD: 290 W RMS @ 5% THD
FREQUENCY RESPONSE: 3 DB Down @ 40 HZ & 15 KHZ
SENSITIVITY @ RATED POWER & LOAD: 800 mV
INPUT IMPEDANCE: 10 K Ohms

NOTE:

The "LTD" is a compact version of the "SESSION" All functions and circuits are identical.



LTD / SESSION 400 PREAMP

LTD./ SESSION 400 POWER AMP

(200 WATTS RMS)