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### EQUIPMENT REVIEW

## **ELAC FS407 loudspeaker**

By Alan Sircom

LAC's new 400 series models are designed from the outset to tick the boxes. They are elegant, slimline floorstanders in rich, modern finishes, the kind of thing that wouldn't send an interior designer into apoplexy. But more importantly for us, they manage to create a sound bigger, better and cleaner than you might expect.

It's not an easy job, being a good loudspeaker in 2013. The loudspeaker needs to be bright enough to punch through the tweaked-up competition, but not so bright that it has a peaky treble in its own right. It needs to sound forward, lest it fail to make its presence felt in demonstration, but not so forward that it only shines in demonstration and two weeks later, it's Audiogon fodder. In addition, with fewer people intelligently system building today (the downturn in dealers combined with unpredictable advice from elsewhere has all made the idea of mixing the right products something of a crap shoot) means the loudspeaker needs to have broad enough shoulders to cope with anything from a low-powered single-ended triode design to kilowatt behemoths. That's one heck of a balancing act.

It's also a balancing act the FS407 excels at.

The two and a half-way bass reflex design uses ELAC's state of the art drivers, including the excellent JET 5 tweeter, based around Dr Oskar Heil's Air Motion Transformer tweeter, which uses a folded polymer strip and aluminium struts in a high-power magnetic field. The AMT design dates back to the 1970s, but has really come into its own in a post-CRT televisual world, because the strength of the magnets in the tweeter could really tear apart a CRT picture screen.

The JET tweeter is coupled to a pair of 150mm AS-XR cones, also from ELAC. These use an aluminium-paper sandwich design for the woofer cone, with the distinctive 'crystal' pattern across the cone itself. That takes care of the 'AS' part of the name; the 'XR' or 'extended range' is there because of an additional strut at the centre of the coil former attaches to the rear of the cone in addition to the usual voice coil connection.

The downward firing port is housed in a very elegant plinth arrangement, which means instead of firing into the floor, it fires into a more predictable baseplate, so the character of the bass reflex will not change subtly if you move from wood flooring to stone or concrete or even carpet. The M8 screw threads in the outriggers from this bass can house spikes or rubber inserts depending on your floor. This whole arrangement not only looks good, but it makes the loudspeaker all but independent of placement. It can go close to the rear and side walls in small rooms and out in free space in bigger ones. A single pair of high-quality WBT connectors in the back plate – and a magnetic grille that's best not used for critical use – complete the deal.



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The AMT also bestows upon the speaker another slight bonus. It seems to make it less sensitive to room furnishing. In fact, if anything unlike almost all loudspeakers, that tweeter fares better in more live environments than the normal recommendations of a room with a lot of diffracted surfaces and absorption. So for once, here's a design that can actually sound good in those huge, open plan minimalist steel and glass rooms brochure designers seem to think best to show off loudspeakers.

The FS407's one trade-off is it's harder to drive than the specs would have you believe. On paper, this is an 88dB design with an easy four ohm nominal, 3.5 ohm minimum impedance and comfortable with anything from a 40-300W amplifier design. The reality is it's more demanding that those specs imply, and I'd recommend an amplifier that can deliver goodly amounts of voltage and current without straining. The good news is it's not that fussy a design, and far from being a loudspeaker in search of an amplifier, crushing lesser mortals in its path. We found it worked exceptionally well with the Electrocompaniet integrated's kind of power delivery. Halve that and while on paper you still have a match, only if you are playing quietly in a matchbox. This is no big stumbling block, given the price tag of the FS407, but anyone contemplating using the loudspeaker with a smaller solid-state design (like a 47 Labs Gaincard, for example) might be best served thinking again.

If you were to sum up the FS407 in a single word, it would be "professional". Not in the cynical "...like a slick used car salesman" way; more in the fact that every aspect of the FS407 bespeaks a highly dedicated, professional approach to loudspeaker making. Audio has a new and frankly terrible reputation of producing shed-fi; enthusiastic near amateurs knocking out products that might (or might not) sound any good, but look as if they are held together by gaffer's tape and each product is materially different to the next. While such things should be praised when appropriate, we also need the professionally made products, built in an environment of engineering prowess and technological development; a quick glance at the FS407 shows that's precisely the world it came from. Fortunately, it backs up that fertile science background with damn good sound.

If you were to sum up the sound of the FS407 in a single word though, it would be 'agile'. There's no bloom, no overhang, no softly softly approach to the sound. It's not all about the transients, but the attack and decay of individual notes are extremely rapid fire. One thing that sets the FS407 apart from a lot of its peers is its ability to deliver the sound it makes at low, medium and – depending on amplifier – high levels without a problem. This is a rarity; there are loudspeakers

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▶ that sound great at low levels, but have a distinct price ceiling, and there are those that only come into their own when the volume levels are cranked. The FS407 is the rare alternative that holds its own across the board. As someone who enjoys both late night listening at whisper levels and the occasional air guitar session at a fair lick and all points in between, the FS407's rare gift of not falling apart sonically across a wide range of volumes is entrancing.

The overall balance is pitched clean and clear across the board, with an extended top end that – thanks to the AMT design – manages to combine a lot of high frequency insight and clarity without becoming bright or lean sounding, although those who think the audio world took a wrong turn by moving on from fabric dome tweeters and doped paper woofers will invariably find this design – and practically every other loudspeaker made in the last two decades – too bright.

How this comes across is the FS407 make a heck of a lot of sense of Elizabeth Fraser's dreamy vocals on 'Teardrop' by Massive Attack; unlike her random vocal sounds in her Cocteau Twins days, the lyrics to this track are in coherent English, but as she uses her voice more like a musical instrument and less like a series of sung words, it's sometimes to make sense of that prose. Through the FS407, however, you could clearly hear each articulated word, stand out from the trippy, electronica-derived background. This wasn't a cold, eviscerating analysis of the recording, just that the music made that bit more sense when played through the 407s because the detail was up and the distortion was down. In this respect, the 407 shares the winner's podium with some very expensive company, even including top notch speakers like Magicos and Raidhos.

Where those first-class transducers have over the 407s is generally a broader sense of dynamic range and an ability to increase that unchanging sound from quiet to loud to extremely loud levels, and – in the case of some of the bigger floorstanders in big rooms, reaching further into the bottom octaves. However, as we are talking anywhere between a three-fold and eightfold increase in price, you have to admire ELAC for delivering the goods at a very keen price.

There's an old inverted snobbery about elegance in audio; the better something looks, the worse it sounds. The FS407 debunks that particular audio myth extremely effectively. It looks svelte and elegant in a cool modern European style, but equally it's efficient, easy to drive, goes well in a wide variety of less than perfect rooms and sounds great on really good equipment. It would be wrong not to give it high praise.

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#### **TECHNICAL SPECIFICATIONS**

Type: 2.5 way bass reflex floorstanding loudspeaker

Tweeter: 1x JET 5 AMT

Woofers: 2x 150mm AS-XR cone Frequency response: 30Hz-50kHz

Sensitivity: 88dB/2.83V/m

Nominal Impedance: four ohms Minimum impedance: 3.5 ohms

(at 200Hz)

Nominal/Peak power handling:

130/170W

Crossover frequencies: 450Hz, 2.5kHz Dimensions (WxHxD): 26x103.8x31.4cm

Weight: 20.4kg

Finishes: Black Gloss, White Gloss, walnut Gloss, Tobacco Gloss

Price: £3,239 per pair

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