

**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**903**

*Personal Stereo Amplifier*

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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 the video, audio, presentation, and broadcasting professional 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<sup>1</sup> that are clearly defined by function.

Thank you for purchasing your Kramer MegaTOOLS™ **903 Personal Stereo Amplifier**. This product is ideal for:

- Presentation rooms and multimedia applications for quick, local audio amplification
- Personal audio listening (for example, PC and portable CD player)

The package includes the following items:

- **903 Personal Stereo Amplifier**
- Power adapter (12V DC Input)
- This user manual<sup>2</sup>

## 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 cables<sup>3</sup>

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<sup>1</sup> GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; 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; GROUP 11: Sierra Products

<sup>2</sup> Download up-to-date Kramer user manuals from our Web site at <http://www.kramerelectronics.com>

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



### 3 Overview

The high-performance **903 Personal Stereo Amplifier** outputs up to 20W RMS per channel. It uses Class “D” technology for highly efficient signal conversion<sup>1</sup> to a pair of loudspeakers with minimum power loss.

The **903** includes:

- Control knobs to adjust volume, bass, mid, treble and stereo balance
- 4 input selector switches
- Outputs for a headphone set and for a pair of loudspeakers
- 3 stereo inputs on standard RCA connectors
- 1 stereo input on a mini 3.5mm socket
- A *LOUD* switch for automatic equalization in low volume listening

To achieve the best performance:

- Use only good quality connection cables<sup>2</sup> to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer **903** away from moisture, excessive sunlight and dust

	<b>Caution:</b> No operator serviceable parts inside unit
	<b>Warning:</b> Use only the Kramer Electronics input power wall adapter that is provided with the unit
	<b>Warning:</b> Disconnect power and unplug unit from wall before installing or removing the device or servicing unit

<sup>1</sup> This prevents the 903 from over-heating. The 903 can generate its maximum power output from a 12V power supply

<sup>2</sup> Available from Kramer Electronics on our Web site at <http://www.kramerelectronics.com>

## 4 Your 903 Personal Stereo Amplifier

[Figure 1](#) and [Table 1](#) define the 903 Personal Stereo Amplifier:

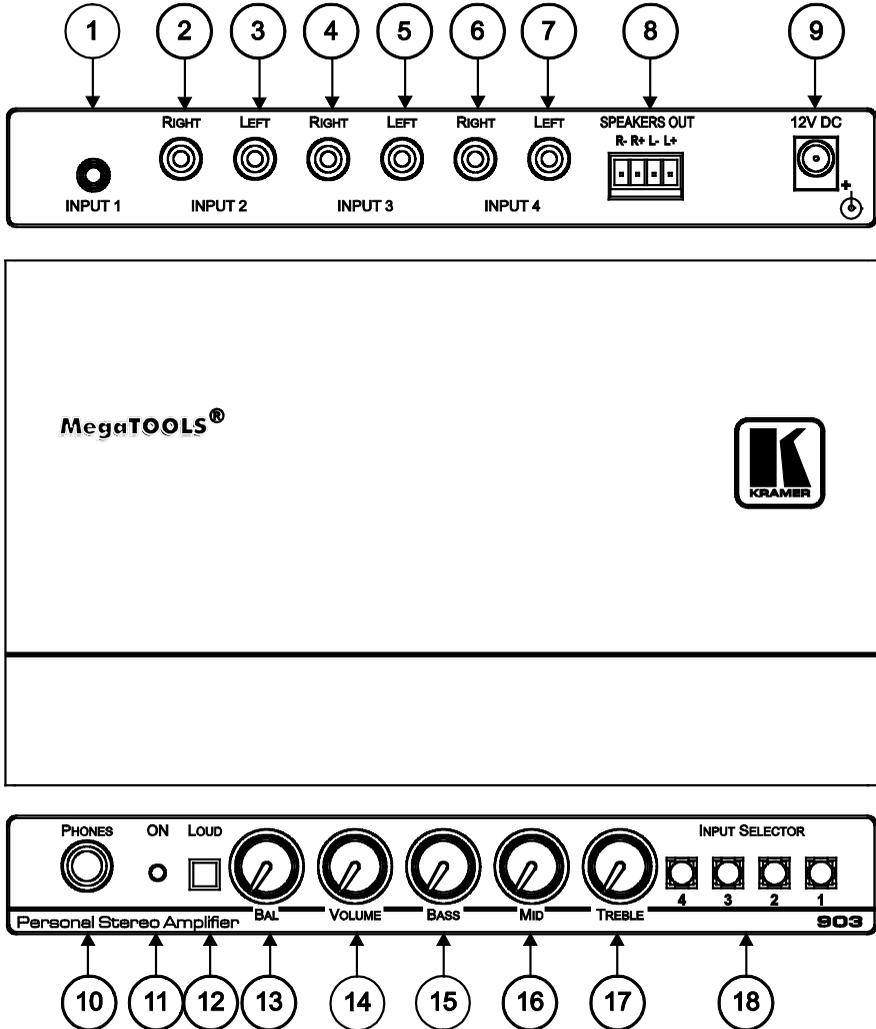


Figure 1: 903 Personal Stereo Amplifier

Table 1: Features and Functions of the 903 Personal Stereo Amplifier

#	Feature	Function
1	INPUT 1 3.5mm Mini Jack	Connects to an interface with a sound card or other player
2	INPUT 2 (Right) RCA Connector	Connects to the right stereo audio line level source 2
3	INPUT 2 (Left) RCA Connector	Connects to the left stereo audio line level source 2
4	INPUT 3 (Right) RCA Connector	Connects to the right stereo audio line level source 3
5	INPUT 3 (Left) RCA Connector	Connects to the left stereo audio line level source 3
6	INPUT 4 (Right) RCA Connector	Connects to the right stereo audio line level source 4
7	INPUT 4 (Left) RCA Connector	Connects to the left stereo audio line level source 4
8	SPEAKERS OUT (R+R-L+L-) Terminal Block Connectors	Connect to the pair of loudspeakers
9	12V DC	+12V DC connector for powering the unit
10	PHONES Connector	Connects to the headphone set
11	ON LED	Illuminates when receiving power
12	LOUD Button	Boosts equalization for low volume listening environments
13	BAL Control Knob	Adjusts the balance between the right and left channels
14	VOLUME Control Knob	Controls the signal output level
15	BASS Control Knob	Controls the bass (low frequencies)
16	MID Control Knob	Controls the mid frequencies
17	TREBLE Control Knob	Controls the treble (high frequencies)
18	INPUT SELECTOR Buttons	Pushing in selects the appropriate input (from 1 to 4)

## 5 Connecting the 903 Personal Stereo Amplifier

Connect your **903**, as the example in [Figure 2](#) illustrates:

1. Connect up to 4 stereo audio sources to the Left and Right RCA connectors (INPUT 2, INPUT 3 and INPUT 4)<sup>1</sup>.
2. Connect a music player to the 3.5 mm socket (INPUT 1)<sup>1</sup>.
3. Connect the SPEAKERS OUT connector to a pair of loudspeakers, by connecting the left loudspeaker to the “L+” and the “L-” terminal block connectors, and the right loudspeaker to the “R+” and the “R-” terminal block connectors.

**Note: Do not ground the loudspeakers**

4. Connect the PHONES connector to a headphone set (plugging in a headphone set to the PHONES connector disconnects the loudspeakers).
5. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.

<sup>1</sup> Unused inputs may be left unconnected

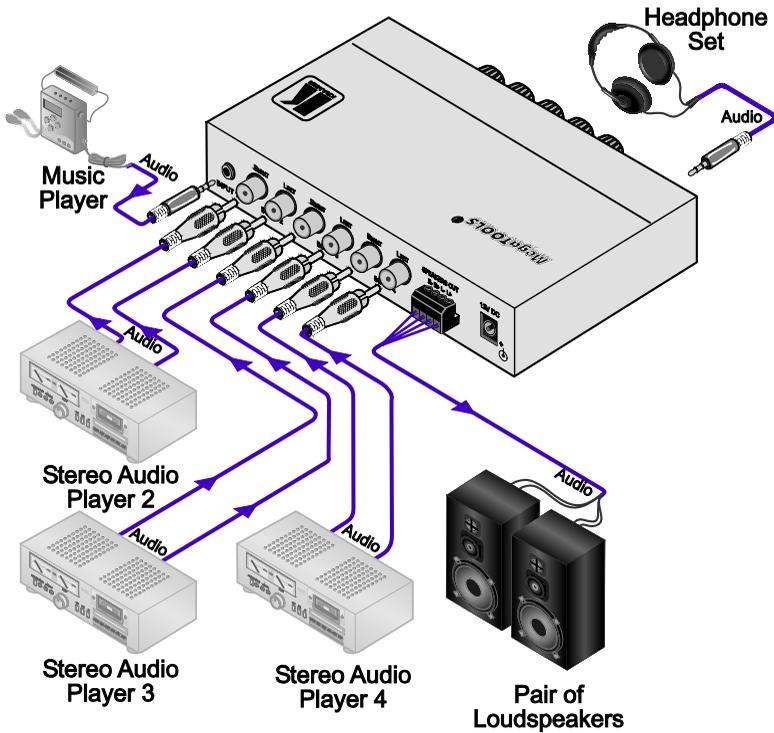


Figure 2: Connecting the 903 Personal Stereo Amplifier

## 6 Operating the 903 Personal Stereo Amplifier

To operate your 903, as [Figure 3](#) illustrates:

1. Choose the active audio source by pressing an *INPUT SELECTOR* button.
2. Adjust the VOLUME, BASS, MID, TREBLE and BALANCE controls as required.
3. Select the LOUD switch setting as required.

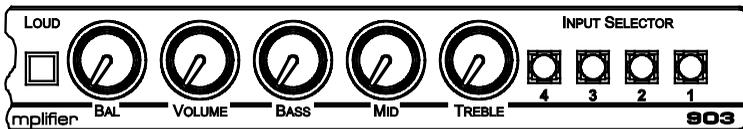


Figure 3: 903 Controls

## 7 Technical Specifications

*Table 2: Technical Specifications<sup>1</sup> of the 903 Personal Stereo Amplifier*

INPUTS:	1 unbalanced stereo audio 1Vpp/50kΩ on a 3.5mm mini jack; 3 unbalanced stereo audio 1Vpp/50kΩ on RCA connectors
OUTPUTS:	Stereo headphone on a 6.5mm connector; loudspeakers on a terminal block connector; automatic switching when a headphone is plugged in
OUTPUT POWER:	2x10W (4Ω)
OUTPUT MUSIC POWER:	2x40W (4Ω)
BANDWIDTH (-3dB):	20kHz
S/N RATIO:	77dB @1kHz
CROSSTALK:-	73dB @1kHz, all hostile
CONTROLS:	Input selector switches: bass (70Hz), mid (1kHz), treble (15kHz): +/-13dB; volume, balance and loudness controls
COUPLING:	AC
AUDIO THD + NOISE:	0.5%
AUDIO 2nd HARMONIC:	0.3%
POWER SOURCE:	12V DC, up to 2.5A
DIMENSIONS:	19cm x 13.5cm x 2.5cm (7.5" x 5.3" x 0.98") W, D, H
WEIGHT:	0.6kg (1.32lbs) approx.
ACCESSORIES:	Power supply
OPTIONS:	RK-T2B 19" rack adapter

<sup>1</sup> Specifications are subject to change without notice

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## 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](http://www.kramerelectronics.com).
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
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 installations 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 you 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.  
\* FCC and CE approved using STP cable (for twisted pair products)



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**For the latest information on our products and a list of Kramer distributors, visit our Web site: [www.kramerelectronics.com](http://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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Web site: [www.kramerelectronics.com](http://www.kramerelectronics.com)

E-mail: [info@kramerel.com](mailto:info@kramerel.com)

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