Millenium

HP8

8 Channel Headphone Amplifier

Owner's Manual



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FEATURES

- 8 stereo headphone channels in a convenient single rack package – enables multiple signal distribution options for monitoring flexibility
- Each channel has separate volume control and ¼" stereo outputs
- Over 100mW of power per channel with full spectrum audio response and maximum headroom (even at high volume headphone levels)
- No-compromise circuit design, SMD technology and low-noise op-amps for reference-quality, transparent audio with maximum headroom even at high headphone volume levels
- Three balanced, line-level input channels with capacity to distribute one input signal to all headphones or group the headphone outputs (depending upon input configuration) for monitoring flexibility
- Mono/Stereo selector switch for each set of inputs
- High quality, rugged 1U construction
- Shielded internal power supply with ~115V (60Hz)/~230V (50Hz) select switch and fused IEC power cord connector

SPECIFICATIONS

AUDIO INPUTS

Connectors .....1/4" jack
Type.....Balanced
Impedance.....40KΩ
Peak input level.....+25dBu

HEADPHONE POWER AMPLIFIER OUTPUTS

Max. output power.....100mW@32Ω

DISTORTION, FREQUENCY RESPONSE, S/N RATIO & CROSSTALK

Distortion .....<0.02%
Frequency response.....20Hz~20kHz, +/-2dB
S/N Ratio .....Better than 80dB
Cross talk rejection .....>68dB@1kHz; 20dB input

FUNCTION CONTROLS

Volume.....Per channel, variable
Mono/Stereo Switch .....Per input set

POWER SUPPLY

AC requirements.....Selectable, 100-120 VAC,
.....200-240V AC, 50-60 Hz
Fuse.....100-120 VAC: 500mA (slow-blow)
.....200-240 VAC: 250 mA (slow-blow)
.....100-240 VAC: 500 mA (slow-blow)
.....5X20mm glass type
Power cord connector.....Standard IEC receptacle w/built-in fuse holder

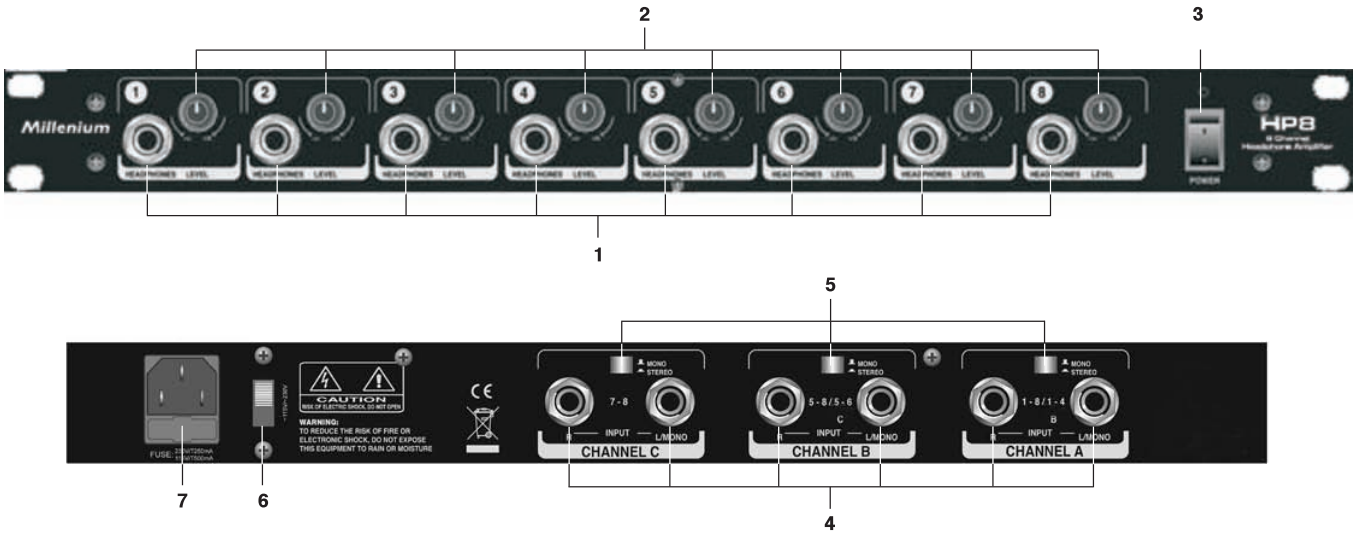
PHYSICAL

Dimensions.....(HWD) ~45mm X 483mm X 210mm
Weight .....6.15 lbs

The specifications above are correct at the time of printing of this manual. For improvement purposes, all specifications for this unit, including design and appearance, are subject to change without prior notice.

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FRONT & REAR CONNECTIONS



FRONT PANEL

(1) STEREO TRS HEADPHONE OUTPUT JACKS
There are eight stereo headphone outputs located on the front panel. All eight outputs can be used simultaneously in a number of configurations detailed below.

(2) VOLUME CONTROLS
Each output channel features a rotary volume pot for variable adjustment of the desired output level.

(3) POWER SWITCH WITH LED INDICATOR
This LED indicator illuminates when the unit is powered on by the front panel power switch.
The power-on LED will illuminate when the power is “ON”. Before turning on this unit, verify connection to the proper voltage AC source, check all connections and turn down the level controls of equipment connected to the outputs.

CONTROLS & INDICATORS

REAR PANEL

(4) BALANCED LINE INPUTS
There are 3 sets of balanced-line stereo inputs. These are labeled “A” “B” and “C”.

(5) MONO/STEREO SWITCHES
Each set of inputs has a Mono/Stereo pushbutton select switch. Note that the “L/Mono” input should be used in Mono Mode.

(6) AC VOLTAGE SELECTOR SWITCH
Before plugging in the power cord, check to see that the unit is set for the proper voltage for your area: ~115v (60Hz) or ~230V (50Hz). (Note: use at the improper voltage can damage your unit and void the warranty.)

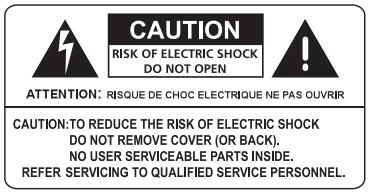
(7) POWER CONNECTOR WITH FUSE HOLDER
Standard IEC power cord receptacle used to connect the AC power to your unit. It features a built-in fuse holder for a 5X20mm, 500mA/250V slow-blow fuse. If the fuse continuously blows, shut off the unit and have it serviced by qualified service personnel.

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WARNING

When using this electronic device, basic precautions should always be taken, including the following:

1. Read all instructions before using the product.
2. Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, etc.).
3. This product should be used only with a cart or stand that will keep it level and stable and prevent wobbling.
4. This product, in combination with headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be positioned so that proper ventilation is maintained.
6. The product should be located away from heat sources such as radiators, heat vents, or other devices (including amplifiers) that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Replace the fuse only with one of the specified type, size, and correct rating.
8. The power supply cord should: **(1)** be undamaged, **(2)** never share an outlet or extension cord with other devices so that the outlet's or extension cord's power rating is exceeded, and **(3)** never be left plugged into the outlet when not being used for a long period of time.
9. Care should be taken so that objects do not fall into, and liquids are not spilled through, the enclosure's openings.
10. The product should be serviced by qualified service personnel if:
    - **A.** The power supply cord or the plug has been damaged.
    - **B.** Objects have fallen into, or liquid has been spilled onto the product.
    - **C.** The product has been exposed to rain.
    - **D.** The product does not appear to operate normally or exhibits a marked change in performance.
    - **K.** The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond what is described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.





An equilateral triangle enclosing a lightning flash/arrowhead symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure which may be of sufficient magnitude to constitute a risk of electric shock.



An equilateral triangle enclosing an exclamation point is intended to alert the user to the presence of important operating and service instructions in the literature enclosed with this unit.

INSTALLATION

INSTALLATION

To ensure years of enjoyment from your Millenium HP8 please read and understand this manual thoroughly before using the unit.

INSPECTION

Your HP8 was carefully packed at the factory in packaging designed to protect the units in shipment. Before installing and using your unit, carefully examine the packaging and all contents for any signs of physical damage that may have occurred in transit. *(Note: Nady Systems is not responsible for shipping damage. If the unit is damaged, do not return to us, but notify your dealer and the shipping company immediately to make a claim. Such claims must be made by the consignee in a timely manner.)*

RACK MOUNTING

The HP8 fits into one standard 19" rack unit of space (1 3/4"). Parts of the unit can become very warm during use. This is normal during operation. Care should be taken to ensure that there is enough space around the unit for cooling (at least 12" or 30cm). Do not place the HP8 on high temperature devices such as power amplifiers, etc., or the unit may overheat in operation.

Also, do not place the unit on speakers as this may cause them to move and/or fall due to speaker vibrations. Although the unit's chassis is shielded against radio frequency (RF) and electromagnetic interference (EMI), extremely high fields of RF and EMI should be avoided.

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POWER CONNECTION

The HP8 has an internal power supply and is designed to operate from an external AC source. Power requirements for electrical equipment differ from area to area. Be sure to confirm that the voltage selected by the voltage selector switch on the back panel is proper for your area (120VAC/60 Hz or 230VAC/50Hz) per the information below:

Europe (except UK): 230V, 50Hz
UK and Australia: 240V, 50Hz
USA and Canada: 120V, 60 Hz

For other areas, please check with local authorities. When ready to operate, plug the AC cord into the power source. Make sure that the unit is turned off before connecting to the AC power source to avoid possible loud transients which can damage your speakers or your ears, especially when monitoring with headphones.

APPLICATIONS

There are 4 basic configurations in which the HP8 can be used, all of which are functional in mono or stereo. These input/ output configurations are selected simply by plugging your input source into the appropriate input-sets. The modes of operation are described below as 1-8 (meaning that a single program source is directed to all 1-8 outputs), 1-4 / 5-8, 1-6 / 7-8, 1-4 / 5-6 / 7-8.

To use the HP8 in the 1-8 mode

Connect a stereo or mono program source to the A input-set at the rear of the unit. Your source will be distributed to all 8 headphone outputs.

To use the HP8 in 1-4 / 5-8 mode

Connect a stereo or mono source to A input-set, then connect a 2nd stereo or mono source to the B input-set. This distributes source B to be to headphone outputs 5-8, while source A is distributed to headphone outputs 1-4.

To use the HP8 in 1-6 / 7-8 mode

Connect a stereo or mono source to A input-set, then connect a 2nd stereo or mono source to the C input-set. This distributes source C to headphone outputs 7-8, while source A is distributed to headphone outputs 1-6.

To use the HP8 in 1-4 / 5-6 / 7-8 mode

Connect a stereo or mono source to A input-set, connect a 2nd stereo or mono source to the B input-set, then connect a 3rd stereo or mono source to C. This distributes source C to headphone outputs 7-8, while source B is distributed to headphone outputs 5-6 and source A is distributed to headphone outputs 1-4.

Mono/ Stereo operation

In any In/Out configuration, it may be desirable to use the unit with mono program source(s). This is made possible by the addition of a mono/stereo switch per input-set. When using the HPA-8 with a mono source program, simply use the “L/Mono” input, and select mono mode by pressing the mono-stereo switch in.

It is possible to use the HPA-8’s output distributions in mono and stereo modes simultaneously. For example, by selecting stereo mode at input-set A, and selecting mono mode at unused input-sets B or C, (refer to the distribution configurations detailed in the preceding paragraphs) it is possible to monitor the program source in stereo at outputs 1-4, while monitoring the program source in mono at outputs 5-8. The program source at the L/Mono input for input-set A will be routed to both left/ tip and right/ ring earphones for outputs 5-8 in this example. Note that if the input-set used is in mono mode, all distributed outputs will be mono regardless of the other mono/stereo switch positions.

Monitoring two mono sources with one headphone output

Another monitoring option that can be realized with the HP8 is split-distribution of different mono program sources. This can be accomplished by utilizing the R inputs of input-sets B and C (in stereo mode) while using the L/Mono input of input-set A. In this configuration, source A will be routed to the left earphone/ tip of distributed headphone outputs while source B is routed to the right earphone/ ring.

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