MODEL:

102xl
2-Channel Audio Mixer

P/N: 2900-000313 Rev 4
102xl Quick Start Guide
This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerelectronics.com/support/product_downloads.asp to download the latest manual or scan the QR code on the left.

Step 1: Check what’s in the box
- 102xl 2-Channel Audio Mixer
- 1 Power supply (12V DC)
- 4 Rubber feet
- 1 Quick Start sheet

Save the original box and packaging materials in case you need to return your 102xl for service.

Step 2: Install the 102xl
Attach the rubber feet and place on a table or mount the 102xl in a rack (using an optional RK-1 rack mount).

Step 3: Connect the inputs and outputs
Always switch off the power on each device before connecting it to your 102xl.

Always use Kramer high-performance cables for connecting AV equipment to the 102xl.

Step 4: Connect the power
Connect the 12V DC power adapter to the 102xl and plug the adapter into the mains electricity.

Step 5: Operate the 102xl
Set the phantom 48V and input level DIP-switches for each input. Use 48V phantom only for condenser microphones.
Set the input or master volume knobs to mix the signals as needed.
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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer 102xl 2-Channel Audio Mixer, which is ideal for the following typical applications:

- Live stage and studio audio mixing
- Presentation systems and press conferences
2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

Go to http://www.kramerelectronics.com/support/product_downloads.asp to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer 102xl away from moisture, excessive sunlight and dust

This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.
2.2 Safety Instructions

Caution:  There are no operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

2.3 Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer’s recycling arrangements in your particular country go to our recycling pages at http://www.kramerelectronics.com/support/recycling/.
The **102xl 2 Channel Audio Mixer** is a high quality, low noise, 2-input mono balanced audio standalone mixer that provides for 2 different levels on each input - Mic level or line level as well as the selection of either a dynamic or phantom microphone.

The **102xl** includes:

- Two XLR input connectors and one XLR output connector
- A MASTER knob for adjusting the level of both input signals mixed into the output, and two LEVEL knobs, for adjusting the levels of each input separately
- A 12 VDC power socket, which is ideal for field use. The unit generates broadcast voltage level ±12V and +48V internally from the single +12 VDC input
- Two input level select switches for selecting the balanced level (MIC or LINE)
- Two switches for applying 48V phantom power
### 3.1 Defining the 102xl 2-Channel Audio Mixer

This section defines the 102xl.

![Diagram of 102xl 2-Channel Audio Mixer]

Figure 1: 102xl 2-Channel Audio Mixer

<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INPUT 1 XLR Female Connector</td>
<td>Connects to the audio source 1</td>
</tr>
<tr>
<td>2</td>
<td>PHANTOM 48V (OFF/ON) Switches</td>
<td>Move to ON to select a condenser microphone; move to OFF to select dynamic microphone (1 and 2)</td>
</tr>
<tr>
<td>3</td>
<td>INPUT 2 XLR Female Connector</td>
<td>Connects to the audio source 2</td>
</tr>
<tr>
<td>4</td>
<td>INPUT LEVEL SELECT (LINE/MIC) Switches</td>
<td>Move to MIC to select microphone level input; move to LINE to select line level input (1 and 2)</td>
</tr>
<tr>
<td>5</td>
<td>12V DC</td>
<td>+12V DC connector for powering the unit</td>
</tr>
<tr>
<td>6</td>
<td>ON LED</td>
<td>Lights when the unit is powered</td>
</tr>
<tr>
<td>7</td>
<td>OUTPUT XLR Male Connector</td>
<td>Connects to the audio acceptor</td>
</tr>
<tr>
<td>8</td>
<td>LEVEL INPUT Knobs</td>
<td>Adjust the input levels of each channel (1 and 2)</td>
</tr>
<tr>
<td>9</td>
<td>MASTER Knob</td>
<td>Adjusts the combined signals from both inputs mixed to the output</td>
</tr>
</tbody>
</table>
4 Connecting the 102xl

Always switch off the power to each device before connecting it to your 102xl. After connecting your 102xl, connect its power and then switch on the power to each device.

To connect up to two balanced audio sources to the 102xl 2 Channel Audio Mixer, as the example in Figure 2 illustrates, do the following:

1. Connect a balanced audio source (for example, a condenser microphone) to the INPUT 1 XLR female connector.
   Set the INPUT LEVEL SELECT IN 1 switch to MIC.
   Set the PHANTOM 48V IN 1 switch to ON.
   When using a dynamic microphone, set the PHANTOM 48V switch to OFF.

2. Connect a balanced audio source to the INPUT 2 XLR female connector.
   Set the INPUT LEVEL SELECT IN 2 switch to LINE.
   Set the PHANTOM 48V IN 2 switch to OFF.

3. Connect the XLR male OUTPUT connector to a balanced audio acceptor (for example, a power amplifier with speakers).

4. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.

5. Rotate the INPUT 1, INPUT 2 and MASTER LEVEL knobs to adjust the audio level of input 1, input 2 and of both inputs mixed together (the MASTER LEVEL knob) to the output, respectively.

For every unused input, be sure to rotate the LEVEL potentiometer fully counter-clockwise (to the minimum level).
Figure 2: Connecting the 102xl 2-Channel Audio Mixer
### Technical Specifications

<table>
<thead>
<tr>
<th>INPUTS:</th>
<th>2 line/mic balanced mono on XLR (F) connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT:</td>
<td>1 line balanced mono on an XLR (M) connector</td>
</tr>
<tr>
<td>MAX. OUTPUT LEVEL:</td>
<td>18Vpp @absolute maximum gain</td>
</tr>
<tr>
<td>BANDWIDTH (-3dB):</td>
<td>&gt; 100kHz</td>
</tr>
<tr>
<td>S/N RATIO:</td>
<td>Line: 91.5dB Mic: 62.5dB, 1kHz</td>
</tr>
<tr>
<td>CONTROLS:</td>
<td>Line:&lt;-48dB to +11.4dB, Mic: &lt;-1.9dB to +62.5dB, minimum to absolute gain</td>
</tr>
<tr>
<td></td>
<td>Phantom +48V selection for condenser microphone by DIP-switches per input</td>
</tr>
<tr>
<td></td>
<td>Line/microphone input mode selection by DIP-switches per input</td>
</tr>
<tr>
<td>COUPLING:</td>
<td>Input: AC, Output: DC</td>
</tr>
<tr>
<td>AUDIO THD + NOISE:</td>
<td>Line: 0.013%, Mic: 0.079%</td>
</tr>
<tr>
<td>AUDIO 2nd HARMONIC:</td>
<td>Line: 0.002%, Mic: 0.01%</td>
</tr>
<tr>
<td>POWER CONSUMPTION:</td>
<td>12 VDC, 140mA</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>0° to +40°C (32° to 104°F)</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>-40° to +70°C (-40° to 158°F)</td>
</tr>
<tr>
<td>HUMIDITY:</td>
<td>10% to 90%, RHL non-condensing</td>
</tr>
<tr>
<td>DIMENSIONS:</td>
<td>10.68cm x 16.2cm x 4.2cm (4.2&quot; x 6.38&quot; x 1.65&quot;), W, D, H</td>
</tr>
<tr>
<td>WEIGHT:</td>
<td>0.65kg (1.4lbs) approx.</td>
</tr>
<tr>
<td>ACCESSORIES:</td>
<td>Power supply</td>
</tr>
<tr>
<td>OPTIONS:</td>
<td>RK-1 19&quot; rack adapter</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice at [http://www.kramerelectronics.com](http://www.kramerelectronics.com)
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The warranty obligations of Krammer Electronics for this product are limited to the terms set forth below:

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This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered
This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Krammer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

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E-mail:  info@kramerel.com

SAFETY WARNING
Disconnect the unit from the power supply before opening and servicing.