

User's Guide for the



Porta Bass

PBC2112/2210
Combo Amplifiers



Made with Pride in the U.S.A. by Ampeg



Thank you for choosing the Ampeg PBC2112/2210 PortaBass Combo Amplifier. These amplifiers feature Ampeg's radical new Micro Dynamic Technology power amp circuitry. This gives you the ultimate combination of power, tone, and portability in a small, lightweight amplifier. Specially designed enclosures – combined with lightweight woofers with powerful Neodymium magnets – produce more bass than anyone could imagine from relatively small cabinets. The enclosures have built-in wheels and a detachable telescoping handle for ultimate portability. A spring-loaded tilt back stand under the front edge of the cabinet allows you to angle the cabinet back a few degrees for increased coverage.

In order to obtain maximum performance and enjoyment from your new Ampeg amplifier, please read these instructions prior to its use.

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	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<small>WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</small>		


	PRECAUCION RIESGO DE CORRIENTAZO NO ABRA	
<small>PRECAUCION: PARA REDUCIR EL RIESGO DE INCENDIOS O DESCARGAS ELECTRICAS, NO PERMITA QUE ESTE APARATO QUEDA EXPUESTO A LA LLUVIA O LA HUMEDAD. PARA DISMINUIR EL RIESGO DE CORRIENTAZO, NO ABRA LA CUBIERTA. NO HAY PIEZAS REPARABLES QUE EL USUARIO PUEDA REPARAR DEJE TODO MANTENIMIENTO A LOS TECNICOS CALIFICADOS.</small>		


	ATTENTION RISQUE D'ELECTROCUTION NE PAS OUVRIR	
<small>ATTENTION: PROTEGEZ CET APPAREIL DE LA PLUIE ET DE L'HUMIDITE AFIN D'EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION. POUR REDUIRE D'ELECTROCUTION NE PAS ENLEVER LE COUVERCLE. AUCUNE PIECE INTERNE N'EST REPARABLE PAR L'UTILISATEUR. POUR TOUTE REPARATION, S'ADRESSER A UN TECHNICIEN QUALIFIE.</small>		

IMPORTANT SAFETY INSTRUCTIONS

- READ, FOLLOW, HEED, AND KEEP ALL INSTRUCTIONS AND WARNINGS.
- DO NOT OPERATE NEAR ANY HEAT SOURCE AND DO NOT BLOCK ANY VENTILATION OPENINGS ON THIS APPARATUS. FOR PROPER OPERATION, THIS UNIT REQUIRES 3" (75CM) OF WELL VENTILATED SPACE AROUND HEATSINKS AND OTHER AIR FLOW PROVISIONS IN THE CABINET.
- DO NOT USE THIS APPARATUS NEAR SPLASHING, FALLING, SPRAYING, OR STANDING LIQUIDS.
- CLEAN ONLY WITH LINT-FREE DAMP CLOTH AND DO NOT USE CLEANING AGENTS.
- ONLY CONNECT POWER CORD TO A POLARIZED, SAFETY GROUNDED OUTLET WIRED TO CURRENT ELECTRICAL CODES AND COMPATIBLE WITH VOLTAGE, POWER, AND FREQUENCY REQUIREMENTS STATED ON THE REAR PANEL OF THE APPARATUS.
- PROTECT THE POWER CORD FROM DAMAGE DUE TO BEING WALKED ON, PINCHED, OR STRAINED.
- UNPLUG THE APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.
- ONLY USE ATTACHMENTS, ACCESSORIES, STANDS, OR BRACKETS SPECIFIED BY THE MANUFACTURER FOR SAFE OPERATION AND TO AVOID INJURY.
- THIS APPARATUS DOES NOT OPERATE NORMALLY AND REQUIRES SERVICE WITH ANY PHYSICAL DAMAGE FROM IMPACT OR ANY EXPOSURE TO MOISTURE.
- SERVICE MUST BE PERFORMED BY QUALIFIED PERSONNEL.
- OUR AMPLIFIERS ARE CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS. CONTINUED EXPOSURE TO HIGH SOUND PRESSURE LEVELS CAN CAUSE PERMANENT HEARING IMPAIRMENT OR LOSS. USER CAUTION IS ADVISED AND EAR PROTECTION IS RECOMMENDED IF UNIT IS OPERATED AT HIGH VOLUME.

EXPLANATION OF GRAPHICAL SYMBOLS:
EXPLICACION DE SIMBOLOS GRAFICOS:
EXPLICATION DES SYMBOLES GRAPHIQUES:

	=	"DANGEROUS VOLTAGE" "VOLTAJE PELIGROSO" "DANGER HAUTE TENSION"
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	=	"IT IS NECESSARY FOR THE USER TO REFER TO THE INSTRUCTION MANUAL" "ES NECESARIO QUE EL USUARIO SE REFIERA AL MANUAL DE INSTRUCCIONES." "REFERREZ-VOUS AU MANUAL D'UTILISATION"
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Features

In the world of high performance bass amps, Ampeg amplifiers stand alone. In true Ampeg tradition, the PBC2112/2210 offers you more power, performance and tone than any other bass amplifier in its class. The outstanding features which set your new amplifier apart from the competition are listed below.

- **MDT POWER AMP:** Micro Dynamic Technology amplifier circuitry provides maximum power in a small, lightweight package – the efficiency of this design eliminates the need for heavy heat sinks, transformers and filter capacitors
- **FOUR BAND ROTARY EQ:** Four bands of equalization and shift controls for the Low and High Mid frequencies provides optimum tone control
- **ULTRA LOW, ULTRA HIGH SWITCHES:** Enhances flexibility and tone control
- **EFFECTS LOOP:** Send and Return jacks are combined with an Effects Blend control for virtually noise-free performance while using your favorite effects
- **TRANSFORMER BALANCED LINE OUTPUT:** XLR jack with level control, ground lift, and a pre/post-EQ switch – for patching into house consoles, mixing boards, or external power amplifiers
- **1/4" SPEAKER OUTPUT JACK:** Use the internal speakers *or* an external speaker cabinet
- **NEODYMIUM MAGNETS:** Woofers weigh-in as tweeters but put out *tons* of low end
- **BUILT-IN TILT-BACK WHEELS:** Heavy duty wheels on the rear bottom edge of the cabinet let you roll this combo amp around with ease
- **DETACHABLE TELESCOPING HANDLE:** For the ultimate in transportation – just grab it and go!
- **TILT BACK STAND:** Spring-loaded tilt back stand for angling the cabinet backwards
- **MADE WITH PRIDE IN THE U.S.A.**

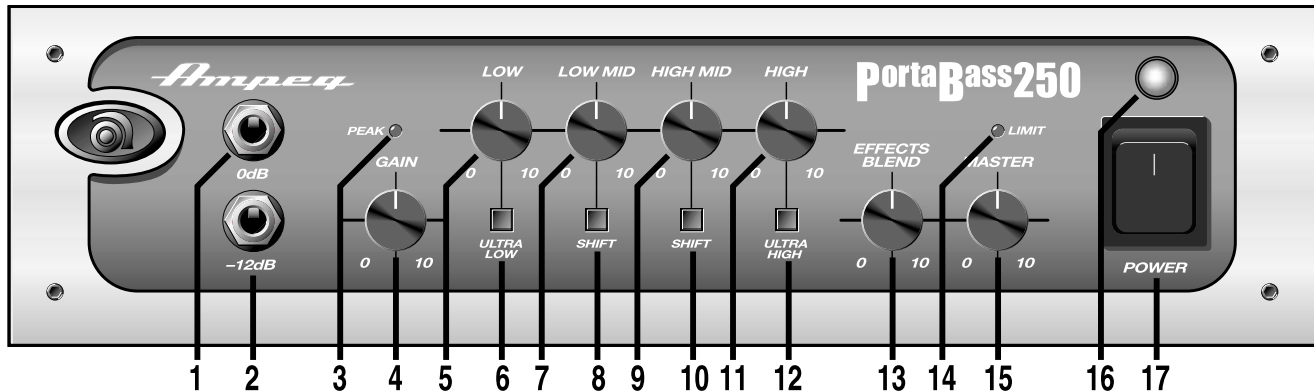
Important Safeguards and Precautions:

All Ampeg products are designed for continuous safe operation, as long as common sense is used and steps are taken to help avoid certain problems. Abiding by the following rules can help prevent damage to your amplifier, yourself, and others.

- The amplifier is equipped with a three-pronged AC power cord. To reduce the risk of electrical shock, **NEVER** remove or otherwise attempt to defeat the ground pin of the power cord.
- Connect the amplifier **ONLY** to a properly grounded AC outlet of the proper voltage for your amp.
- Avoid sudden temperature extremes, rain and moisture. Also, avoid sudden and intense impact. (If the unit has been subjected to any of the preceding abuses, have it looked at by an authorized service center.)
- **NEVER** set the amplifier on a support that might give out under its weight.
- Always keep the total speaker impedance at or above the rated load.
- Unplug the amplifier before cleaning it. **NEVER** spray liquid cleaners onto the amplifier. Wipe it with a slightly dampened, lint-free cloth to remove dirt and film.
- Do not use the amplifier if it has sustained damage to the chassis, controls, or power cord. Refer the unit to an authorized service center for inspection.
- Amplifiers capable of producing high volume levels are also capable of inflicting permanent hearing loss or damage, if the exposure to such levels is prolonged. Such damage is progressive and irreversible! Consider using quality hearing protection devices.
- Do not transport other or additional equipment with the PortaBass telescoping handle. The handle is designed for use with the PBC2112 and PBC2210 only.



The Front Panel Controls and Their Use:



1. 0dB: Connect your bass guitar here by means of a shielded instrument cable. If your bass has active electronics or high-output pickups, or if the Peak LED (#3) illuminates at low signal levels, connect your bass to the -12dB jack (#2).

2. -12dB: Connect your bass guitar here by means of a shielded instrument cable, if your bass has active electronics or high-output pickups. If the Peak LED (#3) does not illuminate at high signal levels, connect your bass to the 0dB jack (#1).

3. PEAK: This LED will illuminate when the level of the preamp signal begins to overdrive the amplifier. For the best signal to noise ratio, set the Gain control (#4) so the Peak LED (#3) flashes on strong signal spikes during normal playing of your instrument.

4. GAIN: Use this control to adjust the level of the signal going into the preamp. Adjust this control until the Peak LED (#3) flashes on strong signal peaks.

5. LOW: Use this control to adjust the low frequency level of the amplifier. This control allows an adjustment of +/-14dB at 100Hz.

6. ULTRA LOW: This switch, when depressed, increases the low frequency output by 6dB at 40Hz.

7. LOW MID: Use this control to adjust the lower midrange frequency level of the amplifier. This control allows an adjustment of +/-15dB at either 270Hz or 400Hz, depending on the setting of the Shift switch (#8).

8. SHIFT (LOW MID): This switch, in the out position, sets the center frequency of the Low Mid control (#7) to 270Hz. When this switch is depressed, the center frequency of the Low Mid control (#7) is set to 400Hz.

9. HIGH MID: Use this control to adjust the upper midrange frequency level of the amplifier. This control allows an adjustment of +/-14dB at either 900Hz or 1.9kHz, depending on the setting of the Shift switch (#10).

10. SHIFT (HIGH MID): This switch, in the out position, sets the center frequency of the High Mid control (#9) to 900Hz. When this switch is depressed, the center frequency of the High Mid control (#9) is set to 1.9kHz.

11. HIGH: Use this control to adjust the high frequency level of the amplifier. This control allows an adjustment of +/-13dB at 6kHz.

12. ULTRA HIGH: This switch, when depressed, increases the high frequency output by 8dB at 10kHz.

13. EFFECTS BLEND: Use this control to adjust the level of external effects that are connected to the Effects Send and Return jacks (#23 and #22, rear panel). With this control in the fully counterclockwise position no effect is applied to the signal. As you rotate the control clockwise the level of the effect increases.

NOTE: When using a compressor/limiter in the external effects loop, this control must be rotated fully clockwise for optimum results.

14. LIMIT: This LED illuminates when the internal limit circuit is activated. This indicates that the amplifier is nearing full output and the limiter is keeping the amplifier from clipping the output signal.

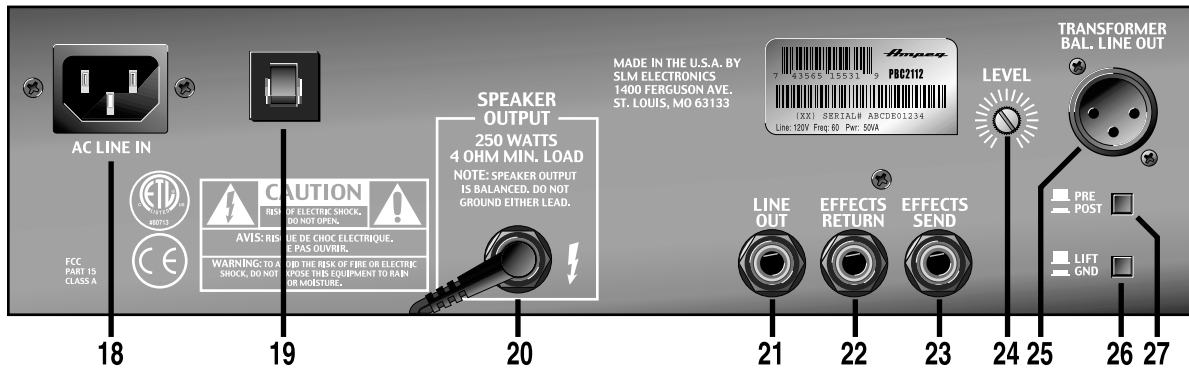
15. MASTER: Use this control to adjust the output level of the amplifier. If the Limit LED illuminates, reduce this control until the Limit LED only flashes on strong signals.

16. POWER ON INDICATOR: This light illuminates when the amplifier is turned on.

17. POWER: Use this switch to apply power to the amplifier. The amp is on when the top of the switch is depressed and off when the bottom of the switch is depressed.



The Rear Panel:



18. AC LINE IN: Firmly insert the female end of the supplied AC power cord into this socket. The grounded power cord should only be plugged into a grounded power outlet that meets all applicable electrical codes and is compatible with the voltage, power, and frequency requirements stated on the rear panel. **Do not attempt to defeat the safety ground connection.**

19. CIRCUIT BREAKER: The circuit breaker protects the unit from damage caused by excessive current demands. If the amplifier stops working, check the circuit breaker. If it has opened, the button will protrude showing a contrasting color. Reset the circuit breaker by depressing it until it latches. The breaker must cool down for a short time before the button will latch. If the circuit breaker opens repeatedly, have the amplifier inspected by a qualified service person.

20. SPEAKER OUTPUT: This jack is connected to the internal speakers. To use an external speaker cabinet, disconnect the cable from this jack and connect the speaker cabinet to the amplifier by means of a heavy duty speaker cable with a 1/4" connector. Observe the 4 ohm minimum impedance rating.

NOTE: This is a balanced output jack. Neither conductor should be allowed to come in contact with a ground point.

ATTENTION: When connecting external speaker cabinets to the amplifier, the minimum total impedance load must not be lower than four ohms. The following chart shows the total impedance load when connecting multiple speaker cabinets in parallel:

Cabinet Impedance	# of Cabs	Total Impedance
8Ω	2	4Ω
16Ω	2	8Ω
16Ω	4	4Ω

21. LINE OUT: Use this 1/4" jack to send a post-EQ line level signal to an external amplifier, mixing console or recording equipment.

22. EFFECTS RETURN: When using an external effect, connect the effect's output to this jack by means of a shielded signal cable.

23. EFFECTS SEND: When using an external effect, connect this jack to the effect's input by means of a shielded signal cable.

24. LEVEL: Use this control to adjust the level of the signal at the Transformer balanced Line Out jack (#25).

25. TRANSFORMER BAL. LINE OUT: Use this XLR jack to send a line level signal to an external amplifier, mixing console or recording equipment. The signal at this jack may be pre or post-EQ, depending on the setting of the Pre/Post switch (#27).

26. LIFT/GND: When this switch is in the out position the ground pin of the Transformer Balanced Line Out jack (#25) is interrupted. This may reduce residual hum and buzz which is sometimes picked up by line out signal cables. This switch does not affect signal at the 1/4" Line Out jack (#21).

27. PRE/POST: This switch determines whether the signal at the Transformer Balanced Line Out jack (#25) is pre-EQ (switch out) or post-EQ (switch depressed).



The Detachable Transport Handle:

The PBC2112/2210 comes equipped with a detachable, telescoping transport handle. Attach the handle to the brackets on the rear of the cabinet as follows:

Line up the upper lip of the handle with the slot over the upper bracket. Slide the lip completely into the slot. The notch in the lip of the handle will mate with the tab in the bracket. **(Figure 1.)**

Press down on the spring-loaded tab on the bottom lip of the handle. While holding the tab down, line up the bottom lip underneath the lower bracket. When the handle is flush with the back of the cabinet, release the spring-loaded tab. The bottom lip will slide into the lower bracket. **(Figure 2.)**

To raise the telescoping handle, press down on the spring-loaded tab on the top of the handle and simultaneously pull up until it locks into its fully extended position. **(Figure 3.)**

To lower the handle, press the spring-loaded tab on the top of the handle and simultaneously push the handle down until it locks in its fully collapsed position.

To remove the handle from the cabinet, press the spring-loaded tab on the lower lip of the handle to free it from the lower bracket. Swing the bottom of the handle away from the back of the cabinet (far enough to clear the lower bracket) and lift the handle straight up.

Figure 1:



Figure 2:



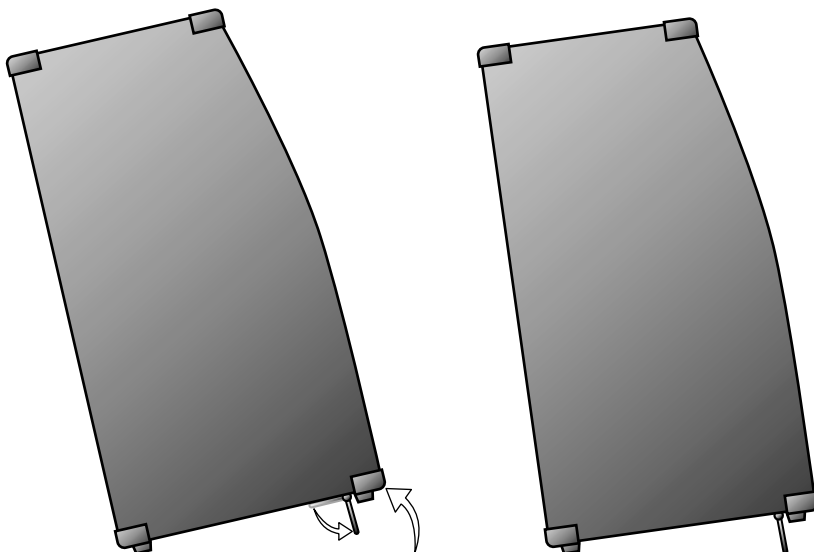
Figure 3:



Using the Tilt Back Stand

The PCB2112/2210 Combo Amplifier features a spring-loaded metal tilt back stand, mounted near the front edge on the bottom of the cabinet. To use the tilt back stand, lean the cabinet back several inches, then reach under and pull the far end of the stand downward and towards the front of the cabinet. While holding the stand in position, carefully lower the front of the cabinet to the floor until the weight of the cabinet rests on the stand. (The stand will spring back to the retracted position when the cabinet is leaned further back or picked up.)

NOTE: DO NOT place objects on the top of the cabinet when the cabinet is in the tilted-back position.

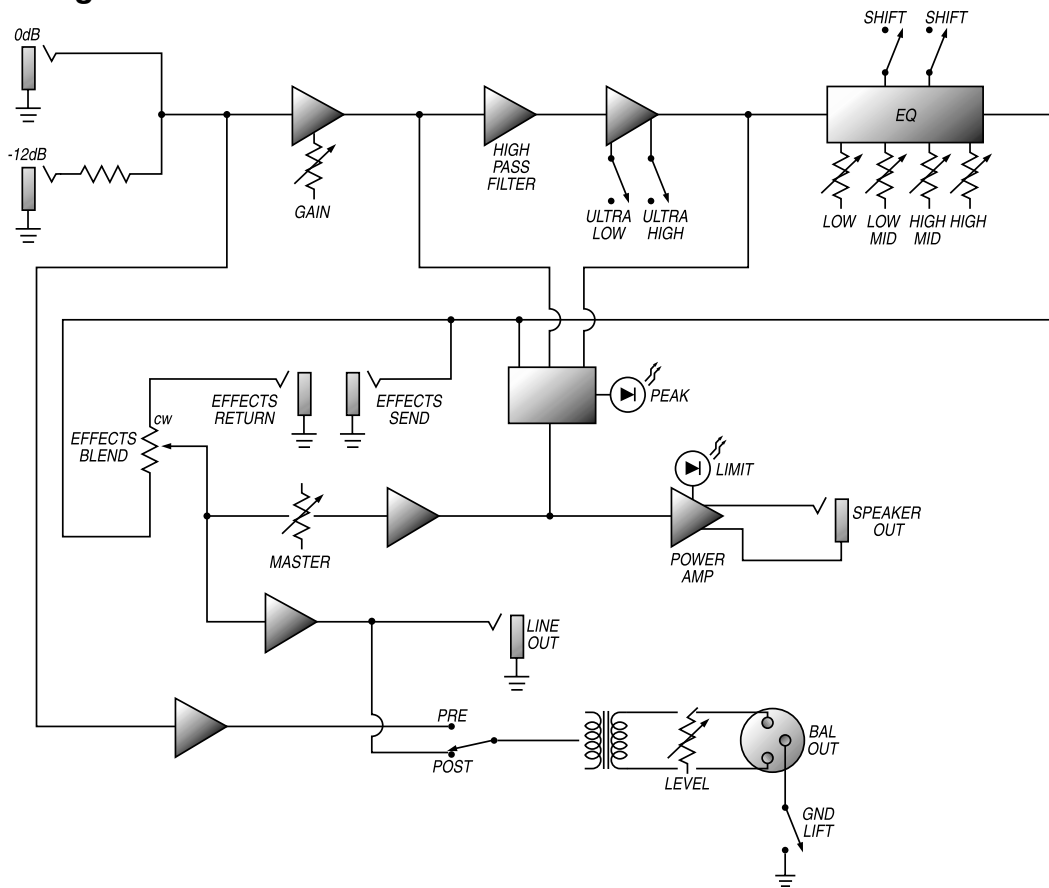


WARNING:
AVOID TRAPPING
YOUR HAND
UNDER
THE TILT BACK
STAND
OR THE CABINET!



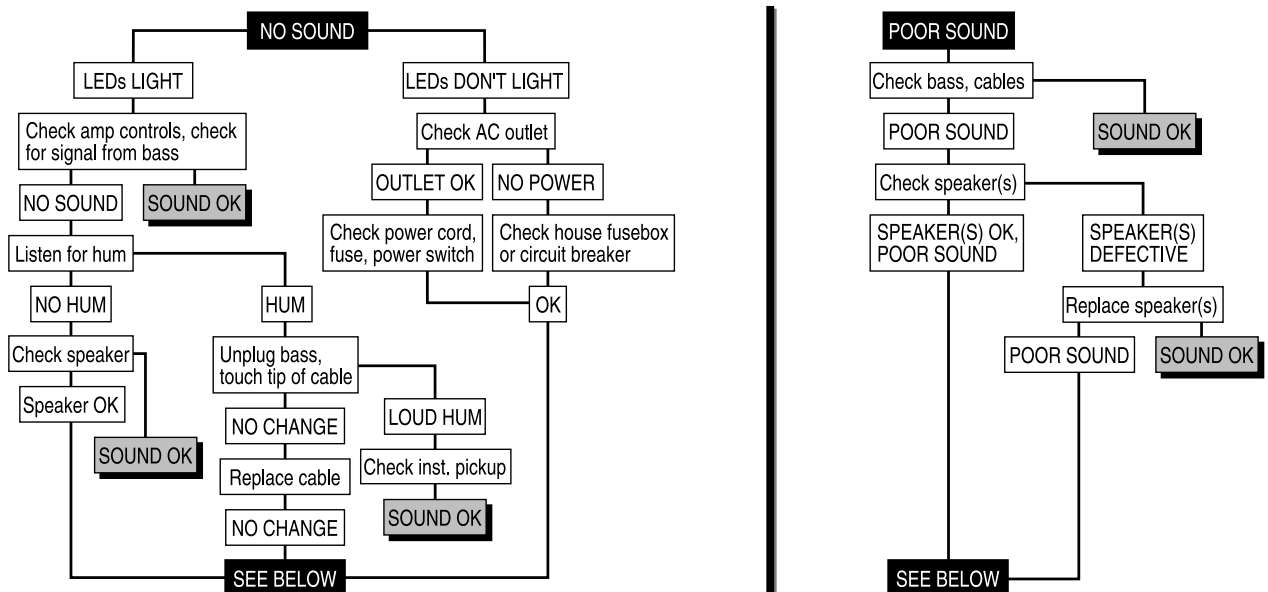


System Block Diagram



Troubleshooting

In the unlikely event that your PBC2112/2210 should malfunction, take a few minutes to troubleshoot it before you call for service. Sometimes you can save yourself time and money by doing it yourself, and often the cure for the problem is simple.



If the problem isn't covered above, or if the steps lead you here, then contact your Ampeg dealer for service information. Also, you should refer your amp to an authorized service center for servicing if it gets dropped, has liquid spilled into it, or sustains damage to its power cord (see page 3).



PBC2112/2210 PortaBass Combo Amplifiers

Technical Specifications

OUTPUT POWER RATING		250 Watts RMS, 4 ohm load, 120VAC 150 Watts RMS, 8 ohm load, 120VAC
TONE CONTROLS	Ultra Low:	+6dB @ 40Hz (switch in)
	Low:	±14dB @ 100Hz
	Low Mid:	±15dB @ frequency determined by Low Mid Shift switch
	Low Mid Shift:	270Hz (switch out), 400Hz (switch in)
	High Mid:	±14dB @ frequency determined by High Mid Shift switch
	High Mid Shift:	900Hz (switch out), 1.9kHz (switch in)
	High:	±13dB @ 6kHz
	Ultra High Switch:	+8dB @ 10kHz (switch in)
GAIN		69dB
SIGNAL TO NOISE RATIO		75dB typical
FREQUENCY RESPONSE	PBC2112:	40 – 20kHz
	PBC2210:	40 – 20kHz
CROSSOVER FREQUENCY	PBC2112:	3.5kHz
	PBC2210:	3.5kHz
DRIVER COMPLEMENT	PBC2112:	One 12" Custom Design, 200 watts, 4 ohm*, 2" voice coil dia, Neodymium magnet One 1" compression driver
	PBC2210:	Two 10" Custom Design, 400 watts, 4 ohm*, 2" voice coil dia, Neodymium magnet One 1" compression driver
POWER REQUIREMENTS	Domestic:	120VAC, 60Hz, 50VA typical (310VA @ full power)
	Export:	100/120VAC, 50/60Hz, 50VA typical (310VA @ full power)
		230-240VAC, 50/60Hz, 50VA typical (310VA @ full power)
SIZE AND WEIGHT	PBC2112:	17" W x 20-3/4" H x 13-3/4" D; 45 lbs.
	PBC2210:	17" W x 26" H x 13-3/4" D; 53 lbs.

*system total

Ampeg reserves the right to change specifications without notice.

Declaration Of Conformity

#41, Effective 02-01-2002

Manufacturer's Name: SLM Electronics
Production Facility: 11880 Borman Drive, St. Louis, MO 63146, USA
Production Facility: 700 Hwy 202 W, Yellville, AR 72687, USA
Shipping Facility: 1400 Ferguson Ave., St. Louis, MO 63133, USA
Office Facility: 1400 Ferguson Ave., St. Louis, MO 63133, USA

Product Type: Audio Amplifier

Complies with Standards:
LVD: 92/31/EEC, 93/68/EEC, & 73/23/EWG
Safety: EN60065
EMC: EN55013, EN55020, EN55022, EN61000-3-2,
& EN61000-3-3

Supplementary information provided by:
 SLM Electronics - R & D Engineering
 1901 Congressional Drive, St Louis, MO 63146, USA
 Tel.: 314-569-0141, Fax: 314-569-0175



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