


 **ORION**TM
HIGH PERFORMANCE CAR AUDIO



XEQ-X3B

PARAMETRIC EQUALIZER

proud to be LOUD!



Thank you for purchasing an Orion product, expertly designed for optimal performance in the mobile audio environment. Included in this manual are crucial guidelines on the proper installation and setup of your new Orion product, as well as instructions on how to seamlessly integrate it into your vehicle's audio system. For enduring satisfaction and optimal performance, we strongly advise having your product installed by an Authorized Orion Dealer. Before beginning installation, we recommend thoroughly reading this manual to fully grasp how to use and install your new product effectively.

Before initiating any electrical connections, it is imperative to disconnect the battery's ground cable to avoid any potential short circuits or damage to electronic components. However, if your vehicle's stereo system includes an anti-theft code, refrain from disconnecting the battery. If disconnection is necessary and you have the stereo's access code, please refer to your vehicle's owner's manual for detailed instructions on how to safely proceed.

ATTENTION

FOR ANY QUESTIONS, ISSUES, RETURNS OR WARRANTY

DO NOT contact the retailer, we recommend that you contact our service department for any and all assistance at support@orioncaraudio.com.

We will do our best to resolve any problem in a professional and timely manner.



WARNING: This product can expose you to chemicals including DEHP which is known to the State of California to cause cancer, birth defects or other reproduction harm. For more information go to www.P65warnings.ca.gov.

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FEATURES

Equalizers, essential tools for fine-tuning audio systems, come in various forms, each suited to specific audio engineering needs. The three main types are graphic equalizers, which allow users to adjust a fixed set of frequency bands; parametric equalizers, which enable precise control over frequency, bandwidth, and amplitude; and para-graphic equalizers, which combine features of both graphic and parametric types.

Additionally, equalizers can be categorized based on their circuit design into passive and active types. Passive equalizers do not amplify the signal and typically do not have gain control, making them less versatile than their active counterparts. Active equalizers, on the other hand, include built-in pre-amps that provide gain control, often necessary for adjusting the volume. There are also booster equalizers, which are generally considered lower quality due to their reliance on inexpensive integrated circuits for signal amplification.

For high-fidelity audio systems, such as those used in home audio setups, the ideal configuration often involves a dedicated pre-amplifier with significant gain capabilities to drive various power amplifiers. This is because home audio amplifiers typically lack adjustable sensitivity and require a robust pre-amplifier to achieve optimal output levels.

In the realm of automotive audio systems, where unique acoustic challenges such as road noise and speaker placement impact sound quality, a specialized pre-amplifier can make a substantial difference. The first production pre-amplifier to integrate a specific bandwidth parametric equalizer with the ability to boost or cut across seven bands by up to 15dB effectively addresses these challenges. This capability allows it to correct for acoustic anomalies unique to the automotive environment, transforming it into the central command, or “Mission Control Center,” of any high-end automotive sound system.

FEATURES



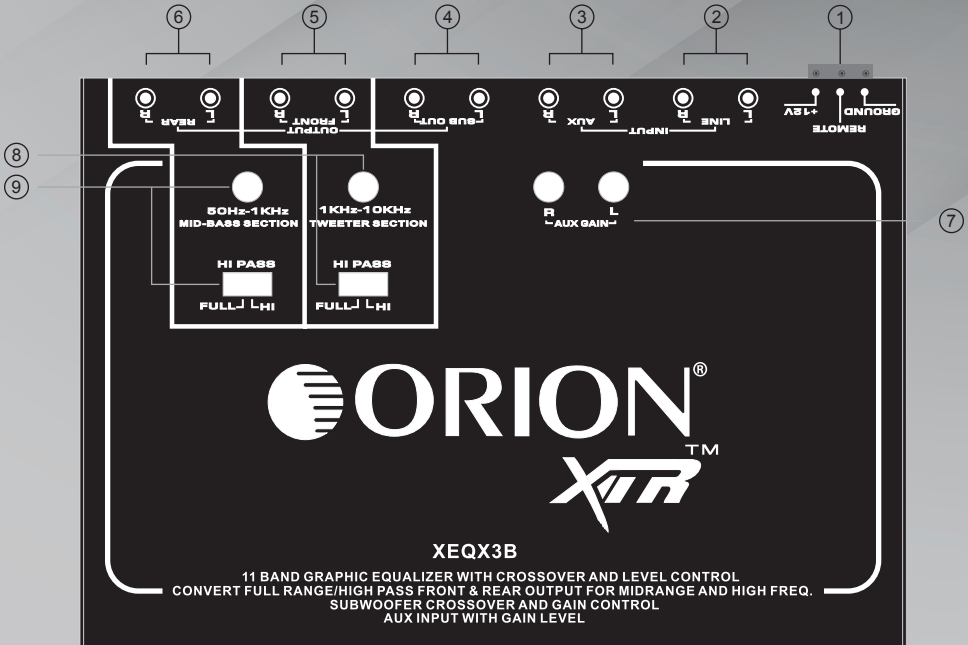
The subwoofer output feature provides an excellent opportunity to enhance your audio system with subwoofers, significantly improving the depth and richness of the bass. This functionality is compatible with any unit that operates within a 12-volt negative ground electrical system.

Key Features Include:

- **11 Band Equalizer with Subwoofer Output:** Fine-tune your audio experience with detailed control over the sound spectrum and dedicated output for adding subwoofers.
- **Equalizer Line Driver:** Enhances signal quality from source to amplifier, ensuring cleaner sound reproduction.
- **Front/Rear Outputs with Fader Control:** Manage the balance of sound between front and rear speakers for optimal audio staging.
- **Subwoofer Level Control:** Adjust the output level of your subwoofers for perfect bass integration.
- **AUX/LINE Input Selector:** Easily switch between auxiliary and line inputs to accommodate various audio sources.
- **RCA Input and Output Connectors:** Facilitates secure and high-quality connections to other audio components.
- **Independent Left & Right Input Gain Adjustments:** Customize input levels separately for each channel to achieve a balanced sound field.

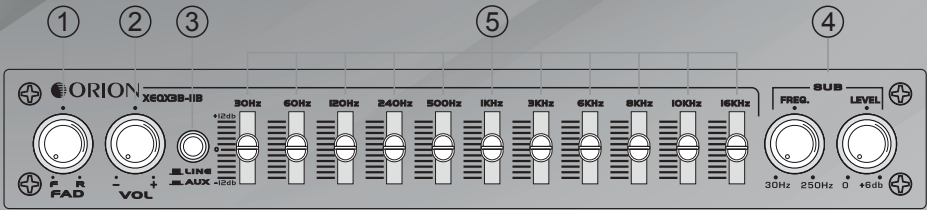
These features collectively enhance the capability and versatility of your audio system, allowing for a more personalized and immersive listening experience.

FEATURES



1. **POWER:** After connecting the Ground, Remote and Power wires, plug in the Power Lock connector here.
2. **LINE INPUT:** Chrome plated RCA inputs. Plug in the RCA cables from the main Source unit here.
3. **AUX INPUT:** Chrome plated RCA inputs. Plug in the RCA cables from the AUX Source unit here.
4. **SUBWOOFER OUTPUT:** Chrome plated RCA outputs. Plug in the RCA cables to your subwoofer amplifier here.
5. **FRONT OUTPUT:** Chrome plated RCA outputs. Plug in the RCA cables to your front channel amplifier here.
6. **REAR OUTPUT:** Chrome plated RCA outputs . Plug in the RCA cables to your rear channel amplifier here.
7. **AUX GAIN CONTROL:** Gain adjustment for left and right auxiliary input.
8. **FRONT OUTPUT HI PASS CONTROL (FULL AND HI) SELECT**
9. **REAR OUTPUT HI PASS CONTROL (FULL AND HI) SELECT**

FEATURES



1. **FADER CONTROL:** Controls the output level to front and rear.
2. **VOLUME CONTROL:** This control adjusts the output level.
3. **INPUT SWITCH:** Press to select auxiliary or line.
4. **SUB LEVEL:** Independent level control for subwoofer output.
5. **PARAMETRIC EQUALIZER CONTROLS:** Control the frequency response of the boost or cut, with the 11 band controls: 30Hz, 60Hz, 120Hz, 240Hz, 500Hz, 1KHz, 3KHz, 6KHz, 8KHz, 10KHz, 16KHz.

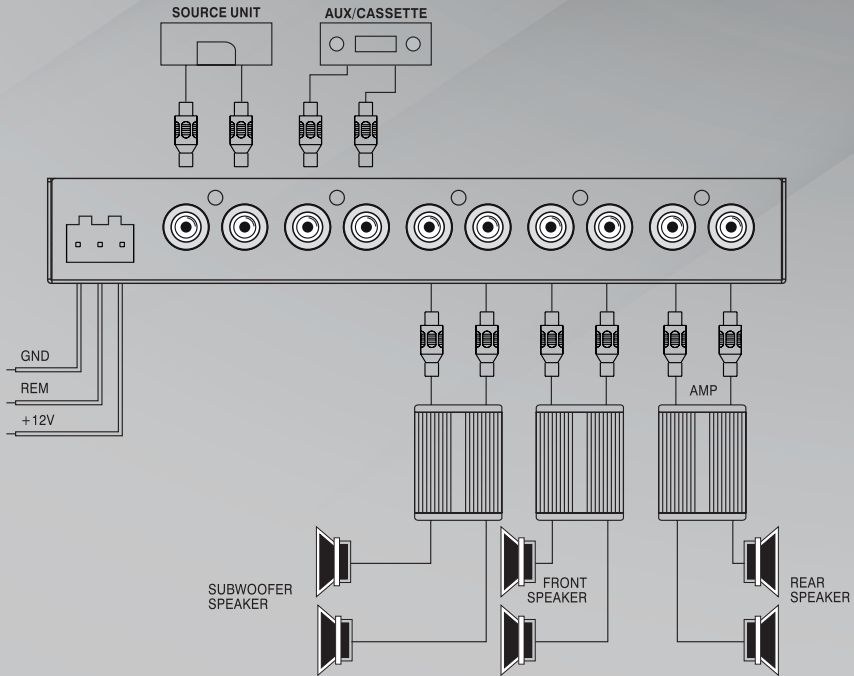
CROSSOVER CONTROL

One of the best features of this unit is that it allows the listener to adjust each band exactly to his own satisfaction, so please note that the correct settings depend very much on the overall system itself and the individual musical taste of the listener. Please check the settings for each band carefully before completing the installation.

SYSTEM TURN ON: After completing all wiring and signal connections you can now turn the system on.

ADJUST: Increase the volume of the unit to its maximum. Adjust the left and right input gains of the until halfway between the minimum and maximum. Gradually increase source volume until clip. Begin gradually increasing input gains until distortion is audible, then reduce slightly. System should be extremely load at this point. Turn the volume control down to minimum and back up to comfortable level Volume changes should sound linear and balanced.

INSTALLATION

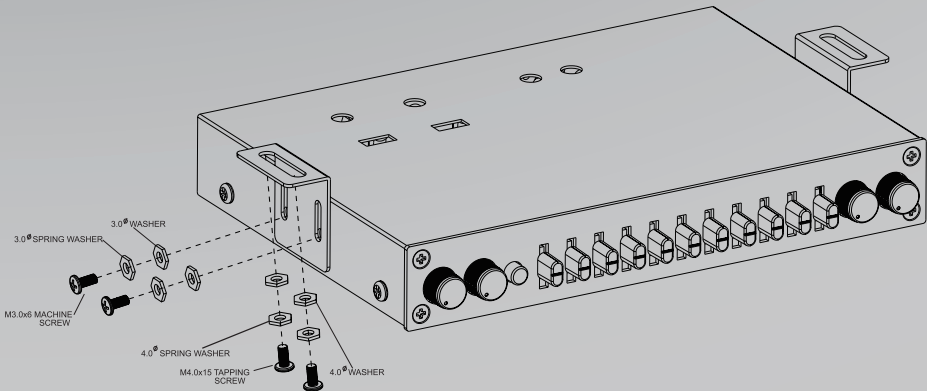


NOTES: Set your source volume at one-half to three quarter up and leave it.

Always use your volume as a master(main) volume control. It has better electronics, higher S/N ratio and is more linear than any source unit volume available. If engine noise is audible, try raising the volume on the source unit, and/or check the ground connection on the unit.

INSTALLATION

1. Select the location to mount the unit under the dashboard.
2. Drill (4) 4.2 mm diameter holes. Fix the mounting bracket to the location with (4) 4 x 15 mm tapping screw. Be careful when drilling so as not to damage existing wiring under the dashboard.
3. Mount unit to the mounting bracket with (4) 3 x 6 mm machine screws.



- ◇ Active gain Equalizer with adjustable input sensitivity.
- ◇ Master volume control with up to 8.5 volts RMS of output.
- ◇ Individual left and right sensitivity controls.
- ◇ TI band parametric equalizer with 15 dB Boost/cut.
- ◇ Subwoofer level control.
- ◇ RCA input/output connectors.
- ◇ Input AUX/LINE switch.
- ◇ Specific bandwidth for each band plus high frequency shelving.

TROUBLESHOOTING

The unit does not work / no light

- Check the fuse.
- The power wires may not be connected. Check the power and ground wiring, then retest.

Sound is distorted

- This source unit volume may be set too high. Reduce the source unit volume.
- Equalizer gain controls are set too high. Turn the equalizer controls to the center position and listen for distortion again. If the problem still occurs, see your authorized Orion dealer.
- Speakers may be damaged. Consult your authorized Orion dealer.

No Sound coming from the unit

- The wrong input is selected. Change the AUX mode switch to turn the main inputs on.
- No remote-on. Using a multimeter, check for +12V from the remote-on source.

Glossary

Crossover: A device that divides frequency ranges between speakers or amplifiers, tailored to their handling capabilities.

Equalization: Adjusting frequency components within a signal to improve sound quality, derived from restoring high frequencies in analog transmissions.

Equalization Band: A specific frequency range affected during sound adjustment.

dB (Decibel): A unit measuring the intensity difference between two sounds, indicating gain or loss in power.

Gain Control: Adjusts the amplification level of an audio signal, measured in decibels.

Graphic Equalizer: An equalizer with multiple adjustable bands, each affecting a specific frequency range, adjusted via sliders or knobs.

Hz (Hertz): The unit of frequency, indicating the number of cycles per second of a sound wave.

Octave: A musical interval where the highest tone is double the frequency of the lowest tone, dividing the scale into eight notes.

OEM (Original Equipment Manufacturer): The original producer of a product's components, possibly resold by another company.

RCA Input/Output: Connectors for audio and video signals in and out of an audio system.

Slope: The rate at which an audio filter attenuates frequencies, measured in decibels per octave, affecting how sound transitions beyond a frequency threshold.

WARRANTY

Orion, warrants this product against all defects in material and workmanship for a period of one (1) year from the date of original purchase provided it was purchased from an Authorized Orion Dealer.

The conditions of this warranty and the extent of the responsibility of Orion, under this warranty are as follows:

1. DATED PROOF OF PURCHASE IS REQUIRED FOR WARRANTY SERVICE OF THIS PRODUCT. Information about Orion authorized warranty service may also be obtained at www.orioncaraudio.com or by emailing Orion at support@orioncaraudio.com.
2. This warranty will become void if service is performed by anyone other than an approved Orion Warranty Service Center.
3. This warranty does not apply to any product which has been subjected to misuse, neglect or accident, or which has had the warranty seal broken, serial number altered, defaced or removed, or which has been connected, installed adjusted or repaired other than in accordance with the instructions furnished by Orion.
4. This warranty does not cover car static, electrical interference, adjustments or labor costs for the removal or reinstallation of the unit for repair.
5. The sole responsibility of Orion under this warranty shall be limited to the repair or replacement thereof, at the sole discretion of Orion.
6. If it becomes necessary to send the product or any defective part to Orion or an authorized service station, the product must be shipped in its original or equivalent carton, fully insured, with shipping charges prepaid. Orion will not assume any responsibility for any loss or damage incurred in shipping.
7. This warranty is not transferable and protects the original purchaser provided they reside and made their purchase in the United States. International consumers may contact their local retailer or distributor for warranty information.
8. ALL IMPLIED WARRANTIES, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, SHALL HAVE NO GREATER DURATION THAN THE WARRANTY PERIOD SET FORTH ABOVE. UNDER NO CIRCUMSTANCES SHALL ORION BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT. BECAUSE SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.
9. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.
10. Should you have any difficulties with the performance of this product during warranty or with any Orion authorized service center, you may contact Orion by emailing us at support@orioncaraudio.com.

ORION

3130 WEST 15TH AVENUE HIALEAH, FLORIDA 33012

TEL: 786.464.0247 EMAIL: SUPPORT@ORIONCARAUDIO.COM ORIONCARAUDIO.COM

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