OPPO®

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BLU-RAY DISC PLAYER BDP-95AU

Blu-rayDisc™

Universal Blu-ray Player

Universal 3D Blu-ray Disc Player BDP-93AU

Compared with the classic BDP-83, the new BDP-93AU and BDP-95AU have achieved tremendous improvements in both styling and functionality. By incorporating a fully custom-engineered decoding chip and software, the BDP-93AU and BDP-95AU can read and play extensive disc types and media formats, support network streaming and local file sharing from external storage. Added to these features is the award-winning, second generation Qdeo™ technology-based Kyoto-G2 video processor from Marvell, which delivers a truly immersive viewing experience by rendering quiet and natural video free of noise and artifacts.

- Blu-ray 3D & Network Streaming
- SACD & DVD-Audio/Video
- Wireless-N, eSATA & USB2.0
- NTFS, FAT & FAT32 External HD

- 2nd Generation Qdeo Video Processing
- Next-generation HD Audio
- Dual HDMI 1.4A, IR & RS232 Control
- Tohei Closed Dust-proof Loader

Qdeo Video Processing by Marvell

The BDP-93AU incorporates a dedicated Marvell Kyoto-G2 video processor to its HDMI 1 output. OPPO has fully exploited the Qdeo video processing capabilities to deliver a truly immersive viewing experience. The main video processing features are explained in more detail below. Please note the following pictures are for demonstration purposes only, the actual image result may vary depending on the settings, the video source and the system configurations.

■ Video Noise Reduction (VNR)

General noise reduction result

Qdeo VNR result

The renowned Qdeo VNR technology can efficiently reduce the non-original image data noise introduced during the image decoding for motion graphics without any loss of the original details.

■ De-interlacing for interlaced contents

General upscaled image

Qdeo De-interlaced image

De-interlacing automatically identifies interlaced video content, and conducts rapid detection and processing for video with different cadence properties, to deliver smooth and clear images with no "jaggies" or comb-type edges.

■ Edge Enhancement

General image with enhanced edge

Edge enhancement result by Qdeo

Edge Enhancement provides images with smoother edges, by automatically detecting and processing jagged edges caused by a variety of factors.

■ Adaptive Contrast Enhancement (ACE)

ACE enhances image contrast for outstanding black-level and brightness performance under specific situations.

General contrast enhancement result   ACE result

■ Intelligent Color Remapping (ICR)

By remapping certain colours of low definition onto colors of higher definition, it bridges the visual gap from these colors to the pristine image.

Original image   ICR result

■ Qdeo True Color (QTC)

Qdeo True Color is capable of converting low-resolution colors to 36-bit high-resolution colours, achieving images with more vivid, natural colours as well as finer details.
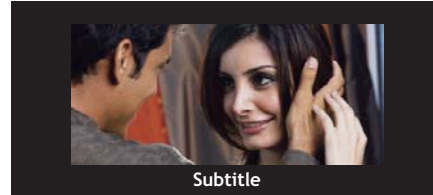

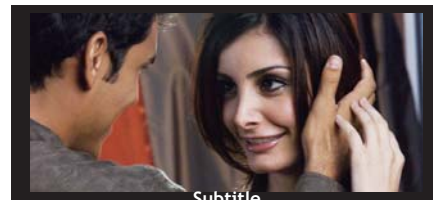24-bit processed image   36-bit processed image
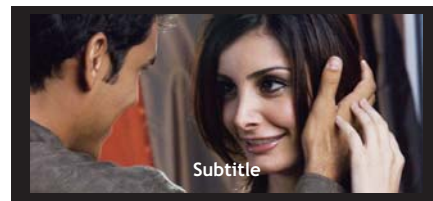

Multiple Zoom Modes

The BDP-93AU supports multiple levels of aspect ratio control and image zooming, including a vertical stretch mode for customers with a 2.35:1 CIH (Constant Image Height) display system. A unique subtitle shift feature allows the user to move the subtitle up and down, making it possible to see all subtitle text when using a 2.35:1CIH display.

Movie playback on 2.35:1 CIH Display

Vertical stretch (unable to show entire subtitle)

Vertical stretch + anamorphic lens + subtitle shift

eSATA & Dual USB Ports

The BDP-93AU features one eSATA port (on the back panel) and two USB 2.0 ports (one on the front panel and one on the back). You can take advantage of these fast interfaces to play audio, video and photo files from external hard drives or computers.

Tohei Loader

BDP-93AU incorporates a newly-designed closed dust-proof Tohei loader for disc playback. The loader applies a proprietary intelligent motion balance mechanism and triplex damping technology to provide stable disc reading with low resonance and mechanical noise. The closed dust-proof design can significantly prolong the service life of the laser header, as well as improve disc reading accuracy. With OPPO's thoroughly-tested servo software, the Tohei Loader provides optimum source reading capability.

Next-generation HD audio

- Dolby® TrueHD - delivers lossless studio master quality audio designed specifically for high definition entertainment. The BDP-93 supports bit-stream output of Dolby TrueHD via its two HDMI 1.4a terminals. It can also internally decode Dolby TrueHD into LPCM and output via HDMI and 7.1ch analog audio terminals. (Dolby Digital and Dolby Digital Plus audio formats are also supported.).
- DTS-HD Master Audio™ - delivers an auditory experience that matches the lifelike images of high-definition video with up to 7.1 channels. The BDP-93AU supports bit-stream output of DTS-HD Master Audio via its two HDMI 1.4a terminals. It can also internally decode into LPCM and output via HDMI and 7.1ch analog audio terminals. (DTS-HD High Resolution Audio and DTS Digital Surround are also supported.)
- 7.1 Channel Analogue Output – Individual analogue 7.1 channel RCA surround outputs are ideal to connect to 5.1 or 7.1 channel sound systems.

Reference Flagship Universal Player BDP-95AU

Based on the decoding platform of BDP-93AU, the audiophile BDP-95AU features a completely re-designed analogue audio board and power supply section, all built with best-in-class components. It also features a meticulous design with a focus on every single detail and overall build quality. OPPO has been committed to creating a new classic player for audio & video enthusiasts.
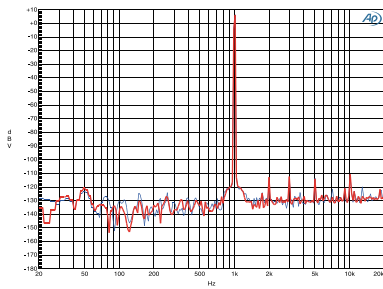

- ■ ES9018 SABRE 32-bit Reference DAC
- ■ True XLR Balanced Stereo Output
- ■ Blu-ray 3D & Network Streaming
- ■ SACD & DVD Audio/Video playback
- ■ Wireless-N, eSATA & USB2.0

- ■ 2nd Generation Qdeo Video Processing
- ■ Rotel Toroidal Power Supply
- ■ Next Generation HD Audio
- ■ NTFS, FAT & FAT32 External HD
- ■ Dual HDMI 1.4A, IR In & RS232 Control

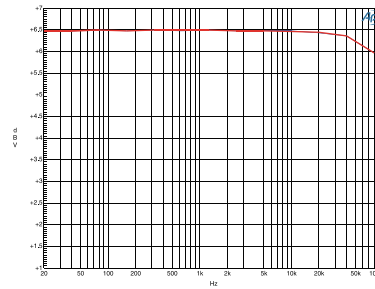## Greatest Hits of Best-in-class Components

- **ESS 32-bit Reference DAC from US**
  The BDP-95AU is equipped with the SABRE32 Reference ES9018 from ESS Technology, the world's best performing 32-bit audio DAC (digital-to-analogue converter) solution. With the ESS patented 32-bit Hyperstream™ DAC architecture and Time Domain Jitter Eliminator, the SABRE32 Reference DAC delivers an unprecedented DNR (Dynamic Range) of up to 135dB and THD+N (Total Harmonic Distortion plus Noise) of -120dB, the industry's highest performance level that will satisfy even the most demanding audio enthusiast. The SABRE32 DAC family targets mainly to professional studio applications and BDP-95AU uses two of its ES9018 DAC chips - one for the 7.1-channel output, and the other for the dedicated stereo output.

- **WIMA audio coupling capacitor from Germany**
  The BDP-95AU employs a total of 72 world-renowned WIMA MK2 audio coupling capacitors to optimise the balance, details and high frequency extension of audio playback, and to produce a ethereal sound without any brittleness.

- **ELNA Silmic II silk fibre audio capacitor from Japan**
  The BDP-95AU employs more than 10 ELNA Silmic II Silk Fiber audio capacitors. Made primarily from natural silk fiber, the capacitor features soft, natural, silk-like sound, improves the low range richness and power by enhancing its acoustic vibration resistance, and reduces the high range peak as well as midrange roughness. Moreover, all lead wires are OFC (oxygen free copper) for its advantages of extremely low distortion (Third high frequency distortion -120dB) and small tangent of loss angle.

- **NT ultra low distortion operational amp from USA**
  The BDP-95AU comes with the latest ultra-low distortion operational amplifier LM4562 by NT (National Semiconductor, US). As one of the few operational amplifiers that are able to deliver THD+N below 0.00003%, LM4562 comes with ultra-low distortion, and is highly praised and acknowledged as one of the top-class operational amps by audiophiles around the world. With its superiority in low noise, high slew rate, wide supply range, strong output current capacity, etc., it will easily satisfy the most demanding audio applications.

- **LT low noise linear power regulator from USA**
  The LT1762 Power LDO (low dropout regulator) from Linear Technology is capable of providing extremely low noise (<-95dB, 10Hz~20kHz) and purifying input power to reduce output ripple voltage and electromagnetic interference to a lower level, by which cleaner power source and more stable load voltage can be achieved.

- **Medical grade Omron relay from Japan**
  For its mute circuit BDP-95 adopts the medical-grade Omron relay G6S-2 with a contact resistance below 75Ω and an insulation resistance above 1000MΩ. Compared with the common mute circuits that use semiconductor components, the audio signal attenuation is reduced to a great extent and the relay switch has a longer service life of up to 100,000 closures.

Ultimate Audio Performance

- **Total Harmonic Distortion plus Noise (THD+N) < 0.0003% or -110dB.**
- **Noise floor < -120dB.**
- **Audio quality achieves an effect approximate to live recording.**

- **Frequency Antenuation 20Hz - 20kHz (±0.2dB), 20Hz - 96kHz (±1dB)**
- **No artificial improvement is perfomed for the entire frequency range for most natural sound performance.**
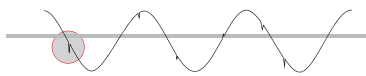
Dedicated Stereo Output

The BDP-95AU features a dedicated 2-channel analogue output with specially optimised ES9018 DAC and output driving stages. Each output is driven by 4 DAC channels stacked together to achieve even greater audio performance.
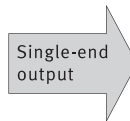
XLR Balanced Stereo Output

XLR balanced terminals are widely used in professional audio equipment. On the BDP-95AU, the balanced output features a true differential signal path all the way from the DAC to the 3-pin XLR connector. By transmitting a pair of differential signals, the balanced output provides better common-mode noise rejection and improves signal quality. Further, the balanced transmission provides stronger anti-interference capacity for long-distance propagation (≤ 100 m). The connector is loaded with a spring clamp ensuring reliable connection and avoiding accidental removal.
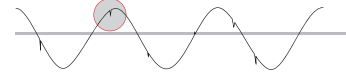
Wave distortion caused by interference

Single-end output

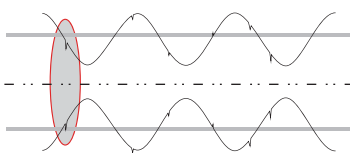In audio signal processing circuit, original signal is inevitably influenced by various interference and noises
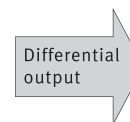
Output waveform with distortion

Output audio signal from terminal bears various distortion and interference.

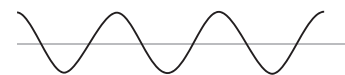### Common-mode distortion eliminated through differential processing

Differential output

In balanced circuit, various noise and distortion are superimposed in two differential signals.

Perfectly clear waveform

Processed by balanced circuit, common-mode noise and interference are completely eliminated to output the perfectly clear original signal.

Toroidal Power Supply custom engineered by Rotel (UK)

Custom designed and built by Rotel, the toroidal power transformer offers superior power efficiency and much lower exterior magnetic field over traditional laminated steel core transformers. The BDP-95AU's toroidal linear power supply provides a very clean and robust power source to the critical audio components.

BDP-93AU Rear

BDP-95AU Rear

Dual HDMI Outputs

Equipped with two HDMI 1.4A output ports, the BDP-93/95AU not only transport high definition video & audio signals, but also offer the most versatile installation options. Even if 3D is not supported on your A/V receiver, you can still enjoy 3D by connecting one HDMI output of the player to your A/V receiver and the other to a 3D TV. Both HDMI outputs keep functioning respectively with no interference. You can also connect the player to two displays and enjoy full 1080P HD content on two screens simultaneously. For projector users, you can connect one output to a projector for home theatre use and the other to a TV for casual viewing.

HDMI CEC

The HDMI Consumer Electronics Control (CEC) protocol simplifies operation by allowing a single remote control to operate multiple CEC-capable devices.

Digital Optical and Coaxial Outputs

For simple and easy connection to more traditional A/V receivers, the BDP-93/95AU include both optical and coaxial outputs for digital audio, allowing you to enjoy Blu-ray movies without the need to upgrade your amplifier.

Back-lit Remote Control

The BDP-93/95AU come with a fully back-lit remote control for ease of use in dark environments. With its ergonomic button layout and clear labeling, operation is simple and logical.

Source Direct Mode

For users who wish to use an external video processor, high-end audio/video receiver or display, the BDP-93/95AU offer a "Source Direct" mode. The original audio/video content on the disc is sent without any additional processing or alteration so that you can use a specific external processor or enjoy the content directly in its native resolution and frame rate.

RS232 Control

For custom installation, the BDP-93/95AU offer an RS232 control port with a rich control and communication protocol. Installers can easily program their favorite control systems to operate the players. For instance, through a device with RS232 capability (such as an intelligent control system) you can control the player (play, stop, forward, reverse) whenever you wish, freeing yourself from the distance and angle limits of using a remote. Moreover, a player with a RS232 interface can serve as not only a playback terminal but also a network node that can be quickly integrated into the system or network composed of other devices, meeting current high definition and network requirements.

External IR

For integration into home theatre control systems, the BDP-93/95AU provide an external IR In port to use with an IR distribution system.

Wireless & Ethernet

With the included wireless-N adapter and the built-in RJ45 Ethernet port, customers are able to interact with BD-Live content, play back video, audio & photo files stored on a home network, and keep the BDP-93/95AU up-to-date with firmware releases to ensure the best Blu-ray compatibility.

DLNA Certified

Digital Living Network Alliance (DLNA) compatibility allows for wired or wireless access of audio, picture, and video files stored on DLNA-compatible devices in the home network, such as a computer or network storage device (NAS).

Specifications

Model	BDP-93AU	BDP-95AU
Disc Types	BD-Video, Blu-ray 3D, DVD-Video, DVD-Audio, AVCHD, SACD, CD, HDCD, Kodak Picture CD, CD-R/RW, DVD±R/RW, DVD±R DL, BD-R/RE, BD-R/RE DL	BD-Video, Blu-ray 3D, DVD-Video, DVD-Audio, AVCHD, SACD, CD, HDCD, Kodak Picture CD, CD-R/RW, DVD±R/RW, DVD±R DL, BD-R/RE, BD-R/RE DL
Media Formats	MKV, AVI, MP4, WMV, AVCHD, FLAC, APE, WMA, JPG, MP3, AAC, M4A, LPCM, WAV, MKA, OGG, DIVX, XVID, MPEG, DAT, VOB, OGM, TS, MOV, MTS, GIF, PNG, GIF Through USB, eSATA and DLNA network	MKV, AVI, MP4, WMV, AVCHD, FLAC, APE, WMA, JPG, MP3, AAC, M4A, LPCM, WAV, MKA, OGG, DIVX, XVID, MPEG, DAT, VOB, OGM, TS, MOV, MTS, GIF, PNG, GIF Through USB, eSATA and DLNA network
Memory	2GB (Approximately 1GB available for BD-Live persistent storage. Actual storage varies due to system usage)	2GB (Approximately 1GB available for BD-Live persistent storage. Actual storage varies due to system usage)
Output	Analogue Audio: 7.1ch, 5.1ch, or stereo Digital Audio: Coaxial, Optical HDMI Audio: Stereo, up to 7.1ch high-resolution PCM, up to 5.1ch DSD, bitstream or LPCM conversion of Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, and DTS-HD Master Audio. Analogue Video: Composite, Component Video (Y/Pb/Pr, 480i/480p, 720p/1080i available for non-restricted content only) Digital Video: HDMI with HDCP (NTSC: 480i/480p/720p/1080i/1080p/1080p24, PAL 576i/576p/720p/1080i/1080p/1080p24)	Multi-Channel Analogue Audio: 7.1ch, 5.1ch, or stereo Dedicated Stereo Analog Audio: XLR balanced and RCA single-ended Digital Audio: Coaxial, Optical HDMI Audio: Stereo, up to 7.1ch high-resolution PCM, up to 5.1ch DSD, bitstream or LPCM conversion of Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, and DTS-HD Master Audio. Analogue Video: Composite, Component Video (Y/Pb/Pr, 480i/480p, 720p/1080i available for non-restricted content only) Digital Video: HDMI with HDCP (NTSC: 480i/480p/720p/1080i/1080p/1080p24, PAL 576i/576p/720p/1080i/1080p/1080p24)
Video Specification	Composite Video Amplitude: 1.0Vp-p (75Ω) Component Video: Y: 1.0Vp-p (75Ω), Pb/Pr: 0.7Vp-p (75Ω)	Composite Video Amplitude: 1.0Vp-p (75Ω) Component Video: Y: 1.0Vp-p (75Ω), Pb/Pr: 0.7Vp-p (75Ω)
Audio Specification	Frequency: 20Hz - 20kHz (±0.3dB), 20Hz - 96kHz (±2.0dB) Signal-to-Noise Ratio: >110dB (A-weighted) THD+N: < 0.002% (1kHz at 0dBFS, 20kHz LPF)	Frequency: 20Hz - 20kHz (±0.2dB), 20Hz - 96kHz (±1dB) Signal-to-Noise Ratio: >125dB (A-weighted, with auto-mute), >115dB (A-weighted, without auto-mute) THD+N: <0.0003% or -110dB (1kHz 192/24 at 0dBFS, 20kHz LPF), <0.002% or -95dB (1kHz 44.1/16 at 0dBFS, 20kHz LPF) Output Level: 2Vrms at 0dBFS (RCA), 4Vrms at 0dBFS (XLR)
General Specification	Power Supply: ~ 100V - 240V, 50/60Hz AC Power Consumption: 35W (0.5W Standby) Dimensions: 430mm x 311mm x 79mm Mass: 4.9kg / 10.8 lbs	Power Supply: - 100V - 240V, 50/60Hz AC Power Consumption: 45W (0.5W Standby) Dimensions: 430mm x 311mm x 98mm Mass: 7.3kg / 16.0 lbs
Operating Temperature	5°C - 35°C	5°C - 35°C
Operating Humidity	15% - 75% No condensation	15% - 75% No condensation

* Compatibility with user-encoded contents or user-created discs is on a best-effort basis with no guarantee due to the variation of media, software and techniques used.
** Nominal specification.

Designs and specifications are subject to change without notice.

OPPO®