PBX-500.4
PBX-1200.5
PBX-600.6

PBX High Efficiency Class D Full Range Amplifier

Owners Manual

Please read through this manual to familiarize yourself with your new amplifier. Should your PowerBass PBX mobile amplifier ever require service, you will need to have the original dated receipt.

THANK YOU AND CONGRATULATIONS

Thank you for your decision to purchase a PowerBass USA PBX mobile amplifier! Our new high efficiency amplifiers are the result of extensive engineering, and testing, to develop the best sounding and most efficient power delivery we have ever produced. with the success of our previous XMA Series our engineers went to work on the PBX Series with the goal of creating true works of art featuring high quality parts and an ultra efficient circuit design proving to be some of the best Class D amplifiers on the market today.

Their versatility enables compat-ibility with optional signal and audio processors. These high quality MOSFET amplifiers may be configured to allow maximum flexibility in designing different types of speaker systems.

CLASS D HIGH EFFICIENCY AMPLIFIERS

The PowerBass PBX Series high efficiency amplifiers are ultra high quality MOSFET amplifiers that are capable of running a system full range, or they may be selected only to power subwoofers. It is important that you closely follow the wiring instructions contained in this Owners Manual so that you get the most from your PowerBass PBX mobile amplifier.

Δ CAUTION Δ

High powered audio systems in a vehicle are capable of generating higher than "Live Concert" levels of sound pressure. Continued exposure to excessively high volume sound levels could cause hearing loss or damage. Also, operation of a motor vehicle while listening to audio equipment at high volume levels may impair your ability to hear external sounds such as horns, warning signals, or emergency vehicles—thus creating a potential traffic hazard. In the interest of safety, PowerBass USA highly recommends listening at lower volume levels when driving.

TECHNICAL FEATURES

- Front Load Terminal Design
- PWM MOSFET Power Supply
- International Rectifier® Chip Set
- Ultra Low Current Draw
- High Damping Control Circuit
- High Efficiency SMD Circuit Technology
- Digital Sound Optimization Circuitry
- Quiet Switching
- High Current Voltage Ripple Rejection Circuitry
- Virtual Silence Turn On/Off Mute Circuit
- Temperature Controlled Output Current Limiting Protection
- Wired Remote Level Control - PBX-1200.5 ONLY
- Calibrated Visual Clip Indicator
- Balanced RCA Input Connectors
- 41 Click Sub Sonic Filter Control - PBX-1200.5 ONLY
- 41 Click HPF/LPF Control
- Selectable Auto Turn-On Circuitry
- Quiet Fan Cooling

FRD-FULL RANGE CLASS D TECHNOLOGY

The PowerBass PBX Series high efficiency amplifiers are ultra high quality MOSFET amplifiers that are capable of running a system full range, or they may be selected only to power subwoofers. It is important that you closely follow the wiring instructions contained in this Owners Manual so that you get the most from your PowerBass PBX mobile amplifier.

This amplifier represents the very latest in Class D technology. The PBX Series uses IR® (International Rectifier) platform. IR®, a leader in PWM circuit design, has worked in conjunction with PowerBass engineers to produce more stable power output, minimal RF interference and improved sound quality.

The benefits of this cooperative effort are many and include improved temperature, frequency, voltage regulation and drive capability to name a few.

The result to the user is a all around improved product that will provide years of listening enjoyment.

International
IOR Rectifier
THE POWER MANAGEMENT LEADER

FUSE REQUIREMENTS

It is absolutely vital that the main power lead to the amplifier(s) in the system be fused within 18-inches (45cm) of the connection to the vehicle battery. The value of this fuse (or circuit breaker) should be no greater than the sum of the fuses found on all of the equipment being connected to that power wire.

NOTE: Due to space limitations, the PBX-Series Amplifiers do NOT use chassis mounted protective fuses. Therefore you must add a fuse and fuse holder (not included) Please refer to the recomendations: [PBX-500.4 - 80A] [PBX-1200.5 - 120A] [PBX-600.6 - 80A]

***** WARNING *****

- Do not install in a place where it could injure the driver or passengers if the vehicle stops suddenly.
- Upside down mounting will compromise heat dissipation through the heatsink and could engage the Advanced Protection Circuitry.
- Try to avoid mounting the amplifier on a subwoofer enclosure, as extended exposure to vibration may cause malfunction of the amplifier.
- Don't mount the amplifier so that the wire connections are unprotected or are subject to pinching or damage from nearby objects.
- The DC power wire must be fused at the battery positive (+) terminal connection. Before making or breaking power connections at the amplifier power terminals, disconnect the DC power wire at the battery end.
- The battery of the car audio system must be disconnected until the entire wiring and installation is completed.

CONTROL PANEL LAYOUT PBX-600.6

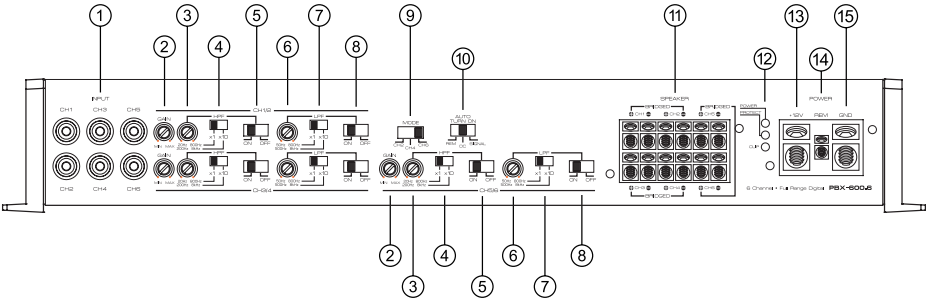


Fig.1 PBX-600.6 Panel Layout

NOTE: Panel Layout and Controls may differ by model.

1. Line INPUT (RCA) Jacks
These RCA style input jacks are for use with source units that have RCA line level outputs. A source unit with a minimum output of 250mV is required for proper operation. However, this input will accept levels up to 10Vrms.

2. GAIN Control
Used to match the input sensitivity of the amplifier to the particular source unit that you are using up to 10 volts.

3. HPF (High Pass Filter) 41 Click Detent Control
This control is continuously adjustable from 20Hz through 8kHz at 12dB per octave.

4. HPF Frequency Multiplier Switch
Works in conjunction with the HPF adjustable controls. When set to x1 the frequency range is 20Hz-800Hz, when set to x10 the frequency range is 200Hz-8Khz. This allows for extended tuning options.

5. Switch for HPF
This activates the built-in HPF Electronic Crossover Network. When Set to FULL, the HPF Controls have no effect on the amplifiers frequency adjustments.

6. LPF (Low Pass Filter) Control 41 Click Detent Control
This filter controls low pass frequency and is adjustable from 50Hz through 8KHz tat 12db per octave.

7. LPF Frequency Multiplier Switch
Works in conjunction with the LPF adjustable controls. When set to x1 the frequency range is 50Hz-800Hz, when set to x10 the frequency range is 500Hz-8Khz. This allows for extended tuning options.

8. Switch for LPF
This activates the built-in LPF Electronic Crossover Network. When Set to FULL, the LPF Controls have no effect on the amplifiers frequency adjustments.

9. INPUT MODE SWITCH
Use this to select the number of inputs you will use to provide the input signal to the amplifier (2,4 or 6).

10. SELECTABLE AUTO-TURN ON
Eliminates the need to run a dedicated remote wire for amplifier power on/off. Works with high level only (HL-AD2 adapter required as shown on page 13).

11. SPEAKER Output Terminals
As shown in the wiring diagrams, be sure to observe speaker polarity through the system and speaker impedance.

12. POWER/STATUS Indicator Light
The LED lights up GREEN for power on and normal operation, The second LED will light up RED when there is a problem when the built-on protection circuitry is activated. The PBX Series Amplifiers also have a built in clipping indicator LED that will light up RED when the signal is clipped indicating you will need to make adjustments to your gain control settings.

13. BATT+ (Power Input Connection)
This solderless terminal is the main power input for the amplifier and must be connected directly to the positive (+) terminal of the car battery.

14. REM (Remote Input Connection)
All PowerBass PBX Series amplifiers can be turned on by applying 12 volts to this terminal. This can be found on the rear of the source unit in the form of a remote output. If this is not available you can wire to the ACC position on the key. An 18 gauge wire is sufficient to run the REMOTE.

15. GND (Ground Input Connection)
A good quality ground is required for your PowerBass PBX Series Class D amplifier to operate at peak performance. A short length of cable the same gauge as your power cable should be used to attach the ground terminal directly to the chassis of the vehicle. Make sure that all of the paint is sanded or scraped away to ensure a quality ground connection.

CONTROL PANEL LAYOUT PBX-1200.5

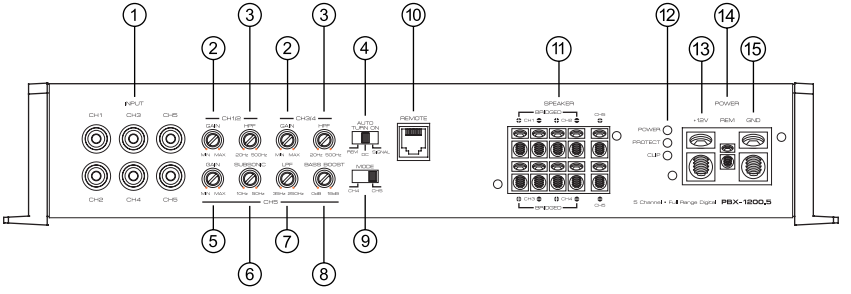


Fig.2 PBX-1200.5 Panel Layout

NOTE: Panel Layout and Controls may differ by model.

1. Line INPUT (RCA) Jacks
These RCA style input jacks are for use with source units that have RCA line level outputs. A source unit with a minimum output of 250mV is required for proper operation. However, this input will accept levels up to 10Vrms.

2. GAIN Control
Used to match the input sensitivity of the amplifier to the particular source unit that you are using up to 10 volts.

3. HPF (High Pass Filter) 41 Click Detent Control
This control is continuously adjustable from 20Hz through 500Hz at 12dB per octave.

4. SELECTABLE AUTO-TURN ON
Eliminates the need to run a dedicated remote wire for amplifier power on/off. Works with high level only (HL-AD2 adapter required as shown on page 13).

5. GAIN Control
Used to match the input sensitivity of the amplifier to the particular source unit that you are using up to 10 volts.

6. SUBSONIC Filter
The subsonic control will filter out all frequencies below where the control is set and prevent those frequencies from going to your subwoofer(s). This will prevent your subs from playing any low frequencies that may harm the speaker.

7. LPF (Low Pass Filter) Control 41 Click Detent Control
This filter allows low pass of frequency and is adjustable from 25Hz through 250Hz to eliminate unwanted high frequencies.

8. BASS BOOST Control
This equalization circuit is used to enhance the low frequency response of the vehicle's interior. With up to 18dB of boost centered at 45Hz, the BASS BOOST can be adjusted to meet your own personal taste.

9. INPUT MODE SWITCH
Use this to select the number of inputs you will use to provide the input signal to the amplifier (4 or 6).

10. REMOTE LEVEL INPUT Connector
This is the connector port for the Remote Level Controller. Now the amplifiers secondary gain circuit for the subwoofer output (channel 5) can be adjusted from the drivers seat. Please note this is active in all settings HP, LP, FULL.

11. SPEAKER Output Terminals
As shown in the wiring diagrams, be sure to observe speaker polarity through the system and speaker impedance.

12. POWER/STATUS Indicator Light
The LED lights up GREEN for power on and normal operation, The second LED will light up RED when there is a problem when the built-on protection circuitry is activated. The PBX Series Amplifiers also have a built in clipping indicator LED that will light up RED when the signal is clipped indicating you will need to make adjustments to your gain control settings.

13. BATT+ (Power Input Connection)
This solderless terminal is the main power input for the amplifier and must be connected directly to the positive (+) terminal of the car battery.

14. REM (Remote Input Connection)
All PowerBass PBX Series amplifiers can be turned on by applying 12 volts to this terminal. This can be found on the rear of the source unit in the form of a remote output. If this is not available you can wire to the ACC position on the key. An 18 gauge wire is sufficient to run the REMOTE.

15. GND (Ground Input Connection)
A good quality ground is required for your PowerBass PBX Series Class D amplifier to operate at peak performance. A short length of cable the same gauge as your power cable should be used to attach the ground terminal directly to the chassis of the vehicle. Make sure that all of the paint is sanded or scraped away to ensure a quality ground connection.

CONTROL PANEL LAYOUT PBX-500.4

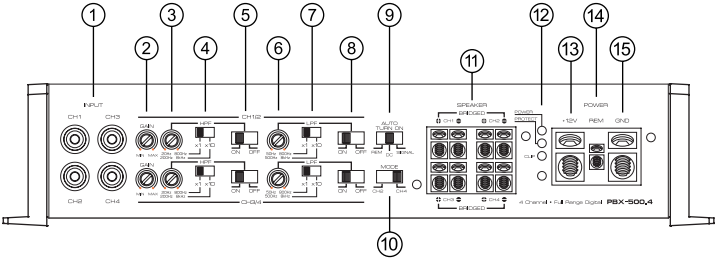


Fig.3 PBX-500.4 Panel Layout

NOTE: Panel Layout and Controls may differ by model.

1. Line INPUT (RCA) Jacks
These RCA style input jacks are for use with source units that have RCA line level outputs. A source unit with a minimum output of 250mV is required for proper operation. However, this input will accept levels up to 10Vrms.

2. GAIN Control
Used to match the input sensitivity of the amplifier to the particular source unit that you are using up to 10 volts.

3. HPF (High Pass Filter) 41 Click Detent Control
This control is continuously adjustable from 20Hz through 8kHz at 12dB per octave.

4. HPF Frequency Multiplier Switch
Works in conjunction with the HPF adjustable controls. When set to x1 the frequency range is 20Hz-800Hz, when set to x10 the frequency range is 200Hz-8Khz. This allows for extended tuning options.

5. Switch for HPF
This activates the built-in HPF Electronic Crossover Network. When Set to FULL, the HPF Controls have no effect on the amplifiers frequency adjustments.

6. LPF (Low Pass Filter) Control 41 Click Detent Control
This filter allows low pass of frequency and is adjustable from 50Hz through 8KHz to eliminate unwanted high frequencies.

7. Switch for LPF
This activates the built-in LPF Electronic Crossover Network. When Set to FULL, the LPF Controls have no effect on the amplifiers frequency adjustments.

8. Switch for LPF
This activates the built-in LPF Electronic Crossover Network. When Set to FULL, the LPF Controls have no effect on the amplifiers frequency adjustments.

9. SELECTABLE AUTO-TURN ON
Eliminates the need to run a dedicated remote wire for amplifier power on/off. Works with high level only (HL-AD2 adapter required as shown on page 13)

10. INPUT MODE SWITCH
Use this to select the number of inputs you will use to provide the input signal to the amplifier (2 or 4).

11. SPEAKER Output Terminals
As shown in the wiring diagrams, be sure to observe speaker polarity through the system and speaker impedance.

12. POWER/STATUS Indicator Light
The LED lights up GREEN for power on and normal operation, The second LED will light up RED when there is a problem when the built-on protection circuitry is activated. The PBX Series Amplifiers also have a built in clipping indicator LED that will light up RED when the signal is clipped indicating you will need to make adjustments to your gain control settings.

13. BATT+ (Power Input Connection)
This solderless terminal is the main power input for the amplifier and must be connected directly to the positive (+) terminal of the car battery.

14. REM (Remote Input Connection)
All PowerBass PBX Series amplifiers can be turned on by applying 12 volts to this terminal. This can be found on the rear of the source unit in the form of a remote output. If this is not available you can wire to the ACC position on the key. An 18 gauge wire is sufficient to run the REMOTE.

15. GND (Ground Input Connection)
A good quality ground is required for your PowerBass PBX Series Class D amplifier to operate at peak performance. A short length of cable the same gauge as your power cable should be used to attach the ground terminal directly to the chassis of the vehicle. Make sure that all of the paint is sanded or scraped away to ensure a quality ground connection.

This amplifier is designed to work within a 9-16 volt DC range. Before any wires are connected, the vehicles electrical system should be checked for correct voltage supply with the help of a voltmeter.

NOTE: Bare wires should be tinned with solder for maximum current flow.

FUSE REQUIREMENTS

It is absolutely vital that the main power lead to the amplifier(s) in the system be fused within 18-inches (45cm) of the connection to the vehicle battery. The value of this fuse (or circuit breaker) should be no greater than the sum of the fuses found on all of the equipment being connected to that power wire.

NOTE: Due to space limitations, the PBX-Series Amplifiers do NOT use chassis mounted protective fuses. Therefore you must add a fuse and fuse holder (not included) Please refer to the recomendations: [PBX-500.4 - 80A] [PBX1200.5 - 120A] [PBX-600.6 - 80A]

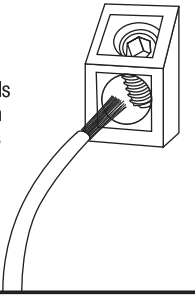
AUTO TURN-ON -SELECTOR SWITCH

When put in the REM position the AUTO ON is disabled , and you will need to run a remote turn on wire and attach it to the terminal marked REM located between the amplifiers BATT+ and GND power terminals. Enabling the High Level Auto Turn-on circuit eliminates the need to run a separate Remote Turn-on Lead but does Require the use of the optional HL-AD2 wiring Harness (see page 12).

When this is in the DC position it will sense DC Voltage offset or change and will turn on and off the amplifier. When this is in the SIGNAL position it will sense the input signal voltage and will turn on the amp or turn off when the signal is not being passed through its input.

CONNECTIONS TO AMPLIFIER FOR BATT+, GND, REM AND SPEAKERS

Your PowerBass Xtreme amplifier features specially tooled solderless terminals for Power (BATT+), Ground, Remote, and Speaker connections. For maximum transfer of Voltage and Signal the bare wire needs to be inserted as far as possible into the terminal before tightening the set screw. For Power (BATT+) and Ground connections it is highly recommended that the bare ends of the wires are tinned with solder before inserting them into the terminal. Hand tighten the set screw and make sure the connection is secure to prevent possible arcing due to loose screws.

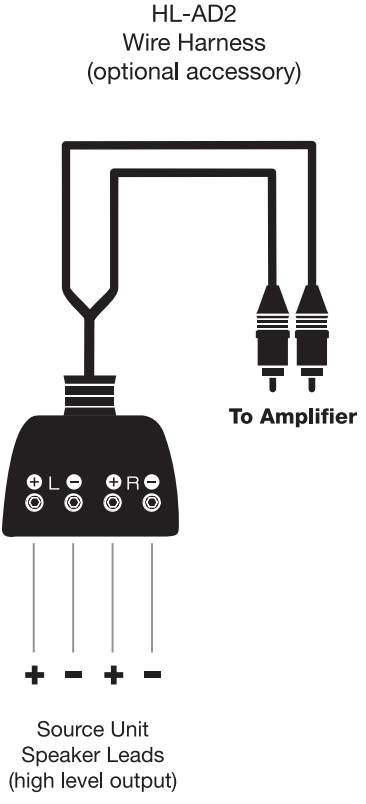


NOTE: It is highly recommended that an Allen wrench is used to tighten the set screws in the terminal blocks by hand and NOT a power drill. This will prevent stripping or other possible damage to the amplifier.

HIGH LEVEL INPUT PLUG

The balanced input of this PBX series amplifier can receive either low (RCA) or high (speaker lead) level signals from the source unit (radio). A high level signal can be run from the source units speaker lead outputs to the low level RCA amplifier inputs via the PowerBass HL-AD2 wiring harness (available separately as shown below.

Fig.4 Optional High Level Input



SET UP ADJUSTMENTS

INPUT Gain Adjustment

Fig.5 GAIN Control

This control allows you to match the input level of the amplifier to the output level of your head unit. Matching the input can be accomplished in three simple steps:

1. Set the volume of GAIN on the amplifier to Min (completely counter clock wise).
2. Turn on the head unit and adjust volume to 2/3 maximum, and set the BASS and TREBLE to zero.
3. Adjust the GAIN control clockwise until the sound **just begins** to distort, then back off slightly to cut distortion and operate at optimum gain.

Remember, the **GAIN control is not a volume control**. Ignoring the three steps above may leave you with damaged speaker and/or a damaged amplifier.

Fig.6 High Pass Control (HPF)

HPF (High Pass Filter) 41 Click Detent Control

When you are using coaxial or component speaker system, this allows you to adjust high-pass X-over frequency togetbettersoundqualityfromcoaxialorcomponentspeakersystem,werecommendthe
frequency should be higher than 80Hz. Make sure the X-OVER switch is positioned at “HPF”. See the charts on pages 24-27 to set the High Pass Filter to the precise frequency for your particular amplifier.
*When x10 is selected this multiplies the frequency by 10 for use with Bandpass tuning on the PBX-500.4 and PBX-600.6 models only.

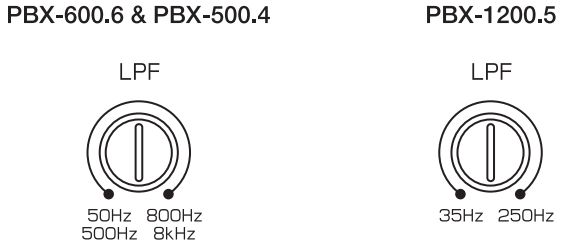


Fig.7 Low Pass Control (LPF)

LPF (Low Pass Filter) 41 Click Detent Control

Using this volume, adjust the LPF frequency for your subwoofer speaker(s) operation. The X-OVER switch position should be at "LPF"(not avaliable on PBX-1200.5 ch. 1-4). Use the enclosed chart to precisely dial in desired frequency.

See the charts on pages 24-27 to set the Low Pass Filter to the precise frequency for your particular amplifier. *When x10 is selected this multiplies the frequency by 10 for use with Bandpass tuning on the PBX-500.4 and PBX-600.6 models only.

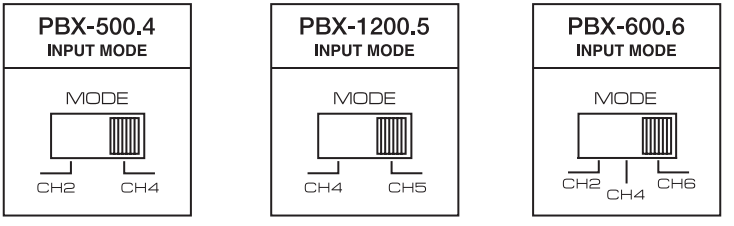


Fig.8 2-4 Channel Input Mode

Input Mode Switch

Matches the input from the Source Unit to that of the amplifier, either 2 ,4,5, 6 Channels. This eliminates the use of "Y" adapters and provides a cleaner input signal.

SPECIAL CONTROLS FOR THE PBX-1200.5

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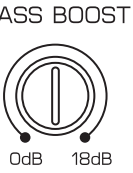


BASS BOOST EQ Variable Control

This special feature is designed to provide you more powerful sound quality, and it allows you to adjust the Bass EQ up to 18dB at 45Hz. Keep in mind more is not always better. Setting the control to the max (18dB) may stress the amplifier and woofer and could result in damage.

SUBSONIC 41 Click Detent Control

The subsonic control will filter out all frequencies below where the control is set and prevent those frequencies from going to your subwoofer(s). This will prevent your subs from playing any low frequencies that may harm the speaker.

When this amplifier is used with a subwoofer in a Vented Woofer application it is important to set the frequency of the filter to cutoff 1⁄2 octave below the vent frequency. This will prevent the woofer unloading from bass notes which are too low for the vented woofer.

Once the woofer is unloaded it is operating as a free air driver and may experience damage by striking the back plate or by shearing off the spider. Proper setting of the subsonic filter is critical.

SPEAKER WIRING AND CONFIGURATIONS

Speaker Load

Keep in mind your PowerBass PBX Amplifier is a high power amplifier and not a high current amplifier. In other words these amplifiers require a minimum impedance of 2 ohms STEREO or 4 ohms bridged MONO to operate trouble free. Lower impedance will send the amplifier into protection and possibly dam-age the electronics inside and void the waranty.

The PBX-1200.5 is stable to 2-ohms on the SUB channel.

NOTE: Know your total impedance load before you make any connections.

Speaker Wiring

Choose the correct speaker wire for your application. Most applications will require a minimum of 16 gauge wire. Route these using the same precautions as you did when you ran the power cable. Terminate these wires at the speaker end using insulated speaker terminals (not supplied) or by soldering the connection. Make sure the speaker connections are positive-to-positive and negative-to-negative. At the amplifier end, it is very im-portant that the wires are making solid contact. Strip the wires insulation back approximately 1/2 inch (12mm) and insert the wires into the appropriate openings while being careful there are no loose or frayed strands of wire straying from the terminal. Check to make sure you've maintained proper polarity and balance.

CAUTION

Maintaining proper impedance is critical when wiring the Full Range Digital model amplifiers. Improper wiring can cause severe damage to BOTH the woofer and the amplifier. Detailed wiring diagrams are supplied with all PowerBass woofers. IF YOU ARE NOT EXPERIENCED OR UNCOMFORTABLE READING THE WIRING DIAGRAMS CONSULT YOUR AUTHORIZED POWERBASS DEALER BEFORE YOU ATTEMPT TO WIRE THE SYSTEM.

Tech Support
8:30am-5:30pm Pacific Time
(909) 923-3868
www.powerbassusa.com

Speaker Output Connections 4 Channel Model (PBX-500.4)

4-Channel Stereo

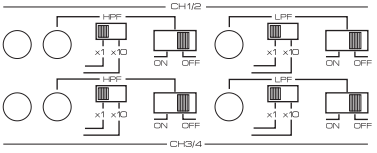
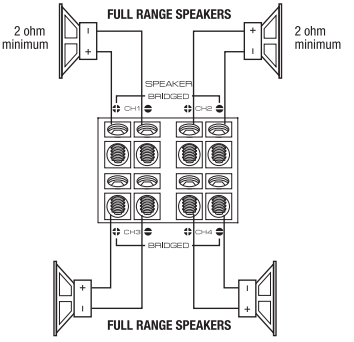


Fig.9 4-CH Speaker Connection
2 ohms minimum



3-Channel Stereo/Mono

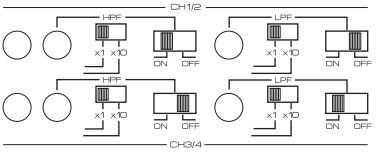
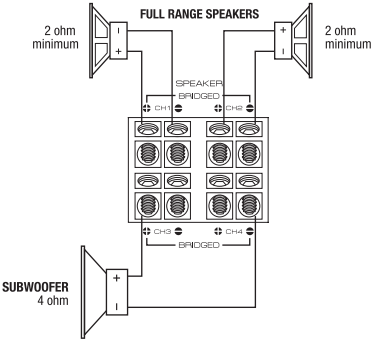


Fig.10 3-CH Speaker Connection



2-Channel (Bridged Mode)

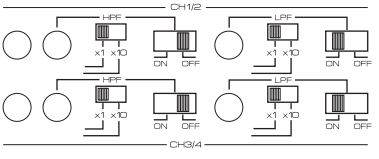
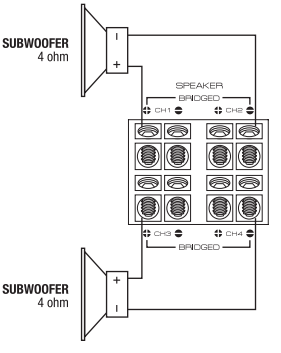


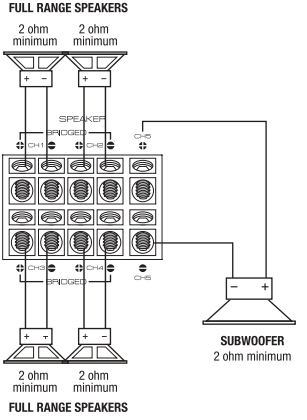
Fig.11 2-CH Speaker Connection
4 ohms minimum



Speaker Output Connections 5 Channel Model (PBX-1200.5)

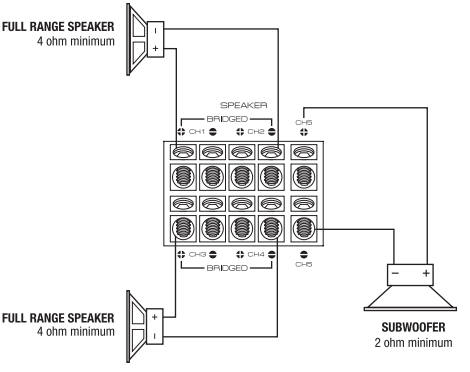
5-Channel Stereo/Mono

Fig.12 5-CH Speaker Connection
2 ohms minimum



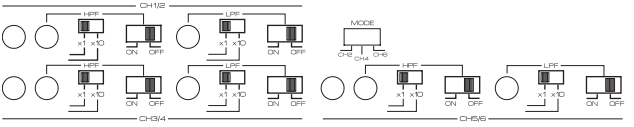
3-Channel Stereo/Mono

Fig.13 3-CH Speaker Connection



Speaker Output Connections 6 Channel Model (PBX-600.6)

6-Channel Stereo



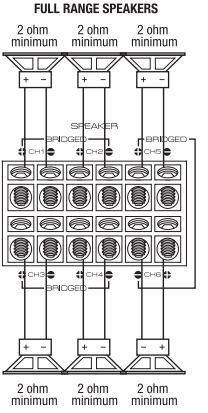
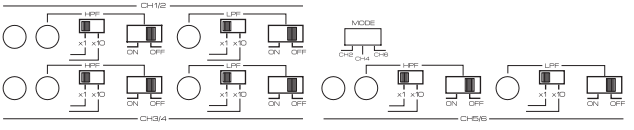


Fig.14 6-CH Speaker Connection
2 ohms minimum

3-Channel Bridged



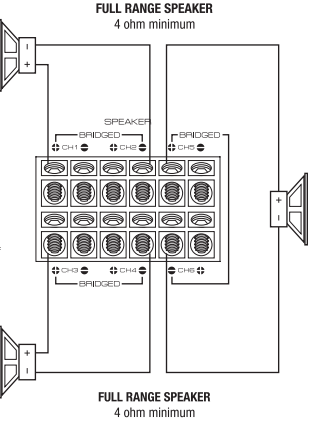
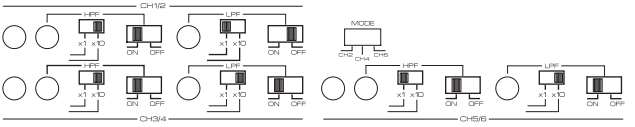


Fig.15 6-CH Speaker Connection
4 ohms minimum

6-Channel Stereo Mixed



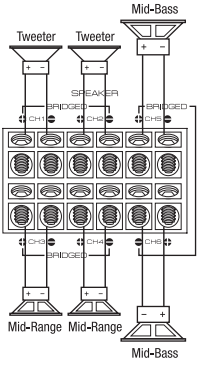
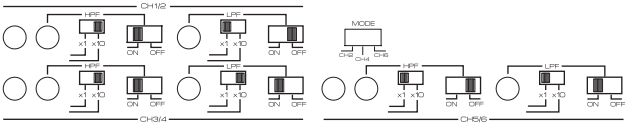


Fig.14 6-CH Speaker Connection
2 ohms minimum

5-Channel Stereo/Mono



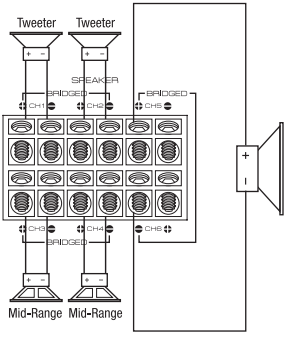
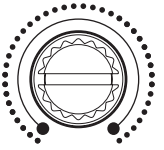


Fig.15 6-CH Speaker Connection
4 ohms minimum

41 CLICK PRECISION ROTARY CONTROLS



These controls allow precise setting of the electronic crossover settings on the amplifier, thus taking the guesswork out of tuning your speakers. Using a small slotted screwdriver make sure the controls are turned all the way to the left (counter clockwise). Refer to the chart and count the clicks (advancing one detent at a time clockwise) until you have reached the desired frequency.

This precise method of setting the crossover controls is available for the LPF and HPF features on the 2-channel and 4-channel amplifiers. It is available for the HPF and LPF/SUB features on the 5-channel amplifier.

NOTE: Select the appropriate chart for your particular model amplifier

Tech Support
8:30am-5:30pm Pacific Time
(909) 923-3868
www.powerbassusa.com

PBX-1200.5

Click Position	CH1&2, CH3&4 HPF 20Hz-500Hz	CH5 LPF 35Hz-250Hz	CH5 Subsonic 10Hz-50Hz
1	19.1Hz	32.4Hz	11.2Hz
2	19.1Hz	32.4Hz	11.2Hz
3	19.1Hz	32.4Hz	11.2Hz
4	19.2Hz	32.4Hz	11.2Hz
5	19.5Hz	32.6Hz	11.2Hz
6	19.6Hz	33.9Hz	11.2Hz
7	20.8Hz	35.2Hz	11.3Hz
8	22.3Hz	38.7Hz	11.9Hz
9	24.2Hz	41.9Hz	12.6Hz
10	26.3Hz	45.5Hz	13.6Hz
11	28.9Hz	49.4Hz	14.7Hz
12	32.1Hz	54.9Hz	15.8Hz
13	35.7Hz	60.2Hz	17.3Hz
14	39.9Hz	66.5Hz	18.7Hz
15	46.6Hz	74.3Hz	20.6Hz
16	53.4Hz	84.5Hz	22.9Hz
17	63.9Hz	96.7Hz	25.4Hz
18	80.9Hz	114.2Hz	28.1Hz
19	100.3Hz	122.5Hz	31.9Hz
20	106.1Hz	126.5Hz	35.6Hz
21	112.1Hz	131.8Hz	36.5Hz
22	119.4Hz	136Hz	37.3Hz
23	126.7Hz	141.6Hz	38.3Hz
24	134.7Hz	148.2Hz	39.2Hz
25	143.9Hz	154.5Hz	40.3Hz
26	156.3Hz	162.7Hz	41.4Hz
27	168.8Hz	170.2Hz	42.3Hz
28	185.5Hz	179.2Hz	43.5Hz
29	204.8Hz	189.4Hz	44.4Hz
30	220.9Hz	201.3Hz	45.6Hz
31	262.2Hz	214.3Hz	47Hz
32	303.2Hz	218.4Hz	48.4Hz
33	320.2Hz	224.3Hz	49.8Hz
34	335.6Hz	228.6Hz	50.4Hz
35	358.9Hz	233.9Hz	51Hz
36	393.8Hz	239.1Hz	51.4Hz
37	408.2Hz	244.8Hz	52Hz
38	453.9Hz	250.1Hz	52.8Hz
39	478.7Hz	254.4Hz	253.2Hz
40	512.8Hz	254.7Hz	53.4Hz
41	513.1Hz	254.8Hz	54Hz

PBX-600.6 & 500.4

Click Position	HPF 20Hz-800Hz	LPF 50Hz-800Hz
1	22.2Hz	46.4Hz
2	22.2Hz	46.4Hz
3	22.2Hz	46.4Hz
4	22.2Hz	46.4Hz
5	22.3Hz	47.8Hz
6	22.9Hz	50.9Hz
7	24.2Hz	54.3Hz
8	25.9Hz	59Hz
9	28.3Hz	63.6Hz
10	31Hz	68.9Hz
11	33.8Hz	75Hz
12	37.6Hz	83.4Hz
13	42.5Hz	92.2Hz
14	48.2Hz	105.1Hz
15	55.8Hz	117.9Hz
16	64.6Hz	136.9Hz
17	78.8Hz	161.9Hz
18	98Hz	200.1Hz
19	125.6Hz	220Hz
20	131.7Hz	232.1Hz
21	139.3Hz	242.8Hz
22	148.4Hz	257.5Hz
23	156.7Hz	276.5Hz
24	170.8Hz	289.5Hz
25	183.9Hz	311.2Hz
26	201.8Hz	335.7Hz
27	219.4Hz	363.2Hz
28	243.7Hz	397Hz
29	270.8Hz	445.9Hz
30	313.4Hz	497.3Hz
31	247.7Hz	561Hz
32	409.6Hz	581.5Hz
33	447.1Hz	615.8Hz
34	486.2Hz	659.7Hz
35	518.2Hz	703.7Hz
36	550.1Hz	732.3Hz
37	611.1Hz	776.7Hz
38	668.4Hz	848.9Hz
39	760.3Hz	852.3Hz
40	767.1Hz	852.4Hz
41	767.4Hz	852.4Hz

RECOMMENDED WIRE SIZES

Power Cable Selection Chart							
Fuse Total	**4Ft**	**4-7Ft**	**7-10Ft**	**10-13Ft**	**13-16 Ft**	**16-19 Ft**	**19-22 Ft**
In Amperes	**Length of Wire/Gauge**						
150A - 200A	2 GA	2 GA	2 GA	*1/0*	*1/0*	*1/0*	*1/0*
125A - 150A	4 GA	4 GA	4 GA	4 GA	2 GA	2 GA	2 GA
105A - 125A	8 GA	8 GA	8 GA	4 GA	4 GA	4 GA	2 GA
85A - 105A	8 GA	8 GA	8 GA	4 GA	4 GA	4 GA	4 GA
65A - 85A	10 GA	8 GA	8 GA	8 GA	4 GA	4 GA	4 GA
50A - 65A	10 GA	10 GA	8 GA	8 GA	8 GA	8 GA	8 GA
35A - 50A	10 GA	10 GA	10 GA	8 GA	8 GA	8 GA	8 GA
25A - 35A	10GA	10GA	10GA	10GA	8GA	8GA	8GA

PowerBass makes several types of amplifier wiring kits to assist with the installation of your PowerBass amplifier. Consult your local PowerBass dealer for details. For more information about recommended power wire check out our website at www.powerbassusa.com.

PERSONAL NOTES:

Name: _____

Date Purchased: _____

Dealer: _____

Installed By: _____

Model: _____

Serial Number: _____

Miscellaneous: _____

TROUBLESHOOTING TIPS

Problem	Solution
Power LED not ON	With a Volt Ohm Meter (VOM) check: • +12 Volt power terminal (should read +12 to +16VDC • Remote turn-on terminal (should read +12 to +16VDC) • Ground Terminal
Power LED lights GREEN, no output	• Check RCA connections • Test speaker outputs with known good speaker • Substitute known good Source Unit • Check for signal on the RCA cable
Power LED lights GREEN, amp plays at very low volume on one or more outputs	• Short circuit protection is engaged. Check for speaker wires shorted to each other or the vehicle chassis. Speakers operating below the minimum impedance can cause this to occur.
Red Status Protection LED is ON, no output and **1. Amp is VERY HOT** **2. Amp shuts down ONLY when the vehicle is running**	• Thermal protection is engaged. Check for proper impedance at speaker terminals. Also check for adequate air flow around the amplifier. • Voltage protection engaged. Voltage to the amp is not within the 10-16 VDC operating range. Have the battery/charging system inspected.
Alternator noise (varies with RPM)	• Check for damaged RCA cable. • Check routing of RCA cable • Check Source Unit for good ground • Check amp gain setting, turn down if set too high
Poor Bass Response	• Check speaker polarity, reverse the connection of one speaker only.

NOTE: If the Status L.E.D. is activated and glows RED with no speakers connected to the amplifier, and all the power connections are correct, this would indicate an internal problem with the amplifier. Contact PowerBass USA or your local dealer.

SPECIFICATIONS FOR XTREME MINI AMPLIFIER

Two Channel Model	PBX 600.6	PBX 1200.5
4 Ohms Power (Watts)	100 x 6	100 x 4 + 400 x 1 ch5
2 Ohms Power (Watts)	150 x 6	150 x 4 + 800 x 1 ch5
4 Ohms Mono Power (Watts)	300 x 3	800 x 1
Peak Music Power (Watts)	1800	1400
THD @ RMS Power	< 0.5%	< 0.2%
Frequency Response	10Hz - 40kHz	10Hz - 40kHz
S/N Ratio (EIA Rated)	> 90dB	> 90dB
Input Sensitivity	250mV - 10.0 volts	250mV - 10.0 volts
Crossover Slope	12dB	12dB
High-Pass Crossover Freq. (Hz)	20Hz - 8kHz	20Hz - 500Hz
Low-Pass Crossover Freq. (Hz)	50Hz - 8kHz	35Hz - 250Hz
Selectable Subwoofer EQ	0 / 12dB / 18dB	0 / 12dB / 18dB
Subwoofer EQ Freq.	45Hz	45Hz
Fuses/ ATC Style	30A x 1	30A x 2
Dimension	15.0" x 7.0" x 2.25"	13.25" x 7.0" x 2.25"

Four Channel Model	PBX 500.4
4 Ohms Power (Watts)	125 x 4
2 Ohms Power (Watts)	250 x 4
4 Ohms Mono Power (Watts)	500 x 2
True Music Power (Watts)	1000
THD @ RMS Power	< 0.2%
Frequency Response	10Hz - 40kHz
S/N Ratio (EIA Rated)	>90dB
Input Sensitivity	250mV - 10.0 volts
Crossover Slope	12dB
High-Pass Crossover Freq. (Hz)	50Hz - 350Hz
Low-Pass Crossover Freq. (Hz)	25Hz - 250Hz
Selectable Subwoofer EQ	0 / 12dB / 18dB
Subwoofer EQ Freq.	45Hz
Fuses/ ATC Style	40A x 2
Dimension	11.25" x 7.0" x 2.25"

POWERBASS ELECTRONICS
LIMITED WARRANTY POLICY

PowerBass USA, Inc. offers limited warranty on PowerBass products under normal use on the following terms:

PowerBass PBX Amplifiers are to be free of defects in material and workmanship for a period of one (1) year.

This warranty applies only to PowerBass products sold to consumers by Authorized PowerBass Dealers in the United States of America. Products purchased by consumers from a PowerBass dealer in another country are covered only by that country's Distributor and not by PowerBass USA.

This warranty covers only the original purchaser of PowerBass product. In order to receive service, the purchaser must provide PowerBass with the receipt stating the consumer name, dealer, product and date of purchase.

Products found to be defective during the warranty period will be repaired or replaced (with a product deemed to be equivalent) at PowerBass's discretion and will not be liable for incidental or consequential damages. PowerBass will not warranty this product under the following situations:

- **Amplifiers received with apparent rust or corrosion**
- **Any evidence of liquid damage or exposure to excessive heat**
- **Attempted repairs or alterations of any nature**
- **Product that has not been installed according to this owners manual**

Any implied warranties including warranties of fitness for use and merchantability are limited in duration to the period of the express warranty set forth above. Some states do not allow limitations on the length of an implied warranty, so this limitation may not apply. No person is authorized to assume for PowerBass any other liability in connection with the sale of this product.

Please call (909) 923-3868 for PowerBass Customer Service. You must obtain an RA# (Return Authorization Number) to return any product to PowerBass. The RA number must be prominently marked on the outside of the shipping carton or the delivery will be refused. Please pack your return carefully; we are not responsible for items damaged in shipping. Return the defective product along with a copy of the original dated retail sales receipt, plus $12.00 for handling and diagnostic evaluation to:

PowerBass USA, Inc.,
Attn: Returns (RA#_____)
2133 S. Green Privado, Ontario, CA 91761

Residents of HI, AK and US territories will be charged for return shipping. All inquires regarding service and warranty should be sent to the above address.

Removed or altered serial numbers will void this warranty

PowerBass Xtreme – A division of PowerBass USA, Inc.
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www.powerbassusa.com