



## Chord on the go

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## Instant replay

How to digitise all your old LP, cassette and tape recordings



# Hi-Fi Choice

**PASSION FOR SOUND**

Issue No. **386**

July 2014

# Superstar system

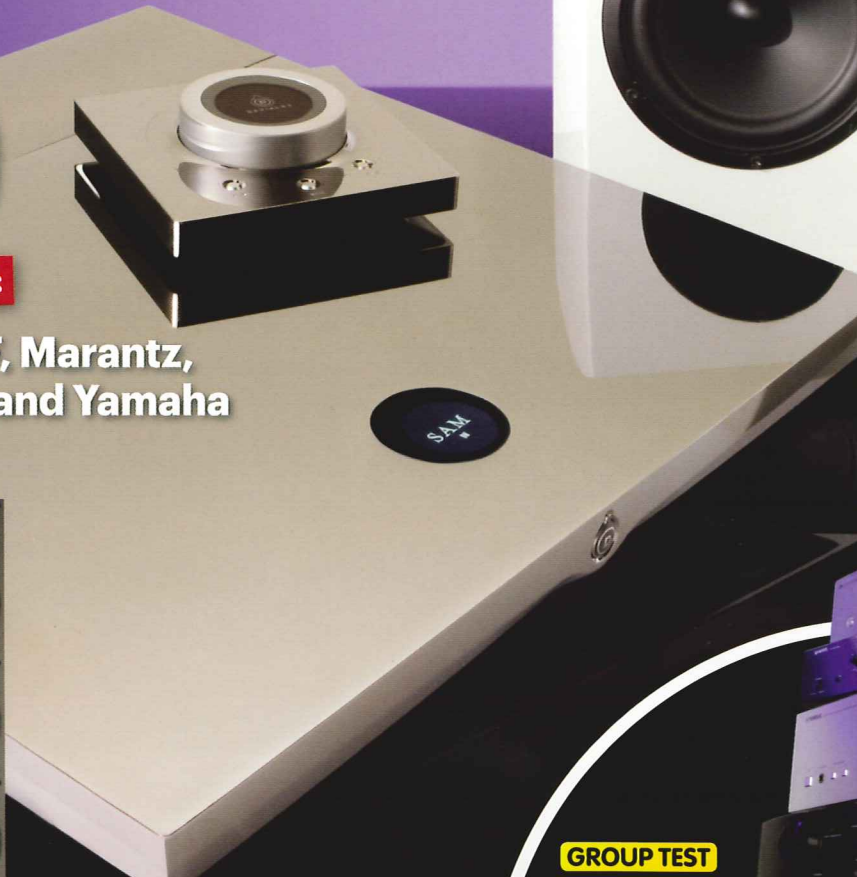
**WORLD EXCLUSIVE**  
1ST FULL TEST

Revolutionary Devialet amp and speakers set new sonic standard

# 30

**PRODUCTS ON TEST:**

Arcam, Cyrus, KEF, Marantz, NAD, Sonus faber and Yamaha



## Rhythm master

B&W's 683 S2 floorstander will get your toes tapping

**GROUP TEST**

## Turn it up!

Six of the best integrated amplifiers under £400



JULY 2014  
9 770955 111106  
£4.50  
07  
PRINTED IN THE UK  
US\$9.99



► **DETAILS**

**PRODUCT**  
Devialet Ensemble

**ORIGIN**  
France

**TYPE**  
Amplifier and  
speaker package

**WEIGHT**  
Amp: 5.65kg  
Speaker: 8kg

**DIMENSIONS**  
(WxHxD)  
Amp:  
383 x 40 x 383mm  
Speaker:  
200 x 330 x 250mm

**FEATURES**

- Amp: Class A/D hybrid analogue/digital
- Speakers: Atohm GT1 SE with matching Zef cable
- AIR streaming module
- Fully configurable inputs for Ethernet, USB, RCA (line-level and S/PDIF) Toslink
- Firmware updates via SD card/website
- 24-bit/192kHz upsampling DAC
- Phono stage

**DISTRIBUTOR**  
• Absolute Sounds

**TELEPHONE**  
0208 9713909

**WEBSITE**  
absolutesounds.com  
en.deviale.com



# Forward thinking

From one of the most advanced hi-fi designers of our age comes an amp and speaker package to set the standard. **Andrew Simpson** investigates



Challenging hi-fi's conventions has been at Devialet's core since the French high-end maker launched its groundbreaking D-Premier amp back in 2010. Concepts including customising settings via an onboard SD card and online configurator, along with firmware releases ensuring your amp stayed up to date brought fresh thinking to long-term ownership.

Devialet's range has since expanded into four models, and with each comes increased connectivity, power and configuration options. At the heart of all Devialet amps beats the same ADH (Analogue Digital Hybrid) amplification, which is a modern take on Quad's Current Dumpers of yesteryear that uses analogue Class A voltage amplification working in parallel with digital Class D dumpers. All Devialet amplifiers also employ 24-bit/192kHz upsampling Texas Instruments PCM1792 DAC chips, developed into its proprietary Magic Wire circuit.

Sitting at the centre of our package is Devialet's new entry-level 120 amp (£4,490 on its own), which morphed

### Even at low levels this system opens the music up with stirring dynamism

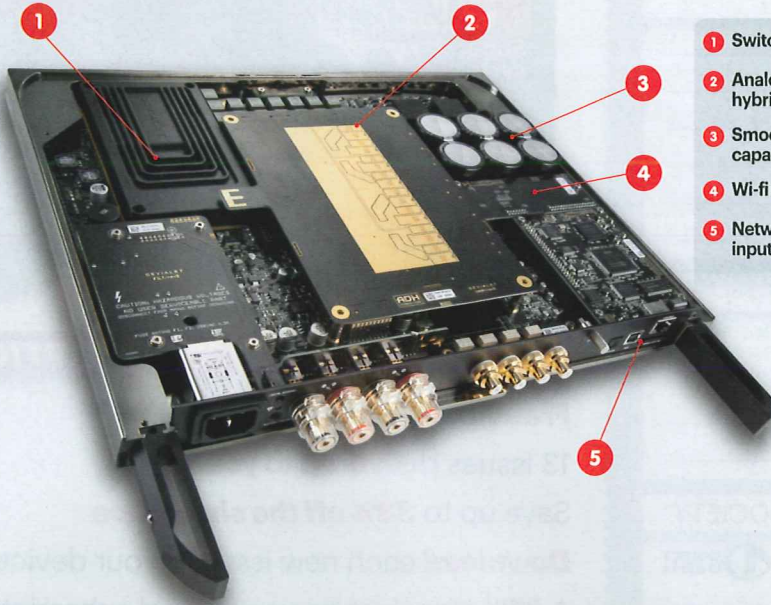
from the 110 model via new firmware, increasing its 110W output to 120W. Joining the 120 in our Ensemble is a pair of Devialet branded Atohm GT1 'Special Edition' loudspeakers with matching white Atohm cables.

What sets this pairing apart from other bundles is the clever use of Devialet's SAM tech, which tailors the amp's supplied signal to match the spec and real-world behaviour of the speakers' bass drivers.

The Atohm's cabinets are formed via layers of 3mm MDF bonded together to achieve their curved sides. Each speaker houses a metal grille-covered soft-dome tweeter with copper-clad aluminium wire voice coils and neodymium magnets, alongside an alloy coned mid/bass driver using Atohm's LDS peripheral suspension and a Kanton/Nomex coil former. The



**DEVIALET 120**



- 1 Switchmode PSU
- 2 Analogue/digital hybrid amplifier
- 3 Smoothing capacitors
- 4 Wi-fi module
- 5 Network and USB inputs

**ON TEST**

Tested with the latest v7.1 firmware installed, this 120 ADH amplifier met its 120W/6ohm specification with a full 2x75W/8ohm, doubling to 2x 150W/4ohm – this power achieved with a peak level (0dBFS) digital input and the volume control set at +0.5dB (not 0dB). The output impedance is vanishingly low at <math>\lt; 2\text{mohm}</math>. Distortion

at this output is still a fabulously low 0.0005% through bass and midrange, a performance largely maintained over the top 40dB of its dynamic range (from 75W down to just 7.7mW). The A-wtd S/N ratio is also a huge 116.8dB at this level. Distortion does increase with frequency, however, particularly above 10kHz, reaching

0.018% at 20kHz/1W/8ohm. The harmonics at this level are inaudible, of course. The response is flat out to +0.08dB/20kHz with 44.1/48kHz media, -0.1dB/40kHz with 96kHz files and -4dB/90kHz with 192kHz files. As with earlier Devialet amps, jitter is incredibly low – just 24psec at 10W output with 24-bit/48kHz media. PM

**ATOHM GT1 SE**



- 1 28mm silk dome tweeter
- 2 Rear bass port
- 3 Speaker cable binding posts
- 4 150mm alloy bass driver

**ON TEST**

The GT1 claims 89dB sensitivity, but our 86.8dB pink noise figure suggests that 87dB is more realistic. Sensitivity could have been higher had lower impedance been used – we measured a minimum modulus of 4.1ohms at 204Hz. With modest LF phase angles this results in a minimum EPDR of 2.2ohms at 134Hz, but there is another

dip to 2.2ohms at 20kHz and a third to 2.4ohms at 44Hz. On-axis response errors, 200Hz-20kHz, were very well controlled at  $\pm 2.9\text{dB}$  for each speaker, with a gentle rise as frequency increases. Pair matching was poorer at  $\pm 1.9\text{dB}$  over the same frequency range due to some narrow-band disparities in the high treble; below

10kHz the error was an excellent  $\pm 0.6\text{dB}$ . Bass extension was 60Hz for -6dB ref 200Hz; with SAM enabled it fell to below 20Hz. Engaging SAM made no difference to the 1.0% THD level at 100Hz for 90dB SPL at 1m. The CSD waterfall shows fast initial energy decay; low-level breakup modes were visible in the lower treble. KH

**Q&A**

**Pierre-Emmanuel Calmel**  
CTO and president, Devialet



**AS: Why have you chosen to pair this Devialet amp with Atohm's GT1 speaker?**

**PC:** We love the GT1's qualities in terms of detailing, imaging, natural sound and bass. Despite its compact size, it's still able to rock our 400m<sup>3</sup> showroom and consequently, many customers are buying GT1s to partner their Devialet amps – in fact, around half of the Devialet components currently being sold through our Paris showroom are part of a Devialet Ensemble package with GT1 speakers and Atohm cables. The GT1s embody the elements we believe are necessary to make the most desirable audio systems: beauty, compactness and, of course, performance.

**Will SAM's database be expanded to tailor match more speaker brands and models?**

Although we have no plans to offer other amp/speaker packages under the Devialet brand, SAM is potentially compatible with any passive electrodynamic speaker. We are launching the technology with support for around 12 models from different brands, and the number is increasing every week. We aim to have more than 200 models supported in the near future – we have several engineers working on this in our acoustics and signal processing laboratory in Paris.

Our engineers can perform a combination of measurements to build an accurate real-time model of any pair of speakers. This is used as the basis for developing a specific SAM profile for the speakers before releasing the profile on our updated SAM configurator. We can do this on our own, but we'd much prefer to work with loudspeaker manufacturers who can provide us with technical data and we're open to any collaboration.

**Will customers be able to recommend which speakers you develop SAM profiles for?**

Yes! We're actually asking consumers to vote for the speakers they want to see supported first, and you can take part at [voteforsam.deviale.com](http://voteforsam.deviale.com).