

Application Guide

Using the ART Dual Passive Direct Box

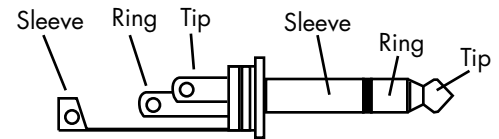


The ART Dual Passive Direct Box (an optional ZON approved accessory) allows you to use the speaker level output of a ZAC-60 controller as an input signal for an external amplifier. The direct box accepts signal from the ZAC-60's speaker output and converts it to a line level signal that works with many commonly available analog power amplifiers..

This application guide provides instructions on how to configure the device for use with your ZON system.

Working With Phone Jacks (Fig. A)

The audio input connection on the direct box are 1/4" Phone jacks. These jacks accept a "tip ring sleeve" or "stereo" type 1/4" Phone plug. Figure A shows how the phone plug is arranged. You will need one phone plug for the left channel and one for the right channel.



Typical 1/4" Phone Plug (Tip Ring Sleeve)

Figure A

The positive lead from each ZAC-60 loudspeaker output connects to the plug's Tip (usually, the shortest wiring terminal on the jack). The negative loudspeaker signals connect to the plug's Ring (usually, slightly longer than the Tip's wiring terminal). The longest wiring terminal is for the Sleeve. The Sleeve is not used in this application *and must not be connected*.

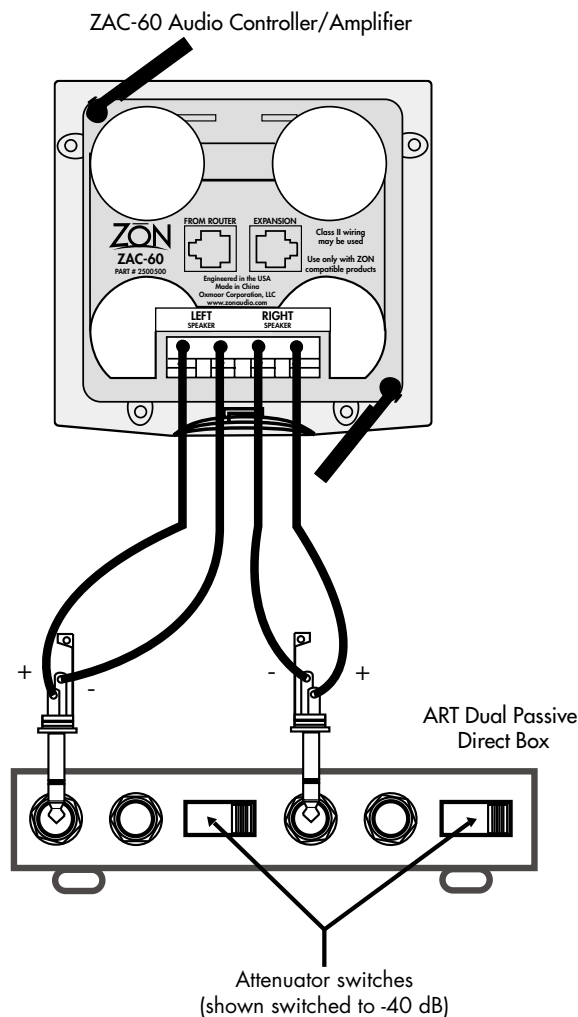


Figure B

Connecting a ZAC-60 to the Direct Box (Fig. B)

Left and Right loudspeaker outputs of the ZAC-60 connect to the direct box as illustrated in Figure B.

For ease of illustration, the connections are shown without the speaker wire and plug connector jackets.

Also note that the direct box attenuator switch is shown switched to the far right position (-40 dB). This is the recommended setting for amplified signals.

Working with the Direct Box Output Connector (Fig. C)

The audio output connectors on the ART Dual Passive Direct Box are XLR-type jacks. Figure C shows how the pins in these jacks are arranged. You will need one XLR female plug for the left channel, and another XLR female plug for the right channel.

Pin 2 is the Positive lead. Pin 3 is the Negative lead. Pin 1 is not used in this application, and must not be connected.

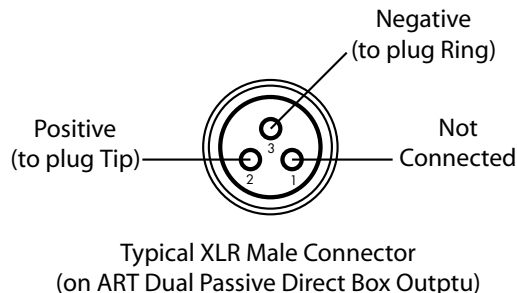


Figure C

Connecting the Direct Box to External Analog Power Amplifier (Fig. D)

Figure D shows how you would wire connectors for 1/4" phone plugs or for RCA plugs. Check your power amplifier's manual for more information on what type of input connection is required.

You will be working with pins 2 and 3 on each XLR output jack. Pin 2 carries the positive signal, and connects to the tip of the plug (both 1/4" phone and RCA types). Pin 3 carries the negative signal, and connects to the ring of the a 1/4" phone plug or to the sleeve of the RCA plug. Pin 1 is not used in this application, and must not be connected.

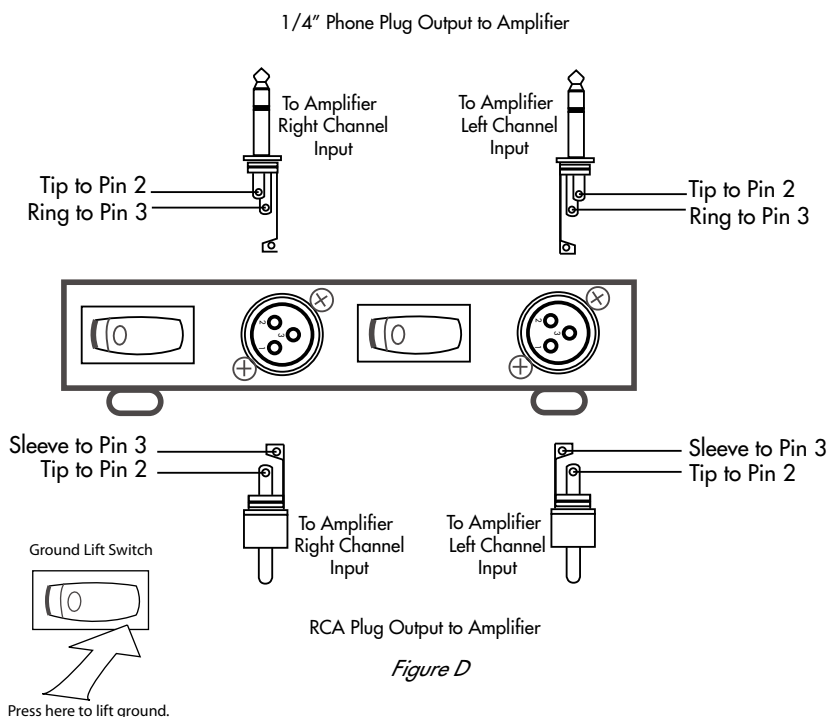


Figure D

Important Note: The output side of the ART Dual Passive Direct Box has two ground lift switches. Both of these switches must be moved to the "lifted" position for proper operation. The side opposite the white dot is pressed in on each switch (Fig. E).

Figure E

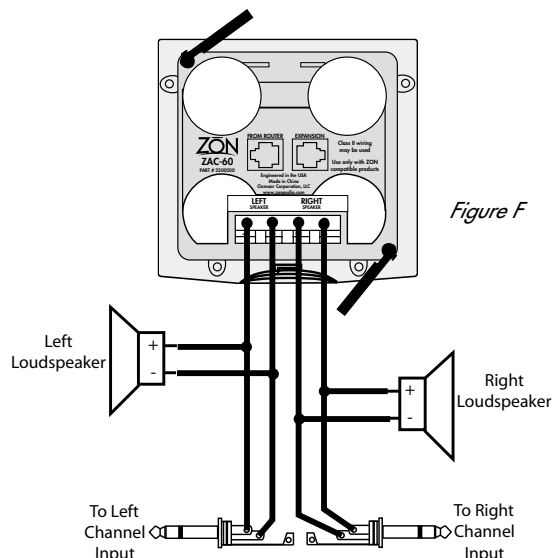


Figure F

Using Loudspeakers and a Direct Box in Parallel (Fig. F)

Figure E illustrates how you can connect a pair of loudspeakers and the ART Dual Passive Direct Box to a ZAC-60. You will note that this is a parallel connection (Positive to Positive, Negative to Negative on each channel).