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Alan Moulder at the Rock face.

Rock and Boulder Monitors and the Bass-o-nator Bass Traps

After many years of experience of marketing and supplying other companies designs, Unity Audio's geologically-inspired monitor range sports some unusual and interesting features.

Unity Audio has been specifying and supplying equipment to audio professionals since 1995, providing some of the top names in professional circles with their monitoring needs. At the end of 2009, the company introduced the Rock, a

The Rock two-way active monitor.

two-way, active, sealed, infinite baffle design featuring a 50kHz folded ribbon tweeter and 7-inch/180cm bass driver, both sourced from German manufacturers, ELAC. The success of the Rock prompted the company to develop a three way active monitor, appropriately called the Boulder. Sharing some of the same design ethos and technology that went into the Rock, the Boulder again features drivers from ELAC, including the innovative combined ribbon tweeter/mid-range unit.

"When I started Unity Audio, over 15 years ago, monitors were the first product we took on and we've always had them in our product line up and we've been successful in establishing new brands," says Unity Audio Managing Director Kevin Walker. "I'd gained an awful lot of experience and it made sense to develop our own range of monitoring products that we could distribute internationally."

Designing Monitors

Rather than re-badge an existing design or turn to Far East manufacture to cut costs, Walker insisted that the new monitors would be designed and built in the UK. While so much new technology is presented facelessly, the designers buried deep in a company's infrastructure, Unity Audio wear those who made the monitors possible on their (virtual) sleeve by naming them on their press releases. "Tim Di Paravicini from Esoteric Audio Research is a very well respected designer of amplifiers for top range hi-fi – I don't use the word lightly, but that guy is a genius!" laughs Walker, "The speaker is only half of the equation in a monitor's performance – the other half is what you power it with. Some people dismiss the importance of an amplifier, but it's critical. We could have gone to a number of well known manufacturers and bought an off-the-shelf design at a fraction of the cost of the amps we use, but I know the quality of sound wouldn't be anything close to what we are getting now. They are all Class A/B hand assembled amplifiers with transformers and it's not something off Tim's shelf – he designed it specifically for us, for that cabinet, for that bass unit, for that tweeter. It is in the truest sense of the word, a custom amplifier."

Building A Range

While Paravicini's original amplifier designs first appeared in the Rock, the intention was always

Andy Gray' with Unity Audio's new Boulder monitor.

The Boulder three-way active monitor.

to use them in further products. "We are using the same amplifier as the Rock in the Boulder, which is why we asked Tim to design a modular amplifier. In the Rock we use two amplifier boards, but in the Boulder there's actually four – one for the tweeter, one for the mid-range, and two for the bass units. This helps us to maintain a 'Unity Audio' sound across the board. It's been designed for those who want lower bass extension and even more mid-range detail than that available from the Rock." Respected studio designer and acoustician, Kevin Van Green (probably best known for Vince Clarke's "Pleasure Dome" studio) was responsible for the cabinet design – and also for persuading Unity Audio to choose an infinite baffle, closed cabinet construction, rather than use the more common tuned bass ports. "Kevin also insisted we use plywood rather than MDF for its strength and rigidity – though it actually costs twice as much to do that," says Walker. Another unusual design choice was the use of DuPont's Corian for the front baffle of both monitors. "All the drive units are mounted to the Corian front baffle that is, in turn, bonded to a plywood baffle, so the whole front end of the cabinet is really chunky – all the energy is projected forward and this means that's there virtually no resonant frequency," says Walker.

Unity Audio approached several different manufacturers when researching the design of the monitors and ultimately chose the German company ELAC to supply the drivers. ""I like the sound of ribbon tweeters, as do many of our existing customers and ELAC were very helpful in development, especially with the dual driver crossover in the Boulder," says Walker. For a three-way monitor, Unity Audio did not want to follow the more common approach of having bass drivers covering both the mid-range and bass but rather have separate drivers for the high, mid and low range of the audio spectrum. "We came across ELAC's X-Jet – which has a 5-inch mid-range unit with the same ribbon tweeter as we use in the Rock, mounted inside," says Walker. "It's a nice and tidy package that solves the phase discrepancy issues found in multi-driver designs and as a bonus, makes the cabinet very symmetrical. ELAC are doing a special OEM version with a different finish in black to suit the Boulder."

Unity Audio Monitors in the Field

Since its launch, the Rock has found favour with many leading engineers and studios.

Alan Moulder (Artic Monkeys, Depeche Mode, Placebo, Foo Fighters, Them Crooked Vultures, Death Cab For Cutie) has recently installed a pair of Unity Audio's active Rock near-field monitors into his North London studio Assault & Battery, while Producer and song writer Andy Gray (Tori Amos, U2, add Hard Fi, and the movie *Swordfish*) has written the film score for the new documentary film *TT3D Closer To The Edge* at his Isle Of Wight studio, Real Noize using a 5.1 Unity Audio monitoring system comprising of both the Rock and Boulder active monitors. "We wanted to design and build a monitor that was squarely aimed at professionals and to produce a really accurate and revealing monitor without an over-hyped low end," says Walker.

With a low frequency unit in development, this avalanche of Unity Audio products provide a range of UK designed and built monitors to suit most professional requirements yet with enough of a unique personality to stand out from the crowd.

The Bass-O-Nator

Aside from having a hand in designing the Rock and the Boulder monitors, Kevin Van Green has also created a bass trap for Unity Audio. "My design brief was to produce something that can be retrofitted, utilising proven tuning principles but in an attractive package for surface mounting," says Van Green. "We target the frequency of the first order standing waves and, with correct placement, this can really help sort out low end problems."

The Bass-o-nator units can be tuned down to 28Hz but Van Green has have found that treating the 50-70Hz range is a more common solution to bass problems. "We also have a wide-band-absorber with an effective range of 80Hz to 200Hz. This product is housed in the same package and for most clients the best solution is a combination of the two."

The Bass-o-nator Bass trap.

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