

OWNER'S MANUAL

CONCERT-1 CONCERT-2

Instrument DI



Concert-1 & Concert-2 USER GUIDE

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INTRODUCTION

Thank you for purchasing a Jensen Concert series direct box. We are confident that you will find the quality and performance meet your expectations in every way. At Jensen, we pride ourselves in producing the very finest products and stand behind them with a 3-year warranty.

Although your Concert series direct box has been designed to be easy to use, we do ask that you take a minute to read through this short manual. This will ensure that you get to know all of the features and how to best take advantage of them. If after reading, you find yourself posing a question that is not covered, we invite you to visit the FAQ page on the Jensen web site. This is where we post questions and answers from users along with updates. If you still do not find what you are looking for, feel free to send us an email at info@jensen-transformers.com and we will do our very best to reply in short order.

Now get ready to enjoy what is likely the best direct box ever produced!



OVERVIEW

The manual covers both the Jensen Concert-1 and Concert-2. As these are almost identical, we have written the manual in such a way that it covers both units.

The Concert series direct boxes are designed to capture the unbalanced high-impedance signal from an instrument and at once convert it to a balanced signal while lowering the impedance for long cable runs. Unbalanced Hi-Z signals are more prone to noise and signal degradation, thus are generally limited to cable runs of 8 meters (25'). Balanced, Lo-Z signals on the other hand can easily drive signals to 100 meters (300') or more.

The 'motor' inside that does the work is a Jensen JT-DB-EPC direct box transformer. This exceptional device does not require power to work. You simply plug it in and it does the balancing and impedance conversion for you. Once you insert a transformer into the audio signal, it will help eliminate nasty hum and buzz caused by ground loops and interference. Best of all, it does so without degrading the audio in any way. This is why Jensen has gained such high praise from the industry and why so many top professionals insist on Jensen as part of their live and studio setups.



CONCERT-1 FEATURES



- 1. INPUT:** 1/4" input jack for instrument and line-level sources to the Concert-1.
- 2. THRU:** 1/4" thru-put jack passes instrument's signal to a stage amp.
- 3. 3.5mm TRS INPUT:** Standard mini TRS stereo input summed to mono for connecting a laptop or iPhone®.
- 4. MONO SUM:** Turns the INPUT & THRU jacks into a passive mixer to sum stereo signals to mono.
- 5. PAD -15dB:** Reduces the input sensitivity for active basses and high output keyboards.



- 6. POL:** Inverts the signal polarity by flipping pin-2 and pin-3 on the XLR output.
- 7. GROUND LIFT:** Lifts pin-1 on the XLR output to help eliminate hum and buzz caused by ground loops.
- 8. XLR OUT:** Balanced low-Z mic-level output. Wired AES standard pin-1 ground, pin-2 hot (+) and pin-3 cold (-).
- 9. DURABLE CASE:** Aluminum frame construction with steel inner tray prevents circuit board from being torqued which could lead to part failure. Durable powder-coat finish keeps your Concert-1 looking great for years.

CONCERT-2 FEATURES



- 1. INPUTS:** 1/4" input jacks for instrument and line-level sources to the Concert-2.
- 2. THRU:** 1/4" thru-put jacks passes instrument's signal to a stage amp.
- 3. 3.5mm TRS INPUT:** Standard mini TRS stereo input for connecting a laptop, tablet or iPhone® to the Concert-2.
- 4. PAD -15dB:** Reduces the input sensitivity for active basses and high output keyboards.



- 5. XLR OUT:** Left and right balanced, low-Z mic-level outputs. Wired to AES standard pin-1 ground, pin-2 hot (+) and pin-3 cold (-).
- 6. GROUND LIFT:** Lifts pin-1 at both XLR outputs to help eliminate hum and buzz caused by ground loops.
- 7. DURABLE CASE:** Aluminum frame construction with steel inner tray prevents circuit board from being torqued which could lead to part failure. Durable powder-coat finish keeps your Concert-2 looking great for years.

CONNECTIONS

Before making any connections, ensure that your audio system is either turned off or all levels turned down. This will avoid plug-in and turn-on transients that could otherwise harm more sensitive components such as tweeters. As the Concert is passive, it does not require any power to make it work. We suggest you turn off the phantom power on your console or mic preamp. Although it will not harm the Concert, turning it off eliminates noise and potential component damage from accidental disconnection.

The Concert DIs are equipped with 1/4" input and thru connections for instruments along with a 3.5mm (mini TRS) stereo input jack for laptops and tablets. These are typically wired in parallel and can be used to pass audio through to other devices.

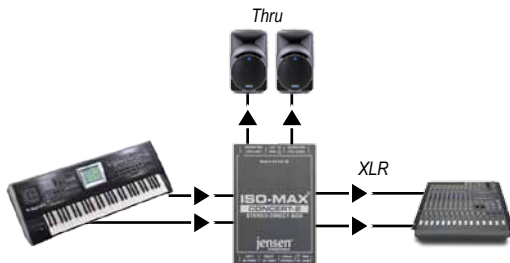
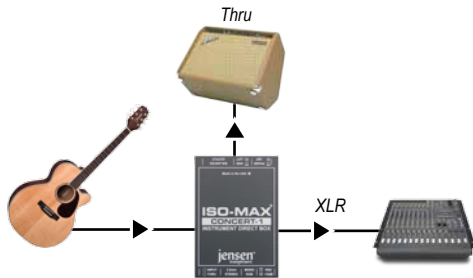


APPLICATION

Setup for instruments

The most common application for a single channel direct box is with an instrument such as an acoustic guitar or bass – either on stage or in the studio. When on stage, it is customary to connect the 1/4" THRU output to the stage amp for the artist while sending balanced audio signal out using the XLR-male connector to the PA. In the studio, recording direct without an amplifier is common. The XLR out follows the AES standard with pin-1 (ground), pin-2 (+), pin-3 (-).

The Concert-2 is a stereo version of the Concert-1 with essentially the same features. It is ideally suited for stereo keyboards as it retains full stereo signal integrity throughout the audio chain.



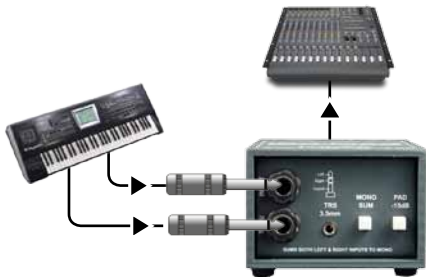
Typical set-ups for consumer devices

To address the ever increasing use of laptop computers and tablets in professional audio, the Jensen Concert direct boxes have been equipped with standard 3.5mm mini TRS input connectors. This makes it easy to connect using a simple mini TRS to TRS cable from any of the available audio outs – which is most likely a headphone out.



Mono Sum

The Concert-1 features a 'MONO SUM' function that turns the 1/4" INPUT and THRU jacks into a 'sum-to-mono' mixer. Depressing the mono sum switch introduces a resistive mixer circuit that will sum a stereo input to mono at the XLR output. This function allows stereo sources such as a stereo keyboard or CD players to 'merge-to-mono', saving valuable channels on the snake and the mixer when you have more sources than available inputs.



Simply connect two instruments with similar output levels into the IN and THRU jacks, depress the MONO SUM switch and you are set to go. The internal resistive mixer is set up to do this without introducing any problems such as phase cancellation.

CONTROLS

The -15dB Pad

Although the Concert series DI boxes are able to withstand tremendous signal levels without distortion, it is customary for a direct box to be equipped with an input pad. This reduces the input sensitivity in order to reduce distortion. In the unlikely event that you do hear distortion, check to make sure the input on your console or mic preamp is not being overloaded. Then, try depressing the pad.

The 180° Polarity Reverse

The Concert-1 is equipped with a polarity reverse that toggles pin-2 and pin-3 at the XLR output. This can be used to correct the polarity when plugging into older (vintage) non-AES standard equipment. It is also used when recording to reverse the phase when combining two sources such as a microphone with a direct feed as a means to better align the fundamentals or widen the effect of the stereo image.

Reversing the polarity can also be a very effective tool for reducing resonant feedback on stage. Frequency bumps or troughs—known as room modes in studios—are caused when two frequencies collide either in phase or out of phase depending on where you are standing. This can make one frequency stand out and cause the top of an acoustic guitar to vibrate and resonate out of control. This can be caused by the PA system, wedge monitors, stage amp and any combination thereof. The natural inclination is to try to eliminate the resonant frequency using an EQ. Although this can work, it also severely affects the tone. A better solution is to move the problem out of the way by inverting the polarity. So if you hear resonant feedback, before reaching for the tone control, try inverting the polarity by solving the problem acoustically.

Ground Lift

Jensen Transformers are legendary in their ability to eliminate hum and buzz in audio systems and the Concert series DI boxes are no exception. When connected, the transformers create a magnetic bridge that allows AC to pass (audio) while blocking disruptive stray DC voltages.

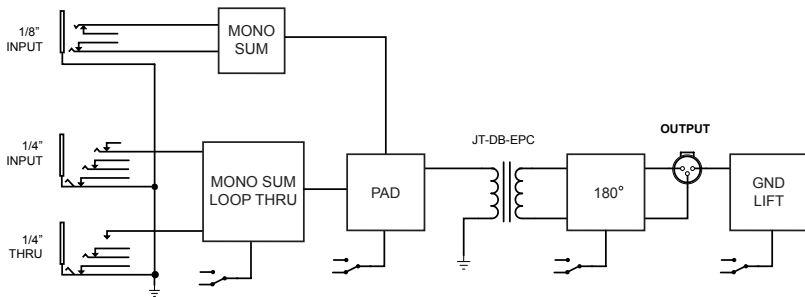
Another common problem is known as a ground loop. This occurs when the audio ground and electrical ground conflict. Disconnecting the electrical ground is both unsafe and illegal. A better solution is lifting or disconnecting the audio ground path between the source instrument and destination audio system. Both Concert series direct boxes are equipped with a ground lift switch that disconnects the pin-1 audio ground at the XLR output. The preferred mode of operation is with the GND lifted.



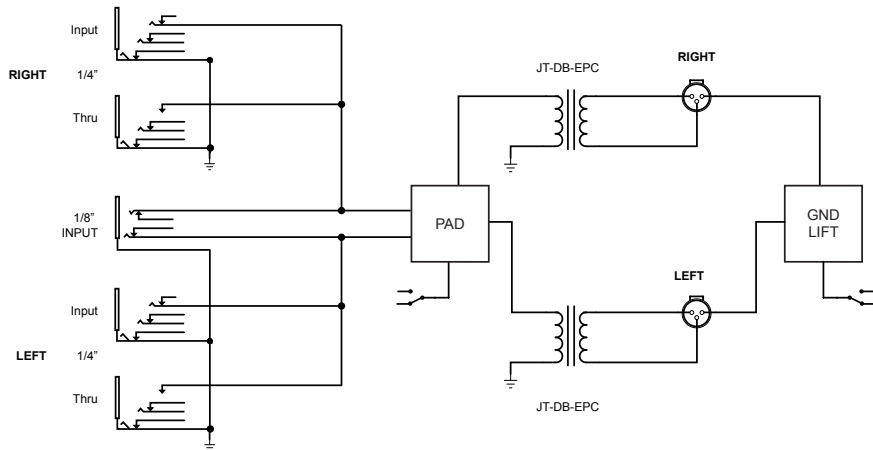
SPECIFICATIONS

Audio circuit type:	Passive transformer isolated
Frequency response:	10Hz to 40kHz
Total Harmonic Distortion: (THD+N)	0.05% @ 20Hz with -10dBV input level
Input impedance:	140k Ω
Maximum input:	+21dBu @ 20Hz
Output impedance:	150 Ω (balanced)
Phase Deviation:	-1.2/-0° (+4dB)
Input pad:	-15dB
XLR configuration:	Pin-1 ground; pin-2 hot (+); pin-3 cold (-)
Power:	None, passive
Construction:	Steel frame with an aluminum shell
Size: (LxWxD)	5" x 3.3" x 1.8" (127mm x 84.1mm x 45.5mm)
Weight:	1.55 lbs (703 grams)
Warranty:	Jensen 3-year, transferable

CONCERT-1 Block Diagram



CONCERT-2 Block Diagram



3 YEAR TRANSFERABLE WARRANTY

For a period of 3 YEARS after purchase, Jensen Transformers, Inc. will, free of charge, repair or replace any part of an ISO-MAX® product that fails due to defective materials or workmanship. This limited warranty is subject to the following limitations:

1. Defects that are, in the sole judgement of Jensen, the result of accident, misuse, abuse, neglect, mishandling, misapplication, faulty installation, unauthorized repair, modification, or acts of God will not be covered by this warranty.
2. There are no express warranties except as listed above.
3. In order to claim a warranty repair, you must first request a repair authorization number from Jensen. The product must then be returned along with a copy of the original sales invoice to Jensen - freight pre-paid with a letter detailing the problem. Upon inspection, the product will either be repaired or replaced and then returned to you. Should a product be returned and no problem found, you will be responsible for all freight charges. Should a repair be required due to out-of-warranty status, you will be charged for the costs associated with the repair.
4. JENSEN TRANSFORMERS, INC. SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR MISUSE OF THIS PRODUCT.

Note: If a problem develops with this product during the warranty period, call or write us before attempting any repair. We can help you identify specific problems, and possibly solve the problem before the unit is returned to us for repair or replacement. In any case, **DO NOT RETURN THE UNIT WITHOUT RECEIVING A RETURN AUTHORIZATION NUMBER** and instructions from us. Jensen cannot be held responsible for damage due to shipping, improper packaging or loss due to carrier negligence.

LIMITATIONS OF LIABILITY: JENSEN PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS, OR IN ANY APPLICATION WHERE THEIR FAILURE COULD CAUSE INJURY OR DEATH.

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