

# HP60

## Six-Channel Headphone Mixing System



### User's Manual Version 1.1



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# PRESONUS LIMITED WARRANTY

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# OVERVIEW

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## 1.1 INTRODUCTION



Thank you for purchasing the PreSonus HP60 Six-Channel Headphone Mixing System. PreSonus Audio Electronics has designed the HP60 utilizing high-grade components to ensure optimum performance that will last a lifetime. We believe the HP60 to be an exceptional sounding unit and an exceptional value.

We encourage you to contact us at 1-800-750-0323 with any questions or comments you may have regarding your PreSonus equipment. 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 improvement is by listening to the real *experts* – our valued customers. We appreciate the support you have shown us through the purchase of your HP60 Six-Channel Headphone Mixing System.

Please pay close attention to how you connect your HP60 to your system. Improper grounding is the most common cause of noise problems found in studio or recording environments. We suggest you use this manual to familiarize yourself with the features, applications and correct connection procedure for your HP60 before trying to connect it to your computer. This will hopefully alleviate any unforeseen issues you may encounter during setup and use.

# OVERVIEW

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## 1.2 FEATURES

The PreSonus HP60 is the most flexible and advanced headphone mixing system designed for the professional and project recording studio. The HP60 features dual stereo inputs and external input for each channel -- allowing the user to mix between three stereo audio streams (mix A, mix B & external input). Stereo output is also available on each channel to send line level headphone channel mixes to additional headphone amplifiers or monitor systems. Each channel features headphone level, mix between A and B inputs, external input volume, mute and mono. The HP60 also features talkback via external XLR microphone. The HP60 is the ultimate headphone amplification system delivering loud and clear headphone mixes for real-world recording situations.

### Summary of features:

- Six independent ultra-low noise and high output headphone amplifiers
- Two sets of stereo inputs (A and B) with balanced TRS connectors
- Stereo external input point on each channel for "more me" control
- Mix control between inputs A and B on each channel
- Talkback with external XLR microphone
- Direct stereo line output on each channel
- Mute and mono buttons on each channel

# OVERVIEW

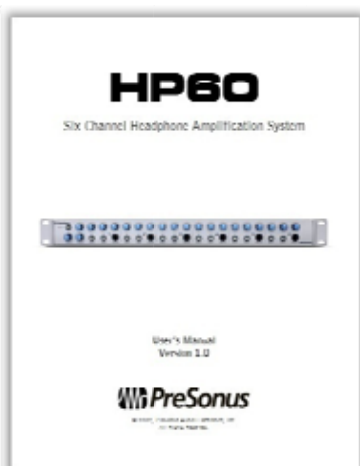
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## 1.3 WHAT IS IN THE BOX

Your HP60 package contains the following:



- PreSonus HP60



- HP60 User's Manual v1.0



- 6' Standard IEC Power Cable



- PreSonus Warranty Card

# OPERATION

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## 2.1 QUICK START GUIDE

The goal of the HP60 Quick-Start guide is to help get your HP60 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.

### Connect the Power

- 1) Turn every knob on the HP60's front panel completely counterclockwise (left).
- 2) Connect the included IEC power cable to the HP60's power input connector and to the appropriate wall socket.
- 3) Flip the power switch to the 'ON' position (|= on).

### Mix A, Mix B & Talkback Mic Connection and Level Adjustment

- 4) Connect your DAW (digital audio workstation) or Mixer Main Outputs to the Left and Right TRS inputs of Input A on the back of your HP60.
- 5) Connect your DAW or Mixer auxiliary outputs (monitor mix / click track) to the Left and Right TRS inputs of Input B on the back of your HP60.
- 6) Connect an XLR dynamic microphone to the *MIC* input on the back of your HP60.
- 7) Connect a pair of headphones to the Phones 1 output and turn its *Level* knob up to the "12 o'clock position".
- 8) Play a CD, session or other audio type typical to your studio through the source of Input A (DAW or Mixer Outputs) and begin turning up the *Input A* knob until your headphones are slightly above a comfortable / desired level.
- 9) Turn the Channel 1 *Mix* knob fully clockwise (right). Repeat steps 7 & 8 for Input B and the Talkback Microphone (You will need to press 'Talk' when setting mic level).



# OPERATION

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## **External Input connection**

- 10) For each of the headphone channels, connect the artist's instrument direct out from your DAW or Mixer to the *Stereo Ext. In* connection on their respective channels.

*(For Example: If a vocalist is on headphone channel 5, take the direct output of their vocals from your DAW or Mixer and connect it to the channel 5 Stereo Ext. In. Likewise, if a guitar player is on headphone channel 2, take the direct output of their guitar from your DAW or Mixer and connect it to the channel 2 Stereo Ext. In.)*

## **Stereo Output Connection**

- 11) If you have additional headphone amplification or monitoring systems or need a copy of your mixes for any reason, connect a stereo ¼" TRS plug to the *Stereo Out* connections of the mixes being copied and to the input of your additional system.

## **Headphone Connection**

- 12) Connect headphones to the six Phones outputs on the front of your HP60.

## **Adjusting the HP60 for the "Optimum Listening Level"?**

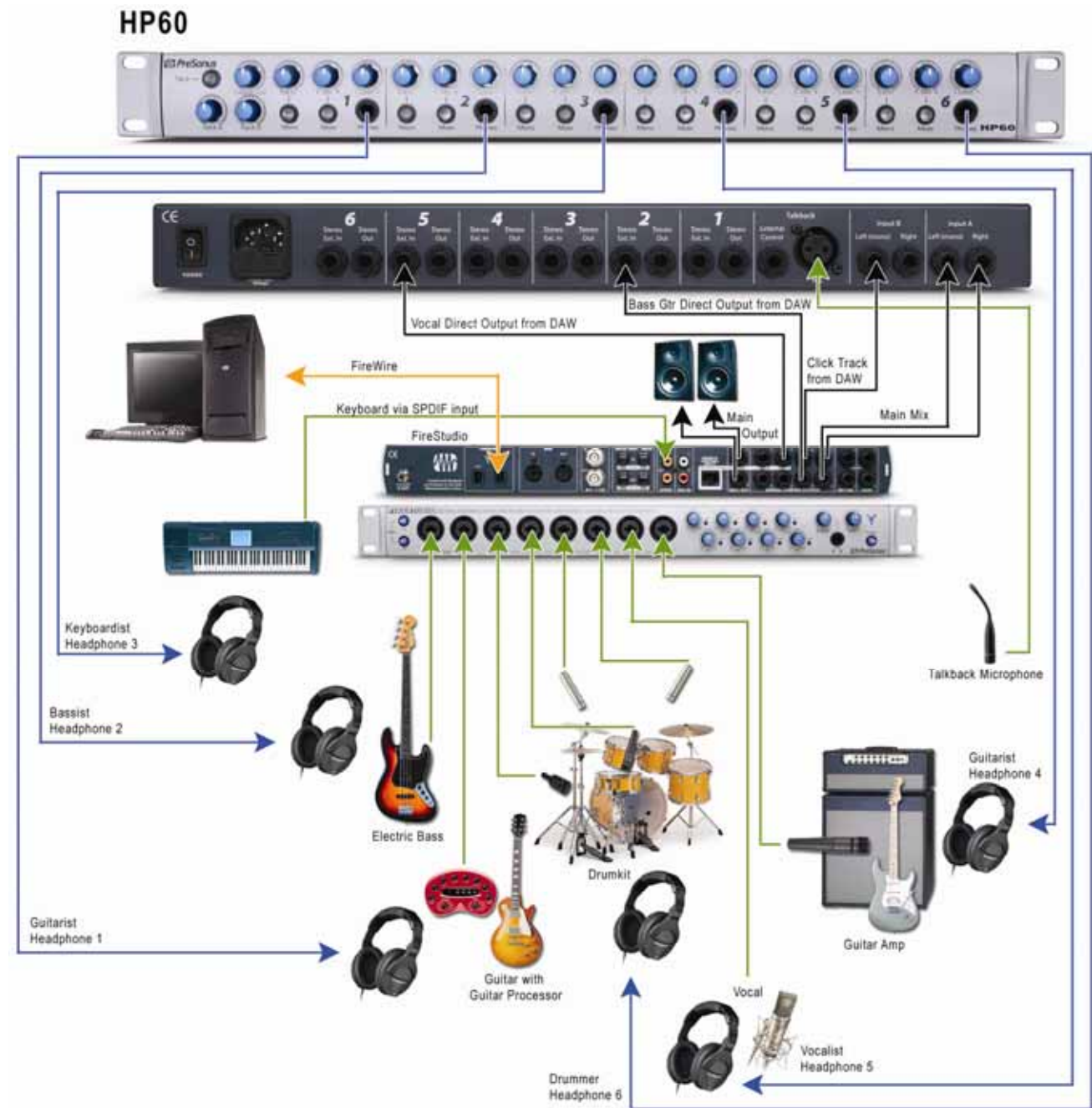
A common situation when setting up monitor mixes is when an artist's headphones are turned all the way up and they still feel they don't have enough level. If you turn up the Input A/B source, the other headphones will need to be turned down or remixed. So, what do you do?

By pre-setting the Input level to be loud enough at the "12 o'clock position" (step 7), you ensure if an artist needs more level, you will have plenty of room to compensate for their needs. This also gives you a good, generic point to which you can set an artist's headphone level before learning their desired listening volume.

An alternate method is to set the HP60 to reach its maximum attainable volume. To do this, repeat steps 7-9 with the headphone level fully clockwise. Instead of paying attention to the volume of the headphones, turn the Input level up until just before the signal distorts. This means if an artist needs more volume, you can politely tell them you are already maxed out.

# OPERATION

## 2.2 SAMPLE HOOKUP DIAGRAM



# CONTROLS & CONNECTIONS

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## 3.1 FRONT PANEL LAYOUT



The front panel of the HP60 is divided into two sections: the Master Input Controls and the six numbered Headphone Channel Controls.

### 3.1.1 Master Input Controls



- **Input A & Input B.** These knobs control the input levels of the Input A and Input B (Mix A & Mix B) inputs on the rear of the chassis into the HP60. These two mixes can be separately mixed together on each headphone output channel.
- **Talkback Level.** This knob controls the input level of the external XLR dynamic microphone connected to the *MIC* input on the rear of the chassis.
- **Talk.** When the Talk button is pressed, the Talkback microphone input is activated. This is a momentary type switch – the microphone is 'ON' only while the button is pressed. An external foot pedal connected to the *External Control* input on the rear of the chassis can also be used to activate the Talkback microphone.

# CONTROLS & CONNECTIONS

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## 3.1.2 Headphone Channels: Level Controls



- **Ext. In.** The external in knob controls the input level and amount of the *Stereo Ext. In* on the rear of the chassis for the channel.
- **Mono.** When the Mono button is pressed, the *Stereo Ext. In* will act as a mono input – summing the signals from the TIP and the RING of the ¼" connection.
- **Mix.** The Mix knob controls the amount of each of the two mixes A & B for the channel. As the knob is turned counterclockwise (left), the amount of Mix A increases, and the amount of Mix B decreases. As the knob is turned clockwise (right), the amount of Mix A decreases, and the amount of Mix B increases. With the Mix knob in the "12 o'clock position," an equal amount of Mix A and Mix B is sent to the channel's headphones.
- **Mute.** When the Mute button is pressed, both Mixes are muted for the channel. This is most commonly used as a type of "Solo" for the external stereo input.
- **Level.** The Level knob controls the volume level of the channel's Phones output.
- **Phones.** This is the channel's stereo headphone output.

# CONTROLS & CONNECTIONS

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## 3.2 BACK PANEL LAYOUT



The back panel of the HP60 is divided into four sections: Power, the six numbered Headphone Channels, Talkback and Inputs A & B.

### 3.2.1 Power



**Power.** The Power switch turns the HP60 on and off. The 'I' down is the ON position.

**IEC Power Input.** The HP60's power input connection accepts a standard IEC plug and is rated for either 100-120 VAC or 220-230 VAC, depending upon the country it is purchased in. Please check with your local retailer or dealer if you have any questions concerning the input voltage of your HP60's power supply.

# CONTROLS & CONNECTIONS

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## 3.2.2 Headphone Channels: Rear Connections



- **Stereo Ext. In.** The Stereo External In jack accepts a stereo ¼" TRS plug and is used for connecting a third, channel-specific Mix. This is commonly used for a direct input of the artist's instrument – allowing the channel's *Ext. In* knob to act as a "more me" control.
- **Stereo Out.** The Stereo Out jack carries a line-level copy of the channel's headphone mix and is commonly used for connecting to additional headphone amplification systems, an additional monitor mixer or even a recording system. The Stereo Out level is not affected by the channel's *Level* knob.

# CONTROLS & CONNECTIONS

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## 3.2.3 Talkback



- **External Control.** The External Control jack accepts a 1/4" TS plug and is used for connecting a footswitch to control the ON / OFF toggle of the External Mic.
- **MIC.** The MIC input accepts a balanced XLR input and is used for connecting a dynamic microphone to be used as the talkback microphone with the HP60's Talkback Communication System.

# CONTROLS & CONNECTIONS

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## 3.2.4 Mix Inputs



- **Left (mono).** The Left jack accepts a ¼" balanced TRS plug and is used for the left input of the stereo pair. This jack should be used alone when connecting a mono source as the Mix's Input.
- **Right.** The Right jack accepts a ¼" balanced TRS plug and is used for the right input of the stereo pair carrying the Mix's signal.



# TECHNICAL INFORMATION

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## 4.1 SPECIFICATIONS

### Audio Inputs

#### *Dynamic Microphone Input*

Type ..... XLR Female Balanced  
Input Impedance ..... 1200 $\Omega$   
Maximum Gain ..... 50dB  
Maximum Input Level ..... -10dBu  
Frequency Response ..... 10Hz to 40kHz,  $\pm$ 1dB

#### *Input A & Input B (Left & Right)*

Type ..... 1/4" TRS Balanced  
Input Impedance ..... 10k $\Omega$   
Gain Range ..... -96 to +10dB

#### *External Inputs 1-6*

Type ..... 1/4" TRS Stereo Unbalanced  
Input Impedance ..... 10k $\Omega$   
Gain Range ..... -96 to +10dB

### Audio Outputs

#### *Headphone Outputs 1-6*

Type ..... 1/4" TRS Active Stereo  
Maximum Output ..... 150mW/channel @ 60 $\Omega$  Load  
THD+N .....  $\leq$  0.05% (150mW/channel @ 60 $\Omega$  Load)  
Frequency Response ..... 10Hz – 70kHz,  $\pm$  1dB

#### *Stereo Outputs 1-6*

Type ..... 1/4" TRS Stereo Unbalanced  
Output Impedance ..... 50 $\Omega$

# TECHNICAL INFORMATION

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## Internal Linear Power Supply

Type ..... IEC  
Input Voltage Range ..... 100-120 VAC or 220-230 VAC (factory set)  
Power Requirements (continuous) ..... 30 Watts

## Physical

Package Type ..... 1U Steel and Aluminum Chassis  
Dimensions ..... 19" (W) x 1.75" (H) x 5.5" (D) (48.26cm x 4.45cm x 13.97cm)  
Weight ..... Approximately 5 lbs.

*As a commitment to constant improvement, PreSonus Audio Electronics, Inc. reserves the right to change any specification stated herein at any time in the future without notification.*

# TECHNICAL INFORMATION

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## 4.2 TROUBLESHOOTING

If you experience any problems with your HP60, please try the following before contacting PreSonus Customer Support:

- 1) Check our Web site at [www.PreSonus.com](http://www.PreSonus.com) for answers to frequently asked questions and for troubleshooting techniques specific to the HP60.
- 2) Power cycle and disconnect / reconnect your HP60 power cable.
- 3) Check your connection cables and audio source(s).
- 4) Check your headphones.
- 5) Isolate the problem to your HP60 by disconnecting any extraneous equipment in your signal chain.

For technical assistance, visit our Web site at [www.PreSonus.com](http://www.PreSonus.com), call us at 225.216.7887 between 9am and 6pm CST (GMT -06:00) or e-mail us at [techSupport@PreSonus.com](mailto:techSupport@PreSonus.com).

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

- A brief description of what connections are being made to your HP60.
- The desired application of your HP60 in your studio environment.
- Your HP60 serial number (*located on the bottom of your unit*).

