MPD SERIES
Owner's manual

MPD4.70
MPD4.100
MPD1.500
MPD5.550

Dear Customer,

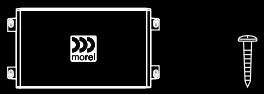
Thank you for selecting Morel's MPD amplifiers to power your system. Those amplifier models were designed with the same passion and innovative philosophy that drives all of Morel's product development. With an emphasis on high fidelity, the unique design and superior componentry provide the MPD the ability to power speakers with precise detail and an engaging musical experience few other amplifiers can produce. Their high-power output design makes them a dynamic and powerful experience for anyone seeking audiophile levels of performance.

Before installation, it is very important to reference the following manual to ensure safe and optimal operation of the amplifier. There are many parameters that needs to be taken into consideration when installing an amplifier to safeguard that the car's electrical system is not compromised in any way and the sound system is tuned properly. Morel highly recommends having your new MPD amplifier professionally installed by an authorized Morel retailer.

unleash the music

MPD

Package content



X1 X4

Available Accessories

- MPS-HL high-low level adaptor with 50-ohm load resistor

Practice Safe Sound!

Studies have shown that continuous exposure to high sound pressure levels from high power audio systems can lead to permanent hearing loss. Additionally, high volume levels can obscure noises from outside your vehicle such as emergency vehicles and horns. As a valued Morel customer, we urge you to use common sense and practice restraint in the operation of this product.

Precaution

The MPD amplifiers are designed to work with a 12VDC electrical system with negative ground. Use of this product in vehicles with positive ground and/or voltages other than 12V may result in damage to the product and/or vehicle and will void the warranty.

PLEASE MAKE SURE TO CAREFULLY READ AND UNDERSTAND ALL INSTRUCTIONS PRIOR TO INSTALLATION

Mounting

Mounting the amplifier

Choose a location for the amplifier with ample ventilation for optimum cooling performance. Be sure the amplifier is mounted with at least 2-inches (50mm) of clearance around the chassis. Never fully enclose the amplifier in a confined space without active ventilation. Also avoid mounting in areas of direct sunlight and in areas of high vibration, such as a subwoofer enclosure. Ideal mounting consists of the chassis being mounted with the base of the amplifier parallel with the floor or perpendicular to the floor with the fins of the heatsink facing upward for the most effective heat dissipation. Your amplifier should always be installed in a location that will remain free of moisture and dirt, and in a manner that does not interfere with any of the electronics or safety gear of the vehicle.

For safety purposes, be sure to take the time to properly mount the amplifier using suitable mounting hardware so the amplifier stays stationary in the event of a collision or unforeseen circumstance.

Protection

Protection

The MPD circuitry is protected by fuses located on the side panel of the amplifier. This should be used along with an inline fuse (see Planning and Installation) for proper protection.

If forever reason the amp does not power up, please check the fuse and replace with the same value.

Planning and Installation

For best results, determine the best configuration of your new amplifier and plan the wiring routes to ease installation and optimize performance.

• **IMPORTANT!** Disconnect the vehicle's primary ground terminal from the battery post prior to commencing the installation.

• Make sure the mounting location you chose for the amplifier does not interfere with any functions of the vehicle mechanics and/or electronic devices. Also, be aware of the locations of the gas tank, wiring harnesses, fuel and brake lines, and other vital components of the vehicle prior to drilling any holes in the vehicle's chassis.

• Select high quality signal cables and proper wire. It is highly recommended to use 100% OFC (oxygen free copper) power and speaker wire of proper size for best performance and longevity of the product.

• Do not run power or audio cables on the exterior of the vehicle as this can result in severe damage to the vehicle and person.

• Avoid running power and audio cables next to sensitive electronics within the vehicle, and avoid crossing the signal cables with the power cables.

• Always use rubber grommets when running wire through metal walls or barriers. Use loom to protect the cable from sharp edges or areas of high heat.

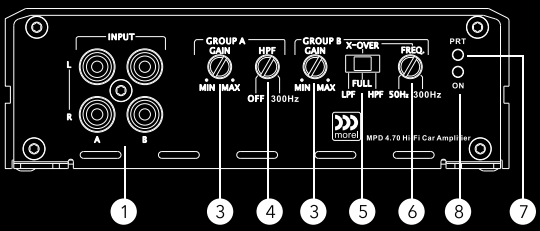
• Power amplifiers place an increased load on the electrical charging system. A modern vehicle's factory electrical system should be able to standup to the extra load of an MPS Limited amplifier without concern. However, multiple amplifier systems can draw excess current and create a strain on the electrical system. It is best to consult your audio specialist for advise on whether or not it is necessary to upgrade your electrical system to meet the demands of the audio system.

• Place an insulated in-line fuse holder (not included) of the appropriate current capacity (see specifications) within 16 inches (40cm) of the battery positive (+) terminal. This is to be connected to the (+) power cable connecting the amplifier. Only install the fuse once the power cable has been secured to the amplifier.

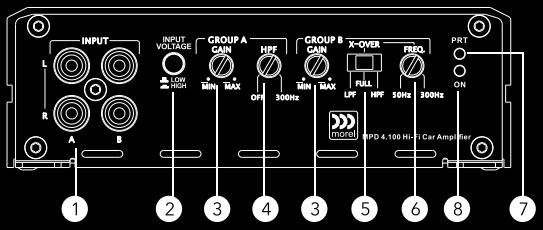
• Locate a solid metal area close to the amplifier to connect the ground wire terminal. Use the same gauge wire for ground as for the power wire. The length of the ground wire should not exceed 36 inches (90cm) from the amplifier. To ensure a solid connection, remove surface paint at the ground point prior to securing the connector in place.

Features

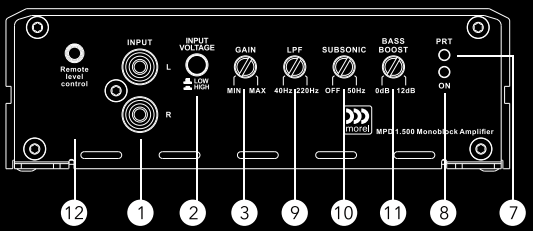
MPD 4.70 - Front panel



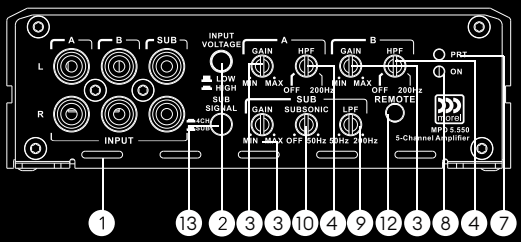
MPD 4.100 - Front panel



MPD 1.500 - Front panel



MPD 5.550 - Front panel



1 RCA Inputs

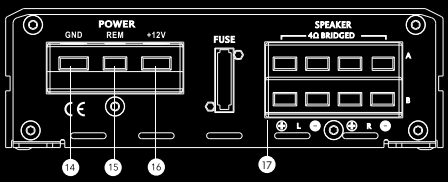
Accepts both low-level signal from an audio source via RCA style connectors.

2 High/Low Level Input Voltage Selector (MPD4.100 and MPD1.500 only)

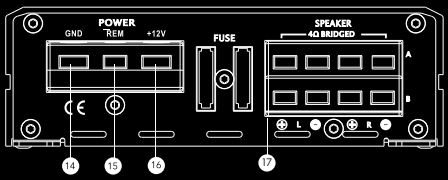
Select signal input voltage based on the type of input used. When using an aftermarket radio, DSP or line level converter, select PRE IN for levels up to 5V. When using high-level input from an amplified factory audio system, select SPK IN for levels up to 10V (MPD1.500 up to 20V). High-level inputs require the MPS-HL line level adaptor (sold separately) to convert amplified speaker outputs from factory audio systems to RCA style connections.

Features

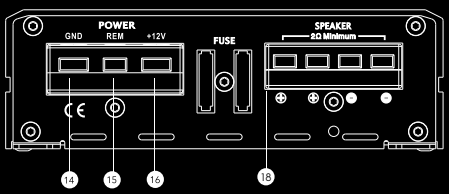
MPD 4.70 - Back panel



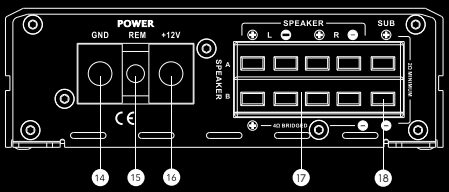
MPD 4.100 - Back panel



MPD 1.500 - Back panel



MPD 5.550 - Front panel



3 Input Level

The input sensitivity controller (gain) is used to properly match input signal level from the signal source to optimize the amplifier outputs. THIS IS NOT A VOLUME CONTROL! To set properly, the maximum unclipped output from the radio or source must be known using proper test equipment. The input level adjustments can then be adjusted to maximize output without overdriving the amplifier. If the gain is not set properly, the amplifier may clip and damage your speakers and the amplifier itself. It is highly recommended to use an authorized Morel retailer to properly install and adjust. Independent gain controls are available for Group A and Group B channels.

4 High Pass Filter Frequency

A 12dB high pass filter can be adjusted between OFF and 300Hz. (200Hz for MPD 5.550.) This is control is for Group A channels only.

5 Crossover Filter Selector

Select between Full (full range), LP (lowpass) and HP (highpass) depending on the requirements of the speakers in your system. Selecting LP or HP turns on a 12dB

Features

filter that can be adjusted using the Filter Frequency. This is selected independently for Group B channels only.

6 **Crossover Frequency Controller**
Use this feature to adjust the frequency of the crossover filter between 50 and 300Hz. This is controlled independently for Group B channels only.

7 **Protection Status Indicator**
LED will illuminate red when the amplifier is in faults into protect mode related to over current, short circuit, thermal protection or internal error within the amplifier. If the fault is caused by thermal protection, the amplifier will reset automatically once the heatsink has cooled to about 70°C (160°F). If the protection LED stays illuminated, turn the amplifier off and check the speakers and wiring.

8 **Power Status Indicator**
LED illuminates blue when amplifier is properly powered on.

9 **Low Pass Filter**
A 12dB low pass filter can be adjusted using the Filter Frequency between 40Hz and 220Hz. (50Hz and 200Hz for MPD5.550.)

10 **Subsonic Filter**
A 12dB subsonic filter (high pass crossover)can be adjusted using the Filter Frequency between OFF and 50Hz.

11 **Bass Boost**
This allows the user to boost the output of the amplifier centered around 45Hz with a range of 0 to +12dB.

12 **Remote Level Control**
Connector for optional MPS-R1 remote subwoofer level control. This allows the user to adjust the output level of the amplifier on the fly from a remote location within the vehicle.

13 **Subwoofer Input Mode Selector**

Selector allows amplifier to accept signal from Subwoofer inputs or Group A & B channels of input. Selecting 4CH will take signal from Group A and B only and send signal to Subwoofer channel.

14 **Negative Chassis Ground Connector**

Connect to a equal or larger OFC (oxygen-free copper) cable for ground as used the power wire. The length of the ground wire should not exceed 36 inches (90cm) from the amplifier. To ensure a solid connection, remove surface paint at the ground point prior to securing the connector in place.

15 **Remote Turn-On Connector**

Connect to wire lead from a switched +12V source. This could be from a head unit or switched ignition lead.

16 **+12VDC Power Connection**

Connect terminal with proper AWG OFC (oxygen-free copper) cable to the positive terminal (+12V) of the car's battery via a inline fuse. The fuse must be located within 16 inches (40cm) of the battery

17 **Left & Right Speaker Outputs**

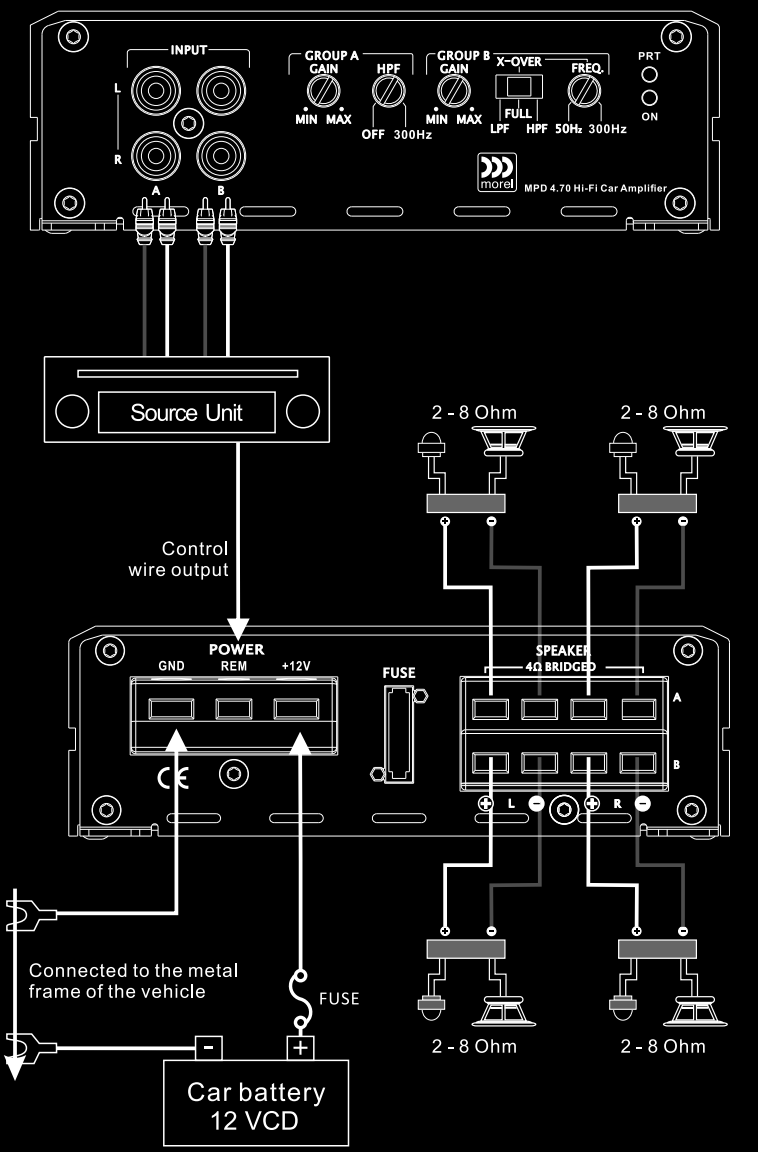
Connect speaker wire up to 12 gauge. Group A and Group B connections can be configured in stereo using the + and – of both L & R outputs, or in a mono configuration using the L+ and R- within Group A or Group B (DO NOT cross-wire between Group A and B). 3-Channel can also be configured using a stereo in Group A and mono in Group B.speakers in stereo.

18 **Subwoofer Outputs**

There are two speaker connections are labeled + and -. The two output connections are internally parallel as this is a single channel amplifier. When using both sets of + and -, you will need to use Ohm's law to calculate the impedance in a parallel configuration. Connect speaker wire up to 10 gauge.

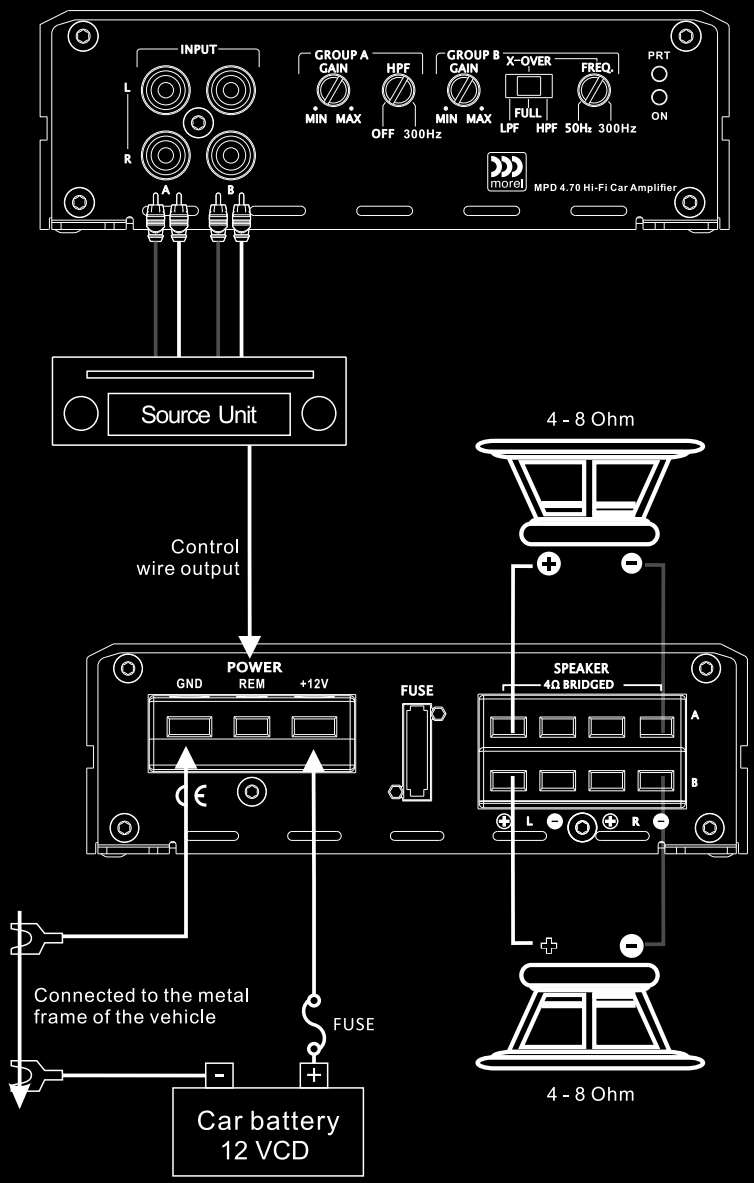
MPD4.70/MPD4.100 - Wiring diagram

4-CHANNEL STEREO MODE



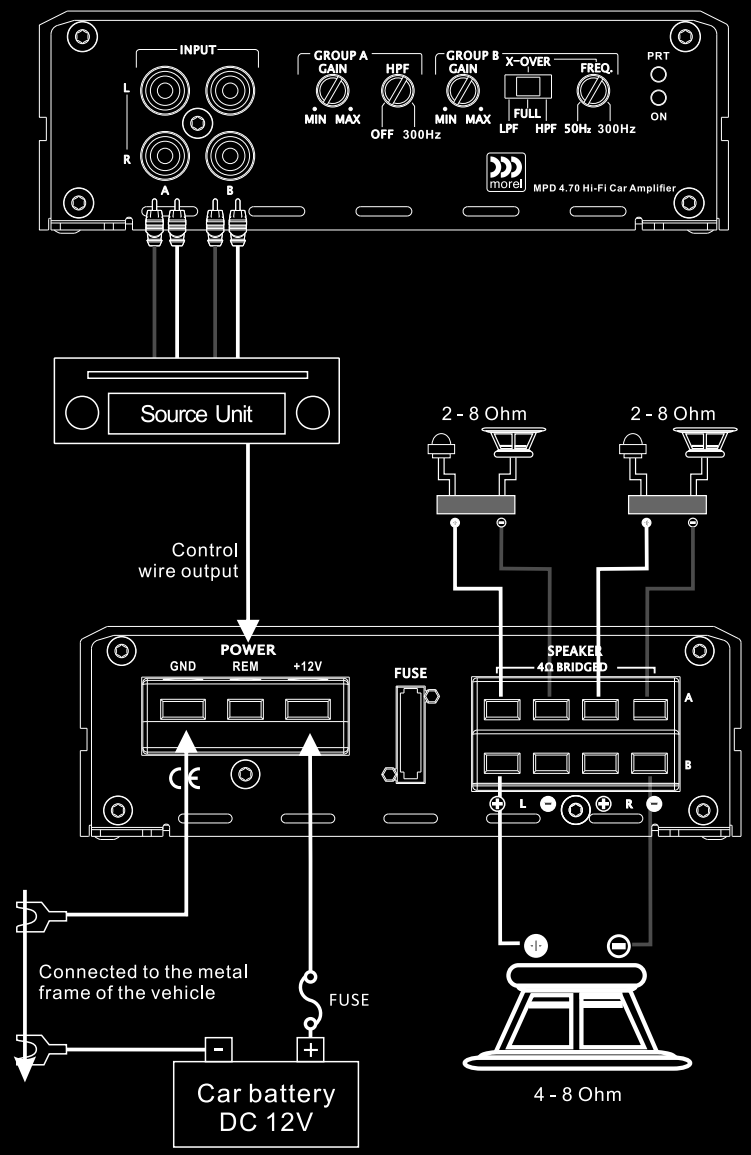
MPD4.70/MPD4.100 - Wiring diagram

2-CHANNEL BRIDGED MODE



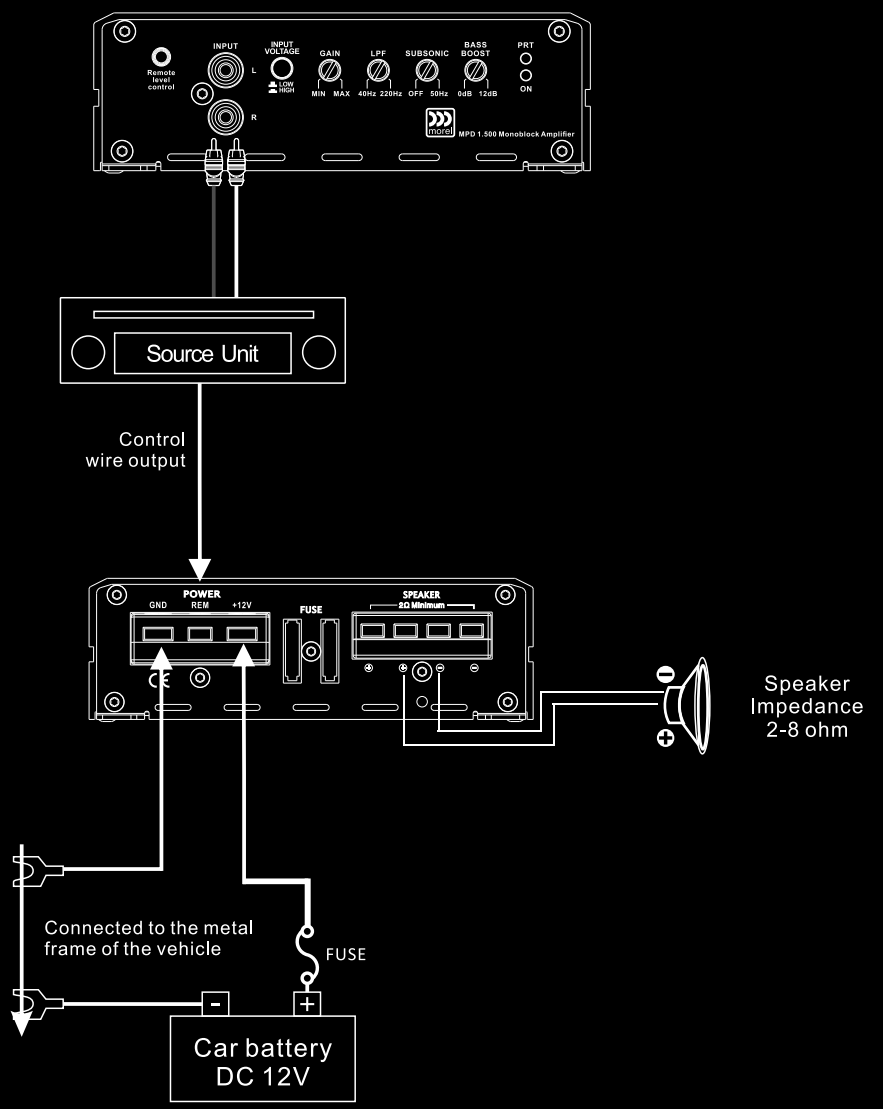
MPD4.70/MPD4.100 - Wiring diagram

3-CHANNEL STEREO + MONO MODE



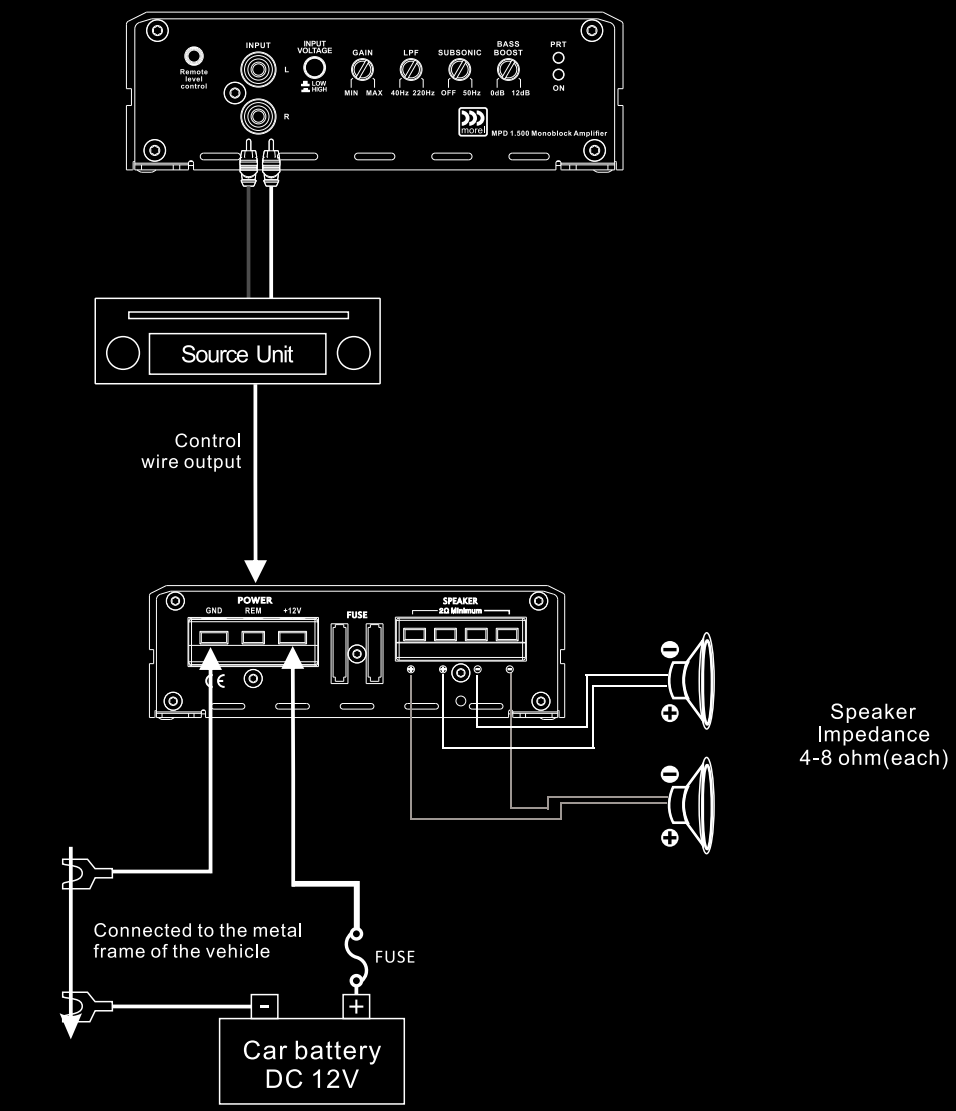
MPD1.500 - Wiring diagram

SINGLE SUBWOOFER CONNECTION



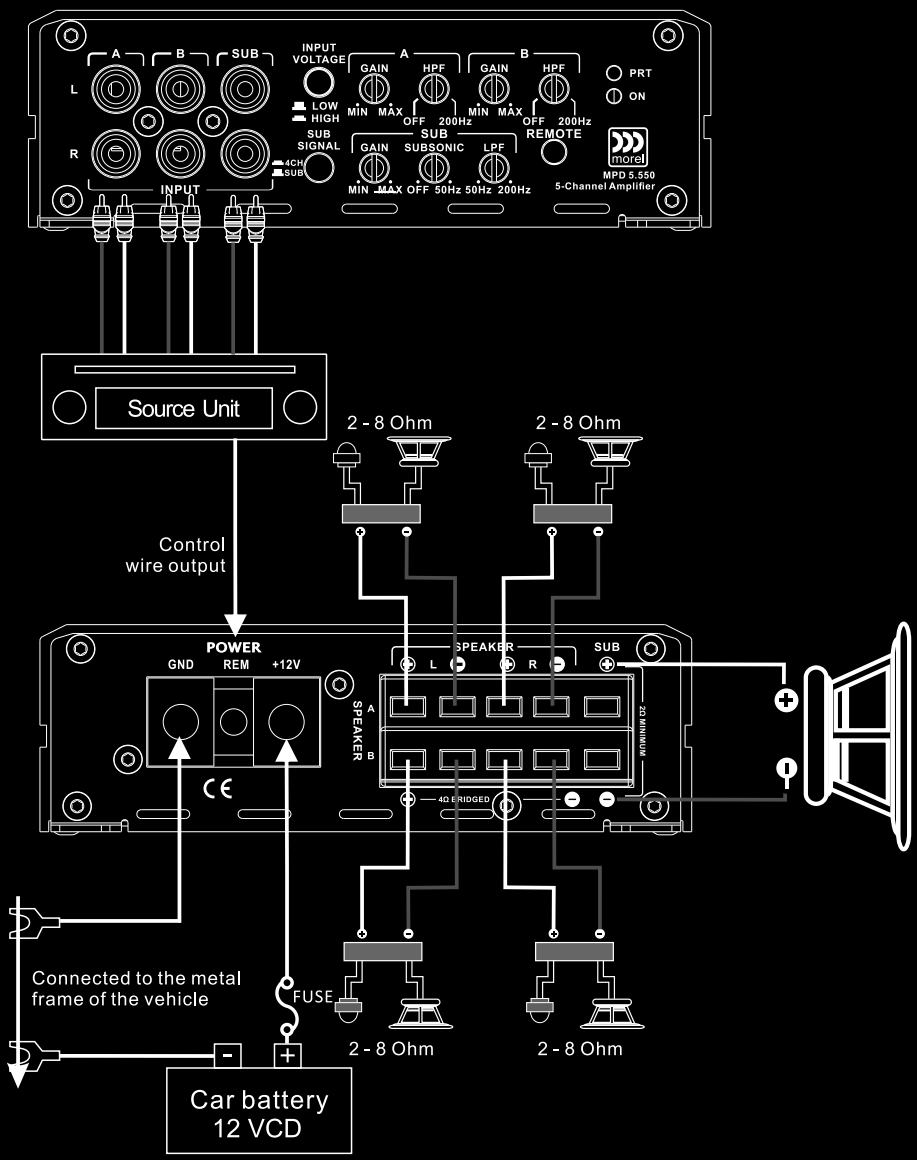
MPD1.500 - Wiring diagram

DUAL SUBWOOFER CONNECTION



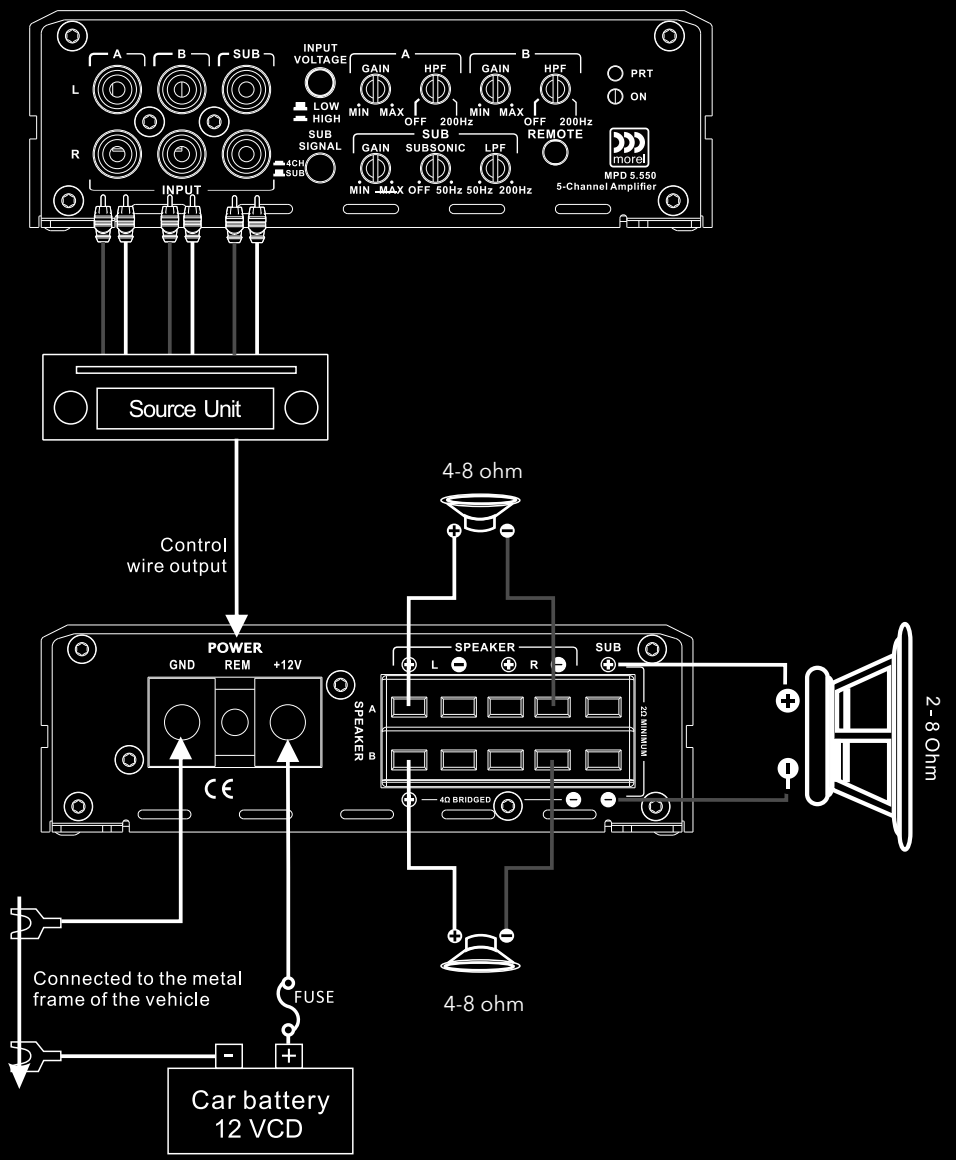
MPD5.550 - Wiring diagram

5-CHANNEL STEREO/MONO - MODE



MPD5.550 - Wiring diagram

3-CHANNEL BRIDGED - STEREO/MONO MODE



Warranty

Products purchased outside the USA are covered only by that country's Authorized Morel reseller and not Morel. Consumers needing service or warranty information for these Morel products must contact that country's reseller or distributor for warranty information including duration and coverage.

Specifications

MODEL	MPD 4.70	MPD 4.100	MPD 1.500	MPD 5.550
4Ω stereo	70w x 4	115w x 4	350w x 1	75w x 4+ 1 x 250w
2Ω stereo	100w x 4	165w x 4	550w x 1	110w x 4+ 1 x 400w
4Ω Mono/Bridged	200w x 2	330w x 2	N/A	220w x 2 (Sub N/A)
Minimum Impedance	2 Ohms	2 Ohms	2 Ohms	

SPECIFICATIONS				
THD+N	<0.2%	<0.2%	<0.3%	<0.3%
Frequency Response (+/-1dB)	20Hz~30kHz	20Hz~30kHz	10-220Hz	Main: 20HZ~30KHZ; Sub: 10-220Hz
S/N Ratio (Rated Power, A-weighted)	>93dB	>93dB	>98dB	>95dB
Channel Separation	>50dB	>50dB	N/A	>50dB
Input Voltage Range	0.2-5V	0.2-5V (PRE INPUT) 0.4-10V (SPK INPUT)	0.2-5V (PRE INPUT) 0.8-20V (SPK INPUT)	0.2-5V (PRE INPUT) 0.4-10V(SPK INPUT)

PREAMP				
Filters	HPF OFF-300Hz for Group A LPF/HPF 50Hz-300Hz for Group B	HPF OFF-300Hz for Group A LPF/HPF 50Hz-300Hz for Group B	LPF 40~220Hz Subsonic OFF~50Hz	HPF OFF-200Hz for Group A & B LPF 50-200Hz, Subsonic OFF-50Hz for SUB
Crossover slope	12dB/Octave	12dB/Octave	12dB/Octave	12dB/Octave
Remote Level Control (sub)	N/A	N/A	Optional MPS-R1	Optional MPS-R1

TURN ON				
DC Offset	No	Yes	Yes	Yes
Remote	Yes	Yes	Yes	Yes

DIMENSIONS				
Height (H)	1.9" (48mm)	1.9" (48mm)	1.9" (48mm)	1.9"(48mm)
Width (W)	5.8" (148mm)	5.8" (148mm)	5.8" (148mm)	5.8"(148mm)
Length (L)	7.7" (195.5mm)	8" (203.5mm)	7.2" (181.5mm)	11.6"(294.5mm)

FUSE RECOMMENDATION				
	Inline fuse must be used within 16"(400mm) of battery			
	50A	60A	60A	80A

*All specifications are measured using 14.4VDC

Morel is constantly developing new technology and processes to improve its products.
Morel reserves the right to modify specifications or change product design without notice.

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