



INTEGRATED AMPLIFIER

Integrated tube amplifier. Rated at 40W/4ohm
 Made by: Octave Audio, Karlsbad, Germany
 Supplied by: Elite Audio (Distribution) Ltd, London
 Telephone: 0203 397 1119
 Web: <http://octave.de/en>; www.eliteaudiouk.com
 Price: £3895

AUDIO FILE

Octave Audio V40SE

Now shipping into the UK, Octave's tube amplifiers are intended to be as easy to use and dependable as possible. Here we test the company's entry-level integrated
 Review: **Steve Harris** Lab: **Paul Miller**

Comfortably established in Karlsbad, in southern Germany, Octave Audio has just celebrated its 30th anniversary of amplifier production, although its big range of tube models has only recently found a UK distributor. So it seemed appropriate to try out Octave's most popular integrated, the £3895 V40SE.

Octave's founder and designer Andreas Hofmann actually developed his first amplifier design in 1975, but the origins of the business go back further, to the Hofmann transformer-winding factory established by his father in 1968. Hofmann specialised in high-voltage phase-shifting transformers for industrial use, but this expertise also provided a great starting-point for a tube amplifier company. In 2000, Octave formally took over Hofmann, and it continues to design and build its own transformers to this day.

THE ECOMODE SYSTEM

The V40SE has been around since 2009, replacing the earlier V40 and V50 models. The SE suffix doesn't stand for 'single-ended' because all Octave's output stages are push-pull, but indicates 'Second Edition'. Along with many internal improvements, the V40SE embodied some new user features, notably Octave's 'Ecomode' system to reduce heat and unnecessary power consumption.

With Ecomode selected, after nine minutes without receiving a signal, the amplifier powers down to a 'sleep' mode, with the heaters and high voltages for the power amp section turned off, thus consuming less than 10W from the mains compared with around 140W in normal operation [see Lab Report test table, p47]. When a music signal is detected, it turns back on with a start-up time of about 35s.

Also included on the V40SE is a home theatre bypass and a buffered pre-out

RIGHT: Lifting the protective cage reveals the ECC83 and 6922 double-triodes in the preamp section and matched pairs of 6550 output tubes. Bias adjustment is manual, not auto

facility. If you want to run the V40SE as a preamp only, you can use a third position on the rear-panel Ecomode switch, to turn the power amplifier section off completely. The rear panel also houses a four-pin connector for Octave's optional Black Box [see boxout, facing page], a passive component that adds extra reservoir capacitance to the power supply.

With its visor-like safety cover in place, the all-black V40SE looks rather forbidding, although it is also available in silver. With the cover removed (via two hex bolts), it looks a lot more welcoming, as pictured, with its array of four big Western Electric 6550 power tubes. Just peeping out from the raised front-section cover are two smaller double-triode tubes. An ECC83 (or 12AX7) provides first-stage amplification of both channels, while a 6922 (or ECC88/E988CC) is the phase-splitter.

Conventional rotaries provide volume and source selection. The source control selects from four line inputs, with a fifth position for output-stage bias adjustment, and a sixth for home theatre bypass. The volume control is motorised to respond to Octave's chunky two-button remote [see p47], which provides no other functions.

LED LIGHTSHOW

On switch-on, the display panel will show a green LED at the left to indicate the source, plus two on the right, one for Soft Start (which goes out when warmed up) and one for power on (which stays on). Also on the right, a yellow LED warns when you've selected Front Channel or home theatre bypass mode, which sends signals from the Front Channel input sockets straight to the power amplifier. A red LED appears if the protection circuit has



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switched off the amplifier in response to a fault. With the source selector turned to position 5, coloured LEDs will also light up in the centre of the display panel to indicate correct, high or low tube bias.

With KT88 or 6550 tubes in play, optimal (high) bias is indicated with both red and green LEDs lit. Manual bias adjustment is achieved by inserting a small screwdriver through the hole in the display window below the appropriate LED to tweak the trim pot.

You might wonder why Octave doesn't offer automatic biasing. But, as Andreas Hofmann explains: 'The problem with auto-bias is that the user gets no information from the unit. He does not see immediately if there is tube damage. In the past, we got units back with one tube dead, and the customer had not noticed.'

'This is the reason I went back to manual bias. It's easier for servicing. And also, you

can adjust for different tubes, which some people want to do.'

If you do choose to use different tubes, you can deliberately set the bias to a lower or higher value to suit. Tubes that will work with the V40SE in the low-bias setting include 6L6, KT66, EL34, KT77, 5881 and 6CA7. 'High-bias' output tubes include KT88, 6550 (as here), KT90 and KT100. The ultra-powerful KT150 is not recommended.

Octave points out that even these and other powerful modern tubes will function satisfactorily on the low-bias setting. But with many loudspeakers, they will benefit from the high-bias setting, as the damping factor then witnesses a claimed improvement.

GLISTENING SOUNDS

Listening started with the V40SE alone – in other words without the power supply boost

ABOVE: In the display between the source and volume controls is an LED array for setting the power tubes' bias current. Here the red and green LEDs indicate an optimal bias value

of the Black Box – using my usual B&W CM10 loudspeakers. But even before it had a chance to warm up, the V40SE started bringing music into the room in an enticing way. With Caterina Zapponi's *Romantica* [Motema 233851], the V40SE brought out a truly glistening piano sound from the singer's husband Monty Alexander, while Bucky Pizzarelli's distinctive semi-acoustic guitar became really ear-catching.

Listening to a very different guitar, on *Antonio Forcione Live!* [Naim naimcd054], the V40SE seemed alive to the atmosphere of the event, and the tremendous sounds that Forcione gets from his electronics. In 'Serenio' you could almost feel audience members holding their breath as waves of sound washed over them, and at home the music really flows from the speakers.

With the Black Box plugged in and listening again to Forcione, even the MC's announcement and the audience's welcoming applause revealed a change, as the guitar sounds now had more natural

attack, more depth and life, with the venue brought to life more palpably. The perceived soundstage was just bigger and more solid. This was one of those happy occasions where you could be surprised at the way a sound that already seemed excellent was improved further.

Moving back to vocal music, I tried 'Snow' from *The Cole Porter Mix*, by 

'The V40SE really gave you the raw emotional quality of Adele's voice'

OCTAVE SCALE

Chunky as it looks, the V40SE is the baby of Octave's integrated amp range. Though built on a similar chassis, the other models offer increasing power output up to 100W-plus per channel. Next comes the V70SE, extracting a claimed 70W/channel from the same array of four 6550s, and also offering a balanced line input. The more recent V80SE takes advantage of KT150 or KT120 tubes to give a claimed 120W/channel, and is the only model with a headphone output. Finally, the V110 is a derivative of the V70SE, using four KT120s and rated at 110W/channel. All seem very compact for the power offered but, especially with 'difficult' speakers, all will give of their best when armed with Octave's secret weapon [see inset picture], a bulky plug-in unit that contains a bank of extra reservoir capacitance for the power supply. This 'power supply booster' comes in two forms. Choose the Octave Black Box (£910) and it will multiply the existing capacitance by four, while the Super Black Box (£2395) gives a tenfold increase.

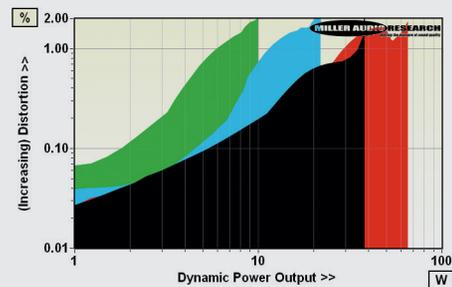


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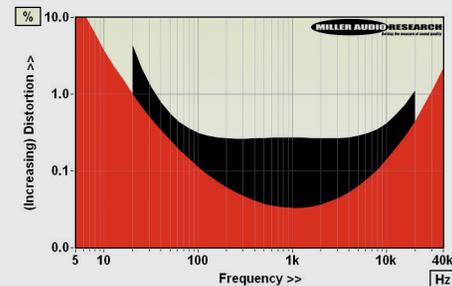
OCTAVE AUDIO V40SE

Tested with its auxiliary 'Black Box' PSU reservoir and with the bias LEDs set to 'green + red', as per our picture [p45] and as indicated for the 6550 output tubes in Octave's uncommonly comprehensive user manual, the V40SE performed largely as anticipated. Octave rates its 'all-rounder' at 40W/4ohm – the ideal impedance for its output transformer's secondaries – but this was only achieved above 1% THD. In practice, 32W/4ohm is possible at 1% THD and a fuller 57W/4ohm at 2% THD. Into 8ohm, the output is necessarily lower, amounting to 27W at 1% THD and 35W at 2% THD while under dynamic conditions there's a smidgen of extra headroom amounting to 37W, 65W, 22W and 10W into 8, 4, 2 and 1ohm loads, respectively [see Graph 1, below].

Octave specifies a modest 10dB of loop feedback (overall gain is +38.9dB) so while distortion rises uniformly with level (0.02%/1W to 0.1%/10W and 1%/27W) it also increases more obviously at the frequency extremes, reaching 1%/20Hz and 0.5%/20kHz at 1W to 4%/20Hz and 1.1%/20kHz at 10W [see Graph 2, below]. More iron in the transformers always holds THD at bay for a little longer in the deep bass of course! Also, the 84dB A-wtd S/N ratio is perfectly acceptable for a pair of 6550s in push-pull although the output impedance, some 3.9-4.3ohm through bass and midrange to 3.2ohm/20kHz, will influence the amp/speaker system response. Into a non-reactive/flat 8ohm load, the V40SE's response is good to -0.5dB from 20Hz-32kHz (0dBW) and a wider 16Hz-46kHz into 4ohm. However, if your speaker has a falling HF impedance then the system response will have a diminished treble just as a rising impedance will prompt a brighter treble. PM



ABOVE: Dynamic power versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (cyan) and 1ohm (green) speaker loads up to 2% THD



ABOVE: Distortion versus frequency at 10W/8ohm (20Hz-20kHz, black) and 1W/8ohm (5Hz-40kHz, red)

HI-FI NEWS SPECIFICATIONS

Power output (<2% THD, 8/4ohm)	35W / 57W
Dynamic power (<2% THD, 8/4/2/1ohm)	37W / 65W / 22W / 10W
Output impedance (20Hz-20kHz)	4.3-3.1ohm
Freq. response (20Hz-20kHz/100kHz)	-0.45dB to -0.06dB/-12.7dB
Input sensitivity (for 0dBW/40W)	33mV / 190mV (4ohm)
A-wtd S/N ratio (re. 0dBW/40W)	83.7dB / 99.7dB
Distortion (20Hz-20kHz re. 10W/8ohm)	0.25-4.2%
Power consumption (Idle/Rated o/p)	138W/239W (9W 'Ecomode')
Dimensions (WHD) / Weight	451x150x415mm / 18kg



ABOVE: Three line ins are joined by tape, a line-level 'front ch' and pre outs. Fixed-tap speaker connections are via substantial 4mm posts. Note 'Black Box' connection

Patricia Barber [Blue Note 50999 5 01468 2 6], both with and without the Black Box. With it, Barber's vocal seemed to take on a new depth and an even greater intimacy, with more body and at the same time more detail in lip and breath sounds.

There seemed to be a better reproduction of the decay of the piano, while Neil Alger's guitar solo took on a new richness and power. Michael Arnpol's big soft bass sound is discreet in the mix but it still sounded full and authoritative.

SCALE AND POWER

To give the V40SE a workout with modern pop, I put on Adele's 21 [XLCD 520] and the amp (alone) did a pretty fine job on this record, not fighting shy of the massive bass sound and really giving you the raw emotional quality of the voice.

But again, there were improvements when switching in the Black Box. Now you could clearly distinguish the studio reverb on Adele's voice, while it seemed easier now to pick out and separate the smaller details from the mass of instruments that create that great crashing beat – in the handclaps and the background vocals, for example.

Partly to investigate the V40SE's bass further, I put on *Ultimate Mancini* [Concord SACD-1034-6] from 2003. On this you get 'The Pink Panther Theme' immaculately recreated by the high-grade 'Ultimate Mancini Orchestra' and featuring the original sax soloist Plas Johnson, with a modernised and admittedly slightly clinical sound including a heavier bottom end.

Here the V40SE passed the test by reproducing the essential walking bass clearly and tunefully, though it could have had more attack. But the solo instruments were excellent,

with the great Plas Johnson sax well focused and separated out front, while the percussive 'edges' of the Hammond sound and the clicking of the action added to the immediacy of Joey DeFrancesco's organ solo.

With orchestral music, the V40SE could deliver a fine sense of scale and power. Respighi's *Church Windows* with the Pacific Symphony Orchestra under Keith Clark [Reference Recordings RR-15CD] gave the amplifier a chance to shine, with a sensation of depth and space from the big recorded acoustic, though – to be critical – this was not actually as airy as it can be.

On *Jimmy & Wes: The Dynamic Duo* [Verve 821 577-2], I could marvel not only at the two great soloists, but at the punchy, swinging arrangements of Oliver Nelson. By now I no longer really needed to disconnect and re-connect the Black Box, because I knew what it would do, but here it seemed to give the music even more swing and drive, opening up of the soundstage, with Grady Tate's drums really coming to life over on the right. This CD produced one of the best effects of the V40SE. I'd only intended to put on one track, but I found myself listening all the way through. ☺

HI-FI NEWS VERDICT

This is a user-friendly tube amp that inspires confidence in every way. You may need to regularly trim the bias, but this is very easy to do. Free from any exaggerated warmth or background noise, it offers fine sound with or without the ancillary Black Box. Whether you really need this may depend on your speakers, so ask for a home trial. But in any case, this is a brand and an amplifier that really should be heard.

Sound Quality: 83%

