# Digital Audio | 2016

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# **BDA** Digital to Analog Converters

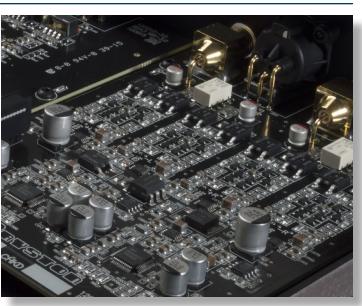
A high performance DAC is built upon more than brandname chips inside. Most comparisons of competing DACs are simplified into who supplies the integrated circuit. Our BDA-2 and BDA-3 digital to analog converters start with the most technologically advanced AKM ICs, but those are only the beginning.

Each electrical input is galvanically isolated to completely eliminate the possibility of ground noise from the attached interconnect and device from polluting the signal. The embedded clock signals are thrown out, and all incoming PCM data is re-clocked with our own high-precision internal master clock for the lowest possible jitter. Rather than a single DAC IC, we use two each in balanced mode for even better signal to noise ratio and lower crosstalk. Digital audio is converted to analog and sent to our proprietary discrete class A operational amplifiers for output to your preamp.

To further improve fidelity, our DACs feature fully independent power supplies for the digital and analog sections to prevent additional distortion.

You won't find more thoroughly engineered or better sounding high performance DACs from anyone else.

BDA-3 D/A CONVERTER



## HIGH RESOLUTION **Direct Stream Digital** OR

High resolution downloads are available from more sources in more formats than ever. When an album is available in multiple formats, how do you choose which to buy? Or, when an album is only available in one format, how can you be sure your hardware will play it?

> The BDA-3's massive support for different resolutions of PCM and DSD virtually guarantee that if you can download it, we can play it.

0 000000000 Which format is superior? It's not for us to judge. Our job is to engineer the best sounding product for each. The BDA-3 gives you the best of each format in one component. The requirements for well designed DSD are so different than those of PCM that we had to design independent signal paths to the DAC ICs for each format. Unlike many other brands which convert one format to another before decoding, we maintain bit-perfect accuracy from input all the way to the balanced pair of AKM converters.



The most notable difference between the BDA-2 and BDA-3 is in addition to PCM playback, that the BDA-3 is fully DSD enabled. It can decode up to DSD-256 through the asynchronous USB inputs and even accept SACD input via HDMI. The BDA-3 has a whopping 10 separate inputs including four 2-channel HDMI, asynchronous USB, AES/EBU, TOSLINK, and digital coax. It also includes our network module which facilitates control via TCP/IP and RS-232—a must for modern home automation.

The BDA-2 sounds almost as good but is limited to PCM data at up to 192kHz / 24 bits and lacks the HDMI interconnectivity and ethernet control of the newer model.

The choice is yours. Are you ready to jump into DSD downloads? Do you want to connect your television or blu-ray player to your stereo system? If so, the BDA-3 is the perfect match. If not, pick the BDA-2 for astonishing sound quality without paying for features you don't need.





## **Compare Features**

Bryston's BDP digital music players let you hear a perfect replica of high resolution studio masters with incredible detail and breathtaking realism. Unlike other digital music players, our sole purpose is to play your music with the greatest possible fidelity without the burdens of deep computer knowledge.

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**BDP**Digital Music Players

Manage your music in the way that works best for you. Whether you store your music on a large network attached storage (NAS) system, or on portable USB hard drives, the BDP products can perfectly play nearly every format available including DSD, FLAC, Apple Lossless, AIFF, WAV, MP3 and more.

Control the system with your existing devices. Our built-in HTML5 web app is compatible with virtually all modern tablets and smartphones. You can also choose from a wide variety of third-party apps to browse your library and play music in a beautiful and intuitive way.

2015

Editors

Unlike most competing players, the BDPs feature linear power supplies which do not radiate high frequency switching noise into sensitive high precision digital audio circuitry.

> You can choose between the ultra high value BDP-1USB and the flagship BDP-2. Both are bit-perfect, sound incredible and feature legendary Bryston quality and reliability.

AUDIO

Greatest Bit



#### Little Box Big Sound

Built upon the Raspberry Pi and HifiBerry platform, the new BDP- $\pi$  is faster and more capable than our classic BDP-1 yet fits in a chassis 1/3rd as wide as our full size gear and costs less than half of a flagship BDP-2.

BDP-π Digital Player

#### Connect

Virtually any DAC can be connected via the on-board



#### **Connect Any DAC**

Not only is the BDP-2 compatible with USB DACs like the above model but also DACs with traditional digital inputs. Use our S/PDIF or AES/EBU outputs and enjoy the benefits of our installed Integrated Audio Device. Measured jitter is so low it's nearly undetectable even by our state-of-the-art lab.





S/PDIF and Toslink connectors. Also, get ultra high resolution by connecting a USB DAC. You can even connect audio through HDMI.

#### Your Music

Connect an external USB drive containing your music library, stream your favorite internet radio stations, and enjoy lossless TIDAL streaming all on the BDP- $\pi$ !



Stroll the halls of audiophile expos or read lively online forums and you'll find a common thread—the Bryston BDP-2. Our flagship high-resolution digital player is the top choice for thousands of audio professionals and enthusiasts worldwide.

#### **High Horsepower**

A blazing Intel processor, and eight times the system memory found in our BDP-1USB make this model extremely quick when managing even the largest of music libraries. Consider the two more USB ports than the BDP-1USB and make them all fully powered, and you have a premium player by any standard.

### More I/O

A fully redesigned 5 amp power supply let us add two more USB ports and power each of them to the full 500mA USB 2.0 standard. We also added a 2nd ethernet port and made them both gigabit. That's 10 times faster than before!



# **BOT-1**Optical Disc Transport

Bryston's BDP digital music players let you enjoy all the benefits of a digital audio library without the frustration of a computer. Until now, you still needed a computer to rip CDs—a frustrating endeavor for many. With the introduction of our new BOT-1, you can banish computers from your listening room for good.

Take full control over ripping parameters and metadata using our Manic



Moose web interface on your tablet or smartphone, or let the BDP do it

automatically and rip with a single button press on the front panel of the BDP.

CD Ripping with no

• Direct CD Playback

resolution audio engine.

**CDS** for easy portability.

computer required.

using the BDP's high

• Burn Playlists to

CD playback buffers a few seconds of CD audio in the system memory correcting timing errors common to all traditional CD players making CD playback sound better than ever.

The BOT-1 isn't a traditional CD transport. It needs a BDP to operate. With the world's largest lossless digital audio library still being CDs, it's easy to understand why adding CD ripping and playback and burning to your BDP grants you access to the most music available.

At only 5.7" wide, yet sharing aesthetic build quality with other C-Series units, it fits nicely into your rack along side your BDP.

electrical ground noise from penetrating the high speed digital link. Computer USB power is noisy and unstable—not a good recipe for high resolution

USB Input	Digital Out	Display	
Asynchronus Class 2.0	S/PDIF (RCA, BNC)	Sample Rate, Pov	
PCM ≤ 192kHz/24 bit	AES/EBU (XLR)	USB, Lock	



<b>BDA Digital to Analog Converters</b> Specifications									
	РСМ	DSD	Analog Out	Digital Out	Control				
BDA-3	up to 384kHz/32 bit	up to DSD256	RCA, XLR	HDMI	TCP/IP, RS232, DC, IR				
BDA-2	up to 192kHz/24 bit	N/A	RCA, XLR	S/PDIF (RCA)	RS232, DC, IR				
Inputs									
	S/PDIF	AES/EBU	Optical	USB	HDMI				
BDA-3	1x RCA, 1x BNC	1x XLR	1x Toslink	2х Туре В	4x				
BDA-2	2x RCA, 2x BNC	1x XLR	2x Toslink	1x Type B	N/A				
	Size WxHxD (in.)	Weight (lbs / kg)	THD+N / IMD	Jitter	Output (XLR/RCA)				
BDA-3	17 or 19 x 3.63 x 11.12	15/6.8	0.002% / 0.0003%	negligible	4.0V / 2.0V				
BDA-2	17 or 19 x 2.75 x 11.12	12 / 5.4	0.002% / 0.0003%	negligible	4.0V / 2.0V				

<b>BDP Digital Players</b> Specifications								
	РСМ	DSD	Media Source Connectivity	Digital Audio Out	App Control			
BDP-2	up to 384kHz/32 bit	up to DSD512	USB, NAS, eSATA, internal SATA	S/PDIF (BNC), AES/ EBU, USB (2.0)	iOS, Android, Desktop			
BDP-π	up to 384kHz/32 bit	up to DSD256	USB, NAS	USB (2.0)	iOS, Android, Desktop			
	File Types	Ethernet	Library Size	Streaming Services	USB Connectivity			
BDP-2	virtually all common music file types	2x Gigabit	virtually unlimited	TIDAL, Internet Radio, custom URLs	6x each full 500mA			
BDP-π	virtually all common music file types	1x 100 mbps	up to approximately 60,000 tracks	TIDAL, Internet Radio, custom URLs	4x share 1.25A			
	Size WxHxD (in.)	Weight (lbs / kg)						
BDP-2	17 or 19 x 2.75 x 11.12	15.2/6.9						
BDP-π	5.7 x 2.75 x 8.5	2.6/1.2						

#### Warranty

Bryston warrants all digital audio products except the BOT-1 for a period of 5 years against defects in materials or workmanship. The BOT-1 optical transport is warranted for 3 years. See www.bryston.com or individual product owner's manuals. for details.