

PHA-3

Portable Hi-Res DAC/Headphone Amplifier

Enjoy your favorite music with convenient Analog and Digital connectivity that lets you maximize your audio experience no matter the source: smartphone, portable audio player, PC or even other analog devices. The internal battery delivers up to 5 hours battery life while the internal DAC can decode PCM audio up to 384 kHz/32-bit and DSD files at 2.8/5.6MHz, while dedicated high fidelity circuitry ensures bit-perfect playback.



Bullets

- Full Hi-Res audio: PCM 384 kHz/32 bit, DSD 2.8/5.6MHz
- Digital connectivity with compatible PCs, Walkman®, Xperia®, and iOs devices¹
- Balanced audio output capable (ideal for use with MDR-Z7 and XBA-Z5)
- Asynchronous, precision USB clock for superior sound
- Separate operational & headphone amps for clear, powerful sound
- High-class DA convertor for bit-perfect sound
- DSEE HX revitalizes and upscales compressed audio to Hi-Res levels
- Enhances non hi-res music sources (via analog input)
- Line-out to connect external amp or active speaker
- Durable aluminum enclosure with protective bumpers
- Built-in Lithium-ion battery for (up to 28 hours) on the go²
- Digital Optical Input for enhanced connectivity
- Supplied with: silicon band and digital/analog connecting cables

Features

Unlock Hi-Res audio

The PHA-3 portable headphone amplifier delivers a high-resolution audio experience through your headphones. The PHA-3 can comprehensively decode PCM audio sources up to 384 kHz/32-bit in addition to DSD audio sources at 2.8 MHz/5.6 MHz formats.

Flexible connectivity

With flexible connectivity the PHA-3 is much more than just a headphone amplifier. While the analog input provides easy plug-play connectivity with most MP3 players, smartphones and other audio devices, digital (USB) inputs including an optical terminal let you maximize your audio experience and enjoy high-resolution files stored on compatible: PCs, digital music players, Smartphones and the like. Perfect for interfacing with an external amp or active speakers, an analog audio output is available.

Balanced Audio capable

As with a home stereo, you generally need to connect a pair of speakers, each one separately, to an amplifier. For the ultimate headphone experience, similar separated left and right channel audio connectivity can be used. Balanced audio output, results in an optimized listening experience, and in the case of the PHA-3 renders optimal audio performance when using compatible headphones such as the MDR-Z7 or XBA-Z5 headphones.

Jitter-free audio

The PHA-3 features an asynchronous USB 2.0 clock that supports highly accurate DA conversions. The precision clock signal generator reduces timing inaccuracies when converting digital signals into analog waveforms. This maintains sound stage integrity and audio response, resulting in superior audio performance with minimal noise and distortion.

High-quality amplification circuitry

Not only can the PHA-3 decode PCM audio up to 384 kHz/32 bit & DSD audio at 2.8/5.6 MHz, but in partnership with the ES9018 DAC and high-bandwidth OPA2604 headphone amp, it can deliver outstanding signal/noise performance up to 130 dB of dynamic range that will breathe new life into your favorite tracks.

Maximize your music

Enjoy optimal audio performance with Sony-unique DSEE HX technology. DSEE-HX revitalizes high-frequency audio response while also up-scaling existing audio signals (MP3, AAC, ATRAC, and WMA) to high-resolution levels.

Durable construction and materials

An extruded aluminum enclosure fits nicely in-hand and also protects the delicate circuitry inside from outside interference and impacts, while integrated, front and rear alloy endcaps protect the terminals from hard knocks. Recessed controls also reduce the chance of accidental access during playback.

Rechargeable Lithium-ion battery

The internal rechargeable battery provides up to 5 hours of balanced audio playback when connected digitally via USB, or up to 28 hours of playback when connected using the analog, 1/8" stereo input.²

Supplied accessories

Everything you need in the box: Digital cables for Walkman® and Xperia®, (1) micro-USB cable, (1) stereo mini cable, (1) silicone belt, and (1) Protection sheet.

Amplifier

INPUTS AND OUTPUTS

Digital Audio Input(s)	Inputs (3): USB Micro-B input (for charging & PC), USB Mini-B input (for Walkman™), USB Standard type A (for iPod®/iPhone®/iPad®)
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General Specifications

AMPLIFIER SECTION

Impedance	Supported impedance: 8 – 600 Ohms (Normal – High)
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AUDIO

Distortion	0.01% or less (1 kHz)
Frequency Response	10 Hz – 100 kHz (AUDIO IN input)
Sampling Frequency	PCM (PC connection Maximum 384kHz/32bit), DSD (2.8MHz,5.6MHz)
Volume Control	Rotary

GENERAL

Case Type	Aluminum chassis
Power On/Off	Integrated: Rotary power/volume knob
Type of Use	Portable and Home

GENERAL SPECIFICATIONS

Recharging time	Approx. 15 hours (PC Connection)
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INPUTS AND OUTPUTS

Digital Audio Input(s)	Inputs (4): Computer, Walkman®, Xperia® connecting port, iPhone®, iPod®, iPad® connecting port, Optical input connecting port, Stereo Mini Jack
Input(s)	Analog (1)
Output(s): Outputs (3)	3-pole mini jack (BALANCED-L) 3-pole mini jack (BALANCED-R) Stereo mini jack*1 (NORMAL)

POWER

Battery Charging (Approx.)	Charging via USB: Approx. 15 hours from empty to full
Red battery charge LED on during charging	
LED indicator turns off automatically once fully charged	
Unit will not charge during playback	
Battery Indicator	Yes: Lights up green when power is turned on, flashes to indicate battery level. See manual for details.
Battery Life (Approx.)	Digital (balanced) connection: Approx. 5 hours
Battery Life (Approx.)	Analog connection: Approx. 17 hours
Battery Type	Built-in Lithium ion rechargeable battery
Input Voltage	Maximum: 2 Vrms (AUDIO IN)
Output Power	Maximum output: Approx. 320mW + 320mW (Balanced Connection, 32 Ohms, 1% distortion)
Power Source	DC 3.7 V Built-in lithium-ion rechargeable battery

WEIGHTS AND MEASUREMENTS

Dimensions (Approx.)	80 mm x 29 mm x 140.5 mm (3.14 x 1.14 x 5.53 in.)
Weight (Approx.)	Approx. 10.6 oz. (300 g) - rechargeable battery included

IN THE BOX

Operating instructions (1)

Digital USB cable for Walkman® (1)

Digital USB cable for Xperia® (1)

Micro-USB cable (1)

Stereo mini cable (1)

Silicone belt (4)

Protection sheet (1)

1. Interoperability and compatibility among Apple® devices may vary.

2. Actual battery performance varies based on settings, environmental conditions and usage. Analog connection provides approx. 17 hours of use and digital connection provides approx. 6.5 hours of use.

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