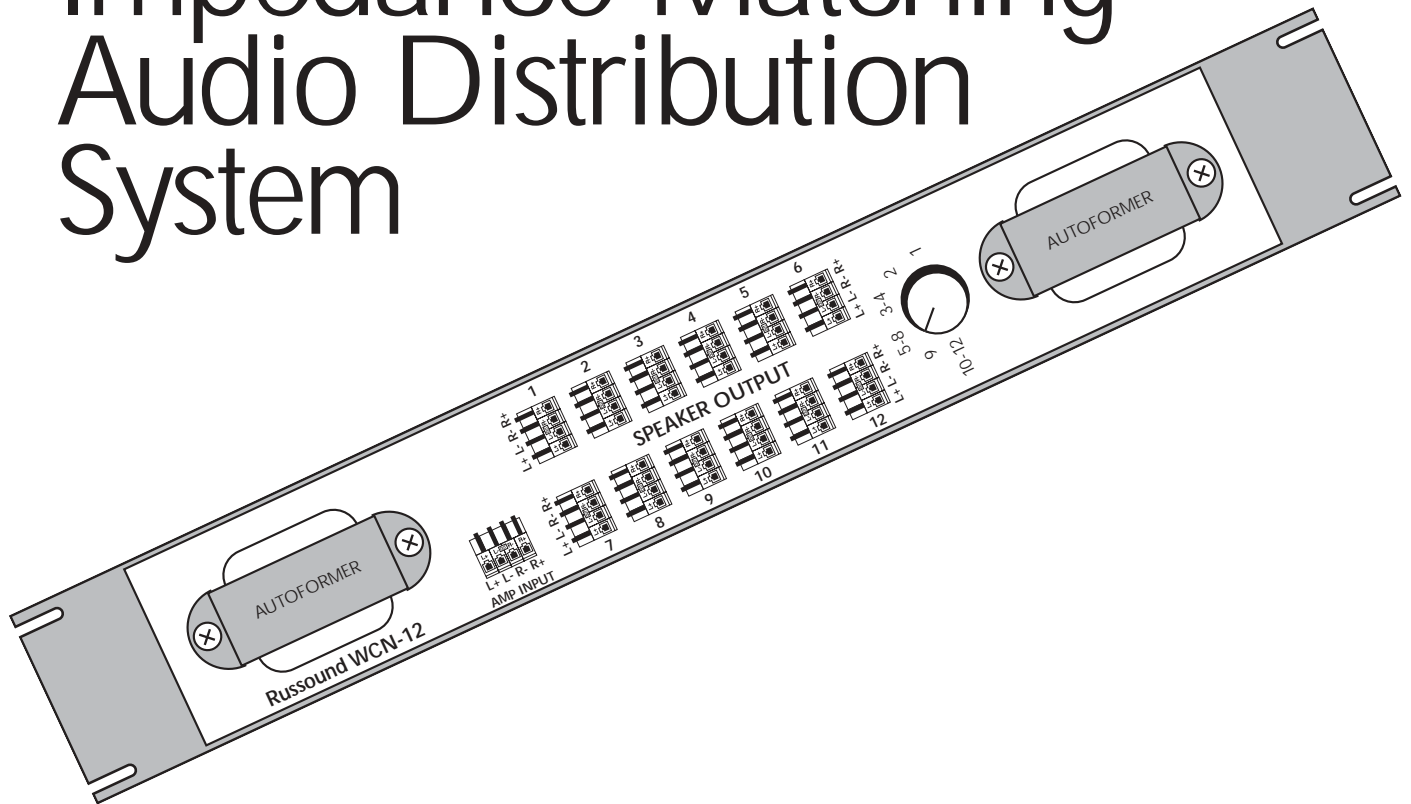


WCN-12

Instruction Manual

Impedance-Matching
Audio Distribution
System



1. Description

The WCN-12 audio distribution system is a highly-efficient impedance-matching distribution block designed for use with 12 pair of either 4 ohm or 8 ohm speakers, and 4 to 8 ohm amplifiers. Russound precision-wound autoformers ensure the highest fidelity and efficient amplifier operation, and are designed for use with amplifiers whose frequency range DOES NOT extend below 20 Hz. In applications with amplifiers whose frequency range does extend below 20 Hz, a low-frequency protection circuit is needed to reduce subsonic signals that would otherwise cause amplifier shutdown. The Russound LFP-1 Low Frequency Protection Module is excellent for protecting these amplifiers. The WCN-12 is equipped with a rotary switch, mounted on the top of the printed circuit board, which can be set to the appropriate position based on the number of pairs of speakers connected in the system. The switch selects the proper taps of the autoformers resulting in the correct impedance multiplication to protect the amplifier.

2. Connections

The WCN-12 has removable color-coded modular snap connectors that snap open for wire insertion and snap shut to secure the connection. Strip about 3/8" of insulation from the ends of all wires to be connected. If necessary, twist the exposed conductor to ensure that no loose strands exist. Remove the SPEAKER connector by firmly pulling it out of its 4-pole connector. Lift the wire locking lever on the connector, insert the wire, being careful to observe the polarity, then lower the lever with a "snap." Connect each pair of speakers one at a time to any of the 12 SPEAKER connectors, observing polarity, then snap the connector back into place. In the same way, remove the AMP INPUT connector. Snap open the connector to insert the wires from the amplifier's output, observing polarity. Snap the connector shut to secure the wire connection. Snap the connector back into place. If external volume controls are used, connect speaker wire from the appropriate speaker connector on the WCN-12 to the volume control input.

3. Operation

All the connected speakers will be driven when the amplifier is operating. To ensure safe operation of the amplifier, an impedance level for the system must be selected using the rotary switch on the WCN-12. The switch must be set based on the following conditions:

- If the amplifier and the speakers are both 4 ohms, set the rotary switch to the number of pairs of speakers connected to the WCN-12.
- If the amplifier and the speakers are both 8 ohms, set the rotary switch to the number of pairs of speakers connected to the WCN-12.
- If the amplifier is 8 ohms and the speakers are 4 ohms, set the rotary switch to TWICE the number of pairs of speakers connected to the WCN-12.
- If the amplifier is 4 ohms and the speakers are 8 ohms, set the rotary switch to HALF the number of pairs of speakers connected to the WCN-12.

4. Setting System Volume

It is important to properly adjust an impedance-matching system to avoid distortion or DC clipping (DC voltage will be produced from an amplifier that is overworked or that has an improper load). These can cause an amplifier/receiver to go into protection, and can cause autoformers on volume controls to heat up, damaging system components. To set up the system, the amplifier/receiver volume should be at its lowest setting, and the in-wall/selector volume control should be at the highest setting. Slowly adjust the amplifier/receiver volume to a level that is acceptable for the amplifier without clipping.

5. Specifications

Power Rating/channel: 200 watts Power Handling
100 watts RMS/channel, continuous
300 watts peak

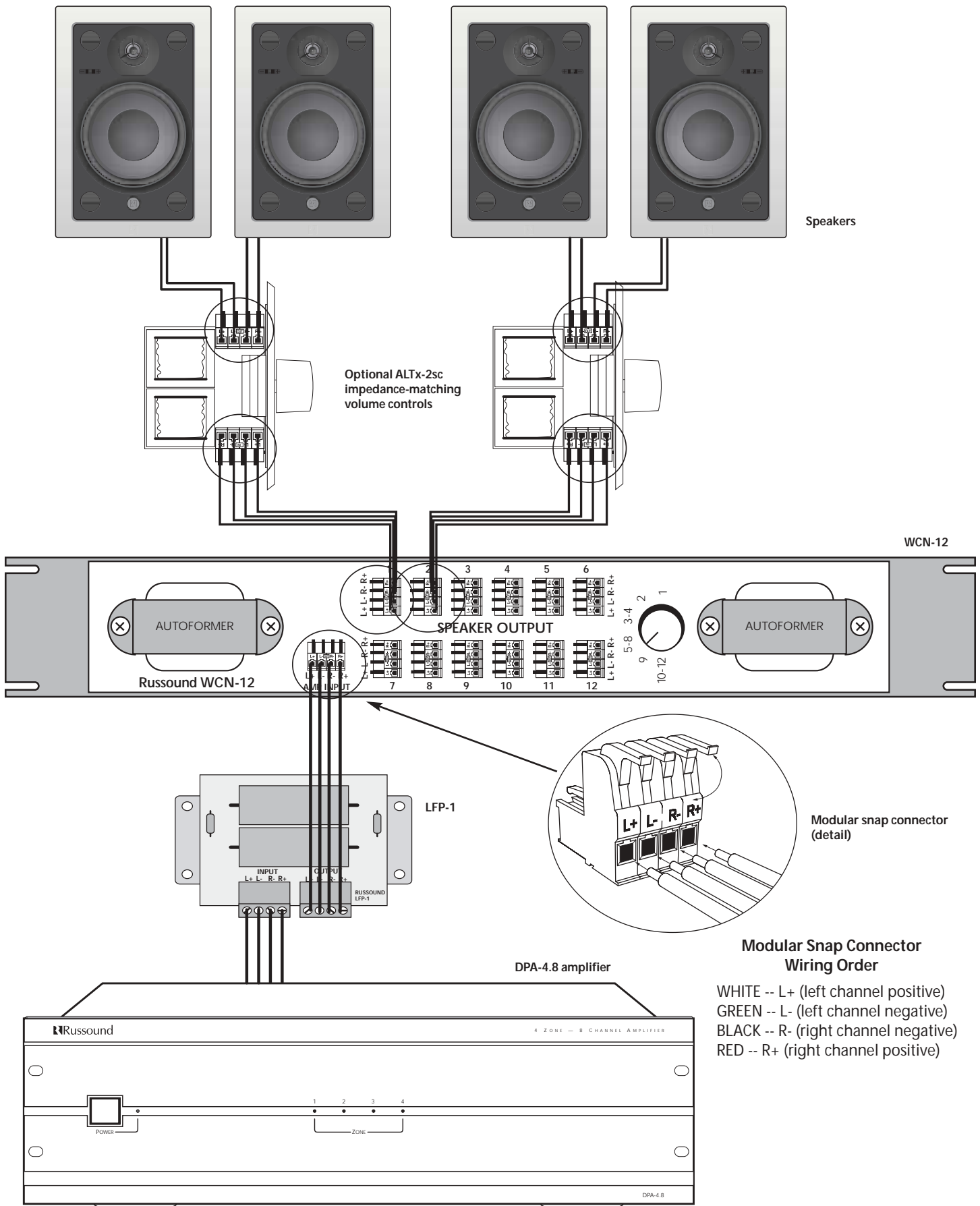
Terminals: Removable modular color-coded snap connectors accept up to 14 gauge wire

Impedance: Use with 4 ohm or 8 ohm amplifiers

Mount: Standard 19" open frame allows rack or stud mounting

Dimensions: 19"W x 3"H x 3"D (48.3 x 8.9 x 7.6 cm)

Weight: 5 lb. (2.3 kg)



Connection Diagram for Russound WCN-12 Audio Distribution Board (not to scale)

6. Optional Accessories

LFP-1 Low Frequency Protection Circuit

ALTx-2sc Impedance matching stereo volume control

7. Warranty

The Russound WCN-12 are fully guaranteed for Ten (10) years from the date of purchase against all defects in materials and workmanship. During this period, Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor. For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. The unit must be returned to Russound at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects under the terms of the warranty. Russound assumes no responsibility for defects resulting from abuse or servicing performed by an agency or person not specifically authorized in writing by Russound. Damage to or destruction of components due to improper use voids the warranty. In these cases, the repair will be made at the owner's expense. To return for repairs, the unit must be shipped to Russound at the owner's expense, along with a note explaining the nature of the service required. Be sure to pack in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.

Russound sells product only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Any Russound product purchased from an unauthorized dealer or other source, including retailers, mail order sellers, and online sellers will not be honored or serviced under existing Russound warranty policy. Any sale of products by an unauthorized source or other manner not authorized by Russound shall void the warranty on the applicable product.



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connection