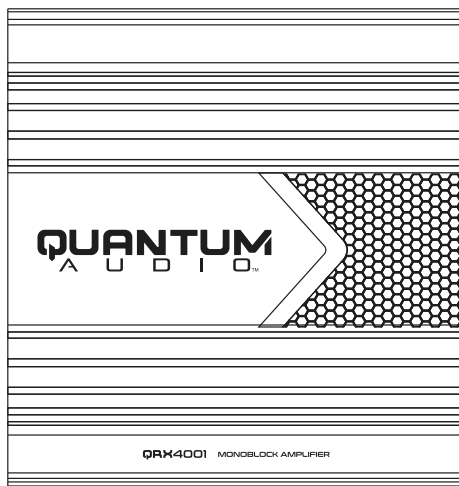


USER MANUAL



QRX2501 / QRX4001 / QRX1504

www.QuantumAudio.net

Due to continuous improvement of the product, specifications are subject to change without notice.

Introduction:

Congratulations on your purchase of a Quantum Audio amplifier. Your selection of a Quantum car audio product indicates a true appreciation of fine musical reproduction. Whether adding to an existing system or including your Quantum Audio amplifier in a new system, you are certain to notice immediate performance benefits.

Product Commitment:

DB's engineering professionals harnessed years of expertise, experience and passion, coupled with exhaustive testing and creative design to develop the optimal product and performance for your musical enjoyment. This is our commitment to you. It's what you deserve and have come to expect from Quantum Audio. We appreciate the confidence and look forward to your positive experience.

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 Audio retailer. However, if you decide to install it yourself, please carefully read through this manual and take your time to do a quality installation.

Optimal Product Choice:

To get the Maximum performance out of your stereo system, we recommend using 100% authentic Quantum Audio electronics and Quantum Audio or DB Link wiring and accessories. Matching Quantum Audio amplifiers and speakers with your state-of-the-art electronics purchase is critical to optimize your system's performance. Wiring is the lifeblood of a system, make sure your audio system has the adequate current and signal transfer it deserves and needs. Quantum Audio and DB Link has it all, from wiring rolls; speaker, power, ground and remote to amplifier kits, RCAs, and Fuse holders, distribution blocks and battery connectors. Insist on getting the best wiring accessories for your Quantum Audio system. It's what you deserve to get the optimum performance from your audio system.

IMPORTANT!

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

WARNING!

Exposure to a 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 # _____

1. QUANTUM AUDIO AMPLIFIER SPECIFICATIONS

1-1. MONOBLOCK AMPLIFIERS

QRX2501

2500 Watt Full Range Monoblock Class D Amplifier

QRX2501

Power @ 14.4 Volts: 1 x 2500 Watts @ 1Ω Mono

Power @ 14.4 Volts: 1 x 1500 Watts @ 2Ω Mono

Power @ 14.4 Volts: 1 x 750 Watts @ 4Ω Mono

1Ω Load Mono Capability

THD at Rated Power :	<0.5%
Bandwidth:	(-3 dB) - 18Hz- 20KHz
Damping Factor:	(1kHz @ 4Ω) - 126
Signal to Noise Ratio:	>90dB
Input Sensitivity:	285Mv - 6V
Minimum Load Impedance:	1Ω mono
Mono Low Pass Filter Slope:	12dB
LPF Range:	40Hz-10KHz
HPF Range:	15Hz-1KHz
Variable Bass Boost @45Hz:	0-12dB

QRX4001

4000 Watt Full Range Monoblock Class D Amplifier

QRX4001

Power @ 14.4 Volts: 1 x 4000 Watts @ 1Ω Mono

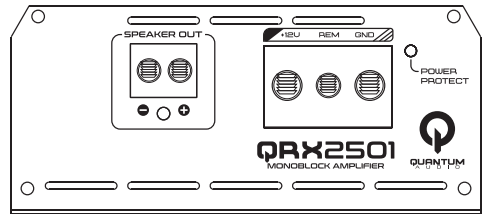
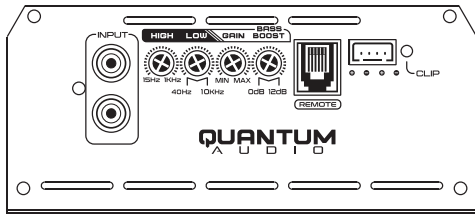
Power @ 14.4 Volts: 1 x 2000 Watts @ 2Ω Mono

Power @ 14.4 Volts: 1 x 1000 Watts @ 4Ω Mono

1Ω Load Mono Capability

THD at Rated Power :	<0.5%
Bandwidth:	(-3 dB) - 18Hz- 20KHz
Damping Factor:	(1kHz @ 4Ω) - 126
Signal to Noise Ratio:	>90dB
Input Sensitivity:	285Mv - 6V
Minimum Load Impedance:	1Ω mono
Mono Low Pass Filter Slope:	12dB
LPF Range:	40Hz-10KHz
HPF Range:	15Hz-1KHz
Variable Bass Boost @45Hz:	0-12dB

2. AMPLIFIER CONTROL and CONNECTION



1. QUANTUM AUDIO AMPLIFIER SPECIFICATIONS

1-1. 4 CHANNEL AMPLIFIER

QRX1504

1200 Watt 4 Channel Class D Stereo Amplifier

Power @ 14.4 Volts: 4 x 150 Watts @ 4 Ω Stereo

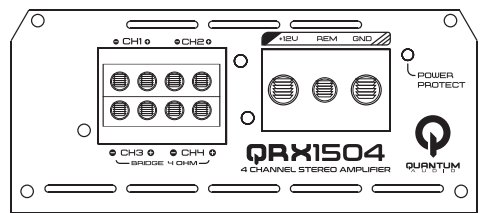
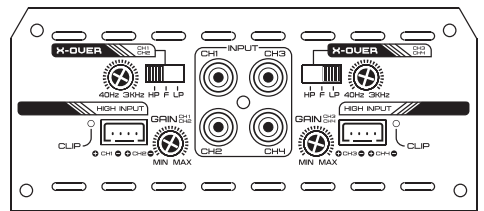
Power @ 14.4 Volts: 4 x 300 Watts @ 2 Ω Stereo

Power @ 14.4 Volts: 2 x 600 Watts @ 4 Ω Bridged

Compatibility 2 Ω Stereo

THD at Rated Power:	<0.5%
Bandwidth:	(-3 dB) - 18Hz- 22KHz
Damping Factor:	(1kHz @ 4Ω) - 100
Signal to Noise Ratio:	>90dB
Input Sensitivity:	285Mv - 6V
Minimum Load Impedance:	2Ω Stereo
Crossover Filter Slope in Stereo:	12dB
Channel 1-2 HPF Range:	40Hz - 3KHz
Channel 1-2 LPF Range:	40Hz - 3KHz
Channel 3-4 HPF Range:	40Hz - 3KHz
Channel 3-4 LPF Range:	40Hz - 3KHz

2. AMPLIFIER CONTROL and CONNECTION



INPUT

Connect RCA output cables from the head unit to Quantum Audio amplifiers' RCA Input.

GAIN (6V — 0.2V)

Matches the output voltage of the head unit's RCA line-outs to Quantum Audio amplifiers' input section.

HIGH PASS FILTER

Controls the High Pass Crossover point for the speaker outputs.

LOW PASS FILTER

Controls the Low Pass Crossover point for the speaker outputs.

+12V (POWER CONNECTION)

This must be connected to the fuse positive terminal (+12V) of the battery. Recommended wire is 4 gauge or thicker. Check the battery voltage.

GND (GROUND CONNECTION)

It is connected to the negative or ground cables of the vehicle. Recommended wire is 4 gauge or thicker.

REM (REMOTE)

It is connected to switched +12V with a trigger cable coming from the head unit.

SPEAKER OUTPUTS

It connects amplifier's terminal to subwoofer, speakers or full range speakers. Minimum speaker wire is 12 gauge.

POWER & PROTECTION INDICATOR

Power LED - Green-lit shows normal operation.

Protect LED - RED-lit shows general malfunction, faulty connection or thermal protection.

HIGH LEVEL INPUTS

Inputs should be used when your head unit or factory head unit does not feature RCA outputs. Be sure to observe polarity to avoid audio phase problems.

CLIP INDICATOR

The QRX series amplifier feature a built in clipping indicator LED. After installing the amplifier and setting up the basic crossover settings, as you begin to adjust the input gain, watch for a red blinking light. If you see the light blinking lightly with heavy bass tracks, this is indicating you're at the safe input gain limit. If the Clip LED is constantly on, turn down the gain. This means your fully clipping (distorting) the outputs. It is good to listen to various types of music as the actual amplifier inputs react different to different types of music. The idea is to find a happy medium on the amplifier input gain.

3. INSTALLATION

In case you install the Quantum Audio amplifier by yourself, please read owner's manual very carefully before your installation. Please take all steps into consideration or you can have a Quantum Audio or DB Research's authorized dealer to check installation and help install your car audio system.

3-1. MOUNTING PREPARATION

Disconnect the negative (-) battery cable before mounting your Quantum Audio amplifier or making any connections. Check the battery and alternator ground (-) connections. Make sure they are properly connected and free of corrosion before selecting a mounting location. Please take some concerns into consideration with cooling efficiency and safety.

3-2. MOUNTING PREPARATION

The Quantum Audio amplifiers use a specially designed heat radiation heat sink to avoid excessive heat from circuitry. However, for improved heat dissipation, it is good to find a mounting location where you can install Quantum Audio amplifiers vertically with the heat sink fins and better air flow around the heat sink. For safety reasons, find a dry and well ventilated location and make sure any cables and drilling car equipment are not interfering with the mounting location. Be sure the mounting location and drilling of pilot cables will not present a hazard to any cables, control cables, fuel lines, fuel tanks, hydraulic lines or other vehicle systems or components.

3-3. +12V, GND, REM CONNECTION

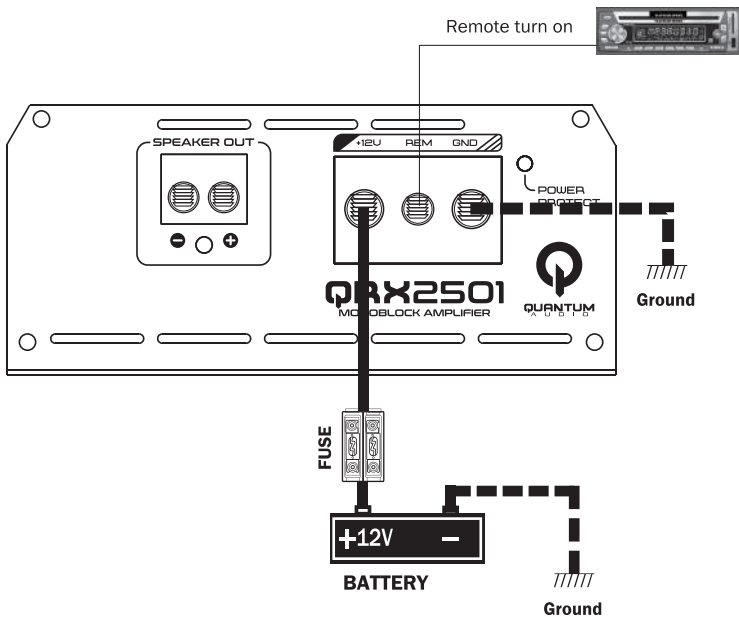
GND (GROUND CONNECTION)

Locate a secure grounding connection as close to your Quantum Audio 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 gauge cable as the power cable to the grounding point. Run one end of the cable to the grounding point, then run the other end of the cable to the mounting location. Connect the ground cable to the screw terminal labeled as GND.

REM (REMOTE CONNECTION)

Run a remote turn on cable from the head unit's remote switched +12V output.

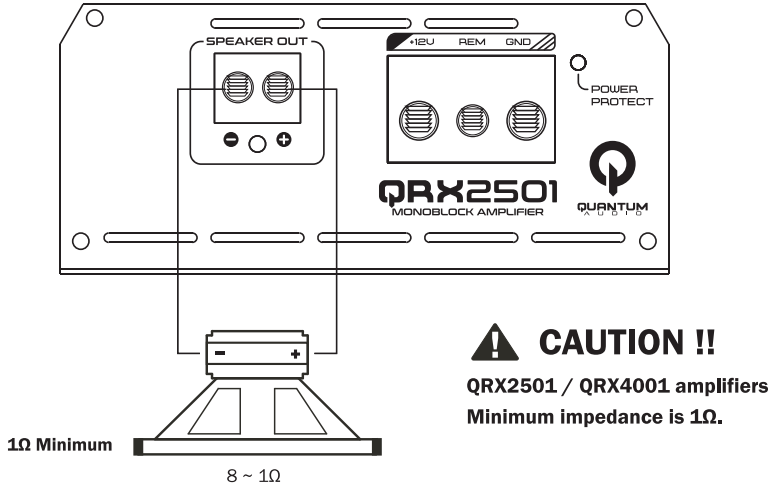
Quantum Audio AMPLIFIER +12V, GROUND, REMOTE CONNECTION DIAGRAM



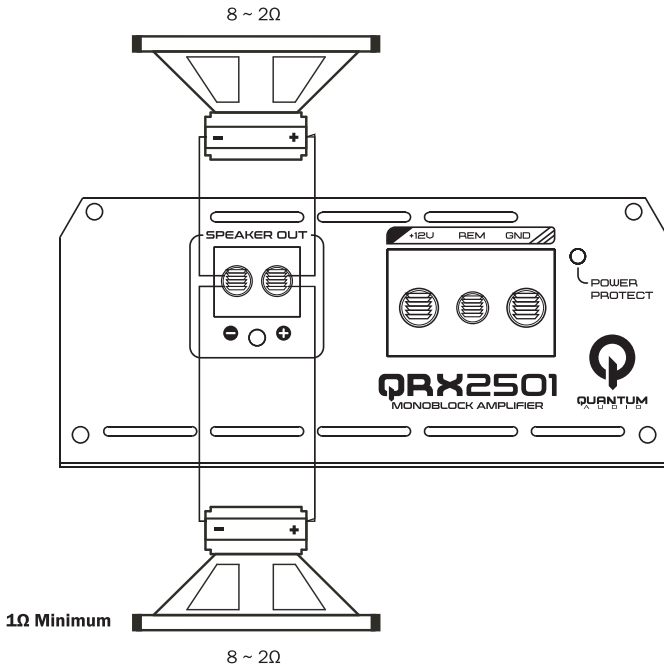
3-4. SPEAKER CONNECTION

Quantum Audio recommends to use a minimum of 12 gauge speaker connecting cables. Run 12 gauge speaker connecting cables from your speakers to the Quantum Audio amplifier's mounting location. Keep speaker cables away from the power cables and Quantum Audio amplifier's input cables. Use grommets anywhere the cables have to pass through the holes in the metal frame or sheet metal. Connect to the speakers according to the type of terminals on each speaker. Strip 3/8" of insulation from the end of each cable and twist the cables strands together tightly. Make sure there are no stray strands that might touch other cables or terminals and cause a short circuit. Crimp spade lugs over the cable ends or tin the ends with solder to provide a secure termination. Connect the cable ends to Quantum Audio amplifiers as shown on the speaker system diagram.

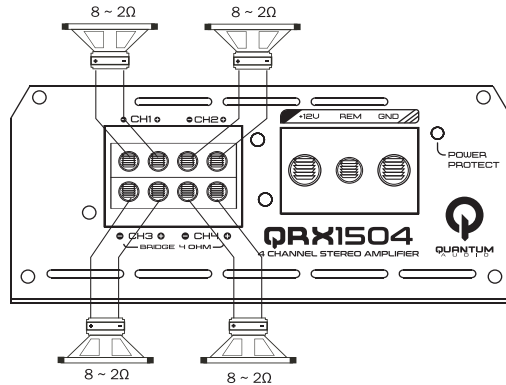
MONOBLOCK AMPLIFIER SPEAKER CONNECTION DIAGRAM 1



MONOBLOCK AMPLIFIER SPEAKER CONNECTION DIAGRAM 2

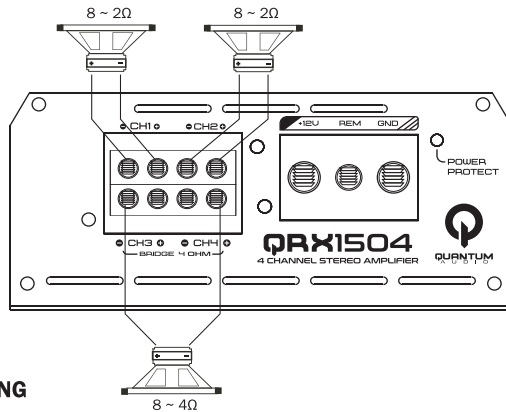


4 CHANNEL AMPLIFIER SPEAKER CONNECTION DIAGRAM 1



⚠ CAUTION !!
QRX1504
 Minimum working impedance
 is 2Ω in stereo or 4Ω bridged.

4 CHANNEL AMPLIFIER SPEAKER CONNECTION DIAGRAM 2



4. TROUBLE SHOOTING

NO POWER - NO SOUND (NO OUTPUT)

- 1) Check all connections, cable routing for short and voltage at amplifier and head unit.
- 2) Check built-in and/or external fuses. If a fuse is blown replace it with a new fuse.
- 3) Check if speakers are functioning correctly. You can test speakers by connecting to another amplifier.

PROTECTION

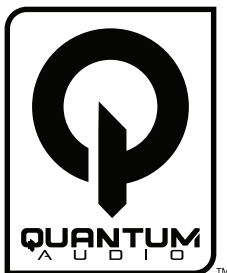
- 1) Check overload, overheat (thermal), short, voltage and DC offset.
- 2) Minimum working impedance for **QRX2501** and **QRX4001** is 1Ω. Lower than 1Ω can damage the amplifiers.
- 3) If the Quantum Audio amplifiers shut down due to overheating, reset by turning off the remote input and allowing time to cool down. Please make sure there are no airflow obstructions around the amplifier to prevent thermal protection.
- 4) All Quantum QRX amplifiers have a voltage protection of 10 ~ 15 volts. If Voltage is out of range, Quantum QRX amplifiers will go into protect mode.

POOR BASS RESPONSE

- 1) Check speaker's polarity.

WHINING NOISE

- 1) Engine noise is caused by poor grounding of amplifier, head unit, battery, alternator, or other components. Please check all grounding connections.



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 (1) year when the unit is installed by an authorized Quantum Audio dealer. Non-authorized dealer installed products carry a one (1) year parts and labor limited warranty. This warranty applies to the original purchase only.

Quantum Audio will either repair or replace (as its option) any unit that had been found to be defective and under warranty provided the defect occurs within:

One (1) year, if purchased through an authorized Quantum Audio dealer with original proof of purchase.

This limited warranty periods do not extend to units having been subjected to misuse, abuse, neglect, or accident. Products that in Quantum Audio's judgment shows evidence of having been altered, modified, or serviced without Quantum Audio's authorization, will be ineligible under this warranty.

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



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