



READY FOR TAKEOFF

Devialet launches the next stage of its revolutionary line of amplifiers. Can the new Expert 220 Pro reach high-end orbits?

There was quite a hype after the Paris-based company Devialet presented itself to high-enders in 2011 with their amplifier D-Premier and its subsequent models. Since then, excitement about the revolutionary amps somewhat dwindled. The reason being that the French were entirely focusing on their – well, what exactly is it? – integrated system named “Phantom”. Although the two devices seem to have nothing in common

at first glance, they use the same technologies and complement as well as benefit from each other.

For example, both make use of the “analog-digital hybrid” amplifier (ADH), which was the starting point and basic innovation behind Devialet. It stems from the brain of the technological genius and mastermind Pierre-Emmanuel Calmel, who presented the first truly new amplifier concept in half a century. Calmel’s

achievement was to combine a low-distortion class-A amplifier with a powerful and effective switching class-D amp. A real challenge because these concepts would usually not fit together at all. It was only by dividing the signal processing into four 90-degree phases that he could merge them. As a result the Expert 220 Pro, which is particularly flat and weighs less than six kilograms, shows two zeros behind the decimal point of the distortion



▲ The sockets and interfaces on the rear of the amplifier are tightly packed. There is a Wlan antenna as well as a ground terminal for the input, that handles phono signals unless otherwise configured. At the top left is the slot for the individually programmed SD card.

and intermodulation values in our lab protocol. That is even more impressive as we measured at a total impulse power of nearly 900 watts at four ohms.

When using the Devialet one quickly gets used to superlatives, which is not least due to the sophisticated control concept. In comparison a “normal” amplifier looks like a handaxe to a smartphone. That is hardly exaggerated, as a device would usually be controlled via buttons and switches, while the progressive Expert manages almost completely without them. The very few it does need it has outsourced to its wireless remote control. Via the remote’s central wheel, the volume can be precisely varied in tenths of a decibel steps. The amp always follows the tiniest turns as meticulously as if it was a potentiometer

directly on the device. All other commands from the remote control work equally well and it can be programmed as extensively as the Expert 220 Pro itself.

The highlight is, however, that the amplifier can be adjusted to the used speakers via “SAM”. If a turntable is connected, you have not only the choice between MM and MC. Rather, absolutely all parameters, such as for example the gain factor or the input impedance and capacitance, can be adjusted. If you are unsure, a comprehensive list of the most common pickups can be found on the Devialet website. Simply click on your model and the appropriate values will be displayed. On top of that, there is a selection of various equalization curves, making this digital wonder-amp turn out to be a true phono specialist. It can even sonically deliver what the sophisticated software promises. The Expert Pro really seems like it was coming from a different hifi-dimension and rather resembles a computer than a traditional amp.

By the way, all mentioned values can even be adjusted during playback. This allows rather simple fine tuning, without the SD card having to be moved back and forth between the PC and the amp. It turned out that the phono performance is even more coherent, relaxed and homogeneous if the sensitivity is set around 20 percent lower than recommended, i.e., for example, to five instead of four millivolts. However, once you have found the optimal setting, you have to save it on the SD card, which is easily done. Otherwise, the amp will revert to the previous values the next time it boots.

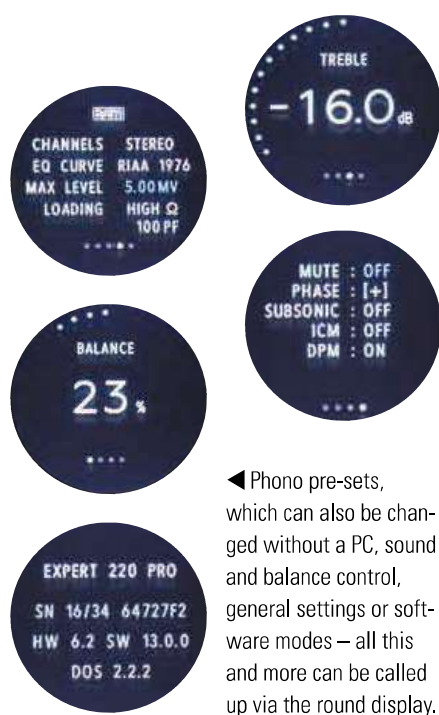
At Devialet, almost everything revolves around chips and software. Calmel enthusiastically talks about his time in a leading position at Nortel Networks, supplier for

YOU DETERMINE THE FUNCTIONS OF YOUR AMPLIFIER

The extensive possibilities to configure a Devialet amplifier are unique. After the online registration you have access to the „Advanced Configurator“. The inputs can be switched on or off. You can limit the performance, for example to prevent misuse by the party crazy offspring, call up the „SAM“ system (see above) or assign the buttons of the remote control entirely according to your own wishes. Same holds true for the „Line“ sockets. These can be used as a high level input or as a second phono input, depending on your taste. Or you can switch them to become two more S/PDIF coaxial digital inputs, because the



other two are used as outputs. The possibilities are almost unlimited. Of course, the phono input can also be switched for CD players, tuners, etc. Otherwise, the phono stage can be minutely configured in regard to sensitivity, impedance, capacity and even equalization. If you are overwhelmed by the abundance of options, simply call up your pickup model in the menu and the Expert 220 Pro automatically sets all values to match it. Finally, the configurations are saved on an SD card and inserted into the amplifier.



◀ Phono pre-sets, which can also be changed without a PC, sound and balance control, general settings or software modes — all this and more can be called up via the round display.

TEST-COMPONENTS

Turntable: Transrotor Rondino nero
 Pickups: Audio-Technica AT-ART9, Benz Micro ACE H, Brinkmann Pi, Ortofon 2M Black
 Multi-player: T+A MP3100HV
 Pre/power amplifier: Accustic Arts Tube Preampl-MK2/Ampl-MK3, Nagra Jazz/MSA
 Integrated amplifier: Symphonic Line RG10
 Loudspeaker: B&W 800D3, DALI Epicon 6, Dynaudio Contour 60
 Cables: HMS, In-Acoustic, Purist Audio Design

telecommunication companies. There he had “access to every kind of technology one could only dream of”. Devialet, on the other hand, was simply too small in the beginning to have full access to all chips from all major manufacturers. Calmel comments “they don’t even talk to a small start-up like us.” In the meantime the French have, however, reached a size that allows more doors to open for their purposes. This was the prerequisite for the current “Core Infinity” signal processing board, which is on the latest and most advanced standard in terms of

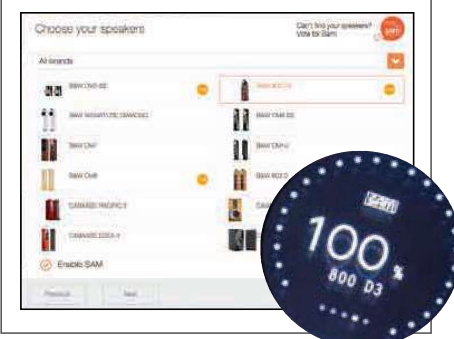
connectivity, bit perfection, jitter, and clock precision. It should not only provide the owner of an “Expert Pro” amplifier with advantages in comfort and connectivity, but also increase the sound quality compared to the previous model generation.

We wanted to find out if they can keep their promise, especially since the just replaced Expert 200 can be upgraded to an Expert 220 Pro by updating it in the spotlessly clean production. The upgrade, however, has its price, costing a proud 3490 Euros. On the other hand, it might be worth it as the sound gain is indeed surprisingly obvious. The 220 immediately sounded smoother, more relaxed, less technical and more musical than its predecessor, which already played astonishingly velvety and homogeneous. All that, regardless of whether the sampling rate of the internal data level had been configured to 96 or 192 kilohertz at 24 bit word widths. Yes, the Expert 220 Pro sounded even more sonorous than our “conventional” reference amps, while still offering finest resolutions.

Maria Pihl’s “Malvina” appeared physically, shone in rich colors and was wrapped in a supple, high-end garment, all the way from the full, but concise bass

PERFECT MATCH FOR MANY SPEAKERS

Usually, an amplifier would treat all speakers exactly the same. Devialet, however, invented SAM. Thanks to this „Speaker Active Matching“-system, the amp knows which speaker is connected and can compensate for its weaknesses. Devialet has analyzed not only the frequency response, but also the timing of more than 800 loudspeakers to date. An overview is provided on the website. Sometimes even crossovers had to be dismantled and measured for the correction curves. Within the configuration (see below) you select your speaker, and the respective data is saved on the SD card, so that the amplifier knows what to do. Of course, SAM can also be switched on and off during operation so that it is easy to comprehend the changes. If you think the correction is too strong – for example in relation to the usual bass boost of compact speakers at low volumes – it can be reduced in percentage steps (see display). In our experiments with SAM the improvements ranged from „slight“ to „oho!“ depending on the quality of the loudspeaker. Speakers sometimes played much tighter and more precisely. SAM is a free online service for Devialet customers.



to the homogeneous mid-range, and the delicate treble and draining synthesizer waves backed into the depths of the stage. The 220 could do this in a more natural way when the “Dynamic Power Management” (DPM) was switched off. Just how minute, dynamically differentiated and impulsively the flat powerhouse works was demonstrated in the bone-dry vibraphone strokes in “Saturday Night” by the Red Norvo Quintet. They plopped up steeply and strikingly in front of the sparsely arranged background, while never sounding artificial.

It didn’t matter whether we presented the music analog or digital to the extremely level-resistant Devialet, who unstrainedly activates its power-reserves



▲ It’s hard to believe how little space is needed for the complex digital electronics and the powerful ADH amplifier, thanks to latest technology.

when needed. Also its phono stage is outstanding. MMs like MCs offered proper analog feeling. I would bet that in a blindfolded listening comparison, nobody would identify the Frenchman as a fully digital amp. Latter confirms that stepping into the world of digital media processing – especially as done here on a high-res basis – is no problem at all.

While speaking of high-res, of course the Expert 220 Pro is perfect for the world of new media. It understands all

common PCM and DSD formats and is a perfect streamer, thanks to its UPNP capability. At lower data rates it can also be used via Wifi. Any unfulfilled wishes? Yes, we would have appreciated a headphone jack and a standby mode that really shuts down the amp instead of keeping it lukewarm. But maybe that's exactly what fans appreciate. What's certain is that, with "Core Infinity", Devialet has launched yet another revolution in their up-and-coming amplifiers.

Matthias Böde

SPARKLING CLEAN PRODUCTION BY THE SPECIALISTS

As the first ever German journalists, STEREO was allowed to visit Devialet's production facility at Vire in Normandy. Not their own company, but the service provider Seprolec, Pierre-Emmanuel Calmel (2, with Expert Pro-Board) won over for his start-up from the very beginning. High-precision machines place parts in the circuit boards (3). Someone hands us a small box. But what's in it? Sand and dust particles? Not quite. In fact they are tiny technical components. We're certainly familiar with state-of-the-art technology, but we haven't seen anything like that before. Work here consistently meets highest standards. Some areas are even restricted and veiled. Military and satellite technology? Sorry, no comment. The finished boards are examined under a microscope (1). A machine even x-rays them because this is the only way to detect hidden contact faults (4). They would be annoying in a Devialet, but catastrophic in a satellite. Now we know where the Devialet's spotlessly clean processing comes from. This perfection is exactly what the French company demands.

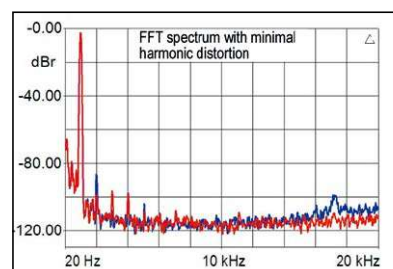


DEVIALET EXPERT 220 PRO

Price: around 7990 €
Dimensions: 39 x 4 x 38 cm (WxHxD)
Warranty: 5 years
Contact: Devialet
Phone: +44 808 168 49 44

Devialet takes its revolutionary amplifier technology to the next level with "Core Infinity". The ingenious operating concept has been further refined. The practical and comprehensive online configurator and „SAM“ make the Devialet unique anyway. Superb sound!

MEASUREMENT RESULTS



Continuous power (8 Ohm / 4 Ohm)	173 W/343 W
Pulse power 4 Ohm (1kHz)	438 W
THD 50mW/5W/1dB Pmax	0.007 %/0.003 %/0.07 %
Interm. 50mW/5W/1dB Pmax	0.005 %/0.003 %/0.08 %
Signal-to-noise ratio at 50mW/ 5W	76 dB/95 dB
Signal-to-noise ratio Phono MM (5 mV for 5 Watt)	82 dB(A)
Signal-to-noise ratio Phono MC (0.5 mV for 5 Watt)	74 dB(A)
Attenuation at 4 Ohm (63Hz/1kHz/14kHz)	450/350/230
Upper cut-off frequency (-3dB/40hm)	96 kHz
Crosstalk Line 1 > Line 2	97 dB
Volume synchronization error at -60dB	0.1 dB
Stereo channel separation at 10kHz	69 dB
Power consumption Stby./idle (at) 13 W/30 W(222 Volt)	

LAB COMMENT



The excellent values together with high power and signal-to-noise ratio as well as very low distortions confirm Devialet's technical amplifier concept. Even the channel separation of the ultra-compact amp is lavish.

FEATURES

Freely configurable inputs and outputs, balance and tone control, phono preamplifier (MM/MC), digital interfaces including USB, control app for IOS and Android, radio remote control

STEREO-TEST

SOUND QUALITY **95%**

PRICE/PERFORMANCE

★★★★★
OUTSTANDING