

# 1 2 0 0 s Bass Amplifier

Reference and Owner's Manual for  
the Sunn 1200s Bass Amplifier

# The SUNN Legacy...

In early 1963, a band from Oregon called "The Kingsmen" hit the charts with a catchy little tune called *Louie Louie*. The Kingsmen quickly became household names and *Louie Louie* the rock anthem of the decade.

With a hit single under their belt, The Kingsmen soon found themselves embarking on a 50 state national tour. One of the first things bassist Norm Sundholm discovered was that his bass amp, while fine for hops and school dances, did not have the power necessary for the larger concert halls to which the band had ascended. To solve this dilemma, Norm enlisted the help of his brother Conrad and by 1964 the brothers Sundholm had designed the world's first high powered concert bass amplifier.

1965 saw the demand for the Sundholms' amplifiers increase to the point that the family garage would no longer serve as a suitable manufacturing facility. Thus, the SUNN Musical Equipment Company was born.

As the years passed, countless pioneers of rock would rely on SUNN amplifiers to carry the weight. The Who, Moody Blues, Cream, Steppenwolf, Kiss, Rush, Queen and a little music festival in up-state New York all endorsed SUNN equipment.

Today, your new SUNN amplifier embodies this rich tradition and combines it with a vision for the future ensuring this American institution known for big sound will continue to be heard.

**SUNN® STAGE GEAR...** *Attitude, Power and Performance for Professionals*



## **SUNN 1200s BASS AMPLIFIER**

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**VACUUM TUBE / SOLID STATE HYBRID DESIGN EMPLOYS THE BEST OF BOTH TECHNOLOGIES**

**CONSTRUCTED IN AN ALL STEEL CHASSIS FOR ENDURING RELIABILITY**

**1200 WATTS OF POWER @ <.2% T.H.D.**

**TWO CHANNELS WITH CLEAN AND DISTORTED MODES**

**FOOTSWITCH JACK FOR REMOTE ON-OFF SWITCHING OF THE GRAPHIC EQUALIZER, COMPRESSOR AND CHANNEL SELECTION**

**EFFECTS LOOP FOR SIGNAL PROCESSING DEVICES**

**SPLIT BAND COMPRESSOR**

**REMOVABLE RACK MOUNT EARS**

Congratulations on your purchase of a sunn® 1200s Bass Amplifier. Built with care and special attention to detail, your new sunn 1200s Bass Amplifier offers much more than meets the eye. Each 1200s bass amplifier is crafted from the finest components available and assembled at the Sunn amplifier factory in Corona, California, USA.

sunn® 1200s Bass Amplifiers include among their many features: 1200 Watts of power (2 $\Omega$  load); active compression circuitry and a 10-band graphic equalizer and high and low frequency controls for full-bodied tonal shaping. The two channels are voiced for both clean and distorted outputs offering the versatility of differing playing styles. The footswitch circuitry allows for remote selection of the front panel graphic equalizer, compressor and the channel selection. Moreover, the rear panel features an effects loop for the addition of external signal processing devices or outboard gear, a tuner out jack for accessing your tuner and both XLR and 1/4 inch line out jacks and a pass through jack for routing your bass signal to another amplifier or mixing console.

In order to thoroughly understand the operation, features and functions of your new sunn® 1200s Bass Amplifier, please read and refer as needed to this operation manual. By doing so, your amplifier is sure to provide you with years of trouble-free music making and maximum playing enjoyment.

Take the time to get to know each other... Tune-up, Plug-in and ... Play On!

### **WARNING:**

**-TO PREVENT DAMAGE, FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.**

**-NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED PERSONNEL ONLY.**

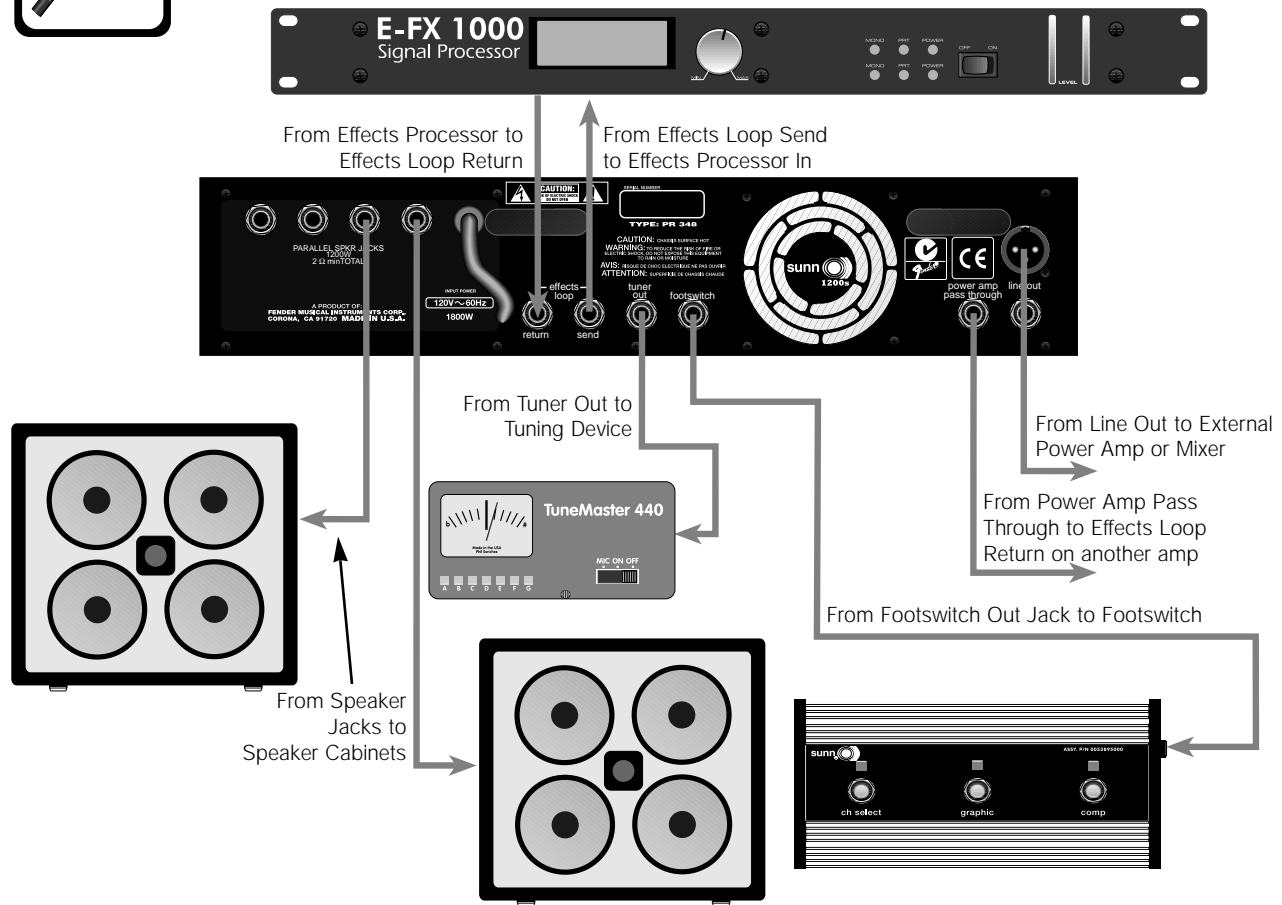
**-ALLOW AT LEAST 3 INCHES (7.6 CM) IN THE FRONT AND REAR OF THE UNIT FOR PROPER VENTILATION. DO NOT BLOCK VENTS.**

**-THIS UNIT MUST BE EARTH GROUNDED.**

## SUNN 1200s SETUP PROCEDURES



To ensure optimum performance from your Sunn 1200s Bass Amplifier, please follow these setup guidelines and procedures.



1. Connect your Sunn 410H / Sunn 215 Bass Loudspeaker Enclosure or equivalent to the parallel speaker jacks located on the rear of the 1200s amplifier. *Note: For improved performance, DO NOT daisy chain multiple enclosures off the same jack. As a rule of thumb, connect only one speaker enclosure per output jack and remember the total minimum impedance load for the 1200s is 2Ω. Remember to connect or disconnect any speaker enclosure to your 1200s with the power off.*
2. Next, attach the 3-button footswitch and your tuner to the TUNER OUT and FOOTSWITCH jacks located on the rear of the amplifier.
3. Connect any effects processing devices through the EFFECTS LOOP SEND and RETURN jacks on the rear of the unit.
4. If sending your 1200s' signal to an external power amplifier or main house mixer, connect a cord from either the 1/4 inch or XLR LINE OUT jack to your external power amplifier or mixer.
5. Make sure the HIGH and LOW tone controls are in their center notched positions, the Graphic EQ is "flat", the compressors are OFF and the LOW, HIGH and MID NOTCH buttons are out.

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6. Turn your amplifier ON.

7. Begin playing your Bass as vigorously as you would during any regular performance; if necessary engage the -6dB PAD button. In order to obtain the optimum signal from the preamp, it is important to play with your maximum performance intensity when setting up the 1200s.

8. Turn the channel 1 volume control up until the INPUT LEVEL LED flashes red. Next, turn down the CH. 1 VOLUME level until the LED flashes red occasionally; this will ensure maximum output without clipping or distorting the preamp.

9. Turn the MASTER VOLUME to your desired playing level.

10. Next, set your 1200s to your desired tone settings using the compressors and graphic EQ if so desired.

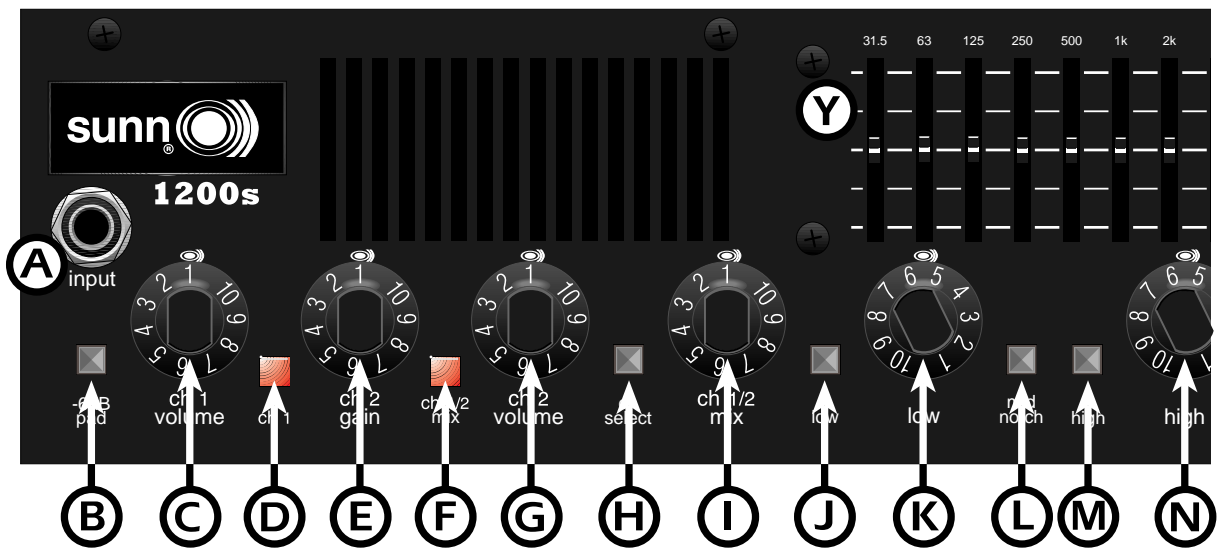
11. To use the graphic eq, simply press the graphic ON / OFF button located next to the EQ watching for the LED to illuminate. You may use the EQ TRIM to match gain levels which may be affected when switching in and out of the graphic equalizer.

12. To use the compression circuitry, simply press the COMP ON / OFF button located between the COMP EQ BAL and COMP GAIN TRIM buttons.

13. Be sure to check the signal level led during your tone setup to ensure you are not overdriving or clipping the preamp. If the SIGNAL LEVEL LED flashes red after all tone adjustments have been made, simply turn down the CH.1 VOLUME until the distorted sound diminishes.

14. If at any time during your performance the 1200s begins to distort without the CH. SELECT switch engaged, simply turn down the CH.1 VOLUME until the distorted sound diminishes.

## SUNN 1200s FRONT CONTROL PANEL



**A. INPUT** - Plug your bass guitar in here.

**B. -6 dB PAD** - Sensitivity / gain switch for the input signal. When this button is in, it provides a 6dB attenuation useful for reducing input levels on bass guitars with active pickups or high level outputs.

**C. CH 1 VOLUME** - This knob adjusts the overall loudness of channel 1.

**D. CH 1 LED** - This LED illuminates when only channel 1 is active. (Channel 1 is active even if the LED is not lit.)

**E. CH 2 GAIN** - This knob adjusts the amount of gain or distortion in Channel 2.

**F. CH 1 / 2 MIX LED** - This LED illuminates when the CH SELECT button has been pressed indicating the Ch. 1 / Ch. 2 mix is active.

**G. CH 2 VOLUME** - This knob adjusts the overall loudness of channel 2.

**H. CH SELECT** - This push button selects Channel 1 / 2 mix. When this button is in, both Channel 1 and Channel 2 are active. This button is used in conjunction with the CH. 1 / 2 MIX knob (item F). Using the footswitch overrides the front panel channel select switch.

**I. CH 1 / 2 MIX** - This knob mixes the channel 1 and channel 2 output levels. When the knob is at "1", only channel 1 is in the output mix. When the knob is at "10", only channel 2 is in the output mix. By rotating the knob, an optimum mix of both channels may be obtained.

**J. LOW** - When this push button is in, it activates a low frequency boost.

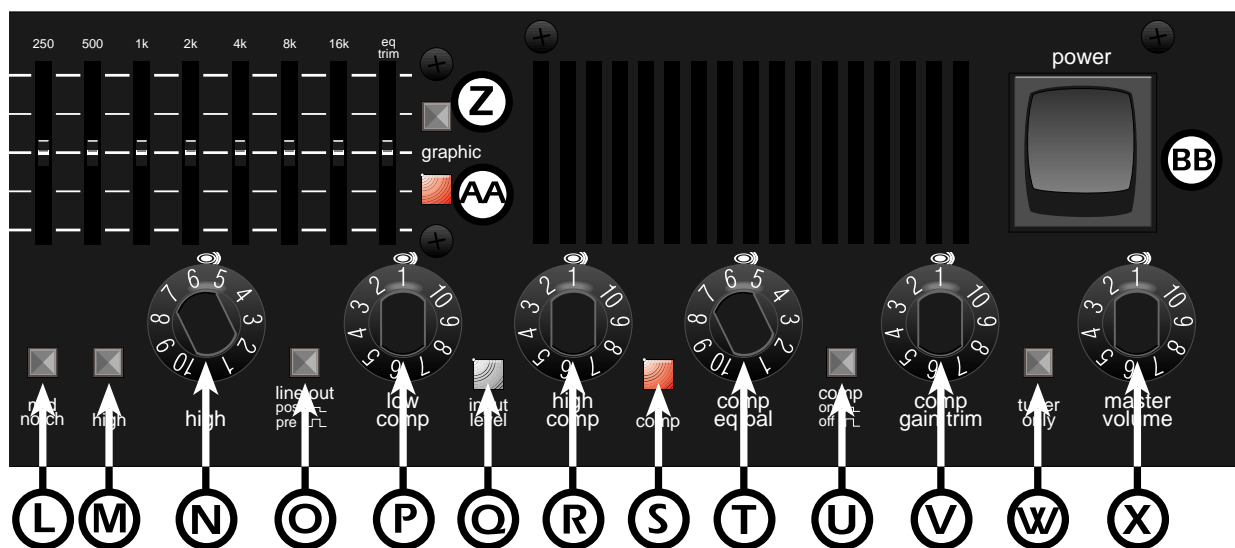
**K. LOW** - This knob adjusts the amount of increase or decrease in the low frequency content of your 1200s. In its center notched position, the low frequency control is "flat" with none of the corresponding frequencies increased or decreased.

**L. MID NOTCH** - This push button reduces the "muddy" mid-frequency tones found in most bass guitars. By utilizing the mid notch button, your bass guitar and amp should have a more "natural" tone and timbre.

**M. HIGH** - When this push button is in, it activates a high frequency boost.

**N. HIGH** - This knob adjusts the amount of increase or decrease in the high frequency content of your 1200s. In its center notched position, the high frequency control is "flat" with none of the corresponding frequencies increased or decreased.

**O. LINE OUT** - This push button switch is used in conjunction with the line out jacks on the rear of the 1200s. When this push button is in, the signal sent from the 1200s is post frequency shaping, channel switching and compression. The line out signal does NOT include any effects which may have been added via the effects loop. If the button is out, the bass guitar's signal is passed through the 1200s without any tone shaping or enhancement.



**P. LOW COMP** - This knob adjusts the compression ratio at 420 Hz and below. Rotating the knob clockwise increases the compression rate at 420Hz and below.

**Q. INPUT LEVEL LED** - This LED illuminates GREEN once the threshold of the compressor has been reached. When a RED light is displayed, this indicates clipping and your 1200s is being overdriven. When the compression circuitry is not engaged, the LED will still indicate signal level.

**R. HIGH COMP** - This knob adjusts the compression ratio at 420 Hz and above. Rotating the knob clockwise increases the compression rate at 420Hz and above.

**S. COMP LED** - This LED illuminates when the compression circuitry is active.

**T. COMP EQ BAL** - This detented knob mixes the low and high compressor outputs. When the knob is at "1", only the low compressor is in the output mix. When the knob is at "10", the high compressor is in the output mix. By rotating the knob, an optimum mix of both compressors can be obtained.

**U. COMP** - This push button switch is used to activate the on-board compressors. When this push button is in, compressors are active. Using the footswitch overrides the front panel comp select switch.

**V. COMP GAIN TRIM** - This knob adds gain to make up for any level lost once the compression circuitry has been engaged. Rotating the knob clockwise increases the amount of gain.

**W. TUNER ONLY** - This push button mutes all outputs and sends your bass guitar's signal to your tuning device (*not included*).

**X. MASTER VOLUME** - This knob adjusts the overall volume level of the 1200s. Rotating the knob clockwise increases volume with "1" producing no volume and "10" producing maximum volume.

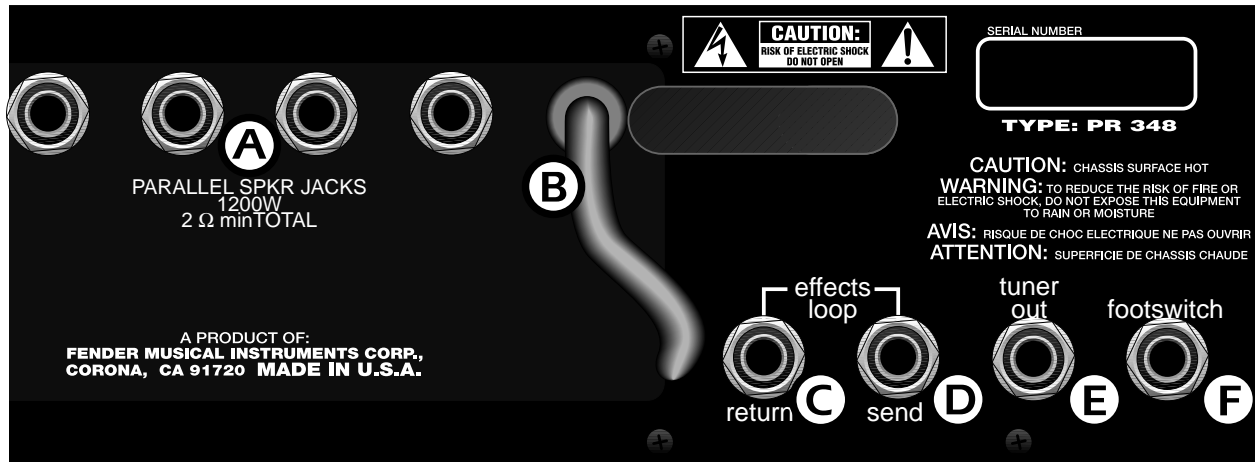
**Y. GRAPHIC EQ** - This 10 band graphic equalizer consists of active band pass / band reject filters spaced at octave intervals. Moving the sliders up or down boosts or cuts the gain at the indicated frequency. The EQ Trim slider provides a gain or decrease of the bass' signal through the graphic EQ. When the slider is at its centered notched position, the input signal is neither boosted nor cut.

**Z. GRAPHIC ON/OFF** - This button activates the Graphic EQ. When the button is in, the Graphic EQ is active. Using the footswitch overrides the front panel graphic select switch.

**AA. GRAPHIC EQ LED** - This LED illuminates when when the Graphic EQ is active.

**BB. POWER** - Turns the AC power ON and OFF. When the rocker switch is is down, the amplifier is OFF and completely shut down.

## SUNN 1200s REAR PANEL



**A. SPEAKER JACKS** - These are the plug-in connections for your speaker enclosure(s) and are wired in parallel. For improved performance, **DO NOT** daisy chain multiple enclosures off the same jack. As a rule of thumb, connect only one speaker enclosure per output jack and remember the total minimum impedance load for the 1200s is  $2\Omega$ . *Remember to connect or disconnect any speaker enclosure to your 1200s with the power off.*

**B. LINE CORD** - This amplifier is equipped with a grounding type supply cord to reduce the possibility of shock hazard. Be sure to connect it to a grounded AC receptacle. The line cord should be connected to a suitable power source in accordance with voltage and frequency as shown in the power rating on the rear panel. If the 1200s is plugged into an outlet rated at 15 amperes, dedicate this circuit solely to the 1200s. **DO NOT ALTER THE AC PLUG.**

**C. RETURN** - This 1/4 inch, balance / unbalanced, tip-ring-sleeve, tip-sleeve, input jack is designed to accept signal from an external processing device, such as a digital delay or a chorus unit. The effects loop will not operate without a plug inserted into this jack.

**D. SEND** - This 1/4 inch, unbalanced, TS, output jack is designed to send a signal to an external signal processing device, such as a digital delay or a chorus unit.

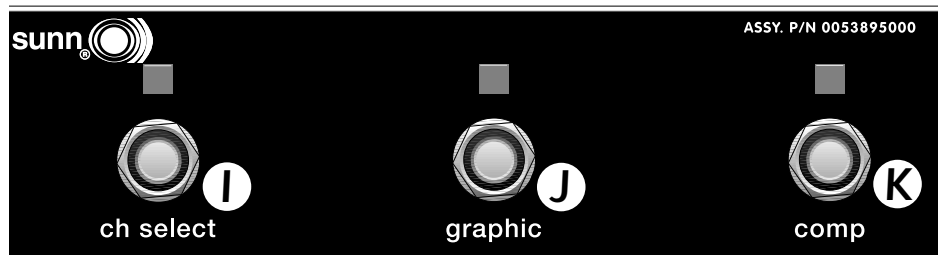
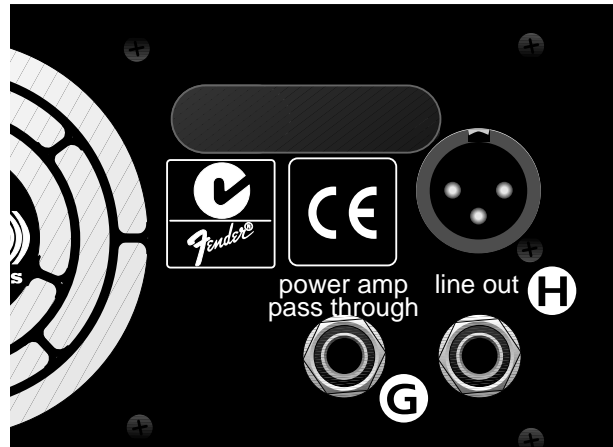
**E. TUNER OUT** - This 1/4 inch, unbalanced, TS, output jack is designed to send your bass guitar's signal to your tuning device (*not included*).

**F. FOOTSWITCH** - Plug-in connection for the footswitch (P/N 053895) used to remotely turn on and off the graphic equalizer, compressors and change the channel selection. Using the footswitch will override the front panel graphic equalizer, compressor and the channel selection buttons. *NOTE: Any good quality patch cord will work with the remote footswitch, however an unshielded speaker type cord is preferable to a coax guitar cord.*

## SUNN 1200s REAR PANEL, CONT.

**G. POWER AMP PASS THROUGH** - This 1/4 inch, unbalanced, TS, output jack is designed to send a preamp line level signal from your "Main" 1200s amplifier to another amplifier. This jack is used for chaining multiple 1200s amplifiers together and increasing your on stage volume. Do so by inserting a 1/4" cable from this POWER AMP PASS THROUGH jack into the RETURN jack in the effects loop section of another 1200s.

**H. LINE OUT** - These transformer balanced, XLR male and 1/4 inch, tip-ring-sleeve, line level output jacks are designed to feed the 1200s' signal to an external power amplifier or main house mixer. The signal from these output jacks include all tone shaping done by the 1200s.



**I. CH SELECT** - Allows the remote ON / OFF switching of the Channel 1 / 2 mix.

**J. GRAPHIC** - Allows the remote ON / OFF switching of the Graphic EQ.

**K. COMP** - Allows the remote ON / OFF switching of the compression circuitry.

## TROUBLESHOOTING

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If the 1200s is set up but does not function, check the following items:

- Is the power cord properly plugged into an electrical outlet?
- Is there power at the outlet?
- Is the instrument properly plugged into the amplifier?
- Are the control knobs turned above 1?
- Is the volume control on your bass guitar turned up?
- Is the tuner out button disengaged?
- Are any cords cut or frayed?
- If using the effects loop, is the effects unit(s) properly plugged into the amplifier?
- Is there power to your effects unit(s)?
- Is the amplifier properly plugged into your speaker cabinet or enclosure?

Eliminate any effects pedals, disconnect any effect devices from the effects loop and try another guitar cord.

**FYI:** Attenuating low frequencies may cause the preamp to distort and this may not cause the INPUT LEVEL LED to flash red. If this is the case, simply turn down the CH.1 VOLUME until the distorted sound diminishes.

If after checking all of the above your amplifier is still not performing correctly, consult your nearest authorized Fender Service Center.

## SURFACE CARE

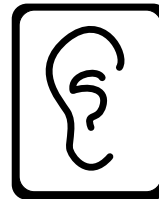
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Your 1200s is covered in a rugged finish for long life and lasting good looks. To clean the chassis, use a sponge and all purpose glass cleaner or equivalent solution. Avoid spilling liquids on the operating surfaces, grill, volume and tone controls and switches. Be careful not to let any liquid come in contact with operating surfaces or seep into any of the vents. **REMEMBER TO UNPLUG THE POWER CORD BEFORE CLEANING AND WAIT UNTIL THE UNIT IS COMPLETELY DRY BEFORE PLUGGING IT IN.**

## RACK MOUNT EARS


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The rack mount ears on your 1200s offer the flexibility of carrying your amplifier in a flight or other rack mount carrying case. In the event you wish to remove the rack mount ears from the chassis, use a 7/16 inch nut driver to remove the bolts on the side of the rack mount ears. When replacing the rack mount ears, be sure to use these same bolts. **ALWAYS USE BOTH FRONT AND REAR RACK MOUNT EARS WHEN CARRYING YOUR AMPLIFIER IN A FLIGHT OR OTHER RACK MOUNT CARRYING CASE. FAILURE TO DO SO MAY RESULT IN SEVERE BENDING AND DAMAGE TO THE RACK MOUNT RAILS.**

## SUNN 1200s SPECIFICATIONS

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TYPE:	PR 348	
PART NUMBER:	21-3300 (120V) 21-3330 (240V) Aust 21-3340 (230V) UK 21-3360 (230V) Eur 21-3370 (100V)	
POWER REQUIREMENTS:	100V AC, 50/60 Hz 1800W 120V AC, 60 Hz, 1800W 230V AC, 50 Hz, 1800W 240V AC, 50 Hz, 1800W	
PREAMP SECTION		
INPUT IMPEDANCE:	470k $\Omega$	
FULL POWER SENSITIVITY :	12.75mV	
TONE CONTROLS:	Treble: +/-15 dB @ 3kHz Bass: +/-15 dB @ 40Hz	
GRAPHIC EQUALIZER:	+/-12 dB @ 31.5Hz, 63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz, 16kHz.	
MID NOTCH:	-20 dB @ 700Hz	
LOW BOOST:	+10 dB @ 40Hz	
HIGH BOOST:	+10 dB @ 6kHz	
POWER AMPLIFIER SECTION		
INPUT IMPEDANCE:	10k $\Omega$	
POWER OUTPUT:	1200W R.M.S. into 2 $\Omega$ @ <0.2% T.H.D.	
SENSITIVITY :	1V R.M.S. (0dBv)	
SPEAKER COMPLEMENT:	Designed for use with the Sunn 410H or Sunn 215 Bass Loudspeaker Enclosures	
DIMENSIONS:	Height: 3.5 in    8.9 cm Width: 19.0 in    48.3 cm Depth: 15.0 in    38.1 cm	
WEIGHT:	35 lbs    15.9 kg	

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Product specifications are subject to change without notice.

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CORONA, CA 91720 USA