



- The computer 3.5mm interface uses unbalanced transmission and is susceptible to external electronic equipment and radio interference. (If they are close to unbalanced cables, they can create buzzing noise. Older non-LED stage lights may also add interference to the signal.)
- Add an isolation protector on the computer side to convert unbalanced signals into balanced signals to ensure that long-distance transmission will not be interfered with.

Parameters

Items	Parameters
Channels	2
Freq. Response	20Hz-20KHz,
Primary to Secondary Ratio	600:600
Gain	1:1
Freq. Response Deviation	-0.006dB(@50Hz) ; -0.001dB(@1KHz) ; +1.326dB(@15KHz)
Distortion	0.048%(@1.8mV); 0.00144%(@1V); 0.013%(@10V)
Loss Attenuation	0.00337%(@50Hz); 0.00156%(@1KHz); 0.0005%(@15KHz)
Core Device	Shielding high-precision transformer components

Learn more information for performance characteristic curve, please visit website.

Notes

Note 1: Since there is a 2~3V bias voltage at the positive pole, hot swapping is not recommended when connecting the mobile phone.

Note 2: If the level of the XLR line entering the mixer is too high, you need to first connect the XLR female to a 6.35 balanced line.

Note 3: Working principle of isolator

In the project, each device is powered by a different phase power supply, resulting in different neutral currents, resulting in differences in induced voltages at the safety ground of the device shell. Audio sound reinforcement systems generally use audio lines for serial connection: signal lines, neutral lines, and ground lines form a physical environment of AC 50Hz sine waves, thus forming the conditions for the generation of hum. Therefore, the mixer and power amplifier process low-noise signals with 50Hz AC and output sharp noise.

If the "directly cutting off the ground wire" method is used to solve the current noise problem, the safety ground function of the equipment shell will be destroyed. If the equipment leaks electricity, it becomes very dangerous.

The application of the isolator can turn the direct connection of the signal channel into a magnetically coupled signal, which is equivalent to physically isolating the 50Hz closed-loop circuit. The output of the subsequent system is a clean audio signal.

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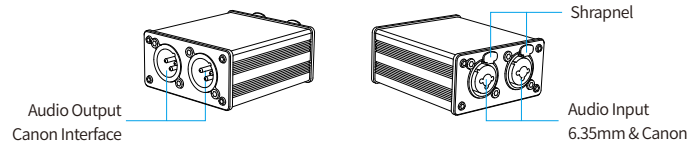
GAODIMIC®
高德麦

Manual

Professional Audio Isolation Protector

AI230-D

Product Instructions



Feature

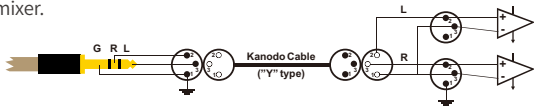
- Eliminate potential differences caused by unequal induced potentials when audio equipment has out-of-phase lines or is grounded at different points.
- Convert unbalanced signals into balanced signals by differential XLR lines.
- When the computer is connected to a projector or LED display screen, eliminate the 50Hz AC current sound; when changing instruments during a performance, avoid current impact noise when switching lines and instruments; when TV stations or other broadcasting agencies transmit signals, electrical isolation and circuit protection are required.

Operation Instructions

- Plug directly between audio devices and it's ready to use, no configuration or adjustments required.
- The input terminal supports 2-pin, 3-pin, and XLR interfaces; the output terminal supports XLR interfaces.

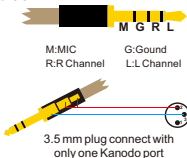
1. Wiring method: Y-type line input connection method

Use a 3.5 terminal to dual 6.35 terminal or a male XLR Y-shaped cable to connect directly to the mixer (as shown below). This method can be directly connected to the mixer, but it is not a balanced transmission. The XLR cable transmits unbalanced audio signals. If audio signals need to be transmitted over long distances, the signal needs to be converted to a balanced XLR cable to connect to the mixer.



2. Wiring method: 3.5 stereo plug to single XLR interface

If only one XLR connector is used, the left and right channel plugs must be connected in parallel, as shown on the right. It is recommended to connect the L line and R line of the audio source in parallel to pin 2 of the Canon (and connect a 2~4.7K resistor in series at the same time), and the negative signal to pin 3, which can reduce the input signal and prevent clipping and distortion of the excessively large signal input to the mixer.



3. Wiring method: connected to the mixer

This device is compatible with balanced wiring and unbalanced wiring. Depending on the purpose of use, the input signal can be sent to the input interface A of the machine from the main output (MAIN), group output (GROUP) or auxiliary output (AUX) of the mixer. IN, B IN.

Various Scene Descriptions

1. Typical scene - between camera and mixing console



- When the camera and mixer use external power supplies, there is a voltage difference between the power supplies, and an isolator needs to be used to eliminate noise and protect the mixer from being burned out;
- You can disconnect the mains power and use battery power, but if you connect a video console and other equipment, you must add an audio isolation protector to protect the safety of the equipment.

2. Typical scene - between the OB truck and the mixing console



- The OB truck uses a engine to generate its own power; the mixer uses mains power supply. There may be a huge ground potential voltage difference between the two, which may cause current sound or impact potential to destroy the equipment. To ensure safety, use an audio isolation protector.

3. Typical scene - between instrument and mixer



- If the length of the cable between the active musical instrument and the mixing console exceeds 10 meters, it is easy to encounter uncontrollable interference and requires the use of an isolation protector. (Passive musical instruments use ID boxes)
- Two purposes: 1.) Convert the unbalanced high-impedance interface of the electric guitar to a balanced low-impedance interface to avoid the noise problem of long cables. Impedance matching avoids loss of bass signal. Unbalanced to balanced transmission, 2.) protects front and rear stage equipment and prevents the impact of plugging and unplugging signal lines of electro-acoustic instruments.

4. Typical scene - between LED screen, computer and mixer



- The switching power supply inside the large screen has Y capacitors connected between the live wire and the ground, and between the neutral wire and the ground, with voltage, and the ground resistance is not zero, which forms the ground potential voltage difference between the equipment. Since the large screen is connected to the computer video cable, there will be an impact sound or current sound.
- In this scenario, if you plug in the mixer first and then the computer, sparking may easily occur. This device is needed to prevent the computer from burning down.

5. Typical scenario - long-distance link between computer and mixer