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World Leader of In-Rack, Audio, Video, Data Monitoring, and Closed Captioning Solutions

ARS Series

- ARS-11
- ARS-22B

Analog Audio Source Selectors and Signal Routers

User Guide

Part Number 821023, Revision A

panorama®

the video division of Wohler

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Customer Support

Wohler Technologies, Inc.
31055 Huntwood Avenue
Hayward, CA 94544
www.wohler.com

Phone: 510-870-0810
FAX: 510-870-0811
US Toll Free: 1-888-596-4537
(1-888-5-WOHLER)
Web: www.wohler.com
Sales: sales@wohler.com
Support: support@wohler.com

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ARS Series User Guide

Introduction

Overview

The ARS Analog series provides electronic switching for multiple audio sources in a single rack space. An ARS unit may function as a stand-alone audio routing switcher, or as the source selector in an interactive system for aural and visual monitoring of multiple audio sources.

The ARS Series features a modular design that allows units to be configured to suit a variety of specific application requirements. Balanced or single-ended inputs are accepted on phoenix style, plug-in, screw clamp terminal blocks. Outputs are on single-ended 3-pin connectors.

Topics

Safety Instructions

1. Read, keep, and follow all of these instructions; heed all warnings.

2. Do not use this equipment near water.

3. Use only a dry cloth to clean the equipment.

4. Do not block any ventilation openings. Install only in accordance with the instructions in the section entitled, "Installation Recommendations" on page 3.

5. Do not install near any heat source such as a radiator, heat register, amplifier, or stove.

6. Do not expose the equipment to rain or moisture.

7. Do not attempt to plug the unit into a two-blade outlet (with only two prongs of equal width).

IMPORTANT: By design, these router/switchers will only plug into a three-prong outlet for your safety. If the plug does not fit into your outlet, contact an electrician to replace the obsolete outlet.

8. Protect the power cord from being walked on or pinched, particularly at plug's source on the equipment and at the socket.

9. Use only the attachments/accessories specified by the manufacturer.

10. Unplug the equipment during lightning storms or when unused for long periods of time.

11. Refer all servicing to qualified service personnel. Servicing will be required under all of the following conditions:

    *   The equipment has been damaged in any way, such as when the power-supply cord or plug is damaged.

    *   Liquid had been spilled or objects have fallen onto the equipment.

    *   The equipment has been exposed to rain or moisture.

    *   The equipment does not operate normally.

    *   The equipment has been dropped.

Installation Recommendations

Mounting

The unit is designed to install into a standard 19" rack mounted.

Heat Dissipation

The ambient temperature inside the mounting enclosure should not exceed 40° Celsius (104° Fahrenheit). Adjacent devices can be rack mounted (or stacked) in proximity to the unit if the above temperature is not exceeded. Allow a 1RU (1.75"/44.45mm) space above and below the unit for air circulation.

Important: As a safety precaution, we advise you to be sure to allow proper ventilation on both sides of the unit.

Power

The unit comes with a standard 24VDC/3.0A internal power supply and connects an A/C mains power source (65W, 100 to 240 VAC, 50/60Hz) to the IEC external power supply connector provided on the rear panel of the unit.

Mechanical Bracing

The chassis is securely attached to the front panel at six points along its surface, not just at the four corners of the chassis ears. This feature will reduce or eliminate rear bracing requirements in most mobile/portable applications. The weight of internal components is distributed fairly evenly around the unit.

Electrical Interference

As with any audio equipment, maximum immunity from electrical interference requires the use of shielded cable; however, satisfactory results can sometimes be obtained without it.

Audio Connections

All input connections are on phoenix style, screw clamp, plug-in terminal block connectors. Each input channel is on a separate plug-in terminal block. For connection to a single-ended (unbalanced) source, the unused input terminal must be jumpered to circuit common, which is easily done on the plug-in terminal block.

Output connectors are male XLR with three or five pins, or female DIN with 8 pins depending on the model. See for pin-out information for both models.

Applications

The ARS Series is ideally suited for use in broadcast, recording, corporate and industrial video, satellite link facilities, and commercial sound applications.

Features

- 1 RU
- CMOS switching
- Many possible input/output configurations available
- Mono or stereo inputs with output on one or two mono or stereo connectors
- LED indication of selected channel(s)
- Tactile switches offer radio button style single channel selection with the additional flexibility of multiple channel selection.
- Comprehensive system application in conjunction with Wohler AMP Series monitors and LM Series multiple source level metering.

Specifications

Table 1–1   ARS Series Specifications

Specification	Value(s)
Input Impedance (min.)	40 k ohms balanced
Input Level: (maximum)	+26 dBv
Crosstalk	-65 dB
Distortion	Less than 0.05%
Frequency Response	± .5 dB 20 Hz - 20 kHz
Noise	-65 dB
Maximum Output	+20 dBv into 600? (Ohms)
Dimensions (H x W x D):	1.75 x 19 x 6 inches (44.5 x 483 x 149 mm)
Weight (maximum)	7 lbs. (3.18 kg)
Power Supply	24 VAC; UL, CSA, or TUV approved

Note: Features and specifications subject to improvement without notice.

Front Panel Controls

Please refer to Figure 1–1 and Figure 1–2 below to familiarize yourself with the front panel features of the ARS Analog series units; descriptions of the controls and indicators follows Figure 1–1 and Figure 1–2 below. All controls and indicators function the same for both ARS models.
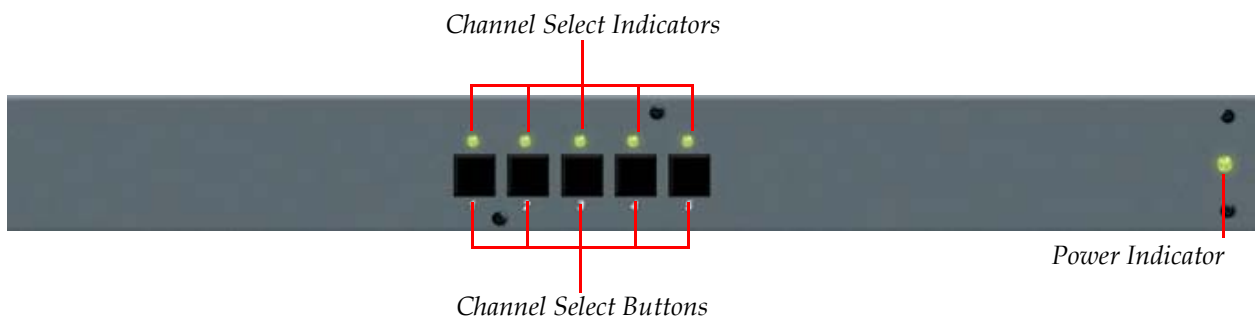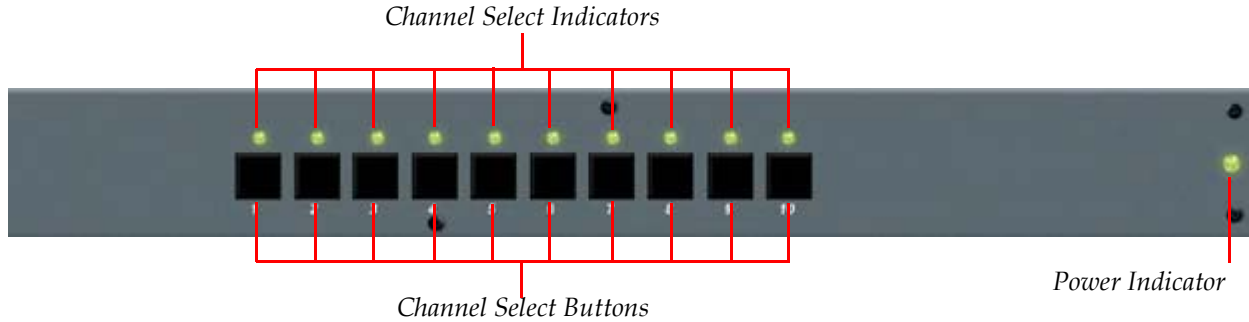
Figure 1–1   ARS-11 Front Panel

Channel Select Indicators

Power Indicator

Channel Select Buttons

Figure 1—2 ARS-22B Front Panel

Channel Select Indicators

Channel Select Buttons

Power Indicator

- **Channel Select Push Buttons**: Push one of these buttons to select the input channel that will be routed to the configured output connector(s). A single push selects the indicated channel.

  Note: To select more than one channel, push on one of the channel select buttons for a desired channel and hold it down while pressing additional buttons one at a time, until all desired additional channels are selected.

- **Channel Select Indicators**: After pressing one of the channel select buttons, its corresponding green LED above the button will light up to indicate that the channel is selected. Pushing another channel select button selects a different channel and automatically de-selects the previously selected channel.

- **Power Indicator**: When the supplied external power supply is connected to the power input on the rear panel and mains power is operating, then this LED will glow green.

Rear Panel Connectors

Please refer to Figure-2a on the following page to familiarize yourself with the rear panel features of the ARS Series units. The following sections describe these features and are referenced, by letter, to Figure-2a.
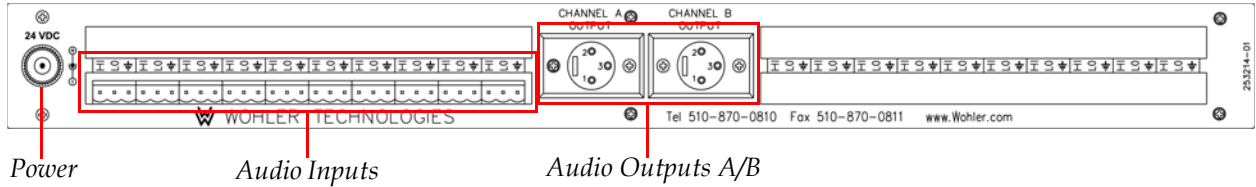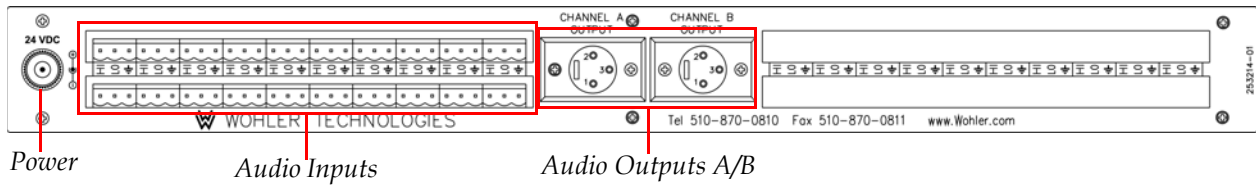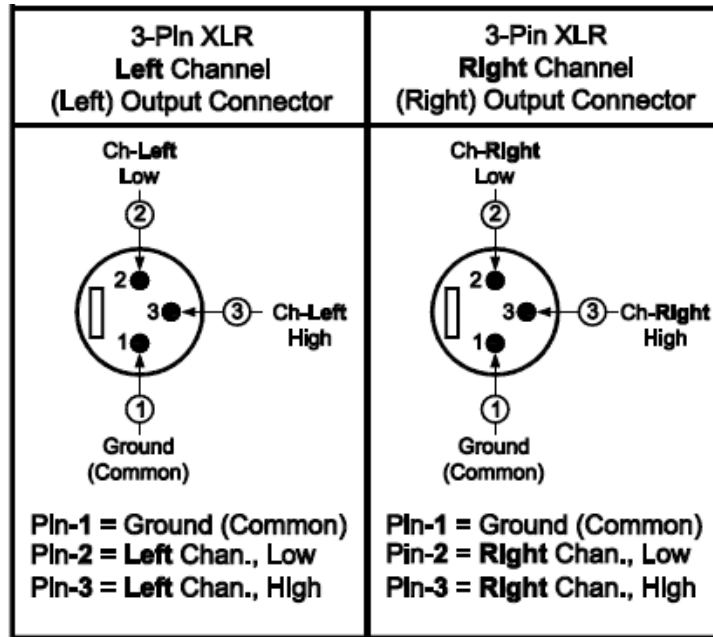
Figure 1–3   ARS-11 Rear Panel

Power   *Audio Inputs*   *Audio Outputs A/B*

Figure 1–4   ARS-11 Rear Panel

Power   *Audio Inputs*   *Audio Outputs A/B*

- **Power Connector**: Plug in the supplied external AC to 24VDC power supply into this connector to supply power to the ARS unit

- **Audio Inputs** (Phoenix Connectors): Plug in your standard analog audio inputs into these Phoenix style, screw clamp, plug-in terminal block connectors. There are from five to forty input connectors depending on the ARS model configuration being used. Please note that due to the modular nature of the rear panel, there will be blank spaces on models that are configured with less than forty input connectors and/or less than two output connectors.

- **Audio Output(s)** (3-Pin, Male XLR Connectors): These connectors provide outputs of the inputs as selected by the Channel Select buttons on the front panel. Output connectors may be configured using one or two 3-pin male XLR connectors.

Figure 1–5 below illustrates the XLR pin-outs.

Figure 1–5 ARS 3-Pin Male XLR Pin-Out Definitions

Technical Functional Overview

Figure 1–6 on page 9 and Figure 1–7 on page 10 illustrate the functionality of the ARS Series switcher/routers.
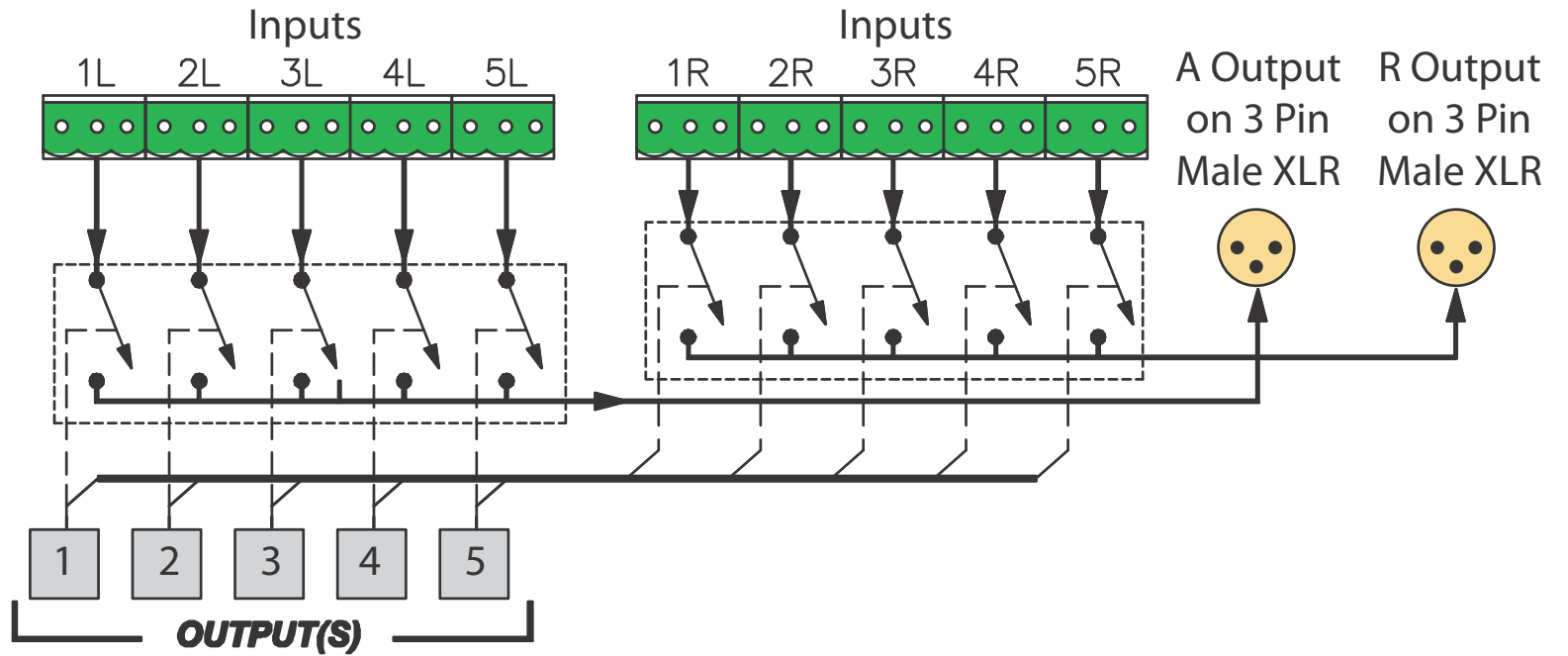
Figure 1—6   ARS-11 Block Diagram

Figure 1—7   ARS-22B Block Diagram