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aspect
A GOOD POINT, WELL MADE



TurboSound®

Earlier this year the Aspect series completed one of its first major tours—going out on the road with Britannia Row Productions for a 27-date European tour with iconic sixties band, The Shadows. Billed as Together Again for One Last Time, the tour took in ten countries, culminating in two Encore Concerts at the National Indoor Arena in Birmingham, UK, where Britannia Row deployed a total of 40 Aspect cabinets to provide the 5000-strong audience with near 180-degree coverage. With numerous dates across Scandinavia, the tour also included concerts in Belgium, France, Germany and the Netherlands.

The largest configuration of the rig, as deployed at Birmingham, involved a three-wide, three-high main hang each side, comprising six Aspect TA-890H touring mid/highs and three TA-890L touring low-frequency cabinets, all used in horizontal orientation. Britannia Row augmented the main hangs with an additional two-by-two hang of TA-890H cabinets each side. A single TA-890H was used on the front edge of the stage each side, as extra fill for the first few seating rows, while a ground-stack of three TA-890H cabinets—with their waveguides rotated to a vertical orientation—plus three TA-890L units, provided the middle-distance coverage. Mike “Bunny” Warren, mix engineer for

One Last Time— THE SHADOWS tour Europe with ASPECT

the tour, commented: *“The Aspect system’s performance throughout the tour was simply superb. The boxes proved very easy to fly, and the whole concept worked very well indeed. In fact, I’ve never heard so many compliments about the sound quality, from the public and promoters alike—a particularly important result, bearing in mind the critical nature of the audiences. The Aspect design is extremely flexible, and gave us superb coverage, from small venues and theatres, up to the largest auditoria and arenas. The design’s compact size was also a great benefit, and we could not have done this one-truck tour without them. Overall, I have nothing but praise for the Aspect, and this was reflected by comments from everyone in the production team.”*

Roger Searle, the tour’s production manager, added his comments on the Aspect design at the end of the tour: *“Our two prime criteria in*

selecting a system for this tour were sound quality and truck-packing convenience, and the Aspect design scored highly on both counts. From a practical standpoint, it worked very well indeed—very efficient on truck packing, with no wasted space. By using Aspect, we managed to fit an entire arena system, with lights, backline and everything, into just one truck! You can pick and choose exactly the number and type of cabinets required for each venue, and leave the rest in the truck. This ability to use just parts of the system according to the venue makes for very efficient set-up, obviously saves time, and provides great flexibility—we were handling 5000-seat arenas one night, and 1000-seat proscenium theatres the next. We had good reactions to the sound quality throughout the tour, including one visitor to the NIA in Birmingham who told us ‘it was like having The Shadows in your front room!’”



Photography by Eva Rose Furnyr



146dB with very low distortion. It utilises proprietary transducers, which operate over four frequency bands divided between the system's modular mid-high and low frequency enclosures, and which all feature high-stability neodymium magnets. These offer greater efficiency and thermal stability, together with lower power compression and a reduction in overall weight.

Key to the system are the Polyhorn™ waveguides that are employed for the design's high frequency and high-mid frequency bands, and comprise equal-path-length, multi-section waveguides that create a phase-coherent wavefront.

The unique Polyhorn™ concept allows individual wavefronts to coincide seamlessly with the physical curvature of an array. This approach minimises comb filtering effects between adjacent cabinets and is responsible for the system's tightly focused point-and shoot directivity—it's intuitively adaptable to the largest

truck packing in American and European vehicles. An install version of the system at the Student Union venue of Belfast's Queen's University has already produced consistently excellent results. But how was it going to fare on the road and, crucially, was it going to live up to the standards set by the classic Flash/Flood combination?

Being a single truck tour with Stardes' vehicle rammed to the hilt, the prospect of accommodating Turbosound technology in a more compact form was a motivating force behind FOH sound engineer Antony King's suggestion that this might be the perfect opportunity to give Aspect a touring trial. Roly Oliver and Bryan Grant of the tour's sound contactor Britannia Row Productions were in agreement, and Turbosound supplied the system for the entire length of the tour. The universally positive feedback from the crew and Bedingfield's management will certainly have contributed towards Brit Row's evaluation of the system.

It may have taken a little longer than her brother Daniel to earn her own slice of fame and chart glory, but thanks to major hits such as 'These Words', 'Single' and 'Bruise Easily', and her top-selling debut album, *Unwritten*, Natasha Bedingfield is now firmly entrenched in the public psyche as one of today's freshest UK pop talents.

After a year or more of making cameo appearances at summer roadshows, showcases and festivals, she's now out there on her own headlining production tour with a vivacious, ballsy show that's been visiting a wide variety of UK venues, including our port of call, Cambridge's Corn Exchange.

Bedingfield's *Unwritten* UK tour was notable for the touring debut of Turbosound's recently introduced Aspect loudspeaker system.

The Aspect series incorporates many patented concepts and is capable of generating peak SPL in excess of

range of room size and audience coverage requirements, with easy scalability from small clubs and auditoria, to the largest arenas and stadia.

Aspect also features integral flying hardware, and offers dramatically rationalised transportation—the dimensions of the identically-sized mid-high and LF enclosures have been carefully chosen to optimise

King himself appeared extremely pleased with the decision to trial Aspect. He said: *"I like it. It's a very interesting system that fits together well, flies nicely and sounds crystal clear—what more do you want? It has a great top end that's pleasing to the ear. I've used Flashlight and Floodlight a lot in the past and I've always been a fan. It sounds like it could never have been designed by another company."*

ASPECT debut outing with NATASHA BEDINGFIELD

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ASPECT rocks at ROSKILDE

One of the largest rigs of Aspect loudspeakers was assembled for the Roskilde Festival in Denmark at the end of June by the system rental division of DPA SoundCo, Turbosound's Danish distributor. Over one hundred Aspect loudspeakers were deployed by DPA for the Orange Stage, which attracted a total audience of around 70,000 during the four-day event. DPA configured the Orange Stage's left-right system with 24 x Aspect TA-890H touring mid-high and 32 x TA-890L touring bass cabinets flown per side, with an additional eight TSW-218 double 18" sub-bass units ground-stacked on each side of the stage.

With a rich programme of bands, DJ's and solo artists covering every musical genre, the Roskilde Festival featured over 150 international acts, with the Orange Stage presenting sets from acts as diverse as Black Sabbath, Duran Duran, Foo Fighters, Green Day and Snoop Dogg. The Aspect-based system delivered this wide range of material across the 70-metre depth of the arena, with Sten Jensen, of DPA SoundCo, commenting: "DPA have always used Turbosound for the Orange Stage at Roskilde, so we were looking forward to using Aspect this year. It was much easier to rig than Flashlight, with just two one-tonne motors each side, and we had the system up in a couple of hours. I've been involved with the development and packaging of Aspect right from the start, so it was good to see that Turbosound has listened and got it right. The system sounded great, with much more consistent coverage than previous years, and with 10dB more level at the desk. We'll definitely be using Aspect at next year's festival—we could not have achieved this great rock and roll sound with our line arrays."



An important highlight in the SeaBritain 2005 programme of nationwide maritime events, this year's International Festival of the Sea (IFOS 2005) in Portsmouth was the largest to date in the annual IFOS series, and formed part of the UK's celebrations for the 200th anniversary of Trafalgar. IFOS 2005 transformed Portsmouth's Historic Dockyard area with sea, land and air live-action displays, plus exhibition areas and street scenes reflecting life in Nelson's era, as well as an impressive range of historic craft, from small yachts to tall ships.

The task of providing the sound reinforcement and public address facilities for the whole event presented a huge challenge, with audio playing a vital role in bringing the event to life, across a mix of spectacular displays, live music, stage shows and commentaries throughout the 4-day festival. Oxford-based WE Audio undertook the sound design for the whole IFOS site, supplying all the audio systems and using over 50 miles of cable in the process. WE Audio also provided sound reinforcement systems for the Combat Display arena and the event's live performance stages. This is the tenth year that WE Audio has been involved with the IFOS series, and it was the first outing for the company's new stock of Turbosound Aspect loudspeakers, with their acquisition triggered by some of IFOS 2005's unique sonic challenges.

In terms of system design, the Combat Display arena presented some very specific challenges. The live action display sequences included tanks, machine guns and abundant pyrotechnics, while the video programming featured Harrier jump jets and Lynx helicopters. The accompanying soundtrack required delivery at realistic SPLs and, against the high

BLOW STUFF UP at IFOS

ambient sound level, the newsroom-style and live-action speech—from headset-equipped soldiers—needed projecting over 60 metres across the arena, while retaining clarity and intelligibility. WE Audio MD, Wayne Barker, explained: *"This was a very demanding application. We needed lots of headroom, to ensure that all the audience seating could hear the live speech and video soundtrack over and above the battle sounds. In addition to the issues of throw and intelligibility, we also had to limit audio spillage into the surrounding areas, and although we couldn't do much about the gunfire and pyros, we had to contain the audio as far as possible. The theory of specifying Turbosound Aspect loudspeakers to address these issues certainly paid off in practice. On all counts, the Aspects gave an exemplary performance—seamless coverage out to the extremes, with no hot spots, plus excellent throw across the arena and with a sharp, well-controlled cut-off. Overall the audio quality was simply stunning. The Aspects also proved their worth on the practical front. Fabulous to rig—they were up and hanging within 45 minutes of the get-in, and down and ready to go in the truck in 25 minutes at the end."*

The Combat Display system was configured as a left/right design, with 8 x Aspect TA-890H touring mid-highs per side, plus two blocks of eight Aspect TA-890L touring lows, ground-stacked behind the scenery. A row of eight Turbosound QLight™ TQ-440SP cabinets were positioned along the front of the arena seating as vocal fills. The system was powered by Turbosound MC² T-25 and T-45 amplifiers, and controlled using an XTA AudioCore via a RECO remote, with a Yamaha PM5000 at FOH.



Article adapted from full version which appears in the September 2005 issue of Total Production International

Innovative, high-efficiency Aspect series loudspeakers were used by Bristol-based South West

Production Services, for the John Peel Stage at this year's Glastonbury Festival. This stage—traditionally home to emerging artists, and renamed this year in John Peel's honour—was the first one up and running, and the only system operating for the first few hours of the festival, due to the flash floods and power outages that affected the start of Glastonbury 2005.

racks, with the FOH system using a Turbosound LMS-D6 for control.

The John Peel Stage featured a constantly changing variety of bands each day, with the Aspect loudspeakers handling everything from the heavy electronica of M83, to The Magic Numbers, as well as Willy Mason's stripped-down acoustic set and the beat-heavy samples of LCD Sound System. Aron Ross, one of the two co-engineers mixing the John Peel Stage commented: "My first experience

"The best rig in the world... and you can quote me..."

Will Biggs, co-engineer working with Aron Ross, added his comments: "The best rig in the world—and you can quote me—I've never mixed on anything as good as this system, it is absolutely awesome! At first I was really quite surprised by the look of the boxes, very compact and completely different from any previous Turbosound products. We hardly EQ'd the rig at all, just backed off a touch at 100Hz, and we were ready. The first band—The Infadels—used keyboards, bass guitar and synth bass lines running as well, and the speakers successfully delivered the very fat bottom end, as well as the clicky top-end definition of the bass guitar. The vocal range was immense, very clear and sharp, and not needing to EQ the vocals was the only odd thing about the whole experience! The Aspect rig was particularly impressive with M83—they had a huge, full-on sound that I wouldn't have expected a rig this small to be able to deliver. We had about 25 guest engineers on the John Peel Stage during the festival, and every one commented very positively on the sound quality. Its consistency was impeccable throughout. Truly awesome!"

FLASH FLOODS and a new ASPECT at GLASTONBURY

Protected by the John Peel Stage's 60m x 40m tent, the Aspect system handled a huge range of musical styles across the fast-changeover sequence of new bands, which were enjoyed by the audience of around 4000 people.

South West Production Services equipped the main FoH rig with 30 Aspect enclosures, configured with six TA-890H mid-highs per side in a 3 x 2 format, and 9 x TA-890L bass cabinets per side, arranged 3 x 3. Additional TA-890H units were also deployed as fills. All the loudspeakers in the main left-right system were ground-stacked and locked together using Aspect's integral rigging system. Three of Turbosound's new TSW-218 double-18", large-format subwoofers bass were also used to add additional warmth at the very low end. The entire rig was powered by just four amp

of Aspect was during The Shadows' European tour earlier this year—I found the speakers' performance really impressive, and the design flies beautifully. The relatively small number of speakers used on that tour handled the range of venues and audiences very successfully. As we were the only stage to open on the Friday, we were able to give the system a real work out, and consequently noise control was not an issue! Due to the stage layout, the Aspect stacks were hidden behind scrim, but fortunately the HF didn't suffer—this would have been a different story with a line array. The system sounded great across the huge range of bands featured, and we received lots of positive comment, especially from the bands' own engineers, many of whom hadn't heard Aspect before and insisted on going onto the stage to check it out."



▲ Photo by Louise Stickland

COACHELLA FESTIVAL

the Mojave Tent

The Aspect series of loudspeakers completed its US festival debut workout this summer at the Coachella Valley Music and Arts Festival in Indio, California. One of the USA's largest annual festivals, the two-day event featured five performance stages, with rental company Rat Sound Systems Inc., of Oxnard, California, deploying a 34-enclosure Aspect rig for the festival's Mojave Tent. The Aspect design's accurate, tightly-focused dispersion pattern helped to reduce reflections from the tent's sidewalls, while also limiting the spill into adjacent tents.

The Mojave Tent was filled to capacity during the festival, with some 5000 people inside, and a further 1000 or so listening in at the doorways. Held in the desert area of Indio, California, the event enabled many thousands of festival-goers to enjoy a massive cross section of US and European music from more than 90 acts, with the listings for the Mojave Tent including Bloc Party, The Bravery, The Kills, Roots Manuva and Stereophonics.

Rat Sound's Turbosound Aspect system utilised a total of 12 x TA-890H mid-highs and 18 x TA-890L 2 x 15" bass cabinets, plus a further 4 x TA-890H units as fills, with their waveguides rotated through 90° to enable vertical orientation. The main system design comprised left and right hangs of TA-890H boxes, arrayed two wide and three deep, plus ground-stacked TA-890L 2 x 15" bass cabinets, arranged in two three-by-three stacks.

Dave Rat, of Rat Sound, outlined the task of creating a high-level dynamic sound in the 64m x 36m tent, while minimising any acoustic issues: "We have been involved with the Coachella festival for several years and were contracted to provide sound for three of the festival's five stages. Sound reinforcement for the high volume Mojave Tent Stage was especially challenging due to its location directly between two other Tent Stages. We considered a line array system, but the fixed 90-degree horizontal dispersion would have put a lot of sound into the side tent walls. We decided that the unique capabilities of the Turbosound Aspect system would be an ideal match for the application. Unlike a line array, the Aspect system offers precise control over the horizontal dispersion, as well as the vertical. Aspect's tight control over the horizontal dispersion allowed us to focus the sound inside the tent and minimise bleed to the other stages. We took some measurements, and it worked! Over 120dB(C) at the mix position and, in view of the number of people listening around the doorways—over 60 metres from the stage—the clarity at this long-throw distance was not an issue.

From our experience at Coachella, the Aspect rig does offer some clear advantages, and having such control over the horizontal dispersion can be of significant benefit in many situations. It represents an important resource in a sound company's toolbox and it offers awesome potential. It's a very compact box, easy to rig and transport, and clearly fills the void left by the total over-run of line-arrays."



LIVE 8

in London's Hyde Park

With 26 major artists, a scheduled turn-round time between bands of less than five minutes, and an audience of 205,000, Britannia Row Productions, who provided sound reinforcement for the Live 8 Hyde Park show, certainly had their work cut out.

Prominently featured throughout the event were Turbosound TFM-450 wedges—with Flashlight side fills and Turbosound TQ-440/TQ-425 drum fills powered by Pulse amplifiers. These were fed by three DiGiCo D5 Live digital monitor consoles, set up to allow one band to prep monitors whilst another act was playing, in order to achieve the incredibly short turn-around times.

The all-neodymium TFM-450 wedges are perfect for this type of high-profile events with fast change-overs, being lightweight, minimal in profile and having the ability to sound great straight out of the box—rarely needing any EQ whatsoever to sound loud and clean.



Photography by Phil Dent

 **Turbosound**

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