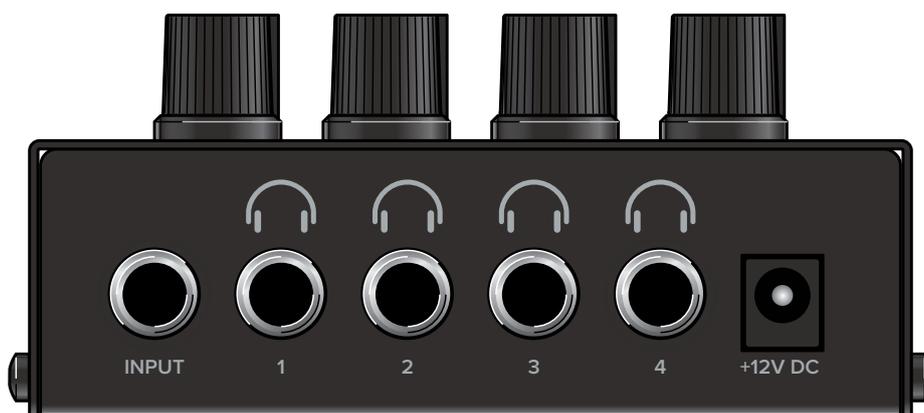


# HM-4

4-WAY HEADPHONE AMPLIFIER

## OWNER'S MANUAL



## Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
12. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

**CAUTION:** Changes or modifications to this device not expressly approved by LOUD Audio LLC could void the user's authority to operate the equipment under FCC rules.

**WARNING** — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

13. This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiator & your body.
14. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

**ATTENTION** — *Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.*

15. This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

16. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	Ryan screaming at Troy about deadlines
0.5	110	
0.25 or less	115	Loudest parts at a rock concert



**Correct disposal of this product:** This symbol indicates that this product should not be disposed of with your household waste, according to the WEEE directive (2012/19/EU) and your national law. This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.

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## Features

- Share a single stereo source with up to four pairs of headphones
- Individual level control for each output
- Powered via the included power supply
- Built-Like-A-Tank™ construction

## How to Use This Manual

After this introduction, a getting started guide will help you get things set up fast. The hookup diagram shows a typical setup.



This icon marks information that is critically important or unique to the HM-4. For your own good, read and remember them.

## Introduction

The ultra-compact HM-4 4-Way Headphone Amplifier features a 1/4" stereo input and four 1/4" headphone outputs with individual level controls. Perfect for studios or even at home when up to four people want to listen together.

## Getting Started

The following steps will help you set up the HM-4 4-Way Headphone Amplifier quickly.

1. Turn down all level knobs on all connected gear.
2. Connect a cable from the output jack of the mixer, computer or other audio device to the input jack of the HM-4.
3. Connect stereo headphones to the headphone output jack(s) of the HM-4.
4. Push the AC adapter securely into the HM-4's connector and plug the other end into an AC outlet. The HM-4 may accept the appropriate voltage as indicated near the connector. The HM-4 will turn on automatically when connected.
5. Be sure that the volume of the input is the same as it would be during normal use.
6. Slowly raise the phones knob(s) to a comfortable listening level.

## Things to Remember

- Never listen to loud music for prolonged periods. Please see the Safety Instructions on page 2 for information on hearing protection.
- Save the shipping boxes and packing materials! You may need them someday. Besides, your hamster will love playing in them and jumping out at you unexpectedly. Remember to pretend like you are surprised!
- Save your sales receipt in a safe place.



Like us

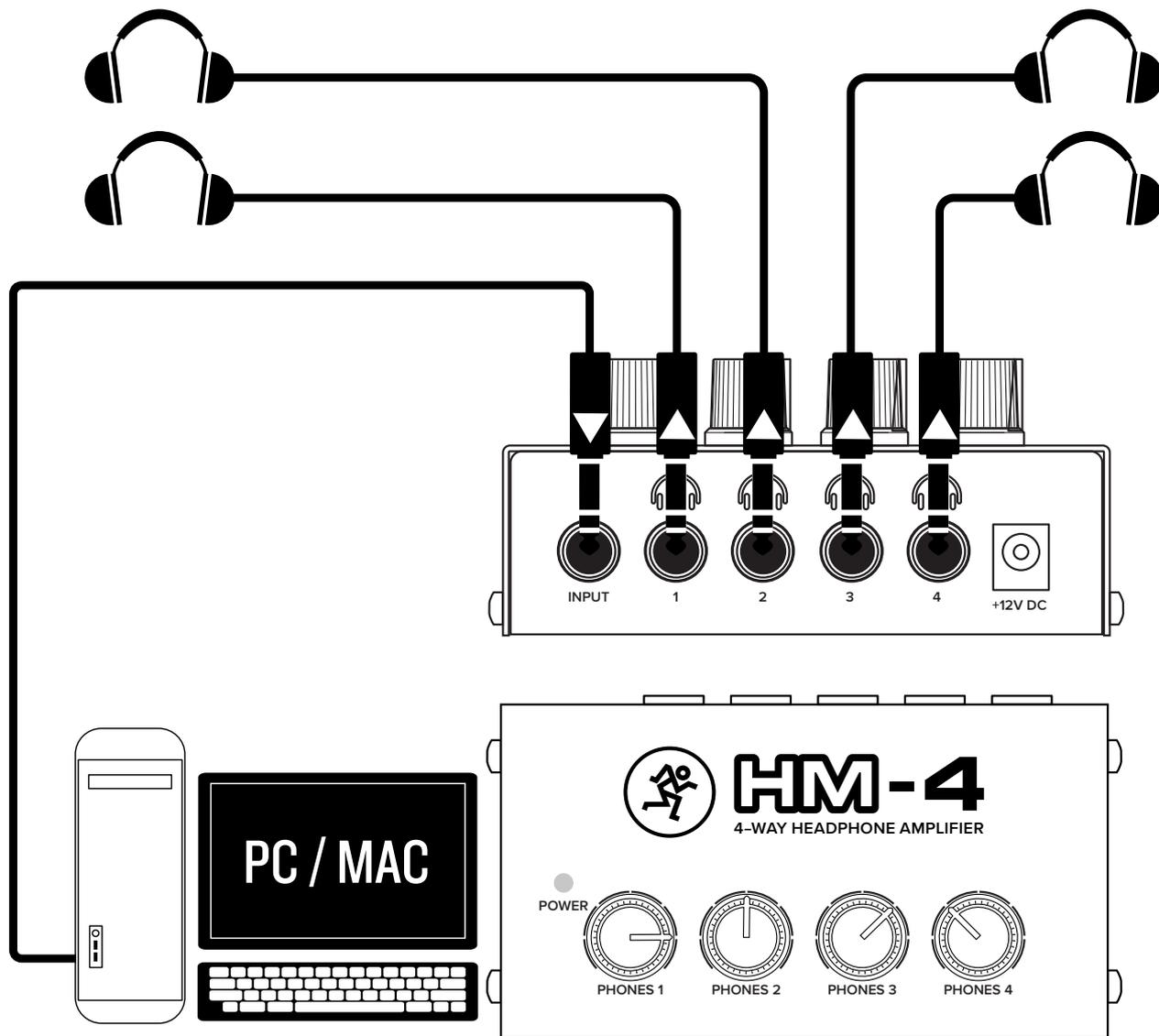


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# HM-4 4-Way Headphone Amplifier Hookup Diagram



*The HM-4 4-Way Headphone Amplifier is an easy, convenient way to combine multiple listeners to the same signal. The hookup couldn't be more straightforward.*

*Start by turning the down the main output level on the computer and all four phones knobs of the HM-4. Next, you will want to connect a cable from the computer's output jack to the HM-4's 1/4" input jack. Now connect up to four pairs of stereo headphones to the 1/4" phones jacks 1-4. Finish up by slowly raising the level of the computer's output level and HM-4's phones knobs. Easy peasy!*

*Note: While a computer may be the most common use, you could also connect a mixer or just about any other audio device to the input jack of the HM-4. The possibilities are not endless, but it's close!*

## Typical HM-4 Setup

# HM-4 4-Way Headphone Amplifier: Front and Rear Panel Features

## 1. Power Connector and LED

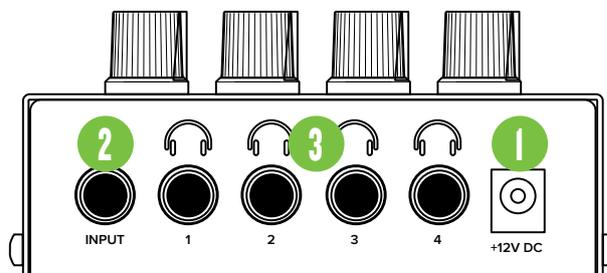
This connection is where to connect the supplied AC adapter to provide power to the HM-4. Connect the AC adapter to the HM-4 first, then plug the other end into a suitable and properly rated AC outlet. The HM-4 will turn on automatically when connected and the power LED will illuminate.



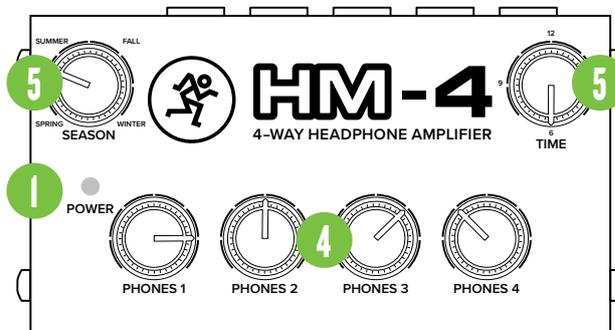
HM-4s feature varying power connectors based on country. Therefore, your power connector may (or may not) look different than the one displayed in the illustration to the right.



Only use the factory-authorized power supply that came with the HM-4.



HM-4 Rear Panel



HM-4 Top Panel

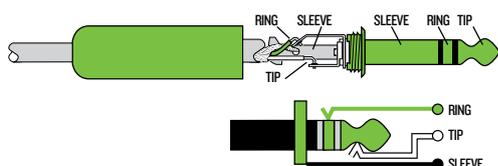
## 2. 1/4" Line Input

This input may accept 1/4" line-level signals driven by balanced or unbalanced sources.

To connect balanced lines to these inputs, use a 1/4" Tip-Ring-Sleeve (TRS) plug. "TRS" stands for Tip-Ring-Sleeve, the three connection points available on a stereo 1/4" or balanced phone jack or plug. TRS jacks and plugs are used for balanced signals and are wired as follows:

### 1/4" TRS Balanced Mono Wiring:

- Sleeve = Shield
- Tip = Hot (+)
- Ring = Cold (-)



To connect unbalanced lines to these inputs, use a 1/4" mono (TS) phone plug, wired as follows:

### 1/4" TS Unbalanced Mono Wiring:

- Sleeve = Shield
- Tip = Hot (+)



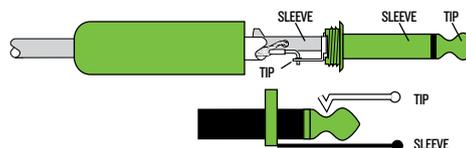
NEVER connect the output of an amplifier directly to the HM-4's input jack. This could damage the input circuitry!

## 3. 1/4" Headphone Output Jacks

These 1/4" TRS connectors supply the output for up to four pairs of stereo headphones. The volume is controlled with the phones level knobs on the top panel.

The phones output follows standard conventions:

- Tip = Left channel
- Ring = Right channel
- Sleeve = Common ground



**WARNING:** The headphone amp is loud, and can cause permanent hearing damage. Even intermediate levels may be painfully loud with some headphones. **BE CAREFUL!** Always turn the phones level controls all the way down before connecting headphones or doing anything new that may affect the headphone volume. Then turn it up slowly as you listen carefully.

## 4. Phones Level Knobs

These knobs are used to adjust the volumes at the phones output from minimum to maximum gain.

## 5. Season and Time Knobs

These knobs are used to adjust the season and time. Unfortunately, since this is an analog device, you will have to set these accordingly. We are currently working on a digital version which will represent the season and time accurately and automatically. Stay tuned!

# Appendix A: Service Information

If you think your HM-4 4-Way Headphone Amplifier has a problem, please check out the following troubleshooting tips and do your best to confirm the problem. Visit the Support section of our website ([www.mackie.com/support](http://www.mackie.com/support)) where you will find lots of useful information such as FAQs and other documentation. You may find the answer to the problem without having to part with your HM-4 4-Way Headphone Amplifier.

## Troubleshooting

### No power

- Our favorite question: Is it plugged in? Make sure the included power adapter is securely fastened to both the HM-4 and AC outlet.
- Is the power LED on the front panel illuminated?

### No sound

- Are the phones level knobs turned all the way down? Verify that all the phones level knobs on the HM-4 are properly adjusted.
- Is the level knob for the input source turned all the way down? Verify that all the volume controls in the system are properly adjusted. Look at the level meter to ensure that the mixer is receiving a signal.
- Is the signal source working? Make sure the connecting cables are in good repair and securely connected at both ends. Make sure the output level control on the mixing console is turned up sufficiently.
- Make sure the mixer does not have a mute on or a processor loop engaged. If you find something like this, make sure the level is turned down before disengaging the offending switch.

### Poor sound

- Is it loud and distorted? Make sure that you're not overdriving a stage in the signal chain. Verify that all level controls are set properly.
- Be sure all connections are secure.

### Hum

- Use balanced connections throughout your system for the best noise rejection.
- Whenever possible, plug all the audio equipment's line cords into outlets which share a common ground. The distance between the outlets and the common ground should be as short as possible.

### Repair

For warranty service, refer to the warranty information on page 9.

Non-warranty service is available at a factory-authorized service center. To locate the nearest service center, visit [www.mackie.com/support/service-locator](http://www.mackie.com/support/service-locator). Service for HM-4s living outside the United States may be obtained through local dealers or distributors.

If you do not have access to our website, please call our Tech Support department at 1-800-898-3211 (normal business hours, Pacific Time), to explain the problem. They will tell you where the nearest factory-authorized service center is located in your area.

**Please write the serial numbers here for future reference (i.e., insurance claims, tech support, return authorization, make dad proud, etc.)**

**Purchased at:**

**Date of purchase:**

# Appendix B: Technical Information

## HM-4 4-Way Headphone Amplifier Specifications

### Audio Performance

Maximum Level (1/4" input) +22 dB

### Input / Output

Input Type Female 1/4" phono, unbalanced, stereo  
 Input Impedance 10 k $\Omega$  each channel, unbalanced  
 Output Type 4x Female 1/4" phono, unbalanced, stereo  
 Output Impedance 47  $\Omega$  each channel, unbalanced  
 Level Control 4x Rotating Phones Knobs

### Power Requirements

Current Draw +12V DC  
 <220 mA, maximum

### Safety Features

Display LEDs Top power on/off

### Physical Properties

Height: 2.0 in / 51 mm  
 Width: 4.3 in / 109 mm  
 Depth: 2.3 in / 58 mm  
 Weight: 0.5 lb / 0.2 kg

### Disclaimer

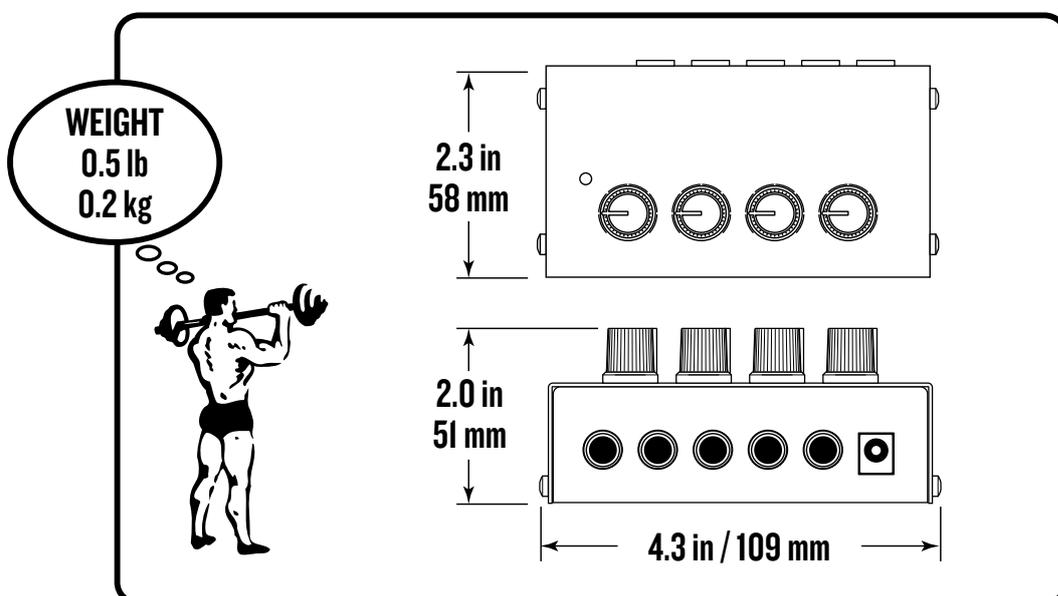
Since we are always striving to make our products better by incorporating new and improved materials, components, and manufacturing methods, we reserve the right to change these specifications at any time without notice.

The "Running Man" figure is a registered trademark of LOUD Audio, LLC.

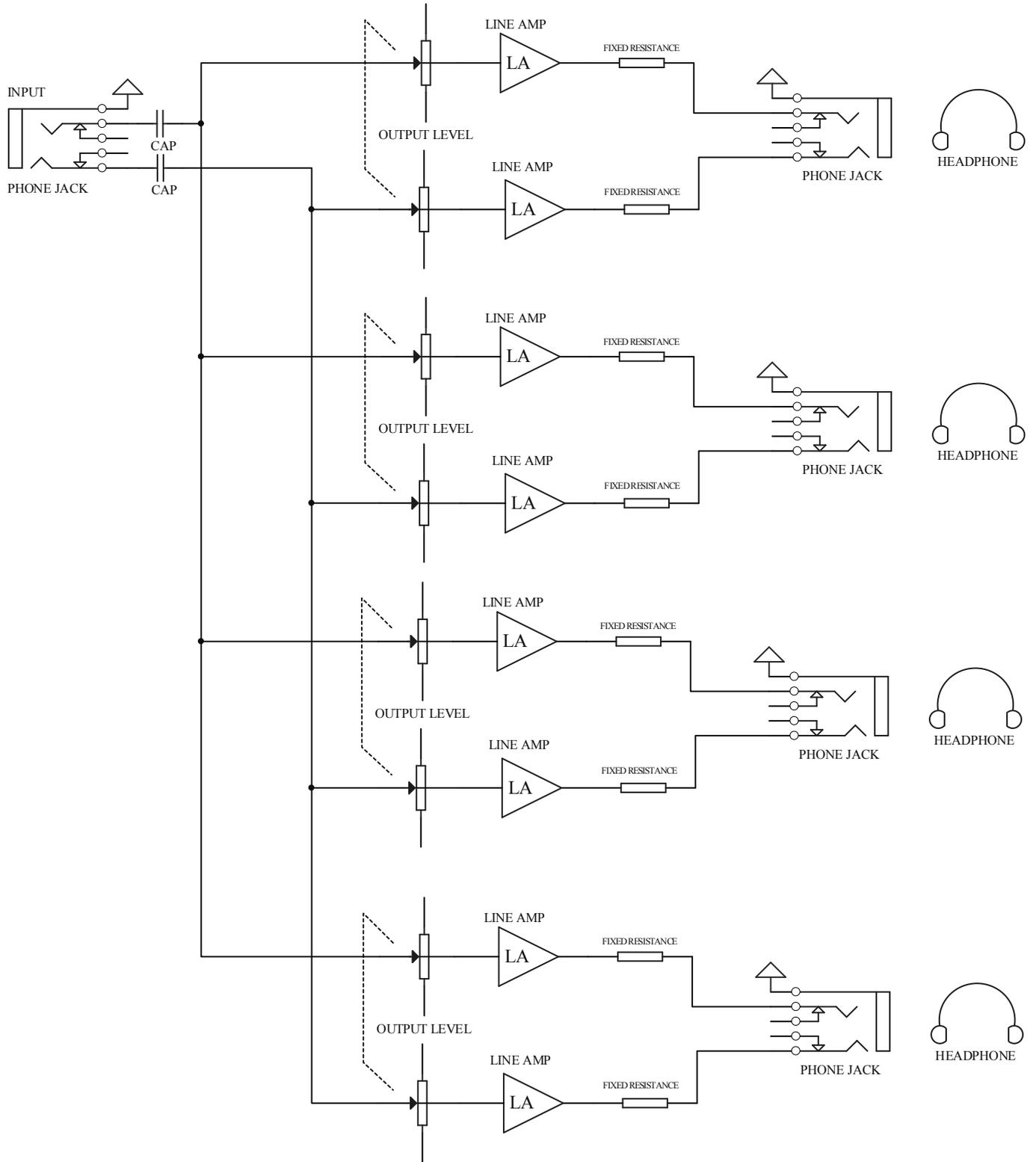
All other brand names mentioned are trademarks or registered trademarks of their respective holders, and are hereby acknowledged.

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## HM-4 4-Way Headphone Amplifier Dimensions



# HM-4 4-Way Headphone Amplifier Block Diagram



### **Please keep your sales receipt in a safe place.**

This Limited Product Warranty ("Product Warranty") is provided by LOUD Audio, LLC ("LOUD") and is applicable to products purchased in the United States or Canada through a LOUD-authorized reseller or dealer. The Product Warranty will not extend to anyone other than the original purchaser of the product (hereinafter, "Customer," "you" or "your").

For products purchased outside the U.S. or Canada, please visit [www.mackie.com](http://www.mackie.com) to find contact information for your local distributor, and information on any warranty coverage provided by the distributor in your local market.

LOUD warrants to Customer that the product will be free from defects in materials and workmanship under normal use during the Warranty Period. If the product fails to conform to the warranty then LOUD or its authorized service representative will at its option, either repair or replace any such nonconforming product, provided that Customer gives notice of the noncompliance within the Warranty Period to the Company at: [www.mackie.com](http://www.mackie.com) or by calling LOUD technical support at 1.800.898.3211 (toll-free in the U.S. and Canada) during normal business hours Pacific Time, excluding weekends or LOUD holidays. Please retain the original dated sales receipt as evidence of the date of purchase. You will need it to obtain any warranty service.

For full terms and conditions, as well as the specific duration of the Warranty for this product, please visit [www.mackie.com](http://www.mackie.com).

The Product Warranty, together with your invoice or receipt, and the terms and conditions located at [www.mackie.com](http://www.mackie.com) constitutes the entire agreement, and supersedes any and all prior agreements between LOUD and Customer related to the subject matter hereof. No amendment, modification or waiver of any of the provisions of this Product Warranty will be valid unless set forth in a written instrument signed by the party to be bound thereby.

### **Need help with the HM-4?**

- Visit [www.mackie.com/support](http://www.mackie.com/support) to find: FAQs, manuals, addendums, and other documents.
- Email us at: [www.mackie.com/support-contact](http://www.mackie.com/support-contact)
- Telephone 1-800-898-3211 to speak with one of our splendid technical support chaps (Monday through Friday, normal business hours, Pacific Time).



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