

Kramer Electronics, Ltd.



USER MANUAL

Model:

102xl

2 Channel Audio Mixer

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 500-plus different models now appear in 8 Groups¹, which are clearly defined by function.

Congratulations on purchasing your Kramer MultiTOOLS® **102xl 2 Channel Audio Mixer**, which is ideal for:

- Live stage and studio audio mixing
- Presentation systems and press conferences

The package includes the following items:

- **102xl 2 Channel Audio Mixer**
- Power adapter (12V DC Input)
- This user manual²

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
- Use Kramer high performance high resolution cables³

2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.

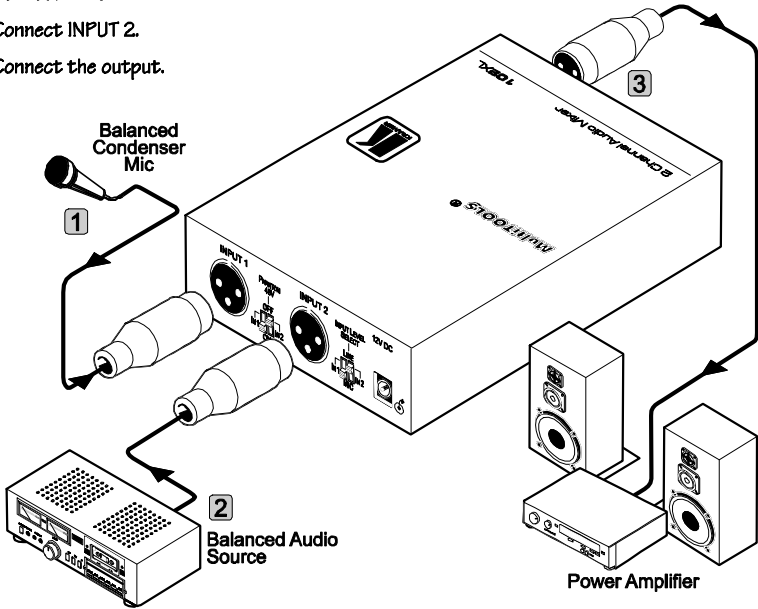
1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from the Internet at this URL: <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

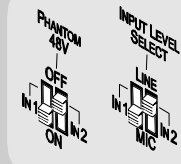
Step 1: Connect the inputs and the output - see section 5

- 1 Connect INPUT 1.
- 2 Connect INPUT 2.
- 3 Connect the output.



SET THE SWITCHES:

- IN 1 PHANTOM 48V switch to ON
- IN 2 PHANTOM 48V switch to OFF
- IN 1 INPUT LEVEL SELECT switch to MIC
- IN 2 INPUT LEVEL SELECT switch to LINE

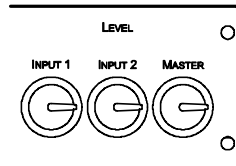


Step 2: Connect the power

Step 3: Adjust the audio levels - see section 5

If required, use the knobs to adjust the:

- ♦ INPUT 1 and INPUT 2 levels
- ♦ MASTER level



SET THE KNOBS INITIALLY TO THE CENTER POSITION AND THEN ADJUST THE AUDIO LEVEL FROM THAT POINT

3 Overview

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 input¹ separately
- A 12 VDC power socket, which is ideal for field use. The unit generates broadcast voltage level $\pm 12V$ and $+48V$ internally from the single $+12$ VDC input
- Two input level select switches¹ for selecting the balanced level (MIC or LINE)
- Two switches¹ for applying 48V phantom power²

Achieving the best performance means:

- Connecting only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoiding interference from neighboring electrical appliances that may adversely influence signal quality and positioning your **102xl** in a location free from moisture and away from excessive sunlight and dust



Caution – No operator-serviceable parts inside unit.

Warning – Use only the Kramer Electronics input power wall adapter that is provided with this unit³.

Warning – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

¹ Each corresponds to its respective input

² This is for applications that require typical condenser microphones to be connected directly to the 102xl To prevent unnecessary damage, apply phantom power to the Mic only when required

³ For example: model number AD2512C, part number 2535-000251

4 Your 102xl 2 Channel Audio Mixer

Figure 1 and Table 1 define the **102xl 2 Channel Audio Mixer**.

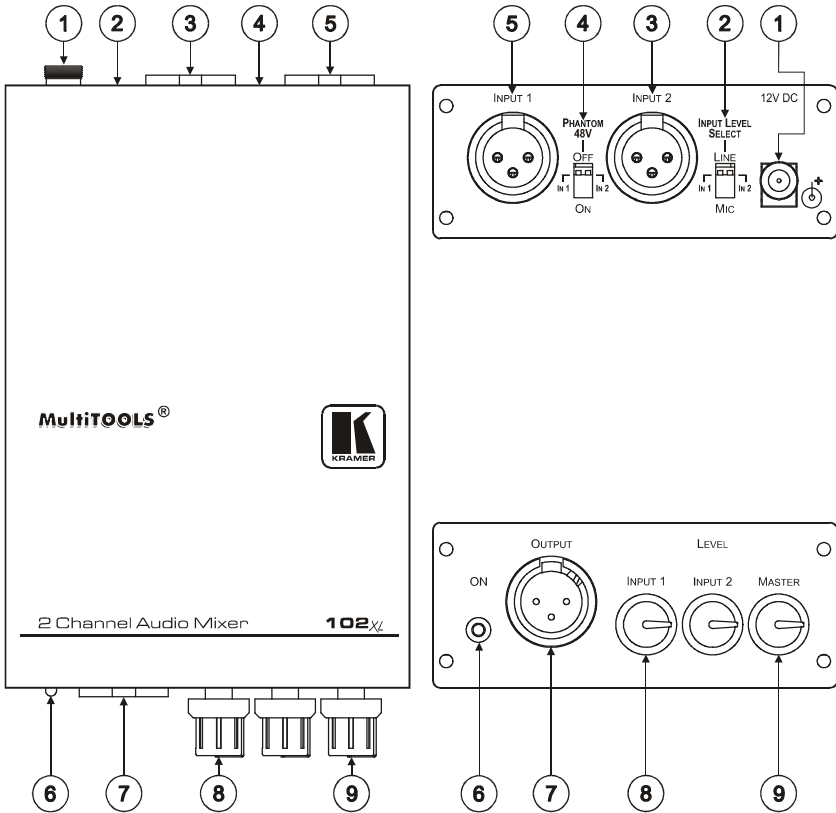


Figure 1: 102xl 2 Channel Audio Mixer

Table 1: 102xl 2 Channel Audio Mixer Features

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

5 Connecting the 102xl 2 Channel Audio Mixer

To connect up to two balanced audio sources to the **102xl 2 Channel Audio Mixer** unit, as the example in Figure 2 illustrates, do the following¹:

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 ON².
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 together³ to the output, respectively.

For every unused input, be sure to rotate the LEVEL potentiometer fully counter-clockwise (to the minimum level).

1 Switch OFF the power on each device before connecting it to your 102xl. After connecting your 102xl, switch on its power and then switch on the power on each device.

2 When using a dynamic microphone, set the PHANTOM 48V switch to OFF.

3 The MASTER LEVEL knob.

Connecting the 102xl 2 Channel Audio Mixer

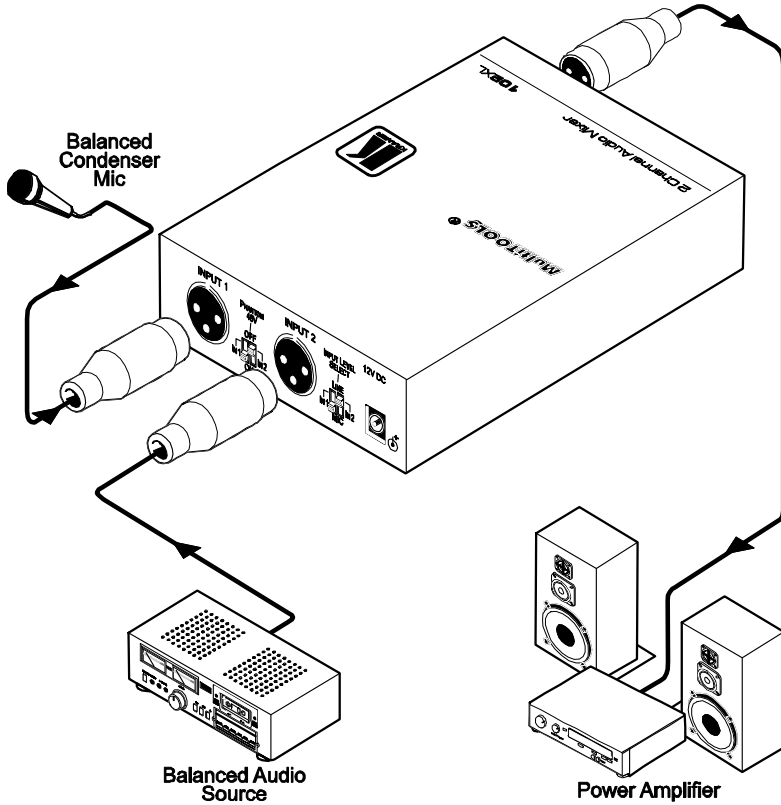


Figure 2: Connecting the 102xl 2 Channel Audio Mixer

6 Technical Specifications

Table 2: Technical Specifications¹ of the 102xl 2 Channel Audio Mixer

| | |
|---------------------|---|
| INPUTS: | 2 Line/Mic balanced mono on female XLR connectors |
| OUTPUTS: | 1 Line/Mic balanced mono on a male XLR connector |
| MAX. OUTPUT LEVEL: | 18Vpp @ absolute maximum gain |
| BANDWIDTH (-3dB): | > 100kHz |
| S/N RATIO: | Line: 91.5dB Mic: 62.5dB, 1kHz |
| CONTROLS: | Line: -48dB to +11.4dB, Mic: -1.9dB to +62.5dB, minimum to absolute gain Phantom +48V selection for condenser microphone by 90 dipswitches ² Line/microphone input mode selection by 90 dipswitches ² |
| COUPLING: | Input: AC, Output: DC |
| AUDIO THD + NOISE: | Line: 0.013%, Mic: 0.079% |
| AUDIO 2nd HARMONIC: | Line: 0.002%, Mic: 0.01% |
| POWER SOURCE: | 12 VDC, 112mA (DC) |
| DIMENSIONS: | 10.68cm x 16.2cm x 4.2cm (4.2" x 6.38" x 1.65"), W, D, H |
| WEIGHT: | 0.65 kg. (1.4 lbs.) approx. |
| ACCESSORIES: | Power supply |
| OPTIONS: | 19" rack adapters |

¹ Specifications are subject to change without notice

² Individual control for each input

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

- 1 Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com
- 2 Any product, on which the serial number has been defaced, modified or removed
- 3 Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

- 1 Removal or installation charges
- 2 Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased
- 3 Shipping charges

HOW YOU CAN GET WARRANTY SERVICE

- 1 To obtain service on your product, you must take or ship it prepaid to any authorized Kramer service center
- 2 Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s)
- 3 For the name of the nearest Kramer authorized service center, consult your authorized dealer

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

- 1 Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
- 2 Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard
Part 1: Residential, commercial and light industry environment"
- CFR-47: FCC Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B Unintentional radiators"

CAUTION!

- Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment
- Use the supplied DC power supply to feed power to the machine
- Please use recommended interconnection cables to connect the machine to other components



For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



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