



LIMITED WARRANTY

Quantum™ Audio warrants any products purchased in the U.S.A. from an authorized Quantum™ Audio dealer. All products are warranted to be free from defects in material and workmanship under normal use and service for a period of one (1) Year. This warranty applies to the original purchase only.

Quantum™ Audio will either repair or replace (as its option) any unit that has been found to be defective and under warranty provided the defect occurs within the one (1) Year warranty period.

This limited warranty does not extend to units have been subjected to misuse, abuse, neglect, or accident. In Quantum™ Audio's judgment, products that show evidence of having been altered, modified, or serviced without Quantum™ Audio's authorization, will be ineligible under this warranty.

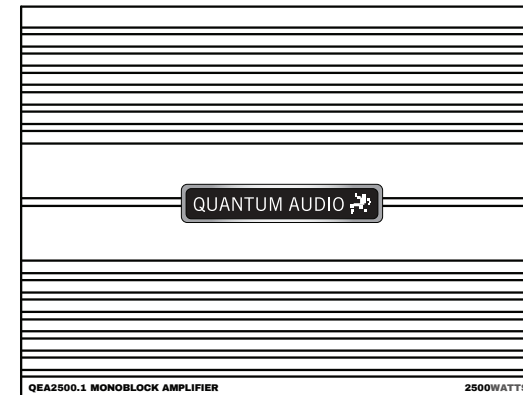
To obtain warranty service please contact your retailer or visit our website at www.quantumaudio.net for more details.



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OWNER'S MANUAL



AMPLIFIER

QEA500.4 & QEA800.4 | 4 Channel Amplifier

QEA800.2 | 2 Channel Amplifier

QEA2500.1 & QEA1500.1 | Monoblock Amplifier

CAR AUDIO SYSTEM

**PLEASE READ CAREFULLY BEFORE INSTALLING
OR OPERATING**

Congratulations on your purchase of this Quantum Audio Amplifier. Your selection of a Quantum product indicates a true appreciation of fine musical reproduction. To ensure proper use of this unit, please make sure to read the owner's manual carefully before operating and keep it for future reference.

■ KEEP YOUR SALES RECEIPT

Take this time to attach your sales receipt to the manual and put in a safe place. In case of any unforeseen reason this product may need warranty service, your receipt will be necessary to establish purchase date.

■ RECOMMENDATION

An amplifier's performance is only as good as its installation. Proper installation will maximize the system's overall performance. It is recommended that you have our product installed by an authorized Quantum retailer. If you decide to install it yourself, please carefully read through this manual and take your time to do a quality installation. Due to continuing product improvements and possible manual revisions, we recommend checking our website for the latest product information at:

www.quantumaudio.net

IMPORTANT! Before making any connections, disconnect the vehicle's battery until the installation is completed to avoid possible damage to the electrical system.

WARNING!

Exposure to high power sound system can cause hearing loss or damage. Listening to your system at loud levels while driving will impair your ability to hear traffic sounds and emergency vehicles. Use common sense when listening to your system.

Serial # _____ Model # _____

Due to continuing product improvement, specifications subject to change without notice.



■ **QEA2500.1**

Monoblock Amplifier

Features:

- Class D Circuitry
- 1Ω Load Mono Capability
- Audiophile Grade Components
- Variable Low Pass Crossover
- High Efficiency Mosfet Design
- QSINK Heat Management System
- Bass Remote Included

■ **QEA1500.1**

Monoblock Amplifier

Features:

- Class D Circuitry
- 2Ω Load Mono Capability
- Audiophile Grade Components
- Variable Low Pass Crossover
- High Efficiency Mosfet Design
- QSINK Heat Management System
- Bass Remote Included

Specifications:

■ **QEA2500.1**

2500 Watts

Monoblock Amplifier

■ **QEA1500.1**

1500 Watts

Monoblock Amplifier

Dynamic Power:	1 X 2500 Watts @ 1Ω Mono 1 X1250 Watts @ 2Ω Mono 1 X 650 Watts @ 4Ω Mono	1 X 1500 Watts @ 2Ω Mono 1 x 750 watts @ 4Ω Mono
X-over Slope:	12dB	12dB
Signal to Noise ratio:	>90dB	>90dB
Variable Subsonic Filter:	10Hz - 50Hz	10Hz - 50Hz
Low Pass Crossover:	30Hz - 250Hz	30Hz - 250Hz
Bass Boost @ 45Hz:	0-12db	0-12db
Phase Shift Control:	0-180°	0-180°
Frequency Response:	20 Hz - 250 Hz	20 Hz - 250 Hz
THD at Rated Power:	< 0.5%	< 0.5%
Input Sensitivity:	285Mv - 6V	285Mv - 6V

■ **Fuse amplifiers power wire at the battery**

Be sure to fuse the power wire within 12" of the car's battery. This will protect the car's battery in case of a short circuit between the power amplifier and battery. THIS IS A MUST, the amplifier's built-in fuse will only protect the power amplifier not the car's battery!

■ **Use high grade wire connectors**

To ensure maximum power transfer and secure safe connections, it is recommended to use high grade barrier spades (for connection at amplifier) and terminal rings (for connection at battery).

■ **Do not run any wires underneath vehicle**

Exposed wires have a chance of being cut or damaged. It is best to run all wires through the vehicle under the carpet and/or side panels. This lends to a cleaner installation and less risk of damage.

■ **Use caution when mounting amplifier**

Remember there are many electrical wires, gas lines, vacuum lines, brake lines as well as a gas tank in the automobile. Make sure you know where they are when mounting the amplifier to avoid puncturing lines, shorting wires or drilling holes in the gas tank.

■ **Run signal wires away from electrical wires**

To avoid possibility of induced noise from the car's electrical system (i.e. popping noises or engine noise), run wires away from the car's electrical wiring.

■ **Make all ground wires as short as possible and at the same point**

In order to reduce the chance of ground loops (i.e. engine noise), make the grounding wire as short as possible to reduce the wire's resistance. Also, when using multiple components, make sure all units are grounded at the same point.

■ **Avoid sharp edges when running the wires**

To avoid the possibility of power, signal or speaker shorts, be careful not to allow the amplifiers wires to come in contact with sharp edges. Use a grommet to protect the wire when running through the fire wall.

■ **DC Offset Protection**

This circuit protects the output of the amplifier against DC voltage. If for some reason DC voltage is detected at the output stage, the amplifier will shut down protecting the speakers from direct current.

■ **Short Circuit Protection**

The circuit protects the amplifier from damage due to a short found in the speakers or wiring. If one of the speakers or its wiring comes in contact with ground, the amplifier will shut down. To resume normal operation, correct the problem and turn the head unit off, then back on. The amplifier will reset and play again.

■ **Thermal Protection**

To protect the amplifier circuitry against damage caused by prolonged exposure to high temperatures, a thermal protection circuit is activated if the amplifier reaches excessively high operating temperature. Once the thermal circuit is activated, the amplifier will shut down to cool off. The amplifier will automatically turn back on once it cools down to a safe operating temperature.

■ **Power Indicator**

The diagnostic L.E.D. illuminates when the amplifier is on and receiving power.

■ **Built-in Crossover**

The Quantum QEA500.4, QEA800.4, QEA800.2 are equipped with a built in variable crossover network allowing you to select the crossover function and frequency for each the front channels or rear channels of the amplifier independently.

The Quantum QEA2500.1 & QEA1500.1 **Monoblock Amplifier** are equipped with a built in variable lowpass crossover network allowing you to select the crossover function and frequency for each the front channels or rear channels of the amplifier independently.

■ **Power and Speaker Distribution Blocks**

Heavy gauge bare wire distribution blocks are provided for maximum power and signal transfer with minimal resistance.

■ **QEA800.4 | QEA500.4 | 4 Channel Amplifier**

Features:

- Class A/B Circuitry
- 2Ω Load Stereo Capability
- Audiophile Grade Components
- Variable Low/ High Pass Crossover
- High Efficiency Mosfet Design
- QSINK Heat Management System

Specifications:

■ **QEA800.4**

■ **QEA500.4**

Dynamic Power:	3200 Watts 4 x 80 watts @ 4Ω stereo 4 x 160 watts @ 2Ω stereo 2 x 300 watts @ 4Ω bridged	2400 watts 4 x 180 watts @ 4Ω stereo 4 x 360 watts @ 2Ω stereo 2 x 600 watts @ 4Ω bridged
Ch 1-2 High Pass Crossover:	20Hz-250 Hz	20Hz-250 Hz
Ch 3-4 High pass Crossover:	20Hz-250 Hz	20Hz-250 Hz
Ch 3-4 Low pass Crossover:	50Hz - 250 Hz	50Hz - 250 Hz
X-over Slope:	12 dB	12 dB
Bass Boost @ 45Hz:	0-12dB	0-12dB
Input Sensitivity:	285Mv - 6V	285Mv - 6V
Signal to Noise ratio:	>90dB	>90dB
THD at Rated Power:	<0.5%	<0.5%

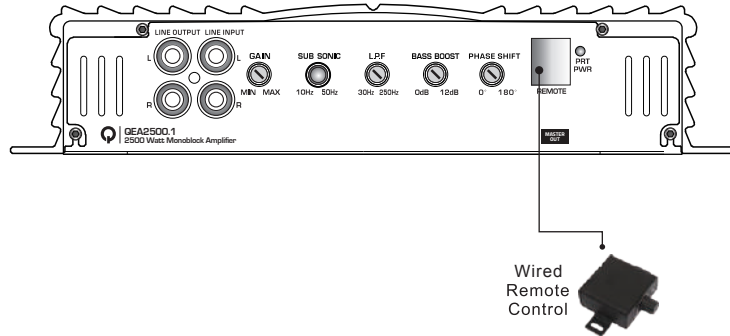
■ **QEA800.2 | 2 Channel Amplifier**

Dynamic Power:	2400 Watts 4X 100 Watts @ 4Ω Stereo 4 X 200 Watts @ 2Ω Stereo 2 X 400 Watts @ 4Ω Bridged
X-over Slope:	12 dB
Bass Boost @ 45Hz:	0-12dB
Input Sensitivity:	285Mv - 6V
HP X-Over:	120 Hz
Ch 1-2 High Pass Crossover:	50Hz - 250 Hz
Ch 1-2 Low Pass Crossover:	50 Hz - 250 Hz
Signal to Noise ratio:	>90dB
THD at Rated Power:	<0.5%

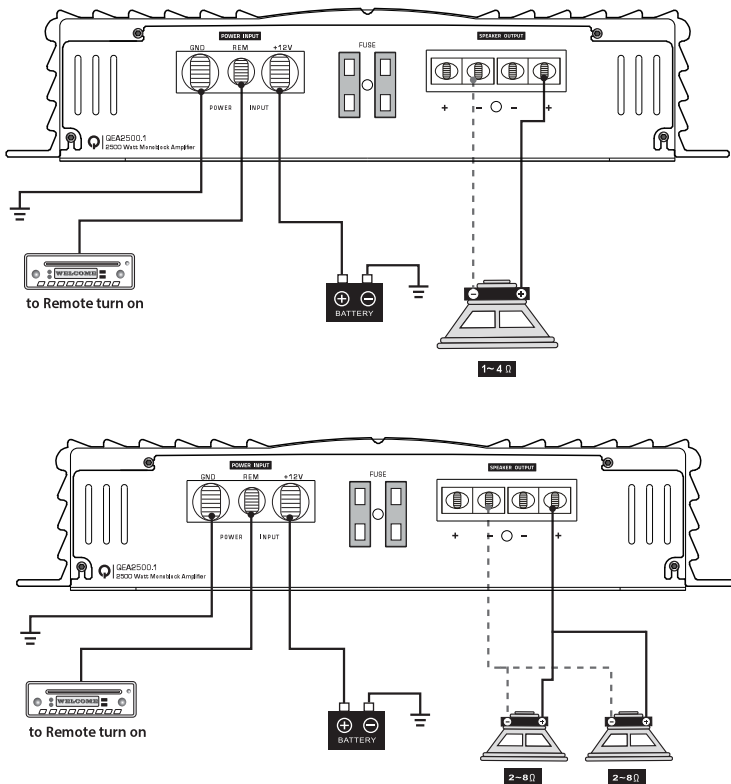
Due to continuing product improvement, specifications subject to change without notice.



■ Single Amp Input Connection



■ Speakers Connections



Full range line outputs have been provided for convenient connection to additional amplifiers in the system. The outputs are buffered to reduce signal loss.

■ Power Fusing

This protects the amplifier against short circuits and excessive current.

■ Remote Turn-on

Automatically turns amplifier on when connected to the head unit's remote output. amplifier will turn on and off with the head unit to save current consumption. This control also operates the reset circuit for the amplifier's protection. It must be connected with the head unit in order to reset protection circuits.

■ Adjustable Input Sensitivity

Allows you to fine-tune the level matching between your source and the power amplifier.

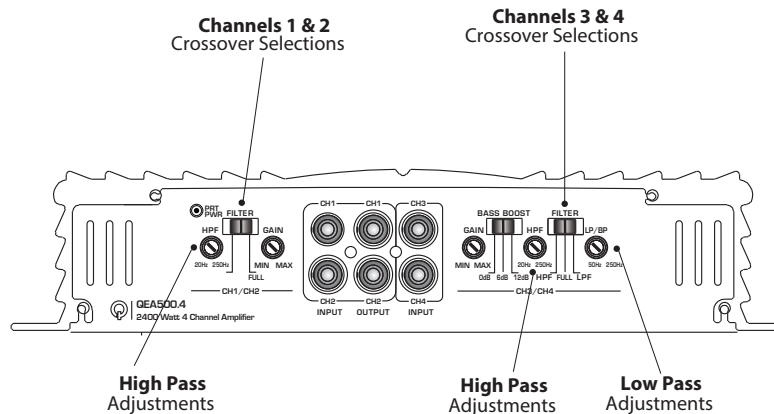
Low Impedance Stability		Height	Width	Length
4 CHANNEL STEREO AMPLIFIERS				
QEA500.4	2 Ω Stereo	1.96" / 49.79 mm	9.54" / 242.35 mm	10.82" / 275 mm
QEA800.4	2 Ω Stereo	1.96" / 49.79 mm	9.54" / 242.35 mm	11.73" / 298 mm
2 CHANNEL STEREO AMPLIFIERS				
QEA800.2	2 Ω Stereo	1.96" / 49.79 mm	9.54" / 242.35 mm	7.04" / 179 mm
MONOBLOCK AMPLIFIERS				
QEA2500.1	1Ω Mono	1.96" / 49.79 mm	9.54" / 242.35 mm	10.82" / 275 mm
QEA1500.1	2 Ω Mono	1.96" / 49.79 mm	9.54" / 242.35 mm	7.87" / 200 mm

■ 4 Channel Stereo Amplifiers

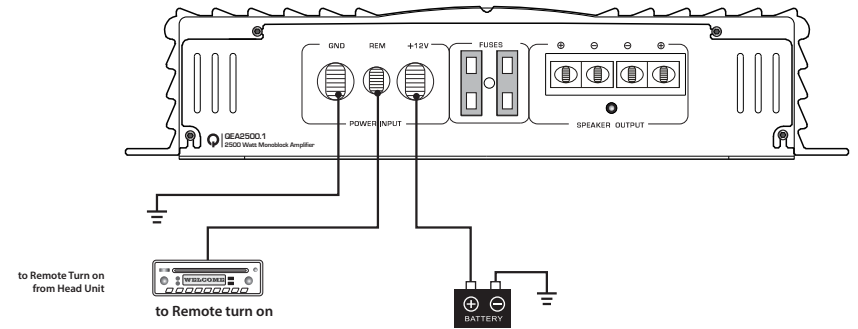
The Quantum **QEA500.4** and **QEA800.4** are equipped with a built in variable crossover network allowing you to select the crossover function and frequency for each the front channels or rear channels of the amplifier independently.

Channels 1 and 2 feature a high pass filter to protect your high frequency speakers from low bass or the option to run your speakers full range.

Channels 3 and 4 allow the user to select a High pass, Low Pass or full range signal to the loud speakers.



■ Power Connections



It is important that you read this manual very carefully and follow it for your installation carefully. Before you start your installation, please consider following concerns.

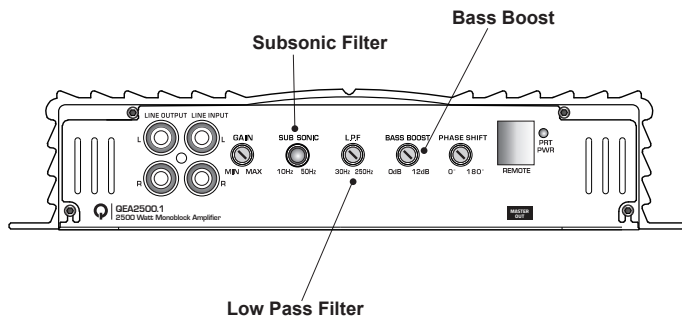
1. Disconnect the negative (-) battery cable before mounting the amplifier. Check the battery and alternator ground (-) connections. Make sure they are properly connected and free of corrosion.
2. Before selecting a mounting location for amplifier, please take some concerns into consideration with cooling efficiency and safety.
3. Power connection
Before installing amplifier, disconnect the negative (-) wire from battery to protect any accidental damage to your amplifier and System. This Amplifier is designed to use 4 AWG POWER and GROUND cables.
4. Ground connection
Locate a secure grounding connection as close to the amplifier as possible. Make sure the location is clean and provides a direct electrical connection to the frame of the vehicle. Connect one end of a short piece of the same size cables as the power cable to the grounding point. Run the other end of the cable to the amplifier mounting location. Connecting the ground cable to the screw terminal labeled as GND.
5. Remote connection
Run a remote turn on cable from the switched +12V source you will be using to turn on the system components. This may be a toggle switch, a relay, or your source unit's remote trigger wire, or power antenna trigger wire. Connect the remote turn on cable to the power terminal labeled as REM. Run this lead to the amplifier mounting location. Using 16AWG wire or larger.

■ Built - In - Crossover QEA2500.1 / QEA1500.1

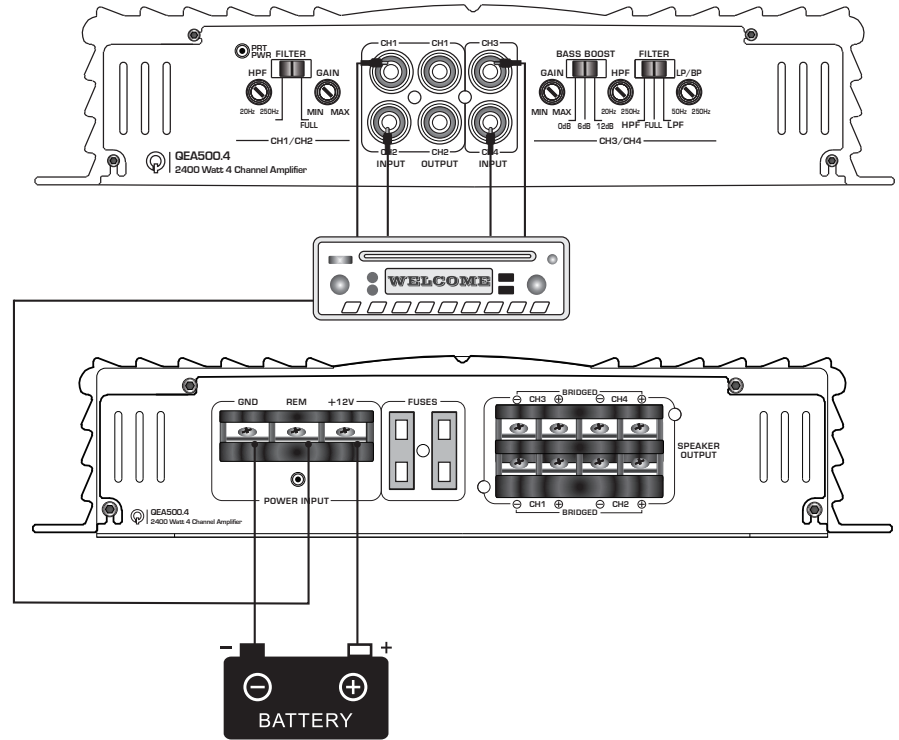
The Quantum Audio QEA Mono Amplifier are equipped with a 24 dB per octave variable Low Pass crossover.

They also feature a variable Sub Sonic filter between 15Hz - 55 Hz to protect your subwoofers from ultra-low frequencies when using vented enclosures.

A Variable Bass Boost is available to tune your subwoofer enclosure.



■ Power Connection Leads



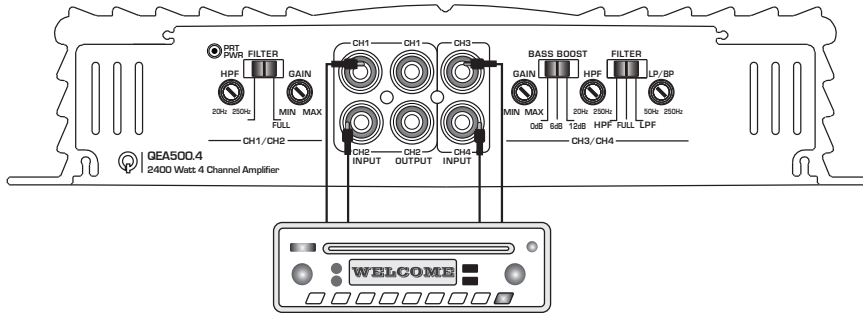
■ Notes on the Power Supply

Connect the +12V power input lead only after all other leads have been connected. Be sure to connect the ground wire of the unit securely to a metal part of the car. A loose connection may cause a malfunction of the amplifier.

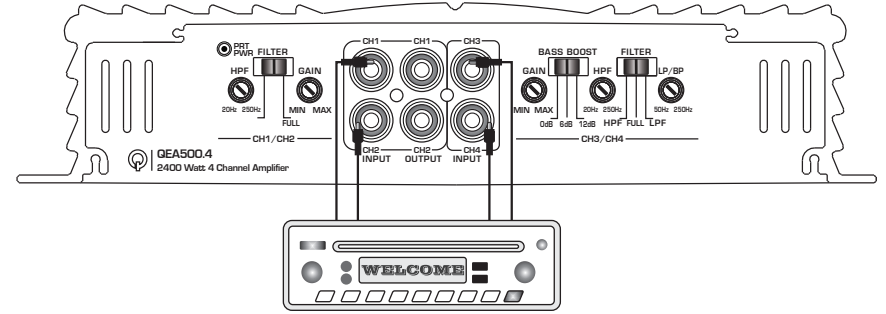
REMOTE: The unit is turned on by applying +12Volts to this terminal. This terminal does not draw heavy current like the two power terminal so a thinner connecting wire is acceptable. Standard 18 GAUGE is fine and the standard color is yellow. If the power antenna wire is already in use, you can still splice into it. With this method, the unit will turn on automatically with the radio. Use the power supply lead with a fuse attached whose value is the same as original fuse. Place the fuse in the power supply lead as close as possible to the car battery.

During a full power operation. Maximum current will run through the system. Therefore, Make sure that the leads to be connected to the +12V and GND terminals of the unit respectively must be larger than 10-Gauge (AWG 10)

■ System 1: 4 Channel Model



■ System 2: Bridged / Stereo Connection Subwoofer
QEA500.4 & QEA800.4



■ Subwoofer Connection

