

DATASHEET: HP1 – INDIVIDUAL MODULAR HEADPHONE AMPLIFIER



OVERVIEW

The HP1 features technical capabilities and resources that enable mobility and high-quality audio monitoring, boasting a wide frequency response and high power output. The device features one (1) headphone output on the front panel and two (2) RJ45 IN/OUT connections (carrying both AUDIO and VCC power) on its rear panel.

Equipped with an individual volume control on the front panel, the HP1 provides independent adjustment for each user's headphones.

To chain multiple HP1 modules, the connection is made in series (daisy-chained) between units, allowing for long-distance installations. By using a simple CAT5e network cable, it eliminates the need for shielded cables, simplifying installation and reducing costs.

For enhanced connectivity, the HP1 is also designed to be fully compatible with several other equipment brands (such as StudioHub®, Axia®, Wheatstone®, Biquad®, etc.) that utilize the RJ45 cabling standard for audio connections.



KEY FEATURES

- **Compact Design:** A small-footprint, individual, and modular stereo headphone amplifier ideal for audio monitoring applications in radio stations, recording and professional production studios, television stations, home studios, or even for ultra-high fidelity audio enthusiasts.
- **Professional Grade:** Conceived and engineered for professional applications, delivering peak performance when paired with professional-grade headphones.
- **Modular Concept:** Its modular design allows installation in distinct locations within a room, giving each user direct control over their own headphone volume.
- **Daisy-Chainable:** Multiple amplification units can be interconnected using just a single network cable, simply daisy-chaining one unit to another.
- **Broad Compatibility:** Built to be compatible with various equipment brands (StudioHub®, Axia®, Wheatstone®, Biquad®, etc.) that utilize the RJ45 standard for audio cabling.
- **Simple Installation:** Extremely simple and clean installation using a single CAT5e cable.
- **Long-Distance Routing:** Since audio routing between modules uses balanced signals, long-distance connections between modules are possible using a standard unshielded CAT5e network cable.
- **Peripheral Integration:** Developed for individual use or as part of a system consisting of multiple amplification units. Compatible with various peripherals, including: Power Supply (HP600 MP), Rack-mount Power Supply (HP600 MP), audio distributors with standard RJ45 connections, etc.

TECHNICAL SPECIFICATIONS

- **Frequency Response:** Flat
- **Wide Frequency Range:** 10Hz to 25kHz minimum
- **Distortion:** Low harmonic and intermodulation distortion
- **Phase Shift:** Minimal phase shift between channels within the specified frequency response band
- **High Output Power:** Up to 1W into 32 Ohms
- **Front Panel Controls:** Volume control knob
- **Status Indicator:** Active operation LED indicator
- **Amplified Output Connector:** 1/4" TRS jack
- **Interface Connectors:** Two (2) RJ45 connectors carrying audio and power signals



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PANEL LAYOUT

Front Panel



- **Volume Control:** Independent volume adjustment
- **Headphone Output:** 1/4" TRS headphone jack
- **LED Indicator:** ON/OFF (active operation) indication

Rear Panel



- **RJ45 Connections:** IN/OUT (AUDIO + VCC)

PHYSICAL DIMENSIONS & PERSPECTIVE



- **Height:** 90 mm
- **Front Plate Width:** 47 mm
- **Body Width:** 37 mm
- **Body Depth:** 72 mm
- **Total Depth (including knob):** 60 mm

RJ45 PINOUT DIAGRAM FOR HPI DAISY-CHAIN CONNECTION

RJ45 PIN	CHANNEL	COLOR PAIR	RJ45 PIN	ETHERNET
1	L+ / AES+	WHITE & ORANGE	1	TX+
2	L- / AES-	ORANGE	2	TX-
3	R+	WHITE & GREEN	3	RX+
4	GND	BLUE	4	n/c
5	nc	WHITE & BLUE	5	n/c
6	R-	GREEN	6	RX-
7	15V-	WHITE & BROWN	7	n/c
8	15V+	BROWN	8	n/c

Note: CAT5e cable wire colors may vary depending on the manufacturer; the images used are for illustrative purposes only.

(nc = no connection)



SYSTEM CONFIGURATION & CONNECTION DIAGRAM

- **Series Connection (Daisy-Chain):** Interconnect modules using the rear RJ45 IN/OUT (AUDIO + VCC) ports.



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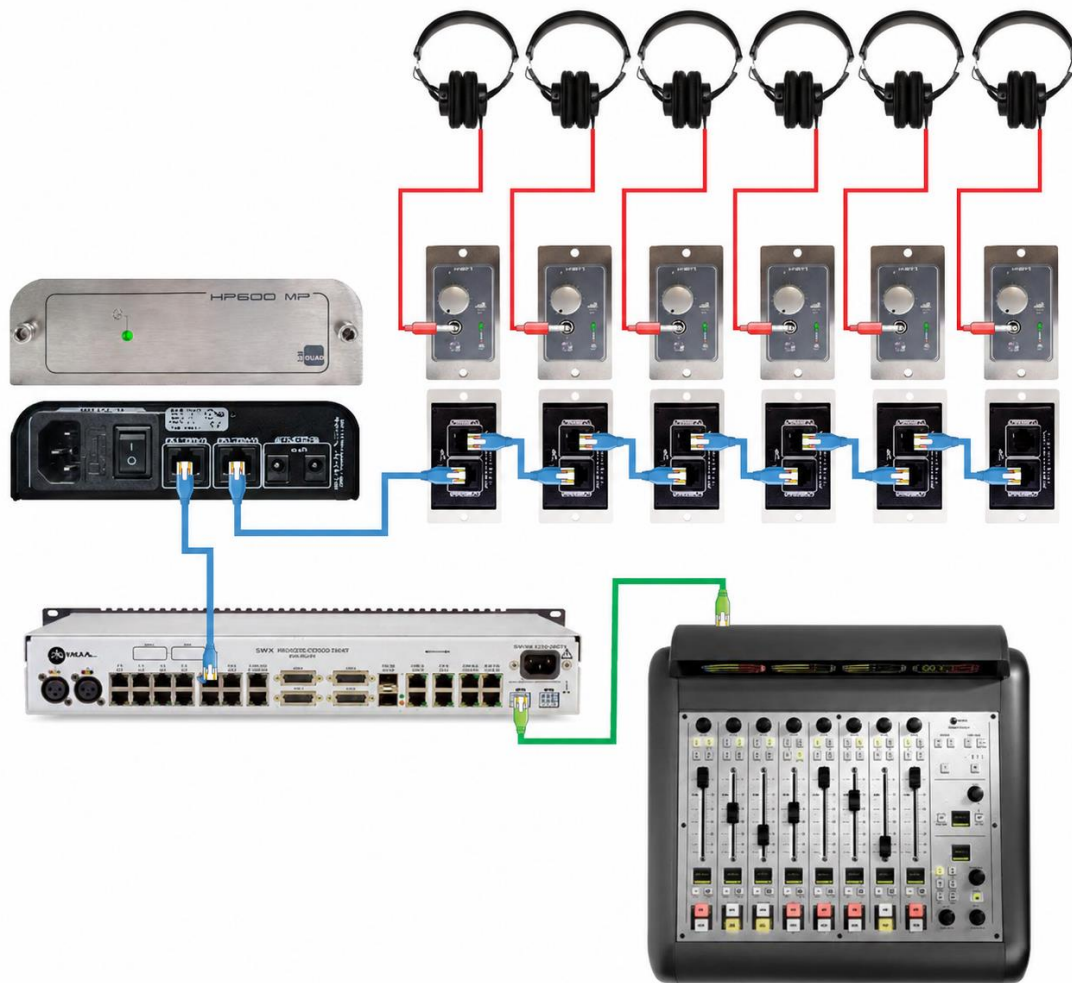


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- **Headphone Connection:** Connect headphones directly to the front-panel output jack.
- **CORE Connection:** Connect the Audio OUT from the CORE module to the AUDIO CONSOLE.
- **HP600 MP Connection:** Audio IN connection.



Note: Connections may vary depending on the manufacturer and the model of your audio console.

Disclaimer: All images, brands, and models referenced in this document are the property of their respective manufacturers and are used solely for illustrative purposes to enhance user understanding.