

 Seymour Duncan®

**OWNER' S MANUAL**  
for the  
**BASS 400 X 2**



If you're like most musicians I know, the first thing you want to do is plug-in your new amp and start playing - the last thing you want to do is read an owner's manual. Go ahead and play the amp and see what it can do for you.

Once you've completed the "breaking in" experience, please read through this manual. The amp is designed to give you versatility from functional controls and switches. This manual will show you the easy way of getting a wide variety of great sounds just by properly setting up the amp.

Enjoy it. If you have any comments about the design of your amp, I'd like to here from you. If you have any ideas for other related products, please write me at the address below.

Thank You.



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P.S. If you haven't mailed in your warranty card, please do it now. It may seem like a hassle, but it's the only way we have to verify warranty status of your amp.



## **Specifications**

### **Bass 400 x 2**

Power: Bi-amp mode: 400 watts bottom end into 4 ohms:  
400 watts high end into 4 ohms.  
Dual mono mode: 400 watts x 2 mono channels into 4 ohms.  
Bridge mode: 600 watts into 8 ohms.  
All power specifications at 4 ohms, less than .05% distortion.

Power Out: 400 watts @ 120 VAC  
Thd: = full power: .2%  
Slew rate: 50V/ $\mu$ s  
Power bandwidth: 10hz to 100 khz +/- 3db  
S/N ratio: (preamp and power amp) 84dB  
S/N ratio: (power amp only) 90dB  
Input impedance: 1 megohm  
Effects Loop: (Output impedance): 10k ohms  
Effects Loop: (Input impedance): 50k ohms  
Dimensions: 5.5" x 10.5" x 17.2"  
Weight: 36 lbs.  
Power requirements: 1200 watts line current required for 400 watts output,  
with both channels running.  
Out: 120 VAC, internally selectable for 100v/50hz or 240v/50hz.

(All specifications subject to change without notice.)



## **WARNINGS**

- Make all speaker connections before plugging unit in.
- Do not disconnect the speaker while the amp is turned on.
- Do not restrict air movement around the fan intake or the air outlet on the back of the amp.
- Do not test the amplifiers operation by touching the tip of the input cable with your finger. This is a very wide bandwidth amp and the extreme amount of radio frequency energy caused by doing this can cause damage to the amp and your speaker system.
- To reduce the risk of fire or electrical shock, DO NOT expose this amplifier to rain or moisture.

## **Unpacking**

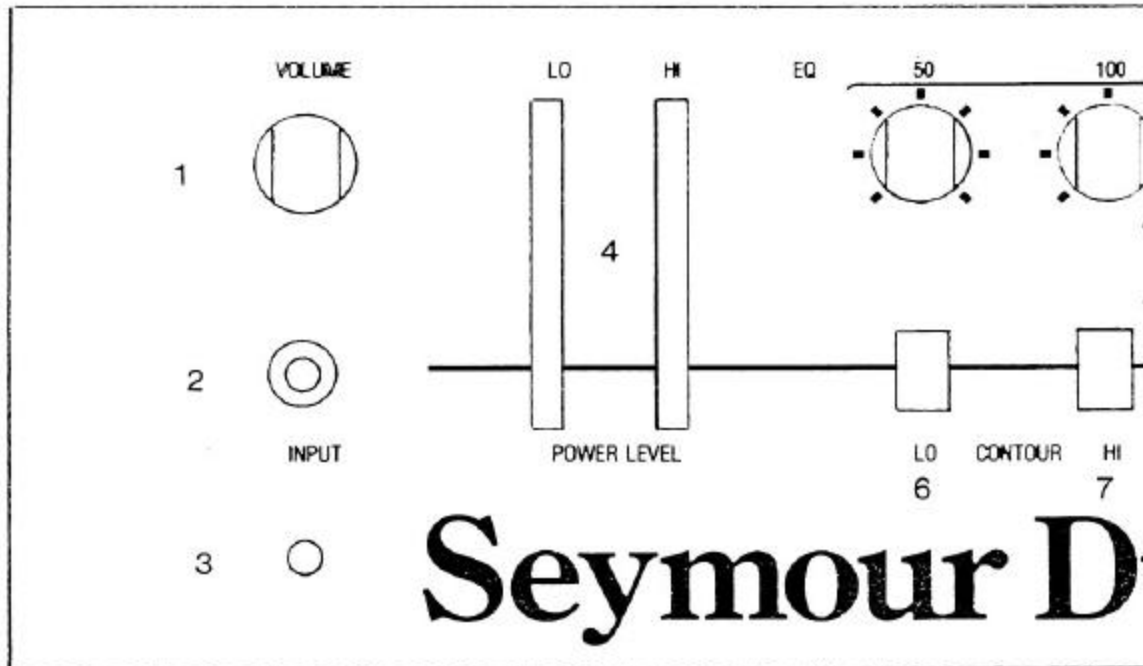
Inspect your bass amp for hidden damage that may have occurred in transit. Your amp was inspected and sound tested before shipment from the factory.

All claims for shipping damage must be made by the receiver. Save your box and packing material for evidence of damage if it has occurred.

## **Packing Materials**

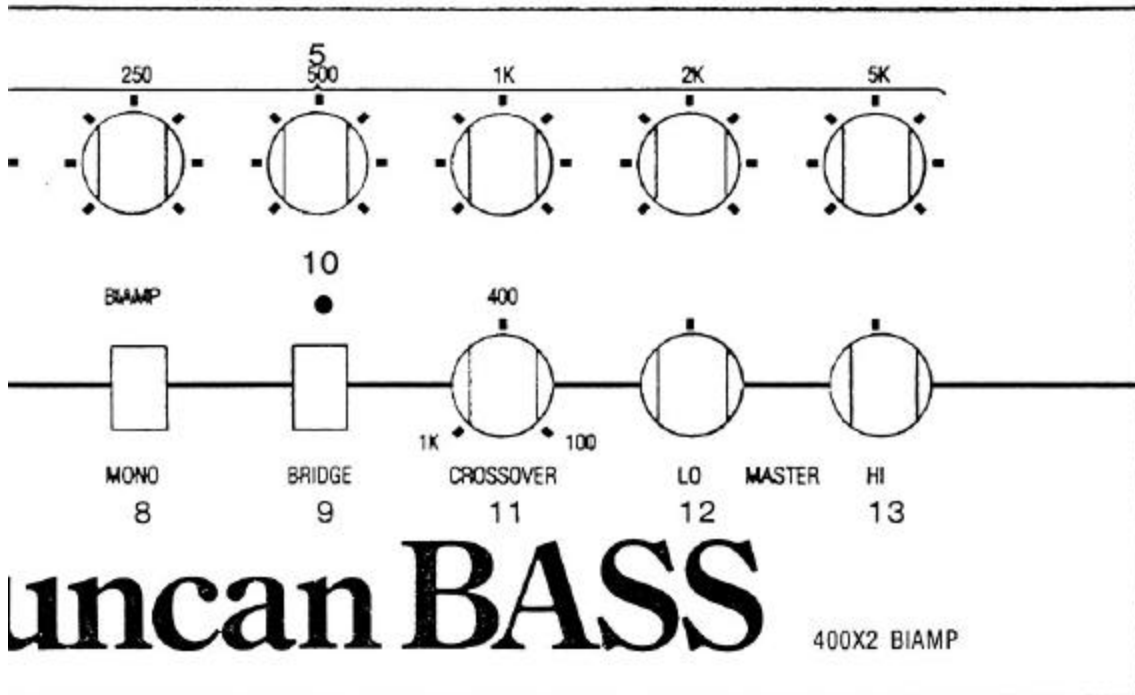
The original box and packing materials are specially designed to protect your amp during shipment. **SAVE ALL PACKING MATERIALS.** In the unlikely event that your amp needs to be returned to the factory, the original box and packing material will be necessary for shipment. These are carrier approved packing materials and they will insure safe transit back to the factory.

## FRONT PANEL CONTROLS



1. **VOLUME:** This control sends the signal volume from the preamp to the power amplifier. Turning the knob clockwise increases volume.
2. **BASS INPUT:** Plug your bass in here. Input impedance is 1 meg ohm.
3. **POWER INDICATOR:** When your amp is on, this L.E.D. will glow. The Bass 400 x 2 uses an L.E.D. instead of a normal bulb because L.E.D.'s last up to 10 times longer.
4. **POWER LEVEL INDICATORS:** These L.E.D.'s show the amount of power being demanded from the power amp, The bottom orange L.E.D. indicates 3 db below rated power. The bottom red L.E.D shows 3 db past the rated power. Sustained operation in the top red L.E.D. region can cause severe damage to speaker systems due to the high level of distortion.
5. **GRAPHIC EQUALIZER:** This is an active equalizer system that provides 15 db of boost and cut (total range is 30 db) per band. Each band of the E.Q. is independent. You can vary the individual bands as much as you want without affecting the range of the E.Q. controls.  
By combining the graphic equalizer with the low contour switch, it is possible to achieve 30 db of gain boost at very low frequencies. Because the power amp is easily capable of providing very low frequencies there is a potential threat to damaging speaker systems through cone over-excursion.

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Exercise caution when playing at high volume levels with large amounts of low frequency boost. When playing outdoors, it may prove beneficial to slightly cut low frequencies to provide more headroom and louder playing volume.

6. **LOW FREQUENCY CONTOUR:** This switch provides 15 db boost at 40 hz. It is especially useful when playing at lower volumes to create a "warm" sound.

7. **HIGH FREQUENCY CONTOUR:** This switch provides 15 db of boost a 4 khz. It is very useful for giving you extra presence or edge.

8. **BI-AMP/MONO SWITCH:** Use this switch to select Bi-Amp or Dual Mono operation. In the Bi-Amp mode, the built-in crossover is activated - low frequencies are sent through the low channel and high frequencies are sent through the high channel. In the Mono mode, the same signal is sent through both channels.

9. **BRIDGE SWITCH:** Use this switch to change amp operation into and out of the bridge mode. Bridge mode combines the two output sections into a single one. You'll get twice the power into twice the load (8 ohms). Using the bridge mode forces the amp into a mono operation, i.e. you cannot run your amp in bridge mode and bi-amp mode at the same time.

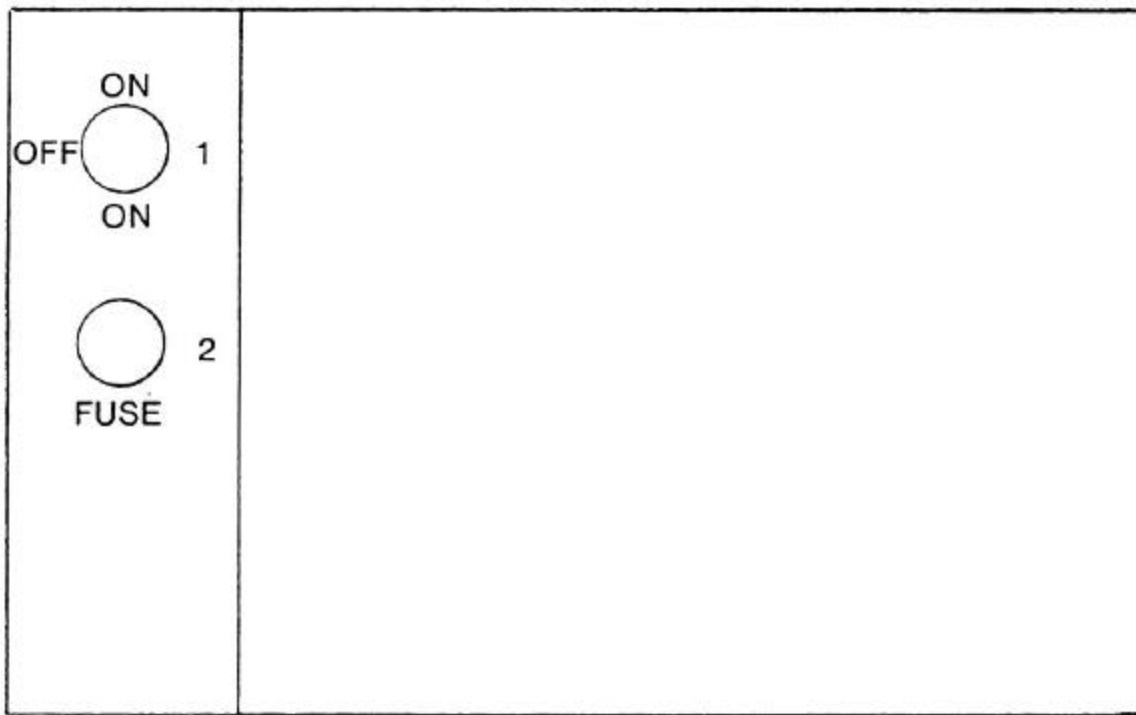
10. **BRIDGE MODE INDICATOR L.E.D.:** This shows you that the bridge switch is activated and that the amp is running in Bridge mode.

11. VARIABLE CROSSOVER: This is a single order crossover that is continuously variable from 100 hz to 1 khz. The optimum crossover point will vary according to the speakers you use. Experiment to see where you like it best.

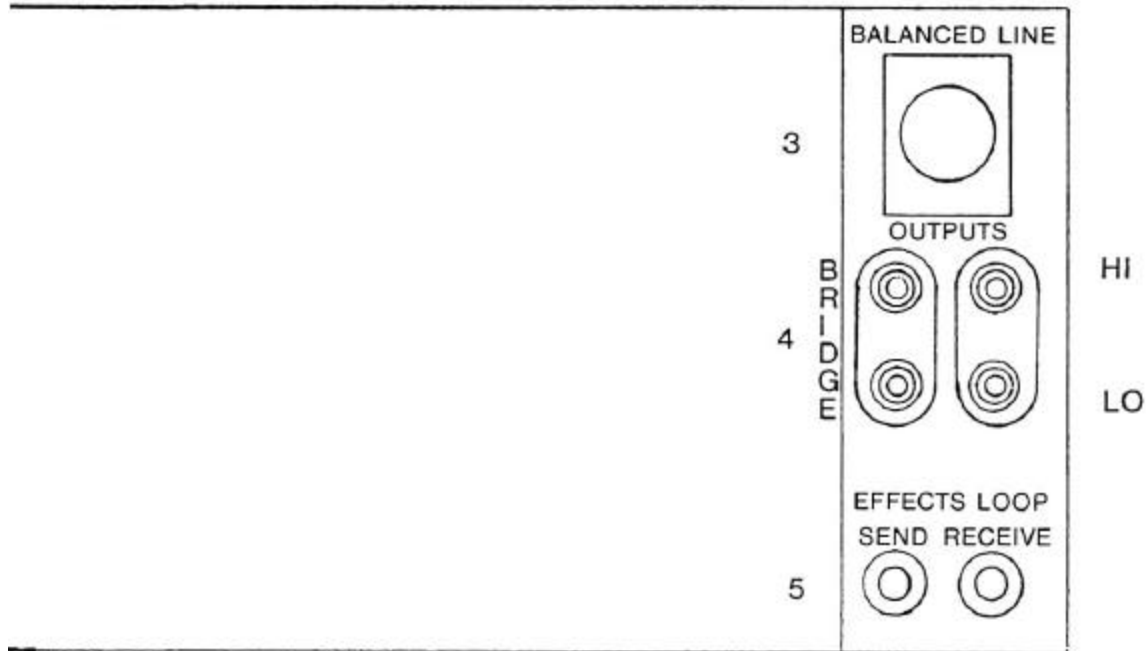
12. LOW MASTER VOLUME: Use this control to set the volume of the low frequency channel in the Bi-Amp mode. In the Dual Mono mode, this control affects the speaker plugged into the lower speaker jack. In the bridge mode, this control operates as a master volume.

13. HIGH MASTER VOLUME: Use this control to set the volume of the high frequency channel in the Bi-Amp mode. In the Dual Mono mode this control affects the speaker plugged into the upper speaker jack. In the bridge mode, this control is non-functional.

## **REAR PANEL CONTROLS**



1. ON/OFF/ON SWITCH: This switch is designed to turn your amp on and to allow you to reverse the A.C. polarity. If you're picking up 60 hz. hum from the wall current, put the "ON" switch in the other "ON" position. If you're using other equipment, like a P.A., and you get a shock when touching the microphone, place the "ON" switch in the other "ON" position to eliminate the shock. The middle position is "OFF".



2. **FUSE HOLDER:** The fuse is located in the cap of the fuse holder. If the fuse fails, it must be replaced with one that provides proper current protection or you will void the warranty. The proper fuse rating for the 110-120 V.A.C. Bass 400 x 2 amp is ABC-10. Before removing the fuse cap, **UNPLUG THE POWER CORD FROM THE WALL A.C. OUTLET.** After checking the fuse and replacing the fuse cap, you can plug the amp back into the wall.

To remove the fuse cap, simply grasp the cap with your fingers, push in, and turn counter-clockwise. To replace the cap, grasp the cap with your fingers, push in, and turn clockwise.

Fuses do not wear out; they do not deteriorate with age. Fuses are protection devices that prevent the electronics from damage if there is a serious electrical problem. If your amp repeatedly has fuse failures, check page under "Fuse Failure" for troubleshooting tips.

3. **BALANCED LINE OUTPUT:** Use this jack for patching the output signal of the amp directly into a mixer or tape recorder. This circuit is wired post E.Q. so all tone settings will affect the outgoing signal. Output is one volt at full power.

The standard three pin XLR jack allows you to use a balanced line so you can run your cord for long distances with no signal loss and no hum.

Output impedance is 600 ohms.

4. **SPEAKER JACKS:** These output jacks accept standard banana plugs.

In the Bi-Amp and Dual Mono modes, optimum amplifier performance is realized with a 4 ohm speaker load.

An 8 ohm load will yield less power. A 2 ohm load will yield more power but under very



demanding conditions (like extremely high volume settings) the current limiting circuit may engage and cause audible distortion. In the Bridge mode, optimum amplifier performance is realized with an 8-ohm load. A 4-ohm load is acceptable, but not recommended. See page 10 for the diagrams showing proper hook-up configurations for the different operation modes.

5. EFFECTS LOOP: Use this circuit with your effects for the least amount of hiss. In older design amps, players had to plug their basses directly into effects and plug the effects into the input jacks on their amps. With the Bass 400 x 2, you can plug your bass into the Bass Input jack and run your effects through the Effects Loop. "Effects Send" should be connected to the input of your effect using a normal guitar cable. "Effects Return" should be connected to the output of your effect using a normal guitar cable. You want the signal to come OUT of your amp INTO the effect and OUT of the effect INTO your amp. Output impedance is 10k ohms.

## TROUBLESHOOTING

The following table should enable you with little or no knowledge of electronics, to isolate the cause of some problems you may experience with your amplifier and the steps required for repair. Most causes of impaired amplifier performance are due to minor problems or irregularities, which can be easily corrected by you. However, if you cannot identify the cause of the problem using the table below, or if it indicates your amplifier to be defective and in need of repair, return the unit to an Authorized Seymour Duncan Service Center or call (805) 964-9610 for a Return Authorization number.

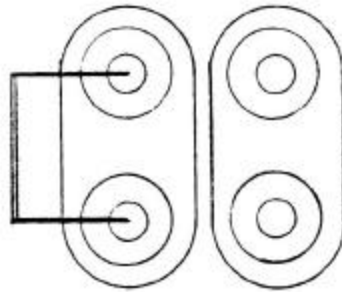
Symptom	Probable Cause	Remedy
Amp does not light up and come on when power switch is "ON".	1) Power not connected	1) Ensure power cord is plugged into operative power outlet
	2) Blown amp fuse	2) Check amp fuse; replace if blown with ABC-10. If it continues to blow, call service center
Amp lights up, but no sound when power switch is "ON"	1) Bad guitar cable	1) Replace cable
	2) Bad speaker cable	2) Replace cable
	3) Effects are hooked up	3) Reverse hook-up cables

	backwards in effects loop	
	4) Defective effects	4) Remove effects
	5) Blown speaker	5) Hook up new speaker
	6) Internal fuse blown	6) Replace with ABC-10 (see diagram). If it continues to blow, call service center
Distorted Sound	1) Partially shorted speaker cable	1) Replace cable
	2) Speaker impedance is below recommended value	2) See manual for minimum load
	3) Master Volume set too low	3) Set control at minimum 3 o'clock
	4) Over boosted E.Q. settings	4) Set E.Q. settings more moderately
	5) Defective or over driven effect	5) Remove effect or reduce input sensitivity
	6) Internal fuse blown	6) Replace with ABC-10 fuse (see diagram). If it continues to blow, call service center
	7) Defective speaker	7) Replace speaker
	8) Low battery (active pickups)	8) Replace battery in pickups
Muddy Sound	1) E.Q. setting set too high in lower frequency ranges	1) Reduce low frequency E.Q. settings
	2) Speakers are wired for Bridge mode, but Bi-amp/Mono switch is set on Bi-amp	2) Reverse switch position to Mono
Buzzing Sound	1) Ground loop (in rack mount installations)	1) Reverse ground or lift ground and reground the rack
	2) Improperly wired instrument	2) Check instrument wiring
	3) Noisy A.C. line	3) Reverse polarity of power switch

## Modes of Operation

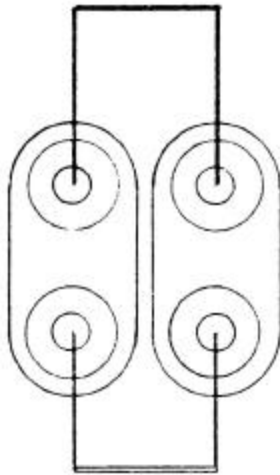
### Speaker Hookup

To Full Range Cabinet



Bridged Mono Mode  
Optimum Load 8

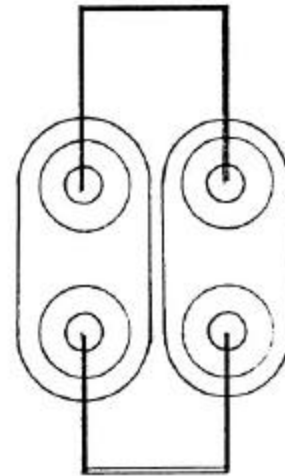
To Full Range  
Cabinet



To Full Range  
Cabinet

Dual Mono Mode  
Optimum Load 4

To High  
Frequency  
Cabinet



To Low  
Frequency  
Cabinet  
Bi-Amp Mode  
Optimum Load 4

