Two-way, reflex-loaded standmount loudspeaker
Made by: Acoustic Energy Loudspeakers Ltd, Gloucestershire, UK
Supplied by: Acoustic Energy Loudspeakers Ltd
Telephone: 01285 654432
Web: https://www.acoustic-energy.co.uk
Price: £2500

Acoustic Energy AE2 40th

Hot on the heels of its AE1 40th Anniversary standmount, Acoustic Energy has reimagined another of its '80s icons in the distinctive, handed-pair shape of the AE2
Review: **Mark Craven** Lab: **Paul Miller**

Toward the end of 2025, Acoustic Energy announced its AE1 40th Anniversary loudspeaker [*HFN* Jan '26]. This resurrection of the AE1 compact standmount from 1987 [*HFN* Jan '89] adhered to the general specification of the original but made some key material changes, and – according to the manufacturer – was an 'unprecedented success'. Now Acoustic Energy has gone back in time once more for the limited edition AE2 40th Anniversary.

Priced £2500, this is based on the AE2 model which debuted in 1988 as the British brand's second speaker [see PM's boxout, p89] and was designed to provide a higher output, wider bandwidth (*ie*, more bass) sound than the AE1. The acoustic design remains effectively unchanged, including the asymmetrical driver layout and front-porting of the cabinet, but the company has taken refinements it introduced in the AE1 40th and added some specific to the AE2 40th. The aim, it states, is to improve the speaker's performance but not 'destroy what was great about the original'.

'The straight-sided cones are hand-spun from alloy'

CLEAR THE AIR

The tweeter is the same, newly designed 29mm anodised aluminium dome used on the revamped AE1. Ferrofluid-cooled and damped, and backed by a 'large' rear chamber to control backward radiation, it's said to deliver a lower distortion compared to the 25mm ELAC-sourced tweeter of the original AE2 speakers. A mesh grille protects the dome and the unit is mounted offset into the AE2 40th's baffle, giving rise to 'handed' cabinets.

Also borrowed from the AE1 40th are the speaker's two 125mm bass/mid drivers. These feature straight-sided cones that are hand-spun from aluminium, and hard anodised for improved stiffness. Again, they are slightly larger than the original (110mm) designs. The motor system has also been upgraded with the addition of an aluminium shorting ring and copper cap to reduce distortion. Three narrow reflex ports on the baffle are used to augment the output of the bass/mid pairing to a rated 35Hz (–6dB), which is a considerable improvement on the AE1 40th's modest 50Hz specification, and the tubes are now internally flared to reduce turbulence.

BETWEEN THE SHEETS

Crossover between the bass/mid drivers and tweeter is set at 2.2kHz (down from the 2.8kHz of the AE1 40th), achieved through a revised 'minimalist, low-order' network that owes more to the Signature version of the AE2 that appeared in 1994. So too does the piano walnut veneer finish option of Acoustic Energy's new speaker, which is akin to that model's piano rosewood. A gloss black colourway, more in keeping with the 1988 iteration, is also offered.

Choose either finish and the underlying enclosure construction is the same. The upgrade here is Acoustic Energy's 'Resonance Suppression Composite' (RSC) technology, a feature of its modern speakers – including the flagship Corinium [*HFN* Apr '26] – where two layers of HDF sandwich a bitumen filling. The 385x235x315mm (hwd) cabinet is also strengthened in specific areas by steel plates, a technique inherited from the Signature edition.

Typical installation of the AE2 40ths will be with the tweeters on the 'inside' to avoid excessive reflections from side walls, although Acoustic Energy's manual gives no recommendation in this regard. It does, however, suggest angling the cabinets in toward the listening position – which correlates with PM's own findings about their off/on-axis behaviour [see Lab Report, p91] – and to aim for minimum rear wall ⇨



RIGHT: Offered in gloss black and walnut veneer finishes, the AE2 40th's cabinet has 18mm and 22mm-thick constrained layer HDF/bitumen walls


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'It feels quite fresh and daring at a time when many speakers appear cut from the same cloth'
AE2 - 40th ANNIVERSARY
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and side wall clearances of 50cm and 1m, respectively. That said, with those ports facing front and the AE2 40th's single set of speaker terminals being recessed, a close-to-wall set-up is a possibility.

Because the front baffle is so packed with details – the three ports, the three drive units and all those exposed gold-coloured driver fixings – these standmounts have a somewhat 'busy' look. But this also feels quite fresh and daring at a time when many loudspeakers can appear to be cut from the same cloth. The quality of the cabinet finish is excellent, too.

When we auditioned the AE1 40th, Acoustic Energy had no dedicated partnering stands available. Now, though, it has teamed with hi-fi stand/support specialist Custom Design to create a £450 set to use with both its new AE1/AE2 speakers. These are 24in types, with dual, mass-loaded steel columns. There are spikes for the baseplate [see pic, opposite] and the plinth has four rubber pads for the cabinet – arguably better than the default Blu Tack option of the 1980s and '90s…

GROW FOR IT

As advertised, the AE2 40th Anniversary succeeds in 'scaling up' the performance of the AE1. On offer is a hugely improved bass extension and greater output (although this makes more demands on system amplification), allied to the speedy, dynamic characteristics of the smaller speaker. However, these improvements do appear to come at the expense of balance and integration, resulting in a sound that works better from one track/genre (and, likely, one system/room) to the next.

FRESH THINKING

Rock and pop music fares well, benefitting from the tight, fast bass and midrange punch. Fed by a price-commensurate Hegel H150 integrated amp [*HFN* Jan '26], the speakers sent the slick Michael Schenker guitar riffs and bubbling bassline on 'Rock Bottom' by UFO [*Phenomenon*, Chrysalis CHR 1059] flying into the room with the requisite drive and snarl. Some 50 years old, this classic rock track sounded fresh and lively. So did the simpler, acoustic guitar-and-voice of Bob Dylan's 'Blowin' In The Wind' [*The Freewheelin' Bob Dylan*, Columbia; 96kHz/24-bit], which had focus to the vocal and string detail.

> "UFO's bubbling bassline flew into the room"

The AE2 40th appeared less sure of itself with some more complex material. While the brass and low bass on the 'Main Title' of John Barry's orchestral score for the western flick *Dances With Wolves* [Epic 4675912] were endowed with richness and weight, the accompanying violins at first felt a little thin and lacking in texture, before being swamped by the choir toward the end. Similarly, the speaker never quite conveyed the smorgasbord of instrumental flavours peppering Shostakovich's fifth symphony, played by the Boston Symphony ⇢

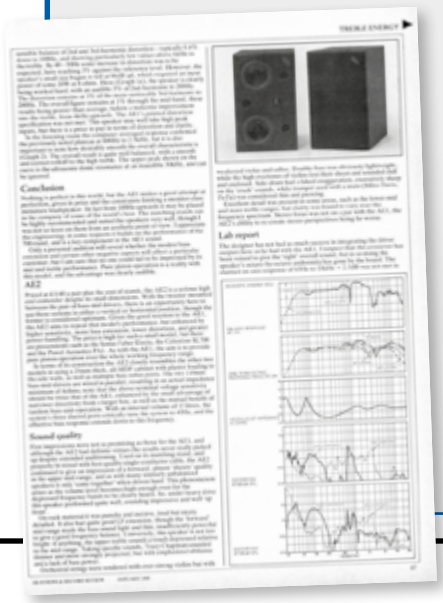


RIGHT: Both the 29mm dome tweeter and two 125mm bass/mid drivers have anodised alloy diaphragms, the latter reflex-loaded via no fewer than three front-facing ports

AE'S SPEAKER TRIPLET

Back in the day (not quite 40 years ago), *Hi-Fi News* ran a comparative review of all three Acoustic Energy loudspeakers – the AE1, the AE2 [inset page] and very substantial AE4 [*HFN* Jan '89]. The numeric suffix simply indicated how many of AE's custom 110mm 'high strength aluminium alloy spun cone bass/mid drivers, all mounted into KEF B110 chassis', were arranged into the baffle of each model. In each case the ported driver (AE1), or drivers (AE2, AE4), were married to a single ELAC-sourced 25mm alloy dome tweeter. The AE2 aimed to capitalise on the AE1's positive critical reception, boasting improved sensitivity, bass extension and power handling, while also claiming lower distortion. The original 25mm-thick all-MDF cabinet was mass-loaded with an internal layer of plaster while the two bass/mid units were wired in parallel – as they still are – trading tandem operation for a further drop in impedance. That original sample had a 4ohm minimum at 250Hz while the AE2 40th is slightly tougher at 3.7ohm/200Hz [see Lab Report, p91].

As the Anniversary model is a faithful recreation of the original, the forward response measured here is almost identical to that published in *HFN* Jan '89 [Graphs, left]. While the large dip through crossover was, and remains, the focus of technical attention, the sharp notch at 1.1kHz was thought to be a 'minor subharmonic' – with today's nearfield and CSD analysis we can see this is a substantial port tube mode (x3!). And the final *HFN* verdict? 'The AE2 was the least successful of the [AE1, AE2, AE4] trio…'. PM





LEFT: Standard 4mm/cable binding posts are inset to keep the back panel flush with rear wall

Orchestra/Andris Nelsons [Deutsche Grammophon; 96kHz/24-bit], despite sounding completely at ease with the composer's thumping percussion and dynamic surges.

LOW AND BEHOLD

Back to more contemporary fare and the subterranean bass effects on Imagine Dragons' 'Radioactive' [*Night Visions*, Interscope Records 0602537224210] sounded more growly than smooth down below. It was even a touch muddy, the AE2 40ths giving the impression of struggling with the sheer volume of low octave info. However, this was arguably pushing what is still a relatively compact model that bit too far. The speaker's handling of the bass in Billy Ocean's 'When The Going Gets Tough' [*Love Zone*, Jive CHIP 35] was massively enjoyable – tuneful, full of twangy body and not showing any unevenness as it jumped around the lower audio band. This up-tempo, synth-laden track also seemed to fit right into the AE2 40th's wheelhouse.

The fullness of the acoustic double bass that's so vital to Dominique Fils-Aimé's 'Birds' [*Nameless*, Ensoul Records; 88.2kHz/24-bit] left me in no doubt that the AE2 40th's *raison d'etre* – to plumb greater depths than its AE1 40th sibling – has been achieved. The snap and speed of the percussive parts of this neo-jazz track, those claps and clicks that erupt from the soundstage, were also striking. The vocals could have sounded softer and sweeter, but there was no arguing with their presence and projection.

There's a good feeling of upper-band attack and explicitness here, which worked well with Stevie Ray Vaughan and Double Trouble's version of Jimi Hendrix's 'Little Wing' [*The Sky Is Crying*, MoFi UDSACD 2078], which is a showcase for the bluesman's fast, expressive fretwork. The thrum of amplifier feedback that lurks in the left channel was also made obvious by the AE2 40th, a detail that's often only hinted at.

The dreamy soundscapes of 'Sweater Weather', from US rock band The Neighbourhood [*I Love You*, Columbia; 44.1kHz/24-bit], also proved hard to resist. Vocalist Jesse Rutherford was prominent in front of echoey, soft guitars and deep-reaching bass and drums, and the AE2 40th's delivery grew effortlessly in stature during the choruses. So, yes, this new take on an old favourite from Acoustic Energy might not match the simple-but-effective presentation of its more conventional stablemate, but has plenty of charm in its own right.

HI-FI NEWS VERDICT

This recreation of Acoustic Energy's sophomore loudspeaker is impressively authentic, and that means maintaining the original and unusual driver/port layout that no doubt contributes to its somewhat unpredictable sound. However, when it's 'on song' the AE2 40th Anniversary is thrillingly seductive, and its eye-catching looks and tempting price will help it stand out too. Is a reimagined AE4 coming next?

Sound Quality: 84%

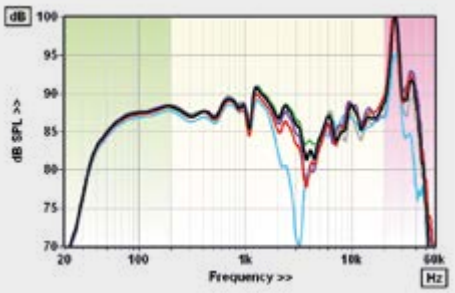
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LAB REPORT

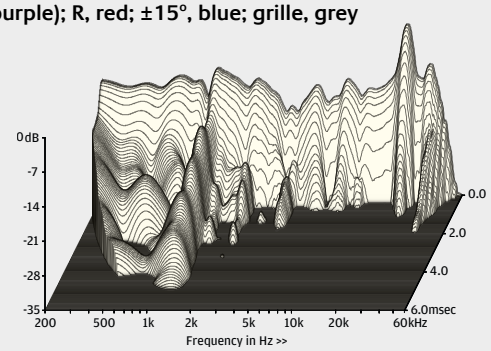
ACOUSTIC ENERGY AE2 40TH ANN.

As we saw in the AE1 40th Anniversary [*HFN* Jan '26], the new 29mm anodised alloy dome tweeter has an extended 45kHz response (–6dB re. 10kHz), following a vigorous (+11dB) breakup just outside the audioband at 25kHz [pink shaded area, Graph 1]. Within the audioband, response errors of ±4.8dB and ±6.0dB, respectively, are caused by a –10dB dip beyond the 2.2kHz crossover on the tweeter axis [purple trace, Graph 1] – an anomaly highlighted in our first review of the AE2 some 38 years ago [see boxout, p89]. The dip is reduced to –8dB if measured between the two mid/bass drivers [black trace] and to –6.5dB at 2m distance [green trace] but was worse on our 'right' loudspeaker [red trace] – hence the poor 3.5dB pair matching. The loss is compounded off-axis [blue trace] so do not toe the AE2's in or out... Finally, while this mid/presence dip integrates out with listening distance, the notch at 1.1kHz remains – any subjective consequence arising from the strong port tube resonance that is the root cause [see CSD waterfall, Graph 2].

Sensitivity is on target at 87.9dB/1kHz (or 86.8dB from 500Hz-8kHz) as is the very creditable 38Hz (–6dB re. 200Hz) diffraction-corrected bass extension. To achieve this, the AE2's three ports are tuned to a low 41Hz, albeit also exposing that pipe mode at 1.07kHz (and 2.25kHz) that overlaps precisely with the resonance noted above. Finally, this generous sensitivity and bass extension has been traded for a merely 'averagely tough' load – the AE2's minimum impedance is 3.7ohm/200Hz with a minimum EPDR of 1.8ohm/120Hz, staying above 2ohm from 150Hz-20kHz. Load-tolerant 60W+ amps are recommended. **PM**



ABOVE: Response inc. nearfield summed drivers/ports [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. L, black (2m, green; tweeter axis, purple); R, red; ±15°, blue; grille, grey



ABOVE: Response notch at 1.1kHz matches the port tube(s) mode. Note treble dome resonance at 25kHz

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83V – 1kHz/Mean/IEC)	87.9dB / 86.8dB / 85.2dB
Impedance modulus: minimum & maximum (20Hz–20kHz)	3.71ohm @ 200Hz 22.4ohm @ 76Hz
Impedance phase: minimum & maximum (20Hz–20kHz)	–49° @ 92Hz +46° @ 22Hz
Pair matching/Resp. error (200Hz–20kHz)	3.5dB/ ±4.8dB/±6.0dB
LF/HF extension (–6dB ref 200Hz/10kHz)	38Hz / 45kHz/46kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.1% / 0.1% / 0.6%
Dimensions (HWD) / **Weight** (each)	385x235x315mm / 14.5kg