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Devialet Ensemble system

by Alan Sircom



Devialet has received a lot of (mostly extremely positive) press since its launch. The company's continual development and an increasing range of designs has made it one of the most successful newcomers in high-end audio today. However, its new Ensemble system represents a radical departure, because it extends the 'does it all' approach to the speakers. This is a turnkey system, and really rather good it is, too.

Ensemble comprises the Devialet 120 – the entry point to the concept – coupled with a pair of custom-designed Atohm GT1 loudspeakers. These two-way, rear ported designs are, in principle, no strangers to the pages of *Hi-Fi+* (we reviewed them in issue 93), but the Devialet-derived version removes the logos from the front, and the room-matching boost/cut dial from the rear panel... for reasons that will become clear soon. From experience, the GT1 on its own has a reputation for speed, precision, and fun.

The Devialet 120 is fascinating in its own right. Normally, when brands try to make a lower-cost version of a popular design, they play an electronic engineering version of the balloon game, sacrificing subsystems in order to achieve the right financial altitude. On the surface, the 120 follows the same path, but in fact it's closer to a completely new design in its own right. Yes, it still uses the same 'ADH' Class A/Class D hybrid core concept, the same 24/192kHz 'Magic Wire' internal DAC architecture and uses the same firmware as the larger models, but it's a completely new design, intended for lower cost applications than the 200/400 and the D-Premier/250/800 models. How it does this is by limiting flexibility a little. So, there's just one line/phono input, four S/PDIF inputs, Ethernet and USB, and no provision for output or dual mono operation (analogue pre-outs for power amps are an option though). The phono stage is less freely

configurable than the bigger models. And, the 120W amp is on a slimmer chassis. Naturally, it can support the company's own AIR streaming (via WiFi or Ethernet).

There are two big pieces in the jigsaw puzzle that have slotted into place in the last two updates; they apply universally to the Devialet concept, but are worth stating here. The first is the bi-directional USB option (from firmware 7.1.1); if you simply use the USB cable to feed digital music from computer to DAC and amp, this is perhaps not a big issue. On the other hand, if you have a turntable, a computer, and a program like Audacity, your Devialet just became the easiest high-performance way of ripping your vinyl. No more scrabbling round for a suitably good quality analogue-digital converter or unplugging your phono stage from the amp for the best possible performance; one box does it all. And, with metadata population programs like Collectorz, the whole process of archiving your albums suddenly moved out of 'chore' valley. The phono stages in the 'better' and 'best' Devialet options improve on the quality of the 120, but not by a significant margin (unless you are fond of amp-strangling low load MC cartridges).

The next is SAM, short for Speaker Active Matching. As the name suggests, SAM helps match the output of the Devialet to the input of the loudspeakers, although 'active' in this sense means 'adapting to the demands of the loudspeaker in real-time' and not 'bypassing the passive crossover network to directly drive the loudspeakers'. This works by using a SHARC chip to model the characteristics of the sub-150Hz performance of the loudspeaker and apply those parameters to every sample it receives from the digital (or converted analogue) sources. It controls the loudspeaker in the phase domain (meaning the loudspeaker is phase correct from top to tail), carefully controls the excursion of the woofer (which has a knock-on effect of making it reach ►



▶ deeper than it has any right to) and provides robust heat protection by knowing the thermal limits of the loudspeaker. All these aspects of SAM sit over and above the ‘raw’ sound of the Devialet system, and if switched out, has no effect on how the 120 sounds.

The ‘how it sounds’ part for the 120 is extremely easy. It sounds like a Devialet; cool, calm, and collected. It’s extremely detailed (but not in an analytical, detached, or musically dead way), extraordinarily precise, stunningly focused, and produces music from an unearthly silence. It is a hard sound to pin down because it is so precisely right, and as a result you end up describing it in terms of what it isn’t like, because most other things wind up sounding as if they are artificially laying on the warmth or the bounce or the soundstaging. The 120, like all the models in the Devialet range, tells it like it is.

And if you think the 120 is somehow compromised by its place in the Devialet hierarchy, or that 120W power rating, guess again. This gives its all, and never shows its limitations. More, when you factor in the speaker control SAM bestows on a loudspeaker, if you are running out of steam with the 120 you are either determined to deafen yourself, trying to get full-thickness sound out of a small speaker in a vast room, or have hooked your Devialet to a couple of pieces of concrete masquerading as the drive units of a loudspeaker. The 120s bigger brothers bring more flexibility in terms of cartridge matching, more connectivity for both analogue and digital sources, and the ability to add enough power to drive a pair of speakers to PA levels. If you do a tight head-to-head comparison between the 120 and 250 (as I did), there are

also slight advantages in terms of detail resolution, focus and bottom end drive. If you are using a loudspeaker that does not form a part of the SAM-approved list, those advantages become all the more noticeable, and the 250 shows it has all that extra muscle on tap. And, we effectively summed up the Atohm as fast, precise, and fun both earlier in this review and in our review of the loudspeaker back in issue 93.

SAM is like firing an audio system’s afterburners. I kept channelling Scotty from Star Trek when listening to the Ensemble. “Ye canne change the laws o’ physics, Cap’n...” and yet a loudspeaker that (by virtue of its box) shouldn’t be capable of delivering much below about 50Hz is reaching down to the bottom octave with ease. This comes down to ▶

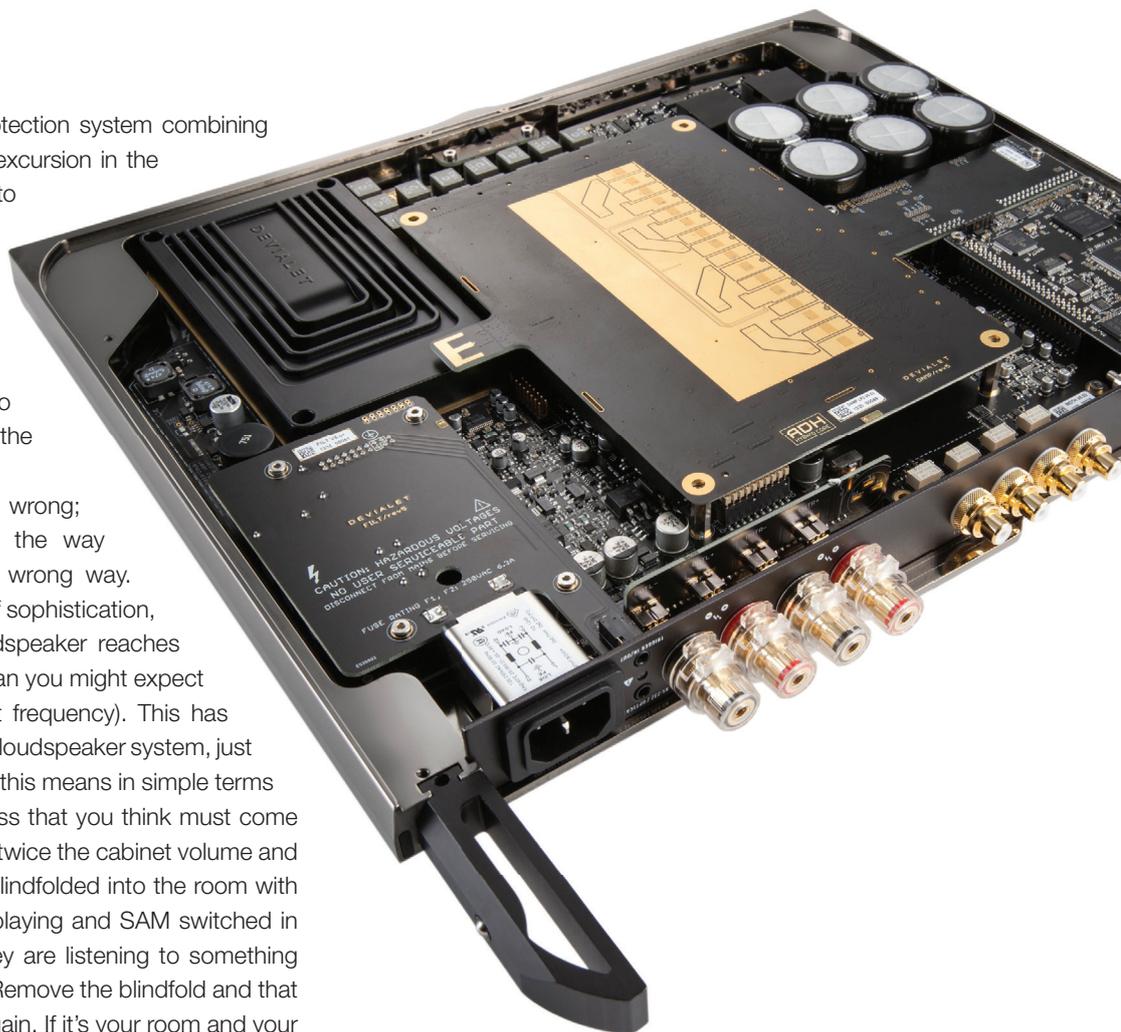
“The ‘how it sounds’ part for the 120 is extremely easy. It sounds like a Devialet; cool, calm, and collected. It’s extremely detailed (but not in an analytical, detached, or musically dead way), extraordinarily precise, stunningly focused, and produces music from an unearthly silence. It is a hard sound to pin down because it is so precisely right.”

▶ SAM's ability to act as heat protection system combining with its ability to manage cone excursion in the speaker. I'm actually struggling to express this without recourse to using the single, guttural, extraordinarily Anglo-Saxon word that gets uttered the first few times you press the SAM button. In fact, you only need to press it once; you only repeat the experience for a laugh.

The physics isn't wrong; rather we've been looking at the way loudspeakers can work in the wrong way. Suitably controlled to this level of sophistication, SAM works wonders. The loudspeaker reaches down to a low point far lower than you might expect (as in, just beyond its resonant frequency). This has been 'notionally' possible from a loudspeaker system, just never realised in the flesh. What this means in simple terms is true, taut, and really deep bass that you think must come from a loudspeaker with almost twice the cabinet volume and drive unit size. Walk someone blindfolded into the room with Atohm/Devialet GT1 speakers playing and SAM switched in and they will probably think they are listening to something closer to a pair of big Tannoys. Remove the blindfold and that Anglo-Saxon word jumps out again. If it's your room and your system, it's said with a big smile, too.

You will reach for those big bass pieces of music, be it Bach's Toccata and Fugue, or Burial, and most will wonder if there's a route back from all that bass. In fact, what you are also hearing is the corrected phase response, and in a two-way like the Atohm, that makes for a sound that is utterly musically faithful across the board. It's a studio-like precision, but without the studio-like scalpel through your music. Female voice in particular takes on an 'in the room' vividness that draws your attention in a way few other systems at the price can approach. And yet, I also know SAM has a similar transformative power that can be put to other loudspeakers big and small. Put simply, the Devialet Ensemble system allows the loudspeaker to be all it is capable of being, but it also shows there is a lot more to get out of most loudspeakers through SAM.

Is there a trade-off to SAM? OK, so if your idea of 'loud' is the police kicking in your door to tell you to turn the music down, then the trade-off is you can't drive this into clipping and end-of-driver-life sessions are a little more subdued. And those who set their watches to 1970s time seem to find the very idea of extending the performance of a loudspeaker this



way somehow 'tampering' with the music. For myself, I find the idea of sacrificing this much improvement over the sound for a notional dislike of the idea of signal processing to be 'somewhat' self-defeating. The advantages to SAM (phase correction, the fact that you can only break your drive units by head-butting them, the transformation of a bookshelf loudspeaker into something that sounds like it should be the size of a Dalek, the way that interacts with the room meaning less treatment, and the sheer sense of control it bestows to the sound in general, not just the bass) in my mind vastly outweigh any misgivings about 'inserting the Devialet sound between the samples' and other non-arguments put about by the suspicious and the cynical.

The Ensemble system is perhaps one of the best ways to experience both what the Devialet thing is all about, and especially what SAM does for a system. Where in previous firmware versions, you could tailor the amount of interaction SAM produced, it's now either 'engaged' or 'disengaged' (and you can switch between the two states on the remote handset, if you delve deeper into the online configurator). ▶



► I'd like to say the effect is profound, but that seems like understatement. It controls and energises the loudspeakers in a way that makes even active drive seem a little flaccid. The Atohm GT1's are already fast, taut sounding loudspeakers, which makes for a good mix with the precision and detail of the 120, but the synergy and bass produced by SAM makes the match almost unassailable.

What makes this Ensemble system so good, and so important is that it is the ultimate turnkey system. If you have a small to mid-size room, this is so natural a solution, you would be hard pressed to improve upon it on fairly basic terms of bass control, depth, and precision. That this holy trinity of low-end goodness creates ripples of improved performance right up through the audio band only serves to reinforce just how good this system is.

There are four conclusions to be drawn from this. First, if you have a loudspeaker on Devialet's ever-increasing list of SAM-ready loudspeakers, you owe it to yourself to hear what a Devialet can do for that loudspeaker. Secondly, if you have a Devialet and are in the market for a pair of loudspeakers, the list of SAM-ready loudspeakers is the only shortlist of products you'll need. Third, if you have a Devialet and loudspeakers that are not on the SAM list, start a campaign to have your speakers tested and matched (and if they are too old or obscure, think about trading up for ones on the list). Finally, if you are in the market for a complete system with bookshelf loudspeakers, the Ensemble is a hard act to beat. Put simply, Ensemble sets the benchmark against which audio should now be judged. And if you think that's good, wait 'til you hear what it can do with really high-performance loudspeakers! +

TECHNICAL SPECIFICATIONS

Devialet 120

Digital inputs: maximum 4x S/PDIF (RCA), 1x Toslink, 1x Toslink Mini inputs, WiFi, Ethernet, bi-directional USB

Analogue inputs: 1x RCA pair (line or phono)
SD card (supplied) for upgrades and configuration

Maximum power: 120W per channel

Digital/Analogue Converter: 'Magic Wire' 192kHz/24bits

Digital Signal Processor: 192kHz / 40bits floating-point

Dimensions (WxDxH): 383mm x 383mm x 40mm

Weight: 5.65Kg

Atohm GT1 Devialet Ensemble Edition

Type: two-way bass reflex standmount loudspeaker

Drive unit compliment: 1x 28mm fabric dome tweeter,
1x 150mm alloy cone mid/woofer

Frequency response: 45Hz-30kHz

Frequency response with SAM: 25 Hz (- 3dB)

Crossover frequency: 2.5kHz

Sensitivity: 89dB

Impedance: six ohms

Power handling: 100W

Peak power: 200W

Dimensions (HxWxD): 33x20x26.5cm

Weight: 8kg

Complete system price: £6,290

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