

Crunch PX-1025.4+M

Crunch PX-1025.4 Powerzone Series Amplifier User Manual

Model: PX-1025.4+M

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Crunch PX-1025.4 Powerzone Series 4-Channel Class-A/B Amplifier. Please read this manual thoroughly before attempting installation or operation to ensure proper use and to prevent damage.

2. SAFETY INFORMATION

Always observe the following safety precautions:

- Ensure the vehicle's battery is disconnected before any wiring is performed.
- Mount the amplifier securely to prevent movement during vehicle operation.
- Avoid mounting the amplifier in areas exposed to direct sunlight, high temperatures, or moisture.
- Use appropriate gauge wiring for power, ground, and speaker connections to prevent overheating and ensure optimal performance.
- Do not attempt to open or service the amplifier yourself. Refer all servicing to qualified personnel.
- Protect all wiring from sharp edges and moving parts.

3. PRODUCT FEATURES

The Crunch PX-1025.4 amplifier is designed to deliver powerful and clear audio performance. Key features include:

- Total Power Output: 1000 Watts
- Pulse Width Modulated (PWM) MOSFET Power Supply for efficient operation.
- LED Indicators: Green for Power, Red for Protect status.
- Soft Start Turn-On Circuitry to prevent speaker damage.
- Versatile 4/3/2 Channel Operation for various audio configurations.
- Speaker-Level (High-Level) Inputs for integration with factory head units.

- Preamp RCA Outputs for daisy-chaining multiple amplifiers.
- 3-Way Protection Circuitry: Thermal, Overload, and Speaker Short Protection.
- Dual Speaker Terminals for simplified multi-speaker hookup.
- Heavy Duty Aluminum Alloy Heat-Sink for effective heat dissipation.
- Wide Frequency Response: 10 - 45000 Hz.
- Low Total Harmonic Distortion (THD): 0.05%.
- High Signal to Noise Ratio: >90dB.
- Variable High-Pass Filter: 60 - 1200 Hz.
- Variable Low-Pass Filter: 30 - 250 Hz.
- Switchable Bass Boost: 0, +6, +12 dB.

4. PACKAGE CONTENTS

Verify that all items are present in the package:

- Crunch PX-1025.4 Powerzone Series Amplifier
- Gravity Magnet Phone Holder (as part of the bundle)
- User Manual (this document)
- Mounting Hardware (screws, etc.)



Image: The Crunch PX-1025.4 amplifier shown alongside its bundled Gravity Magnet Phone Holder. The amplifier is black with red accents, featuring the 'CRUNCH' logo and model number 'PX1025.4'. The phone holder is in its retail packaging.

5. SETUP & INSTALLATION

Proper installation is crucial for optimal performance and safety. If you are unsure about any part of the installation process, consult a professional car audio installer.

5.1 Mounting the Amplifier

Choose a mounting location that is dry, well-ventilated, and away from direct heat sources. Ensure there is sufficient airflow around the amplifier's heat sink. Secure the amplifier firmly to a solid surface using the provided mounting hardware.



Image: An angled view of the Crunch PX-1025.4 amplifier, highlighting its black casing, red side panels, and the 'CRUNCH' logo. The heat sink fins are visible, emphasizing the importance of proper ventilation for cooling.

5.2 Wiring Connections

Before making any connections, disconnect the vehicle's negative battery terminal.



Image: This image displays both the input and output sides of the Crunch PX-1025.4 amplifier. The top view shows the RCA inputs, gain controls, and crossover settings. The bottom view shows the power, ground, remote, and speaker output terminals, along with the fuse block.

5.2.1 Power, Ground, and Remote Wiring

- **Power (+12V):** Connect a heavy-gauge wire (e.g., 4-gauge) from the amplifier's +12V terminal directly to the positive terminal of the vehicle's battery. Install an in-line fuse (not supplied) within 18 inches of the battery.
- **Ground (GND):** Connect a heavy-gauge wire of the same size as the power wire from the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle's chassis. Ensure a good electrical connection.
- **Remote (REM):** Connect a wire from the amplifier's REM terminal to the remote turn-on output of your head unit. This wire turns the amplifier on and off with the head unit.



Image: A detailed view of the power input, ground, remote, fuse block, and speaker output terminals on the Crunch PX-1025.4 amplifier. This section is critical for proper electrical connections.

5.2.2 Speaker Connections

Connect your speakers to the amplifier's speaker output terminals. The PX-1025.4 supports 4-channel, 3-channel (bridged for subwoofers), or 2-channel (fully bridged) configurations. Observe correct polarity (+ to + and - to -) for all speaker connections.

- **4-Channel Mode:** Connect four speakers, one to each channel output.
- **3-Channel Mode (Bridged):** Bridge two channels for a subwoofer and use the remaining two channels for full-range speakers. Refer to the bridging diagram on the amplifier.
- **2-Channel Mode (Fully Bridged):** Bridge all four channels into two powerful outputs for two subwoofers or high-power speakers.

5.2.3 RCA (Low-Level) Inputs

Connect RCA cables from your head unit's preamp outputs to the amplifier's RCA inputs (CH1/CH2, CH3/CH4). Ensure secure connections.

5.2.4 High-Level Inputs

If your head unit does not have RCA outputs, you can use the speaker-level inputs. Connect the speaker wires from your head unit directly to the amplifier's high-level input terminals. Consult the amplifier's specific high-level input wiring diagram if provided on the unit itself.



Image: A close-up view of the input and control panel of the Crunch PX-1025.4 amplifier. This includes the RCA line inputs, gain adjustment knobs, X-OVER (crossover) switches and frequency controls, and the Bass EQ switch. The Power and Protect LED indicators are also visible.

6. OPERATION

6.1 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 green POWER LED should illuminate, indicating it is receiving power and operating correctly.

6.2 Adjusting Controls

- **GAIN Control:** Adjust the GAIN control to match the output voltage of your head unit. Start with the gain at minimum and slowly increase it until you hear distortion, then back off slightly. This is not a volume control.
- **X-OVER (Crossover) Switch:**
 - **FULL:** Full range audio output.
 - **HPF (High-Pass Filter):** Allows frequencies above the set point to pass through. Useful for full-range speakers to prevent low bass distortion. Adjustable from 60 - 1200 Hz.
 - **LPF (Low-Pass Filter):** Allows frequencies below the set point to pass through. Essential for subwoofers. Adjustable from 30 - 250 Hz.
- **BASS EQ (Bass Boost):** Use this switch to apply a bass boost of 0, +6, or +12 dB at a specific frequency (typically around 45 Hz). Use sparingly to avoid speaker damage or distortion.

6.3 LED Indicators

- **POWER (Green):** Illuminates when the amplifier is powered on and operating normally.
- **PROTECT (Red):** Illuminates when the amplifier enters protection mode due to thermal overload, speaker short circuit, or DC offset. Turn off the system immediately and troubleshoot the issue.

7. MAINTENANCE

The Crunch PX-1025.4 amplifier requires minimal maintenance. Keep the amplifier clean and free of 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.

8. TROUBLESHOOTING

If you experience issues with your amplifier, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No Power (Power LED Off)	Blown fuse Poor power/ground connection No remote turn-on signal	Check and replace fuses (use correct rating). Verify all power, ground, and remote connections are secure. Check remote wire connection at head unit and amplifier.
Protect LED On	Speaker short circuit Overheating Low impedance load	Check speaker wiring for shorts (bare wires touching). Ensure adequate ventilation around the amplifier. Verify speaker impedance matches amplifier's capabilities (2-ohm stable).
No Audio Output	RCA cables disconnected/faulty Speaker wires disconnected/incorrect polarity Gain set too low Head unit volume too low	Check RCA connections and test cables. Verify speaker wiring and polarity. Increase gain setting gradually. Increase head unit volume.
Distorted Sound	Gain set too high Crossover settings incorrect Poor ground connection	Reduce gain setting. Adjust HPF/LPF settings appropriately for speakers/subwoofers. Ensure ground connection is clean and secure.

9. SPECIFICATIONS

Feature	Specification
Model Number	PX-1025.4+M
Brand	Crunch
Number of Channels	4
Amplifier Class	Class-A/B
Total Power Output	1000 Watts
RMS Power (4 Ohms)	125 watts x 4 channels

Feature	Specification
RMS Power (2 Ohms)	250 watts x 4 channels
Bridged Power (4 Ohms)	500 watts x 2 channels
Frequency Response	10 - 45000 Hz
Total Harmonic Distortion (THD)	0.05%
Signal to Noise Ratio	>90dB
Variable High-Pass Filter	60 - 1200 Hz
Variable Low-Pass Filter	30 - 250 Hz
Switchable Bass Boost	0, +6, +12 dB
Input Voltage	12 Volts (DC)
Dimensions (L x W x H)	14 x 9 x 4 inches
Item Weight	5.26 pounds
Material	Aluminum Alloy


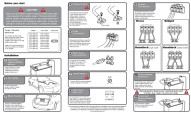
10. WARRANTY & SUPPORT

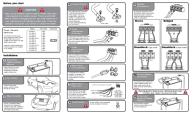
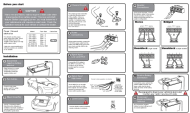

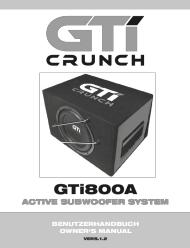
For warranty information and technical support, please refer to the warranty card included with your product or visit the official Crunch website. Keep your proof of purchase for warranty claims.

For further assistance, you may contact Crunch customer service through their official channels.

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Related Documents - PX-1025.4+M

	<p>Crunch GTO3750 3-Channel Amplifier User Manual</p> <p>User manual for the Crunch GTO3750 3-channel amplifier, detailing specifications, installation, operation, and troubleshooting procedures for optimal audio performance.</p>
	<p>Crunch Powerzone Amplifiers: Quick Start Installation Guide</p> <p>Comprehensive quick start guide for installing Crunch Powerzone car amplifiers, covering power, ground, signal, and speaker connections, as well as setup and level setting procedures. Includes model information and warranty details.</p>

	<p>Crunch Power Zone Amplifier Quick Start Installation Guide</p> <p>A comprehensive guide for installing Crunch Power Zone amplifiers, detailing power and ground connections, signal inputs, speaker wiring, and setup adjustments for optimal audio performance in vehicles.</p>
	<p>Crunch SA Series Amplifier Installation Guide</p> <p>A quick start installation guide for Crunch SA series amplifiers, covering power/ground cable sizing, installation steps, setup, and warranty information.</p>
	<p>Crunch GP690v2 Active Subwoofer System Owner's Manual & Installation Guide</p> <p>Detailed owner's manual and installation guide for the Crunch GP690v2 Active Subwoofer System. Learn about technical specifications, safety instructions, installation procedures, troubleshooting, and controls.</p>
	<p>Crunch GTi800A Active Subwoofer System Owner's Manual</p> <p>Comprehensive owner's manual for the Crunch GTi800A Active Bassreflex-Subwoofer-System, detailing specifications, safety instructions, electrical connections, functions, and troubleshooting. Includes model information and manufacturer details.</p>