PYRAMID

COMPETITION AMPLIFIER

2-OHM STABILITY

CE

PB 310 SX
PB 610 SX
PB 800 SX
PB 1000 SX

OWNER'S MANUAL

INTRODUCTION

Thank you for purchasing a Pyramid car audio amplifier.

Rest assured you have purchased a quality product designed and engineered to give you many years of uncompromised musical service.

This amplifier has been designed using the latest in electronic technology available today and will provide you with years and years of high quality sound level amplification and reproduction.

This amplifier have been designed with a fully regulated 100% MOSFET Power supplies assuring extremely quick switching response and self protection with soft starting power turn on.

A FEW WORDS ABOUT PROTECTION CIRCUITRY.

Advanced protection circuits have been designed into all Pyramid amplifiers. The protection circuitry will disable the amplifier if it senses an input overload, speaker short circuit short or extreme high temperature conditions.

When the protection circuit is in operation the LED indicator on the unit will light indicating that the amplifier has gone into a self preservation mode.

At this time please check your system to see what is causing the protection circuit to fire. The amplifier can be reset by turning the remote power off and then on again. If the system shuts down because of a thermal overload condition, allow the amplifier to cool down before restarting. If the amplifier shutdown because of an input overload or speaker short circuit please be sure to correct these conditions before restarting the amplifier.

2-OHM OPERATION

This unit was designed to operate efficiently at loads down to 2 ohms.

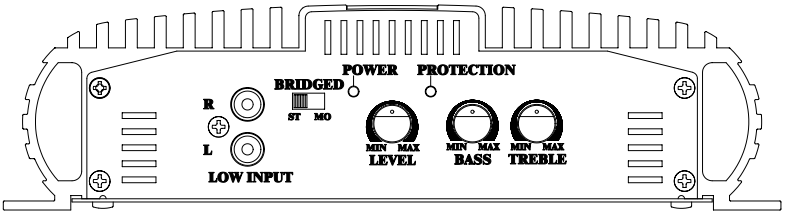
What this means is that you can do an installation of FOUR-8 ohm speakers per channel using parallel wiring or TWO-4 ohm speakers per channel in parallel.

When operating at 2 ohms, the amplifier to increase their power output by approximately 50 percent. The current draw of the amplifiers will also increase by about the same as amount. Be sure that you have enough current to run the amplifier into a 2 ohm load otherwise distorted music will be reproduced.

Do not use a 2 ohm load in the bridged mode.
The amplifier accepts 4-8 ohms only in the bridged mode.

FEATURES

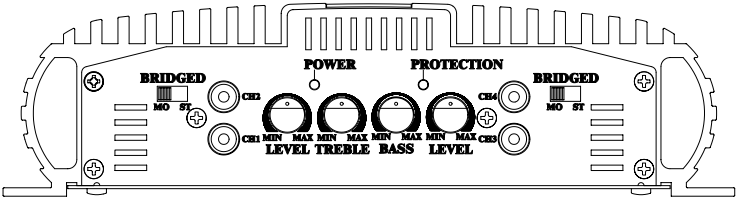
PB 310 SX



- TWO CHANNEL BRIDGEABLE AMPLIFIER
- 300 WATTS X 2 OUTPUT
- 600 WATTS X 1 BRIDGED OUTPUT
- VARIABLE GAIN CONTROL
- REMOTE TURN ON/OFF
- 2 OHM STEREO STABLE
- MOSFET PULSE WIDTH MODULATED POWER SUPPLY
- VARIABLE BASS BOOST (0-18 dB @ 60HZ)
- VARIABLE TREBLE BOOST (0-12 dB @ 10KHZ)
- GOLD PLATED RCA HIGH IMPEDANCE INPUTS
- SPEAKER TERMINAL BARRIER STRIP
- SOFT TURN-ON CIRCUIT
- HEAVY DUTY ALUMINUM ALLOY HEATSINK
- DC TO DC CONVERTER CIRCUITRY
- POWER ON & DIAGNOSTIC LED INDICATOR
- SIGNAL TO NOISE RATIO: GREATER THAN 90dB
- DISTORTION: LESS THAN 0.05% @RMS POWER
- FREQUENCY RESPONSE : 10HZ-30KHZ
- INPUT SENSITIVITY: 100MV-1V ADJUSTABLE
- INPUT IMPEDANCE: 10K OHMS
- OVERLOAD PROTECTION
- THERMAL SHUTDOWN
- DIMENSIONS: 209MM(L) X 242MM(W) X 64MM(H)

FEATURES

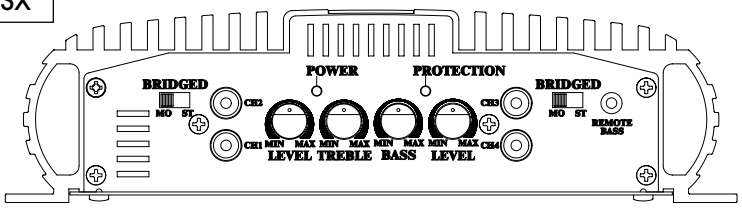
PB 610 SX



- FOUR CHANNEL BRIDGEABLE AMPLIFIER
- 250 WATTS X 4 OUTPUT OR
- 500 WATTS X 2 BRIDGED OR
- 250 WATTS X 2 + 1 X 500 W
- VARIABLE GAIN CONTROL
- REMOTE TURN ON/OFF
- 2 OHM STEREO STABLE
- TWIN MOSFET PULSE WIDTH MODULATED POWER SUPPLIES
- VARIABLE BASS BOOST (0-18 dB @ 60HZ)
- VARIABLE TREBLE BOOST (0-12 dB @ 10KHZ)
- GOLD PLATED RCA HIGH IMPEDANCE INPUTS
- SPEAKER TERMINAL BARRIER STRIP
- SOFT TURN-ON CIRCUIT
- HEAVY DUTY ALUMINUM ALLOY HEAT SINK
- DC TO DC CONVERTER CIRCUITRY
- POWER ON & DIAGNOSTIC LED INDICATOR
- SIGNAL TO NOISE RATIO: GREATER THAN 90dB
- DISTORTION: LESS THAN 0.05% @RMS POWER
- FREQUENCY RESPONSE : 10HZ-30KHZ
- INPUT SENSITIVITY: 100MV-1V ADJUSTABLE
- INPUT IMPEDANCE: 10K OHMS
- OVERLOAD PROTECTION / SHORT CIRCUIT PROTECTION
- THERMAL SHUTDOWN
- DIMENSIONS: 350MM(L) X 242MM(W) X 64MM(H)

FEATURES

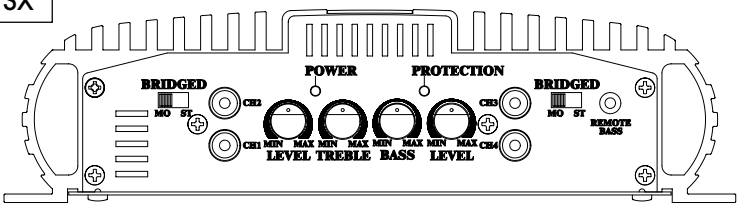
PB 800 SX



- FOUR CHANNEL BRIDGEABLE AMPLIFIER
- 300 WATTS X 4 OUTPUT OR
- 600 WATTS X 2 BRIDGED OR
- 300 WATTS X 2 + 1 X 600 W
- VARIABLE GAIN CONTROL
- REMOTE TURN ON/OFF
- 2 OHM STEREO STABLE
- TWIN MOSFET PULSE WIDTH MODULATED POWER SUPPLIES
- VARIABLE BASS BOOST (0-18 dB @ 60HZ)
- VARIABLE TREBLE BOOST (0-12 dB @ 10KHZ)
- GOLD PLATED RCA HIGH IMPEDANCE INPUTS
- SPEAKER TERMINAL BARRIER STRIP
- SOFT TURN-ON CIRCUIT
- HEAVY DUTY ALUMINUM ALLOY HEAT SINK
- DC TO DC CONVERTER CIRCUITRY
- POWER ON & DIAGNOSTIC LED INDICATOR
- SIGNAL TO NOISE RATIO: GREATER THAN 90dB
- DISTORTION: LESS THAN 0.05% @RMS POWER
- FREQUENCY RESPONSE : 10HZ-30KHZ
- INPUT SENSITIVITY: 100MV-1V ADJUSTABLE
- INPUT IMPEDANCE: 10K OHMS
- OVERLOAD PROTECTION / SHORT CIRCUIT PROTECTION
- THERMAL SHUTDOWN
- REMOTE BASS BOOST
- DIMENSIONS: 380MM(L) X 242MM(W) X 64MM(H)

FEATURES

PB1000 SX



- FOUR CHANNEL BRIDGEABLE AMPLIFIER
- 400 WATTS X 4 OUTPUT OR
- 800 WATTS X 2 BRIDGED OR
- 400 WATTS X 2 + 1 X 800 W
- VARIABLE GAIN CONTROL
- REMOTE TURN ON/OFF
- 2 OHM STEREO STABLE
- TWIN MOSFET PULSE WIDTH MODULATED POWER SUPPLIES
- VARIABLE BASS BOOST (0-18 dB @ 60HZ)
- VARIABLE TREBLE BOOST (0-12 dB @ 10KHZ)
- GOLD PLATED RCA HIGH IMPEDANCE INPUTS
- SPEAKER TERMINAL BARRIER STRIP
- SOFT TURN-ON CIRCUIT
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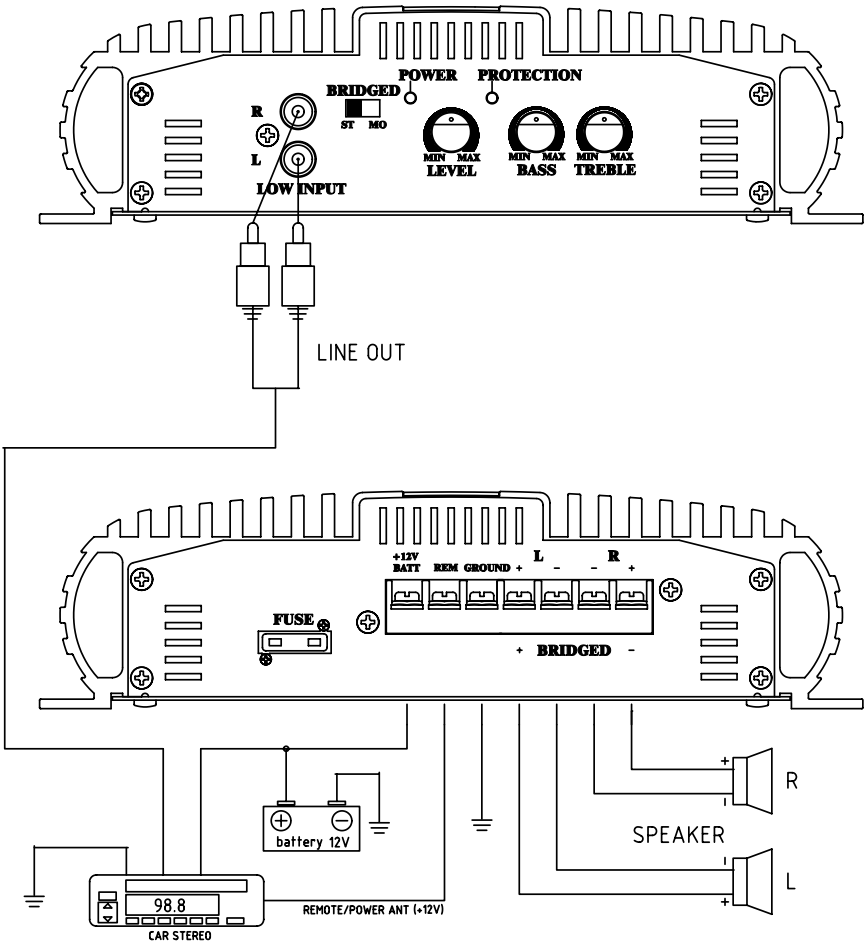
- DISTORTION: LESS THAN 0.05% @RMS POWER
- FREQUENCY RESPONSE : 10HZ-30KHZ
- INPUT SENSITIVITY: 100MV-1V ADJUSTABLE
- INPUT IMPEDANCE: 10K OHMS
- OVERLOAD PROTECTION / SHORT CIRCUIT PROTECTION
- THERMAL SHUTDOWN
- REMOTE BASS BOOST
- DIMENSIONS: 410MM(L) X 242MM(W) X 64MM(H)

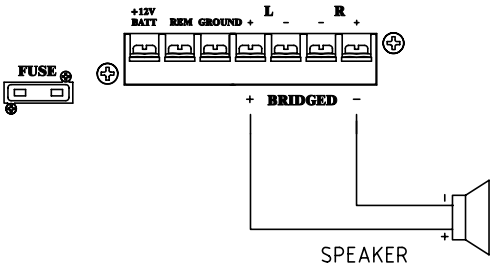
CONNECTIONS

PB310SX STEREO MODE



CONNECTIONS

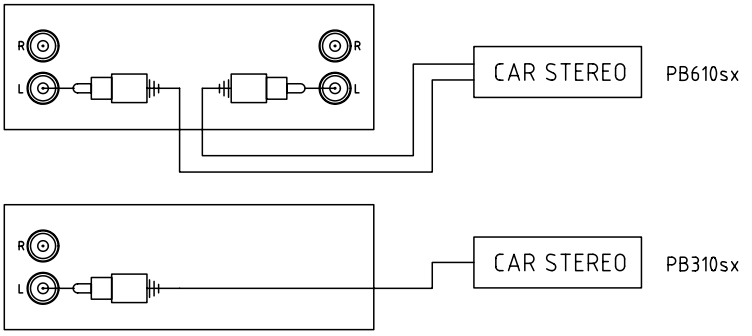
PB310SX BRIDGED MODE



SPEAKERS NEGATIVE TERMINALS ON AMPLIFIER ARE NOT USED IN BRIDGED MODE BRIDGING IS DONE BY SUMMING POSITIVES.

CONNECT THE NEGATIVE SPEAKER TERMINAL TO THE POSITIVE TERMINAL OF CH2 (R-CH) ON THE AMPLIFIER BE SURE TO SELECT BRIDGED SWITCH KNOB FOR PROPER OPERATION.

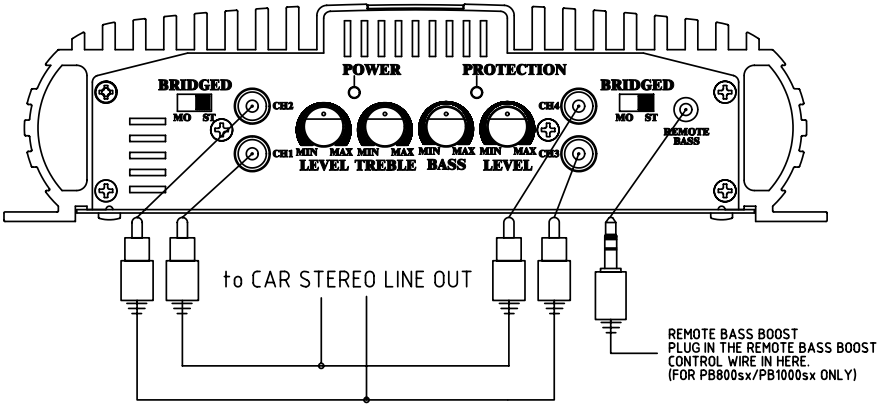
BRIDGED MODE INPUT WIRING

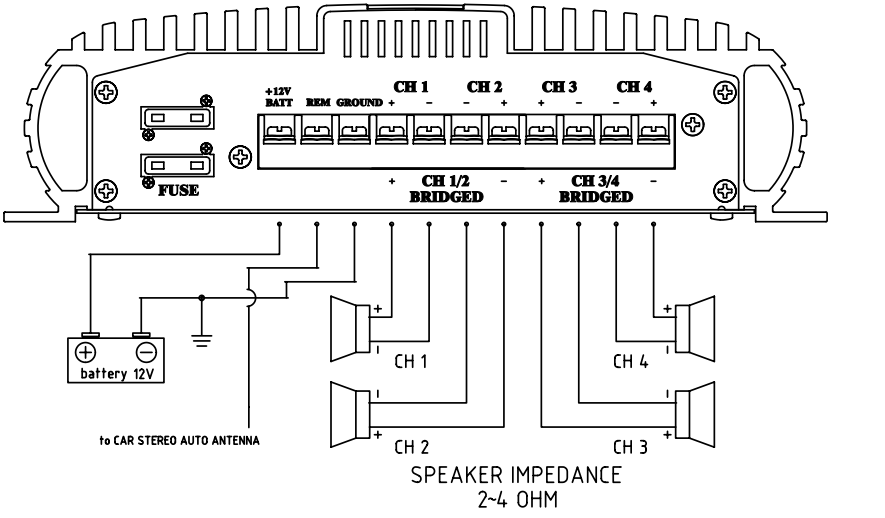


CAR SIGNAL INPUT (RCA LINE OUT) MUST BE CONNECTED TO ONLY EACH "L" CHANNEL (BRIDG SWITCH KNOB SHOULD BE SELECTED MO). IF CAR SIGNAL INPUT IS CONNECTED TO "R" CHANNEL THERE SHALL BE NO POWER OUT (NO SOUND).

CONNECTIONS

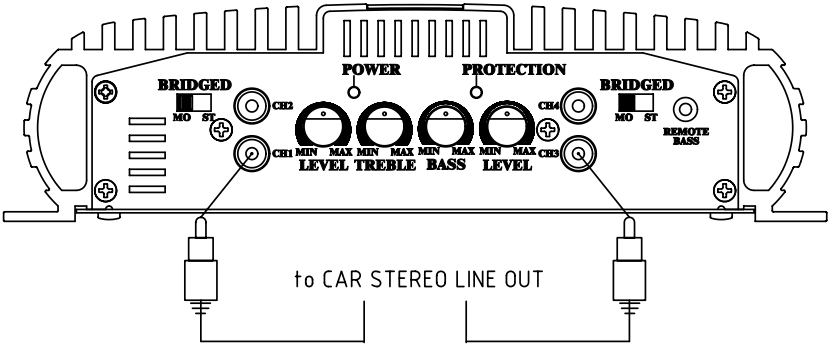
PB610SX/ PB800SX/ PB1000SX STEREO MODE

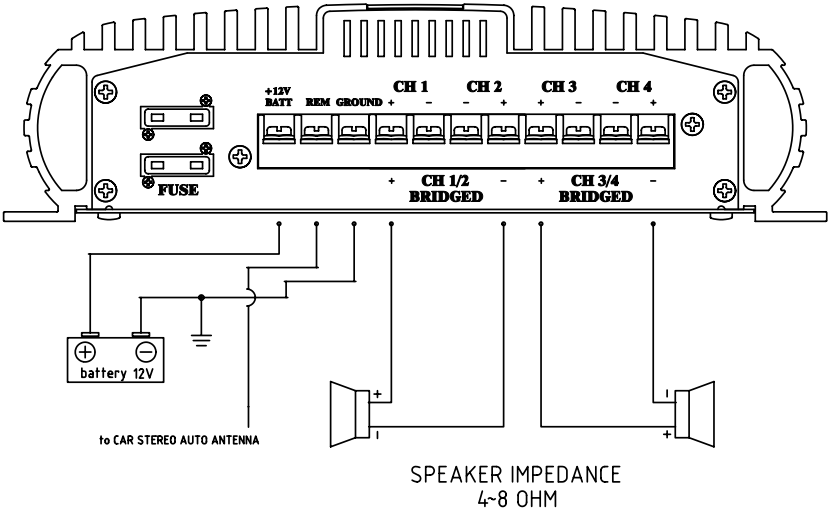




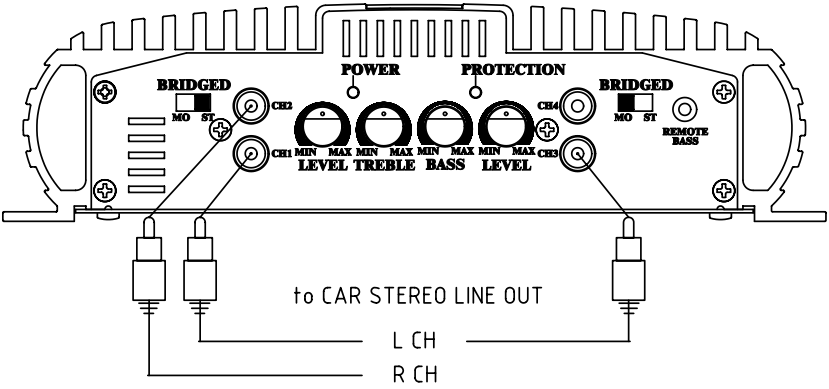
NOTE: REMOTE BASS BOOST IS A FEATURE OF PB800SX AND PB1000SX

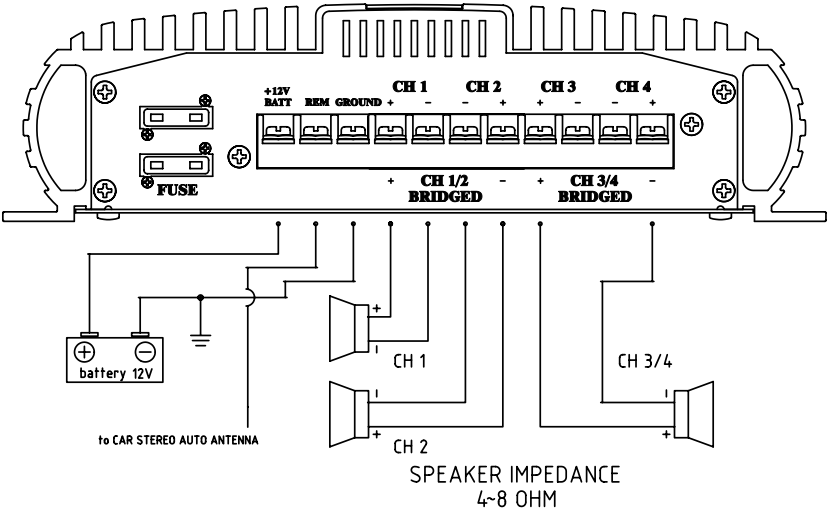
A. TWO-SPEAKER SYSTEM





B. THREE-SPEAKER SYSTEM





MECHANICAL INSTALLATION

Mark the locations for the mounting screw holes by holding the AMPLIFIER in place and using a scribe or one of the mounting screws inserted in each mounting hole in turn to mark the mounting surface. If the mounting surface in carpeted, measure the hole centers and mark with a felt-tip pen.

Drill pilot holes for the mounting screws into the holes of the system insert the mounting screws into the holes and tighten them securely.

WARNING

Investigate the layout of your automobile thoroughly before drilling or cutting any holes. Take care when you work near the gas tanks, lines, or hydraulic lines, and electrical wiring. Don't use power amplifier unmounted. Attach this system securely to the automobile to prevent damage, particularly in the event of an accident.

Don't mount this system so that the wire connections are unprotected or are subject to pinching or damage from nearby objects.

The +12VDC power wire must be fused at the battery positive terminal connection. Before making or breaking power connections at this system power terminals, disconnect the +12V wire at the battery end. Confirm your radio/cassette player and/or other equip is turned off while connecting the input jacks and speaker terminals.

If you need to replace the power fuse, replace it only with a fuse identical to that supplied with the system. Using a fuse of different type or rating may result in damage to this system which isn't covered by the warranty.

ELECTRICAL INSTALLATION

1. Connect the power ground terminal to the nearest point on the chassis of the car keep this ground wire less than one meter(39") in length. Use #8 wire.
2. Connect the remote terminal to the remote output of the head unit using #14 wire.
3. Connect an empty fuse holder within 300mm (12") of the battery and run a #8 or larger high quality cable from this fuse to the amplifier location.
4. Make sure there is no fuse in the fuse holder. Then make the connection to the "BATT" connection on the amplifier.
5. If multiple amplifiers are being used, either run separate cables. (each with its own fuse at the battery) or a #0 or #2 cable from the fuse holder at the battery to a distribution block at or near the amplifier's location.
6. Connect all line inputs and outputs using high-quality RCA-RCA cables.
7. Insert fuse(s) at the battery fuse holder(s).
8. Recheck all connections before powering up.
9. Set all level controls to their least sensitive positions and set all crossover controls, switches, etc. to the desired frequency or position.
10. Once the system is powered up, set the volume control on the head unit to about the 2 o'clock position, and then set all the amplifiers, level control for maximum sound pressure.
11. When bridging the amplifiers be sure to change the stereo/mono switch knob to the in position for the appropriate channels to bridge.
12. Further fine turning of the various controls may be necessary to obtain the desired results.

PLEASE NOTE:

The gain control of any car audio amplifier should not be mistaken for a volume control. It is a sophisticated device to match the output level of your source unit to the input level of the amplifier. Do not adjust the level to maximum unless your input level requires it. Not following this instruction will result in an input overload to the amplifier and high levels of distorted musical reproduction.

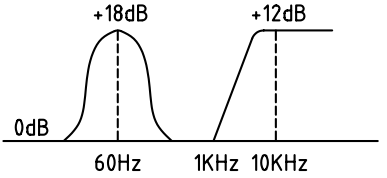
SPECIFICATIONS

	PB310SX	PB610SX	PB800SX	PB1000SX
RMS Power per channel at 4 Ohms	2 x 150	4 x 125	4 x 150	4 x 200
Peak Power per channel at 4 Ohms	2 x 300	4 x 250	4 x 300	4 x 400
Bridged power at 4 Ohms	1 x 600	2 x 500	2 x 600	2 x 800
RMS power per channel at 2 Ohms	2 x 200	4 x 175	4 x 250	4 x 350
Minimum Speaker Impedance	2 OHM			
THD	Less Than 0.05%			
Frequency Response	10Hz —– 30KHz (-3dB)			
Input sensitivity	100mV —– 1V			
Input Impedance	10K OHM			
Signal-to-Noise Ratio	>90dB			
Channel Separation	>65dB			
Treble boost	0 –12 dB (10KHz)			
Bass boost	0 –18dB (60Hz)			
Dimensions (WxHxL)	242x64x209 mm	242x64x350 mm	242x64x380 mm	242x64x410 mm
FUSE	20A	20A x 2	20A x 2	25A x 2

BUILT-IN ELECTRONIC TREBLE & BASS

The TREBLE is adjustable form 0 ~ +12dB Boost at 10KHz

The BASS is adjustable from 0 ~ +18dB Boost at 60Hz



BASS FREQUENCY TREBLE FREQUENCY

TROUBLE SHOOTING GUIDE

SYMPTOM:	CHECK:	CURE:
Amp turning off at low volume levels	Check speakers for damage or short	Have your dealer inspect the speakers.
No Sound	Is the power LED illuminated ?	Check fuses in amplifier. Be sure Turn-on lead is connected Check signal leads. Check gain control. Check Tuner/Deck volume level. Clean contacts on fuse holders.
No Sound	Is the Diagnostic LED illuminated?	Check for speaker short or amplifier overheating.
No sound in one channel	Check speaker leads	Inspect for short circuit or an open connection.
	Check Audio Leads	Reverse Left and Right RCA inputs to determine if it is occurring before the amp.
	Check Mono Bridge and Amp Sub woofer Switches	Change switches to ensure proper position with respect to the installation.
Amp turning off at medium or high volume levels	Check speaker load impedance	Be sure proper speaker load impedance recommendations are observed. (If you use an ohmmeter to check speaker resistance, please remember that DC resistance and AC impedance may not be the same.)

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