Crown XLS2502

Crown XLS2502 2-Channel Class D DriveCore Professional Audio Power Amplifier User Manual

Model: XLS2502

Overview	Setup	Operation	Maintenance	Troubleshooting	Specifications	Warranty & Support

1. PRODUCT OVERVIEW

The Crown XLS2502 is a 2-channel Class D DriveCore professional audio power amplifier designed for exceptional performance and versatility in various audio setups. It features a sleek design with an LCD display and advanced Digital Signal Processing (DSP) capabilities.

Key Features:

- 2-channel XLS DriveCore 2 Series Power Amplifier
- 775W Continuous/channel at 4 ohms
- Lightweight 10.8-lb chassis
- Remote Power On/Off functionality
- Integrated Digital Signal Processing (DSP)
- PureBand Crossover System
- Peakx Limiters for speaker protection
- XLR/RCA Inputs for broad compatibility

Figure 1: Front view of the Crown XLS2502 Power Amplifier.

2. SETUP INSTRUCTIONS

Proper setup ensures optimal performance and longevity of your amplifier. Follow these steps carefully.

2.1 Unpacking and Inspection

Carefully remove the amplifier from its packaging. Inspect the unit for any signs of damage that may have occurred during shipping. Retain all packaging materials for future use or return if necessary. The box typically contains the amplifier unit and a power cable.

2.2 Placement and Ventilation

Place the amplifier in a well-ventilated area. Ensure that the front and rear vents are not obstructed to allow for proper airflow. This amplifier is designed for rack mounting but can also be placed on a stable surface. Maintain adequate space around the unit for cooling.

2.3 Input Connections

The XLS2502 offers versatile input options. Connect your audio source (mixer, preamplifier, etc.) to the amplifier using either XLR or RCA cables. For balanced connections, use XLR. For unbalanced connections, use RCA.

Figure 2: Rear panel showing input and output connections.

2.4 Output Connections

Connect your loudspeakers to the amplifier's output terminals. The XLS2502 uses SpeakON connectors for secure and reliable speaker connections. Ensure correct polarity (+ to + and - to -) for each channel. The amplifier supports both dual-channel and bridged-mono operation.

Video 1: A close-up demonstration of the Crown XLS series amplifier, highlighting front panel controls and rear panel connections. This video provides a visual guide to the physical aspects of the amplifier.

2.5 Power Connection

Connect the supplied AC power cord to the amplifier's power inlet and then to a suitable AC power outlet. Verify the voltage selector switch (if present and accessible) matches your local power supply (e.g., 120V or 240V). The unit features a reset button for power-related issues.

3. OPERATING INSTRUCTIONS

Familiarize yourself with the amplifier's controls and DSP features for optimal sound management.

3.1 Front Panel Controls

- **Power Button:** Turns the amplifier on or off.
- **Gain Controls (CH1, CH2):** Adjust the input sensitivity for each channel.
- **LCD Display:** Shows current settings, DSP parameters, and status information.
- **Menu/Select Button:** Navigates through menus and confirms selections.
- **Previous/Next Buttons:** Used for navigating menu options.
- **LED Indicators:** Signal, Clip, Thermal, and Power indicators provide visual feedback on amplifier status.

Figure 3: Close-up of the front panel controls and LCD display.

3.2 Digital Signal Processing (DSP)

The XLS2502 incorporates powerful DSP functions accessible via the front panel LCD and buttons. These include:

- **Crossover:** Configure high-pass and low-pass filters to optimize frequency distribution to your speakers.
- **EQ:** Adjust equalization settings to fine-tune the audio response to your environment.
- **Delay:** Apply delay to align speaker outputs in time.
- **Peakx Limiters:** Protect your speakers by preventing excessive signal peaks.

Refer to the on-screen menu for detailed navigation and parameter adjustments for each DSP function.

4. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of your amplifier.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the amplifier. Avoid using liquid cleaners or solvents, as they may damage the finish or internal components.
- **Ventilation:** Periodically check that all ventilation openings are clear of dust and debris. Blocked vents can lead to overheating and potential damage.
- **Connections:** Ensure all input and output cables are securely connected. Loose connections can cause signal loss

or intermittent performance.

5. TROUBLESHOOTING

If you encounter issues with your XLS2502 amplifier, consult the following common troubleshooting steps before seeking professional service.

Problem	Possible Cause	Solution
No Sound Output	Power cable disconnected Input cables loose or incorrect Speaker cables loose or incorrect polarity Source device not sending signal Amplifier in standby or muted	Check power connection and outlet. Verify input cable connections and integrity. Ensure speaker cables are secure and correctly wired. Confirm source device is powered on and playing audio. Check amplifier display for standby/mute status and adjust.
Distorted Sound	Input signal too high (clipping) Speaker impedance mismatch Damaged speaker or cable	Reduce input gain on amplifier or source. Ensure speaker impedance matches amplifier's rating. Inspect speakers and cables for damage.
Amplifier Overheating (Thermal LED on)	Poor ventilation Excessive load on amplifier	Ensure vents are clear and adequate airflow. Reduce volume or check speaker impedance. Allow amplifier to cool down.

6. SPECIFICATIONS

Detailed technical specifications for the Crown XLS2502 amplifier.

Feature	Detail
Model Number	XLS2502
Number of Channels	2
Output Power	775 Watts (per channel at 4 ohms)
Voltage	240 Volts (AC)
Item Weight	10.8 pounds
Product Dimensions (L x W x H)	10.7 x 19 x 3.5 inches
Material	Plastic, Aluminum
Mounting Type	Surface Mount (also rack-mountable)
Specification Met	FCC
UPC	691991001161 (Primary, others listed in product data)

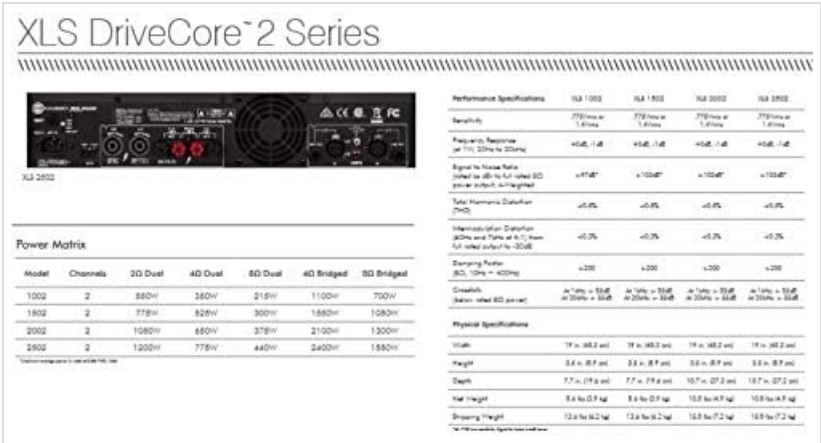| Feature	Detail
Date First Available	June 5, 2015

Figure 4: Performance specifications table for the XLS DriveCore 2 Series.

7. WARRANTY AND SUPPORT

7.1 Warranty Information

Crown products are designed for reliability and performance. For specific warranty terms and conditions applicable to your region, please refer to the warranty card included with your product or visit the official Crown website. Warranty coverage typically includes defects in materials and workmanship for a specified period from the date of purchase.

7.2 Customer Support

Should you require technical assistance, service, or have questions regarding your Crown XLS2502 amplifier, please contact Crown customer support. Contact information can usually be found on the official Crown website or in the documentation provided with your product.

Online Resources: For additional information, FAQs, and software updates, visit the official Crown website:
www.crownaudio.com