PHOENIX GOLD 2 Channel and 4 Channel Active Line Output Converters Instruction Manual

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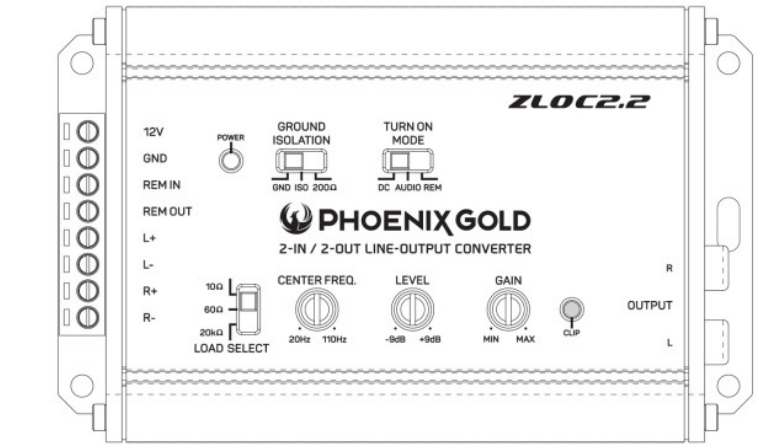
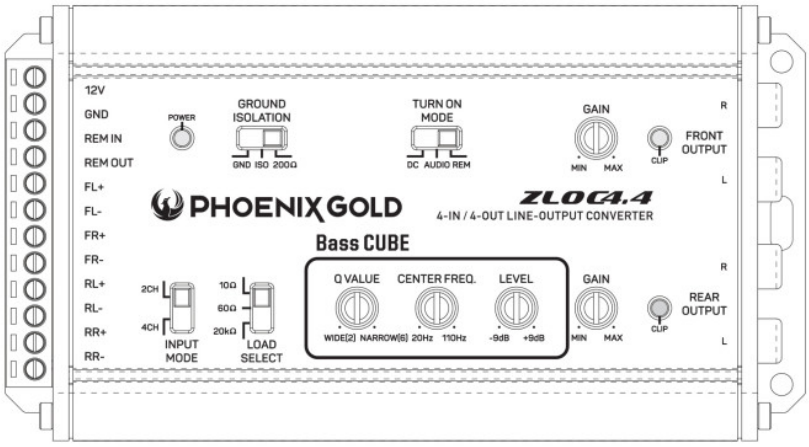
ZLOC ACTIVE LINE-OUTPUT CONVERTERS

Introducing the Phoenix Gold active line-output converters (LOO) – the essential solution for enhancing your vehicle's audio system. While many vehicles now come with integrated amplifiers, the original OEM system often falls short in terms of performance. Replacing the entire audio system can be costly and sometimes not feasible. That's where our LOC converters step in. Not only do they reduce distortion, but they also allow for seamless integration of aftermarket audio components into your OEM system. Gone are the days of being unable to upgrade your head unit – our LOC converters cleverly bypass OEM resistance, all while eliminating unwanted system noise. Upgrade your audio experience today with our advanced OEM integration solution.

ZLOC2.2 I ZLOC4.4 FEATURES OVERVIEW





TECHNICAL SPECIFICATIONS

The ZLOC active line output converters share the performance specifications listed below; however, they vary in terms of the numberof inputs and outputs they possess.
ZLOC2.2 = 2-Channels in and 2-Channels out, ZLOC4.4 = 4-Channels in and 4-Channels out.

ITEM	ZLOC2.2	ZLOC4.4
Speaker Input	2CH	4CH
Outputs	4CH	4CH
REM In	Yes	Yes
REM Out	Yes	Yes
Load Select	10-Ohm / 60-Ohm / 20K-Ohm	
Ground Isolation	GND/ISO/20K-Ohm	
Gain	Yes,X1	Yes,X2
Clipping	Yes,X1	Yes,X2
Center Frequency	20Hz-110Hz	20Hz-110Hz
Bass Level	-9 ~ +9dB	-9 ~ +9dB
Turn On Mode	REM/DC/AUDIO	REM/DC/AUDIO
Input Mode	N/A	2CH/4CH
Remote	None	None
Dimensions(LxWxH)mm	130.6x82x24.8mm	150.6x82x24.8mm
Chassis Body	Aluminum	Aluminum

Operating Voltage	8 to 32V
Input Sensitivity	0.5 to 32V
Max 40V as Input	Must be 20K-ohm load
Output Voltage	Max. 7.5V @ 14.4V
Input Impedance	10-Ohm / 60-Ohm / 20K-Ohm
Signal to Noise	>100dB @6.4V output
THD+N	<0.01%
Frequency Response	10-30kHz
Max Current Draw	120 - 150 mA
Output Impedance	< 120-ohm
Gain	-28 to 0dB
Turn-On Trigger, DC	3 to 7V
Terminal Gauge	Quick Connect / 16# AWG

FEATURES

1. Connect the speaker inputs to your head unit or amplifier's speaker outputs to receive the signal your amplifier may not be capable of handling.
2. Outputs: Establish a connection with the inputs of the amplifier. The signal the device processes is precisely what the amplifier needs to function optimally.
3. REM In: Rem turn-on input. It works with the "REM" in the "Turn-on" mode.
4. To connect aftermarket audio equipment, use the "Rem In" option and disable "EM Out". The "Rem-out" function will always remain active when the ZLOC is turned on, regardless of the turn-on method. Make sure to connect it to only one aftermarket amplifier.
5. Many OEM head units require a resistance load to enable audio signal output, Without this load, a ZLOC would not function properly. For most of these systems, 10-ohm or 60-ohm is compatible. Choose 10-ohm/60-ohm for those systems and 20k-ohm for all others.
6. Ground Isolation: Experiment with various switches if you encounter unwanted "alternator whine" or "ground noise interfering with the audio signal. Keep in mind that the power ground and signal ground are not interconnected. Remember to turn off the converter before making any switches.
   GND: power supply has the same ground as the audio.
   ISO: The power supply ground is separated from the audio.

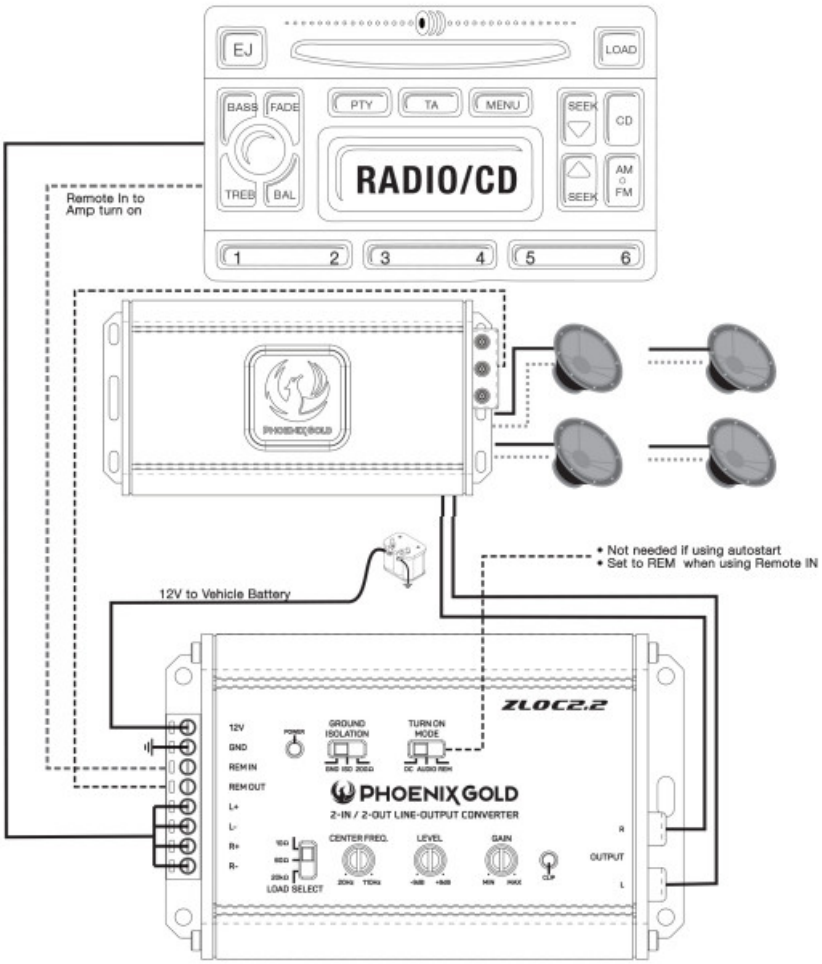
200-Ohm: There is 200-Ohm load between the power ground and the audio ground.

7. Gain: Adjusts the output signal for every channel pair, 9.5V RMS.
8. Clip: If the LEDs light up, it indicates a distorted output signal.
9. LPF: The filtering of signals above 250Hz can be toggled on or off. The two rear channels are primarily intended for subwoofers.
10. Bass Level : This feature allows you to finely tune the bass levels within a range of -9 to +9dB, specifically targeting the centre frequency.
11. Turn-on Mode: It provides the drivers with the convenience of choosing different ways to activate the device. REM: This approach follows a traditional method of activating the 7LOG, granting you precise control over its ignition and enabling you to determine the specific timing for turning it on or off, DC: The RS-HTL is activated when the head unit is turned on. It is important to ensure that the signal from the head unit has a DC offset. AUDIO: Selecting VOX activates the ZLOC, triggering it only when the head unit plays radio, CD music, or Bluetooth streams. By doing this, it optimises functionality without compromising on quality or interrupting other audio sources.
12. Input Mode: To obtain four outputs from two speaker-level inputs, switch to 2CH. The four outputs will receive the same source, but you will retain the flexibility to set L_PF or Boost as needed.
13. BASS CUBE:(Constant Usable Bass – enhancement) is a single-band equaliser consisting of two components: a processor module that can be conveniently mounted near the subwoofer amplifier and a wired remote control that can be elegantly installed on the dashboard. The remote control allows you to conveniently adjust the centre frequency (ranging from 20 to 110 Hz) and boost level (ranging from -9dB to +9dB) with its intuitive knob. Additionally, the knob can be used to toggle the processor on and off easily.

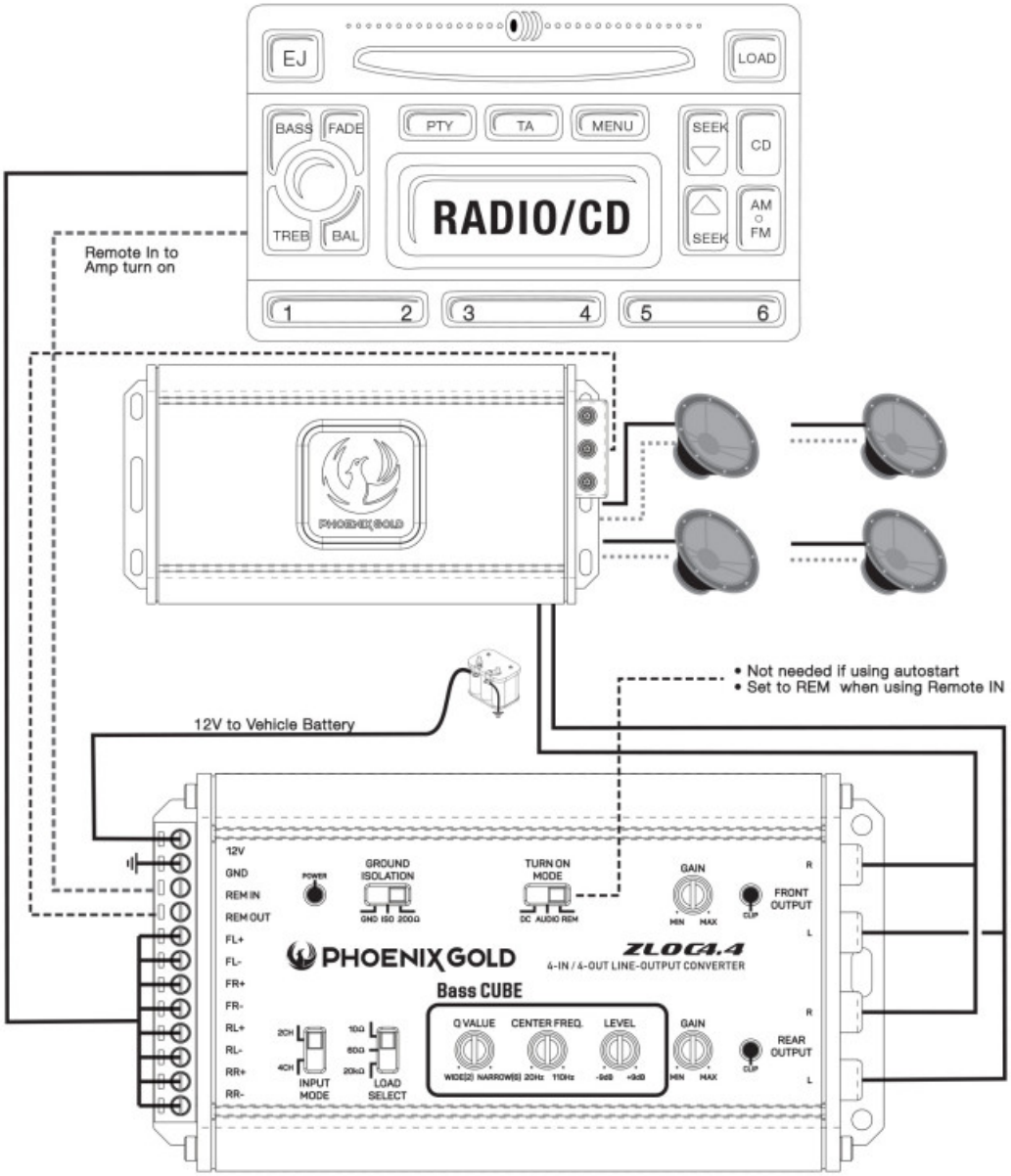
The processor module features two switches that control infrasonic filtering and Q. The wide low-Q setting (Q = 2) is commonly used to enhance overall sound quality, particularly with sealed enclosures. On the other hand, the narrow high-Q setting (Q = 6) is recommended for achieving maximum output. The processor module features two switches that control infrasonic filtering and Q. The wide low-Q setting

The Bass CUBE offers a versatile third-order infrasonic filter that can be switched between a fixed cut-off frequency of 25 Hz and an adjustable mode. In the adjustable mode, which is recommended for use with vented enclosures, the infrasonic cut-off frequency is set one-third of an octave below the centre frequency, adjusting accordingly as the centre frequency changes. This feature allows for optimal control and flexibility in shaping the audio output.

ZLOC2.2 TYPICAL WIRING DIAGRAM



ZLOC4.4 TYPICAL WIRING DIAGRAM



IMPORTANT INSTALLATION PRECAUTIONS

1. Connect all components with the power turned off, ensuring that the battery ground is connected in the final step.
2. Connect the ZLOC 12V connector with a constant +12V power source to ensure a stable power supply. It is advised to use a 16 AWG wire for optimal performance.
3. Before inserting any wire, ensure that the terminals are completely open.
4. To optimise the device's performance and longevity, it must be placed on a stable, dry, and well-ventilated surface, away from any moisture, heat, and dirt sources.
5. Do not mount directly on the vehicle's body, frame, or structure.
6. Avoid placing the device near the sub-box to prevent potential vibrations.
7. To ensure peak performance, it is advisable to keep RCA cables as far away as possible from the vehicle's wiring, power cables, and output speaker wires. By doing so, interference can be minimized, resulting in superior audio quality.
8. To minimize noise and power loss, keeping the wires as short as possible is advisable.
9. Professional installation is recommended for optimal results.

10. Adjust the remote level control to a position easily reachable by the driver.
11. Adjust the remote level control to a position easily reachable by the driver.

TROUBLE SHOOTING

POWER LED IS ON, NO OUTPUT

- Verify the source unit's output
- Ensure the input gain control is functioning properly
- Check the quality and connection of the RCA cable
- Inspect the speaker and wiring for any potential shorts
- Assess for any signs of amplifier damage

NO SOUND ON ONE CHANNEL

- Switch the left/right input to inspect the source.
- If the sound switches, it indicates a faulty source or signal cable.
- Perform a left/right speaker swap to test the functionality of the speakers. If the sound does not switch, it indicates a problem with the speaker or its wiring.
- If these solutions prove ineffective, it is advisable to seek guidance from an authorised dealer to address the issue at hand.

WARRANTY
Phoenix Gold products come with a limited warranty and are covered by our regional distribution partners and their terms and conditions. You can find out more information by contacting your local retailer or distributor.
DISCLAIMER
Ensure your safety and the well-being of those around you by following these essential guidelines:

- Keep all product materials and packaging away from children, pets, or anyone at risk of suffocation.
- Exposure to noise levels above 85 dB can cause permanent hearing damage.
- Extreme sound frequencies reduce perception abilities that are essential in road traffic conditions; do not let loud volumes distract from being mindful behind the wheel.
- Phoenix Gold takes no responsibility for any physical harm or damage caused by improper use of their products.

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Documents / Resources

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