YAMAHA
Make Waves

HA-L7A

HEADPHONE AMPLIFIER

Audio components

Rated HP OUTPUT POWER	1000 mW + 1000 mW (1 kHz, 0.01 %THD, 32 Ω)
Frequency response (HP OUT)	4 Hz to 80 KHz, –3 dB
Total Harmonic Distortion	≤ 0.003% (Digital IN, 1 kHz, 300 mW, 32 Ω)
Signal to Noise Ratio	>120 dB
Input Sensitivity	HP OUT 1.4 V, PRE OUT 0.2 V, LINE OUT 2.0 V (Analog IN)
Input Impedance	RCA 50 kΩ

Audio playback modes and eco-friendly functions

SOUND FIELD MODE	7 modes (STRAIGHT, CINEMA, DRAMA, MUSIC VIDEO, CONCERT HALL, OUTDOOR LIVE, BGM)
PURE DIRECT	YES
AUTO POWER STDBY	YES

Terminals

Input jacks/connectors	Analog L/R (RCA) × 1, Digital optical × 1, Digital coaxial × 1, USB (Type-B) × 1
Output jacks/connectors	(Headphones) Standard 6.3 mm (1/4-inch) × 1, Balanced 4.4 mm × 1, XLR, 4-pin × 1 (PRE OUT/LINE OUT) Analog L/R [RCA] × 1, Analog XLR 3-pin × 1
Supported audio formats	(Digital optical) PCM 2-channel: max 96 kHz [24-bit], (Digital coaxial) PCM 2-channel: max 192 kHz [24-bit], (USB) PCM 2-channel: max 384 kHz [32-bit], DSD 2-channel: max 11.2 MHz [DSD256]

General

Power consumption	19 W
Standby power consumption	0.2 W
Dimensions (W x H x D)	333 × 133 × 189 mm (including the feet and protruding parts)
Weight	5.3 kg ,

TRUE SOUND. BECAUSE THERE ARE GREATER HEIGHTS TO REACH.

Striving for the ultimate True Sound in headphone listening, Yamaha has crafted a headphone amplifier that achieves true audiophile performance. Our passion to constantly create and innovate has scaled sonic heights for over 30 years—fusing superior Hi-Fi audio technologies with sound field advancements from our AV receivers. Introducing our HA-L7A high-end headphone amplifier. Dive in, immerse yourself, and newly experience the full emotion and excitement in all your entertainment.

TRUE SOUND

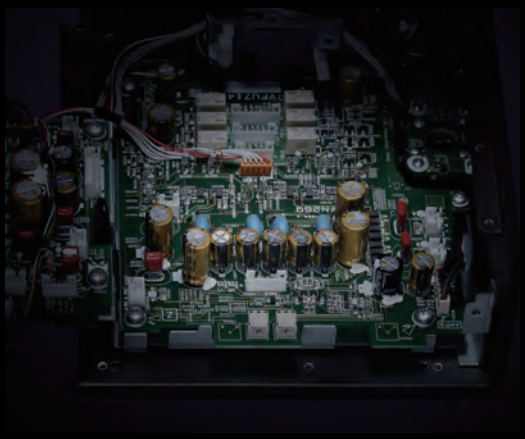
From the moment the sound is created to the time it reaches the human ear—Yamaha is there. It is the only brand in the world that intimately knows this process, ranging from the manufacture of musical instruments to professional audio equipment. And True Sound, which strives for sound that accurately reproduces even the very thoughts the artist puts into the music and the expressive view intended by the creator as is, allows you to fully immerse yourself in the sound and enter a profound musical experience, feeling as if you were right in the middle of the performance.

TONAL BALANCE

Striving for the thorough elimination of minute noise and attaining high slew rate, which are crucial for ultra-high-resolution music sources, and making sure the amplification can precisely handle even the most delicate signals—so that all sound elements from musical instruments to vocals and dialogue are faithfully reproduced ‘as is’ without any unnatural coloration or timbral changes.

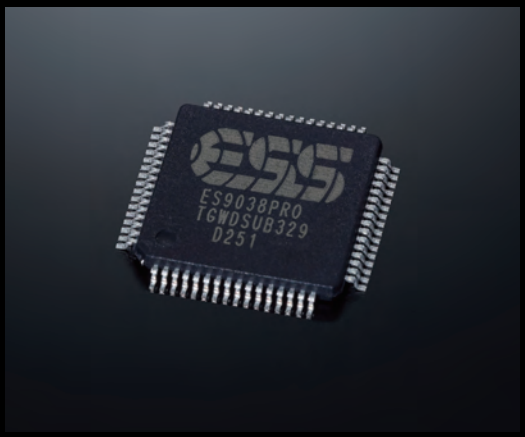
YAMAHA’S UNIQUE FLOATING AND BALANCED POWER AMPLIFIER TECHNOLOGY

Yamaha has optimized its patented Floating and Balanced Power Amplifier technology for this headphone amplifier. A total of four sets of power amplifier circuits on the plus and minus sides of the left and right channels of the output stage are floated from the ground, resulting in thoroughly symmetrical push-pull operation of the output stage. The headphones can be driven without altering the amplifier configuration between balanced and unbalanced, minimizing any sound quality discrepancies due to different output terminals. Moreover, all circuitry, including the power supply, is completely independent of the ground, and all effects of minute voltage fluctuations and external noise surrounding the ground are thoroughly eliminated. By maximizing these sound quality advantages, the amplifier achieves a natural and fatigue-free sound that lets you fully lose yourself in your entertainment, even when listening for a long time.



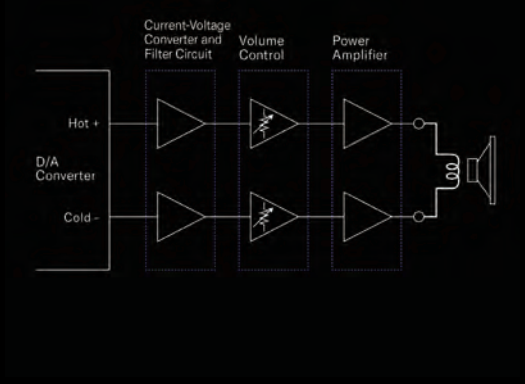
ELITE, ULTRA-HIGH PERFORMANCE 32-BIT D/A CONVERTER FROM ESS

Sparing no expense to realize superior sonic quality suitable for Yamaha's ideal high-end headphone amplifier, we have adopted ESS Technology’s ES9038PRO converter, which is outstanding in the DAC industry for top-quality audio reproduction of minute signals. The dedicated master clock on the device utilizes a crystal oscillator with ultra-low phase noise to attain the highly precise D/A conversion, and features an eight-channel D/A converter housed inside the chip that applies four-channel conversion to the left and right sides respectively. Utilizing this four-channel bundle delivers exceptionally high-quality audio output with broad dynamic range and superior signal-to-noise ratio. This unlocks a greater sense of enjoyment in headphone listening, where you can intimately experience even background noises of the concert hall and the most minute details in the sounds of the instruments.



DISCRETE CONSTRUCTION AND BALANCED TRANSMISSION

All major stages after the DAC are unified with balanced circuitry and discrete configuration, achieving fully balanced transmission from the D/A converter output to the headphone jack. Moreover, balanced conversion is performed internally for ordinary single-ended (unbalanced) inputs, delivering the unique advantages of balanced transmission and amplification, such as minimizing external noise and sound quality deterioration, and applying them to a wide range of input sources. Additionally, when combined with headphones that support balanced drive, the common impedance of the transmission system is suppressed, further enhancing the signal separation that is crucial for quality headphone listening.



DYNAMICS

In order to fully convey the contrast between serene stillness and powerfully dramatic motion in the sound, the amplifier adopts two toroidal transformers and boasts a unique, highly rigid construction. Accepting no compromise, we've achieved low-frequency response with outstanding response to minute sounds, luxurious volume, and extraordinary transparency, to ensure accurate reproduction of all kinds of content with dynamic and realistic sound.

LOW-FREQUENCY REPRODUCTION AND REMARKABLE SPACIOUSNESS FROM DUAL TOROIDAL TRANSFORMERS

The power supply section employs independent transformers for the minute-signal circuitry in the front stage and the amplifier section in the second stage, and implements a separate power supply design that minimizes noise due to mutual signal interference. Moreover, usage of toroidal transformers significantly reduces magnetic flux leakage. Also, employing bifiler winding minimizes voltage variations, which in turn enhances the stability of the power supply, and achieves overwhelming spaciousness with powerful low-frequency reproduction.

HIGH RIGIDITY CONSTRUCTION - ELIMINATING SONIC IMPACTS FROM VIBRATION

In order to eliminate any detrimental impact of external and internal vibrations on the audio signals, we've given the unit a rugged construction that combines an original design concept with parts of high rigidity. An extruded aluminum panel of 8 mm thickness forms the L-shaped top surface, while the naturally vibrating toroidal transformer is mounted firmly onto a 2-mm-thick steel plate. Even stronger support is provided by a thick front panel, a double rear panel, and a unique housing design that features a bottom cover at the end. Through this heavy-duty housing, unnecessary vibrations are suppressed, enabling powerful yet supple low-frequency reproduction, and allowing you to completely feel the powerful energy and genuine realism contained in the music.

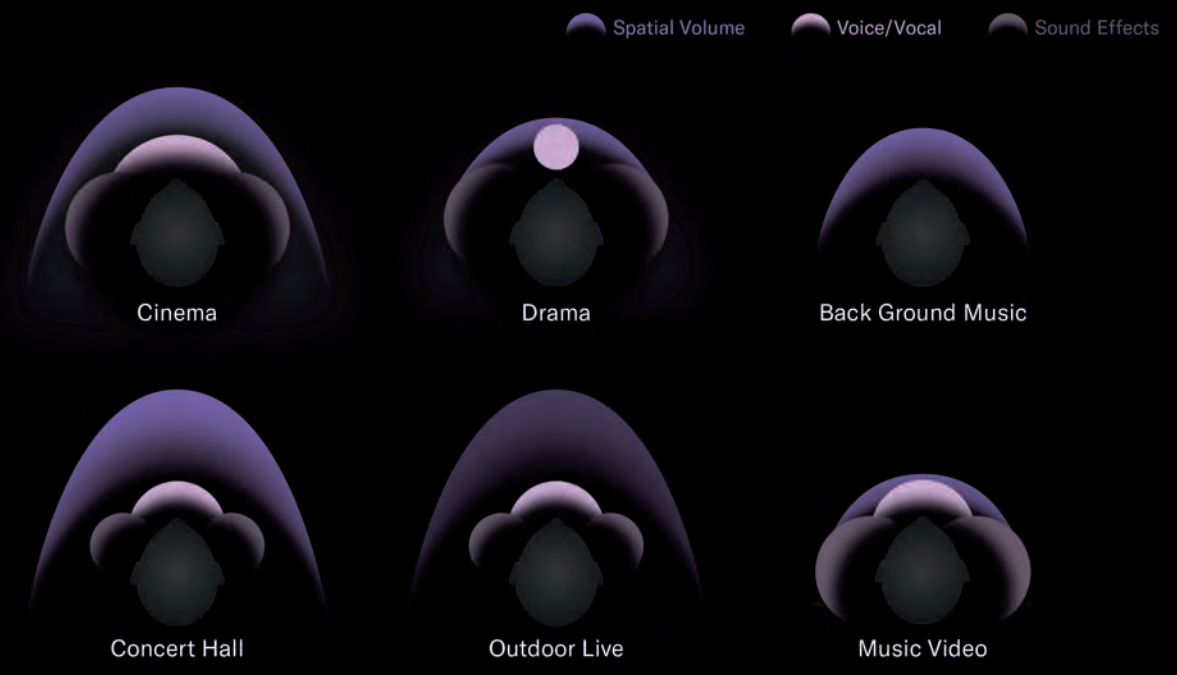
SOLID METAL FEET FOR STABILITY

The distinctive L-shaped HA-L7A is supported by five conical steel feet at each corner of the chassis, with dampers cushioned between each foot and the bottom panel that effectively suppress any vibration, allowing firm and stable support even on a desk or tabletop. Together with the weighty 5.3 kg body, all elements work together to effectively eliminate unwanted vibrations to achieve focused and realistic sound reproduction.

SOUND IMAGE

Yamaha's unique SOUND FIELD mode and tremendous sound field recreation could only be accomplished through our unwavering commitment to the best in sound reproduction. With a realistic, natural sound field that allows you to completely lose yourself in your listening, we deliver a new entertainment experience that had previously been unexplored with headphone amplifiers. Enjoy a truly immersive feeling - as if you were entering the very performance space of the artist.

SOUND FIELD MODE FOR UNPARALLELED IMMERSION WITH ANY CONTENT



The HA-L7A features the same Yamaha CINEMA DSP sound field creation technology that is incorporated into many of our AV receivers. The unit also utilizes the unique signal processing and multi-channel expansion technologies Yamaha has developed and cultivated over its many years of designing AV components—now brought into the headphone field. And one of the stunning results is the built-in SOUND FIELD mode. Adopting six convenient options that reproduce the optimal sound field for the entire scope of music, video, and other specific sources, it lets you enjoy all kinds of entertainment content with a full sense of realism and immersion that takes headphone listening into heretofore unexplored new worlds.

LOW-NOISE CIRCUIT DESIGN & HIGH-QUALITY PARTS

The HA-L7A adopts a low-noise design that isolates the three circuit boards: the main board that handles minute signals, the amplifier board and the amplifier, and the power supply board for the system. In addition, the main board is designed to eliminate any undesirable cross effects between the digital and analog signals through utilizing a multilayer board and thoroughly eradicating ground loops. Moreover, the MUSES72323, famed for its exceptionally low distortion and low-noise output, is used for the volume IC, while the power supply IC made by Analog Devices boasts low output noise with high ripple rejection. The converter section features the ES9842QPRO, made by ESS Technology. By using only the highest quality parts meticulously selected through repeated listening tests, we have achieved the most natural sound field reproduction possible.

CONNECTIVITY WITHOUT COMPROMISE

Since the HA-L7A is fully compatible with the widest possible variety of music, video and entertainment sources, you can deeply immerse yourself in your favorite listening with sonic performance that brings out the potential of all your headphones to their utmost. Comprehensive connectivity and expansion flexibility further expand and deepen the pleasure of your headphone experience.

THREE FRONT-PANEL HEADPHONE JACKS

The front panel of the HA-L7A features two balanced headphone jacks that allow you to fully enjoy the detailed, as-is high-quality of balanced circuitry, and one unbalanced headphone jack that reduces contact loss thanks to gold-plated processing. Famed NEUTRIK jacks are used for the XLR balanced headphone jacks, and Pentaconn terminals are used for the 4.4 mm 5-pole terminals, letting you connect your preferred set of headphones and unleash its full potential.

COMPREHENSIVE INPUT/OUTPUT TERMINALS FOR EXPANDABILITY

Featuring a comprehensive set of input terminals, including USB (type B), coaxial, and optical, the HA-L7A lets you connect a full variety of devices, such as high-resolution DAPs (digital audio players), PCs, and CD players. The amplifier also has built-in XLR and RCA pre-out/line-out output terminals, allowing it to serve as a D/A converter or preamplifier, providing exceptional connectivity and expandability options when using an external amplifier.

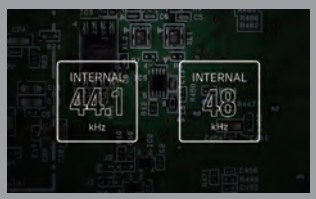
OTHER FEATURES

PURE DIRECT

This function reduces noise by bypassing all circuitry that is not present in the original input source, such as DSP processing and analog-to-digital converters for analog audio. It ensures purity of the signal and enhances the sound, letting you fully enjoy the subtlest nuances in the music.

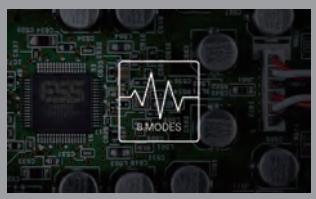
USB DAC FUNCTIONALITY

DSD (Direct Stream Digital) files of up to the top-level 11.2 MHz rate can be played natively with the ASIO driver, which accurately reproduces the original sound of DSD audio. Moreover, PCM high-resolution sound sources of up to 384 kHz and 32-bit are also supported. The driver is by Yamaha Steinberg, and transmission is not synchronized with the PC clock, but uses asynchronous transfer that controls transmission with the unit's high-precision clock. This reduces jitter to the utmost limit, for accurate reproduction of the most demanding high-resolution sound sources.



HIGH-PRECISION CLOCKS

The USB DAC processing employs two dedicated clocks: a 44.1kHz system and a 48kHz system that uses a high-precision crystal oscillator with low phase noise. Moreover, the DAC section is designed to be less susceptible to external clock jitter through placement of the clock with the crystal oscillator as the master clock near the device.



EIGHT TYPES OF DIGITAL FILTERS

Various built-in digital filters include Yamaha's original low-latency filter as well as those already pre-programmed to the DAC processor. There are a total of eight modes you can select to match your personal preference.

QUALITY THAT CREATES THE SATISFACTION OF OWNING AND USING

Even as this headphone amplifier is defined by a pragmatic internal design that prioritizes the utmost in sound quality, it is the stylish exterior that truly transforms your listening space into a special environment. The considered approach to design and the high-quality texture that you feel and see when using the amplifier only deepens your enjoyment of listening to music with your favorite headphones.

UNUSUAL DESIGN TO MATCH THE UNUSUALLY HIGH SOUND QUALITY

Following traditional audio principles and maintaining a low center of gravity, two transformers are mounted on the main frame and represented in the unique external design, invoking an impression of fine modern architecture. Furthermore, thanks to a vertical three-dimensional structure, the transformer is located immediately above the power supply board, minimizing the power supply path, contributing to a design that delivers both high sound quality and external elegance.

ELEGANT ROTARY DIAL

The robust weighty chassis is comprised of thick aluminum, and in addition to that exquisite main frame, aluminum is also used for the master volume and mode selector dials. Moreover, an abrasive sandblasting process has produced a high-grade textural feel, contributing to the elegance of high-end audio right down to the smallest detail—delivering a tactile experience when using the HA-L7A.

OLED DISPLAY WITH BRILLIANT VIEWABILITY

The top panel of the unit features a gorgeous OLED display that provides a variety of important information, including the input source, its sampling frequency, volume, and the name of the SOUND FIELD mode used—all in an easy-to-read manner. The display automatically turns off after being operated, eliminating any distraction or slight undesirable effects on the sound.