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Issue 215
Making the future since 1992

FutureMusic®

Technique and technology for making music

STUDIO SUPERTEST

THE BEST MONITORS EVER?

Head-to-head! 2009's biggest and
best get put to the ultimate test



WORLD EXCLUSIVE

Akai APC40

First FULL review of the
ultimate Live controller

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TECHNIQUE

Speaker secrets

Make your studio sound stunning
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REVIEW SPECIAL

- Novation ReMote SL MkII
- Rob Papen SubBoomBass
- UAD-2 SSL and Time Cooper
- Arsenal Audio R20 mic pre
- Focal Professional CMS65
- Submersible Drumcore 3
- Sample DVD round-up
- Arturia Minimoog V2
- AND MORE!**

STUDIO SUPERTEST

THE BEST MONITORS EVER?

We set out to find 2009's best new monitors – and we found the competition more fierce than ever. But one pair edged it. **Robbie Stamp** meets Event's remarkable new Opals. The new standard starts here...

WHAT IS IT?

Active two-way near-field studio monitor

CONTACT

Who: Source Distribution
Tel: +44 (0)20 8962 5080
Web: event1.com

HIGHLIGHTS

- 1 Incredible depth and clarity
- 2 Excellent off axis response
- 3 High amplifier and power handling headroom

SPECS

Input Connection: Combo XLR/TRS (balanced and unbalanced)

Frequency Range: 36Hz to 22kHz

Crossover Frequency: 1600Hz

Crossover Type: Acoustic 8th order (48dB/Octave)

3rd Harmonic Distortion: 0.08% (500Hz – 7kHz), 0.2% (200Hz – 20kHz), 1.5% (<200Hz) – all measured at 90dB SPL @ 1m

Average Long-Term Power Consumption: 220watts

Quiescent Power Consumption: <20 watts

LF Transducer (woofer): EX8 8" driver with neodymium magnet, carbon fibre composite cone and patented X-Coil voice coil

LF Transducer Power Handling: 360W (program power), 720W (peak power)

HF Transducer (tweeter): ULD1 1" beryllium copper dome with neodymium driver magnet

HF Transducer Power Handling: 50W (program power above 1.6kHz), 100 watts (peak power above 1.6kHz)

LF Amplifier Frequency Response: 20Hz – 20kHz +/-0.1dB (operating band pass 20Hz -1.6kHz)

LF Amplifier THD: 0.009% @ 300 watts into 5Ω load

HF Amplifier THD: 0.003% @ 90 watts into 5Ω load

HF Amplifier Frequency Response: 20Hz – 20kHz +/-0.1dB (operating band pass 1.6kHz to 20kHz)

Cabinet/Waveguide Construction: High-pressure injection moulded aluminium

Cabinet Volume: 28 litres

Dimensions

295 x 273 x 450mm

Weight

21.2kg each

The last time we put a bunch of monitors head to head the fighting – sorry – discussion went on for weeks. Now, with

a couple of years of water under the bridge we decided to do it all again. Flip to page 35 for details of our day in the hotseat, but for now, settle in with the inspiration for the new test – Event's new Opal monitors.

Event Electronics president Peter Freedman is a man on a mission to let the world know what a 'no compromise' design brief and three years of R&D can create. This ambitious project has been a massive undertaking, producing several patents (granted and pending) for speaker driver technology along the way. There is something of the maverick about this product – and its claims of exceeding the finest three-way studio monitor systems could be construed as foolish – so we just had to find out for ourselves.

Indeed, there is an awful lot to say about the Event Opal and an awful lot of work has gone into its design, but for once let's skip the preamble and get straight to the heart of the matter.

Aural truth

The Opals sound so amazing and perform so well I am loath to return the review pair. By 'amazing' I mean that the frequency response is frighteningly accurate across the audible range, with a wholly acceptable roll-off from ~60Hz to the vanishing point at ~30Hz. The accuracy and transient articulation is

Let's skip the preamble. The Opals sound so amazing and perform so well that I am loath to return them

such that I have been mesmerised while listening to music I thought I knew inside out. The off-axis response is truly excellent and allows for a uniquely wide 'sweet-spot' and first-rate stereo imaging. Sometimes monitors seem accurate and revealing, but the listener is in fact responding to pronounced phase distortions and their psycho-acoustic effects, which then becomes noticeable with the rapid onset of ear fatigue.

It is instantly apparent with the Event Opal, you are hearing the real deal, free from artificial enhancement, allowing for a remarkably true representation of what is being



recorded/played back. In the time spent with the Opals, I have never tracked and mixed so effortlessly and with so little need to reference other speaker systems. This kind of aural transparency also translates into an increased work rate and less ear fatigue, which has got to be worth some investment alone.

The Opals are capable of monitoring levels way beyond what would be expected in relation to their physical size. I may be a little sensitive, but I think my ears/brain started to distort before the monitors left their linear

a track. During tracking, the Opals also shine as multi-mic phase issues are laid bare, low frequency aberrations (eg. footfalls coming through mic stands) are easily isolated and mic/preamp selection can be sped up to make sessions more efficient.

Black mass

So how is all this possible? The key word is mass, and at 21.2kg the Event Opal has plenty of it. The injection moulded aluminium cabinet may be a lot more expensive than a wooden option, but the performance gains are enormous as

acoustic design (contouring) can be actualised without compromise. The metal cabinet means rigidity so resonance very low

performance region! In any reasonable size control room (50m³ to 100m³), the even frequency response and overt lack of electronic/acoustic distortion will be maintained right up into SPLs that are only advisable for very short periods.

Even bass-heavy tracks do not seem to challenge the power of the Opals. In fact I have rarely experienced such rapid low frequency amplification and found it a revelation for tweaking the transient shape of bass elements in a mix. The mid- and high-frequency accuracy is such that vocal placement within a dense mix or reverb level setting is a breeze and time can be spent dealing with the finer balance of

without reducing the internal volume necessary for low frequency amplification. Standard bass porting has been replaced by two 'variable impedance' vertical ports at either side of the cabinet face that work over a wider range of low frequencies than normal fixed-frequency designs.

While this design helps extend the low frequency amplification, the main contributor has to be the EX8 low/mid driver (woofer), a proprietary 8" design utilising a neodymium magnet and patented voice coil design (X-Coil). Without going into the techy details, this means the carbon/paper composite cone can travel faster and further



ALTERNATIVES



Focal Twin 6 BE

£1,660 per pair

These 'Johnny 5' look-alike near-fields are much lauded and have a forward mid-range that is pleasing to work with. They don't have quite the frequency range extension or sheer power of the Opals, but worth a listen.

focal-fr.com



Klein & Hummel 300D

£3,340 per pair,

This three-way near-field is around 50% more expensive at street price, but it is the nearest monitor I've heard with regard to soundstage clarity and stereo imaging. Worth comparing, but still short on power compared to the Opal.

klein-hummel.com



Dynaudio Air 6

£2,247 per pair,

Comparable on price but not close on power, these represent a more technological alternative. Utilising the TC Link communication system, the Air range offers stereo to multichannel 'intelligent' monitoring for sweet spot and frequency response management.

dynaudioacoustics.com

(36mm linear excursion – that's kind of massive) than other drivers, and with a peak power handling of 720W it is no wonder the bass and mids are so accurate. The ULD1 high frequency transducer (tweeter) is also a bespoke creation, again using a neodymium magnet to drive its 1" beryllium copper dome and possessing a very high power

flat frequency response (+/-0.1dB from 20Hz - 20kHz) that in combination with the EX8 and ULD1 drivers make the most of the moulded cabinet.

The final points of interest are the four M8 mounting bracket holes on the large rear heatsink, a set of signal lights on the front (start-up state, signal present, overload, fault and

I've ever heard. At an RRP of £2,495 a pair (with an expected street price of around £2100) they are not cheap, but they are in a league where similar performance will be closer to £4k or more (mainly three-way systems), which makes them a relative bargain. I hope other manufacturers put a lot more effort into their products instead of trading on a name.

In weighing up value, one must consider what a product can do for your business, and in this case it can save a lot of time as you can trust

The Event Opal is a staggering achievement and the best active near-field monitor I've ever heard

handling (100W peak) to make sure it never distorts. This has been set in an aluminium waveguide that is fully rotatable so the user can set the monitor on its side.

The amplifiers use the classic 'best of both worlds' class A/B topology to balance low distortion with electrical efficiency. They have a low-distortion/high-power characteristic as well as a

overheating) and a 25-pin D-Sub connector at the rear for connecting expansion modules (eg. digital input conversion or surround interconnection), though no modules are available as yet.

The weigh-up

The Opal is a staggering achievement and the best active near-field monitor

what you are hearing, increase productivity due to less ear fatigue and be happy working as these are a true pleasure to listen to. The frequency accuracy, transient response, stereo imaging, construction/design quality and raw power of the Opal is staggering and worth more than the price. Oh yeah, and they come with a calibration microphone and analysis software to optimise their performance within a room. I can't recommend this monitor enough, so if you've got the money do not hesitate to buy them. If you don't quite have the money, wait until you have – it will be worth it. **FM**

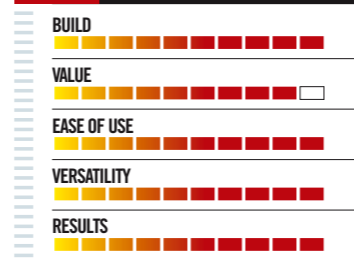
Opal Control

Beneath the EX8 cone is a rubber cover that hides a row of eight small control knobs. The first adjusts the input sensitivity by +/- 6dB in 3dB steps from the standard 0dB reference of 0.755v RMS. Following this a knob labelled 'Space' which acts as an overall low frequency loading control with three settings (1/1, 1/2 and 1/4) to compensate for the acoustic effects of room positioning, i.e. in an open space, close to a

wall or in a corner. This is a unique and useful feature that does a great job of keeping the not inconsiderable low-end performance of the Opal in check. A notch filter is provided across three knobs for fine-tuning the low frequency range (40Hz to 280Hz) where standing waves can seriously hamper monitor clarity. The Q and Depth controls allow the user to range from a subtle, gentle Q cut to a very pronounced and sharp

removal of a particular frequency, though I found the frequency on the legending did not match the real frequency of the notch. As if this level of control is not enough, there are also LF and HF shelving EQ trims (centred at 200Hz and 5kHz with +/-1.5dB) for a very gentle adjustment of the two ends of the spectrum. The final knob controls the illumination of the backlit 'Event' badge which, like the tweeter waveguide, is fully rotatable. Nice.

FutureMusic VERDICT



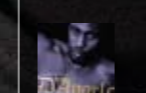
Easily the best active monitor you can get for the money and sets a new standard for the industry.

The Focals get carefully positioned in our endless round of head-to-head tests

THE TRACKS



Marilyn Manson, Tainted Love
This dense wall of noise was an ideal test for mid-range definition.



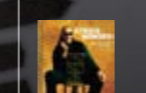
D'Angelo, Untitled
The warmth and deep bass of this track put the cat among the pigeons.



Daft Punk, Revolution 909
A fizzy, filtered club record designed to test the top and bottom end.



AC/DC, Back In Black
Which of our test subjects coped best with the dynamics of a Rock classic?



Stevie Wonder, So What The Fuss?
Solid, polished Funk to provide a full-on workout.

The Big Test

Take five pairs of monitors, borrow a studio for the day and fill it with *Future Music's* test crew. Our goal? To find the best in show. Ready? Fight!

By now you've read our review of Event's new Opal monitors, and probably been knocked out by its astounding scores. In fact, we were so astounded by the new contenders that we had to rack them up against a line-up of *FM* favourites. Just to make sure...
And so off we went to Modern World Studios in Tetbury with a host of test subjects (and a box of CDs) all hand-picked to separate men from boys and wheat from chaff. First into

the back of van was, of course Event's Opals, a monitor swathed in so many superlatives that someone had to be lying. Surely? Rocking up next was Focal's JM Labs Twin 6 BE – our favourite monitors of last year and the best £2,000 many of our reviewers and celeb interviewees have ever invested. Representing a dependable studio standard we reached for PMCs superb TB2S-A – a safe choice and an ideal benchmark for potentially wayward claims. With a nod to the more unconventional we

went for Equator Audio's distinctive Q8 monitors which put in a great review performance a few months back. And completing the pack we opted for another review favourite the KRK VXT8s – when it comes to making Dance music we're hard-pushed to suggest a better pair for the money.
Choose your weapons
The first order of the day was deciding on a playlist of test tracks. Our intention was to find the sweet

spot in all of our monitor's range and – maybe – find one set that was head and shoulders above the pack regardless of what we threw at it.

With the selected tracks loaded into Pro Tools and ran through consecutive channels on the studios SSL Duality desk we were able to quickly switch tracks and monitors – essential if we were going to head-to-head our subjects. And, in order to further eek out the truth, we set up a piano and drumkit in the live room to see how they coped with some 'real' instruments too.

We racked up the monitors two pairs at a time. That way no one set would be disadvantaged through its positioning and quick A-to-B comparisons kept things moving and

in focus. The PMCs quickly established themselves as a benchmark by which the competition either triumphed or failed. Their performance was deemed 'predictable' but every test track – and our live playing – sounded exactly as we anticipated. And while the Equator's certainly pumped the bottom end a little more, they were ultimately deemed 'a little boxy' and 'forced' by our test panel. It was the KRK VXT8's however that gave the

widest range of results – sounding superb on the full-on Dance range of our Daft Punk test track but delivering a harsh dense mid-range for Marilyn Manson's *Tainted Love*.

The final throwdown

So far we were lacking a jack of all trades. Time to break out the big guns in the shape of those Focals, and the young pretender, the Opals. This is where things got rather tough as both flattered the sound in

similarly pleasing ways. Our Stevie Wonder and AC/DC test tracks suddenly acquired 'air between the tracks', while the low down, grunt of the D'Angelo track revealed the Opal's magnificent bottom end.

Things were getting tougher and after a long break the team demanded the return of the Focals and Opals – this time in reversed positioning – for a final test. Was the Opal's bass too much, we wondered? And did *Tainted Love* 'brickwall' less on the Focals? It was a close thing but one question helped nail our final decision: If our test team could take away one set of monitors from the day, which would it be? The answer? Eight unanimous vote for the Event Opals. Gentlemen, we have a winner.



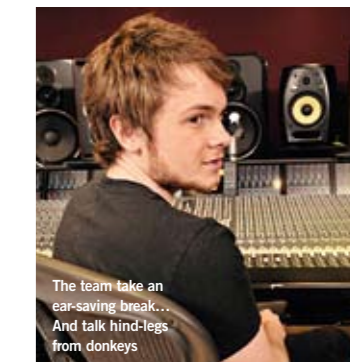
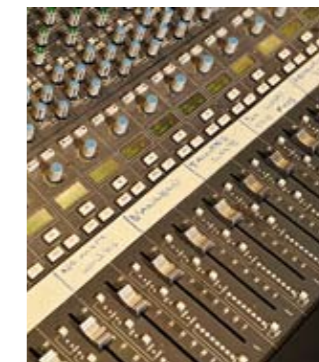
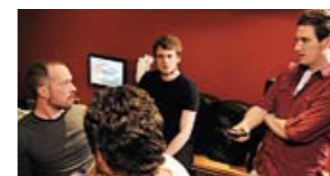
Robbie Stamp, Producer/Engineer

"The Focals are great for fine tuning on stuff – when I'm looking for detail and don't need a massive bottom end."



Mike Nyandoro, Engineer

"The Opals and Focals are both great. I'd love to mix on either one but the Opals just have so much more."



The team take an ear-saving break... And talk hind-legs from donkeys

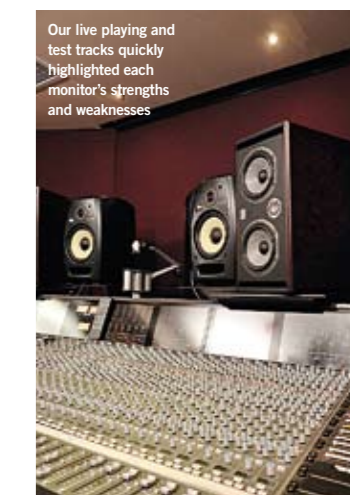


Ben Muscat, Engineer

"The Events have this massive reserve of power, so bass comes through right across the frequency range."



With the monitors racked up side by side we were able to A/B them all



Our live playing and test tracks quickly highlighted each monitor's strengths and weaknesses



That essential component of any listening test: The chin-touch



Greg Scarth, Producer/Engineer

"The off-axis response of the Opals sounds way better than the Focals. The sweet spot is just much wider."

The Listening Panel

- 1** Declan McGlynn, Prod Assistant, *Future Music*
- 2** Chris Barker, Features/Reviews Editor, *Future Music*
- 3** Greg Scarth, Producer/Engineer and FM test regular
- 4** Ben Muscat, Engineer, Modern World Studios
- 5** Nick Poortman, Engineer, Modern World Studios
- 6** Robbie Stamp, Producer/Engineer and sound designer
- 7** Mike Nyandoro, Engineer, Modern World Studios
- 8** Daniel Griffiths, Editor, *Future Music*



SPECIAL THANKS TO THE TEAM AT MODERN WORLD STUDIOS, TETBURY, UK. MODERNWORLDSTUDIOS.CO.UK

THE VERDICT



Focal Twin 6 BE

£1,660 per pair
One of our best buys of 2008, these super-versatile units once again excelled on every test, being able to 'breathe new life and depth into every track' we played on them. Never noticeably enhancing their results, their 'honesty and depth' was referred to time and time again.
focal-fr.com



PMC TB2S-A

£2,270 per pair
Deemed the most accurate and 'steady' set of monitors by our panel, this tried and tested model coped admirably with all we threw at it. Their 'NS-10-like predictability' drew approval but ultimately meant that they 'earned a deservedly respectful nod' rather than reams of praise.
pmcspeakers.com



Equator Audio Q8

£1,595 per pair
With the calibration system supplied the Q8's made them great both in the main control room and smaller programming room. More 'exciting-sounding' than the PMCs and 'truer' than the KRKs, they nevertheless 'failed to ignite' when alongside the front runners.
equatoraudio.com



Event Opal

£2,100 per pair
'First you notice the incredible bass, then you can't believe that there's no mid-range driver.' Built like tanks, heavy as planets and the 'most exciting' and 'in-depth sounding' monitor we've tested. You might quibble about their 'flatter' but we'd record and mix on these every time.
event1.com



KRK VXT8

£949 per pair
Punchy and powerful, these gave great results on the more Electronic tests we threw at them and they remain a true bargain and a pro performer. However 'a lack of definition and space' meant more subtle tracks weren't given the their record and mix on these every time.
krksys.com

THE WINNER