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## Memphis CX23

# Memphis Audio CX23 3-Way Car Electronic Crossover Processor

## USER MANUAL

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## 1. Introduction

The Memphis Audio CX23 is a 3-way electronic crossover processor designed to provide precise control over your car audio system. This device allows for detailed signal processing before amplification, making it an ideal solution for multi-amplifier setups. It also incorporates an onboard line driver to enhance signal strength and clarity. This manual provides essential information for proper installation, operation, and maintenance of your CX23 crossover.

## 2. Key Features

- 3-Way Crossover functionality for precise frequency distribution.
- Bandpass capable rear channel for flexible speaker configuration.
- Includes a wired remote level control for convenient subwoofer adjustment.
- 7V Line Level Output for strong signal to amplifiers.
- AUX Input for additional audio source connectivity.

## 3. Safety Information

Please read all instructions carefully before installing and operating the CX23 crossover. Failure to follow these guidelines may result in damage to the unit, your vehicle, or personal injury.

- **Professional Installation Recommended:** Installation of car audio electronics can be complex. If you are unsure about any part of the installation process, seek assistance from a qualified professional installer.
- **Power Disconnection:** Always disconnect the vehicle's negative battery terminal before beginning any electrical work to prevent short circuits and damage.
- **Proper Wiring:** Ensure all wiring is correctly routed and secured to prevent pinching, chafing, or shorting. Use appropriate gauge wire for power and ground connections.
- **Ventilation:** Mount the unit in a location that allows for adequate ventilation to prevent overheating.

- **Moisture Exposure:** Do not expose the unit to moisture or extreme temperatures.
- **Fuse Protection:** Always use the correct fuse rating as specified in the wiring diagram to protect the unit and the vehicle's electrical system.

## 4. Setup and Installation

Proper installation is crucial for optimal performance. Plan your wiring carefully before making any connections.

### 4.1 Mounting the CX23

Choose a secure, dry location away from direct heat and moisture. Ensure there is enough space for wiring and ventilation. Use the provided mounting hardware to secure the unit.



Figure 1: Front view of the Memphis Audio CX23 Crossover Processor with the wired bass remote. This image shows the overall design and the connection point for the remote.

### 4.2 Wiring Connections

Refer to the diagram below for proper wiring. All connections should be secure and insulated.



Figure 2: Rear panel of the Memphis Audio CX23 showing input and output RCA connections, remote bass control port, and power terminals.

1. **Power (12V):** Connect the +12V terminal to a constant +12V power source from the vehicle's battery. Use an appropriate gauge wire and an inline fuse (not supplied, typically 1A-3A) as close to the battery as possible.

2. **Remote (REM):** Connect the REM terminal to the remote turn-on output of your head unit or other switched 12V source. This will turn the CX23 on and off with your audio system.
3. **Ground (GND):** Connect the GND terminal to a clean, solid chassis ground point in the vehicle. Ensure a good metal-to-metal connection.
4. **RCA Inputs:**
  - **Front Input:** Connect RCA cables from your head unit's front output to the CX23's "FRONT INPUT" jacks.
  - **Rear Input:** Connect RCA cables from your head unit's rear output to the CX23's "REAR INPUT" jacks.
  - **Sub Input:** Connect RCA cables from your head unit's subwoofer output (if available) to the CX23's "SUB INPUT" jacks. Alternatively, the CX23 can generate a subwoofer signal from the front/rear inputs.
  - **AUX Input:** If using an auxiliary source, connect it to the "AUX INPUT" jacks.
5. **RCA Outputs:**
  - **Front Output:** Connect RCA cables from the CX23's "FRONT OUTPUT" jacks to your front channel amplifier inputs.
  - **Rear Output:** Connect RCA cables from the CX23's "REAR OUTPUT" jacks to your rear channel amplifier inputs.
  - **Sub Output:** Connect RCA cables from the CX23's "SUB OUTPUT" jacks to your subwoofer amplifier inputs.
6. **Remote Bass Control:** Connect the wired remote bass control to the dedicated port on the CX23. Mount the remote in an accessible location for easy adjustment.

## 5. Operating Instructions

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The CX23 offers extensive control over your audio frequencies. Familiarize yourself with the controls shown in the diagram below.

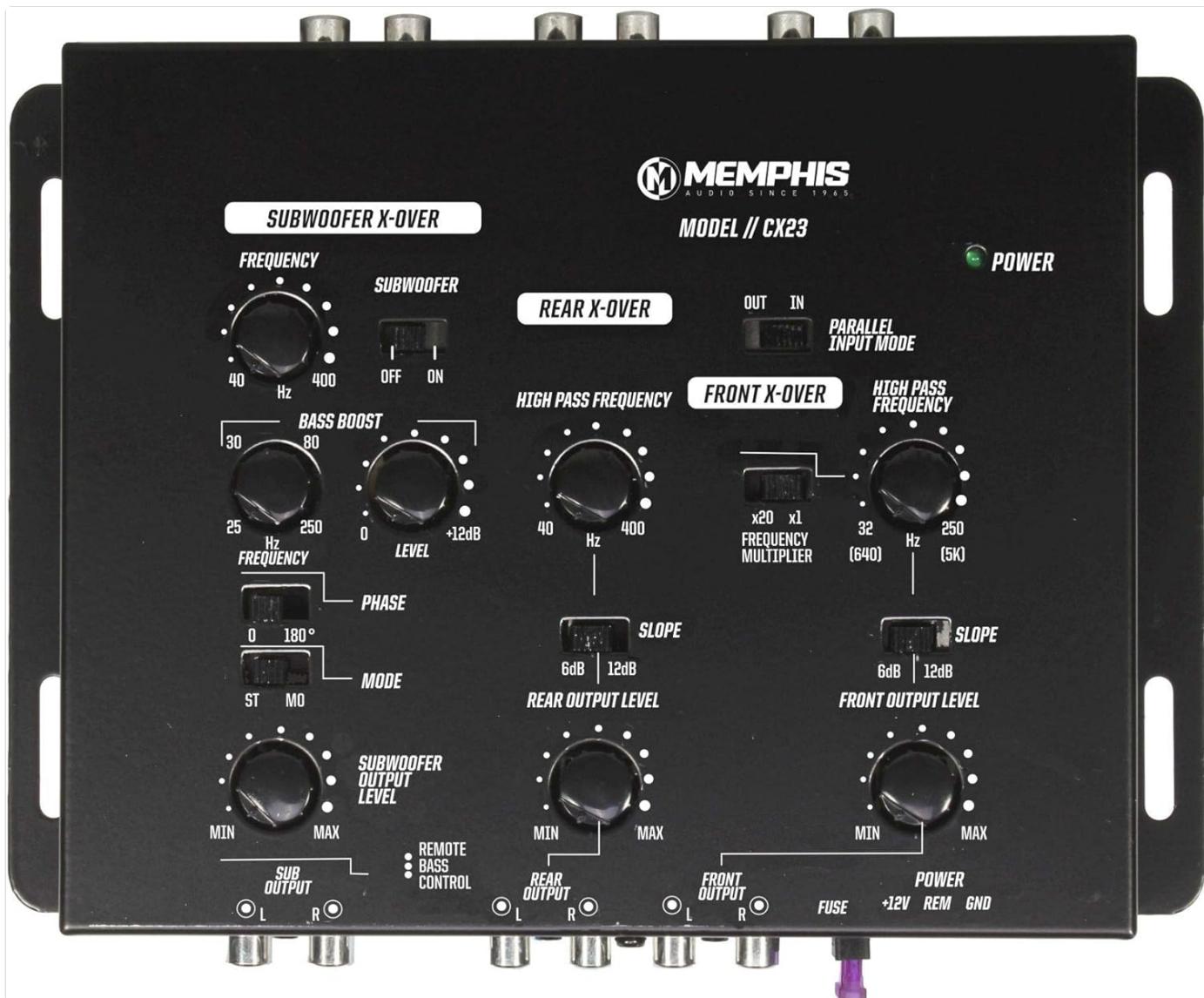


Figure 3: Top panel view of the Memphis Audio CX23, detailing all control knobs and switches for frequency, level, phase, and mode adjustments.

## 5.1 General Controls

- **Power LED:** Illuminates when the unit is powered on.
- **Parallel Input Mode (Switch):**
  - **IN:** When selected, the front input signal is routed to all outputs (front, rear, sub). Useful if your head unit only has one pair of RCA outputs.
  - **OUT:** When selected, each input (front, rear, sub) is processed independently and routed to its respective output.

## 5.2 Subwoofer Crossover Controls

- **Frequency (40Hz - 400Hz):** Adjusts the low-pass filter cutoff frequency for the subwoofer output. Frequencies above this setting will be attenuated.
- **Subwoofer ON/OFF (Switch):** Enables or disables the subwoofer output.
- **Bass Boost (25Hz - 250Hz, 0 - +12dB):**
  - **Frequency:** Selects the center frequency for the bass boost.
  - **Level:** Adjusts the amount of boost applied at the selected frequency.
- **Phase (0° - 180°):** Adjusts the phase of the subwoofer output relative to the main speakers. Use this to optimize bass integration and impact.

- **Mode (ST/MO):**
  - **ST (Stereo):** Processes left and right subwoofer signals independently.
  - **MO (Mono):** Sums left and right subwoofer signals to a mono output.
- **Subwoofer Output Level (MIN - MAX):** Adjusts the overall output level of the subwoofer channel. This can also be controlled by the wired remote.

### 5.3 Rear Crossover Controls

- **High Pass Frequency (40Hz - 400Hz):** Adjusts the high-pass filter cutoff frequency for the rear output. Frequencies below this setting will be attenuated.
- **Slope (6dB/12dB):** Selects the steepness of the high-pass filter. A 12dB slope provides a steeper cutoff than 6dB.
- **Rear Output Level (MIN - MAX):** Adjusts the overall output level of the rear channel.

### 5.4 Front Crossover Controls

- **Frequency Multiplier (x1/x20):**
  - **x1:** The frequency knob adjusts from 32Hz to 250Hz.
  - **x20:** The frequency knob adjusts from 640Hz to 5kHz. This allows for bandpass configurations when combined with the high-pass filter.
- **High Pass Frequency (32Hz - 5kHz):** Adjusts the high-pass filter cutoff frequency for the front output. The range depends on the Frequency Multiplier setting. Frequencies below this setting will be attenuated.
- **Slope (6dB/12dB):** Selects the steepness of the high-pass filter. A 12dB slope provides a steeper cutoff than 6dB.
- **Front Output Level (MIN - MAX):** Adjusts the overall output level of the front channel.

### 5.5 Wired Remote Level Control

The included wired remote allows for convenient adjustment of the subwoofer output level from the driver's seat. Turn the knob clockwise to increase subwoofer level and counter-clockwise to decrease it.

## 6. Maintenance

The Memphis Audio CX23 is designed for reliable operation with minimal maintenance. Follow these guidelines to ensure longevity:

- **Cleaning:** Use a soft, dry cloth to wipe the unit. Do not use harsh chemicals, solvents, or abrasive cleaners.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.
- **Ventilation:** Ensure that the mounting location remains clear of obstructions to allow for proper airflow and prevent overheating.

## 7. Troubleshooting

If you experience problems with your CX23, consult the following troubleshooting guide before contacting support.

Problem	Possible Cause	Solution
No Power / Power LED Off	Blown fuse Incorrect power or ground wiring No remote turn-on signal	Check and replace fuse (if necessary, with correct rating). Verify +12V, GND, and REM connections. Ensure head unit or source is providing a remote signal.

Problem	Possible Cause	Solution
No Sound Output	Incorrect RCA connections Output level set to minimum Amplifiers not powered on Parallel Input Mode switch incorrect	Check all input and output RCA cables. Increase output level knobs on the CX23. Verify amplifiers are receiving remote turn-on signal and power. Ensure Parallel Input Mode switch is set correctly for your setup.
Distorted Sound	Input signal too high (clipping) Output level too high Incorrect crossover settings	Reduce head unit volume or input gain to the CX23. Reduce output level knobs on the CX23. Adjust crossover frequencies and slopes for optimal sound.
No Bass Remote Function	Remote cable disconnected or damaged Subwoofer output level on CX23 set to minimum	Check the connection of the remote cable to the CX23. Ensure the "Subwoofer Output Level" knob on the CX23 is not at minimum.

## 8. Specifications

<b>Model</b>	CX23
<b>Type</b>	3-Way Electronic Crossover Processor
<b>Number of Channels</b>	3
<b>Subwoofer Crossover Frequency</b>	40Hz - 400Hz (Low Pass)
<b>Rear Crossover Frequency</b>	40Hz - 400Hz (High Pass)
<b>Front Crossover Frequency</b>	32Hz - 250Hz (x1), 640Hz - 5kHz (x20) (High Pass)
<b>Crossover Slope</b>	6dB or 12dB per octave
<b>Bass Boost</b>	0 to +12dB, adjustable frequency (25Hz - 250Hz)
<b>Line Level Output</b>	7 Volts
<b>Minimum Supply Voltage</b>	7 Volts (DC)
<b>Maximum Supply Voltage</b>	7 Volts (DC)
<b>Mounting Type</b>	Surface Mount
<b>Parcel Dimensions</b>	28.5 x 21.31 x 6.1 cm
<b>Weight</b>	1.04 kg
<b>UPC</b>	702588210030

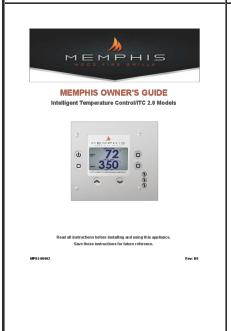
## 9. Warranty and Support

Memphis Audio products are designed and manufactured to the highest quality standards. For specific warranty information, please refer to the warranty card included with your product or visit the official Memphis Audio website. For technical support or service inquiries, please contact your authorized Memphis Audio dealer or Memphis Audio customer service directly.

Please retain your proof of purchase for warranty claims.

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## Related Documents - CX23

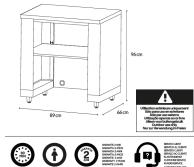
	<p><a href="#"><u>Memphis ITC 3 IntelliBurn Technology Wood Fire Grill Owner's Guide</u></a> Comprehensive owner's guide for Memphis ITC 3 IntelliBurn Technology Wood Fire Grills, covering installation, operation, safety, maintenance, and troubleshooting for Elite Cart, Pro Cart, Elite Built-in, and Pro Built-in models. Learn to maximize your outdoor cooking experience.</p>
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	<p><a href="#"><u>Memphis ITC 3 IntelliBurn Technology Owner's Guide</u></a> Comprehensive owner's guide for Memphis ITC 3 IntelliBurn Technology wood fire pellet grills, covering setup, operation, safety, maintenance, troubleshooting, and warranty for Elite Cart, Pro Cart, Elite Built-in, and Pro Built-in models.</p>



### [Memphis Wood Fire Grills ITC 3 IntelliBurn Technology Owner's Guide](#)

Comprehensive owner's guide for Memphis Wood Fire Grills ITC 3 IntelliBurn Technology models (Elite Cart, Pro Cart, Elite Built-in, Pro Built-in), covering installation, operation, features, maintenance, troubleshooting, and warranty.

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### [MEMPHIS Outdoor Kitchen Appliance Cabinet Assembly Instructions](#)

Official assembly instructions for the MEMPHIS Outdoor Kitchen Appliance Cabinet. Includes product dimensions, parts list, step-by-step assembly guide, maintenance, and storage information.