

NVX XLCA2X

NVX XLCA2X X-Series PRO 2-Channel Line Out Converter

Model: XLCA2X | Brand: NVX

INTRODUCTION

The NVX XLCA2X X-Series PRO is a sophisticated 2-channel line output converter and digital bass enhancer designed to seamlessly integrate aftermarket audio components, such as amplifiers, with your vehicle's factory stereo system. It addresses common issues like bass roll-off found in many OEM systems, providing a clean, high-quality signal for enhanced audio performance. This manual provides detailed instructions for installation, operation, and troubleshooting to ensure optimal performance of your XLCA2X unit.

KEY FEATURES

- **2-Channel Line Out Converter with Adjustable xBOOST:** Corrects for bass roll-off, restoring low-frequency response.
- **High Input Voltage Capability:** Handles up to 30V (225 watts RMS) speaker-level inputs.
- **High Output Voltage:** Provides up to 9.5 Volts of output for strong signal to amplifiers.
- **Auto Turn-On:** Features automatic turn-on via DC offset or audio detection, eliminating the need for a remote wire from the head unit.
- **Load Selection Switch:** Offers 20Ω, 60Ω, or 20KΩ options to prevent factory radio shut-down issues.
- **Wired Remote Bass Level Control:** Allows convenient adjustment of bass levels from the driver's seat.
- **Ground Isolation:** Selectable ground isolation (200Ω, ISO, GND) to eliminate ground loop noise.

PACKAGE CONTENTS

Please verify that all items are present and in good condition upon opening the package:

- NVX XLCA2X Line Out Converter Unit
- Wired Remote Bass Level Control
- Remote Control Cable (RJ11)
- Mounting Screws (4 large, 2 small)

- Small Screwdriver (for adjustments)



Image: The NVX XLCA2X unit with the included wired remote bass level control.



Image: The wired remote bass level control and its connecting cable.



Image: Included mounting screws and a small screwdriver for adjustments.

SETUP AND INSTALLATION

Before beginning installation, ensure your vehicle's battery is disconnected to prevent electrical shorts or damage. Professional installation is recommended.

1. Mounting the XLCA2X Unit

Choose a secure, dry location for mounting the XLCA2X, away from excessive heat or moisture. Ensure adequate ventilation around the unit. Use the provided mounting screws to secure the unit to a flat surface.

2. Wiring Connections

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

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Image: Overview of the NVX XLCA2X unit showing high-level inputs, low-level outputs, power inputs, and remote bass knob input.

Power Connections:

- **+12V (Power):** Connect to a constant +12V power source from the vehicle's battery. An inline fuse (not included, typically 1A-5A) is highly recommended close to the battery.
- **GND (Ground):** Connect to a solid chassis ground point in the vehicle. Ensure the connection is clean and free of paint or rust.
- **REM IN (Remote Input):** This input is optional if using the auto turn-on feature. If your head unit provides a remote turn-on lead, connect it here.
- **REM OUT (Remote Output):** Connect this output to the remote turn-on input of your aftermarket amplifier(s). The XLCA2X will provide a +12V signal to turn on the amplifier.



Image: Close-up view of the power input terminal block (+12V, GND, REM IN, REM OUT) and RCA outputs.

Audio Connections:

- **High Level Input (L+, L-, R+, R-):** Connect these inputs to the speaker-level outputs of your factory head unit or amplifier. The XLCA2X can handle up to 30V (225 watts RMS) input.
- **Low Level Output (RCA L, R):** Connect these RCA outputs to the RCA inputs of your aftermarket amplifier.



Image: Close-up view of the high-level speaker input terminal block (L+, L-, R+, R-).

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SPEAKER-LEVEL INPUTS

Preamp RCA and Speaker-level Inputs.
Speaker-level inputs handle up to 225 Watts

Image: Visual representation highlighting the speaker-level inputs, capable of handling up to 225 Watts.

Remote Bass Control Connection:

- Connect the wired remote bass level control to the "REMOTE" port on the XLCA2X unit using the provided RJ11 cable. Mount the remote control in a convenient location for the driver.

OPERATION AND ADJUSTMENTS

The XLCA2X features several adjustable settings to optimize audio performance and system integration.

1. Turn On Mode Switch

This switch determines how the XLCA2X powers on and provides a remote turn-on signal to your amplifier.

- **AUD (Audio Detection):** The unit turns on when it detects an audio signal from the high-level inputs. This is ideal for factory systems without a remote turn-on lead.
- **DC (DC Offset Detection):** The unit turns on when it detects a DC offset voltage on the high-level inputs, common in many factory head units.
- **REM (Remote Input):** The unit turns on when a +12V signal is applied to the REM IN terminal. Use this if your head unit has a dedicated remote turn-on output.



Image: Close-up of the "Turn On Mode" switch (AUD, DC, REM) and "Load Select" switch.

2. Load Select Switch

This switch adjusts the impedance presented to the factory head unit's speaker outputs. This is crucial for preventing factory radios from shutting down or distorting due to incorrect load detection.

- **20KΩ:** Standard impedance, suitable for most factory systems.
- **60Ω:** For factory systems that require a lower impedance load to prevent shut-down.
- **20Ω:** For factory systems that require an even lower impedance load.

Experiment with these settings if your factory radio exhibits unusual behavior (e.g., shutting off, volume reduction) after connecting the XLCA2X.

3. Ground Isolation Switch

This switch helps eliminate ground loop noise (e.g., alternator whine) that can occur in car audio systems.

- **200Ω:** Provides 200 ohms of resistance for ground isolation.
- **ISO (Isolated):** Fully isolates the ground.
- **GND (Ground):** Direct ground connection.

If you experience noise, try switching between these settings to find the quietest option.

4. Output Level Adjustment (MIN/MAX)

This potentiometer adjusts the overall output level of the XLCA2X to match the input sensitivity of your aftermarket amplifier. Start with the level at minimum and slowly increase it until the amplifier's input gain is set correctly, or until the "CLIP" indicator on the XLCA2X illuminates, then back off slightly.



Image: Close-up of the "MIN/MAX Output Level" adjustment potentiometer.

5. xBOOST Controls (Level and Bass-X Edge)

The xBOOST feature is designed to restore and enhance the low-frequency response that is often rolled off by factory audio systems.

- **Level:** Adjusts the amount of bass enhancement applied. Turn clockwise to increase the effect.
- **Bass-X Edge:** Controls the center frequency of the bass enhancement. Adjust this to fine-tune which bass frequencies are boosted.

Adjust these controls to achieve the desired bass response without distortion. Monitor the "CLIP" indicator to avoid overdriving the signal.



Image: Close-up of the xBOOST "Level" and "Bass-X Edge" adjustment knobs.

6. Remote Bass Level Control

The wired remote allows for convenient, real-time adjustment of the bass output level from the driver's seat. This control primarily affects the output level of the bass frequencies.

MAINTENANCE

The NVX XLCA2X is designed for reliable operation and requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Use a soft, dry cloth to clean the unit. Do not use harsh chemicals or abrasive cleaners.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.
- **Environment:** Ensure the unit remains in a dry environment, protected from extreme temperatures and direct sunlight.

TROUBLESHOOTING

If you encounter issues with your NVX XLCA2X, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No Power Indicator Light	No +12V power, poor ground connection, blown fuse, incorrect "Turn On Mode" setting.	Check +12V and GND connections. Verify inline fuse. Adjust "Turn On Mode" switch (AUD, DC, REM) to match your system.
No Audio Output	Incorrect input/output connections, low output level, amplifier not turning on.	Verify high-level input and RCA output connections. Increase "Output Level" knob. Check REM OUT connection to amplifier. Ensure amplifier is powered on.
Distorted Sound / Clipping	Output level too high, amplifier gain too high, xBOOST level too high.	Reduce "Output Level" knob. Reduce amplifier gain. Reduce xBOOST "Level" and "Bass-X Edge" settings. Ensure "CLIP" indicator is not constantly lit.

Problem	Possible Cause	Solution
Engine Noise / Whine (Ground Loop)	Ground loop interference.	Adjust "Ground Isolation" switch (200Ω, ISO, GND) to find the setting that eliminates the noise. Ensure all ground connections are clean and secure.
Factory Radio Shuts Down / Volume Drops	Incorrect load presented to factory radio.	Adjust "Load Select" switch (20KΩ, 60Ω, 20Ω) to find the setting compatible with your factory system.
Switches Difficult to Access/Move	Manufacturing alignment issue.	Use the provided small screwdriver or a similar thin tool to carefully adjust the switches. If persistent, contact NVX support.

SPECIFICATIONS

Feature	Specification
Number of Channels	2
Maximum Input Voltage	30 Volts (225 Watts RMS)
Maximum Output Voltage	9.5 Volts
Turn-On Modes	Audio Detection (AUD), DC Offset Detection (DC), Remote Input (REM)
Load Select Options	20KΩ, 60Ω, 20Ω
Ground Isolation Options	200Ω, Isolated (ISO), Ground (GND)
Remote Bass Control	Wired (RJ11)
Dimensions (Package)	8.75 x 8.75 x 2 inches
Item Weight	1.05 pounds
Manufacturer	NVX
Model Number	XLCA2X
Certifications	CE, FCC

WARRANTY AND SUPPORT

NVX 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 NVX website. For technical support or assistance, please contact NVX customer service through their official channels.

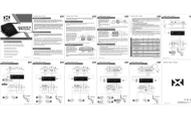
You can find more information and support resources on the [NVX Brand Store on Amazon](#).

PRODUCT VIDEOS

No official product videos from the seller were found in the provided data for this model. For general product overviews or installation guides, please check the manufacturer's official website or authorized channels.

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Related Documents

	<p>NVX XDSP28 Bluetooth Digital Signal Processor User Manual</p> <p>Comprehensive user manual for the NVX XDSP28 Bluetooth Digital Signal Processor, covering installation, control panel functions, audio processing, troubleshooting, and warranty information.</p>
	<p>NVX V-Series Premium Class-D Amplifiers User Manual</p> <p>Explore the NVX V-Series Premium Class-D Amplifiers with this detailed user manual. Learn about installation, features, specifications, and warranty for models like VAD10001v2, VAD8402v2, and VAD22008v2. Optimize your car audio system with NVX's high-performance amplifiers.</p>
	<p>NVX VADM Series Owner's Manual</p> <p>Owner's manual for the NVX VADM series audio amplifier, detailing installation, connections, and safe operation.</p>