# HP4

# Owner's Manual





## **Important Safety Instructions**

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in this manual.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous" voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO OUALIFIED

PERSONNEL.



CAUTION: To reduce the risk of electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no object filled with liquids, such as vases, shall be placed on the apparatus.



**CAUTION:** These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other

than that contained in the operation instructions. Repairs must be performed by qualified service personnel.

- 1. Read these instructions.
- Keep these instructions.
- 3. Heed all warnings.
- Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with dry a cloth.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades, with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11. Use only attachments/accessories specified by PreSonus.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with this apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14. Servicing is required when the apparatus has been damaged in any way, such as if a power-supply cord or plug is damaged; or liquid has been spilled, or objects have fallen, into the apparatus; or if the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. All PreSonus products in the USA should be serviced at the PreSonus factory in Baton Rouge, Louisiana. If your product requires a repair, contact support@presonus.com to arrange for a return-authorization number. Customers outside the USA should contact their local distributor. Your distributor's contact information is available at www.presonus.com.
- 15. The apparatus shall be connected to a Mains power outlet with a protective grounding/earthing connection.
- Where the Mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

## EU Directives on the Protection of the Environment and Other Euro Stuff

**RoHS** This product is compliant with the EU Directive 2011/65/EU for the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment. No lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr+6), PBB or PBDE is intentionally added to this device. Any traces of impurities of these substances contained in the parts are below the RoHS specified threshold levels.

**REACh** This product is compliant with the European Union Directive EC1907/206 for the Registration, Evaluation, Authorization, and Restriction of chemicals (REACh) and contains none or less than 0.1% of the chemicals listed as hazardous chemicals in the REACh regulation.

## **SPL Warning:**

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

WEEE This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point



for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

CE This product complies with the European Union Council Directives and Standards relating to electromagnetic compatibility EMC Directive (2006/95/EC) and the Low Voltage Directive (2004/108/EC).

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. Earplugs 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	
0.5	110	
0.25 or less	115	Loudest parts of a rock concert



#### 1.0 Overview

Thank you for purchasing this PreSonus product. PreSonus Audio Electronics, Inc., has manufactured it using high-grade components to ensure optimum performance that will last a lifetime. The 150 mW headphone amps in the HP4 are loud enough to explode the oysters in a Po-Boy sandwich, yet the sound is clear and clean, with a wide dynamic range. The HP4 is loaded with professional features, such as a monitor output with level control and mute and a Mono summing switch for the headphone and monitor outputs.

## 1.1 Summary of Features

- 4 discrete headphone-level controls
- Mono summing switch
- Monitor level control
- Monitor mute switch
- 2 balanced ¼" line inputs
- Daisy-chain multiple units or pass signal to studio monitors via monitor outputs
- 4 stereo, ¼" headphone outputs
- 2 impedance-balanced, ¼" line outputs

We encourage you to contact us with questions or comments regarding this product. You can reach us by email at techsupport@presonus.com or call us at 1-225-216-7887 between 9 a.m. and 5 p.m. Central Time (GMT 05:00). PreSonus Audio Electronics is committed to constant product improvement, and we value your suggestions highly. We believe the best way to achieve our goal of constant product

## 1.1 Summary of Features

Overview

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improvement is by listening to the real experts: our valued customers. We appreciate the support you have shown us through the purchase of this product.

Please use this manual to familiarize yourself with the features, applications, and correct connection procedure for the HP4 before trying to connect it to your recording system. Pay close attention when connecting the HP4 to your system, as bad cables and improper grounding are the most common causes of problems encountered in recording and live P. A. environments. We recommend checking your cables, connections, and grounding if you experience any noise or other sonic performance problems.

#### 1.2 What Is In The Box

In addition to this manual, your PreSonus package contains the following:



PreSonus HP4



16 VAC, 1,000 mA Power Supply

## 2.0 Quick Start Guide

This Quick Start guide is designed to help get your HP4 connected to your system as quickly as possible. The following step-by-step instructions are based on a common studio environment. Your actual setup may change based on your needs and applications.

## 2.1 Getting Started

#### Connect the Power

- 1. Turn every knob on the front panel of the HP4 completely counterclockwise (left).
- 2. Connect the included power supply to the HP4 and plug it in to a wall socket, power strip, or surge protector.

#### **Connect Your Input Sources**

- 1. Turn down the main output volume on your audio interface or mixer to its lowest position.
- Connect the main outputs of your audio interface or mixer to the Left and Right TRS inputs on the back of your HP4. For the best sound quality, PreSonus recommends using balanced cables whenever possible.
- Connect the Left and Right Monitor/Thru outputs on the back of your HP4 to the inputs of your powered studio monitors or power amp (if your studio monitors are passive). This will allow you to use a single output pair from your audio interface or mixer to feed both your HP4 and your studio monitors.

## 2.1 Getting Started

Quick Start Guide

#### **Set Monitor Levels**

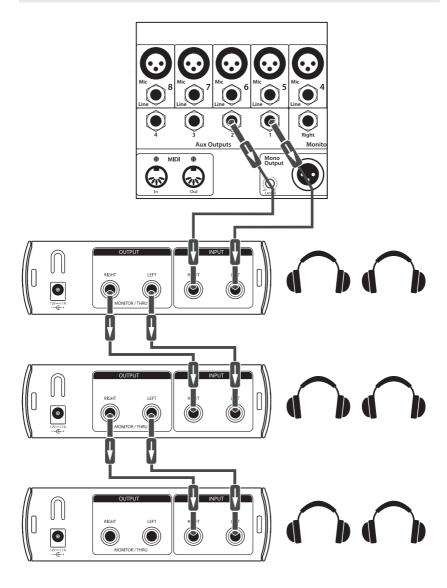
2

- 1. Connect a pair of headphones to the Phones 1 output.
- Play a CD, DAW session, or other audio recording that is typical of your studio productions through your audio interface or mixer outputs.
- Turn the main output volume of your audio interface or mixer to unity gain. You may need to consult the documentation that came with your device to determine the knob or fader position for unity gain.
- 4. Begin turning up the Phones 1 volume knob on the front panel of your HP4 until your headphones are at a comfortable listening level.
- Begin turning up the Monitor Level knob on the front panel of your HP4 until your studio monitors are at a comfortable mixing level.

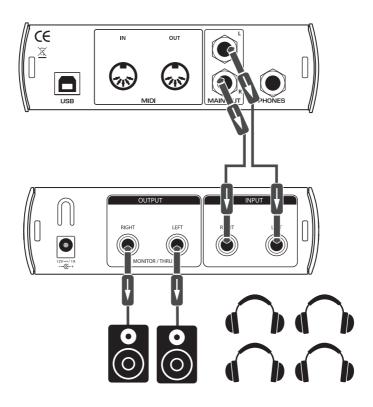
#### Your HP4 is now ready to use!

## 2.2 Hookup Diagrams

## 2.2.1 Using the same stereo source for multiple HP4s.



#### Connecting an HP4 and studio monitors to the same stereo source. 2.2.2



#### 3.0 Hardware

## 3.1 Front-Panel Layout



**Headphone Volume**. The HP4 has the potential to be very loud. (It goes to 12; 11 is for wimps!) Please be careful when you first start passing sound through the unit. It is best to start with the volume set at 1 and then slowly bring up the volume.

**Note** that the loudness of your headphones will vary depending on their design and their input impedance. The output impedance of the HP4 is  $51\Omega$  (ohms), and it will work fine with professional and consumer headphones but the volume will differ depending on which type of headphone you use. Headphones with lower input impedances will generally be louder than higher-impedance headphones. (In this case, louder does not mean better!) Most professional headphones have impedances between  $150\Omega$  and  $600\Omega$ . Consumer headphones for CD players and the like often have impedances between  $8\Omega$  and  $32\Omega$ . Broadcast headphones are specialized, and you are unlikely to use them with an HP4; their impedances are typically between  $1.5 k\Omega$  (kilohms) and  $2 k\Omega$ .

**Mono button.** When you press the Mono button, each input will be summed together on each output. For example, if you plug a CD player into the left input, and press the Mono button, the signal from the left input will be present in the left and right headphone channels and in the master output. When the Mono button is

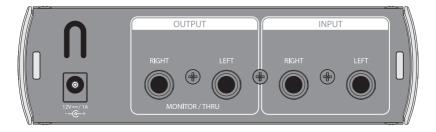
#### Hardware 3.1 Front Panel Layout

not depressed, the left and right outputs will carry the left- and right-channel signals, respectively.

Monitor Level. The Monitor Level knob controls the volume of the rear-panel outputs.

Monitor Mute. The Monitor Mute button mutes the main rear-panel outputs, which is handy when you only want to use the front-panel headphone outputs. This is especially helpful when recording in front of a computer and studio monitors: you can simply mute the signal going to the monitors rather than turn down the Monitor Level.

#### 3.2 **Back-Panel Layout**



**Left/Right Balanced Inputs.** These line-level inputs should only be used for signals from sources that do not require preamplification, such as CD and MP3 players, mixers, and audio interfaces.

Left/Right Balanced Outputs (Monitor/Thru). These are the line-level outputs for the HP4. The Monitor Level knob on the front of the unit controls their output level. These outputs can be used as a Monitor Thru or to connect another HP4 for additional headphone distribution. (See Section 2.1 for hookup diagrams.)

Power-Supply Connector. This is the connection for the external power supply.

## 4.0 Resources

4.1	Specifications

#### **INPUTS:**

Connector Type	1/4"TRS, balanced
THD+N	0.0025%, 1 kHz, unity gain
Max Input Level	+18 dBu, <0.5% THD+N, unity gain
Input Impedance	10 kΩ
Frequency Response	20 Hz - 20 kHz, ±0.5 dB

#### **MONITOR OUTPUT:**

Connector Type	1/4"TRS, impedance-balanced
THD+N	0.0025%, 1 kHz, unity gain
Max Output Level	+18 dBu, <0.5% THD+N
Output Impedance	51Ω
Frequency Response	20 Hz - 20 kHz, ±0.5 dB

#### **HEADPHONE OUTPUT:**

ConnectorType	1/4"TRS, stereo
Max Output Power	150 mW/Ch, <0.5% THD+N, 60Ω load
Frequency Response	20 Hz - 20 kHz, ±0.5 dB, 60Ω load
Headphone Impedance Working Range	32Ω – 600Ω

#### POWER:

External Adapter Type	+12 VDC, 1000 mA, center pin positive
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**NOTE:** As a commitment to constant improvement, PreSonus Audio Electronics, Inc., reserves the right to change any specification stated herein at any time, without notification.

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4.1

# 4.2 Troubleshooting and Repairs

Resources

**Specifications** 

If you experience problems with your HP4, please try the following before contacting PreSonus Customer Support:

- Check our Web site at www.PreSonus.com for answers to frequently asked questions and for troubleshooting techniques specific to the HP4.
- 2. Make sure your HP4 and all equipment connected to it are powered on.
- 3. Disconnect/reconnect your HP4 power supply.
- 4. Check your connection cables and audio sources.
- 5. Check your headphones.
- Isolate the problem by disconnecting any extraneous equipment in your signal chain.

To submit a tech-support request, visit our Web site at http://support.presonus.com/home or call us at 1-225-216-7887 between 9 a.m. and 5 p.m. Central Time (GMT 05:00). Please note that you must register your product at www.PreSonus.com before contacting Customer Service. Customers outside of the United States should check first with their regional PreSonus distributor for technical support and repairs.

When contacting technical support, please have the following information at hand:

- A brief description of the connections to and from your HP4.
- A description of the problem that you are encountering.
- Your HP4 serial number (located on the bottom of the unit).

If you think that your power supply has failed, rather

than the HP4 itself, please let the Customer Service representative know. If your HP4 is still under warranty, a replacement power supply will be provided to you free of charge. If your HP4 is no longer under warranty, you may purchase a replacement at www.PreSonus.com/store.

PreSonus Audio Electronics, Inc., warrants this product to be free of defects in material and workmanship for a period of one year from the date of original retail purchase. This warranty is enforceable only by the original retail purchaser. To be protected by this warranty, the purchaser must complete and return the enclosed warranty card within 14 days of purchase. During the warranty period PreSonus shall, at its sole and absolute option, either repair or replace, free of charge, any product that proves to be defective on inspection by PreSonus or its authorized service representative. To obtain warranty service, the purchaser must first call or write PreSonus at the address and telephone number printed below to obtain a Return Authorization Number and instructions of where to return the unit for service. All inquiries must be accompanied by a description of the problem. All authorized returns must be sent to the PreSonus repair facility postage prepaid, insured, and properly packaged. PreSonus reserves the right to update any unit returned for repair. PreSonus reserves the right to change or improve the design of the product at any time without prior notice. This warranty does not cover claims for damage due to abuse, neglect, alteration, or attempted repair by unauthorized personnel and is limited to failures arising during normal use that are due to defects in material or workmanship in the product. Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose,

## 4.2 Troubleshooting and Repairs

are limited in duration to the length of this limited warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. In no event will PreSonus be liable for incidental, consequential, or other damages resulting from the breach of any express or implied warranty, including, among other things, damage to property, damage based on inconvenience or on loss of use of the product, and, to the extent permitted by law, damages for personal injury. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This warranty only applies to products sold and used in the United States of America. For warranty information in all other countries, please refer to your local distributor.

#### PreSonus Audio Electronics, Inc.

7257 Florida Blvd. Baton Rouge, LA 70806 USA www.PreSonus.com





# Added bonus: PreSonus' previously Top Secret recipe for...

# **Jambalaya**

#### **Ingredients:**

- 5 lbs link andouille sausage
- 3 lbs boneless chicken
- 2 lbs ground beef
- 3 lbs onions (yellow or purple)
- · 2 stalks of celery
- 1 lb bell peppers (green or red)
- 1 batch green onions
- 3 lbs rice
- Tony Chachere's Cajun Seasoning
- 1 bottle chicken stock concentrate (or 3 cubes chicken bullion)
- 1 can Rotel tomatoes with chilies, diced (regular hot)
- Tabasco sauce

#### **Cooking Instructions:**

- 1. In a 16 qt. pot or larger, slice link sausage and pan-fry until brown.
- 2. Add ground beef and brown.
- 3. Do not remove from pot Add diced onions, celery, and bell peppers, 1 can Rotel Original diced tomatoes w/chilies, 3 oz concentrate chicken stock, ½ teaspoon of Cajun seasoning, 1 teaspoon of Tabasco hot sauce (or more...maybe lots more).
- 4. Cook until onions are translucent.
- 5. Add chicken and cook until it turns white.
- 6. Add diced green onions, 1 tsp. salt,  $\frac{1}{2}$  gallon water and bring to a boil.
- Add rice and bring to a boil. Cook on high for 8 minutes, covered, stirring every 2 minutes
- 8. Cook covered on low for 10 minutes, stirring only once.
- Turn off and let sit for 30 minutes.
- 10. Serve and enjoy!

#### Serves 20

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# HP4

## **Ouick Start Guide**

#### **EMC Statement:**

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 PreSonus Audio Electronics could void the user's authority to operate the equipment under FCC rules.

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 las limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le réglement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

