

HA-P50



High quality, portable headphone amplifier with built-in 24/96 USB DAC, providing high-resolution 'go anywhere' listening from iPhone, Android and PC/Mac

■ Main Features

- Portable headphone amplifier with built-in DAC for enjoying high sound quality headphone listening, both indoors and outdoors
- Accepts a digital input via USB from iPhone or Android* devices (**AOA2.0-compatible Android handsets*)
- 24-bit/96kHz high-resolution playback from iPhone and other iOS devices (with no Apple Camera Connection Kit needed when using the TEAC HR Audio Player for iOS high-resolution audio playback app)
- An optical digital input jack allows direct connection to portable audio players or CD/DVD/Blu-ray players
- HIGH/LOW output gain sector
- 21.7mm thick flat-profile design; sturdy aluminum body
- USB-rechargeable Li-ion battery (continuous battery life approx. 8 hours) with auto power save function



Brand	TEAC
Series	Reference To-Go
Model	HA-P50-B
Announcement Date	2/5/2014
Release Date	Late March 2014
JAN/EAN Code	4907034218714
MSPR	Open Price
Assumed selling price	JPY26,800 (not including tax)
Dimensions / Weight W x H x D	64x21.7x112/210(mm/g)
Package Dimensions / Weight W x H x D	170 x 67 x 129/420 (mm/g)
Items packed per Master Carton	10

■ Delivers audiophile Reference sound quality, even when you're outdoors

- **A portable amplifier that's purpose-designed for high-performance headphones**

The HA-P50 is the ideal headphone amplifier for the audiophile on the go. Allows you to take that great Reference 501-grade headphone listening experience outdoors and enjoy it wherever you want to go. Packs a high-performance digital-to-analog adapter and high specification power amplifier circuit into a compact body, to bring out the very best from quality headphones.

- **Gets high-quality sound from your iPhone or Android (*1) via USB digital input**

Digital audio signals stored in your iOS device or Android are extracted digitally via USB and processed through the HA-50's high-performance built-in digital-to-analog converter, with minimal sound degradation and allowing the purest playback quality, with maximum fidelity. The HA-P50 can be used with the free TEAC HR Audio Player app for high-resolution 24bit/96kHz audio playback for iPhones and other iOS-based devices... there's no need to buy a separate adapter (such as the Apple Camera Connection Kit) in order to connect. Also comes with rubber fixing straps for securing it to an iPhone or Android handset, making the HA-P50 very easy to carry around.



*1: AOA2.0 compatible Android phone handset

*2: TEAC HR Audio Player can be downloaded for free from the App store.

- **Uses a BurrBrown PCM5102 digital-to-analog converter**

The built-in BurrBrown PCM5102 digital-to-analog converter is capable of processing digital audio signals up to maximum 24-bit/96kHz resolution



- **High 160mW + 160mW output gain (at 32Ω load)**

Fitted with a 160mW + 160mW high-output power amplifier (at 32Ω load). Lets you drive 600Ω -class headphones at full power.

- **Low distortion discrete power amp section**

Uses a top-flight OPA 1652 operational amplifier to process audio signals with maximum purity. The discrete push-pull circuit achieves a very low distortion rate of 0.001% (at 100mW + 100mW output) which IC-based amplifier headphone circuits cannot match, thanks to meticulous component selection and an absolute insistence on sound quality. Every lesson TEAC has learnt about amplifier sound quality has been applied to the HA-501 in the pursuit of the very best listening experience, one that's wholly uncompromised in a mobile environment.



- **Dual-setting gain switch for use with high-impedance headphones**

Fitted with a high/low gain selector which enables output gain to be matched to the impedance of the headphone being used. An indispensable feature for those



Last Updated: April 8, 2014

Supplemental to New Product Information (SNPI) **TEAC** who use top quality high-impedance headphones.

- **Accepts USB input from a PC/Mac**

The HA-P50 accepts input from your computer via USB. Capable of high-resolution 24-bit/96kHz sound source playback when used with the TEAC HR Audio Player app (free to download) installed on your Windows PC/Macintosh.

- **Equipped with both optical digital/analog inputs**

This versatile portable audio player is fitted with an optical digital input terminal (*) that can be connected to a home audio system. The HA-P50 creates a high quality digital audio playback environment. With its dual-function AUDIO IN port * for analog audio, the HA-P50 takes input from non-digital audio players and passes it through its sophisticated amplifier circuits, letting you enjoy a high quality headphone listening environment wherever you are.



* A combined optical digital input and analog AUDIO IN terminal that self-detects incoming signals.

- **Compact and robust full aluminum body**

Constructed from durable aluminium, the HA-P50's compact, flat body measures just 21.7mm thick (at its widest point), ideal for mobile environments where toughness, small size and lightness are essential. Designed from the outset for mobile use, its compact aluminium volume knob has just the right torque to allow fine volume adjustment. Raised guards on either side prevent accidental volume changes when the HA-50 is being carried in a pocket or bag, as well as protecting headphone plugs from bumps.



- **Convenient recharging by USB; 8 hour continuous battery life**

The HA-P50 has a built-in 2100mAh Li-ion battery, allowing a maximum of 8 hours of continuous battery life (with digital connections) and the included USB-A type DC cable allows recharging from a computer's USB port. A separately sold TASCAM PS-P515U AC adapter allows rapid recharging from wall/mains power, if required. Thanks to its auto power save function, the unit goes into sleep mode after 30 minutes if it has failed to detect a sound signal, or if there's no headphone jack plugged into the headphone port.



■ Special Features

- Digital input from iPhone or Android devices
Custom iOS application TEAC HR Audio Player for iOS (free to download) offers 24-bit/96kHz high-resolution audio playback (No Apple Camera Connection Kit needed)
- High 160mW + 160mW output gain (at 32 Ω load)
- Low 0.001% distortion (at 100mW + 100 mW output)
- Built-in BurrBrown PCM5102 high-performance D/A converter
- Discrete output amp section based on a push-pull circuit
- High quality OP1652 operational amplifier
- HIGH/LOW gain selector
- USB input from PC (24-bit/96kHz maximum)
- Works in conjunction with the TEAC HR Audio Player app for PC/Mac (free to download) to deliver high-resolution audio playback
- Combination optical digital/AUDIO IN input
- 3.5mm stereo mini headphone output
- Slim 21.7mm thick (max) design; sturdy full aluminum body
- Internal rechargeable 2100mAh Li-ion battery with continuous battery life of approximately 8 hours
- USB-rechargeable
- Supplied with rubber fixing straps for securing HA-50 to iPhone or Android handsets
- Auto power save function

■ Specifications

Compatible Formats

USB input

iOS devices:	24-bit/96kHz (when using TEAC HR Audio Player for iOS)
iPod and Android phone handsets (*):	16-bit/44.1kHz
Personal computer (PCM):	24-bit/96kHz

* iPod nano (7th generation), AOA2.0 compatible Android phone handset

Digital/Analog Converter (DAC) Section

D/A converter:	BurrBrown PCM5102
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Audio Input & Output Capacity

USB input 1:	USB Micro B-type, USB2.0 PCs (Windows, Macintosh) with the compatible product TEAC HR Audio Player installed
USB input 2:	USB A-type, USB2.0
Compatible products:	iPhone 5s, iPhone 5c, iPhone 5, iPad Air, iPad (4th generation) iPad mini with Retina display, iPad mini. iPod touch (5th generation), iPod nano (7th generation), Android (AOA2.0 compatible Android phone handset)
Optical digital input:	optical mini-jack (combination AUDIO IN port; automatic signal detection)
AUDIO IN input	3.5mm (1/8") stereo mini-jack (combination optical digital input; automatic detection) Prescribed input level (sequential publication)
Maximum input level:	1mVrms (0dBV)
Input impedance:	22k Ω
Headphone output:	3.5mm (1/8" stereo mini jack)

Audio Performance

Compatible impedance:	8 Ω to 600 Ω
Frequency response:	10Hz to 100kHz (when using AUDIO IN input)
Effective maximum output:	160mW + 160mW (@ 32 Ω , 1kHz, THD 10%, JEITA) 65mW + 65mW (@ 300 Ω , 1kHz, THD 10%, JEITA) 35mW + 35mW (@ 600 Ω , 1kHz, THD 10%, JEITA)
Overall distortion:	0.001% (@ 32 Ω , 1kHz, 100mW + 100mW, JEITA)

General

Battery:	Built-in rechargeable Li-ion battery
Battery capacity:	2100mAh
Recharging method:	USB (via USB-A DC recharging cable)
Continuous battery life:	Approximately 8 hours (when using digital input)
External dimensions:	W 64 x H 21.7 x D 112mm (not including protruding guards); W 68 x H 23 x D 126 mm (including protruding guards)
Weight:	210g
Included accessories:	Electric recharging cable included (DC plug – USB A plug) Computer connection cable (USB micro B plug – USB A plug) Rubber fixing straps for fastening x 2 Instruction Guide (including Warranty)
Separately sold option:	USB-compatible AC mains adapter (PS-P515U)

■ Panel

