

## Quantum QB2000D

# Quantum QB2000D Beta Series Mono Amplifier User Manual

Model: QB2000D

## 1. INTRODUCTION

Thank you for choosing the Quantum QB2000D Beta Series Mono Amplifier. This manual provides essential information for the proper installation, operation, and maintenance of your amplifier. Please read this manual thoroughly before attempting installation or operation to ensure optimal performance and safety.

The QB2000D is a high-performance mono amplifier designed for car audio systems, featuring Class AB circuitry and robust power output for driving subwoofers.

## 2. SAFETY GUIDELINES

- **Professional Installation Recommended:** Installation of car audio components can be complex. If you are unsure about any aspect of the installation, consult a qualified professional.
- **Power Disconnection:** Always disconnect the vehicle's negative battery terminal before starting any electrical work to prevent short circuits and damage.
- **Proper Wiring:** Ensure all wiring is correctly sized and securely connected. Loose connections can cause overheating, power loss, and potential damage.
- **Ventilation:** Mount the amplifier in a location that allows for adequate air circulation to prevent overheating. Do not cover the amplifier's heat sink fins.
- **Fuse Protection:** The amplifier is equipped with internal fuses. Ensure external fusing is also properly installed on the main power wire near the battery.
- **Avoid Moisture:** Do not expose the amplifier to moisture or direct water contact.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust audio levels responsibly.

## 3. PRODUCT FEATURES

The Quantum QB2000D Beta Series Mono Amplifier incorporates advanced features for superior audio performance

and reliability:

- Beta Series 2 Ohm Mono Amplifier with Class "AB" circuitry.
- Rated at 14.4 volts for stable power delivery.
- Power Output: 1 x 1000 watts @ 4 ohms, 1 x 2000 watts @ 2 ohms.
- QSINK heat management system for efficient thermal dissipation.
- Buffered pre-amp input circuitry for signal integrity.
- Continuously variable 12dB low-pass crossover.
- Continuously variable 12dB bass boost @ 45Hz.
- Continuously variable subsonic filter (15-55Hz) for mono applications.
- Direct-connect integrated speaker and power wire terminals.
- Full range RCA line outputs for easy daisy chain configuration.
- Variable input level control.
- DC-DC PWM power supply.
- DC short circuit protection.
- Bass remote capability (remote sold separately).
- Fuse type: ATC 3 x 30 amp.

## 4. PACKAGE CONTENTS

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Please check the package for the following items:

- Quantum QB2000D Mono Amplifier
- Mounting Hardware (screws)
- User Manual (this document)
- Warranty Card

*Note: Additional wiring (power, ground, RCA, speaker wire) and a bass remote are typically sold separately.*

## 5. INSTALLATION

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Proper installation is crucial for the performance and longevity of your amplifier. Always disconnect the vehicle's negative battery terminal before beginning installation.

### 5.1 Mounting the Amplifier

Choose a mounting location that provides adequate ventilation and is protected from moisture. Common locations include the trunk, under a seat, or behind a panel. Ensure the mounting surface is solid and secure.

1. Place the amplifier in the desired location and mark the mounting holes.
2. Drill pilot holes if necessary, ensuring not to damage any vehicle components beneath the surface.
3. Secure the amplifier using the provided mounting screws.



This image displays the Quantum QB2000D Beta Series Mono Amplifier. The top surface features a ribbed heat sink design for efficient thermal management, with the 'Quantum Audio' logo prominently displayed in the center. The side panels show various connection terminals and fuse holders.

## 5.2 Wiring Connections

Refer to the amplifier's terminal labels for correct connections. Use high-quality wiring of appropriate gauge.

- **Power (B+):** Connect a fused power cable directly from the positive terminal of the vehicle's battery to the amplifier's B+ terminal. The fuse holder should be installed within 18 inches (45 cm) of the battery.
- **Ground (GND):** Connect a ground cable of the same gauge as the power cable from the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle chassis. Ensure a solid, low-resistance connection.
- **Remote (REM):** Connect a remote turn-on wire from your head unit's remote output to the amplifier's REM terminal. This wire turns the amplifier on and off with your head unit.
- **RCA Inputs:** Connect RCA cables from your head unit's subwoofer or full-range pre-outs to the amplifier's RCA input jacks.
- **Speaker Outputs:** Connect your subwoofer(s) to the amplifier's speaker output terminals. Ensure the total impedance of the connected speakers is within the amplifier's specified operating range (2 ohms minimum for this mono amplifier).
- **RCA Line Outputs:** If daisy-chaining multiple amplifiers, connect RCA cables from these outputs to the inputs of the next amplifier.

## 6. OPERATION

Once all connections are made and verified, reconnect the vehicle's negative battery terminal. Turn on your head unit. The amplifier should power on, indicated by an illuminated power LED (if present).

Begin with the amplifier's gain control set to minimum and the head unit's volume low. Gradually increase the head unit's volume and then slowly adjust the amplifier's gain control until the desired output level is achieved without distortion.

## 7. ADJUSTMENTS

The QB2000D offers several adjustable controls to fine-tune your audio system:

- **Input Level (Gain):** Matches the amplifier's input sensitivity to the output voltage of your head unit. Adjust carefully to prevent distortion.
- **Low-Pass Crossover (LPF):** Filters out frequencies above the set point, allowing only lower frequencies to pass to the subwoofer. This is continuously variable (e.g., 50Hz - 250Hz).
- **Subsonic Filter:** Filters out extremely low, inaudible frequencies that can waste amplifier power and potentially damage subwoofers. This is continuously variable (15-55Hz).
- **Bass Boost:** Provides an adjustable boost at 45Hz to enhance bass impact. Use sparingly to avoid distortion and speaker damage.

Adjust these controls incrementally and listen for improvements in sound quality. Over-adjustment can lead to distortion or damage.

## 8. MAINTENANCE

The Quantum QB2000D amplifier requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Keep Clean:** Periodically wipe the amplifier's exterior with a soft, dry cloth to remove dust and debris. Do not use harsh chemicals or abrasive cleaners.
- **Ensure Ventilation:** Regularly check that the heat sink fins are clear of obstructions and dust to maintain proper cooling.
- **Check Connections:** Occasionally inspect all wiring connections for tightness and corrosion. Loose or corroded connections can degrade performance and cause overheating.
- **Fuse Replacement:** If a fuse blows, replace it only with a fuse of the exact same type and rating (ATC 3 x 30 amp). Using an incorrect fuse can lead to damage or fire.

## 9. TROUBLESHOOTING

If you experience issues with your amplifier, consult the following troubleshooting guide before seeking professional service:

Problem	Possible Cause	Solution
No Power / Amplifier does not turn on	<ul style="list-style-type: none"><li>• Blown fuse (external or internal)</li><li>• Loose power or ground connection</li><li>• No remote turn-on signal</li><li>• Faulty wiring</li></ul>	<ul style="list-style-type: none"><li>• Check and replace fuses (3 x 30A ATC)</li><li>• Verify all power, ground, and remote connections are secure</li><li>• Check remote wire for 12V when head unit is on</li><li>• Inspect wiring for breaks or shorts</li></ul>

Problem	Possible Cause	Solution
No Sound Output	<ul style="list-style-type: none"> <li>• RCA cables disconnected or faulty</li> <li>• Speaker wires disconnected or shorted</li> <li>• Amplifier in protect mode</li> <li>• Gain set too low</li> </ul>	<ul style="list-style-type: none"> <li>• Check RCA connections at head unit and amplifier</li> <li>• Verify speaker wire connections and check for shorts</li> <li>• Check for protect light; address overheating or short circuits</li> <li>• Increase gain control gradually</li> </ul>
Distorted Sound	<ul style="list-style-type: none"> <li>• Gain set too high</li> <li>• Bass boost set too high</li> <li>• Improper crossover settings</li> <li>• Speaker impedance too low</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce gain control</li> <li>• Lower bass boost setting</li> <li>• Adjust LPF and Subsonic filter settings</li> <li>• Verify speaker impedance is 2 ohms or higher</li> </ul>
Amplifier Overheats / Goes into Protect Mode	<ul style="list-style-type: none"> <li>• Insufficient ventilation</li> <li>• Speaker impedance too low</li> <li>• Prolonged high volume operation</li> <li>• Internal fault</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure adequate airflow around amplifier</li> <li>• Verify speaker impedance is 2 ohms or higher</li> <li>• Reduce volume or allow amplifier to cool</li> <li>• If problem persists, seek professional service</li> </ul>

## 10. SPECIFICATIONS

Feature	Specification
Model	QB2000D
Amplifier Type	Mono, Class AB
Rated Voltage	14.4 Volts
Output Power (RMS @ 4 Ohms)	1 x 1000 Watts
Output Power (RMS @ 2 Ohms)	1 x 2000 Watts
Low-Pass Crossover	Continuously Variable 12dB
Bass Boost	Continuously Variable 12dB @ 45Hz
Subsonic Filter	Continuously Variable (15-55Hz)
Power Supply	DC-DC PWM

Feature	Specification
Fuses	3 x 30 Amp ATC
Dimensions (L x W x H)	45.1 x 22.9 x 6.4 cm (approx. 17.75 x 9 x 2.5 inches)
Weight	5.44 kg (approx. 12 lbs)
Manufacturer	Quantum



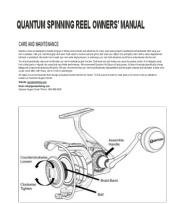
## 11. WARRANTY AND SUPPORT



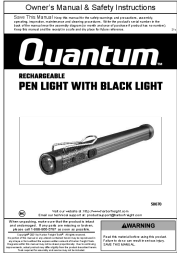
Quantum products are designed for reliability and performance. This amplifier is covered by a limited warranty. Please refer to the warranty card included in your package for specific terms, conditions, and duration of coverage.

For technical support, service, or warranty claims, please contact your authorized Quantum dealer or visit the official Quantum Audio website for contact information.

*Please retain your proof of purchase for warranty purposes.*

### Related Documents - QB2000D

 <p><b>Quantum HotSpot HS2</b> WIRELESS PORTABLE ROUTER (LTE)</p> <p>User manual</p> <p>We invite you to carefully read this manual before using it. Please keep it for future reference.</p>	<p><a href="#">Quantum HotSpot HS2 User Manual: Portable LTE Wireless Router</a></p> <p>This user manual provides comprehensive instructions for setting up and using the Quantum HotSpot HS2 portable LTE wireless router. It covers product features, installation, operation, connectivity, battery care, safety guidelines, and regulatory information.</p>
 <p><b>Quantum Q-Logic 2</b> Basic Operation Instructions</p>	<p><a href="#">Quantum Q-Logic 2 Controller Basic Operation Instructions</a></p> <p>Detailed basic operation instructions for the Quantum Q-Logic 2 controller used in power wheelchairs. Covers joystick functions, safety guidelines, menu navigation, iLevel feature, Bluetooth connectivity, error codes, and maintenance for Quantum Rehab power chairs.</p>
 <p><b>QUANTUM SPINNING REEL OWNER'S MANUAL</b> ONE-AGE INSTRUCTIONS</p>	<p><a href="#">Quantum Spinning Reel Owner's Manual: Care, Maintenance, and Operation</a></p> <p>Comprehensive guide to caring for, maintaining, assembling the handle, spooling line, and setting the drag on your Quantum spinning reel. Includes tips for optimal performance and longevity.</p>

	<p><a href="#">Quantum Q5 Smartwatch User Manual and Features</a></p> <p>Comprehensive user manual for the Quantum Q5 smartwatch, detailing setup, features, app integration with Da Fit, and troubleshooting. Learn how to use your smartwatch for activity tracking, notifications, and climate information.</p>
	<p><a href="#">Quantum SuperLoader 3 Error Code Guide</a></p> <p>A comprehensive guide to understanding and resolving error codes displayed on the Quantum SuperLoader 3, providing detailed explanations and suggested actions for each error. This document helps users diagnose and fix issues with their Quantum tape autoloader.</p>
	<p><a href="#">Quantum Rechargeable Pen Light with Black Light - Owner's Manual &amp; Safety Instructions</a></p> <p>Owner's manual and safety instructions for the Quantum Rechargeable Pen Light with Black Light (Model 58070). Includes specifications, operating instructions, charging, battery removal, and warranty information.</p>