Eve Audio SC307

Three-way Active Monitors

Could Eve's DSP-based approach to monitor design tempt users away from the more established brands?

BOB THOMAS

Founded in 2012, Eve Audio have an illustrious back-story: their founder and owner, Roland Stenz, was CEO at Adam Audio and, having departed that fold, he put together an R&D team to design a new line of active monitors from the ground up. Their strategy is to use on-board DSP, PWM amplifiers and lower-cost Chinese manufacturing, to change the age-old balance of price versus performance.

The first thing I noticed about the SC307 was a certain cosmetic similarity to the Adam A77X that I reviewed (and purchased) last year. Although the twin 6.5-inch bass drivers and the AMT tweeter look familiar at first glance, the absence of front-panel reflex ports and the presence of a chrome control panel, replete with its multi-function controller and the stylish Eve logo, are evidence that the SC307 is no mere clone of its Adam ancestor.

The rear panel is similarly sparse. At one end you'll find the mains IEC connector, on/off switch and voltage selector, and at the other the analogue balanced XLR and unbalanced RCA phono inputs, which sit neatly next to a block of three DSP DIP switches. This trio enables you to lock volume and filter settings, and to decide which of the two mid-range/bass drivers is to handle frequencies below 300Hz. This means that, unlike my Adams, you don't have to worry about left or right variants with the SC307, and also that you can experiment with bass-driver positioning with the monitor *in situ*.

The twin rectangular reflex ports are positioned at either end of the back panel, which reduces port noise at high levels — although it does mean that you lose the face-cooling effect of front-panel ports in a hot control room. More seriously, the large size and the absence of hard edges in the ports' design aims to reduce port compression and to maintain port efficiency at higher volumes, thus reducing distortion in the lower frequencies.

Overall, it is the front-panel, multi-function DSP encoder that stands out in the design of the SC307. Elegant and restrained, and surrounded by its glowing LED ring, it is the coolest control I have ever seen on a monitor.

Scratching The Surface

Despite the similarity in appearance between Eve's AMT RS2 tweeter and its Adam antecedent, they are somewhat different in design. Internal changes devised by Eve's engineers have resulted in a larger front plate, with larger slots to reduce coloration, and also in a larger magnet assembly that increases the tweeter's efficiency. An Eve innovation is 'The Grid', an acoustically transparent iron grille with a hexagonal honeycomb moulded into it, which latches magnetically to the front of the AMT to protect it from foreign bodies.

The two SilverCone 6.5-inch bass drivers are driven by a 1.5-inch voice coil, and feature a glass-fibre coating over a honeycomb core. The result is a stiff cone that is capable of delivering bass and low mid-range frequencies with precision.

Amplification is supplied courtesy of three Class-D amps — 100W for each mid-range/bass transducer and 50W for the treble unit. In these amps, the modulation of the analogue power stage is driven directly in the digital domain by the DSP. While this in itself is neither new nor unique, it is an area that requires careful application of the available technology if it is to deliver the level of performance required of a monitor.

It's worth noting that, although the quoted frequency response has its -3dB points at 40Hz and 21kHz, the design of the DSP's direct digital drive to the PWM amplifiers means that its high-frequency response is flat to 20.5kHz, before hitting a brick-wall filter and dropping like a stone.

The DSP runs at 192kHz/24-bit, and uses Burr-Brown chips in its A-D conversion circuitry. In addition to taking care of the two crossover points, the DSP is used to »

Eve Audio SC307 £1920

PROS
- High degree of clarity and definition.
- Smooth character makes it easy to listen to for long periods.
- Innovative interface.
- Large rear ports significantly reduce port noise at higher listening levels.
- User-configurable bass-driver position removes the need for L/R variants.

CONS
- No direct digital connection.
- Horizontal mounting might not suit smaller spaces.

SUMMARY

An impressive monitor that combines DSP control with PWM amplification, to deliver a high level of performance at an interesting price. Its smooth character makes it very easy to listen to for extended periods.

» control the volume level of the SC307 and the boost/attenuation of its three EQ filters. These filters are designed to allow you to compensate, to some extent, for acoustic anomalies at your listening position, and/or to accommodate personal taste.

The low-shelf filter operates at 300Hz, adjustable in 0.5dB steps and with a +3dB/-5dB range. The high-shelf filter deals in the same way with frequencies above 3kHz. Using these two filters in combination effectively gives you mid-range attenuation if you boost them, and a mid-range boost if you attenuate them.

The Desk filter has two very different functions. Turned down, it acts as a narrow-band EQ centred on 160Hz, which lessens the effect of any low-mid boost arising from console surface reflections. Turned up, it acts as another EQ centred on 80Hz, giving a bit more punch to the bass.

Setting Up

The SC307 is intended for midfield and nearfield use, and is one of the easiest monitors around to set up. Set the rear DIP switches to select the bass driver and unlock volume and filter functions, hook up the audio and the mains power, and switch on.

The encoder gives you control over the volume and filter functions, and its red LED ring displays either the volume level or, in Setting mode, the value of the parameter being adjusted. I found the LED ring a little confusing, as it is scaled for the filter setting function (-5dB to +3dB), so I had to memorise the 0dB to -80dB scaling for the volume: flat out is 0db, 0 on the scale is -10dB, 12 o'clock is -20dB, 9 o'clock is approximately -45dB and fully anti-clockwise is -80dB. The LED ring has two modes — bright and dim — and each of those can display the chosen volume as either a continuous ring, or as a single point.

A simple push on the encoder bring up Setting mode, and the desired function is then selected by rotating the control until the required function LED illuminates. Press to select, rotate to tweak, press to return to the menu, and then press and hold for three seconds (or wait for 10) and the SC307 will return to volume mode.

Alternatives

If you're looking around the SC307 price point, you'll also run into excellent monitors from the likes of **Adam**, **Dynaudio**, **Event**, **Focal**, **Genelec** and **Quested**. All of these have their own individual pros, cons and sonic characters, so you'll need to spend time listening until you find the ones that suit you.

The back panel houses the XLR and RCA analogue inputs, as well as DIP swiches for locking and unlocking the DSP functionality.

Perhaps the encoder's killer feature is going into (and out of) standby mode. Press and hold it and the LED ring starts shutting down in an anti-clockwise direction until all LEDs are extinguished. To start up, just tap the encoder and the LEDs start illuminating in sequence until the last setting is reached. Incidentally, all settings are saved, so you can turn the SC307 off at the mains with no penalty.

Smooth As Silk

After the usual running-in period, and with all filters set flat, my initial impression of the Eve SC307 was that of a very civilised loudspeaker with a detailed, smooth top-end, real clarity in the mid-range and a defined and well-controlled bottom end. The bass has depth coupled with a lithe, tight character which means that its timing is always spot-on and exhibits none of the slow feeling that you can find in some ported cabinets. Whatever Eve have done with the DSP, amps, drivers and porting, it works extremely well.

The mid-range delivers all the detail and sense of space that I like to hear, and combined with the smooth, detailed treble, this leaves poor mixes and masters with nowhere to hide. The SC307 is also capable of delivering a wide sound-stage and giving individual instruments within it a real sense of scale and depth.

Given its smoothness, I began to think of the SC307 as also having the characteristics of a particularly revealing hi-fi speaker, rather than of a really ruthless monitor. This is no bad thing, as a smooth, controlled speaker is easier and much less tiring to listen closely to for long periods than one with a very in-your-face sound.

Having said that, you can use the filters in the DSP to bring the high end forward, pump up the bass or subjectively lift or drop the mid-range response. While altering all the filter settings changes the sound as specified, even lifting the treble to excess doesn't affect the overall sense of smooth control that characterises the SC307.

Comparing the digitally-driven SC307 directly to its analogue antecedent (my Adam A77X) was an interesting exercise in hair-splitting. Both companies have differing, but equally valid, approaches to the job in hand and have given us excellent monitors, albeit with very different sonic signatures. To my ears, the SC307 has an overarching sense of smooth control and precision, while the A77X is a bit more sonically dishevelled, and that untidiness seems to me to allow it to deliver a slightly more heightened impression of what is going on. While the Eve is deep, tight and lithe in the bass, the Adam is perhaps a bit slower, but sounds, to me, to be slightly weightier. In the mid-range and high frequencies, the Eve delivers a significant level of detail, but the Adam, perhaps only because of its extended high-frequency response and fully analogue signal path, seems subjectively to get me further into the sound.

Conclusion

There's no doubt that the SC307 is an impressive monitor. Its excellent definition, clarity and control in the mid-range and bass, coupled with fine detail and an overall sense of smoothness in the high end, means that it won't wear out your eardrums over long periods of close listening. The one surprising omission is the direct digital input that would have allowed me to remain in the digital domain between source and loudspeaker.

Its price per pair pitches the SC307 in amongst some steep competition, but it is more than capable of carving out a niche for itself. If you're looking for monitors at this level, you really should give the SC307 a serious audition. ■■■

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