

Panasonic

DP-UB9000
Technical Audio Information

Ultra HD Blu-ray Player

PRODUCT INFORMATION

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Features

HIGH QUALITY SOUND

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HIGH QUALITY SOUND
High-Quality Audio Design for the UB9000

Unique Audio Technologies Achieve Rich Sound Reproduction

In addition to the high picture quality of its HCX Processor, the reference class UB9000 offers analog audio circuits, including a dedicated audio power supply, a high-performance D/A converter, and XLR balanced output, housed in a newly developed chassis with high rigidity and lower position for the center of gravity, for extremely high sound quality. This exciting new model raises the bar for AV enthusiasts with the highest-ever picture and sound quality in the history of Panasonic Blu-ray Disc Players.

❑ Chassis with High Rigidity and Lower Position for the Center of Gravity

- Newly Developed Drive Base and Center Mechanism
- 2-Layer Chassis
- Aluminium Front and Side Panels

❑ Dedicated Audio Power Supply

- AC/DC Conversion Circuit
- 10-Line Isolated DC Regulator Circuit

❑ Analog Audio Circuit

- High-Performance D/A Converter
- Special Circuit Board for Analog Output
- 2 Channel (XLR/RCA) and 7.1 Channel Output Terminals



HIGH QUALITY SOUND
Chassis with High Rigidity and Lower Position for the Center of Gravity

Reduce vibration to the utmost for pursuing premium sound quality

A newly developed drive base with a 3-dimensional, thick steel plate fixes the optical disc drive to the center of the 2-layer chassis to reduce vibration and noise during disc rotation. And thick aluminum is used on the front and side panels. This raises the rigidity of the chassis, and reduces vibration.

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HIGH QUALITY SOUND

Chassis with High Rigidity and Lower Position for the Center of Gravity

Technical Information

- **Newly Developed Drive Base and Center Mechanism**

A beam structure links the drive base with the front and rear of the chassis to further improve chassis rigidity and reduce vibration. The optical drive, which generates rotational vibration during disc reproduction, is also mounted directly to a thick, 3D, 1.2-mm drive base in the center of the chassis. This reduces vibration in the optical drive and increases the precision of disc scanning. Rotation when playing discs is optimized to reduce unwanted wind-cutting and other noise.

- **Aluminum Front and Side Panels**

Thick aluminum is used on the front and side panels. This raises the rigidity of the chassis, and reduces vibration.

Front Panel: 7mm
Side Panel: 3mm



- **2-Layer Chassis and Top Panel**

The use of a 2-layer structure with a heavy steel plate for the bottom chassis and top panel achieves a low center of gravity and low vibration.

Bottom Chassis: Base chassis 1.2 mm/ Bottom panel 1.6 mm
Top Panel: Top base 1.0mm/ Top panel 0.55mm

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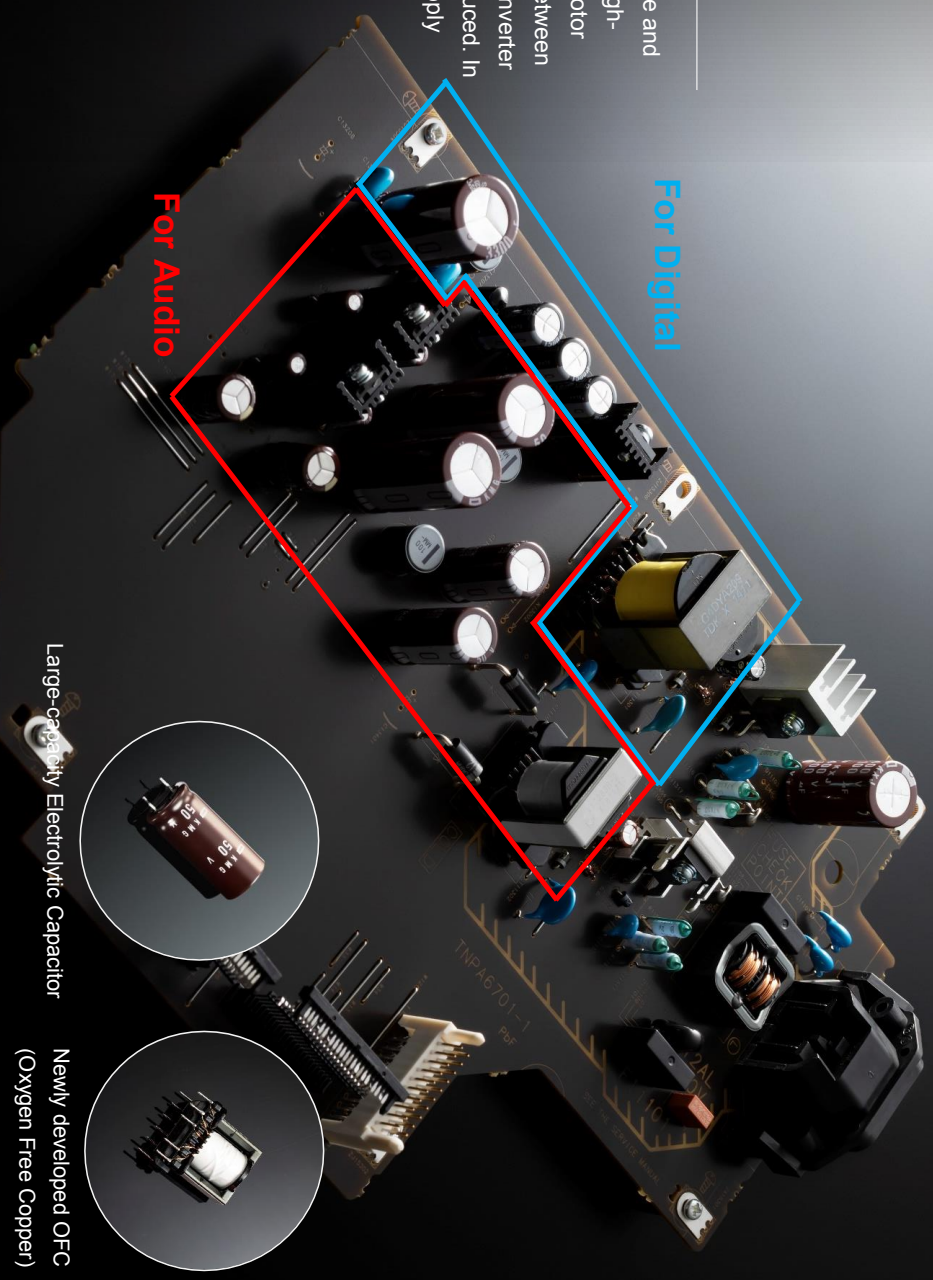
HIGH QUALITY SOUND AC/DC Conversion Circuit

Clear Sound with Minimal Noise

The main power supply, which provides power to the optical drive and video signal processing circuits, generates a variety of low- to high-frequency noises. These occur, for example, when driving the motor during disc playback, accessing memory, and communicating between peripheral circuits. By separating the power for the audio D/A converter and analog output circuit at their origin, the noise effects are reduced. In addition, soft switching control lowers the noise of the power supply itself.

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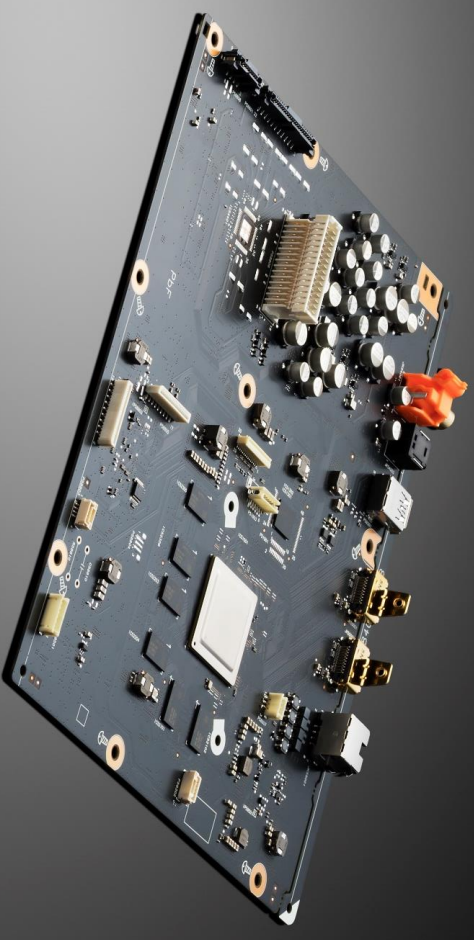
HIGH QUALITY SOUND 10-Line Isolated DC Regulator Circuit

Stable Voltage and Current Supply for Sound with Minimal Distortion

The digital and analog power supplies for the D/A converter are isolated. The analog channel is further separated into 2 channels and 7.1 channels, and for the 2-channel output, the reference voltage of the left and right channels is isolated, making a 10-line regulator circuit and reducing mutual effects to improve distortion. Moreover, high-quality audio grade electrolytic capacitors are used in the analog channel to minimize noise.

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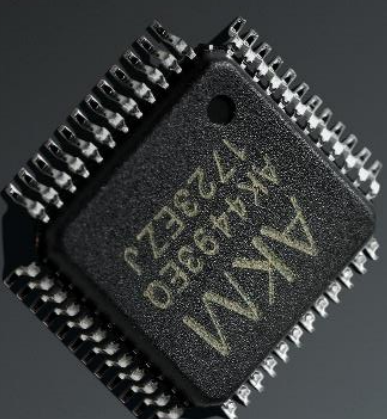
HIGH QUALITY SOUND
High-Performance D/A Converter

Advanced Input Compatibility

A high-performance D/A converter with 768 kHz/ 32 bit input compatibility, high S/N, and high dynamic range is provided for each of the 2 channel and 7.1 channel circuits.

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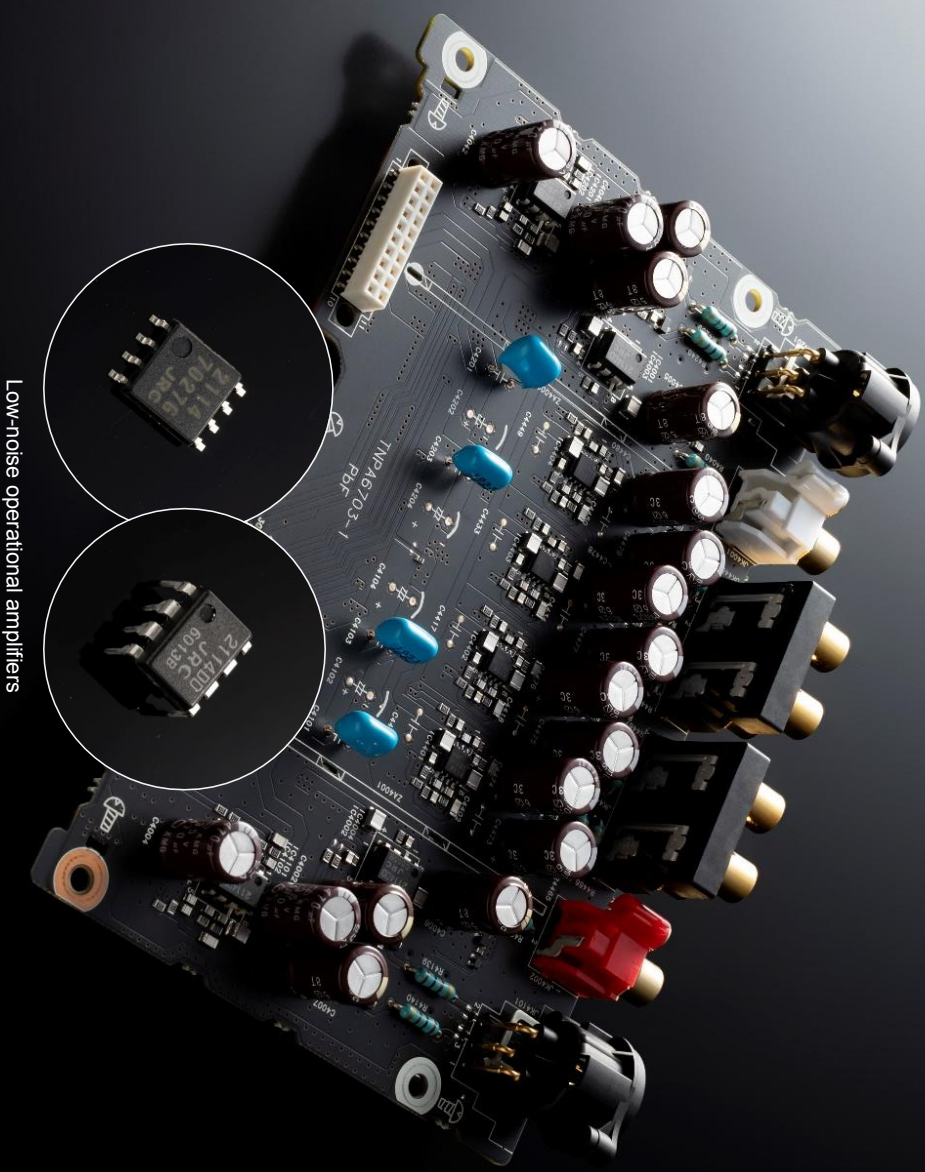
HIGH QUALITY SOUND Special Circuit Board for Analog Output

Carefully Selected Audio Parts Achieve High Quality Sound

The analog circuits for 2 channel and 7.1 channel output are mounted onto special glass-epoxy circuit boards. Together with the use of quality components, such as low-noise operational amplifiers and audio grade electrolytic capacitors, a totally balanced signal transmission is achieved by using differential circuits all the way from the D/A converter output to the XLR output terminal.

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Low-noise operational amplifiers

HIGH QUALITY SOUND
Special Circuit Board for Analog Output

Technical Information

Full balanced circuit achieved low noise audio signal

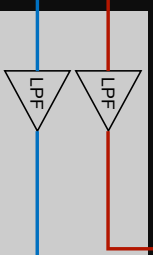
768KHz/
32bitDAC
AK4493



Low noise op-amp
(NJM2114 L ch)

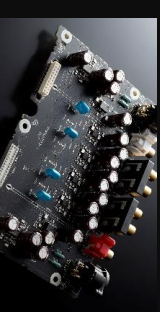
L ch

Hot +
Cold -



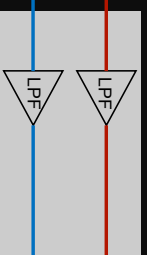
NEUTRIK
Balance
connector

L ch Circuit



R ch

Hot +
Cold -



Low noise op-amp
(NJM2114 R ch)



NEUTRIK
Balance
connector

R ch Circuit

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HIGH QUALITY SOUND 2 Channel (XLR/ RCA) and 7.1 Channel Output Terminals

Versatile, High Quality Audio Output Terminals

The 2 channel and 7.1 channel output terminals are also separated. Moreover, the 2 channel output is equipped with a balanced XLR output terminal in addition to the RCA terminal.

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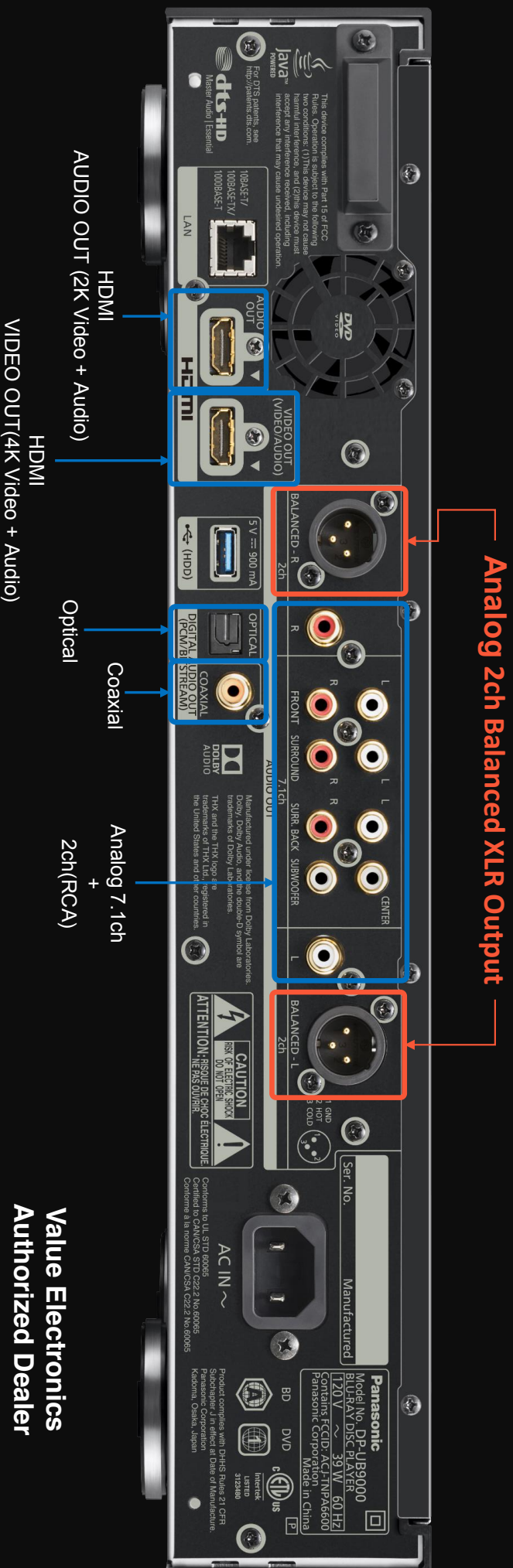
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HIGH QUALITY SOUND Abundant Rear-Panel Terminals (Including 2 Channel (XLR/RCA) and 7.1 Channel Output Terminals)

For US

Technical Information



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HIGH QUALITY SOUND
High Quality Audio Parts Dedicated Audio Power Supply/ Analog Audio Circuit

Technical Information

Powerful and robust bass and high S/N and wide range sounds

Power supply



Large-Capacity Electrolytic Capacitor



Non-Inductive Type Across-the-Line Capacitor



High rated Voltage, Large Capacity Scotty Diode



Ruby Mica Capacitor

Analog circuit



768KHz-32bit Audio DAC for 2ch output



OFC-Lead Electrolytic Capacitor



Surface-Mounted Acoustic Electrolytic Capacitor

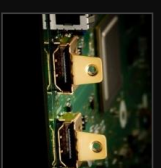


Non-Magnetic Carbon Film Resistor

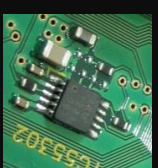
Digital circuit



LAN Common Mode Filter



Gold-Plated Twin HDMI Terminal



Low jitter Audio PLL

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