

Integrated tube amplifier. Rated at 50W/8ohm
Made by: Icon Audio, Leicestershire
Supplied by: Icon Audio
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Price: £2200

AUDIO
FILE

INTEGRATED AMPLIFIER

Icon Audio Stereo 40 MkIV

Promising more power, better sound and greater flexibility, will this latest incarnation of a longstanding 'audiophile favourite' tube integrated meet the challenge?
Review: **David Price** Lab: **Paul Miller**

The first Stereo 40 tube integrated amp arrived in the year 2000, and according to Icon Audio's founder and chief designer David Shaw, 'is the heart of what we do'. It's the metaphorical ham sandwich of the valve amplifier world – the staple diet of audiophiles wanting a simple, affordable, user-friendly integrated that offers classic tube sound and some interesting features too. This new £2200 Stereo 40 MkIV sits bang-smack in the middle of the range and, as claimed, is uncommonly versatile.

It is ready to work with a wide range of output valves from EL34s to KT88s, so there's plenty of room for future experimentation. Furthermore, this integrated offers a choice of Triode or Ultralinear output stage configuration. The former gives a claimed 30W and the latter 50W [see PM's Lab Report, p61], both best suited to loudspeakers of medium-to-high sensitivity. These numbers are usefully up on its MkIII predecessor [HFN Mar '13], which I felt to be a tad underpowered.

GIANT STEPS
Designer David Shaw is modest about the Stereo 40, calling it 'a mishmash of concepts with several nods to ideas of the giants of the past like GEC, Blumlein, Williams, Philips, etc.' The amplifier isn't fancy, or unnecessarily complex, which makes it great for newcomers to the genre, but has evidently been refined over time. This latest version gets tweaks to its custom-wound tertiary output transformers, with an additional third winding key to the amplifier's compensation (feedback) network.

Designed in the UK, the amplifier is hand-assembled in China with point-to-point wiring and silver PTFE audio cable [see inside shot, opposite]. A choke-regulated power supply is used, with

RIGHT: Point-to-point wiring features strongly in the Stereo 40 MkIV, and note the standby PSU [top left]. The bases for the Shaw-branded CV181 line/phase-splitter triodes and KT88 'Gold Lion' output tubes are securely mounted

selected passive components. The new MkIV version also features a redesigned cascode driver circuit utilising four 6SN7 triodes, alongside the same number of KT88 output valves. A motorised volume control is also fitted, working with the supplied remote handset [see p61].

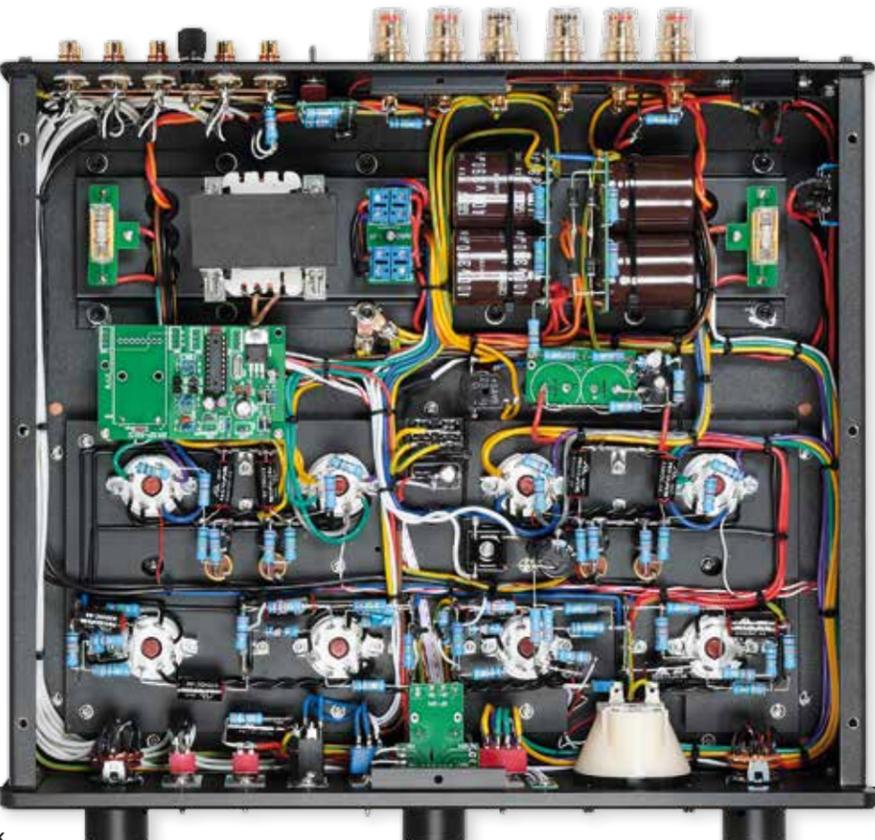
As valve amplifiers go, the Stereo 40 MkIV is pretty compact, measuring 390x210x410mm (whd). It weighs a chunky 22kg, making a trip to the osteopath likely if you don't lift it correctly. Much of that weight is down to the PSU and output transformers, but this is an 'old school' amplifier with a thick pressed-steel chassis, and feels commensurately rugged.

The copper trim plate on the top is an attractive and distinctive styling touch, and the retro front panel bias meter is redolent of something you'd see in Bletchley Park. Round the back can be found gold-plated

binding posts with taps for 4 and 8ohm loudspeakers, plus four pairs of unbalanced RCA line inputs, and a tape monitor circuit. There's also a toggle switch for sensitivity, offering a choice of high or low gain [see PM's boxout, p59]. Personally, I would have liked this to have been fitted to the amplifier's front fascia for easier access, considering it's just as useful as the Triode/Ultralinear mode switch.

Getting up and running with this amp is simple enough. However, the first time you use it, it's essential you remember to adjust the valve biasing correctly using the aforementioned meter and set-up knob.

CHARM SCHOOL
In short, this new Stereo 40 MkIV has much of the appeal of a good valve design and relatively few of its flaws. It's a clean, sweet and engaging-sounding amp that develops



LEFT: Crowded fascia sports valve bias knob and meter, Triode/Ultralinear mode switch, volume knob, speaker/headphone selector and socket, on/standby, tape monitor and input selector knob

a pleasingly panoramic soundstage thanks, in part, to its reassuring grip over the loudspeakers at hand. I judge the true mettle of any valve amp by its ability to drive real-world loudspeakers, because poor quality output transformers often saturate, and/or wheeze as they try to wrest control of tough loudspeaker loads.

In this respect, the Stereo 40 MkIV sounds surprisingly powerful for its price.

However, my impressions were mildly complicated by the choice of operating modes the amp offers. With both Ultralinear and Triode operation and two sensitivity settings, this integrated is effectively several amplifiers in one. To my ears and in my system, it sounded best in Triode mode with sensitivity set to High. In Ultralinear mode, there was a perceived improvement in power, but

the music typically sounded coarser and less composed from bottom to top. For example, playing Steely Dan's 'Aja' [Aja; MCA Records VDP-27] in Ultralinear mode with sensitivity set to High, bass was fuller and more exuberant but had less grip. Also,

'I loved the scratchy, raw Rickenbacker guitar sound'

the midband wasn't quite as organic-sounding while the treble was a little gritty. Still in this mode but with sensitivity set to Low, there was a good deal less gain, and although I did detect a slight improvement in bass grip, this varied between loudspeakers. For example, it was more obvious when the amplifier was driving my classic Yamaha NS-1000M monitors [HFN Oct '18] than when hooked-up to a pair of modern, easier-to-drive Cambridge Audio

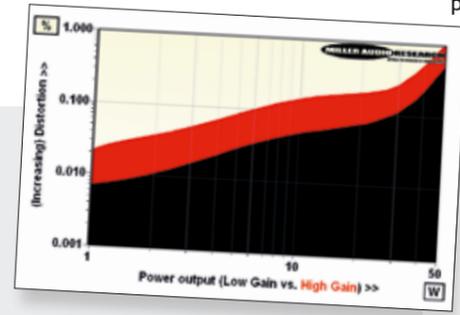
AeroMax 60 floorstanders. In the High sensitivity setting, things seemed more balanced and natural sounding, and there was less of a need to wind the volume towards its maximum position.

In its optimal configuration for my system – Triode mode and High sensitivity – the Stereo 40 MkIV's bass proved tuneful and supple while the general exuberance of its music-making pulled my attention away from any small failings. For example, there's a slight amber glow to its smooth, sweet midband so even a dry-sounding '70s rock production such as 'Aja' comes over ever so slightly softer and fluffier-sounding than perhaps it should.

In this respect, this amplifier gives you the famed 'magic of valves', sacrificing transparency at the altar of euphony. The sound of hi-hat cymbals, for example, was particularly silky although it lacked real bite, so while some will love this amp's romantic nature, others will perhaps be less enamoured of its slightly opaque and coloured character.

A QUESTION OF GAIN

Many tube amplifiers offer the choice between Ultralinear and Triode operation [see Lab Report, p61] but Icon Audio goes one step further here in providing a choice of overall feedback level. Although the amplifier's power output is unchanged, the 40 MkIV's 'Low Sensitivity' (higher feedback) mode offers a lower output impedance (0.3ohm versus 1.14ohm) compared with its 'High Sensitivity' (low feedback) mode, ensuring the amp/speaker system response is more predictable. Overall gain is necessarily lower (+26.6dB vs. +35.8dB) but this makes 'Low' ideal for use with today's 2V+ digital line sources. Distortion is also much lower at 0.007%/1W, 0.05%/10W and 0.5%/50W (black trace) vs. 0.02%/0.18%/1.1% (red trace) – see inset Graph. Distortion is lower at the bass/treble extremes too (0.2%/20Hz and 0.36%/20kHz at 10W/8ohm vs. 0.9%/0.95%). Moreover 'Low' also offers the wider A-wtd S/N ratio (92dB vs. 85dB re. 0dBW). So the 'Low' gain/moderate feedback option would seem to hold all the performance cards. But I wonder how many listeners will actually prefer the 'High' gain/low feedback mode for sound? PM



HEAVY LIFTING
George Benson's funky 'Give Me The Night' [Give Me The Night; Warner Bros 32XD-348] sounds tangibly brighter and tighter than does 'Aja', and the Stereo 40 MkIV caught this difference in production well, giving an especially beguiling feel to the up-tempo rhythm guitar work. It's still not the 'quickest' amplifier on the block, but it knits the beats together very deftly, allowing your mind's eye to enjoy the spectacle of the performers in full flight.

Although this tube integrated puts out a healthy amount of power it's still no bottomless pit of watts. For example, the latter part of Supertramp's 'School' [Crime Of The Century; A&M Records CD-3647] becomes really loud, calling for some

ICON AUDIO STEREO 40 MKIV



ABOVE: Two output transformers [far left / right] have dual secondaries feeding the 4 and 8ohm speaker outlets. Three line ins and a tape loop are included (no phono) while the 'H'/'L' toggle offers a choice of High or Low sensitivity [see boxout, p59]

heavy lifting on the amplifier's part. The Ultralinear mode is the best option here, ensuring the Stereo 40 MkIV runs out of puff only when the volume knob is abused. And here the output stage 'clipping' is not abrupt, as it might be with a similarly-powered solid-state amp, but realised as a progressive compression of the sound as dynamics are increasingly 'sat on'.

TEEMING WITH DETAIL

At more moderate levels, or with more sensitive loudspeakers, the Stereo 40 MkIV proved a great all-rounder. It also sounded impressively detailed, despite the inherent levels of harmonic distortion [see PM's Lab Report, p61], excavating lots of low-level information from almost any recording. Even the relatively lo-fi sound of The La's 'Timeless Melody' [The La's; Go! Discs 828 202-2] came over in a most satisfying way.

True, you don't get the same sort of forensic retrieval here that you might from the best solid-state rivals at this price, yet still the sound was vibrant and teeming with detail. Lee

Mavers' fingerwork on the frets of his electric guitar was very well carried; I loved the scratchy, rich, raw Rickenbacker sound, and the sheer energy that his hands were channelling into the instrument. His voice was also beautifully



LEFT: Icon Audio's little IR handset offers control over volume (including mute) but input selection is via the fascia control only

handled – it's hardly one of rock's finest but has an earthiness that really matches the music. Although it quite rightly sounded hard and acerbic, it never grated or made listening a chore. This song was mixed in a forward and compressed way, yet the amplifier certainly didn't dwell on this.

Many tube amps excel at recreating a believably spacious soundstage, and the Stereo 40 MkIV was no exception. Here the difference between Ultralinear and Triode modes was obvious, the former sounding wider and more expansive. As well as the extra air and space, additional bass and treble energy further augmented the big, out-of-the-box sound.

Yet, overall, I still preferred its Triode mode, which was capacious but also tidier and better ordered with superior image location between the loudspeakers. Some classic techno in the shape of Goldie's 'Inner City Life' [Timeless; FFRR – 828 646-2] had elements of the mix more tightly located while depth perspective was better too. The result was a joyously wide and enveloping electronic soundscape. ☺

HI-FI NEWS VERDICT

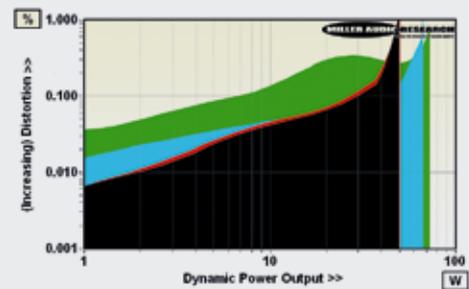
Now in MkIV guise and better value than ever, Icon Audio's latest Stereo 40 can take on both tube and solid-state amps at this price. It offers more power and control that you might expect from the former, plus a natural charm that one doesn't always associate with the latter. A real improvement on its predecessor, the Stereo 40 MkIV combines great sound with the bonus of Triode and Ultralinear modes.

Sound Quality: 84%

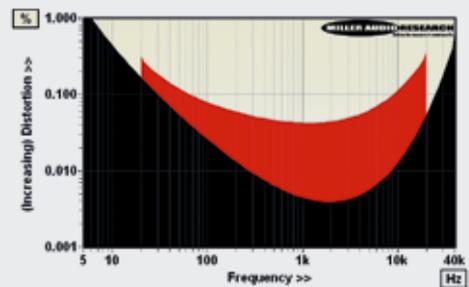


Although equipped with the same complement of KT88s, the performance of Icon Audio's Stereo 40 MkIV is superior in every key area of performance to its predecessor, the Stereo 40 MkIII [HFN Mar '13]. Power output has improved from 40W into 8/4ohm loads (via 8/4ohm taps, respectively) to 2x55W into 8/4ohm loads at <1% THD while its dynamic output has lifted from 40W, 40W, 51W and 54W to 52W, 52W, 69W and 73W into 8, 4, 2 and 1ohm loads [see Graph 1, below]. Power output in Triode mode is typically ~60% of that in Ultralinear, the Stereo 40 MkIV achieving 2x35W into 8/4ohm loads. In Ultralinear guise, and with 'Low gain/moderate feedback' selected [see boxout p59], the output impedance has reduced from 0.75-1.05ohm to 0.32-0.27ohm (20Hz-20kHz), improving low frequency damping, while the response is both flatter and more extended, reaching out to -0.22dB/20kHz and with -3dB points of 2Hz-90kHz/8ohm. There is no appreciable difference in frequency response between Ultralinear and Triode modes but there is a boost in subsonic bass (+0.5dB/5Hz vs. -3dB/5Hz) between 'Low' and 'High' sensitivity settings.

Again, compared with the MkIII, distortion is reduced across the audio bandwidth [see Graph 2] to 0.042-0.36% (10W/8ohm) and versus power output from 0.007%/1W, 0.05%/10W to 0.5%/50W in Ultralinear mode, and 0.005%/1W, 0.021%/10W to 0.31%/30W in Triode mode. Noise has also been reduced in the MkIV, the amplifier achieving an A-wtd S/N of 91.6dB in Ultralinear and 92.2dB in Triode mode (re. 0dBW) and with any residual hum/flicker noise less than -75dBV. By any measure, the MkIV represents a significant upgrade on the MkIII. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 8.5A



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

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	55W / 56W
Dynamic power (<2% THD, 8/4/2/1ohm)	52W / 52W / 69W / 73W
Output imp. (20Hz-20kHz/100kHz)	0.32-0.27ohm / 1.41ohm
Freq. resp. (20Hz-20kHz/100kHz)	-0.0dB to -0.22dB/-3.9dB
Input sensitivity (for 0dBW/50W)	133mV / 970mV (Low Gain)
A-wtd S/N ratio (re. 0dBW/50W)	91.6dB / 108.5dB (Low Gain)
Distortion (20Hz-20kHz, 10W/8ohm)	0.042-0.36% (Low Gain)
Power consumption (Idle/Rated o/p)	198W / 289W (70W standby)
Dimensions (WHD) / Weight	390x210x410mm / 25kg