MEMPHIS AUDIO
PRX1500.1V2
PRX1500.1V2 Power
Reference Mono
Subwoofer Amplifier

MEMPHIS AUDIO PRX1500.1V2 PRX1500.1V2 Power Reference Mono Subwoofer Amplifier Instruction Manual

Contents

MEMPHIS AUDIO PRX1500.1V2 PRX1500.1V2 Power Reference Mono Subwoofer Amplifier

READY TO TURN IT UP? READ THIS FIRST!

Memphis Audio built a 50 year legacy in the audio industry engineering the highest quality products to produce the best possible listening experience for our fans and loyal supporters. To fully appreciate our products we recommend taking the time to read and follow the instructions in this manual. As always, we recommend all installations and service be performed by an authorized Memphis Audio dealer.

- For optimal performance, Memphis recommends using only Memphis Connection accessories. Outfitting your system with properly sized Memphis Connection wire and accessories will dramatically boost your listening experience and increase the durability of your Memphis Audio products.
- Check out our full line of Power Reference speakers and woofers to create a complete Memphis Power Reference system in your ride.

Features

MultiChannel: PRX800.5V2 // PRX500.4V2

- Extruded aluminum heatsink
- Signal sensing auto turn on
- Top mounted controls
- 12dB/octave butterworth crossovers
- Input select switch
- LED light strip
- Remote bass knob RG6 (PRX800.5V2)

MONO: PRX1500.1V2 // PRX1000.1V2 // PRX800.1V2 // PRX400.1V2

- Extruded aluminum heatsink
- Signal sensing auto turn on
- Top mounted controls
- 18dB/octave butterworth crossovers

- 1Ω Stable
- Protection circuitry against: Overload, short circuit, thermal & reverse polarity.
- LED light strip
- Remote bass knob RG6
- Variable bass boost (0-12dB) centered at 45Hz
- 24dB Subsonic
- High level speaker inputs
- Fully Variable low pass crossover

Platinum Plated Connectors
Ensures solid electrical connections that resist corrosion.

Fully Variable High & Low Pass Crossovers
Fully variable crossovers promote installation ease and save the cost of outboard crossovers. The 12dB per octave slope (full range, 18dB mono) offers steep roll-off above/below the selected frequency.

Protection Circuitry
Protects against overload, short circuit, thermal and reverse polarity. These protection features are designed to protect the amplifier from misuse as well as from common causes of amplifier failure.

LED Light
Blue light indicates that the amplifier is working normally. If the light is not illuminated or glowing red please consult the troubleshooting section of the manual.

Specifications

	Specifications	PRX800.5V2	PRX500.4V2	PRX400.1V2
PR AMPLIFIERS	RMS Power/CH @ 4Ω	70 x 4 + 250 x 1	75 x 4	230
	RMS Power/CH @ 2Ω	100 x 4 + 400 x 1	125 x 4	400
	RMS Power/CH @ 1Ω	–	–	600
	RMS Power/Bridge 4 Ohms	200 x 2 + 400 x 1 @ 2 Ω	250 x 2	–
	THD	<1%	<1%	<1%
	Signal/Noise Ratio	>80dB	>83dB	>85dB
	Frequency Response ± 0.5dB	10Hz – 21kHz / 10Hz – 250Hz	10Hz – 27kHz	10Hz – 250Hz
	Crossover Frequency (HPF)	50 – 250Hz	50Hz – 250Hz	–
	Crossover Frequency (LPF)	50 – 250Hz	50Hz – 250Hz	50Hz – 250Hz
	Dimensions (in)	10.13 x 5.7 x 2.16	8.6 x 5.7 x 2.16	6.63 x 5.7 x 2.16
	Input Range	200mV – 6V	200mV – 6V	200mV – 6V

	Specifications	PRX1500.1V2	PRX1000.1V2	PRX800.1V2
PR AMPLIFIERS	**RMS Power/CH @ 4Ω**	**500**	**400**	**300**
	RMS Power/CH @2Ω	**1000**	**750**	**500**
	RMS Power/CH @ 1Ω	**1500**	**1000**	**800**
	RMS Power/Bridge 4 Ohms	**–**	**–**	**–**
	THD	**<1%**	**<1%**	**<1%**
	Signal/Noise Ratio	**>85dB**	**>80dB**	**>85dB**
	Frequency Response ± 0.5dB	**10Hz – 250Hz**	**10Hz – 250Hz**	**10Hz – 250Hz**
	Crossover Frequency (HPF)	**–**	**–**	**–**
	Crossover Frequency (LPF)	**50Hz – 250Hz**	**50Hz – 250Hz**	**50Hz – 250Hz**
	Dimensions (in)	**10.92 x 5.7 x 2.16**	**8.6 x 5.7 x 2.16**	**7.81 x 5.7 x 2.16**
	Input Sensitivity	**200mV – 6V**	**200mV – 6V**	**200mV – 6V**

Features and Specifications are subject to change without notice.

Service/Returns

Please consult with your local authorized dealer if you experience issues with your unit. You may also contact Memphis Audio customer service at **800-489-2300** or email tech support directly at: techsupport@memphiscaraudio.com. Do not attempt to return your amplifier directly to us without first calling for a Return Authorization number. Units received without an accompanying Return Authorization number will be processed more slowly. Additionally, you must include a copy of your purchase receipt from an authorized dealer for consideration of in-warranty service, otherwise repair charges will apply. Units received without a receipt will be held for up to 30 days allowing us time to contact you and obtain a copy of the receipt. After 30 days all units will be returned to you unrepaired.

Installation Information

Memphis Audio recommends the installation of our products to be performed by an Authorized dealer. Attempting an installation project on your own or through an unauthorized source may result in damage to your products and may potentially void your warranty. Amplifiers are generally mounted in the hatch/trunk area of your car or SUV or behind the seat of most pickup trucks. Select a location that provides adequate ventilation. Avoid mounting the amplifier with fins facing down. The amplifier should be secured using the screws provided.

Warning

For your safety, always inspect the mounting location carefully to ensure you are not drilling into any electrical, hydraulic, fuel or fluid lines. Always check your speaker load with a multi-meter before connecting the amplifier. Connecting any speaker load lower than the rated impedance of the amplifier will result in damage to the amplifier. Damage of this nature is NOT covered under warranty. Please pay close attention to what connections are made tothe amplifier. If you are uncertain or uncomfortable proceeding with your installation, please contact your local authorized Memphis Audio Dealer

Troubleshooting

When troubleshooting your amp, speaker, and speaker wires should be tested first.

No Output

- Confirm all wiring is firmly connected. Both +12V and REM terminals must have +12 Volts present and GND must be connected to the chassis ground or to the negative battery terminal.
- Confirm the signal source is connected and supplying an output signal. To confirm the amp is working, connect an RCA patch cord to the line inputs of the amplifier (do not connect the other end of the patch cord). Briefly tap the center pin of each disconnected RCA with your finger. This should produce a noise (brief static or hum) in the speakers.
- If the amp is hot, check the speaker impedance or load. The total minimum impedance of all speakers should not be lower than the rating of the amp.

Only One Channel Works

- Confirm the speaker terminal strip connections are firmly connected.
- Check the “balance” control on your signal source.
- If using RCA Low-Level inputs, reverse the input plugs at the amplifier. If the silent channel reverses position, the problem is in the source unit or connecting cable.

Weak Output

- Check input sensitivity control adjustment.

Unwanted Noise

- Whine that increases and decreases with engine speed – confirm the Amp & Source unit are grounded properly.
- Clicking or popping noise at a rate that follows engine speed – this is often induced by the vehicles ignition system. Confirm that the vehicle is equipped with resistor spark plugs and wires. The ignition system may need service.
- Noise can be caused by routing speaker input wires too close to the light wires and other accessory wires in the vehicle. Re-route wires to avoid unwanted interference.
- If above steps do not improve/reduce noise, the system should be checked by a professional audio installer at a Memphis Authorized Dealer.

Red LED is Illuminated

- Speaker or wire is shorted
- Battery voltage too high
- Battery voltage too low
- Amplifier has overheated due to improper ventilation

Power Supply Connections

Install the fuse at the battery last!

Use conventional stranded copper wire for all connections. Finish the ends of the wires at the amp and vehicle with proper size terminals. Poorly made connections and/or inadequate wire size will generate excessive heat and may lead to equipment failure.

12 Volt + Connection
make the 12V+ connection directly at the positive battery post using the proper wire size and fuse listed below, The fuse should be installed within 18” of the battery. This fuse is vital to protecting the vehicle from damage in the case of a dead short. The fuse value at the battery should be at least equal to the total fuse value of all the amplifiers being used.

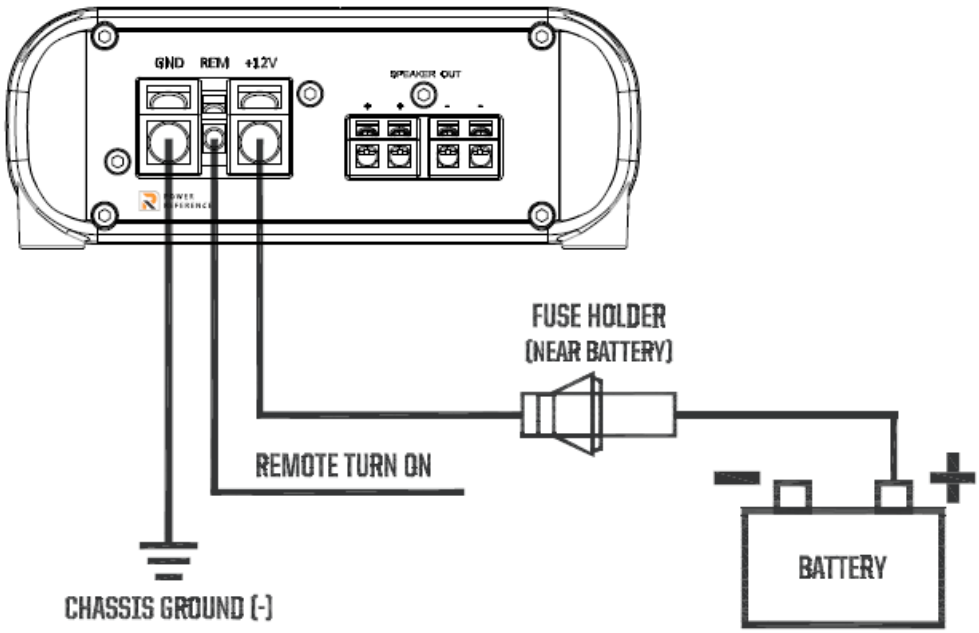
Model	Amp Kit
PRX500.4V2	**8GKIT**
PRX800.5V2	**4GKIT**
PRX400.1V2	**8GKIT**

Model	Amp Kit
PRX800.1V2	**4GKIT**
PRX1000.1V2	**4GKIT**
PRX1500.1V2	**4GKIT**

Ground Connection
Make ground connection directly to the chassis of the vehicle as close to the amp as possible. Make sure this connection is made with the same wire size as used for the 12-volt connection. Ensure that all dirt, grease, paint, and coatings are removed prior to attaching the ground wire to the chassis.

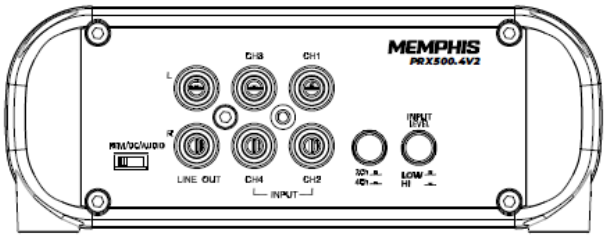
Remote Turn On
Remote turn-on should be connected to the source unit’s remote turn on lead or power antenna output wire. When using the power antenna wire, make certain it does not lose power when any source other than the radio is selected.

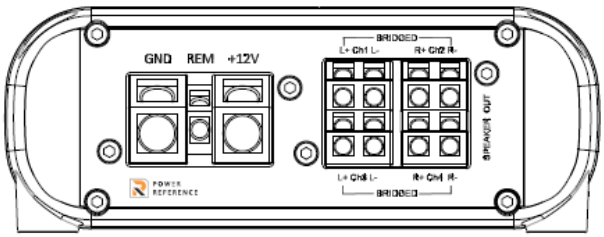
Power Connections



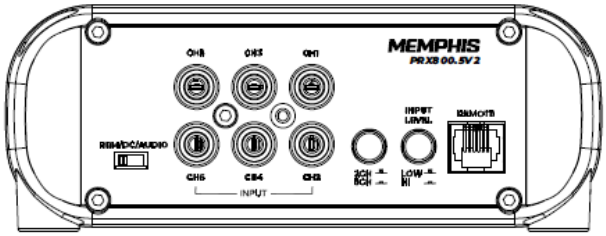
End Panel Connections

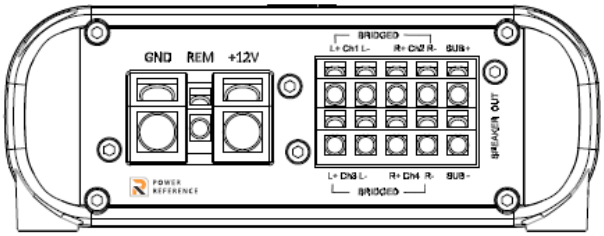
PRX500.4V2



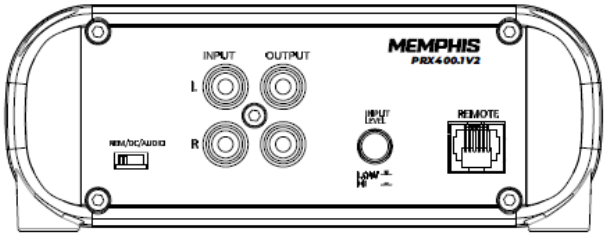


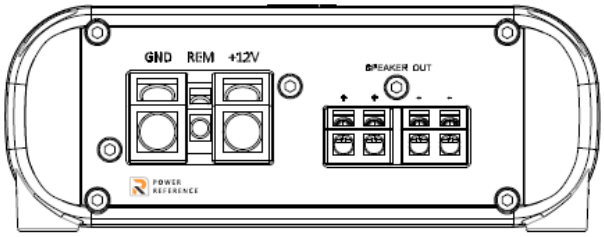
PRX800.5V2



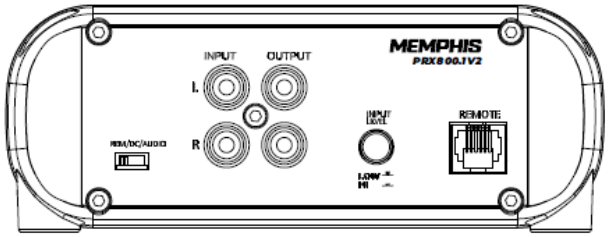


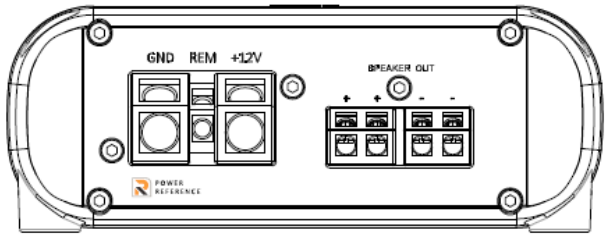
PRX400.1V2



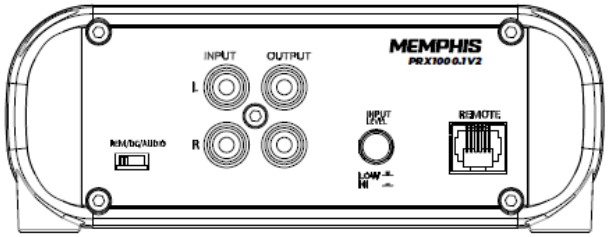


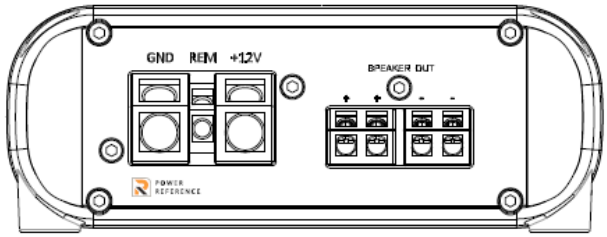
PRX800.1V2



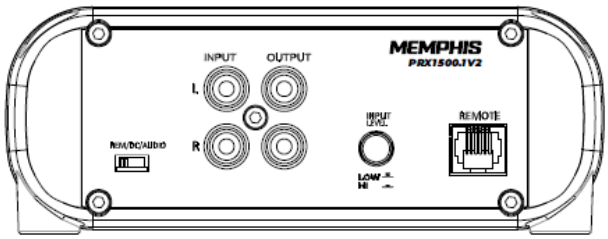


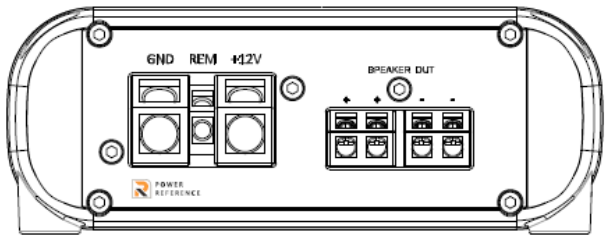
PRX1000.1V2





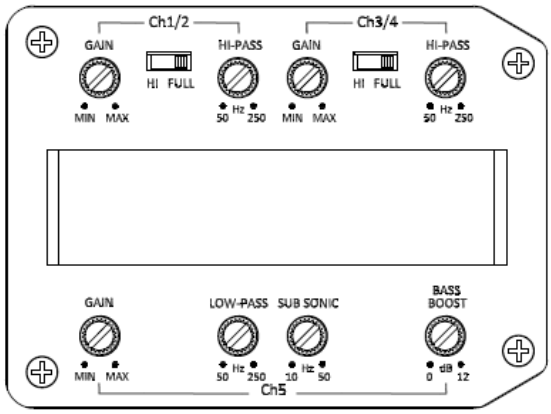
PRX1500.1V2

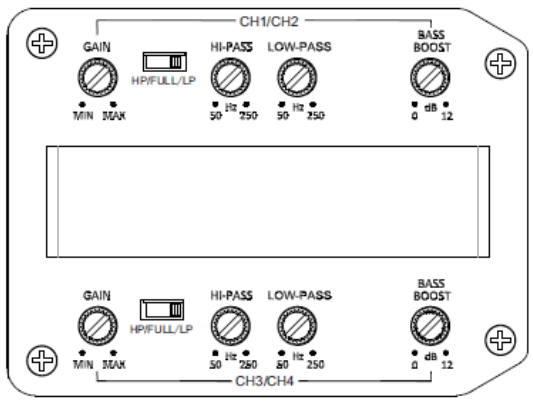




- **High Input:** Use this connection method when feeding the amplifier with a high-level speaker input from a factory radio or OEM amplifier.
- **Low-Level Output:** (MONO Amps) Use this output connection to feed the audio signal to additional amplifiers. Remote: (all models) Use only “PRX” Remotes for this amplifier model. The adjustment will increase/decrease the output level of the amplifier. The remote controller only operates the subwoofer channel of the PRX800.5V2.
- **Input Mode Switch**: (PRX800.5V2/PRX500.4V2) Place the switch on the number of audio inputs being used. If 2CH or 4CH is selected on the PRX800.5V2, the subwoofer channel will be provided.

Control View





FULL RANGE AMP SET UP & ADJUSTMENT

Gain

The gain control is NOT a volume control. The gain control adjusts the amount of signal required to drive the amplifier to full output. With the gain at full clockwise rotation, less signal voltage is required to drive the amp to full output. With the gain at full counterclockwise rotation, more signal voltage is required to drive the amp to full output. For optimal performance, set the gain control to a minimum

High Pass Filter (HPF)
The high pass crossover/filter is designed to remove low frequency information from a speaker. This is generally used to protect smaller devices from trying to reproduce low-frequency information that might damage them. The crossover frequency is adjustable from 50 Hz to 250 Hz and uses 12 dB per octave slope. To engage the HPF simply slide the switch to the position on the marked HPF. Crossover frequency selection is made by rotating the dial: clockwise raises the frequency, and counter-clockwise lowers the frequency. Most mid-bass or midrange drivers should be set between 80 and 400 Hz depending on how high the subwoofer(s) plays. For mid-range drivers that are 5” or smaller, we suggest setting the HPF to 120Hz. The HPF can also be combined with passive crossovers on a separate or coaxial speaker set to provide low-frequency protection to the midrange driver or to form band-pass filter for a midrange speaker already using a passive low-pass filter.

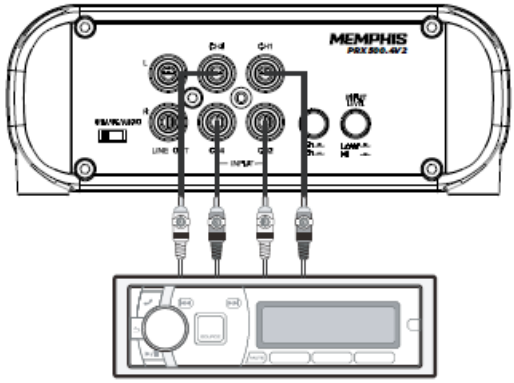
Low Pass Filter (LPF)
The Lowpass crossover/filter is designed to remove high-frequency information from a speaker. This is generally used to prevent mid-bass speakers or subwoofers from trying to reproduce mid and high-frequency information that they are not designed to reproduce. The crossover frequency is adjustable from 50Hz to 250Hz and uses a 18dB per octave slope. To engage the LPF slide the switch to the position marked LPF. Frequency selection is made by rotating the dial: clockwise raises the frequency and counterclockwise lowers the frequency. Most subwoofers should be set between 80Hz and 100Hz depending on how low the mid-bass or midrange drivers are capable of playing.

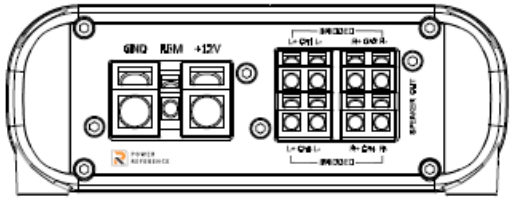
Full Range
Sliding the selector switch to this position turns off all crossovers and allows a full-range signal to pass. The flat position should be selected when using outboard electronic crossovers.

Top Mounted Control Panel
Remove the four screws to remove the top panel an access the controls.

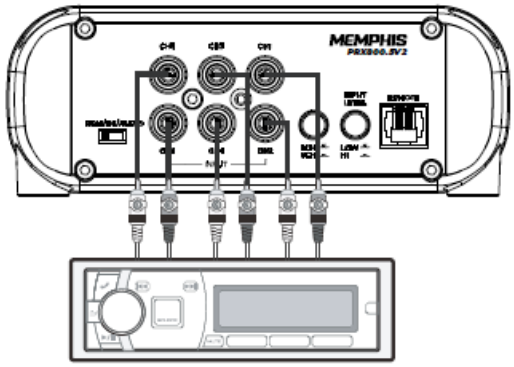
Signal Input Connections

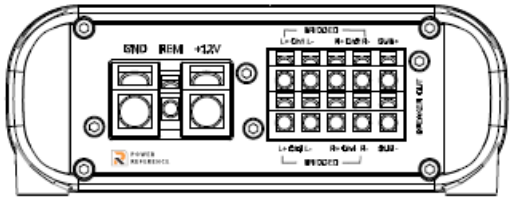
PRX500.4V2



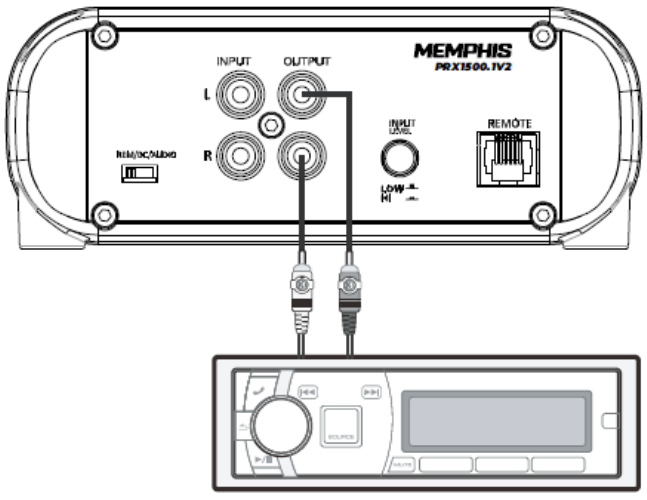


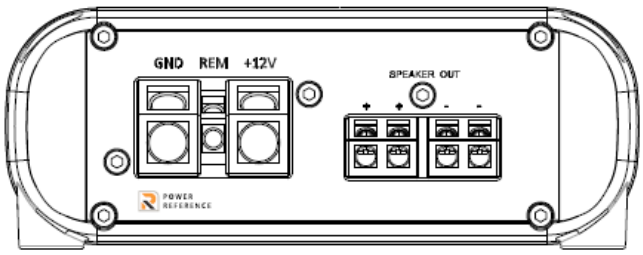
PRX800.5V2





PRX1500.1V2 // PRX1000.1V2 // PRX800.1V2 // PRX400.1V2



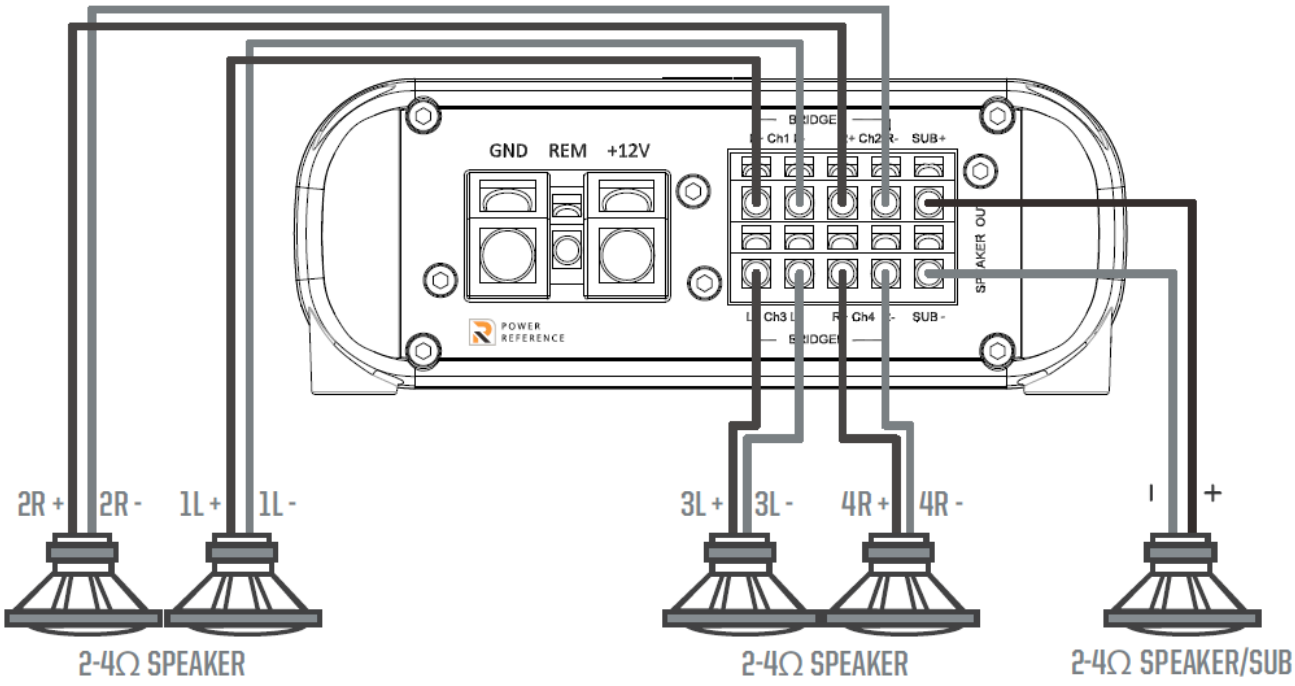


Wiring Multi-Channel Amps

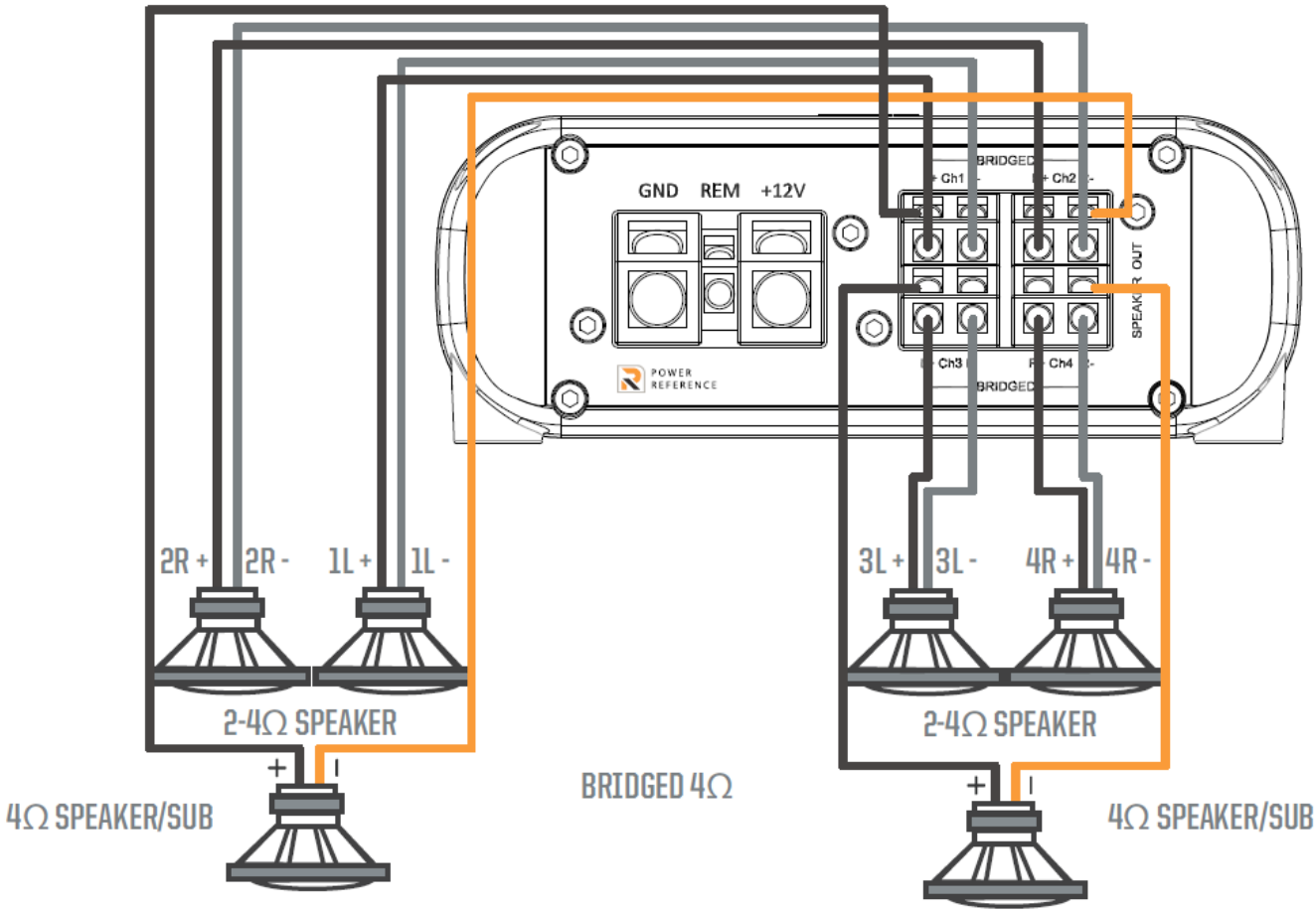
Speaker have a positive and negative marking on the terminals. These are used to indicate polarity and must be considered when wiring speakers or subwoofers to an amplifier. Amplifiers also have positive and negative markings on their speaker outputs. Use these marking to match polarities to ensure the speakers are in phase. Failure to wire speakers or woofers in phase with one another will result in a loss of bass. All power reference amplifiers require a minimum 2ohm impedance in stereo or 4 ohms in mono (bridged) mode. Always check your speaker load with a multi-meter before hooking them up to the amplifier. The PRX500.4V2

CAUTION amplifier is stable to 2 ohms stereo or 4 ohms bridged mono. The PRX800.5V2 amplifiers are stable to 2 ohms stereo or 4 ohms bridged mono (front & rear channels) and stable to 2 ohms (sub channel). Any Impedance (load) smaller than what is recommended will damage the amplifier! Such damage is not covered under warranty, so pay strict attention to what connections are made to the amplifier.

WIRING 5-CHANNEL AMPLIFIERS – PRX800.5V2



WIRING 4-CHANNEL AMPLIFIERS – PRX500.4V2

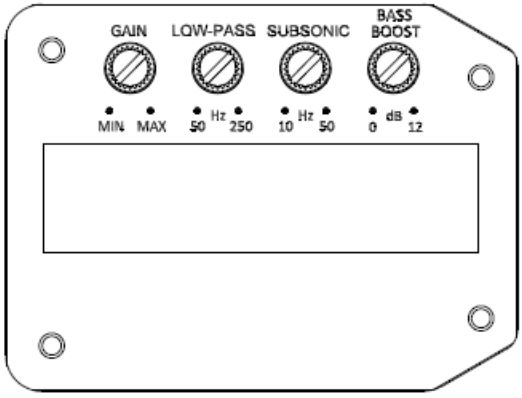


MONO AMP SETUP & ADJUSTMENT

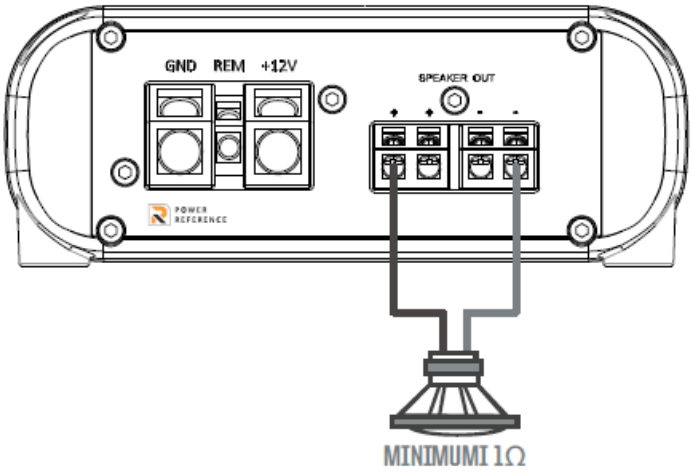
CAUTION
Always check your speaker load with a multi-meter before hooking up to the amplifier. The PRX800.1V2, PRX400.1V2 PRX1000.1V2, and PRX1500.1V2 amplifiers are 1 ohm stable. Any Impedance (load) smaller than 1 ohm will damage the amplifier! Such damage is not covered under warranty, so pay strict attention to what connections are made to the amplifier.

Gain The gain control is NOT a volume control. The gain control adjusts the amount of signal required to drive the amplifier to full output. With the gain at maximum (full clockwise rotation), less signal voltage is required to drive the amp to full output. With the gain at minimum (full counter-clockwise rotation), more signal voltage is required to drive the amp to full output. Low Pass Filter (LPF) The low pass crossover, or filter, is designed to remove high-frequency information from a subwoofer. This is generally used to prevent mid-bass speakers or subwoofers from trying to reproduce mid and high-frequency information that they are not designed to reproduce. The crossover frequency is adjustable from 50Hz to 250Hz and uses an 18dB per octave slope. Frequency selection is made by rotating the dial; clockwise raises the frequency and counter-clockwise lowers the frequency. Most subwoofers should be set between 80 and 100Hz, depending on how low the mid-bass or midrange drivers are capable of playing. Bass Boost (45Hz) Boost should be used with discretion, keeping in mind that electronically enhanced boost places an additional load on the amplifier and the speakers they are connected to. This control is fully variable from 0 – 18 dB. Subsonic This filter is fully variable from 10Hz-50Hz and removes unwanted frequencies below the frequency selection. This filter is most useful with subwoofers loaded in a ported enclosure, which helps prevent unloading (rapid loss of power handling below the port-tuned frequency).

Top Mounted Control Panel
Remove the four allen head screws to remove the top panel and access the controls.



WIRING MONO AMPLIFIERS – PRX1500.1V2//PRX1000.1V2//PRX800.1V2//PRX400.1V2



WIRING SUBWOOFERS
When using a single amplifier to power one subwoofer, the positive and negative terminals of the subwoofer voice coil is connected the positive and negative terminal of the Amplifier.

WARRANTY

Memphis Audio Power Reference Amplifier Limited Warranty
This product has a one year warranty from the date of purchase for defects in material or workmanship. This warranty will be extended to 2 years when installed by a Memphis authorized dealer using Memphis Connection products. The warranty is void if the product has been physically damaged by improper usage or abuse. If repairs are attempted outside of a Memphis Audio facility, the warranty is void. This warranty is limited to the original retail purchaser and does not cover any expenses incurred in the removal or re-installation of the product. This warranty does NOT apply to product exterior and cosmetics. Memphis Audio disclaims any liability for incidental or consequential damages caused by product defects. Memphis Audio liability will not exceed the purchase price of the product and the warranty period specified.

What is NOT covered under warranty

- Damage due to improper installation
- Damage caused by exposure to moisture, excessive heat, chemical cleaners and/or UV radiation
- Damage through negligence, misuse, accident or abuse. (Repeated returns for the same damage may be abuse)
- Product damaged in accident and/or due to criminal activity
- Service performed by anyone other than Memphis Audio

- Subsequent damage to other components
- Any cost or expense related to the removal or re-installation of the product
- Products with tampered, missing, altered or defaced serial numbers/labels
- Freight damage
- The cost of shipping product to Memphis Audio
- Return shipping on non-defective items
- Any product not purchased from an authorized Memphis Audio dealer

Some states do not allow the exclusion or limitation of incidental or consequential damages. The above limitations or exclusions may not apply to you. This warranty gives you specific rights, you may have other rights which vary from state to state. If warranty service is required, a return authorization number is required to return the product to Memphis Audio. Warranty shipments to Memphis Audio are the responsibility of the purchaser. Pack the product carefully in the original carton if possible Memphis Audio will not be responsible for damages incurred in shipment or due to improper packaging materials used by the purchaser. If determined to be within warranty your product will be repaired or replaced at the discretion of Memphis Audio.

CONTACT INFO

- 122 GAYOSO AVE MEMPHIS, TN USA 38101
- TECH SUPPORT **800-903-6979**

SHOW US YOUR INSTALL

- **WWW.MEMPHISCARAUDIO.USA**
- MEMPHISCARAUDIO
- MEMPHISCARAUDIOUSA

Documents / Resources

	**MEMPHIS AUDIO PRX1500.1V2 PRX1500.1V2 Power Reference Mono Subwoofer Amplifier** [pdf] Instruction Manual PRX1500.1V2, PRX1000.1V2, PRX800.1V2, PRX400.1V2, PRX800.5V2, PRX500.4V2, PRX1500.1V2 PRX1500.1V2 Power Reference Mono Subwoofer Amplifier, PRX1500.1V2, PRX 1500.1V2 Power Reference Mono Subwoofer Amplifier, Reference Mono Subwoofer Amplifier, Mono Subwoofer Amplifier, Subwoofer Amplifier, Amplifier

References

- **User Manual**