



## **5.2**

### **INSTRUCTION MANUAL**

**STEREO/MONO BRIDGEABLE  
HIGH POWER CAR AMPLIFIER**

PLEASE READ THIS MANUAL BEFORE INSTALLATION AND USING AMPLIFIER

## Congratulations!

And thank you for choosing this car audio amplifier! To maximize the performance of this amplifier and your car audio system install, we recommend that you acquaint yourself thoroughly with all capabilities and features of the amplifier model you have chosen. Please read this manual carefully, before attempting the installation of this amplifier. Please retain this manual and your purchasing / installation receipts for future reference.

### **IMPORTANT NOTICE:**

**In case you are installing your amplifier by yourself, you should have your installation checked and approved by an authorized professional dealer / installer, in order to qualify for full warranty protection and also, to reach maximum power-output and audio performance possible with your individual car audio system.**

## Features

- Class "AB" Technology MOSFET PWM Power Supply.
- Bridgeable & TRI-Mode Operation.
- Continuously Variable 12dB/Octave High Pass & 12dB
- SILVER Plated RCA
- High Quality Power & Speaker Block Terminal.
- Soft Start & Muting.
- Overload, Thermal, DC off set and Short Circuit Protection.
- Power & Protection indicator.

## DESIGN FEATURES

### **CAR AUDIO AMPLIFIER :**

This amplifier allows the crossover controlled amplification of satellite speaker systems, kickwoofer or subwoofer systems

### **FULL-MOSFET CIRCUITRY :**

This amplifier line features a full MOS-FET circuitry layout, implementing MOS-FET's for power supply, to guarantee excellent sonic performance and very high power output

### **LOAD STABILITY :**

This amplifier line up features models that work stable and reliable into very low impedance loads. Due to the high damping factor, every model of this amplifier line will guaranteed to have full control over the connected speaker system(s)

### **INTEGRATED ELECTRONIC CROSSOVER :**

The internal crossover section features independently selectable highpass filtering, as well as full range loop through. All x-overs feature crossover slope rates of 12 dB/octave

### **UNCOMPROMISING DESIGN AND CONSTRUCTION :**

Only best electrical and electronic components have been used for the assembly of this amplifier line.

### **ADVANCED PROTECTION CIRCUITRY :**

The protection circuitry safe-guards the amplifier from short-circuits at the speaker outputs, DC offset voltage at the outputs and overheating of power electronics

### **STATUS AND PROTECTION LED'S:**

A green and a red LED located at the side panel enable you to monitor the operating status of your amp

### **ADJUSTABLE INPUT SENSITIVITY :**

in order to achieve maximum signal-to-noise performance "LEVEL" control adjusts the signal level from your headunit to match the amplifier's sensitivity.

### ***IT IS NOT A VOLUME OR POWER CONTROL!!***

To adjust, proceed as follows:

- a. Set input "LEVEL" control to "MIN".
- b. Turn your headunit's volume to maximum level. If distortion is heard decrease headunit's volume until the sound is clear.
- c. Turn the "LEVEL" control toward "MAX" in stages, until the onset of audible distortion is heard, then decrease to level prior to the point of audible distortion.

### **NOTE:**

***not performing above adjustment procedure and/or simply setting "LEVEL" control at or near "MAX" position, may induce electrical audio noise into the system or break down of the amplifier because driving the amplifier to distortion.***

## CONNECTIONS & CONTROLS

### FRONT PANEL

#### 1. RCA INPUTS 1/2-CH

Low-level stereo RCA signal input for connection with head-unit..

#### 2.INPUT LEVEL CONTROL

Input level control for amplifier section-allowing to match the output voltage of the head-unit's RCA line-outs to the amplifier input section.

#### 3.AMPLIFIER ACTIVE X-OVER SWITCH

a) FULL: Allows for full range pass through.

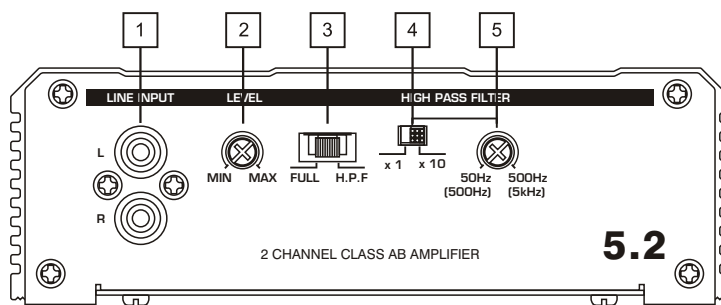
b) High position (HPF): Allows for the control of the high pass frequency range (50Hz-500Hz) by using the high Variable Control.

#### 4.AMPLIFIER ACTIVE HPF RANGE SELECT SWITCH

High position (HPF): Allows for the control of the high pass frequency range (50Hz-5KHz) by using the high Variable Control.

#### 5.HIGH PASS FREQUENCY CONTROL

Control for the frequency adjustment of the 12dB/oct. high-pass filtering of the speakers connected to output terminals.



## CONNECTIONS & CONTROLS

### REAR PANEL

#### 6. POWER LED

Green "Operation" LED, signaling correct operation of the amplifier.

#### 7. PROTECTION LED

Red "Protection" LED, signaling faulty speaker connections or general malfunction of the amplifier.

#### 8. "GND" POWER INPUT TERMINAL

Terminal to connect the amplifier to the negative or ground pole of the car battery.

#### 9. "REM" REMOTE INPUT TERMINAL

Terminal to connect the amplifier to the automatic (remote) turn-on / turn-off lead of the head unit.

#### 10. "B+" POWER INPUT TERMINAL

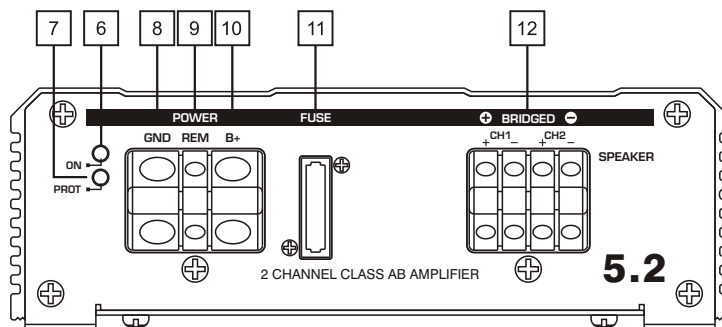
Terminal to connect the amplifier to the positive +12V pole of the car battery.

#### 11. FUSE

Fuses protect amplifier from high current so that amplifier works safely.

#### 12. SPEAKER OUTPUT TERMINALS 1/2-CH

Output terminals to connect the speakers in stereo or bridged mode to the amplifier.



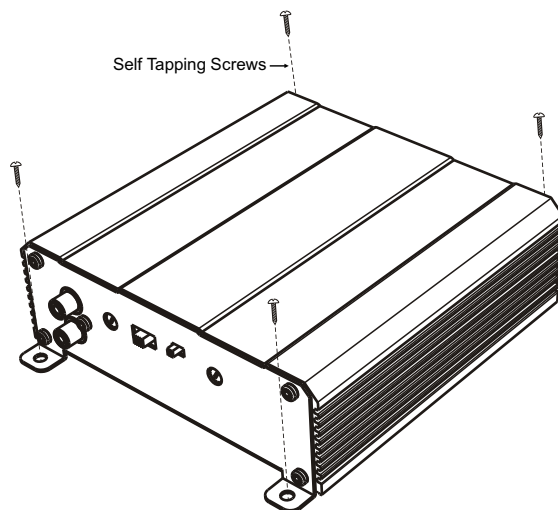
## AMPLIFIER MOUNTING

**Attention! For your own safety, disconnect the positive battery terminal (+12v) or remove the main fuse in the positive power cable near the car battery, before you start any wiring work!**

Before you proceed to install this amplifier, it is recommended to map out the complete audio system and the respective wiring required. Consider all additional electrical requirements and accessories, such as power cables, interconnect cables etc., to complete this install. Please note that because of possible interference problems with the existing car electrics and electronics especially the routing of the signal cables and the chassis ground connection will have a profound impact on the trouble free (noise free!) operation of the amplifier.

The mounting location should be carefully selected and in the interest of passive driver and passenger safety, the amplifier must be securely mounted. Make sure that there is no wiring harness, fuel tank etc. behind or below the mounting surface, that may be damaged by the drilling of the holes for the amplifier mounting screws. After installation, there should be a clearance of at least 5cm to all sides including the top of the amplifier heatsink. Make sure the unit is not exposed to direct sunlight, humidity, water, oil or spill of other fluids that may enter the amplifier.

Once the location where the amplifier will be mounted is defined, use the unit as a template for the marking of the mounting holes with pencil or felt-tip marker. The mounting holes should be pilot-drilled, using a 2,5mm or 3mm drill bit. For the actual mounting, always use the supplied rubber washers before attaching the amp to the panel with the supplied mounting screws.



## WIRING CONNECTIONS

**CAUTION:**

**AS A PRECAUTION, IT IS ADVISABLE TO DISCONNECT THE VEHICLE'S BATTERY BEFORE MAKING CONNECTION TO THE +12 VOLT SUPPLY WIRING.**

33/20/10mm<sup>2</sup> depending from the model(thicker if planning for additional amplifier) wire is recommended for both the power and ground wires. 12 Gauge, for the remote turn-on wire. Both types are available at most Mobile Audio Dealers or Installation Shops.

(1) GROUND: To Vehicle Chassis

To avoid unwanted ignition noise caused by ground loops, it is essential that the amplifier be grounded to a clean, bare, metal surface of the vehicle's chassis

**NOTE:**

**GROUND WIRE SHOULD NOT BE EXTENDED MORE THAN 3FT(1 METER)**

(2) +12 Volt(Fuse) Constant Power: To Battery(+)

Due to the power requirements of the Amplifier, this connection should be made directly to the positive(+) terminal of battery. For safety measures, install an in-line Fuse Holder (not included) as close to the battery positive (+) terminal as possible with an ampere rating; not to exceed total value of fuses in Amp.

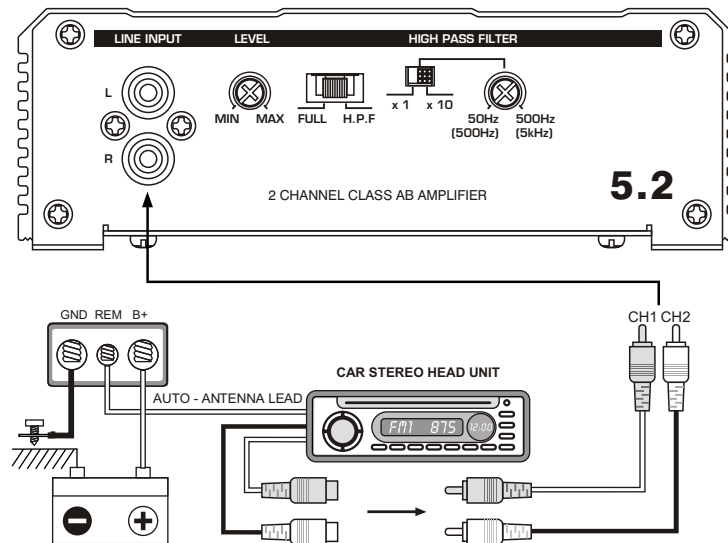
(3) Remote Turn-On Input: To Power Antenna output of Car Stereo This Amplifier is turned "ON" remotely when the vehicle's stereo is turned "ON".

**NOTE:**

**If your radio does not have a +12 Volt output lead when the radio is turned ON, the "RMT" terminal on the Amplifier can be connected to vehicle's accessory circuit that is live when the key is "ON".**

## WIRING DIAGRAM

### 2 CHANNEL



## CROSSOVER ADJUSTMENTS

### INPUT LEVEL ADJUSTMENT

To reach a maximum in dynamic response from each individual head-unit/amplifier/speaker combination, it is important to set the respective input level controls "GAIN" of all channel pairs correctly.

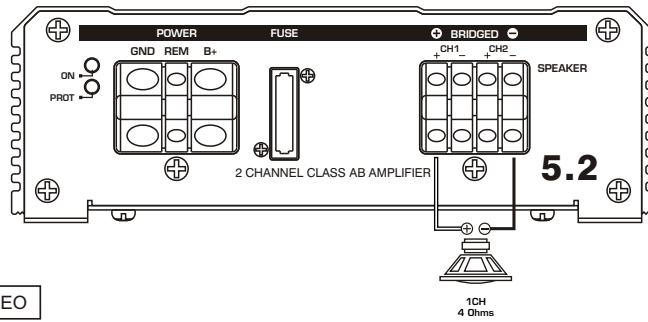
Before you start, you **MUST** set **all tone controls** (Bass, Mid, Treble, Loudness etc.) and **the fader on the head unit to their neutral or center positions.**

Now turn all input gain controls of the installed amplifiers anti-clockwise to their minimum positions and start with the channel pair, that drives the subwoofer system. The lowpass level remote control if installed in your system configuration - should be set at a low position, so there is enough headroom to turn up the bass volume later on.

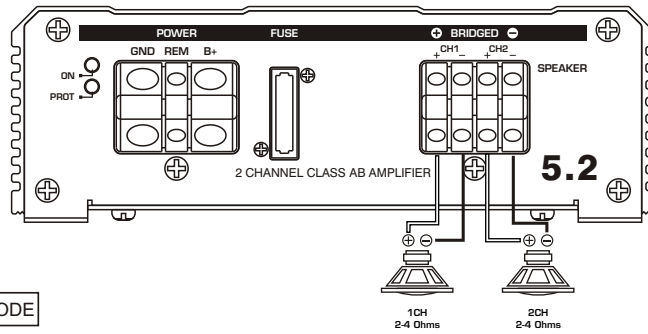
## SYSTEM WIRING DIAGRAM

### 2 CHANNEL SPEAKER CONNECTIONS

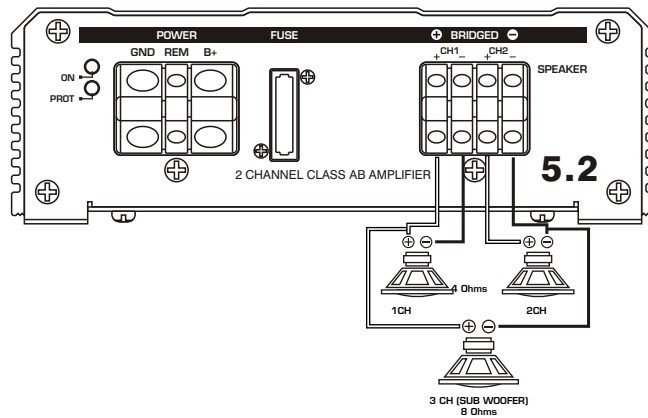
#### 1 SPEAKER BRIDGED



#### 2 SPEAKER STEREO



#### 3 SPEAKER TRI-MODE



## TROUBLE SHOOTING THE SYSTEM

We have put together this trouble-shooting guide if you experience problems after installing the amplifier. Please keep in mind that the majority of problems incurred are caused by improper installation and not the equipment itself. In addition, there are many components in the system that could cause various signal problems such as inducted electrical noise and engine noise.

Before you can properly address the problem, you must first find the component that is causing the problem. This will take patience and a process of elimination.

<b>LOOK FOR....</b>	<b>SOLUTION</b>
<b>No Output</b>	
Blown fuse	Replace
Bad RCA Cable(s)	Replace
+12V at power terminal	Check connection
+12V at remote terminal	Check connection
Grounding point clean and tight	Check for ground w/meter
Head Unit's fader not in center position	Set to center position
<b>Low Output</b>	
Check level adjustments	Re-adjust
Bad RCA cable(s)	Replace
Improper level matching	Re-adjust
<b>Engine Noise</b>	
Grounding points are clean and tight	Check for ground w/meter
Ground all components at same point	Ground at same point
Try different grounding point	Change for better ground
Bad RCA cable(s)	Replace
Use High Quality shielded RCA cables	Rejects inducted noise
Low Vehicle charging system and/or battery	Fix and/or replace
<b>Protection L.E.D. Illuminated</b>	
Speaker short	Check speakers connection for short circuit
Speaker grounding out	Make sure speaker wires do not touch chassis ground
Impedance too low	Check speaker impedance (Min 2 ohm Stereo, 4 ohm Bridged)
Overheating	Check mounting location for adequate air circulation. Speaker impedance too low

## **SPECIFICATION**

<b>AMPLIFIER</b>	<b>5.2</b>
<b>4OHM @ 0.08% THD STEREO RMS</b>	<b>65X2</b>
<b>2OHM @ 0.08% THD STEREO RMS</b>	<b>100X2</b>
<b>4OHM @ 0.08% THD MONO RMS</b>	<b>190X1</b>
<b>EFFICIENCY</b>	<b>80%</b>
<b>HIGH PASS FILTER(VARIABLE)</b>	<b>50Hz-5KHz</b>
<b>FREQUENCY RESPONSE (-1dB)</b>	<b>10Hz-30kHz</b>
<b>SIGNAL TO NOISE RATIO ('A' WTD)</b>	<b>&gt;103dB</b>
<b>INPUT SENSITIVITY</b>	<b>200mV - 6V</b>
<b>INPUT IMPEDANCE</b>	<b>10k Ohms</b>
<b>OPERATION VOLTAGE (NEGATIVE GROUND)</b>	<b>DC 12V</b>
<b>SPEAKER IMPEDANCE @ STEREO DRIVEN</b>	<b>4 Ohms</b>
<b>FUSE RATING</b>	<b>20A x 1</b>
<b>DIMENSIONS (W mm x H mm x D mm )</b>	<b>152 x 49 x 150</b>

**NOTE :**

*Specifications & design subject to change without notice for improvements.*



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