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PLMRA220

PLMRA420

PLMRA220 - PLMRA420

Waterproof Marine Bridgeable Amplifier

USER GUIDE

About PyleUSA

Pyle, founded in the 1960s, has evolved into a renowned manufacturer of high-quality advanced woofers. Our journey started with the iconic Pyle Driver, becoming a household name in original speakers. In the late 20th century, we expanded into replacement speakers, car audio, home audio, marine audio, and professional audio & musical instruments with our Pyle Pro line.

Pyle Car:
Transform your car into a perfect listening environment with our c ompetitively priced speakers, amplifiers, and head units. Upgrade from factory speakers to enhance your music experience. Explore accessories like navigation systems, DVD players, iPod interfaces, and safety-focused cameras.

Pyle Home:
Discover a range of home entertainment products, including projectors, TVs, mounts, stands, and HD technology. Pyle Home offers bass-expanding mini speakers, headphones, vintage turntables, power amplifiers, horn speakers, and more for an enriched media experience at home and on the go.

Pyle Pro:
As the leading source of audio equipment worldwide, Pyle Pro caters to musicians, studio engineers, and amateurs. Our PA Systems, featuring wireless microphones, rechargeable batteries, and iPod/iPhone docks, are ideal for various events. Explore our emerging guitar line, effects pedals, and USB-to-analog converters without compromising on quality.

CONTENTS

READ ALL INSTRUCTIONS CAREFULLY BEFORE USING THIS PRODUCT.

RETAIN THIS OWNER'S MANUAL FOR FUTURE REFERENCE.

California Prop 65 Warning

⚠WARNING:

This product may expose you to chemicals, which is known to the state of California to cause cancer, birth defects and other reproductive harm. Do not ingest.

For more info go to: www.P65warnings.ca.gov

General Features

PLMRA220

High-Performance 600 Watt 2-Channel Bridgeable MOSFET Amplifier

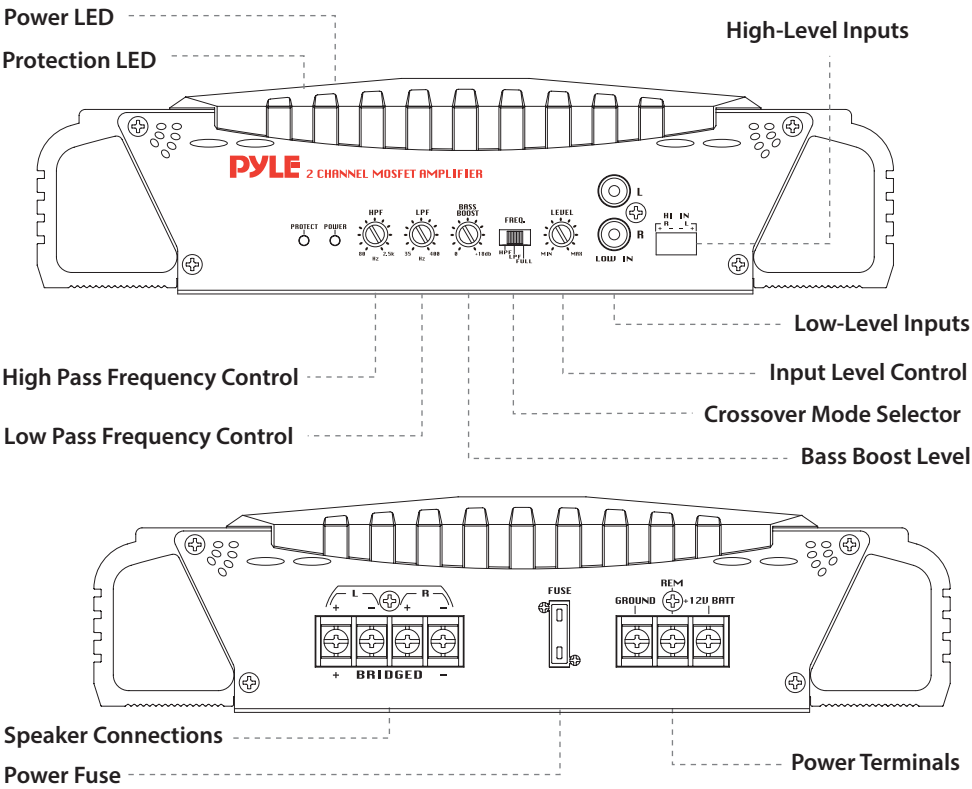
- 300 Watts x 2 Output
- 600 Watts x 1 Bridged Output
- Variable Hi/Lo Electronic Crossover Network
- Variable Bass Boost (0 to +18 dB @ 60Hz)
- Variable Input Level (Gain) Control
- Remote Turn On/Off
- Gold-Plated RCA Inputs
- High-Level MOLEX Input
- Power ON LED Indicator
- LED Protection Indicator
- S/N Ratio: > 95 dB
- THD: < 0.04%
- Thermal Protection
- Overload Protection
- Short Circuit Protection
- Anti-Thump Turn-On
- Blue LED Level Display

PLMRA420

High-Performance 1000 Watt 4-Channel Bridgeable MOSFET Amplifier

- 250 Watts x 4 Output
- 500 Watts x 2 Bridged Output (250 Watts x 2 + 500 Watts x 1)
- Dual Variable Hi/Lo Electronic Crossover Network
- Dual Variable Bass Boost (0 to +18 dB @ 60Hz)
- Variable Input Level (Gain) Control
- Remote Turn On/Off
- Gold-Plated RCA Inputs
- High-Level MOLEX Inputs
- Power ON LED Indicator
- LED Protection Indicator
- S/N Ratio: > 95 dB
- THD: < 0.04%
- Thermal Protection
- Overload Protection
- Short Circuit Protection
- Anti-Thump Turn-On
- Tri-Mode Configurable
- Blue LED Level Display

PLMRA220 - 2 Channel Amplifier Control Functions



Crossover Mode Selector: When used with normal full-range systems, set this switch to "**FULL**." If you wish to use the internal crossover to power a driver of a specific frequency range, use the "**LOWPASS**" or "**HIGHPASS**" settings.

Input Level Control: Use this control to match the output of your head unit to the amplifier. Start with your head unit set at about the 2 o'clock position, increase the amp level control until distortion begins, and then reduce slightly.

Low Pass Frequency Control: When the crossover selector switch is in "**LOW PASS**" mode, this control sets the upper frequency limit for the audio program sent to the speakers.

High Pass Frequency Control: When the crossover selector switch is in "HIGH-PASS" mode, this control sets the lower frequency limit for the audio program sent to the speakers.

Bass Boost Level Control: This control permits adjustment of the bass level up to an increase of approximately 18 dB.

Low-Level Inputs: This amp features gold-plated RCA input jacks for high impedance input. Use these with car stereo outputs that utilize RCA-type connector cables.

High-Level Inputs: If your car stereo lacks RCA-type output jacks, you may connect the speaker output leads to these input connectors.

Power LED: This indicator lights up when power is applied.

Protection LED: This indicator lights up when the built-in protection circuitry is activated.

Power Fuse: The fuse protects the amplifier and your car's electrical system from short circuits.

Power Terminals: Use these connectors to deliver power, ground, and remote turn-on control to the amplifier.

Speaker Connections: These terminals are 14K gold-plated to guarantee high conductivity and minimize signal loss.

Technical Specifications

Output Power @ 14.4V DC, 1KHz:
- RMS Power @ 4 Ohms: 40 Watts x 2
- RMS Power @ 2 Ohms: 70 Watts x 2
- Maximum Power Output: 300 Watts x 2

Frequency Response: 15 Hz - 30 KHz

Input Impedance:
- Low-Level Inputs: 10K Ohms
- High-Level Inputs: 100 Ohms

Input Sensitivity:
- Low-Level Inputs: 250mV
- High-Level Inputs: 2.5V

Power Supply Voltage: 14.4V DC Negative Ground (10.5-16V)

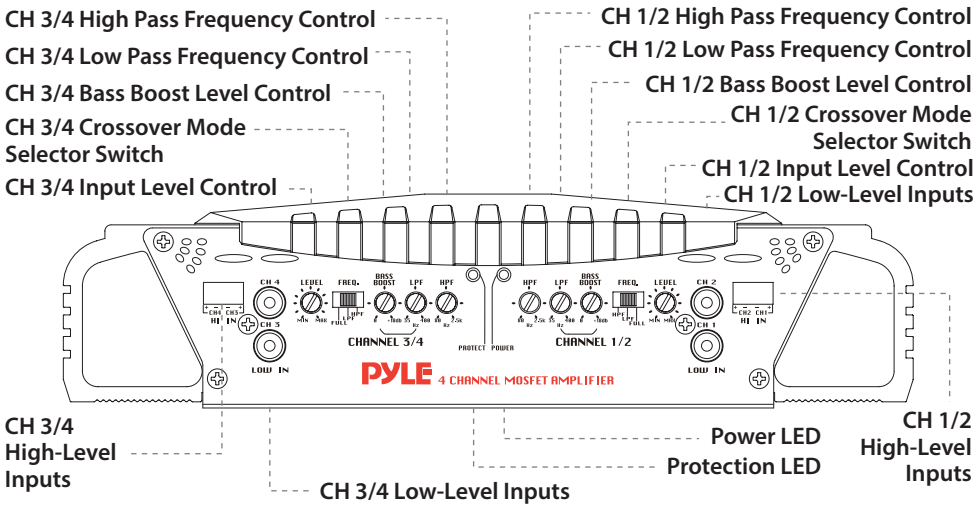
Matching Speaker Impedance:
- Stereo Mode: 2-4 Ohms
- Bridged Mode: 4-8 Ohms

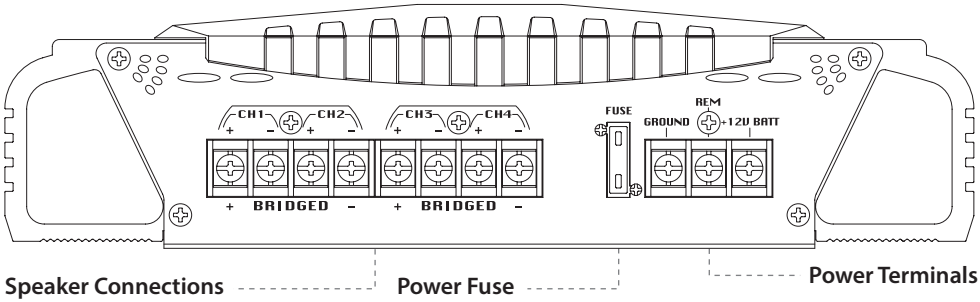
Maximum Current Draw: 15A

Dimensions (W x H x D): Inches: 10.9 x 2.7 x 8.25

Features and Controls

PLMRA420 - 4 Channel Amplifier Control Functions





Crossover Mode Selector: When used with normal, full-range systems, set this switch to "**FULL**." For specific frequency range drivers, use the "**LOWPASS**" or "**HIGHPASS**" settings.

Input Level Control: Match the outputs of your head unit to the amplifier. Start with the head unit at about the 2 o'clock position, then adjust the amp level control until distortion begins, and reduce slightly.

Low Pass Frequency Control: When the crossover selector switch is in "**LOWPASS**" mode, this control sets the upper frequency limit for audio sent to the speakers.

High Pass Frequency Control: When the crossover selector switch is in "**HIGHPASS**" mode, this control sets the lower frequency limit for audio sent to the speakers.

Bass Boost Level Control: Adjusts the bass level up to an increase of a pproximately 18 dB.

Inputs and Outputs

- Low-Level Inputs: Gold-plated RCA input jacks for high impedance input, ideal for car stereos with RCA-type connector cables.
- High-Level Inputs: Connect speaker output leads if your car stereo lacks RCA-type output jacks.

Indicators and Protection

- Power LED: Illuminates when power is applied.
- Protection LED: Illuminates when built-in protection circuitry is activated.
- Power Fuse: Protects the amplifier and your car's electrical system from short circuit conditions.

Technical Specifications

Output Power @ 14.4V DC, 1KHz:

- RMS Power @ 4 Ohms: 35 Watts x 4
- RMS Power @ 2 Ohms: 50 Watts x 4
- Maximum Power Output: 250 Watts x 4

Frequency Response: 15 Hz - 30 KHz

Input Impedance:

• Low-Level Inputs: 10K Ohms

• High-Level Inputs: 100 Ohms

Input Sensitivity:

• Low-Level Inputs: 250mV

• High-Level Inputs: 2.5V

Power Supply Voltage: 14.4V DC Negative Ground (10.5 - 16V)

Matching Speaker Impedance:

• Stereo Mode: 2-4 Ohms

• Bridged Mode: 4-8 Ohms

• **Maximum Current Draw:** 20A

• **Dimensions (W x H x L):** 10.9 x 2.7 x 12 inches

Electrical Connections

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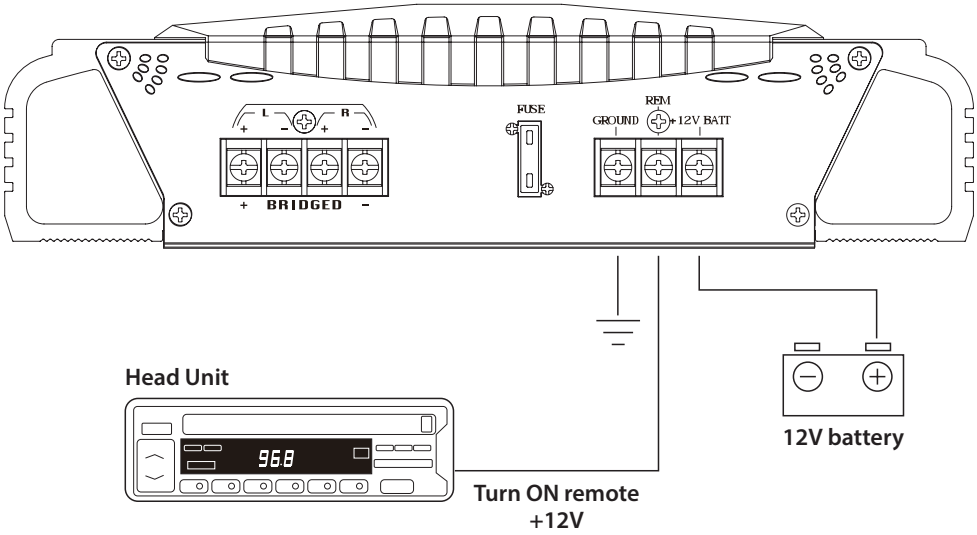

Electrical Connections

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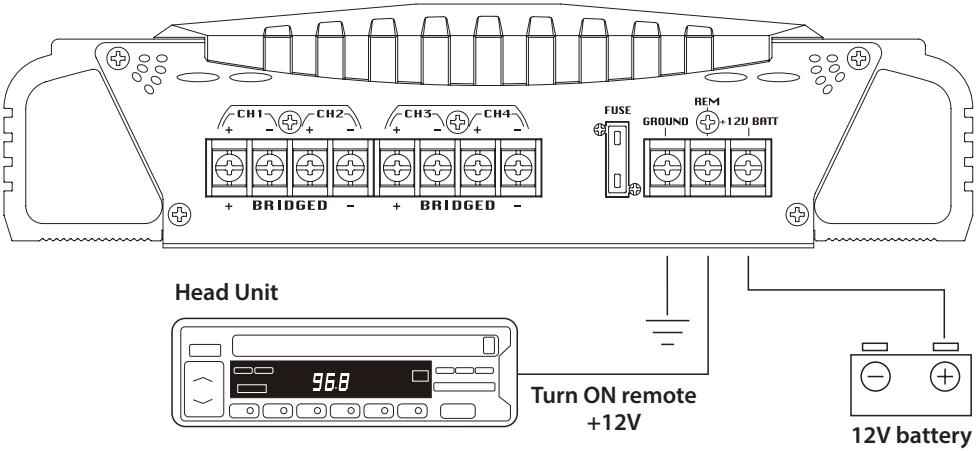

Stereo Input Connections

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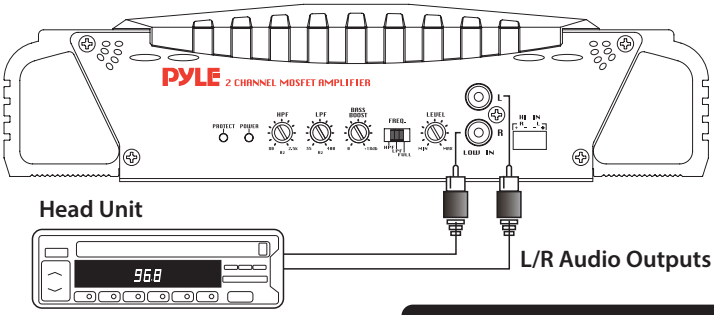
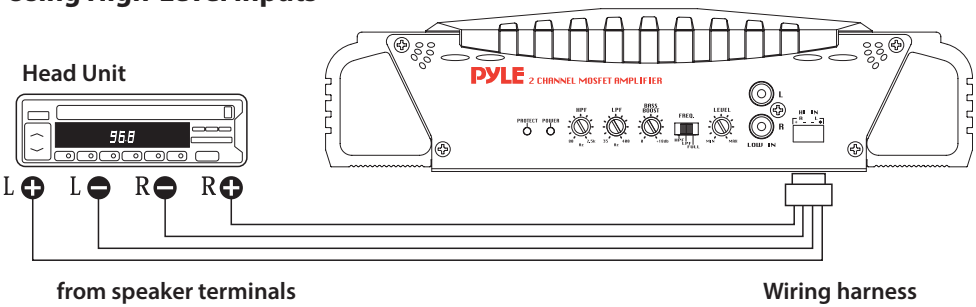
Using Low Level Inputs



PLEASE NOTE:
If using high-level inputs, do not use the low-level RCA inputs at the same time.

Using High-Level Inputs



Mono Input Connections

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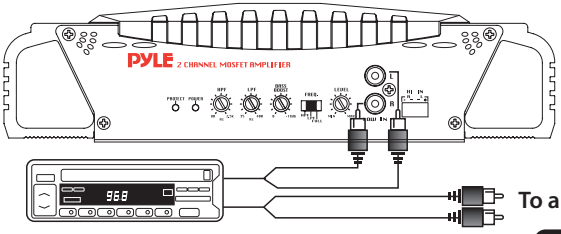
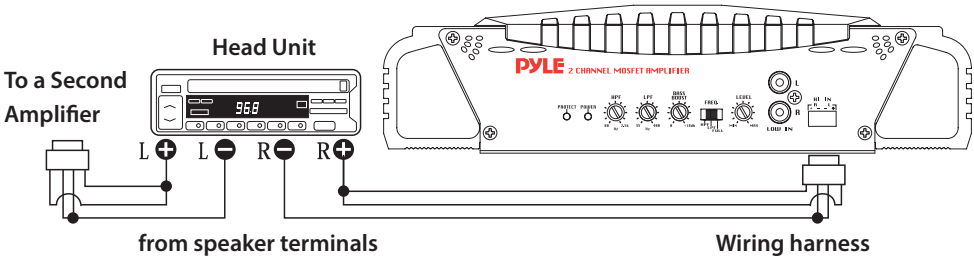
Using Low Level Inputs



PLEASE NOTE:
If using high-level inputs, do not use the low-level RCA inputs at the same time.

Using High-Level Inputs



2/4 Channel Input Connections

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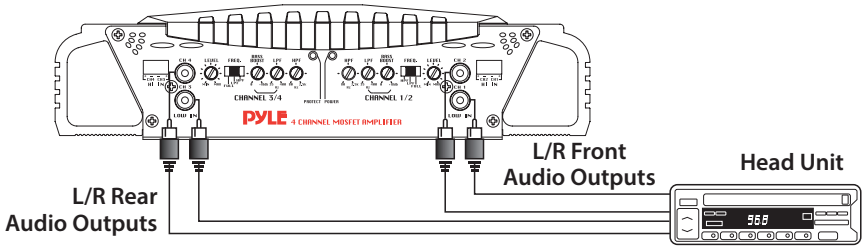
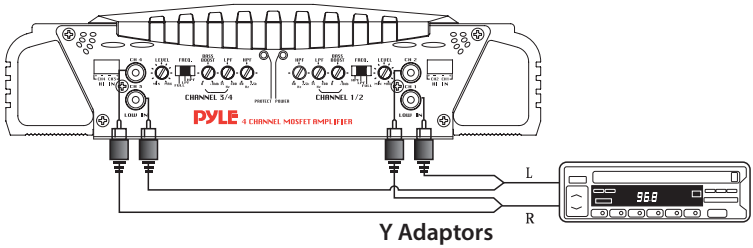
4 CH Input Connections Using Low-Level Inputs



2 CH Input Connections Using Low-Level Inputs



High Level Input Connections

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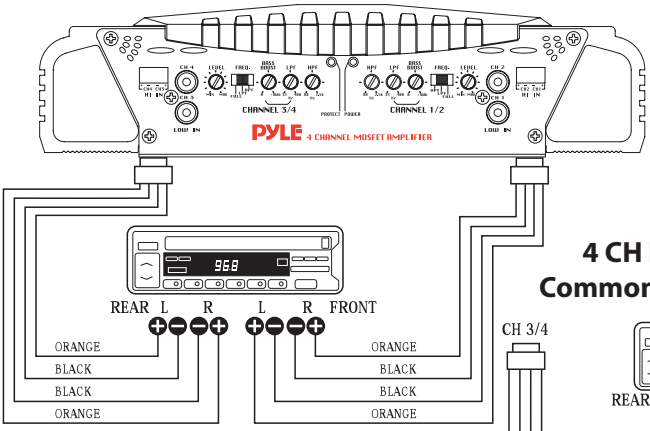
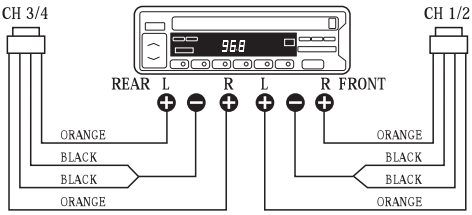
4 CH Floating Ground Connections



from speaker terminals

PLEASE NOTE:
If using high-level inputs, do not use the low-level RCA inputs at the same time.

4 CH Harness Wiring for Common Ground Connections



from speaker terminals

Mono Input Connections

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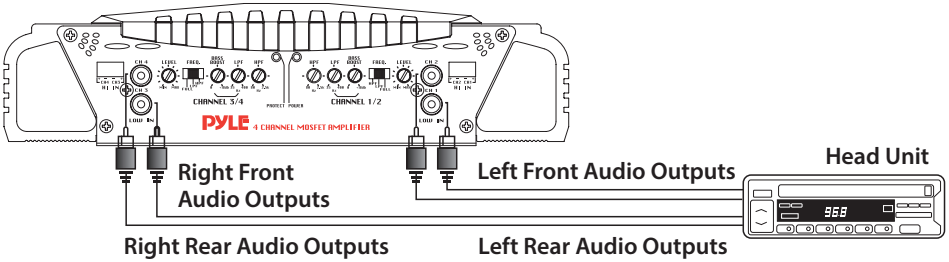
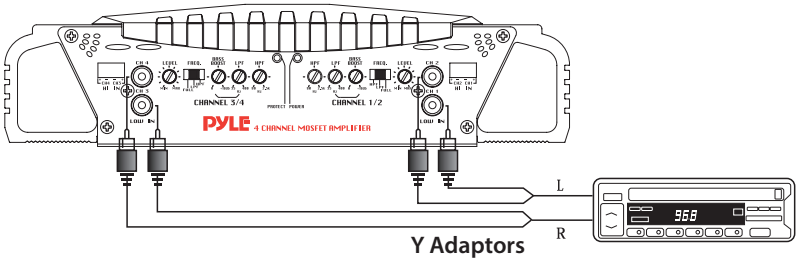
4 CH Mono Input Connections Using Low-Level Inputs



2 CH Input Connections Using Low-Level Inputs



High Level Mono Input Connections

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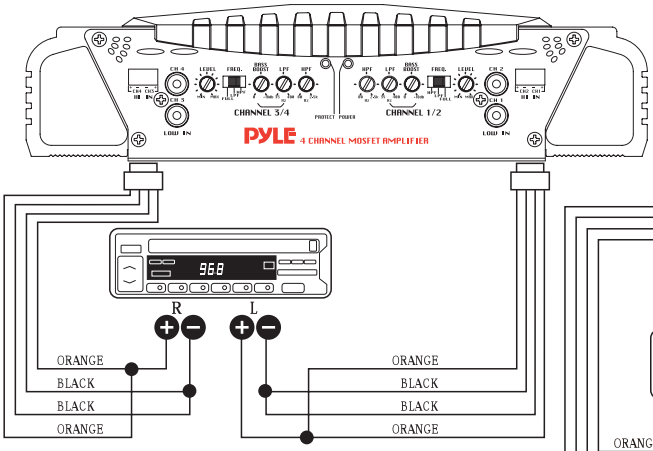
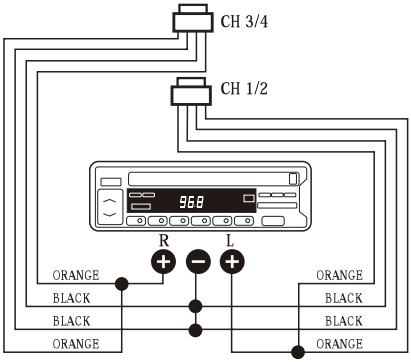
4 CH Floating Ground Connections



from speaker terminals

PLEASE NOTE:
If using high-level inputs, do not use the low-level RCA inputs at the same time.



from speaker terminals

4 CH Harness Wiring for Common Ground Connections

Speaker Connections

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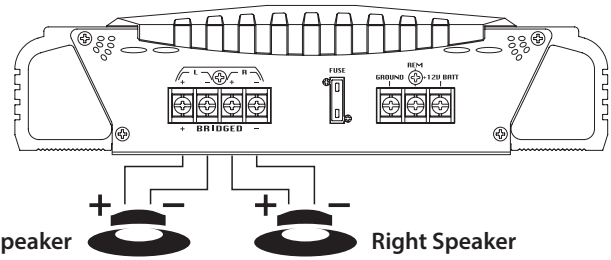
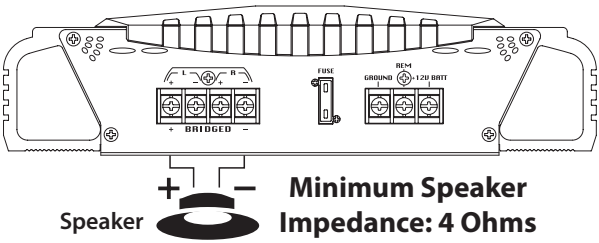
Stereo Output Mode



Bridged Mono Output Mode



Minimum Speaker Impedance: 4 Ohms

Speaker Connections

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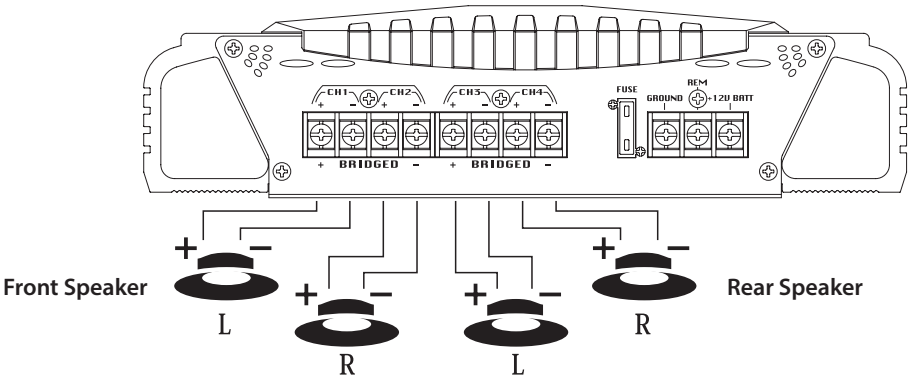
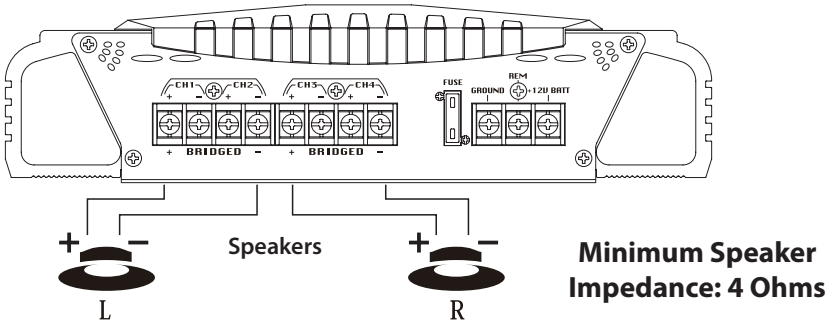
4 CH Output Mode

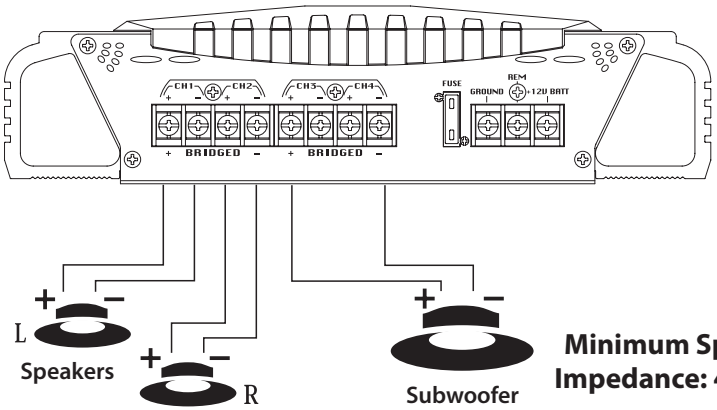


Bridged Dual Mono Output Mode



Minimum Speaker Impedance: 4 Ohms

4 CH Stereo Output Mode with Mono Bridged Subwoofer Output



Minimum Speaker Impedance: 4 Ohms

Mounting and Installation

Mounting

Your new Pyle Marine Series amplifier comes with all necessary mounting hardware. When choosing a location in your vehicle, keep in mind that the amplifier is a high-power electronic device that generates significant heat.

Key Considerations for Mounting

- Choose a location with low vibration, adequate ventilation, minimal dust, and no moisture.
- Ensure there is sufficient airflow around the cooling fins.

Steps for Mounting

1. **Position the Amplifier:** Place the amplifier where you want to install it.
2. **Mark Screw Holes:** Use a scribe or one of the mounting screws to mark the mounting surface through the screw holes. If the surface is carpeted, measure the hole centers and mark them with a felt-tip pen.
3. **Check for Obstructions:** Before drilling, check for any wires, lines, or other components behind the mounting surface.
4. **Drill Pilot Holes:** Drill the pilot holes in the marked locations.
5. **Secure the Amplifier:** Insert and tighten the mounting screws securely.

Wiring Tips

When connecting your amplifier, follow these guidelines:

- **Power and Ground Connections:** Use at least 8 gauge wire.
- **Direct Connection:** Wire the amplifier directly to the car battery.
- **Grounding:** Use the shortest possible wire to connect to a good chassis ground point.
- **Remote Connection:** Wire the Remote connection to the auto start lead of your head unit, equalizer, or power antenna.

About Power Fuses

Pyle Marine Series amplifiers have a built-in fuse system to protect both the amplifier and your vehicle's electrical system from faults.

Fuse Replacement: If you need to replace a fuse, use one with the exact same type and rating. Using a different type or rating could cause damage or a fire.

Precautions

Mounting: Do not operate the amplifier when it is unmounted. Securely attach all audio system components within the vehicle to prevent damage, especially in case of an accident.

Wiring Protection: Ensure the wire connections are protected, not pinched, and not likely to be damaged by nearby objects.

Battery Disconnection: Before making or breaking power connections, disconnect the vehicle battery. Make sure your head unit or other equipment is turned off while connecting the input jacks and speaker terminals.

Fuse Replacement: If you need to replace the power fuse, only use a fuse identical to the one supplied with the amplifier. Using a different type or rating may result in damage that isn't covered under the manufacturer's warranty.

Protection Circuitry

The built-in protection circuitry in the Marine amplifiers will disable the amplifier if it detects:

- Input overload
- Speaker short circuit
- Extreme temperature conditions

Protection LED:

When the protection circuit is activated, the Protection LED will illuminate.

Steps to Follow:

- **Thermal Overload:** If the shutdown is due to thermal overload, allow the amplifier to cool down before restarting.
- **Input Overload/Speaker Short Circuit:** If the shutdown is due to input overload or a speaker short circuit, correct the issue before restarting.
- **Restarting:** Turn the remote power OFF and then ON again to restart the amplifier.

Troubleshooting

No Output:

- Ensure all terminal strip connections are secure and tight.
- Check both in-line and built-in fuses. Both the +12V and the Remote terminals must have +12V referenced to the chassis ground.
- Verify that the audio signal source (car radio, equalizer, etc.) is connected and supplying an output signal.
- To check if the amp is supplying a signal, unplug the cables from the signal source (but leave them plugged into the amp). Briefly tap the center pin of each disconnected RCA plug with your finger. This should produce a noise (feedback) in your speakers.

Only One Channel Works:

- Ensure all terminal strip connections are secure and tight.
- Check the Balance control on the head unit (or other source) to ensure it is set to the midpoint.
- If using the Low-Level RCA input, reverse the input plugs at the amplifier (i.e., switch the L with the R). If the silent channel switches to the other side, the problem is either in the head unit/other source or the connecting cables.

Weak Output: Adjust the Input Level Control(s) to better match the input signal.

Noise in the Audio:

- **Whine (Engine Speed-Dependent):** Ensure that the amplifier and any other signal sources (head unit, etc.) are properly grounded.
- **Clicking/Popping (Engine Speed-Dependent):** This usually indicates that the vehicle has resistor spark plugs and wires, or the ignition needs servicing.
- **Check Wiring:** Ensure that the speaker and input wires are not near wires that interconnect lights and other accessories.
- **If these steps don't resolve the noise interference, consult a professional mobile audio installer.**

FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement.
The device can be used in portable exposure condition without restriction.

IC warning

- English:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

(1) L'appareil ne doit pas produire de brouillage; (2)L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

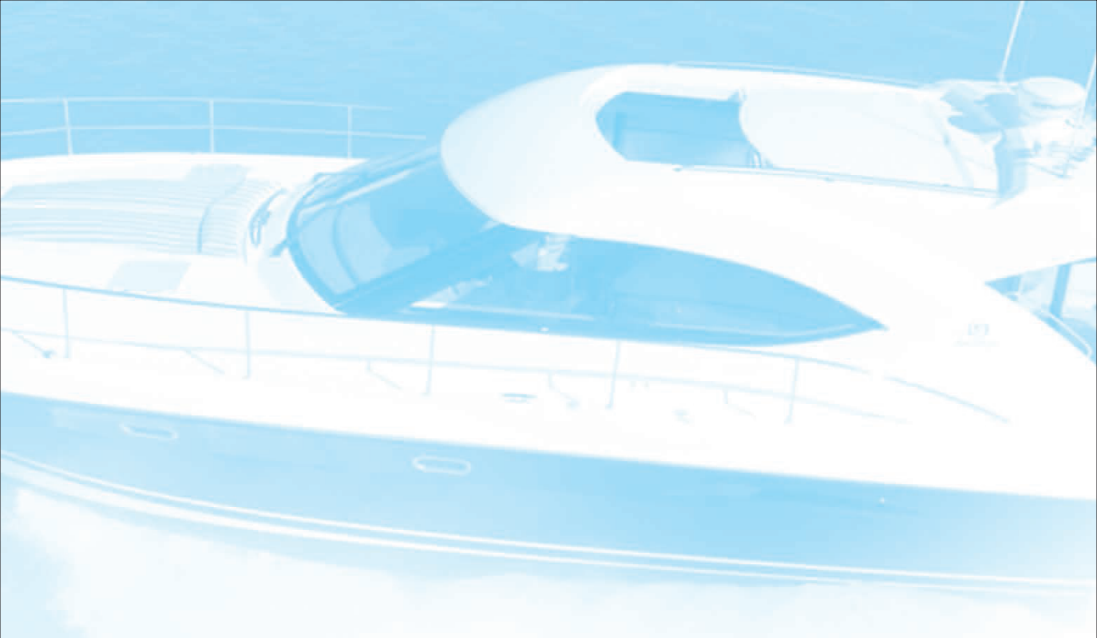
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

Register Product

Thank you for choosing PyleUSA. By registering your product, you ensure that you receive the full benefits of our exclusive warranty and personalized customer support.

Complete the form to access expert support and to keep your PyleUSA purchase in perfect condition.

PyleUSA.com/register



PYLE®

PyleUSA.com

Questions or Comments?
We are here to help!
Phone: 1.718.535.1800
PyleUSA.com/ContactUs