



The AE Team

Returning to UK ownership and celebrating over 30 years in the business, **David Price** talks to Acoustic Energy about its ethos, past, present and future

Our story starts in 1987," says Acoustic Energy's managing director Mat Spandl, "when an engineer called Phil Jones had been working on a small compact pro monitor speaker using some advanced techniques for the time. It was sandwich aluminium construction drivers and very heavy-duty cabinets. He wanted to get the dynamics of a larger speaker in a small enclosure. In developing that he came up with the AE1, and joined with two other guys who did the financial and business side. That company became Acoustic Energy Ltd. and that was how the ball got rolling."

The idea was for the AE1 to be a pro monitor, but the hi-fi buying public twigged it was actually a very good audiophile speaker, and that began the shift from professional audio to domestic. Phil Jones had left by the early nineties, and several changes of management followed. "I joined in 1995 as UK sales and marketing manager," says director Neil Truckell, "and employed James Luce (now creative director) here in 2001 in marketing and technical support. Then Mat joined as a design engineer in 2005."

"We overlap in some areas and in other areas not so much. It works very well like

that", says Mat. "We're a down-to-earth bunch of people and I suppose we're all pretty grounded about what we do. If anyone has delusions of grandeur they tend to get pushed to the side a little bit", adds Neil.

Although they haven't exactly got cider coming out of the cold water taps, there's definitely a West Country vibe to the way Acoustic Energy is run. "The character of the

"Multi-channel speakers sold well for a while, but today's market has gone back to stereo hi-fi"

company very much reflects the character of the staff and we are all fairly local, everyone is from this part of the world", says Neil.

"There are a few West Country hi-fi companies and we all tend to have similar personalities."

"Becoming an independently owned British loudspeaker company once again is a very exciting development in AE's history," comments Mat. The company continues to operate and manufacture from its Cotswolds HQ, together with dedicated manufacturing partners overseas to produce its range of

loudspeakers. Mat continues: "The obvious reason we're here is that the land costs are a lot lower, yet we are not too far off in terms of transport links. So it's a very good location to get around the country, but also for getting access to good stocks and access abroad. It's a great strategic location."

When Acoustic Energy was born in 1987, the speaker market was a very different beast. It's hard to understate the changes it has been through. The ghost of the seventies was still visible, where bigger was better in terms of loudspeakers. Then the AE1 turned things around – arguably alongside the Celestion SL6 and Wharfedale Diamond. Here was a really high-quality compact design that sounded far bigger and better than most larger ones. "It started the trend towards smaller, slimmer boxes where less was more", says Neil. "I think the AE1 was probably the first high-class compact to be shown to get really serious performance from a small speaker. It is the most useful, practical size for most people."

"The loudspeaker market went heavily into AV in the late nineties and early two thousands," says Neil. "5.1 was huge for a while, but once everyone had got something they didn't seem to come back for more. By



AE's friendly and informal Cirencester factory has a strong West Country feel

2010 it had got a bit carried away with 7.2 and all those variations and this had become too much for the average user. Acoustic Energy was part of that scene; we produced various multi-channel speaker packages, which sold well for a while, but today's market has gone back to stereo hi-fi. People still want subwoofers and centre speakers, but there's nowhere near the demand that there used to be. Stereo is settled now, probably at the level it is going to be at for people who want a better sound from their systems, and want that upgrade from the Bluetooth speakers – which are the new entry-level products. It's a pretty stable market now, with world trends being fairly similar. Some countries are more behind

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than others but generally within a couple of years of each other."

"I think Britain is at the forefront of most of the curves," says James. "Indeed, we have done some advanced products, which were probably too early – like wi-fi speakers and Bluetooth back in 2006. That's where technology has moved on. Headphones are huge now, but if it gets people interested in listening to music then the long-term effect is good, as those people want to get better sound. They'll move on naturally to conventional hi-fi. The loudspeaker market doesn't tend to get affected by this so much, and the business stays fairly stable as long as you're keeping up with trends in terms of finish and design."

"Active is the one area where there has been some growth, but still relatively small for domestic products. With the pro side, of course, it's really popular. Hi-fi people don't seem to be able to get outside that 'mix and

match' mindset, it's part of the hobby. But it makes huge sense to do things in the active domain." Mat adds that there is an educational job to do: "If we can educate consumers on the benefits of active loudspeakers for streaming front ends, it'll be a big opportunity for our industry".

Spot the difference

Neil says that he was quickly persuaded by the new AE1 Active. "One of the first demos James did to convince me that we should launch this was with an old passive AE1, CD player and amplifier. We played a couple of tracks, then again after taking out the amplifier and just plugging the CD player into the AE1 Active. It was like night and day, with massive benefits in terms of overall dynamics and detail. The difference was far greater than the sum of the parts."

"On the technical side, there's a couple of reasons why you can get more out of that speaker", says Mat. "Losing the passive crossover gives you more headroom, so if, for example, you have an amplifier capable of delivering 15V to a speaker and you have a passive crossover in the way then quite a significant proportion of that doesn't make it to the speaker. With an active design, you get the full 15V to the drive unit, meaning that pound for pound your speaker can put out more dBs. As you have a line-level



The AE107 centre channel and AE100 standmount from AE's entry-level range

THE AE1 ACTIVE

"The original 1987 AE1 was basically a response to the widely respected BBC LS3/5A design," says Mat. "Effectively it was Phil Jones' reply to this classic small speaker. He took it as a starting point and said, 'Let's fix the things I think are wrong with it'. He wanted to make a small, uncoloured speaker that could take 100W of power without falling apart. We have taken that baton and run with it. The new AE1 Active (HFC 421) has been a joy to work on. It's a special project for us, but very important."

"Many hi-fi dealers aren't keen on active loudspeakers," he explains, "so it's our job to show them and the buying public how good they can sound. The speaker was universally liked when we launched it at The Bristol Show last year, both in terms of sound and value for money. When you buy a separate amplifier you, of course, pay for an expensive case, whereas that doesn't happen with an active speaker because it shares the cabinet with the drive units. So, the price of the system is much cheaper for the quality you're getting."

"The £999 AE1 Active is the equivalent of the AE1s strapped to the back of a £2,000 amplifier," points out James. "We want to keep the value and the price at that lower point and, while it's not cheap, the sort of AE1 price point was where we wanted to hit with that speaker. We still feel that in any A/B demo of an equivalent passive system to an active system, the active is a better system from all technical sides. So it is one of those things, we think, that as education gets through to the public they continue to grow in popularity. But at the end of the day, we are open to make what people want to buy really. It is down to the public to try and tell the dealers to get these things in."

"We developed the AE1 Active back around 2012, but market demand wasn't there so we waited for the right time to release it. This was partly down to our dealers not always pushing active products because it wasn't what they usually sell. Partly it was down to a lack of understanding by customers of the technical benefits. You get rid of the most destructive element of the speaker, which is the passive crossover. You're not having to put that signal through resistors, capacitors, inductors before you get to the drive unit, it is all dealt with before. That has quite an impact on the sound, a certain kind of clarity you get from an active speaker, which is quite immediate. We found it sounded sweeter with Class AB amplification because – while Class D has come a long way – we still reckon there is a different feel to the sound, which we felt wasn't as good for our purposes. We have kept the warmish AE1 sound, but it's much less compressed in active guise."



Yellow Shark Studios is using the AE1 Active for mixing the new Red Box album...

crossover, the other thing you can do is have multiple EQ stages, which means you've got very fine control over the response of the loudspeakers and you can fine tune the sound to a much greater degree than would otherwise be possible. In technical terms, these are really significant."

"Like all our high-end designs," says Mat, "the AE1 Active uses metal mid/bass drivers, something we as a company are now famous for. Soft cone materials go through a number of break-ups. You select the material to dampen these break-up modes and to tune the sound so that, even though the cone has

The AE1 was a compact design that sounded far bigger and better than most larger speakers

gone floppy at some frequencies, it can still sound good. Our approach, however, is to make a stiff cone, which doesn't have the break-ups in the working band; instead it happens out of band so the cone doesn't add its own resonances. The challenge is quite severe because when it does break up the material has low damping. The skill is in controlling it and making sure it doesn't detract from the sound overall. We have a patent for a metal cone, which has this thick anodised layer on each side. It is so thick and so strong that it actually increases the stiffness of the cone and pushes the break-up to an even higher frequency compared to the aluminium cone on its own. We still use this



With +/- 2dB treble and bass adjustment, the AE1 Active can be tailored to any room

technique today – a thick anodising process that some people call a ceramic sandwich. It takes a long time to do and is quite a tricky process to get right."

"We match this on the AE1 with a special metal dome tweeter that has a very wide sweet spot, says Mat. "This is simple to make to high consistency and easy to get right. Domes tick a lot of boxes for us, even if they're not especially trendy right now. We have added small wave guides in our recent designs, which help to offset some of the negatives, improve dispersion, lower distortion and increase power handling. Fabric and metal domes both have their strengths; we tend to focus on matching them to the mid/bass drivers to retain the tonal characteristic across the entire bandwidth." James adds that: "We have tried various things over the years. Ribbon tweeters are very nice in isolation when you look at the sound as a whole, they flounder. They don't necessarily blend together with mid/bass drivers that well."

Who are you?

"I would define the Acoustic Energy sound as being really enjoyable," says James. "We have always made this type of speaker. All our most commercially successful models have been the most enjoyable to listen to. I think you can make things accurate, you can make things technically do a great job at one thing or another, but actually it comes down to getting a sound. We all agree that there's no such thing as a neutral loudspeaker so we do punchy sounding, tonally slightly warm yet pacey speakers. There's a certain character which the metal driver in particular has, it's very clean and powerful sounding. But even in our entry-level models with the paper drivers we still aim to get that sonic character. When I listen to other designs I do find there's a tendency for a harder, brighter kind of sound, which isn't necessarily any more musical. It's probably better on the computer or in an anechoic chamber, but we do a lot of the work by ear. Of course, we get the technical side as good as it can be, but all final tests are done by ear. We think that is where good old-fashioned experience comes in! All our best models – the AE1, the old 109, the new 100 series, the Active – they are all fun speakers. We make things that we like listening to."



Acoustic Energy speakers are available in a range of contemporary finishes

"We re-established ourselves at the entry-level end of the market with the 100 series," says Neil. "Now the priority is the high-end with the new 300 series, which gets launched this year and then, following that, the 500 series in 2019. The idea is to make products that people love to own and use, which is what we've always done. The amount of people who still use our speakers from two or even three decades back is amazing. "We're going to keep developing as much as we can", adds Mat. "The new 300 series has slight tweaks to the drive units, changes to the profile of the bass driver and so on. But unless we can improve something, we won't change it. We keep looking at techniques to improve the drivers, and they get better in an evolutionary way" ●

RED BOX

The AE1 Active is now earning its living in the pro sphere. Classic pop band Red Box is currently mixing its new album, *Chase The Setting Sun*, with it in Yellow Shark Studios in Cheltenham, and lead singer and songwriter Simon Toulson-Clarke has been using a pair for home studio duties too. Mixing Engineer Clint Murphy runs them next to professional Genelecs to get a sense of what the new album will sound like on high-quality domestic hi-fi systems. "We've had fantastic feedback from the guys in Red Box, who often have difficulty transitioning from using large pro monitors to hi-fi speakers", says Acoustic Energy's Neil Truckell. "Hi-fi speakers tend to aim for wide bandwidths and delivering a pleasant sound, whereas studio monitors are all about midrange accuracy. They've found the AE1 Active bridges that gap far more easily than most."

Attending one of the mixing sessions, I found they fared well with an upfront sound, holding up against the larger, more expensive Genelecs very well. The band's new album incidentally is full of catchy tunes – the like of which many remember from their eighties smash hits, *For America* and *Lean On Me*.

