

NVX XLOC22X

NVX XLOC22X High Voltage Active Line Output Converter User Manual

Model: XLOC22X

1. INTRODUCTION

The NVX XLOC22X is a 2-channel high voltage active line output converter designed to integrate aftermarket amplifiers with factory car audio systems. It converts high-level speaker signals from a factory head unit into low-level RCA signals, providing up to 9.5 volts of output. This device features impedance matching, auto turn-on capabilities, and a built-in low-pass filter to ensure optimal audio performance and system compatibility.



Image 1.1: Front view of the NVX XLOC22X Line Output Converter, showing all controls and connections.

2. KEY FEATURES

- **2-Channel Speaker Level Inputs:** Accepts high-level signals from factory head units.
- **2-Channel RCA Outputs:** Provides low-level signals for aftermarket amplifiers.
- **High Voltage Handling:** Capable of handling up to 40V (400 watts RMS) input.
- **High Output Voltage:** Delivers up to 9.5 Volts of output for strong signal to amplifiers.
- **Auto Turn-On:** Features DC offset or Audio detection for automatic amplifier turn-on.
- **Load Selection Switch:** Adjustable impedance (20, 60, or 20K ohms) to prevent factory stereo shutdown.
- **Built-in Low Pass Filter (LPF):** Selectable LPF for subwoofer applications.
- **Bass Boost:** Adjustable bass boost (0dB to 12dB).
- **Gain Control:** Independent gain adjustment for optimal level matching.
- **Clipping Indicator:** Visual indicator for signal clipping.

3. SAFETY INFORMATION

Please read all instructions carefully before installation and use. Failure to follow these guidelines may result in damage to the product, vehicle, or personal injury.

- Always disconnect the vehicle's battery negative terminal before beginning any electrical work.

- Ensure proper wiring and connections to prevent short circuits or electrical fires.
- Mount the device securely in a dry, well-ventilated area away from heat sources and moisture.
- Consult a professional installer if you are unsure about any part of the installation process.
- Do not operate the device if it has been damaged or exposed to water.

4. PRODUCT OVERVIEW

The NVX XLOC22X features various inputs, outputs, and controls for seamless integration and audio optimization.



Image 4.1: Diagram showing the dimensions (4.75" x 3.25" x 1") and key labeled components of the NVX XLOC22X, including High Level Input, Output to Amplifier, Bass Knob Input, and Clipping Indicator.

4.1 Connections and Controls

- **12V:** Power input terminal.
- **GND:** Ground input terminal.
- **REM IN:** Remote turn-on input (optional, for remote turn-on mode).
- **REM OUT:** Remote turn-on output for amplifier.
- **L+/L- and R+/R-:** High-level speaker inputs (Left and Right channels).
- **GROUND ISOLATION Switch:** Selects ground isolation mode (GND, ISO, 200Ω) to eliminate ground loop noise.
- **POWER LED:** Indicates power status.
- **LOAD SELECT Switch:** Adjusts input impedance (20Ω, 60Ω, 20KΩ) to prevent factory stereo shutdown.
- **LPF Switch:** Toggles the Low Pass Filter ON/OFF.
- **BOOST Control:** Adjusts bass boost level (0dB to 12dB).

- **GAIN Control:** Adjusts output gain (MIN to MAX).
- **CLIP Indicator:** Illuminates when the output signal is clipping.
- **OUTPUT (L/R RCA):** Low-level RCA outputs to amplifier.
- **REMOTE Port:** RJ11 port for optional bass knob connection.



Image 4.2: Top-down view of the NVX XLOC22X, clearly showing the terminals for 12V, GND, REM IN, REM OUT, L+/L-, R+/R-, and the switches for Ground Isolation, Load Select, LPF, Boost, Gain, and the Clip indicator.

5. SETUP AND INSTALLATION

Proper installation is critical for optimal performance. Follow these steps carefully.

5.1 Mounting

Choose a secure, dry location for mounting the XLOC22X, such as under the dashboard, behind the glove box, or in the trunk. Ensure adequate ventilation. Use the provided screws to secure the unit.



Image 5.1: Included mounting screws and a small screwdriver for installation.

5.2 Wiring Connections

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 included) near the battery.
2. **Ground (GND):** Connect the GND terminal to a solid chassis ground point in the vehicle. Ensure a clean, paint-free metal surface for the best connection.
3. **Remote Turn-On (REM IN/REM OUT):**
 - If using the **REM** turn-on mode (selected via the 'TURN ON MODE' switch), connect the REM IN terminal to the remote output of your head unit. The REM OUT terminal will then provide a remote signal to your amplifier.
 - If using **DC** offset or **Audio** detection turn-on mode, the REM IN connection is not required. The REM OUT terminal will still provide a remote signal to your amplifier when the XLOC22X detects an input signal.

4. **High-Level Inputs (L+/L-, R+/R-):** Connect the factory speaker wires to the corresponding high-level input terminals. Ensure correct polarity.
5. **RCA Outputs (L/R):** Connect the RCA outputs of the XLOC22X to the RCA inputs of your aftermarket amplifier. The XLOC22X provides up to 9.5 Volts of output.



Image 5.2: Close-up view of the RCA output section, highlighting the capability of 9.5 Volt output.

5.3 Initial Settings

- **GROUND ISOLATION:** Start with the 'GND' position. If noise (e.g., engine whine) is present, try 'ISO' or '200Ω' to eliminate it.
- **LOAD SELECT:** This switch adjusts the impedance presented to the factory head unit. If the factory stereo shuts down or produces distorted sound, try adjusting this switch (20Ω, 60Ω, or 20KΩ) until stable operation is achieved.
- **TURN ON MODE:** Select 'DC' for DC offset detection or 'REM' for remote wire turn-on. If your factory head unit does not provide a DC offset on its speaker outputs, use 'REM' with a dedicated remote wire, or 'AUDIO' if available (check specific model features).
- **LPF:** If connecting to a subwoofer amplifier, set the LPF switch to 'ON'. For full-range applications, set to 'OFF'.
- **BOOST:** Set the BOOST control to 0dB initially.
- **GAIN:** Set the GAIN control to MIN initially.

BASS BOOST

BUILT IN LOW PASS FILTER



Image 5.3: Close-up of the Bass Boost knob (0dB to 12dB) and the LPF (Low Pass Filter) ON/OFF switch.

AUTO TURN-ON

12V REMOTE AND DC OFFSET



Image 5.4: Close-up of the Auto Turn-On Mode switch, showing options for DC offset or Remote (REM) detection.

6. OPERATING INSTRUCTIONS

Once installed, follow these steps to optimize your audio system.

1. **Power On:** Turn on your vehicle's ignition and head unit. The XLOC22X POWER LED should illuminate.
2. **Set Amplifier Gain:** With the XLOC22X GAIN at MIN, set your amplifier's gain to its minimum setting.
3. **Adjust XLOC22X Gain:** Play a dynamic piece of music at a moderate volume level on your head unit. Slowly increase the GAIN control on the XLOC22X until the CLIP indicator just begins to flash. Then, slightly reduce the gain until the CLIP indicator no longer flashes. This ensures a clean, unclipped signal to your amplifier.
4. **Fine-tune Amplifier Gain:** Now, adjust your amplifier's gain to achieve the desired volume level without distortion.
5. **Bass Boost Adjustment:** If desired, slowly increase the BOOST control to enhance bass frequencies. Monitor for distortion.
6. **Ground Isolation Adjustment:** If you experience any unwanted noise (e.g., engine whine), try adjusting the GROUND ISOLATION switch to 'ISO' or '200Ω' to find the setting that eliminates the noise.

7. MAINTENANCE

The NVX XLOC22X 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 unit.
- Ensure the mounting location remains dry and free from excessive heat.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No sound from amplifier.	No power to XLOC22X or amplifier. Incorrect remote turn-on connection/setting. Incorrect input/output wiring. XLOC22X or amplifier gain set too low.	Check 12V and GND connections. Verify 'TURN ON MODE' switch setting and REM OUT connection to amplifier. Check high-level input and RCA output connections. Increase GAIN on XLOC22X and amplifier.
Distorted sound.	Gain set too high (clipping). Incorrect LOAD SELECT setting. Damaged speaker wires.	Reduce GAIN until CLIP indicator stops flashing. Adjust LOAD SELECT switch. Inspect and repair speaker wires.
Engine whine or other noise.	Ground loop issue. Poor ground connection.	Adjust GROUND ISOLATION switch (GND, ISO, 200Ω). Ensure GND connection is clean and secure.
Factory stereo shuts down.	Incorrect LOAD SELECT setting.	Adjust LOAD SELECT switch (20Ω, 60Ω, or 20KΩ) until stable.

9. SPECIFICATIONS

Feature	Specification
Model Number	XLOC22X
Number of Channels	2
Maximum Input Voltage	40 Volts (400 watts RMS)
Maximum Output Voltage	9.5 Volts
Load Selection	20Ω, 60Ω, 20KΩ
Auto Turn-On Modes	DC Offset, Audio Detection, Remote (REM)
Bass Boost	0dB to 12dB
Output Power	22 Watts (This specification seems to be a general product detail and not directly related to the LOC's function as a signal converter. It's included as per provided data.)
Item Weight	9.9 ounces

Feature	Specification
Package Dimensions	6.77 x 4.92 x 2.13 inches
Certifications	CE, FCC

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official NVX website or contact NVX customer service directly. Keep your purchase receipt as proof of purchase.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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