

LUXMAN

HEADPHONE AMPLIFIER
P-100 CENTENNIAL



100th Anniversary — “CENTENNIAL”

In 1925, inspired by an experimental broadcast from Japan’s NHK, a visionary businessman crafted a prototype radio receiver and shared its technical manual. This breakthrough captured the imagination of audio enthusiasts, igniting excitement and innovation.

From this spark, Lux was born. The company soon ventured into designing and manufacturing radio tuners, amplifiers, and speakers — laying the groundwork for what would become modern audio systems. Through relentless innovation and craftsmanship, Lux evolved into the brand now known as LUXMAN.

Now, a century later, we proudly celebrate 100 years of sonic excellence. To honor this milestone and step boldly into the future, LUXMAN has refined its expertise and perfected its technology to create the “CENTENNIAL” models — designed to set new benchmarks in performance and sound quality for the next century.

Leading this special lineup is our flagship P-100 CENTENNIAL headphone amplifier, a testament to our legacy and our commitment to the future of high-fidelity audio.



A Symphony of Pure Sound

Immerse yourself in the pinnacle of headphone listening.

Feel the true essence of recorded sound — from the hush of silence to the soaring heights of a crescendo.

More than sheer power, this headphone amplifier unveils the finest textures, the boundless depth of the soundstage, and the rich emotional resonance that brings music to life.



Image of using two P-100s, each in mono, while connecting them in balanced BTL mode

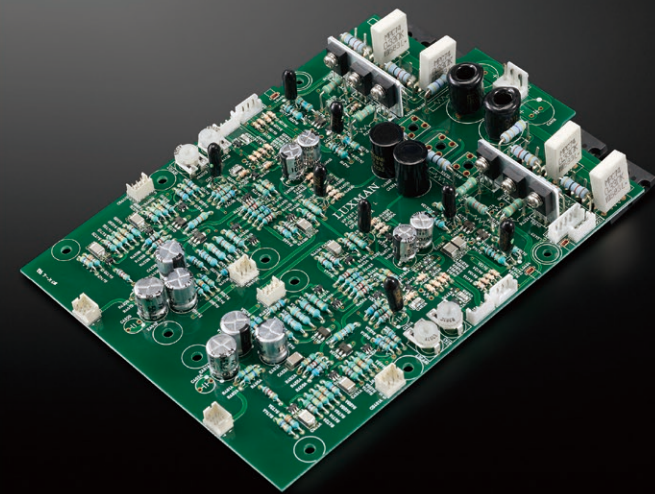
"New amplified feedback engine"

LIFES

Luxman Integrated Feedback Engine System

Fully balanced amplifier circuitry that drives a wide variety of headphones

ODNF (Only Distortion Negative Feedback) has been at the heart of LUXMAN's amplifier technology for over 20 years, excelling as a unique, high-quality feedback system for improved sound. Since the release of the P-1 in 2002, LUXMAN's headphone amplifiers have continuously evolved with the benefit of ODNF. Our P-750uMKII features the latest, most advanced version of ODNF. The P-100 CENTENNIAL, created to commemorate our company's 100th anniversary, is the first headphone amplifier to incorporate the LIFES amplification feedback engine, an evolution of ODNF. LIFES, our groundbreaking technology designed for a new century, completely reimagines circuit design and components, while retaining the core concept of feeding back and eliminating only the distorted components detected at the output, a hallmark of ODNF, to produce a clearer and more vibrant tone. We've carefully selected high-quality, robust components, including a newly adopted, high-performance FET used in the voltage amplification stage. Compared to ODNF, distortion at the output is reduced by more than half and the signal-to-noise ratio is improved by over 3dB. The result is an amplifier that is quieter than ever, with every element of an audio recording more precisely defined, bringing the dynamism of our listener's favorite music to new heights.



LIFES amplification feedback engine

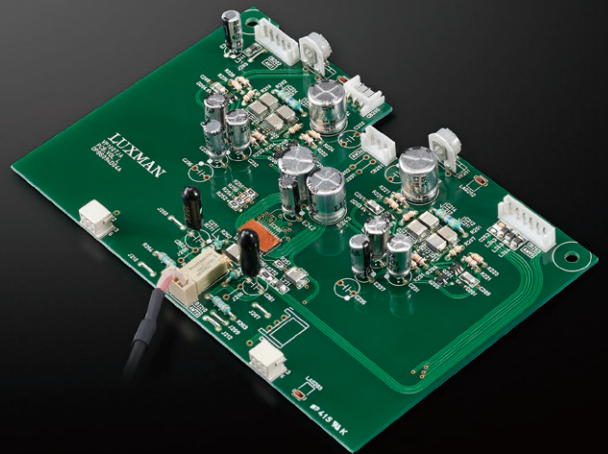
"New computerized attenuator"

LECUA-EX

Luxman Electronically Controlled Ultimate Attenuator - Excellent eXperience

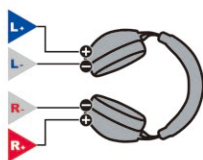
High definition volume control system with tactile response

For over 20 years, LUXMAN has been perfecting LECUA, an advanced electronically controlled attenuator, which addresses issues such as L/R level imbalances at low volumes and changes in sound quality due to volume control position, issues especially noticeable when listening with headphones, where the sound source is close to the ear. The P-100 CENTENNIAL features our LECUA-EX system, which uses a solid-state (IC) design to streamline the circuitry and incorporates a high precision rotary encoder with a weighted rotation mechanism for precise position detection. Additionally, by updating the core IC, it offers a range of 200 steps in 0.5dB increments, allowing for even finer micro-adjustments. The LECUA-EX system integrates all volume-related functions, including three-stage sensitivity switching based on the impedance and efficiency of the listener's headphones, left-right balance adjustment and a six-stage volume limiter to protect both your ears and your headphones from unexpected volume spikes. A large 3-digit, 7-segment LED display clearly shows the volume level, making it easier to maintain consistent volume settings during precise listening.



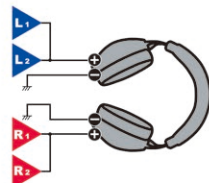
Volume control mechanism LECUA-EX

PHONES-2 (Φ4.4mm), PHONE-3 (4-pin XLR)



BTL balanced

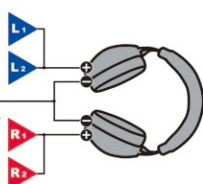
4 independent BTL balanced outputs using a $\Phi 4.4\text{mm}$ small balanced jack or a sturdy 4-pin XLR connector.



Parallel unbalanced (GND: independent LR)

By setting the switch to G-DIV, 2 circuits are bundled for each channel, resulting in an unbalanced output with independent L/R grounds.

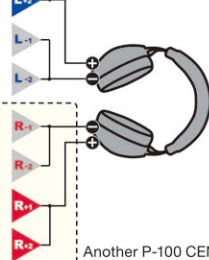
PHONES-1 (Φ6.3mm)



Parallel unbalanced (GND: common LR)

Conventional headphone connection using a $\Phi 6.3\text{mm}$ standard plug. Unbalanced output with 2 circuits bundled for each channel.

PHONES-4 (3-pin XLR)



Parallel BTL balanced

Ultimate output configuration using 8 amplifier circuits in total, with 2 circuits bundled per channel, using 2 P-100s, each in mono mode, for a dual BTL balanced connection.

Another P-100 CENTENNIAL

Fully balanced headphone outputs, four discrete power amplifiers

The P-100 CENTENNIAL is a high-performance headphone amplifier featuring fully balanced architecture, enabled by uniting four independent amplifier blocks, enhanced by our advanced LIFES amplifier feedback engine. These identical amplifier modules have been meticulously designed using discrete components for optimal audio fidelity. Balanced output: Using a BTL (bridge-tied load) configuration, the balanced output combines the positive and negative signal outputs from four independent amplifier blocks. This setup enhances channel separation, positional accuracy, reduces intermodulation distortion and improves power regulation. Unbalanced output: The unbalanced output employs a parallel drive system, combining two amplifier circuits per channel to double the output current, ensuring ample driving power. When using the balanced output terminal ($\Phi 4.4\text{mm}$ or 4-pin XLR), a switch allows for parallel unbalanced operation with independent left and right grounds. For the ultimate headphone listening experience, connection to two P-100 CENTENNIAL units via their 3-pin XLR outputs offers parallel BTL balanced drive. This mode employs all eight available amplifier blocks, doubling the current output per channel, yielding unmatched, exquisite performance.



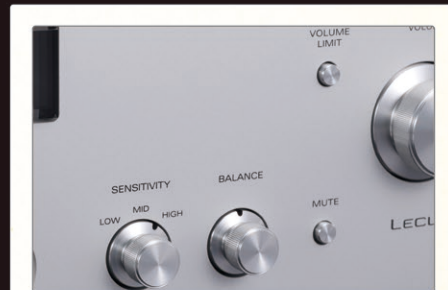
4 types of headphone output terminals

Abundant output terminals to suit your choice of headphones

The headphone outputs provided by the P-100 CENTENNIAL have been engineered to connect to a wide variety of high-end headphones available across the global market. In addition to a standard (unbalanced) $\phi 6.3\text{mm}$ output terminal, there is a 4-pin XLR terminal and a $\phi 4.4\text{mm}$ terminal, both balanced outputs. In addition, a 3-pin XLR terminal is also provided as a dedicated terminal for the parallel BTL balanced output mode using two P-100 CENTENNIAL units.

Various settings and adjustment functions eliminate sound quality degradation

By applying LECUA processing, the unit offers three levels (0, -6, -12dB) of sensitivity switching, LR balance adjustment (0.5dB steps, LR 0 to -12dB) and output mute functions that match the impedance and efficiency of the headphones used without degrading the sound quality. In addition, the unit is equipped with a volume limit function (6 levels: OFF, -10, -20, -30, -40, -50dB) that sets an upper limit on the volume and protects the listeners' ears from excessive sound pressure levels.



Various functions that apply LECUA



7-segment LED with excellent visibility

LED Volume display with large 7-segment LED

The P-100 CENTENNIAL is the first LUXMAN headphone amplifier to feature a display panel on the front. It features a large 7-segment LED (3-digit display showing 0.5dB steps) with excellent visibility that allows you to check the current volume level numerically. In addition, the status of the through output, mode switching during balanced output, BTL and volume limit functions have their own LED indicators.



Drive mode that brings out the capabilities of your headphones

Various drive mode switching

The P-100 CENTENNIAL offers a total of four output configurations that can be selected according to the performance characteristics and quality of your headphones, including two styles of parallel unbalanced output (common ground LR/independent ground LR), BTL balanced output and our ultimate output configuration, achieved by using two P-100 CENTENNIALs operating as paired mono units. We feel these options will bring out the full potential of our listeners' beloved headphones.

Nameplate commemorating the 100th anniversary and luxurious exterior

The front panel of the P-100 CENTENNIAL proudly displays a "CENTENNIAL" nameplate with its platinum like finish, exclusive to our 100th anniversary models. In addition, the precise hairline finish and bold characteristics of the oversized front panel create the luxurious appeal of a flagship model, while also increasing the rigidity of the housing.



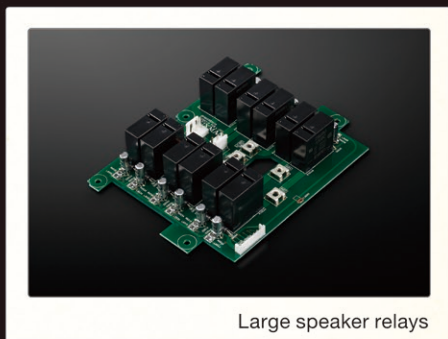
Oversized chassis with hairline finished cover



Custom made transformer and filter capacitors

Independent, High-Capacity Circuits for Each Channel

The power supply features two custom made, large-capacity OI-type transformers, renowned for their high regulation capability, dedicated exclusively to each channel. Additionally, an independent transformer is provided for peripheral circuitry, such as driving relays and LED indicators. The output stage incorporates four custom 10,000 μF filter capacitors, while the driver stage includes four custom 3,300 μF filter capacitors, all configured independently for the left and right channels. This configuration adheres to LUXMAN's traditional, high-capacity, highly stable power supply circuit benchmark.



Large speaker relays

Carefully Selected, High-Quality Components

The P-100 CENTENNIAL employs large speaker relays with parallel, low-resistance connections to ensure lossless power transmission. The output lines for driving headphones are optimized for ultra-low impedance. The internal OFC (oxygen-free copper) wiring with spiral wrap shielding and non-plated cores, coupled with meticulously crafted custom components, delivers overwhelming flagship-level performance.

Large, Highly Rigid Chassis Improves Headphone Performance

The chassis adopts a highly rigid, loopless structure to prevent earth loop generation and eliminates the effects of chassis current impedance and magnetic fields. The bottom section features a 4.1mm thick (2.9 + 1.2mm) steel plate, which increases ground mass, lowers the product's center of gravity and serves as a heatsink for the power block. Density gradient cast-iron feet are included to protect the delicate electronic signals inside from unwanted external vibrations.

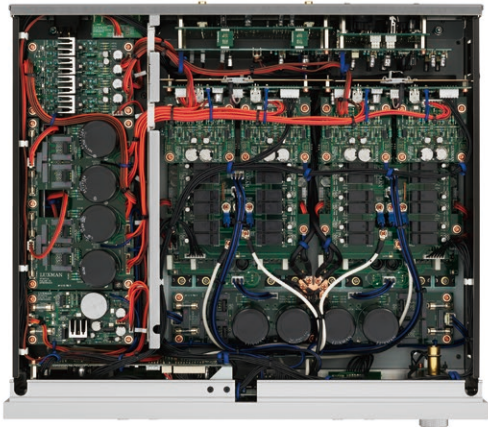
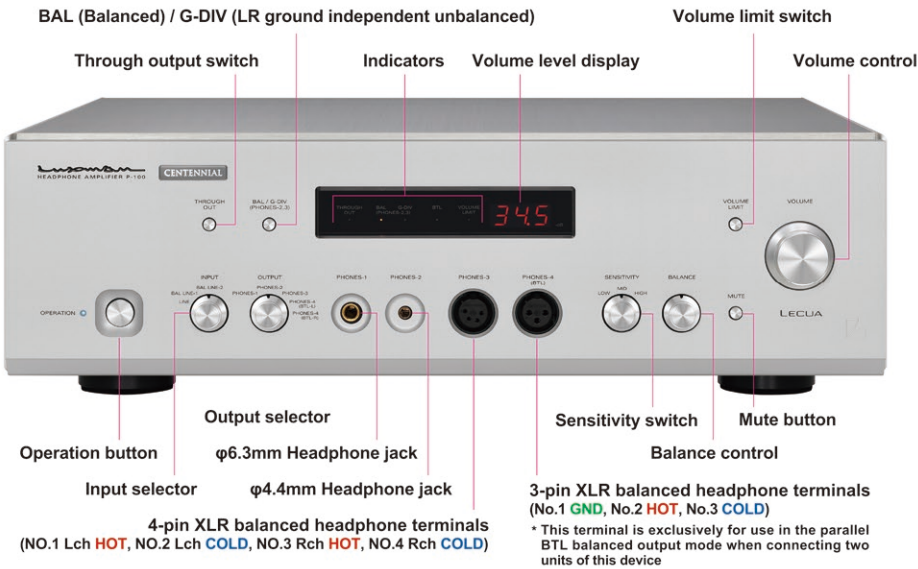


Density gradient cast-iron feet

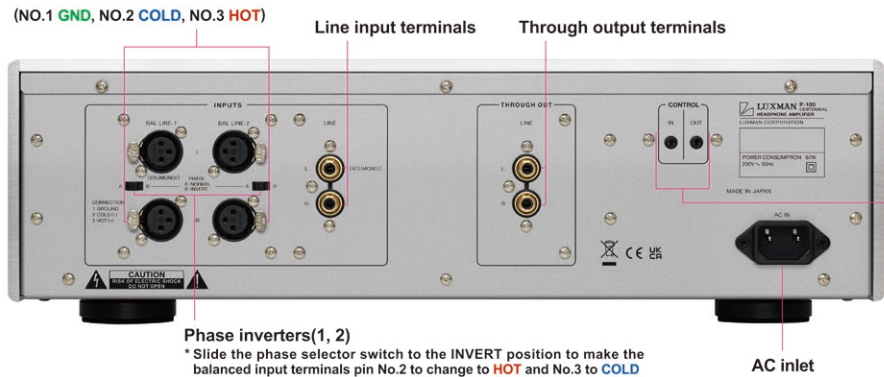
HEADPHONE AMPLIFIER

P-100 CENTENNIAL

P-100 CENTENNIAL HEADPHONE AMPLIFIER



Internal configuration



Control input / output terminal

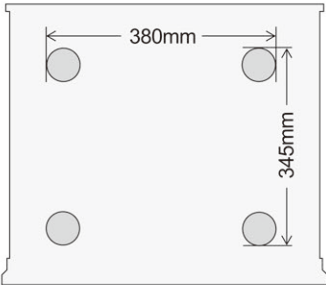
Remote control operations can be sent to a compatible LUXMAN product connected via commercially available 3.5mm monaural mini jack cable. (To be supported in the future)

This terminal is exclusively for use in the parallel BTL balanced output mode when connecting two units of this device.

SPECIFICATIONS

Rated output	Unbalanced : 4W + 4W (8Ω), 2W + 2W (16Ω)
	1W + 1W (32Ω), 53mW + 53mW (600Ω)
Balanced	: 8W + 8W (16Ω), 4W + 4W (32Ω)
	: 213W + 213W (600Ω)
Instantaneous max. output	Unbalanced : 5W + 5W (8Ω)
	Balanced : 20W + 20W (8Ω)
Input sensitivity/ input impedance	Unbalanced : 1.0V / 14kΩ
	Balanced : 2.0V / 28kΩ
Frequency response	20Hz to 20kHz (+0, -0.1dB)
	10Hz to 175kHz (+0, -3.0dB)
Total harmonic distortion	Unbalanced : 0.0025% (1kHz)
	Balanced : 0.0015% (1kHz)

S/N ratio (IHF-A)	Unbalanced : 117dB
	Balanced : 119dB
Power transformer	Ol type x 2 (L/R independent) + El type (Peripheral circuitry)
Insulator feet	Cast iron density gradient x 4
Power supply	230V~(50Hz) / 115V~(60Hz)
Power consumption	67W, 47W (under no signal)
External dimensions	446(W) x 136(H) x 401(D) mm
	front side knob of 14mm and rear side terminal of 8mm included in depth
Net weight	19.7kg (main unit)
Accessories	Power cable



Insulator position / dimensions

* A headphone cable for FOCAL UTOPIA, compatible with our unique Parallel Balanced BTL Mode when connecting two P-100 CENTENNIAL units together, is now available from Onso (Hisago Denzai Co., Ltd.).

A modern DAC that matches contemporary audio environments



USB D/A CONVERTER
DA-07X

A music streamer that adds advanced network playback functionality to your DAC



NETWORK TRANSPORT
NT-07

LUXMAN

LUXMAN CORPORATION, 1-3-1 Shinyokohama, Kouhoku-ku, Yokohama-shi, Kanagawa 222-0033, Japan
Tel: +81-45-470-6980 Fax: +81-45-470-6997 www.luxman.com
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Safety Cautions

To ensure correct use of this product, read the "Owner's Manual" prior to use. Failure to follow all safeguards can result in fire, electric shock, or other accidents.