



1-OHM STABLE DESIGN

Minimum Impedance Load is 1-Ohm*

*2-ohm minimum impedance when used in Dual Link Power Doubling configuration.

ASA3-600.1D

ASA3-1000.1D

ASA3-1500.1D

ASA SERIES CLASS D AMPLIFIER

Owners Manual

Please read through this manual to familiarize yourself with your new amplifier. Should your PowerBass Auto-Sound® 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 Autosound mobile amplifier! Our Autosound amplifiers are the result of extensive engineering, testing, and bullet proof construction. They feature the latest in D Class microprocessor technology. Their versatility enables compatibility with optional signal and audio processors. These high quality MOSFET amplifiers may be configured to allow maximum flexibility in designing different of subwoofer options.



CLASS D AMPLIFIERS

All PowerBass ASA series Class "D" models are single channel dedicated subwoofer amplifiers. Unlike most Full Range amplifiers, these models are designed specifically for low frequencies and are intended 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 AutoSound D Class 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 will 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

- Mono Block Amplifier for Subwoofer
- Latest Class D Technology
- Double Sided Circuit Board Construction
- MOSFET Power Supplies for High Power Output and Unprecedented Stability into Low Impedance Loads
- Soft Delay Remote Turn On/Off Circuit to Eliminating Pops and Clicks
- Built-in Adjustable Low Pass Electronic Crossover
- Built-in Fully Adjustable Bass Boost EQ
- Self Diagnostic Protection Circuit with LED Status Indicator for Impedance Over-load, Speaker Short Circuit, Thermal Overheating, and DC Output.
- Real 1-ohm Stable Operation with Extensive Output Power Increase
- Variable Gain Control
- Pass Thru Line Output Jacks
- Remote Level Control (Included)
- Internal Thermal Cooling Fan (ASA3-1000.1D and ASA3-1500.1D only)
- Dual Link Power Doubling Circuit (Amp-to-Amp Bridged at 2 ohm minimum)

INSTALLATION EXPERIENCE

Installation of PowerBass mobile amplifiers requires detailed knowledge of electronics wiring and proper speaker impedance. We strongly recommend installation by an authorized PowerBass dealer. This Owners Manual only provides general installation and operation instructions. If you have any reservations about your installation skills, please contact your local PowerBass dealer for assistance.

IMPORTANT : This amplifier is designed for operation in vehicles with 12-volt Negative ground electrical systems only.

PREPARING FOR INSTALLATION

NOTE: The tools listed below may be required for basic installation

- An electric drill with bits
- Philips head and standard screwdrivers
- Wire strippers
- Crimping tool
- VOM (electronic volt ohm meter)
- Heat shrink tubing and heat gun
- Soldering iron
- Electronic (Rosen Core not Acid Core) Solder

INSTALLATION PRECAUTIONS

NOTE: Proceed only if you are a qualified installer, otherwise; see your Authorized PowerBass Dealer to professionally install this amplifier. Always wear protective eyewear when using tools.

- Turn off all electrical devices before you begin.
- Disconnect the negative (-) lead from your vehicles battery.
- Locate all fuel lines, brake lines, oil lines, and electrical cables when planning the install.
- Make sure there is at least 2-inches (5 cm) around the air vents on the amplifier.
- When connecting ground points, make sure all paint is carefully scrapped away from the auto body and contact is made with bare metal.
- Use a utility knife to trim away fabric from hole locations before drilling or cutting.
- When running power cables through sheet metal, be sure to use grommets to properly insulate the metal edges from the wire insulation.
- If possible, use tubing through grommets.

MOUNTING THE AMPLIFIER

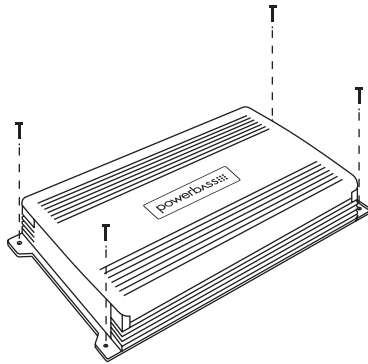


Fig.1 Mounting Amplifier

Due to the high power output of the PowerBass Autosound Class D amplifiers, considerable heat may be produced when the unit is in operation. For this reason the amplifier should be mounted in a location which will allow air to circulate freely. A clearance of at least 2-inches (5 cm) to all sides of the amplifier is necessary not only for proper cooling, but also for gaining access to the inputs and other variable controls. Be sure that the power and signal cable connections can enter and leave the amplifier in a straight line to avoid the risk of kinked wires causing malfunction.

MOUNTING LOCATION

Find a clear and well ventilated area to mount your amplifier that is unobstructed by any objects that will cause harm or block ventilation. You may use the amplifier as a template and mark the four screw locations with a felt tip pen. Set the amplifier aside before drilling. Use caution to make sure there are no objects behind the installation surface that may become damaged during drilling.

If mounting under a seat, make sure there is at least 1-inch (2.5 cm) of space above the amplifier's heatsink to permit proper cooling.

The amplifier should be protected from exposure to moisture and direct sunlight. The best places to mount your amplifier are: The floor of the trunk, under a seat, or on the back of the rear seat. For alternate installation locations, please consult your authorized PowerBass Dealer.

NOTE: Do not use a drill with driver bit to mount the amplifier. Excessive force could cause the plastic mounting feet to crack.

*** WARNING ***

- Upside down mounting will compromise heat dissipation through the heatsink and could engage the thermal protection circuit.
- 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

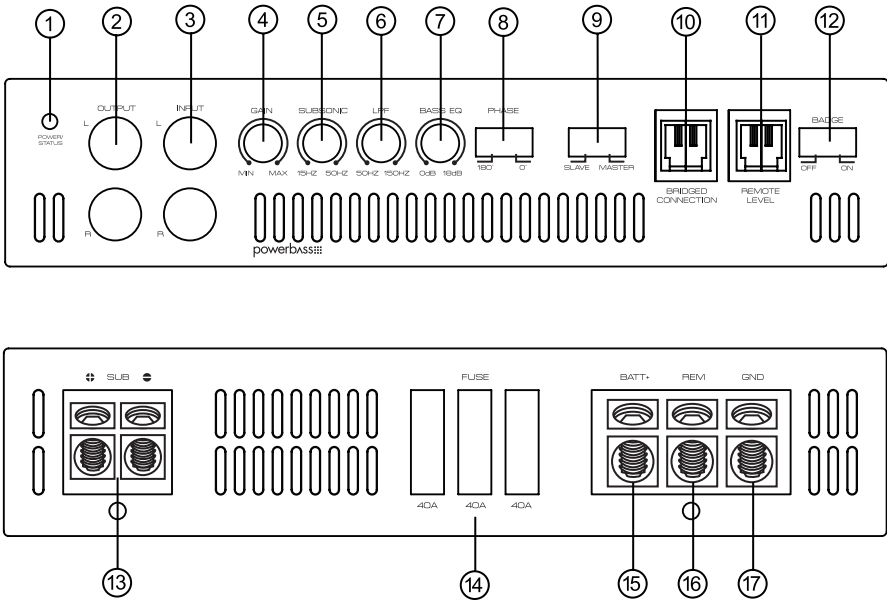


Fig.2 Panel Layout

1. POWER/STATUS Indicator

The BLUE L.E.D. lights up when the power is on. This L.E.D. turns RED constantly or flashes when the built-in protection circuitry is activated. This indicates a problem with the system in relation to the amplifier (see Troubleshooting Tips page 21).

2. LINE OUT (RCA) Jacks

RCA style pass through output jacks allow for a signal to be sent to other amplifiers in a daisy-chain configuration. Only one Remote Bass Control can be used when multiple bass amplifiers are connected.

3. LINE IN (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 200mV is required for proper operation. However, this input will accept levels up to 6Vrms.

4. GAIN Control

This control is used to match the input sensitivity of the amplifier to the particular source unit that you are using up to 6 volts. Proper setting on page 13.

5. SUB SONIC Control

This control is continuously adjustable from 15Hz through 50Hz at 12dB per octave to provide an extra level of speaker protection from bass robbing power at unheard frequencies.

6. LPF (Low Pass Filter) Control

This filter allows low pass of frequency and is adjustable from 50Hz through 150Hz to eliminate unwanted high frequencies.

7. BASS EQ 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.

8. PHASE Switch

This switchable control can be used to correct any "phase" or "time delay" effect in the system by bringing the low frequency from the rear of the vehicle to the front.

9. BRIDGED Switch

Two like amplifiers can be connected together and bridged into a single 2-ohm (min) load. The level and frequency controls on the SLAVE amp will be disabled. Only the amplifier you select as the MASTER will control these functions. The Dual Link Power Doubling Circuit increases the output power as follows:

ASA3-600.1D x 2 = 1,200 watts RMS (2 ohms min)

ASA3-1000.1D x 2 = 2,000 watts RMS (2 ohms min)

ASA3-1500.1D x 2 = 3,000 watts RMS (2 ohms min)

10. BRIDGED CONNECTION Port (RJ45 Jack)

For linking two of the same model PowerBass Autosound Class D amps together. Connect the INPUT of the MASTER to a suitable source via a standard telephone wire with RJ45 modular connectors to the jack on the SLAVE amplifier. Then select the MASTER/SLAVE switch properly (see Speaker Output Configuration diagram on pages 19 and 20).

11. REMOTE LEVEL (RJ45 Jack)

This is the connector port for the Remote Level Control. Now the amplifiers secondary gain circuit can be adjusted from the driver's seat.

12. BADGE Switch

Controls the lighting of the top mounted PowerBass logo badge.

13. SPEAKER Output Terminals

As shown in the wiring diagrams, be sure to observe speaker polarity through the system and subwoofer impedance. This specially tooled terminal is designed to accommodate up to 10 gauge speaker wire.

14. FUSES

For convenience most PowerBass AutoSound amplifiers utilize common automotive ATC type fuses. For continued protection in the event that a fuse blows, replace the fuse only with the same value.

CAUTION: These power fuses on the amplifier chassis are for protecting the amp against overdrive. To protect the vehicles electrical system, an additional fuse should be used within 18-inches of the battery on the 12V+ cable.

ASA3-600.1D 40A x 2

ASA3-1000.1D 40A x 3

ASA3-1500.1D 40A x 4

15. BATT+ (Power Input Terminal)

This terminal is the main power input for the amplifier and must be connected directly to the positive (+) terminal of the car battery. (see Power Cable Selection Chart for recommended wire gauge for each model).

16. REM (Remote Input Terminal)

All PowerBass AutoSound 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.

17. GND (Ground Input Terminal)

A good quality ground is required for your PowerBass AutoSound D Class 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

POWER WIRING AND SIGNAL CONNECTIONS

*** WARNING ***

Disconnect the negative (-) battery terminal before you start any wiring work! The battery of your car audio system must be disconnected until the entire wiring installation is completed.

Your PowerBass Autosound Class D amp will draw large levels of current, so use the largest gauge power/ground cable as possible. Using too small of power cable can result in unnecessary over-heating of the amplifier, distortion at high volume levels and might even cause the thermal protection circuitry to shut-off the amplifier. Remember, bigger wire is better!

- Use rubber grommets when running cables through any metal or sharp plastic, to prevent accidental shorting or shearing. Make sure the cables do not interfere with normal operation of the vehicle.
- The audio signal cables (RCA interconnects) should be kept far away from any potential sources of electrical interference such as electronic vehicle management systems (relays, engine computers wiring harnesses, fuel pumps etc.)

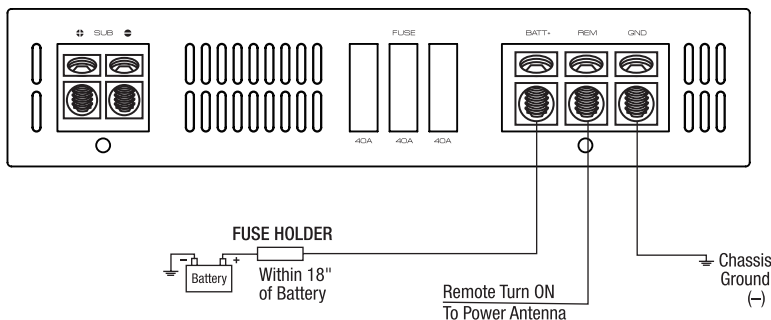


Fig.3 Power Input Connection

This amplifier is designed to work within a 9 to 17 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.

First, check the voltage at the battery with the ignition in the OFF position. The voltmeter should read no less than 12V. If your vehicles electrical system is not up to these specifications, we recommend having it checked by an auto electrician before any further installation. Once the vehicle is checked, make certain the correct cable gauge is used. We recommend using as large a gauge cable as possible, use the Power Cable Selection Chart to calculate the correct power wire size for your application.

BATT+ (Power)

This amplifier should be wired directly to the vehicle battery using the appropriate size cable. Start at the vehicle battery and run the power cable through to the amplifier. Avoid running the power cable over engine components and near heater cores. **The use of an inline fuse or circuit breaker is a must;** this will prevent the risk of a potential fire caused by a short in your power cable. Connect the fuse holder or circuit breaker as close to the battery positive (+) terminal as possible (no farther than 18" from that battery). This fuse or circuit breaker should be no greater than the sum of the fuses found on the chassis of your amplifier (also see specifications chart). You may now connect the cable to the battery, but remember to leave the fuse out or circuit breaker "off" until all other cable connections are made.

GND (Ground)

When grounding your amplifier, locate a metal area close to the amplifier that is good source of ground (preferable the floor pan). Once again, investigate the area you wish to use for electrical wires, vacuum lines, and brake or fuel lines. Use either a wire brush or sandpaper to eliminate unwanted paint for better contact of the ground.

Secure the ground cable to the body using a bolt, star washer and nut. Spread silicon over the screw and bare metal to prevent rust and possible water leaks.

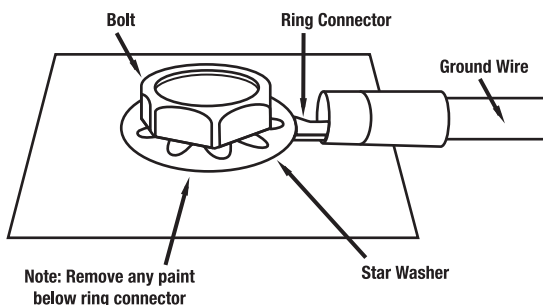


Fig.4 A good ground is essential to proper operation

Now it's time to connect the power and ground cables to the amplifier. Cut both cables to length. Strip off 1/2 inch (12mm) of the insulation so that the bare wire fits all the way in the terminal block on the side panel of the amplifier, seating it firmly so no bare wire is exposed. Use an Allen wrench to loosen the BATT+ and the GND connections on the amplifier. Insert the ground first, and then the +12V and please make sure that you place them into the correctly marked terminals. Then tighten the screws down securely.

REM (Remote Trigger)

This terminal must be connected to a switched +12V source. Typically, remote turn-on leads are provided at the source unit that will turn on and off the amplifier in correspondence with the source. If there is not a remote turn-on lead on the unit, then a switched +12V supply must be used, like the ACC, +12V.

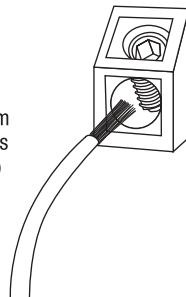
Run a minimum of 18 gauge wire from the amplifier location to the source of the switched +12V lead. If possible, route this wire on the same side of the vehicle as your power cable. Connect the source remote output to the wire. Go back to the amplifier and cut the wire to length. Loosen the screw terminal marked REM on the amplifier. Insert the stripped (bare) portion of the wire into the terminal and tighten the screw securely.

FUSE REQUIREMENTS

While the panel on your PowerBass amplifier incorporates one or more fuses, these do nothing to protect the vehicle from a dangerous short circuit. 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.

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

Your PowerBass 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 a hand driver and NOT a power drill is used to tighten the set screws on the terminal blocks. This will prevent stripping or other possible damage to the amplifier.

RCA INTERCONNECT WIRING

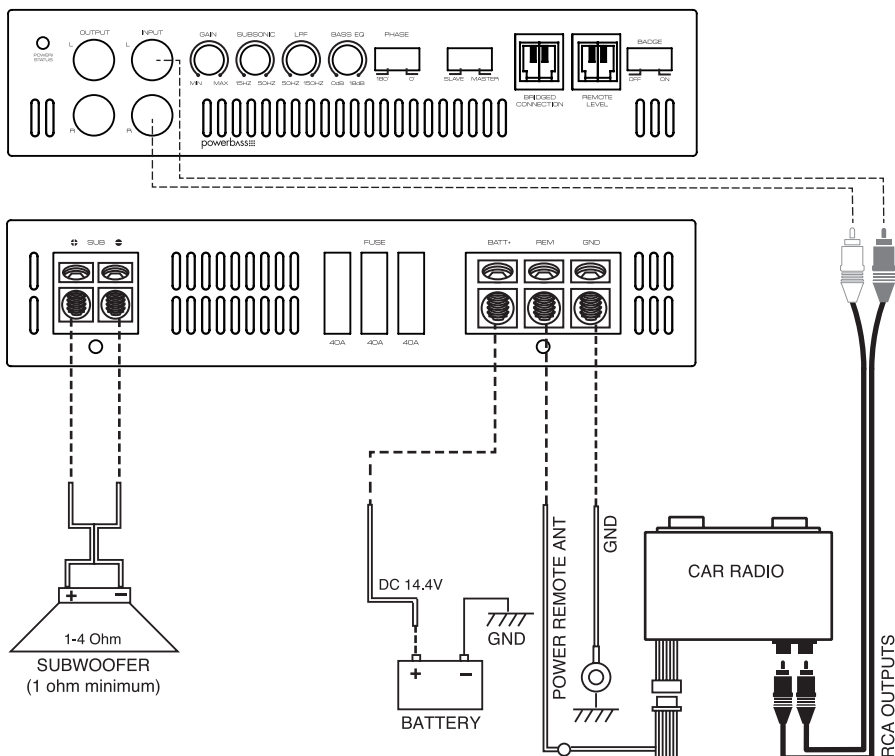


Fig.5 Low Level Input using RCA

Choose the correct length and style of RCA interconnects for your needs. Always use high quality RCA audio cables (not supplied) for signal connections—those with multiple layers of shielding or a twisted pair variety for better noise rejection.

Be extra careful when routing your RCA audio interconnect cables. Car environments are notorious for poorly insulated wires. This means that hiss, engine noise, and fan noise can easily be picked up through RCA cables if run incorrectly.

Make sure that the cables for power and audio signal are not on the same side of the vehicle and that they do not cross each other; this will help reduce any noise that may radiate from the power cable and the signal cable. If an audio cable is too close to a power cable, it may pick up the magnetic field generated by the power cable, which could lead to a loss of quality in your signal.

SET UP ADJUSTMENTS

Input GAIN Adjustment



Fig.6 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 four simple steps:

1. Make sure that the remote level control is not plugged in until after the master gain control is set.
2. Set the GAIN control on the amplifier to Min (completely counter clock wise).
3. Turn on the head unit and adjust volume to 2/3 maximum, and set the BASS and TREBLE to zero.
4. Adjust the LEVEL 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 these four steps above may leave you with damaged speaker and/or a damaged amplifier.



Fig.7 Sub Sonic Adjustment

SUB SONIC Adjustment

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



Fig.8 Low Pass Control

LPF (Low Pass Filter) Adjustment

The crossover frequency adjustment filters out frequencies that you don't want your speaker(s) to reproduce. Using the LPF control, adjust the Low Pass Frequency to limit the amount of mid range you want going to your woofer(s). Since musical tastes vary, adjust the crossover by ear while listening to the music of your choice. Be sure to set the tone controls of your source unit to flat before adjusting the crossover



Fig.9 Bass EQ Boost Control

BASS EQ Adjustment

This special feature is designed to provide you more powerful sound quality, and it allows you to increase the bass output up to +18dB at 45Hz. Keep in mind that more is not always better. Setting the control to the max (18dB) will stress the amplifier and the speakers and could result in damage.

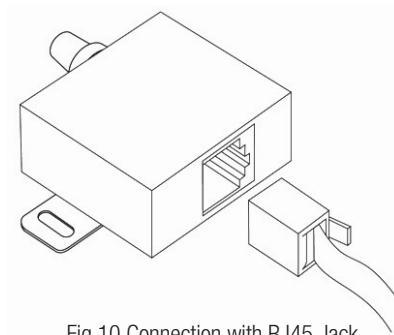


Fig.10 Connection with RJ45 Jack

REMOTE LEVEL Controller Connection

Your PowerBass Autosound Class D amp includes a Remote Level control module. It uses standard telephone wire and telephone RJ-45 connectors. To connect the Remote Level Control to the amplifier, simply insert one end of the telephone plug into the REMOTE LEVEL port. Plug the other end into the remote module. Install the module within easy reach on or under your dash.

WARNING – Do not plug and un-plug the Remote Level Control while the amplifier is operating.

SPEAKER WIRING AND CONFIGURATIONS

Speaker Load

Keep in mind your PowerBass Autosound Class D amp is a high power amplifier and not a high current amplifier. **In other words it requires a minimum impedance of 1 ohm.** If you are unsure of calculating impedance loads please consult your Authorized PowerBass Autosound Dealer before damaging your amplifier. Too low of an impedance could send your amplifier into protection mode and/or damage the amplifier.

NOTE: Know your impedance load before connecting speakers.

Subwoofer Wiring

Choose the correct speaker wire for your application. We recommend 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 to the speaker. Be certain to maintain correct polarity throughout the system. Make sure the speaker connections are positive-to-positive and negative-to-negative. Most speaker wire has some indicator (color code, ribbing, or printing) on one of the two wires to help you distinguish the positive (+) and negative (-) leads.

At the amplifier end, insert the stripped (bare) speaker wires into the properly marked terminals. Use an Allen wrench to loosen the speaker terminals on the amplifier. Make certain that no bare wire ends touch each other. Such contact could result in an electrical short and cause the amplifier to turn off (short circuit protection) or malfunction.

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

Speaker Output Configurations

1. A SINGLE VOICE COIL SUBWOOFER SPEAKER

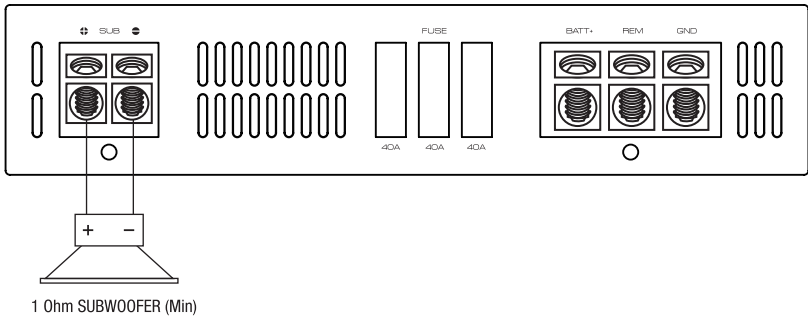


Fig.11 A Single Voice Coil Subwoofer (1~4 ohm)

2. TWO SINGLE VOICE COIL SUBWOOFER SPEAKERS

(Note: Don't connect speaker impedance under 2 ohms)

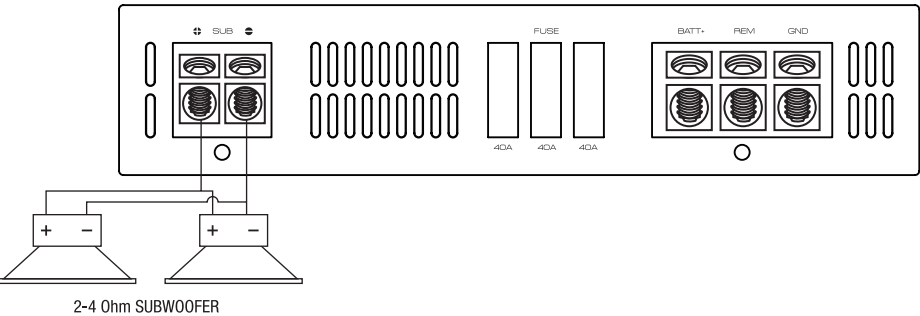



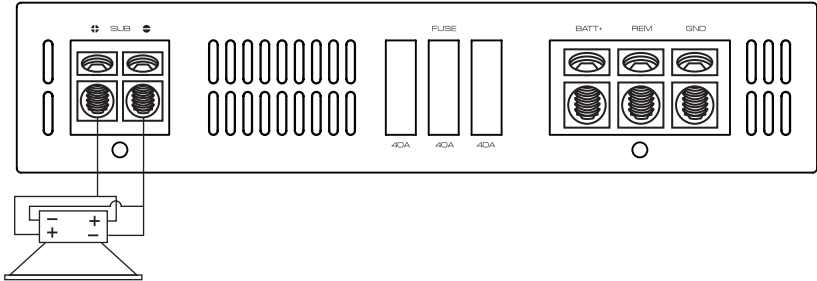
Fig.12 Two 4 ohm Subwoofers with Single Voice Coil



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

3. ONE DUAL VOICE COIL SUBWOOFER SPEAKERS

(Note: Don't connect speaker impedance under 2 ohm)




2-4 ohms DUAL VOICE COIL SUBWOOFER
Dual 4 ohm becomes 2 ohm as shown above
Dual 2 ohm becomes 1 ohm as shown above

Fig.13 One Subwoofer (2~4 ohms) with Dual Voice Coil

1-OHM STABLE DESIGN Minimum Impedance Load is 1-Ohm

Unless you are bridging two ASA3 amplifiers in which case min load is 2 ohms. Maintaining proper impedance is critical when wiring the Class D 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

4. DUAL LINK AMP TO AMP BRIDGED CONNECTION

You can connect two of the same model number ASA3 Series amplifiers and double the output power into a minimum 2-ohm load (do not mix two different model amplifiers or trouble will occur).

IMPORTANT – Do not attempt wiring the Dual Link Power Doubling circuitry unless you are a qualified installer.

Bridging two amplifiers (of same model) can be done via the BRIDGED switch and wiring the two amplifiers as follows:

Be sure to set the BRIDGED switch on the first amplifier to MASTER, and set the second amplifier to SLAVE.

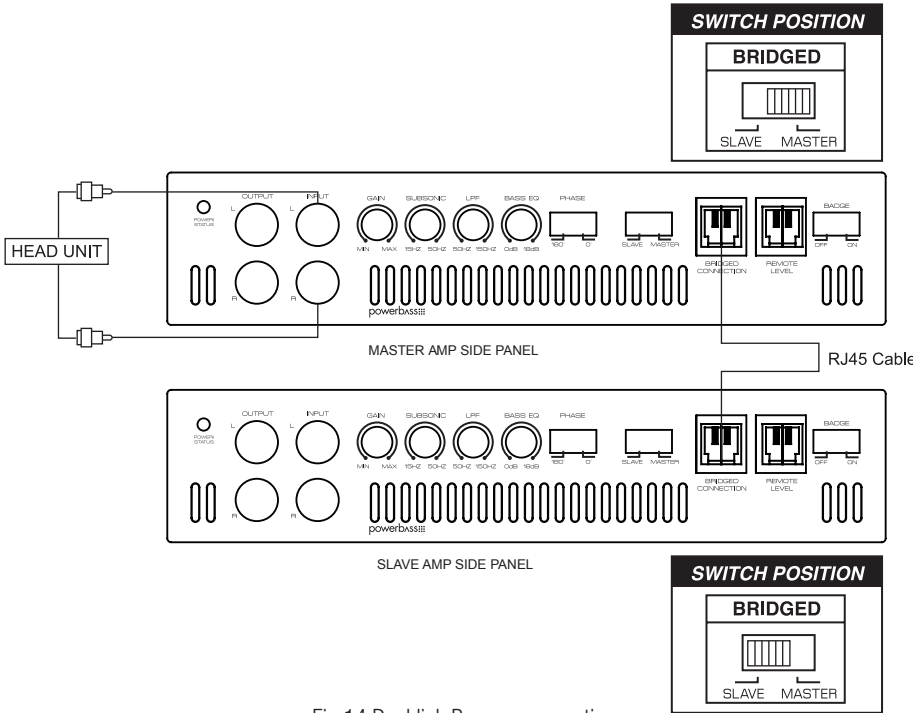


Fig.14 Dual link Preamp connection

Use the supplied RJ-45 cable to connect the two amplifiers via the BRIDGED CONNECTION ports.

When using the Dual Link Power Doubling configuration, set the GAIN control, SUBSONIC control, Bass EQ and LPF crossover on the amplifier selected as the MASTER. These controls except for the GAIN control are inactive on the (second) SLAVE selected amplifier.

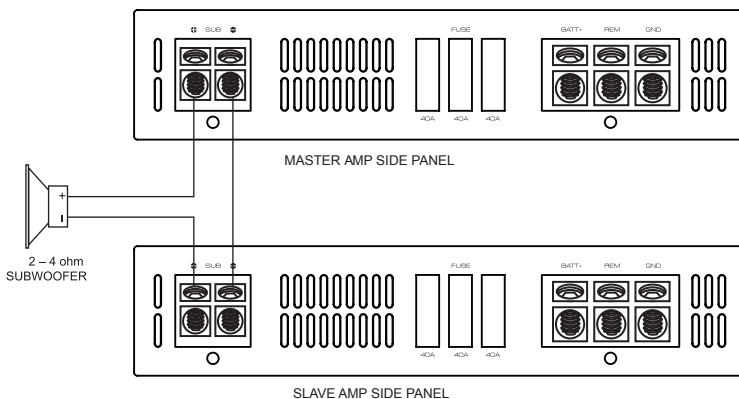


Fig.15 Dual Link Speaker connection (minimum 2 ohm load)

SPEAKER CONNECTION FOR BRIDGING TWO AMPS

The mono woofer must be connected between the speaker (+) terminals of the two amplifiers and use at least #12 gauge speaker wiring as shown above.

Install a #12 gauge wire link between the speaker (-) terminals of the two amplifiers as shown above. If this is not done, the system will not function properly, and damage to the amplifiers may result.

Total impedance of speakers must be over 2-ohms. If the impedance drops under 2-ohms, critical damage to the amplifier will occur.

DUAL LINK CAUTION! When externally bridging the speaker outputs as shown above, the amplifier must see a 2-ohm load or higher. Below 2-ohms will cause internal damage to the amplifier and void the warranty.

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

PowerBass makes several types of amplifier wiring kits to assist with your installation. 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: _____

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TROUBLESHOOTING TIPS

Problem	Solution
Power LED not ON	<p>With a Volt Ohm Meter (VOM) check:</p> <ul style="list-style-type: none"> • +12 Volt power terminal (should read +12 to +16VDC) • Remote turn-on terminal (should read +12 to +16VDC) • Ground Terminal
Power LED lights BLUE, no output	<ul style="list-style-type: none"> • Check RCA connections • Test speaker outputs with known good speaker • Substitute known good Source Unit • Check for signal on the RCA cable with VOM in AC position
Red Status Protection LED is ON, no output and 1. Amp is VERY HOT 2. Amp shuts down ONLY when the vehicle is running 3. Amp plays at very low volume	<ul style="list-style-type: none"> • 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 9-17 VDC operating range. Have the battery/charging system inspected. • 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.
Alternator noise (varies with RPM)	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 AUTOSOUND D CLASS AMPLIFIERS

PowerBass Autosound Class D Models	ASA3-600.1D	ASA3-1000.1D	ASA3-1500.1D
Power Output @ 14.4 VDC Input			
• 4 Ohms RMS at THD 0.5%	200W x 1	400W x 1	500W x 1
• 2 Ohms RMS at THD 0.5%	400W x 1	700W x 1	1000W x 1
• 1 Ohm RMS at THD 0.5%	600W x 1	1000W x 1	1500W x 1
• 1 Ohm Max Output	1200W	2000W	3000W
Signal to Noise Ratio	> 80dB		
Frequency Response	20 Hz ~ 150 Hz ± 1dB		
Crossover			
• Low Pass Filter	40Hz ~ 150 Hz		
• Crossover Slope	12dB Octave		
• Sub Sonic Filter	15Hz ~ 50Hz		
• Bass EQ at 45Hz	0 ~ 18 dB		
Input Gain Control	0.2V ~ 6.0V		
Low Level Input Impedance	22K Ohms		
Damping Factor	>150 into 4 Ohms		
Fuse Rating/ ATC Style	2 x 40A	3 x 40A	4 x 40A
Dimensions			
• Width (W) x	9.4" (240 mm)		
• Height (H) x	2.3" (58 mm)		
• Length (L) mm	13.6" (345 mm)	15.5" (395 mm)	16.6" (422 mm)

Important Notes:

- **Due to continuing improvements these specifications are subject to change without any notice.**
- **Do not attempt to fix or repair this unit. Unauthorized repairs will void the manufacturer's warranty.**

POWERBASS AUTOSOUND LIMITED WARRANTY POLICY

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

PowerBass Autosound 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 inquiries regarding service and warranty should be sent to the above address.

Removed or altered serial numbers will void this warranty



PowerBass Autosound – A division of PowerBass USA, Inc.

2133 S. Green Privado – Ontario, CA 91761

Tel. (909) 923-3868 – Fax (909) 923-8048

www.powerbassusa.com