

*Optoma*

| Audio range  
Summer 2016



NU FORCE



## Hear more. Feel more.

NuForce is already known for its clean design and superior sound. The Optoma NuForce audio range comprises of three main categories:

Mobile - created for premium sound on the move.

Home stereo - advanced technology and design for the highest sound reproduction capability.

Home cinema - complements Optoma's award winning home cinema projectors.

[www.optoma.com](http://www.optoma.com)



## Mobile

Optoma's mobile products deliver crystal clear HiFi sound for life on the move. The range includes a choice of superior in-ear headphones and a super small mobile USB DAC.



HEM8



#### High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. Designed for professionals, the HEM8 in-ear monitors deliver spectacular detail and a strong bass. Each earpiece has four individual drivers.

Number of driver(s)

8

Driver type

High resolution Knowels™ balanced armature

Frequency range

10 - 40,000Hz

HEM6



#### High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. The HEM6 are perfectly balanced for professional use on stage as well as music on the go. Each earpiece has three individual drivers.

Number of driver(s)

6

Driver type

High resolution Knowels™ balanced armature

Frequency range

18 - 40,000Hz

HEM4



#### High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. Designed for professionals and audio enthusiasts, the HEM4 reflects sound better than most in its class. Each earpiece has two individual drivers.

Number of driver(s)

4

Driver type

High resolution Knowels™ balanced armature

Frequency range

18 - 40,000Hz

HEM2



#### High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. The HEM2 are ideal for home musicians and audio enthusiasts. Each earpiece contains a single full range driver.

Number of driver(s)

2

Driver type

High resolution Knowels™ balanced armature

Frequency range

20 - 40,000Hz



### Wireless Bluetooth® in-ear headphones

The BE6i takes the same stylish design as the BE6 but offers an incredible battery life of up to 8 hours. They are also IPX5 certified for greater protection from rain and sweat. The BE6i are the only Bluetooth® in-ear headphones to be fully crafted from aluminium, which provides crystal-clear sound and elegant design in a lightweight form-factor, making them durable and attractive for all lifestyles.

#### Bluetooth

Bluetooth 4.1, aptX, supported AAC

#### Impedance

20 Ohm

#### Battery life

up to 8 hours



Mobile



NE800M



NE750M



### Superior performance in-ear headphones

The NE800M introduce music lovers and gamers to the next level of sound. These in-ear headphones include a sound nozzle machined from solid brass to minimise vibration and optimise the sound. Coupled with an ultra-lightweight and durable carbon fibre chassis, the NE800M's exceptional acoustic design brings out all of the detail in your music.

### High performance in-ear headphones

Designed for people that care about the sound; these in-ear headphones deliver exceptional acoustic design, superior quality components and an ultra-lightweight and durable chassis. They offer a substantial upgrade from those that come with your smartphone or music player and set the standard for premium portable sound.

#### Impedance

16 Ohm

#### Maximum SPL

120dB

#### Sensitivity

118dB +/-3dB

#### Impedance

16 Ohm

#### Maximum SPL

120dB

#### Sensitivity

113dB +/-3dB



uDAC3



### Super small DSD DAC and headphone amp

The uDAC3 is Optoma's first DSD high resolution DAC. It will play any audio file at any resolution. It combines a robust headphone amplifier which significantly transforms any computer's sound output. Ideal for enthusiasts and music lovers who wish to listen to the highest quality audio content. Available with drivers for PC and MAC.

#### Connections

Input: USB. Output: RCA L+R/digital coax, 3.5mm with volume control

#### Maximum SPL

120dB

#### Resolution

Up to 384kHz PCM and DSD256



uDAC5



### Super small mobile DAC and headphone amp

The uDAC3 digital to analogue converter (DAC) and combined headphone amplifier significantly upgrades any computer's sound output. Ideal for music lovers and gamers, this tiny device connects to the computer's USB port and improves, amplifies and converts digital audio files from a PC or Mac.

#### Connections

Input: USB. Output: RCA L+R/digital coax, 3.5mm with volume control

#### Power supply

Via USB connection

#### Resolution

96kHz / 24 bit



## Home stereo

Optoma's home stereo products offer the highest sound reproduction capability for the most discerning listener. The range includes a digital to analogue converter (DAC), power amps, integrated amps, a headphone amp and a Bluetooth receiver.

Home stereo



DDA120 + BTR1



DAC80



STA120



HA200



#### Powerful integrated digital amp with Bluetooth receiver

The DDA120 is a powerful yet compact integrated digital amp and is supplied with the Bluetooth receiver dongle. It is an ideal entertainment hub that can be connected to both digital and analogue sources from record players, digital satellite boxes, DVD players and gaming consoles to the most advanced digital devices.

#### Connections

Input: USB, RCA L+R, 2x optical, Bluetooth, digital coax

#### Output and control

Optical, speakers, IR control

#### Power

2x 50W (8 Ohm)

#### Digital to analogue converter and pre-amp

The 192/24 capable DAC80 simply extracts every last nuance and detail from your digital music collection. Destined to become the cornerstone of your high-end audio system with three different digital connectivity options and the capability to connect four devices concurrently, the DAC80 is an audiophile's digital music hub.

#### Connections

Input: USB, optical, 2x digital coax. Output: RCA

#### Power supply

IEC mains

#### Resolution

192kHz / 24 bit

#### High end stereo Class-D amp

The STA120 is a high end Class-D power amp housed in a stylish, compact enclosure. It renders all of your recordings with deep bass, crystal clear highs, and a warm, life-like midrange - all in perfect balance with high resolution and effortless, fatigue-free sound.

#### Connections

Input: RCA L+R

#### Output and control

Speakers

#### Power

2x 80W (8 Ohm)

#### High performance headphone amp

The HA200 high performance headphone amp is capable of driving any set of headphones with more detail and greater scale. The HA200 uses a purist Class-A design in a constant current configuration and offers true single ended output performance. For even greater performance the HA200 provides balanced mode operation with increased accuracy.

#### Connections

Input: RCA L+R, XLR

#### Output and control

6.3mm, XLR

#### Power supply

IEC mains

## Home stereo



**WDC200**



### High resolution wireless DAC

The WDC200 wireless DAC is all about getting the best possible sound quality from any wireless digital device. Compatible with Apple AirPlay® and Android devices, it provides a simple way to stream your favourite music from your home network or mobile device to your sound system. For ultimate sound quality, high resolution file formats are supported for Android users.

#### Connections

Input: wireless 801.11 b/g/n, optical. Output: RCA L+R

#### Power supply

External

#### Resolution

96kHz / 24 bit wireless, 192kHz / 24 bit via optical

**STA200**



### High performance amp

Engineered for audio purists, this two channel power amp provides reference audio quality and is neatly enclosed in a striking metal case. Complementing any contemporary living space the sleek design and compact dimensions are equally at home displayed as a centre piece or can be discreetly hidden.

#### Connections

Input: RCA L+R

#### Output and control

Speakers

#### Power

2x 80W (8 Ohm)



**BTR100**



### Bluetooth receiver

Free the music from your smartphone, tablet or computer. Using the latest aptX and AAC technology, the BTR100 is an advanced Bluetooth hub for all mobile devices. Easy to synchronize and connect, you can wirelessly stream CD quality digital audio, via Bluetooth, directly to your home stereo system.

#### Bluetooth

aptX supported by AAC

#### Power supply

External

#### Output

3.5mm, optical



## Home cinema

Optoma's home cinema products are engineered for audio purists with astounding accuracy for superior sound. The range includes a digital AV preamp and two high power multi-channel amps.

Home cinema



AVP18



MCA18



MCA20



### Digital AV preamp

The AVP18 is a digital AV preamp for audio enthusiasts with an optional Bluetooth receiver dongle, BTR1. This preamp focuses exclusively on sound quality rather than the latest gimmicky features. Accepting only digital inputs for the purest audio quality and utilising the same technology found in our high-end DAC, this AV processor was built from the ground up for superior surround sound and audio performance.

### Connections

Input: 4x HDMI 1.4, 2x optical, 2x digital coax, Bluetooth

### Surround

DD, DD EX, DD+, DD Tru HD, dts, dts ES, DTS-HD\*

### Type

7.1

\*see website for full specifications

### High end multi-channel amp

The MCA18 multi-channel amp offers superb power along with eight channels of superior sound. Developed for audio enthusiasts, the MCA18 will render your music collection and movie soundtracks with astounding accuracy. A perfect tool for integrators and installers.

### Connections

Input: 8x RCA

### Output and control

8x speakers, trigger

### Power

8x 55W (8 Ohm)

### High power multi-channel amp

The MCA20 multi-channel amp offers superb power along with eight channels of superior sound. Developed for audio enthusiasts, the MCA20 will render your music collection and movie soundtracks with astounding accuracy. A perfect tool for integrators and installers.

### Connections

Input: 8x RCA

### Output and control

8x speakers, trigger

### Power

8x 110W (8 Ohm)

## Specifications

### In-ear headphones

Model name	HEM8	HEM6	HEM4
			
Product category	Mobile	Mobile	Mobile
Product type	In-ear headphones	Wireless in-ear headphones	In-ear headphones
Connector type	3.5mm	3.5mm	3.5mm
Cable length (m)	1.38 (OFC), 1.38 (Mic)	1.38 (OFC), 1.38 (Mic)	1.38 (OFC), 1.38 (Mic)
Driver	4 Balanced Armatures	3 Balanced Armatures	2 Balanced Armatures
Impedance (Ohm)	32	37	38
Frequency response	10 - 40KHZ	18 - 40KHZ	18 - 40KHZ
Sensitivity (dB)	124dB +/-3dB	113dB +/-3dB	113dB +/-3dB
Weight (kg)	0.0164 (16.4g)	0.0158 (15.8g)	0.0152 (15.2g)
Standard accessories	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), Brush / cleaning tool, Lapel clip, Waterproof display case, Carrying case	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), Brush / cleaning tool, Lapel clip, Waterproof display case, Carrying case	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), Brush / cleaning tool, Lapel clip, Waterproof display case, Carrying case
Colour	Black	Black	Blue
Suggested products	uDAC5, HA200	uDAC5, HA200	uDAC5, HA200

### In-ear headphones

HEM2	BE6i	NE800M	NE750M
			
Mobile	Mobile	Mobile	Mobile
In-ear headphones	Wireless in-ear headphones	In-ear headphones	In-ear headphones
3.5mm	Bluetooth	3.5mm (4-pole stereo)	3.5mm (4-pole stereo)
1.38 (OFC), 1.38 (Mic)	0.561	1.37	1.37
1 Balanced Armature	10mm (patented)	Dynamic / 8.6mm	Dynamic / 8.6mm
26	20	16	16
20 - 40KHZ	20Hz - 20kHz	10Hz - 40kHz	20Hz - 20kHz
110dB +/-3dB	95 +/-3 at 1KHz	113 +/-3	113 +/-3
0.0134 (13.4g)	0.016	0.018	0.014
2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), Brush / cleaning tool, Lapel clip, Waterproof display case, Carrying case	4 x pairs proprietary NuForce silicone ear tips (XS, S, M, L), 2 x pairs Comply foam ear tips (M, L), 1 x pair ear wings, 1 x USB charging cable (USB A-USB micro), 1 x carry case	2 pairs Comply earbuds (M, L), 3 pairs silicone earbuds (S, M, L), carry case	3 pairs silicone earbuds (S, M, L), carry case
Red	Gold or Grey	Black / Gold	Black / Red
uDAC5, HA200	-	uDAC5, uDAC3, HA200	uDAC5, uDAC3, HA200

## Specifications

### DACs

Model name	uDAC5	uDAC3	DAC80
			
<b>Product category</b>	Mobile	Mobile	Home stereo
<b>Product type</b>	DSD portable DAC	Portable DAC	DAC
<b>Connections - input</b>	USB	USB	USB-B, Toslink, 2x digital coax
<b>Connections - output</b>	RCA L+R, digital coax, 3.5mm	RCA L+R, digital coax, 3.5mm	Analogue, RCA L+R
<b>Headphone power output</b>	140mW x 2 at 32 Ohm	80mW x 2 at 16 Ohm	-
<b>Volume control</b>	Rotary	Rotary	Rotary 32bit digital attenuator
<b>Maximum sampling rate (kHz)</b>	384kHz/DSD256	96	192
<b>Bit resolution (bit)</b>	24	24	24
<b>Native bit rate</b>	16, 24	16, 24	16, 24
<b>Frequency response</b>	20 - 25kHz	20 - 25kHz	20 - 25kHz +/- 0.25dB
<b>Signal to noise ratio (SNR) (dB)</b>	112	98	96
<b>Power supply</b>	USB bus powered, 1A/5V	USB powered, 80mA/5V	115V - 230V, 50 - 60Hz
<b>Wireless type</b>	-	-	-
<b>Weight (kg)</b>	0.100	0.090	1.2
<b>Dimensions (W x D x H mm)</b>	68 x 45 x 21	68 x 38 x 21	229 x 216 x 51
<b>Standard accessories</b>	USB cable	USB cable	IR remote, power cable, USB cable
<b>Colour</b>	Silver	Red, Black or Silver	Black or Silver
<b>Suggested products</b>	HEM series, DDA120, AVP18	NE800M, NE750M	STA120, STA200, uDAC5

### DACs

Model name	WDC200
	
<b>Product category</b>	Home stereo
<b>Product type</b>	Wireless DAC
<b>Connections - input</b>	802.11b/g/m, Wireless, Toslink
<b>Connections - output</b>	RCA L+R
<b>Volume control</b>	-
<b>Volume control</b>	Rotary
<b>Maximum sampling rate (kHz)</b>	192
<b>Bit resolution (bit)</b>	24
<b>Native bit rate</b>	16, 24
<b>Frequency response</b>	20 - 20kHz
<b>Signal to noise ratio (SNR) (dB)</b>	100
<b>Power supply</b>	5V 450mA
<b>Wireless type</b>	802.11b/g/n
<b>Weight (kg)</b>	1.5
<b>Dimensions (W x D x H mm)</b>	180 x 215 x 42
<b>Standard accessories</b>	External power supply, wireless antenna
<b>Colour</b>	Silver
<b>Suggested products</b>	STA120, STA200

### AV processor

Model name	AVP18
	
<b>Product category</b>	Home cinema
<b>Product type</b>	AV processor
<b>Connections - input</b>	4x HDMI, 2x digital coax, 2x Toslink optical, USB-B (service), USB-A Bluetooth
<b>Connections - output</b>	HDMI (ARC), 8x RCA, Toslink
<b>Connections - control</b>	RS232
<b>Maximum sampling rate</b>	192kHz
<b>Bit resolution (bit)</b>	24
<b>Frequency response</b>	20Hz - 20kHz
<b>Signal to noise ratio (SNR) (dB)</b>	100
<b>Power supply</b>	115V - 230V, 50 - 60Hz
<b>Supported HD Audio</b>	Dolby Digital, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Pro Logic IIx, Dolby Pro Logic IIz, DTS, DTS ES, DTS HD, DTS HD Master Audio, DTS Neo:6, SPDIF, PCM 8 channel
<b>Video input</b>	HDMI/DVI, 480P, 576P, 720P50, 720P60, 1080i 50, 1080i 60, 1080P 50, 1080P 60, 1080P 24
<b>Weight (kg)</b>	4.6
<b>Dimensions (W x D x H mm)</b>	430 x 314 x 81
<b>Standard accessories</b>	Power cable, IR remote control, setup mic for room equalization
<b>Colour</b>	Black
<b>Suggested products</b>	MCA18, MCA20, uDAC5

**Optoma**

Optoma has a full range of business, education and home entertainment projectors.

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## Specifications

### Integrated amplifiers

#### DDA120



#### Model name

Product category	Home stereo
Product type	Integrated amplifier
Connections - input	RCA L+R, USB-B, S/PDIF coaxial 75 Ohm, 2x Toslink, USB-A expansion for BT receiver
Connections - output	Toslink, 5 ways speakers posts
Connections - control	IR remote
Power output	50W per channel (8Ohm)
Maximum sampling rate (kHz)	32, 44.1, 48, 88.2, 96, 176.4
USB sampling rates (kHz)	32, 44.1, 48, 96
S/PDIF sampling rates (kHz)	32, 44.1, 48, 88.2, 96, 176.4
Bit resolution (bit)	16, 24
Gain (dB)	Digital: 11.625 Analog: 31
Frequency response	20Hz - 20kHz +/- 0.1dB
Signal to noise ratio (SNR)	>95dB A-weighted
Power supply	90 - 264V ~ 50/60Hz 2.5A
Weight (kg)	1.2
Dimensions (W x D x H mm)	241 x 216 x 51
Standard accessories	IR remote, power cable
Colour	Black or Silver
Suggested products	uDAC5

### Amplifiers

#### HA200



Product category	Home stereo
Product type	Headphone amplifier
Connections - input	RCA L+R, XLR
Connections - output	XLR, 6.3mm (stereo jack)
Connections - control	-
Power output	393mW at 16 Ohm, 747mW at 32 Ohm, 383mW at 100 Ohm, 129mW at 300 Ohm, 70mW at 600 Ohm
Peak output power	600mW at 16 Ohm, 937mW at 32 Ohm, 530mW at 100 Ohm, 180mW at 300 Ohm, 96.3mW at 600 Ohm
Recommended headphone impedance (Ohm)	32 to 600
Balanced mode	200 Ohm, 14.6Vrms
Frequency response	10Hz - 20KHz
Signal to noise ratio (SNR) (dB)	>106
Power supply	115V - 230V, 50 - 60Hz
Weight (kg)	2.2
Dimensions (W x D x H mm)	217 x 231 x 44
Standard accessories	Power cable
Colour	Black
Suggested products	HEM series

### Amplifiers

#### STA120



#### STA200



#### MCA18



#### MCA20



Home stereo	Home stereo	Home cinema	Home cinema
Stereo amplifier	Stereo amplifier	Multi channel amplifier	Multi channel amplifier
RCA L+R	RCA L+R	8x RCA L+R	8x RCA L+R
Five way speakers posts	Five way speakers posts	8x 5 way speakers posts	8x 5 way speakers posts
-	-	12V trigger	12V trigger
2x 80W at 8 Ohm	2x 80W at 8 Ohm	8x 55W at 8 Ohm	8x 110W at 8 Ohm
300W	160W	8x 80W at 8 Ohm	8x 187W at 8 Ohm
-	-	-	-
-	-	-	-
10Hz - 40KHz	20Hz - 80kHz	10Hz - 50kHz	10Hz - 50kHz
115	100	>89	>91
115V - 230V, 50 - 60Hz	115V - 230V, 50 - 60Hz	110V - 230V, 50 - 60Hz	115V - 230V, 50 - 60Hz
3.5	6	6.5	11
215 x 230 x 44	355 x 224 x 87	432 x 340 x 70	432 x 340 x 80
Power cable	Power cable, power connector (for WDC200)	Power cable, 12V trigger cable	Power cable, 12V trigger cable
Black or Silver	Silver	Black	Black
DAC80, WDC200	DAC80, WDC200	AVP18	AVP18

## Specifications

### Bluetooth

#### Model name

**BTR100**

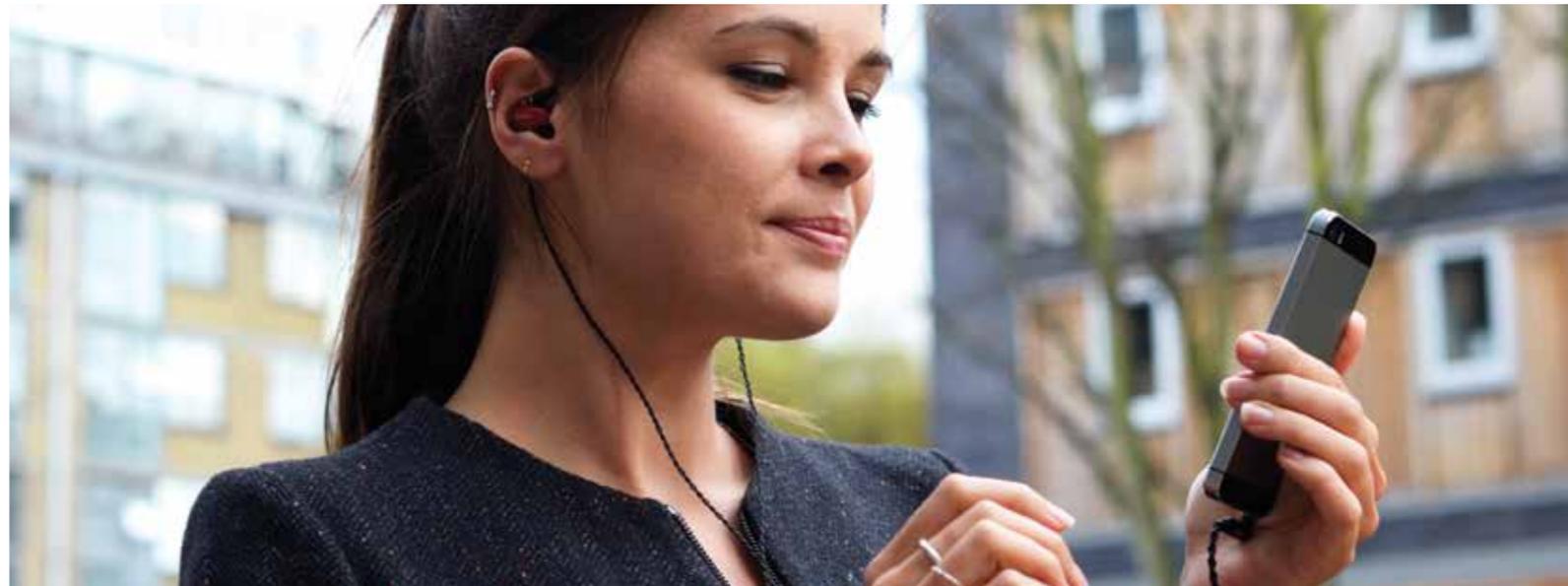
**BTR1**



Product category	Home stereo	Home stereo
Product type	Bluetooth receiver	Bluetooth receiver
Connections - output	Optical, 3.5mm stereo	Bluetooth
Frequency response	20Hz-20kHz	-
Sensitivity (dB)	-84	-
Signal to noise ratio (SNR) (dB)	>90	>92
Power supply	5V 1A	-
Operating range (m)	10	10
Supported CODECs	aptX®, SBC, AAC	aptX®, SBC
Weight (kg)	0.103	0.035
Dimensions (W x D x H mm)	157 x 155 x 38	65 x 26 x 8
Standard accessories	Power supply, 3.5mm - 3.5mm cable, 3.5mm - RCA L+R	-
Colour	Black	Black
Suggested products	-	-

## Social

Keep up to date with all the latest product releases and video by following us.



## Key definitions

### 96/24

Higher than CD resolution with greater amounts of detail and bandwidth, resulting in a greater level of the original recording with very substantial and positive effect on the quality of bass and clarity.

### 192/24

Very high resolution audio available in two major formats. This offers the purest form of the music as captured in the studio. It is in fact the standard used by professionals to record most music.

### Balanced armature driver

A balanced armature driver is able to reach frequencies of up to 40,000Hz for rich bass and clear highs. It uses a magnet to move a small diaphragm, resulting in low distortion levels for spacious, detailed and fatigue-free sound at any volume level.

### Bluetooth®

Bluetooth smart technology is a wireless communications system intended to replace the cables connecting many types of devices such as mobile phones and headphones.

### DAC

Digital to analogue converter, designed to translate digital signal of various formats into the analogue sound that is heard from a speaker or headphones.

### DSD

Direct Stream Digital (DSD) audio is able to capture the original sound created by musicians in a professional studio. It is offering a range of sound and frequencies far greater than that of a CD. DSD offers a staggeringly realistic recreation of the originally recorded notes.

### Hi-Res Audio

High resolution audio stands for audio formats that contain larger quantity of data and greater range than that of CD quality audio. Music made of high resolution audio can be heard from discs and downloads.

### Integrated amp

Combines the ability to connect and select a source, change volume levels and output the signal sent from source as sound via a connection to speakers.

### LPCM

A form of PCM files typically used to code high resolution movie sound tracks that are greater than CD audio quality.

### Multi channel amplifier

Designed to connect to a surround sound speaker system and deliver the individual signal required to create the surround sound effect to each speaker.

### PCM

Method used to represent digitised analogue signals; the most common form of digital audio. Used for CD replay, movie sound track and audio download files of various types all the way from MP3 to 192/24 audio files.

### Power amp

Offering the power and current required to transform the signal sent from source into sound via a connection to speakers.

### Pre amp

Improves separation of audio signal and provides the ability to change sources and volume levels. Requires a power amp in order to transform the signal from source into sound.

### Pulse Width Modulation

A modern circuit that allows very efficient electrical design, typically known as Class-D amp, resulting in small compact structures that are able to provide a great deal of power, whilst maintaining lower power consumption when compared to traditional amp design.

### RCA

The most common analogue speciality audio connection which is also known as "Phono" and "Single-ended" connection.

### S/PDIF

This connection is designed to offer easy digital connection between audio components. Able to send high definition audio and mainly used in professional and broadcasting industry with BNC termination.

### Surround sound processor

Detects and converts surround sound and other types of audio signal from digital and analogue sources and divides the signal between the individual speakers.

### Toslink

Optical fibre connection designed to transmit digital audio files. Commonly found on almost every home audio entertainment device. Able to transmit very high resolution signal as well as all Dolby and DTS HD format and many other PCM and LPCM audio formats.





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