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Get up and glow

HFC takes a look at Copland's compact tube-driven headphone amp and DAC with DSD-ready USB input

Denmark is rightly widely recognised as the home of cool, sleek, sophisticated design. Whether it be iconic furniture, smart but functional clothing or consumer electronics, the Danes appear to have a knack for elevating the mundane into a work of art. So when Copenhagen's Copland unveiled its latest USB DAC/headphone preamp, there was more than a touch of excitement in the air. Combining the styling of a fifties radio, with the red glow of Michael

Hasselhoff's 1982 Pontiac Trans Am in TV show *Knightrider*, the 'laterally perforated' DAC215 looks to have got the balance pretty much spot on.

Unlike many current DAC/headphone amplifiers, the DAC215 has one stereo pair of analogue line inputs, in addition to its array of digital inputs. So if you're building a system to play vinyl records as well as digital sources, you need only add a phono stage to make it function as your main preamplifier, although it won't give you remote control.

DETAILS

PRODUCT
Copland DAC215

ORIGIN
Denmark

TYPE
USB DAC/
headphone preamp

WEIGHT
3.8kg

DIMENSIONS
(WxHxD)
200 x 115 x 280mm

FEATURES
• PCM up to 32-bit/384kHz and DSD64 and 128
• Inputs: coaxial; 2x optical; AES; EBU; USB Type-B digital; RCA analogue
• Class A analogue section

DISTRIBUTOR
Absolute Sounds Ltd

TELEPHONE
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WEBSITE
copland.dk

It can handle high-resolution LPCM files up to 32-bit/384kHz alongside DSD64 and DSD128. It's based on the ESS Sabre ES9018 Reference eight-channel DAC, which is used here in double-differential mode.

With the outputs of four of the DAC's converters combined for each of the two stereo channels, this promises an improved signal-to-noise ratio and reduction in even-order distortions, the impact of the tube stage notwithstanding.

Positioned behind those impressive slats are the small-signal ECC88 double-triodes, which are backlit by a series of distinctive red LEDs.

Below the grille are an analogue volume control, not an 'endless' rotary encoder, and a source selector to switch between the one analogue line input and four digital options: USB and S/PDIF (coaxial and two Toslink optical) inputs. These are accompanied by a main on/off switch – not a standby control – and a 6.35mm headphone socket. A small toggle switches the unit's amplifier section in or out of circuit.

With this set to 'Amp', the DAC215 functions as a preamp, providing a

volume-controlled variable output from its rear-panel amplifier output sockets. This automatically mutes to a low level when headphones are plugged in. Setting the toggle to 'Off' puts the unit in DAC-only mode, which is shown by a red light. The internal amplifier section is now bypassed, and the DAC215 sends a fixed-level analogue output to the 'DAC Output' sockets.

An array of six discreet LEDs light up to indicate the incoming sample rate of digital sources. Copland has kept this as simple as possible, with the three LEDs in the left column being labelled DSD, 48 and 44.1(kHz). The other three LEDs are labelled x2, x4 and x8, and will light appropriately along with one of the left-hand ones to indicate 'double speed' DSD and the higher PCM sample rates, from 88.2kHz (44.1 x2) and 96kHz (48 x2), and so on up to 384kHz (48 x8).

It's possible to switch these backlight LEDs off using the small switch on the circuit board placed vertically behind the tubes. To access this, or to replace the tubes, simply remove the four screws holding the small ventilation cover on to the unit's top surface.

Sound quality

We start off using the Copland purely as a DAC, via its USB inputs and fixed-level, solid-state DAC output. Listening to Jimmy Webb's *PF Sloan* we can feel the force of passion in the song while appreciating the superbly crafted arrangement. From the same



Available with silver or black front panels

Chesky hi-res sampler, the 24/96 file of Marta Gomez and *Lucia* from *Entre Cada Palabra* is entirely captivating, with the DAC presenting the delicate, almost tremulous quality in the singer's voice and also conveying the air around it. And the DAC215 really

We can't help but marvel at the sheer depth and solidity of the sound

brings out the relaxed and effortless quality that's achieved by the accompanying musicians.

With ripped 16/44.1 material it also impresses, allowing the music to flow easily and freely. Rickie Lee Jones' *Easy Money* comes over with an infectious rhythmic quality, a light and almost jaunty bounce that's so often lost in the hi-fi chain.

Kalerka from Rebecca Pidgeon's *The Raven* SACD brings out the rhythmic qualities of the track well with the barcarolle-like accompaniment really conjuring up the feeling of a boat gently riding the waves.

Used purely as a DAC with a CD-transport source, the DAC215 gives impeccable results. With Keith Jarrett and Charlie Haden's great piano/bass duo album *Jasmine*, it feels alive to the special atmosphere of the recording, made in Jarrett's home studio. The big, warm sound of Haden's double-bass is very well conveyed and, more intangibly, so is the feeling of peaceful homecoming that pervades this musical reunion.

Switching to headphones – Oppo's PM-1 – we discover a tube-amp sound that is rich and warm in character. Tim Hugh playing Kodály's solo cello sonata from *Hands On Heart* is completely absorbing and we can't help but marvel at the sheer depth

CONNECTIONS



- 1 RCA analogue input
- 2 Amplifier output
- 3 DAC output
- 4 Digital coaxial in
- 5 2x digital optical in
- 6 USB Type-B input

Q&A

Ole Møller

Founder and designer, Copland



HFC: What's the design philosophy behind the Copland DAC215?

OM: Given the way many people listen to music these days, there is clearly demand for high-quality DACs and headphone amps. We wanted to make the very best DAC/headphone amp we could, utilising valves, in a convenient form. The fact that the operational parameters of headphones are very different from speakers makes the voicing of a headphone amp different from that of an ordinary amp. It's not a question of altering the frequency response, more a way of distributing the perceived energy of the recorded music to the specific parts of the frequency spectrum in a way that complements the very close loading from the transducer membrane to the eardrum and the lack of deep bass body impact.

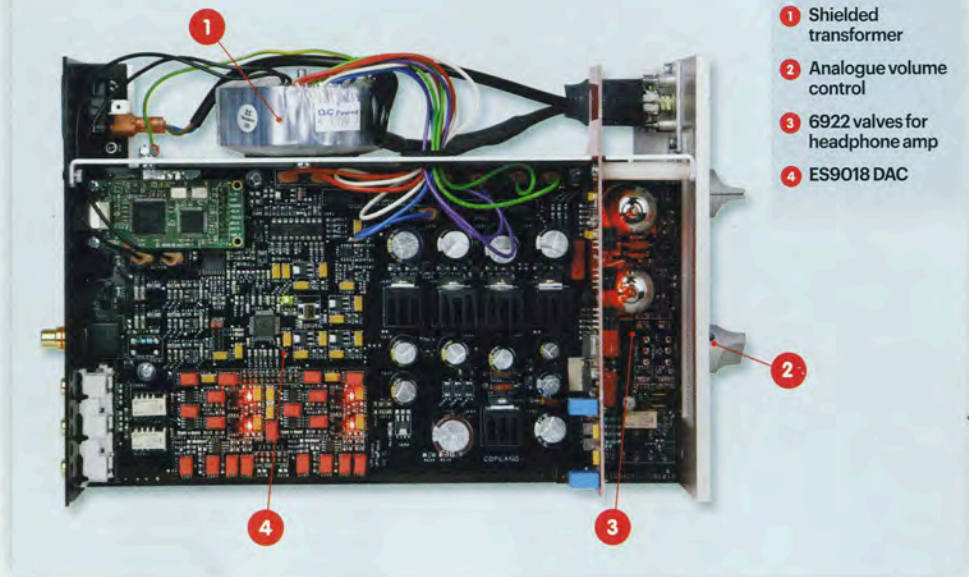
Are there any trickle-down benefits from other Copland products?

Pretty much everything was tailor-made for this project, although everything we make – and the things we learn in the process – influences the design of what comes next to some degree. We did borrow the principle behind the DAC215's analogue buffer and post-filtering circuitry from the CDA 825 CD player. However, as can be felt from the heat of the drivers, the high-current output from the DAC215's paralleled DACs requires even more power from the Class A transistor stage driving the low-impedance feedback and filtering circuitry.

Which headphones would you use with the DAC215?

I had top-end headphones from Sennheiser, Grado, Beyerdynamic and Hifiman, among others, at my disposal during the development of the DAC215; they all have very different qualities and I like to change from time to time. It's really a matter of personal preference... all I can say is that the DAC215 has been designed to work with a wide range of headphones and will make the most of any high-quality pair musically.

IN SIGHT



- 1 Shielded transformer
- 2 Analogue volume control
- 3 6922 valves for headphone amp
- 4 ES9018 DAC

and solidity of the sound he makes, and its consistency from top to bottom of the instrument.

Moving on to a 24/96 download of the Elina Duni Quartet playing *Kurtē kujtosh*, the singer's emotive delivery really strikes home with the little tremble in her voice clearly outlined by the perceptible studio 'air' around it. Again there is warmth, especially in the insistent and heavily recorded piano, but this never becomes overwhelming.

For a contrast in vocal and recording style, we return to Marta Gomez's *Lucia* and discover that the background produced by her musicians is miraculously light and spacious. With the Copland serving purely as a DAC, we find this track particularly enticing, and here it's just as attractive with the sound a little fattened-up with a kind of creamy quality, and with Gomez's voice cooingly intimate.

Focused on orchestral sounds, David Chesky's amazing *Venetian Concertos* sound intense and densely textured and the Copland/Oppo combination is more than capable of meeting its demands, never losing the inner detail in the string writing and conveying the sheer energy of the composer's vision.

Returning to CD-quality material, we run through some old favourites and are agreeably impressed every time. With Florence & The Machine's *Dog Days Are Over*, the DAC215 offers an intelligible, exciting performance, free of any harshness or confusion. With *Loan Me A Dime* from Boz Scaggs' *Greatest Hits Live* it is a treat to wallow in the doomy descending

chords, supported here by what seems like a bottomless bass that frames Scaggs' richly textured guitar intro and vocal.

Staying with the blues, we switch to an old track from *Sang Mêle*, by the late French keyboard wizard Eddy Louiss. With its wild and impassioned synth against a churchy organ background, *Blues For Klook* is Louiss' heartfelt tribute to jazz drummer Kenny Clarke. And with the Copland, he sounds more soulful than ever.

Conclusion

The Copland is an excellent USB DAC/headphone amp that can very happily serve as a main system preamplifier too, as long as you don't need more than one (unbalanced) analogue input and can do without remote control. It provides truly enjoyable, satisfying headphone listening from digital sources, especially via USB but also via its S/PDIF input. It's nice to use and the attractive retro look is a real bonus ●

HOW IT COMPARES

The DAC215 faces some tough competition from the similarly specified Simaudio Moon Nêo 230HAD (HFC 411). The 230HAD is cheaper but goes toe to toe with the Copland in terms of functionality, including the fitting of an analogue input. The technically interesting transconductance-based headphone amplifier in the Moon gives it a slight edge when used in this way and while there is very little in it when used as a line-level DAC, it is fractionally better here too. Where the Copland does enjoy the edge is as a preamp where it sounds slightly fuller and more open – although annoyingly, unlike the Moon it doesn't have a remote control for the volume.

Hi-Fi Choice

OUR VERDICT

- | | |
|---------------------------------|---|
| SOUND QUALITY
★★★★★ | LIKE: Rich, evocative sound; good looks and build |
| VALUE FOR MONEY
★★★★★ | DISLIKE: Only one pair of analogue line inputs; no remote control |
| BUILD QUALITY
★★★★★ | WE SAY: An excellent USB DAC/headphone amp that's equally impressive working as a preamp |
| FEATURES
★★★★★ | |

OVERALL

