

Copland CSA150

Danish brand Copland beefs-up the power supply to its all-singing, all-dancing CSA100, crowning its range of tube hybrid integrated amplifiers with this heavyweight model
 Review: **Mark Craven** Lab: **Paul Miller**

Not long into my audition of Copland's CSA150, I began to feel a little annoyed that, at some point, I'd have to unplug it and send it back. Reviewer remorse isn't quite as galling as buyer remorse, but it is still 'a thing', and this £4988 hybrid tube integrated had given me a bad case of it. Hybrid? Yes, for the CSA150 looks to be an upscaled CSA100 [HFN Aug '20] combining a 6922 double-triode and solid-state FETs in its preamp stage, driving a bipolar transistor amplifier output. Perhaps keen to avoid overselling the benefits of this architecture, Copland warns buyers not to expect 'the warm and nice, coloured charm of some older tube designs'.

This amplifier certainly looks spectacular in the aluminium finish of our sample (black is also offered as an alternative), and operationally it's a pleasure to use. Above all that, it sounds musical, confident and completely unflagging which, perhaps, is to be expected from a brand already held in high regard by many audiophiles. The question here, however, is whether the CSA150 represents enough of an upgrade over that aforementioned CSA100, which offers the same broad feature set, a lower claimed power output and, at £3498, a more accessible price tag.

TUBULAR SELLS

Danish manufacturer Copland is a tube specialist. In the past, the company has made devices without valves, including CD players, but look at the current lineup of DACs, preamps, integrations and power amplifiers and you'll always find a tube somewhere in the mix. I use 'current range' advisedly, as it includes models – such as the CTA405 integrated valve amplifier [HFN Aug '07] – that have now been in production for over a decade.

RIGHT: Line stage uses one 6922 double-triode [left] and output stage has a pair of high current transistors from On Semiconductors [heatsink]. Large PSU toroid is under rectifier PCB [top right] with smoothing caps [lower left]. USB hub and ESS DAC digital boards are isolated [lower right]

Copland, then, is clearly a brand that doesn't like to rush things, or follow the hi-fi herd, which explains why the CSA150 has no interest in networking. Yes, for an extra £200 it can be fitted with an aptX Bluetooth module, but I'd imagine more buyers will opt instead for an external network player. Or maybe they won't, as the CSA150 offers plenty on its own.

First and foremost, you get the promise of greater power and better suitability to a range of loudspeakers than the more affordable CSA100. There is a caveat here, for while that model wasn't exactly underpowered in its 100W/8ohm (180W/4ohm) rating and while there's an increase here to a specified 150W/8ohm (230W/4ohm), PM's independent lab tests [see p67] indicate there's little practical difference in the amps' dynamic power.

With no networking connection, this probably can't be considered a full member

of the just-add-speakers club, but it still has the flexibility to perform as a system centrepiece. Analogue sources are handled by balanced XLR and a quartet of RCA inputs (including tape and phono); digital hook-ups are on USB-B (you'll need to download the Amanero driver for Windows PC use), two optical, and one coaxial. There are also pre-out and tape out connections, plus a full-sized headphone socket serviced by Copland's custom preamp.

LIGHTING THE WAY

All bar the latter of these connections sit nicely spaced on the amp's back panel below high-quality binding posts [marked as 'inverting speaker polarity', because the amp flips absolute phase – see HFN Aug '20]. There's a little more room here than on the CSA100, the machined aluminium chassis now 164mm rather than 135mm high, but it's still an easy fit on a hi-fi rack.



The CSA150's connectivity is identical to that of the CSA100, right down to the absence of an MC stage on the phono input, and the styling is no different either. Like all of Copland's amplifiers, it looks gorgeous, with a symmetrical front panel layout that places large source select and motorised volume controls either side of a central wheel of LEDs. These light up to signify source and standby/ on status while a secondary dial switches between digital sources, and an LED lights up when playing DSD files.

Some of the labelling is Lilliputian, but it took me very little time to fall into step with the CSA150's operations – I have experienced amps that entice with LCD displays but manage to be much more unwieldy. A paucity of user options (there are no DAC filters to experiment with here, for example) goes some way to streamlining the process, but Copland should still be applauded for delivering an amp that feels intuitive. The

system remote handset is less of a hit as it's also designed for use with the CD players that Copland appears to have stopped making (they're absent from its website). A refresh might be in order!

CHARACTER BUILDING

If you want clarity, subtlety and precision from an amplifier, Copland's flagship doesn't disappoint.

Unsurprisingly, it packs the punch and drive of a solid-state design, but to deem it 'warm-sounding' would be erroneous even if it certainly leans in that direction. Anyone getting an audition should also be prepared for a smoothness, even a gentility, to the CSA150's presentation. Treble harshness is not a concern, the tuning here favouring silk over sparkle.

This would seem to rule it out as an obvious match for your Motörhead collection – which would be right – but it might give you a greater appreciation

'It lapped up the deep dives and midrange snarls'

ABOVE: Precision-milled rotaries select source and volume with a smaller control stepping through the digital input options. Central dial carries the IR 'eye' and input/status LEDs

of the band's craft, because regardless of genre or recording I found the CSA150 always shone a favourable light. Its performance is full of character, consistently rustling up musical magic from seemingly the most lo-fi of recordings.

I didn't kick off with the raucous stuff, though. Once the amp was ready to roll (that valve brings with it 30-odd seconds of boot-up time), Mark Knopfler's 'Yon Two Crows' [Privateering; Mercury 3707935] proved a good early-listening choice, as it was a captivating, intimate listen from the moment its uilleann pipe/ keyboard intro oozed from my B&W 705 S2 speakers. It was just a murmur to begin with, but even at a low level I could hear a wealth of texture and separation, and then it unfurled, and the amp started to really breathe life into this folk-influenced recording. Knopfler's acoustic guitar playing was awash with inflection and succinctly picked strings, and his downbeat vocal appeared spectre-like in my room.

PURE INSTINCT

Deciding to switch from analogue to a 96kHz/24-bit FLAC download of the same piece revealed the same tasting notes: excellent tonality, grin-inducing detail and a wide-open soundstage. The amp sounded unfettered, nuanced and – to put it simply – quite lovely. It's vital for a model with hybrid aspirations (analogue and digital) to be effective with both, and Copland certainly hasn't missed the trick.

The CSA150 has a way with bass that puts the affordable end of the market to shame, which is what one should expect from an amp at this price. Low-end notes had a rich, pure quality, sounding deep

OLÉ MØLLER

Is Scandinavia the centre of the hi-fi universe? It can sometimes feel like it, because the area has birthed a number of well-known brands, including SEAS of Norway, Genelec of Finland, Primare of Sweden and Denmark's Dynaudio, DALI, Jamo and Bang & Olufsen. And then there's Copland, another Danish company but one whose history has seen it cross the Øresund Bridge into Sweden, but then later return. One constant throughout this time has been the presence of Olé Møller, founder and principal designer.

Møller began his audio career at Denmark's Ortofon, where he worked on the development of low-noise amps, but an interest in valves led him to build his own hardware, and establish Copland in the mid-1980s. By the following decade, manufacturing had shifted to Sweden to meet growing demand, and the brand was under the ownership of Xena Audio, which had also formed a partnership with Primare. During the '90s Copland and Primare products were crafted in the same facility, albeit by independent teams, before a split saw the former return to Copenhagen and a dedicated factory. Both companies remain famed for their marriage of sound quality and smart design. Maybe they compared notes...

COPLAND CSA150



ABOVE: MM phono is joined by a tape loop, three line ins (two on RCAs, balanced on XLRs), a preamp out and single sets of 4mm speaker terminals. Digital inputs include coaxial, two optical and USB. Note hole for optional Wi-Fi/BT streaming adapter

and purposeful but entirely in keeping with the rest of the audioband. Even the gentlest of compositions, such as Nils Frahm and Woodkid's piano-laden 'Winter Morning I' [*Ellis*; 48kHz/24-bit] had a tangible solidity to them, and with an electronic track like Grooverider's evocative 'Where's Jack The Ripper?' [*Mysteries Of Funk*; Higher Ground HIGH6CD], it lapped up the deep dives and midrange snarls.

DRINK TO THAT

Jostling for attention alongside this adept bass handling was the CSA150's expression and graceful grasp of the high notes. Indeed, this is a product where it's hard to put a finger on one specific standout aspect. Call it holistic hi-fi. Listening to Pink Floyd's immaculate 'Brain Damage' [*The Dark Side Of The Moon*; 96kHz/24-bit FLAC] was like wondering what to sample at a wine tasting – far-away guitar licks, harmonised vocals, the dynamic surge of the drums, the quivering of a Hammond organ? I drank it all in.

Yes, this amp's character makes it an unlikely fit for brasher listening tastes, but what it does successfully is unpick the detail and rhythmic

nature of whatever you put through it. It got a lot out of Guns N' Roses' 'Nightrain', the standout track on a standout album [*Appetite For Destruction*; Geffen Records,



LEFT: Copland's rubber-edged RC-102A system remote caters for its legacy CD player and, for the CSA150 amp, offering standby and volume plus input selection

00602567565673]. Steven Adler's drum kit sat at the back of a cavernous space, ride cymbal hits ringing out, while intricate twin-guitar riffs were lifted clean above bass and vocals. All highly enjoyable, without, it must be said, delivering the head-banging experience the LA quintet probably envisaged.

Likewise, Nirvana's 'Lithium' [*Nevermind*; 96kHz/24-bit FLAC] revealed a higher-quality production than I remembered from my youth with, again, soundstage depth and instrumental detail. It was only when the chorus arrived, accompanied by a barrage of distorted power chords, that the CSA150's measured tone began to sound slightly incongruous.

The thing is, such a voicing is no doubt deliberate, and it's not the case that the CSA150 is short on dynamic ability. It leapt into Michael Jackson's 'Bad' [eponymous; EPC 504423 2] from the opening bar of stabbed synth chords, locked into the track's funk rhythms and let the percussion roam free across the stereo field. It was snappy, upbeat and bold. The song ends with Jacko asking 'Who's bad?'. Not this Copland, that's for sure. ☺

HI-FI NEWS VERDICT

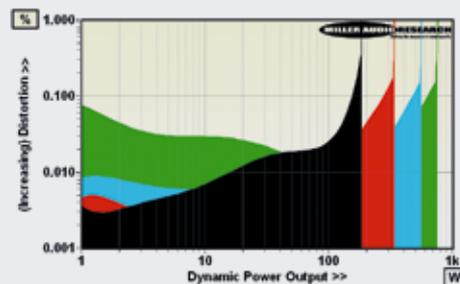
The hybrid market won't fade away if amplifiers like Copland's CSA150 keep arriving. By way of performance, this beefy Dane doesn't so much cut the mustard as slice through it with an *Ulfberrht* sword – as long as you appreciate its character it'll give you hours of listening pleasure. It also picks up brownie points for looking smart and being well-connected. Audition it alongside the more affordable CSA100.

Sound Quality: 85%

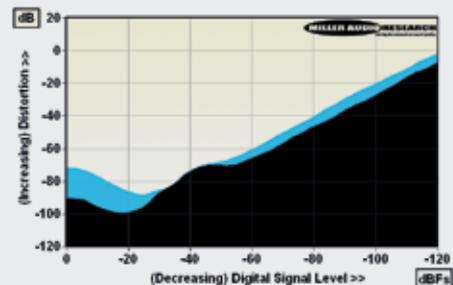


Comparing this 150W/8ohm-rated CSA150 with the 100W/8ohm CSA100 [*HFN* Aug '20] is instructive because the former behaves almost exactly like the latter except for an uplift in *continuous* power output. So, where the CSA100 offered 2x125W/8ohm and 2x193W/4ohm, the flagship CSA150 delivers 2x175W/8ohm and 2x270W/4ohm. However, the PSU has proportionally *less* headroom so its dynamic output of 184W, 341W, 570W and 767W into 8, 4, 2 and 1ohm [see Graph 1] is not appreciably higher than the 174W, 320W, 527W and 715W, respectively, offered by the CSA100. The trend of distortion – still largely 2nd harmonic – also increases uniformly with power output through the midrange from 0.003%/1W, 0.008%/10W, 0.03%/100W and 0.04% at the rated 150W (all 1kHz/8ohm) although, at very high frequencies, it's a consistent ~0.04%/20kHz (1-100W). As we saw with the CSA100, the CSA150's A-wtd S/N is a below-average 80dB (re. 0dBW) but this is still a pleasing white noise rather than hum or buzz. The (analogue) response remains flat and extended from +0.0dB/5Hz to -0.25dB/20kHz and -2.7dB/100kHz while the main/preamp outputs are still phase inverting.

Measured via the non-inverting test loop, a 0dBFS digital input yields a 2.08V output, the ESS9018S-based DAC stage offering a 103dB A-wtd S/N ratio and minimum 0.0011% THD over the top 20dB of its dynamic range [see Graph 2]. Jitter is suppressed to an impressive ~30psec via all sample rates while the 82dB stopband rejection, ringing on transients, and response(s) are all defined by the default linear phase digital filter. The responses reach to -0.04dB/20kHz, -0.7dB/45kHz and -2.3dB/90kHz with 48kHz, 96kHz and 192kHz digital files. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 27.7A



ABOVE: Distortion versus 48kHz/24-bit digital signal level over a 120dB range (1kHz, black; 20kHz, blue)

HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	175W / 270W
Dynamic power (<1% THD, 8/4/2/1ohm)	184W / 341W / 570W / 767W
Output imp. (20Hz-20kHz, Pre/Amp)	192ohm / 0.027-0.055ohm
Freq. resp. (20Hz-20kHz/100kHz)	+0.00 to -0.25dB/-2.7dB
Digital jitter (USB / S/PDIF)	29psec / 33psec
A-wtd S/N ratio (DAC/Amp)	103.4dB (0dBFS) / 80.1dB (0dBW)
Distortion (DAC, 0dBFS/Amp, 0dBW)	0.0017-0.027% / 0.0014-0.041%
Power consumption (idle/rated o/p)	42W / 550W (1W standby)
Dimensions (WHD, each unit)	435x164x370mm / 15kg