

Excalibur X500.2

Excalibur X500.2 2-Channel 1000W Car Audio Amplifier Instruction Manual

1. INTRODUCTION

1.1 Product Overview

The Excalibur X500.2 is a compact 2-channel amplifier designed for car audio systems, offering a peak power output of 1000 watts. This amplifier provides flexible power options, delivering 2×50 W RMS at 4 Ohms or 1×150 W RMS when configured in bridged mode. It features advanced sound control capabilities, including adjustable high-pass and low-pass filters, and a bass boost function that allows for sound customization up to +12 dB. Integrated thermal and short-circuit protections ensure reliable operation. With its compact dimensions of $225 \times 230 \times 55$ mm and a weight of approximately 1.95 kg, the X500.2 is suitable for installation in various vehicle types.



Figure 1: Excalibur X500.2 2-Channel 1000W Car Audio Amplifier. This image displays the top-down view of the amplifier, showcasing its black casing with silver accents and the Excalibur logo.

2. SAFETY INFORMATION

Please read all instructions carefully before installing and operating your Excalibur X500.2 amplifier. Failure to follow these guidelines may result in damage to the amplifier, vehicle, or personal injury.

- Always disconnect the vehicle's negative battery terminal before beginning any electrical work.
- Ensure proper grounding to prevent electrical hazards.
- Use appropriate gauge wiring for power and speaker connections as specified in this manual.
- Avoid mounting the amplifier in locations exposed to direct sunlight, excessive heat, moisture, or dust.
- Do not open the amplifier casing. There are no user-serviceable parts inside. Refer all servicing to qualified personnel.
- Protect wiring from sharp edges and moving parts to prevent shorts and damage.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Excalibur X500.2 2-Channel Amplifier
- Mounting Hardware (screws)
- User Manual (this document)
- Spare Fuse (if included)

4. PRODUCT FEATURES

- **Flexible Power Output:** Delivers 2 × 50 W RMS at 4 Ohms or 1 × 150 W RMS in bridged mode at 4 Ohms.
- **Advanced Sound Control:** Equipped with adjustable high-pass (HPF) and low-pass (LPF) filters for precise audio tuning.
- **Bass Boost Function:** Provides bass amplification up to +12 dB for enhanced low-frequency response.
- **Integrated Protection:** Features thermal and short-circuit protection circuits to ensure amplifier longevity and safe operation.
- **Compact Design:** Dimensions of 225 × 230 × 55 mm allow for versatile installation in various vehicle environments.

5. CONTROLS AND CONNECTIONS

5.1 Input and Control Panel



Figure 2: Input and Control Panel. This image shows the side of the amplifier featuring the RCA input jacks, crossover switches, gain control, bass boost, and treble controls.

- **RCA Input (INPUT L/R):** Connects to the RCA pre-out from your head unit or source.
- **Crossover Switch (CROSSOVER):** Selects between High Pass Filter (HPF), Low Pass Filter (LPF), or FULL range.
- **HPF/LPF Frequency Control:** Adjusts the cutoff frequency for the selected filter.
- **Gain Control (GAIN):** Matches the amplifier's input sensitivity to the output level of your head unit.

- **Bass Boost (BASS):** Adjusts the level of bass enhancement.
- **Treble Control (TREBLE):** Adjusts the level of treble.

5.2 Power and Speaker Output Panel



Figure 3: Power and Speaker Output Panel. This image displays the opposite side of the amplifier, showing the power input terminals, fuse, and speaker output terminals.

- **Ground Terminal (GND):** Connects to a solid chassis ground point in the vehicle.
- **Remote Terminal (REM):** Connects to the remote turn-on lead from your head unit.
- **+12V Power Terminal (+12V):** Connects directly to the positive terminal of the vehicle's battery via an inline fuse.
- **Fuse Holder (FUSE 30A):** Contains the main protection fuse for the amplifier.
- **Power/Protection Indicators:** LEDs indicating power status (green) and protection mode (red).
- **Speaker Output Terminals (L/R, BRIDGE):** Connects to your speakers. Use L and R for stereo operation, or BRIDGE for mono operation.

6. SETUP AND INSTALLATION

6.1 Mounting the Amplifier

Choose a mounting location that is dry, well-ventilated, and protected from direct sunlight and excessive heat. Ensure sufficient space around the amplifier for proper cooling. Use the provided mounting hardware to secure the amplifier firmly to a solid surface in your vehicle.

6.2 Wiring Connections

1. **Power Wiring:** Run a power cable (minimum 8-gauge recommended) from the vehicle's positive battery terminal to the amplifier's +12V terminal. Install an inline fuse holder (30A) within 18 inches (45 cm) of the battery.
2. **Ground Wiring:** Connect a ground cable (same gauge as power cable) from the amplifier's GND terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a solid electrical connection.
3. **Remote Turn-On Wiring:** Connect a remote turn-on wire (18-gauge recommended) from your head unit's remote output to the amplifier's REM terminal.
4. **RCA Input Connections:** Connect RCA cables from your head unit's pre-out to the amplifier's RCA INPUT L/R jacks.
5. **Speaker Connections:** Connect your speakers to the SPEAKER OUTPUT terminals. For stereo operation, connect left and right speakers to their respective terminals. For bridged mono operation, connect a single speaker to the BRIDGE terminals. Ensure correct polarity.

7. OPERATING INSTRUCTIONS

7.1 Initial Power-Up

After all connections are made and verified, reconnect the vehicle's negative battery terminal. Turn on your head unit. The amplifier's power indicator LED should illuminate green. If the protection LED illuminates red, refer to the troubleshooting section.

7.2 Adjusting Settings

- **Gain Adjustment:** Start with the gain control at minimum. Play a familiar piece of music at a moderate volume on your head unit. Slowly increase the amplifier's gain until you hear distortion, then back off slightly. This sets the maximum clean output.
- **Crossover Settings:**
 - **HPF (High Pass Filter):** Use for full-range speakers to block low frequencies, preventing distortion and improving clarity. Adjust the frequency to suit your speakers.
 - **LPF (Low Pass Filter):** Use for subwoofers to allow only low frequencies to pass, ensuring deep bass reproduction. Adjust the frequency to match your subwoofer's characteristics.
 - **FULL:** Allows all frequencies to pass through.
- **Bass Boost and Treble:** Adjust these controls to fine-tune the sound to your personal preference. Use sparingly to avoid distortion.

8. MAINTENANCE

The Excalibur X500.2 amplifier requires minimal maintenance. Keep the unit clean and free from dust and debris. Periodically check all wiring connections to ensure they are secure and free from corrosion. Do not use harsh chemicals or abrasive cleaners on the amplifier's surface.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
No Power (Power LED off)	Blown fuse, poor power/ground connection, no remote signal.	Check amplifier fuse, inline fuse, power and ground wiring. Verify remote turn-on signal from head unit.

Problem	Possible Cause	Solution
Protection LED on (Red)	Short circuit in speaker wiring, amplifier overheating, impedance too low.	Check speaker wiring for shorts. Ensure proper ventilation. Verify speaker impedance matches amplifier specifications.
No Sound	RCA cables disconnected, gain too low, head unit settings.	Check RCA connections. Adjust gain. Verify head unit volume and settings.
Distorted Sound	Gain too high, improper crossover settings, damaged speakers.	Reduce gain. Adjust crossover settings. Inspect speakers for damage.





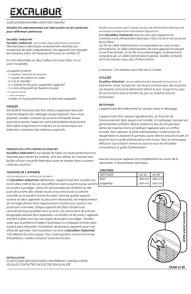
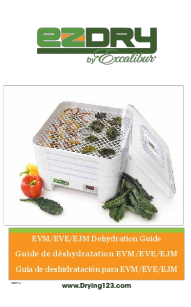
10. SPECIFICATIONS

Feature	Specification
Model Number	X500.2
Brand	Excalibur
Number of Channels	2
Output Power (Peak)	1000 Watts
RMS Power (4 Ohms)	2 x 50W
RMS Power (4 Ohms Bridged)	1 x 150W
Dimensions (L x W x H)	225 x 230 x 55 mm (approx. 8.86 x 9.06 x 2.17 inches)
Weight	1.95 kg (approx. 4.3 lbs)
Voltage	8 Volts (Operating)
Maximum Supply Voltage	12 Volts
Mounting Type	Through-hole or Surface Mount
Compliant Specifications	CE, RoHS
Material	Plastic
Country of Origin	China

11. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Excalibur website. Keep your proof of purchase for warranty claims.

Related Documents - X500.2

 <p>OWNER'S MANUAL X4100.4 CAR AUDIO SYSTEM PLEASE READ CAREFULLY BEFORE INSTALLING OF YOUR NEW UNIT</p> <p>WARNING Read and understand all instructions before attempting to install or use this product. Failure to follow instructions may result in property damage, personal injury, or death.</p>	<p>Excalibur X4100.4 Car Audio System Owner's Manual</p> <p>This owner's manual provides essential information for the Excalibur X4100.4 Car Audio System, including installation guides, system planning, troubleshooting tips, and technical specifications. Learn how to properly set up and operate your car audio amplifier.</p>
	<p>Excalibur Dehydrator: Comprehensive Dehydration Guide</p> <p>A detailed guide to using the Excalibur Dehydrator for preserving fruits, vegetables, meats, and more. Includes preparation, drying, storage, recipes, and troubleshooting.</p>
	<p>Excalibur X600.4 Car Audio System User Manual</p> <p>User manual for the Excalibur X600.4 Car Audio System, covering installation, connections, safety precautions, and troubleshooting for optimal performance.</p>
	<p>Excalibur RF-50-EDP Deluxe 2-way OEM Upgrade & Range Extender Operation Guide</p> <p>This operation guide provides detailed instructions for the Excalibur RF-50-EDP, a deluxe 2-way OEM upgrade and range extender system. It covers controller and transmitter overview, functions like locking, unlocking, trunk release, remote start, panic mode, auxiliary functions, and advanced features such as low battery/temperature auto-starting and pit-stop mode. The guide also explains security features, valet switch usage, status light indicators, controller options, and programming procedures for transmitters and system features.</p>
	<p>Manuel d'utilisation et spécifications du désinsectiseur Excalibur Industriel</p> <p>Guide complet pour le désinsectiseur électrique Excalibur Industriel, incluant l'installation, l'utilisation, le nettoyage, la maintenance et les spécifications techniques des modèles EXI 40 et EXI 80.</p>
	<p>EZ Dry Dehydrator Guide: EVM/EVE/EJM Models</p> <p>Comprehensive guide for operating and maintaining EZ Dry dehydrators (EVM, EVE, EJM models) by Excalibur. Learn about food preparation, drying basics, temperature settings, and various uses like making fruit leathers and jerky.</p>