



London's Olympic Park features a sponsored attraction with a heartbeat. Phil Ward defibrillates . . .

Fingers on the Pulse

UK - Nasty thing, dysrhythmia. Any abnormal electrical activity in the heart is bad for people, bad for animals and bad for buildings wired for sound - especially if the sound is conceived as a union of sport and music. And that's exactly what the Coca-Cola Beatbox is: a gradual helter-skelter experience through synchronised audio made largely from the sounds athletes make. Thankfully, as this is a celebration of Olympian achievement, there are no ambulance sirens or shouts of 'clear!' (followed by that electro-cardiac thump) anywhere in the soundtrack.

Plus this structure is fitted with a pacemaker. All of the loops and samples that visitors hear are locked to a central file server and, furthermore, delay-matrixed by TiMax so that the aural curve is seamless. This is crucial because, just as the designers intended, this is not a stop, press and listen kind of attraction. The idea is that each component part of the music can be triggered

and re-triggered by the visitors themselves, lending a sort of DJ-cum-remix flavour to proceedings, and given the potential for disastrous asynchronicity that spells, it's no wonder that various layers of protection have been expertly laid down between the Box and the beat.

The visitors touch, stroke, scratch or simply wave at rectangular panels equipped with sensors and transducers, referred to as 'interactive cushions' because they are slightly pneumatic. The air inside them transmits the audio output created by the random input, although it's not quite so random as it might seem. Music technology and informatics guru Arthur Carabott has developed a continuous loop that visitors literally tap into, based on the component parts of producer Mark Ronson's Olympic theme song *Anywhere In The World*. Stems from the track have been distributed around the outside of the building, while inside the full track is waiting for you with a refreshing bottle of . . . now, let me see, was it Lucozade or Fanta?

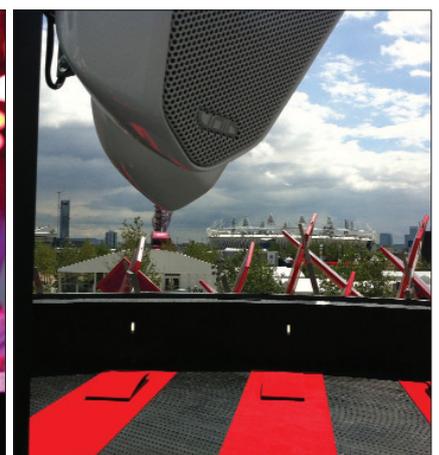
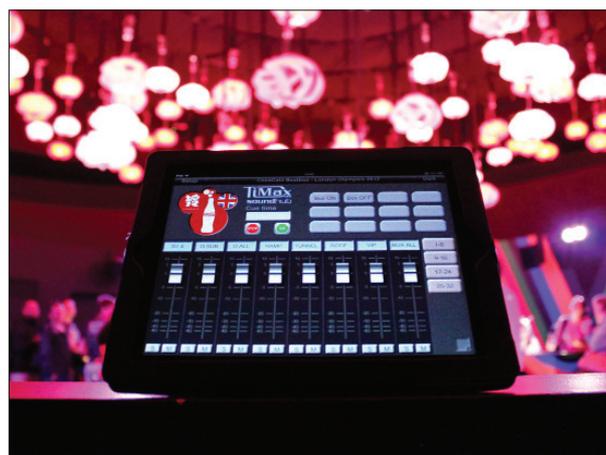
To boost the fizz, a host of Void Acoustics monitors have been placed along the interior ramp, on the roof and around the inner sanctum, and these are the elements that benefit from the source-oriented reinforcement of TiMax: actually a TiMax2 SoundHub-S32 with 32x32 analogue I/O and 32 tracks of playback. It's also pretty much the whole engine, managing everything from the multizone PA to instantaneous live backup of the interior music bed, tunnel heartbeats and rooftop FX playback, talent mics, iPod feeds, the tunnel speakers and dancefloor outs including a solitary Void Basys sub - although two Soundweb units network a roof DJ feed down to TiMax.

The main L/R dancefloor speakers are Void Micro8s; the main surround L/R dancefloor system consists of two pairs of Micro6s; a dozen black Void Indigo6s line the inner ramp; two more pairs of red Indigo6s are inside the tunnel, pumping out a heartbeat sample; and the cluster of four Indigo6s on the roof are white. Input sources and output zone speakers

Top: The Coca-Cola Beatbox exterior.

Right: TiMax's customisable interface allows control of the system via iPad.

Far right: Looking across to Olympic Stadium, with Void Indigo6 cabinets on the roof.





On the roof of the Coca-Cola Beatbox, from left to right: Out Board's Dave Haydon, Dave Parry of MOST Technical and Alex Skan from VOID.

are linked using TiMax SoundHub's group faders: 17 groups are assigned out of a total of 32 allowing the operator to trim and enhance zone levels in accordance with visitor occupancy levels and general flow through the various spaces.

A bespoke TiMax iPad app has also been provided, running on the 1602MiniServer developed and supplied by Out Board Electronics' US associate, 1602Group. "What looks like an app is actually a web page hosted on the server and called up like an app via a home-page button," explains Out Board's Dave Haydon. "This means that each implementation can be fully customised for the client's application and also run other IP-controllable devices in the installation beyond just the TiMax SoundHub.

"To a large extent this is an experimental venue, so zone levels and other characteristics are hard to predict until actually filled with excited people," continues Haydon. "Discreet control of TiMax SoundHub by iPad was essential for the Coca-Cola creatives to continually optimise the impact and immersion of the finale to the whole experience, as you enter the interior. The idea is that, while the exterior interactive cushions cause jaws to drop and excitement to build, the party atmosphere and mini-shows encountered inside will send people away with smiles on their faces. Maintaining proper energy levels without being overpowering is essential to this end. I've also given them four TiMax 3D spatialisation panning cues on the iPad to play with as the mood takes them."

I say 'solitary' sub because late changes to the design did lead to compromises all too familiar to audio teams engaging with fluid architecture. Fortunately, this was a team steeped in sensitive and prestigious installs from nightclubs to high-profile weddings. "It's a high-concept, very visual installation and it was felt that Void was the perfect choice," comments Void Acoustics' Alex Skan. "Beyond sound reinforcement itself, the brief was to work in perfect harmony with the design of the building. The small, pod-like Indigos look great where they are, although we have put a more heavy-duty Micro system into the darkened interior. Obviously, in such a complex building there were many issues to overcome, but thanks to our consultant Dave Parry and the rest of the team, we managed to accommodate all of the visual twists and turns."

The overall build and commissioning was controlled by JA Productions, led by John Adkins and including the hard-pressed Alex Mills, seconded to Coca-Cola as showcasing operations coordinator with the role of managing logistics and the implementation of the entire AV and general technical infrastructure. "It's both design-driven and highly technical," confirms Mills, a Music Technology graduate, "so it needed proper production management. Balancing the demands of the visual aesthetics, as Coca-Cola's creative team saw them, and those of correct and effective sound reinforcement has been quite a challenge. They went for Void and TiMax straight away as no-brainer brands, but then it took a lot of thought and planning to map the sound design to the visual design - especially as it changed! But thank god for this team: we've been very lucky to have Alex, Dave Parry and Dave Haydon on board."

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