

**the edge!**  
#17 • September 2008

# GLORIOUS GLASTONBURY



**INSIDE**

- Wimbledon • Papal Visit • Matter
- Pacha • VUE all-digital multiplex

The Martin Experience



[www.martin-audio.com](http://www.martin-audio.com)



# the cutting edge!

This edition of *The Edge!* celebrates another bumper half-year for the company. Our products have dominated a number of prestigious installations — from the UK's first all digital VUE cinema multiplex in Hull to Centre Court at Wimbledon — with

arguably the world's most technologically progressive new venue (matter) set to open at London's Docklands as we went to press. All feature products from right across our portfolio.

But the main feature pages are dedicated to only one event this month and that is Glastonbury (what other event could relegate a Papal visit to a support role!) How we met the challenge of the toughest gig in the universe and responded to Chris Beale's exacting specification in terms of coverage patterns and SPL levels required, is set out in detail — from the Longbow Display™ measurements to the way in which our WS218X sub bass array was custom-configured to meet the same criteria.

Interestingly the implementation of both the Pyramid Stage system at Glastonbury and the Centre Court installation at Wimbledon were the responsibility of RG Jones Sound Engineering and we congratulate them on these extraordinarily disparate feats in June which must have stretched their resources to the limits (and given a whole new meaning to the term 'mixed doubles').

Elsewhere, the faith we invested in our new OmniLine® system is starting to bear fruit as we report the UK's first installation, along with a sports hall in Belgium and a church in Northern Ireland.

Thanks to all our contributors from around the world for ensuring this edition again has a truly global reach. On that subject we congratulate our long-serving man in Hong Kong, Dah Chong Hong's Patrick Lau, for taking up the challenge to become head of international sales for Martin Audio in the Asian region.

The publication of a new edition of *The Edge!* signals that a new trade show is upon us. Marking the end of summer and the start of the new season the PLASA Show in London will hope to open in a spirit of optimism, after 2008's economic malaise. Be sure to visit us on Stand D30.

**Jerry Gilbert**

**Contributors to this edition:** Our thanks go to Richard Lawn at Pro Audio Asia and Mike Lethby for their help with story and picture contributions. Other photo credits are supplied with captions.

**Cover:** Glastonbury 2008, Pyramid Stage.

## WHERE TO SEE US

- 07 - 10 Sept: **Plasa 2008**, London, UK
- 24 - 26 Oct: **LDI**, Las Vegas, N. America
- 06 - 07 Nov: **Worship Facilities Expo**, Houston, N. America
- 03 - 05 Feb: **ISE 09**, Amsterdam, The Netherlands
- 25 - 26 Feb: **evenTech**, Scotland, Glasgow, UK
- 23 - 24 Mar: **Integrated Systems ME Africa**, Abu Dhabi, UAE
- 01 - 04 Apr: **Musikmesse**, Frankfurt, Germany

**Web:** [www.martin-audio.com](http://www.martin-audio.com)



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VUE's first all-digital multiplex  
Rising to the challenge of Glastonbury  
Matter: 02 technology is taken to a new level  
Monkey's Club, Düsseldorf; Assembly, Leamington  
LE1500's at iTunes Festival  
The Papal Mass in Washington DC  
£10m Strule Arts Centre, Omagh  
Lifting the roof off on Wimbledon's Centre Court  
First UK OmniLine® installation at high-glam Kingly Club  
Historic Chicago blues club upgrades  
Black Crowes at Bayfest  
Pacha London upgrades with WT3  
Ampco's "largest PA system ever"  
Da Vinci — an elegant new venue in Athens  
Citadel Music Festival, Berlin; Luxurious Westin Dubai hotel  
72 OmniLines® in Antwerp Sportpaleis; Disco On in Murcia  
Unleashing the power in Toronto;  
Patrick Lau to set up Asian office; Higginson Hall, Boston  
Hard Rock Café, Boston; The Vanguard, Hollywood;  
Telus World Skins Gala, Kelowna  
OmniLine® in Magheralin Parish Church;  
Norwegian company takes Mini Line Array to Algeria

**OMNILINE® UK DEBUT P16**  
The new award-winning OmniLine® Micro Line Array has been installed in the stunning new Kingly Club, Covent Garden.



# ALL-DIGITAL VUE

UNITED KINGDOM

Martin Audio cinema sound systems have been specified throughout Europe's first new-build, all-digital multiplex cinema — at Princes Quay in the north of England.



Vue Entertainment has invested £5m in developing the multiplex — built on top of the Princes Quay Shopping Mall in Hull — equipping it with state of the art digital projection and processed surround sound technology as part of a complete innovation package.

Martin Audio has been the system of choice in Vue Cinemas for many years and each site is purpose-specified within an existing design template.

Throughout Hull's ten screening rooms Martin Audio's purpose-developed Screen 5's or Screen 4's have been deployed (depending on room size), accompanied by Screen Sub 1A's and Effect 5 surround speakers. These were set into position by Canadian company Eomac, who also designed the screen frames and stretch wall fabric, with the full termination/integration and commissioning of the sound and

projection system carried out by cinema specialists Sound Associates

General manager Paul Denny and projection manager, Mark Buck are delighted to be piloting such a state-of-the-art project. Mark Buck confesses that although well aware of Martin Audio's pedigree, this has been his first exposure to the company's signature sound.

"We both think it is the best sound we have ever heard. It can be fantastically discreet and there is no bleed whatsoever.

"At the same time it always staggers us just how much power the Martin Audio system provides. One of the engineers recently re-EQ'd it from the laptop because we wanted more dynamic bass [for a particular soundtrack] and we have never experienced anything like it." And on top of that, the sound system has run faultlessly from Day One, he notes.

The audio sources are sent from the Dolby Show Player via the CP650, which decodes the signals and feeds the 5.1 speaker array.

Tim Richards, CEO Vue Entertainment, concluded: "This ground breaking all digital cinema is hugely exciting not just for Vue and the community of Hull but for the cinema industry in the UK."



the  
edge!





Martin Audio combined with Synco partner RG Jones Sound Engineering to provide a universally acclaimed sound reinforcement solution for the legendary Pyramid Stage at this year's Glastonbury Festival.

With mostly dry weather and a fantastically eclectic Glastonbury musical line-up including Kings of Leon, The Fratellis, Amy Winehouse, Jay-Z, Goldfrapp, Leonard Cohen and The Verve to savour, there was plenty for audiences to smile about – including an all-new PA system design from Martin Audio that saw RG Jones extend its contribution in 2007 from the stage sound to the main arena PA.







The loudspeaker specialists became involved in March this year, when RG Jones director John Carroll asked if they would be interested in proposing a sound system design for the Pyramid Stage. Convinced that they had the products to meet this challenge Jim Cousins and Jason Baird, together with RG Jones senior project manager, Simon Honywill set about conceiving the design immediately the tender document was received.

#### **System design and simulation**

This document centred round a specification written by Chris Beale of CBA Associates which described the coverage patterns and SPL levels required for all the main sound systems used at the festival. As well as specifying figures for the audience areas, it also sought to minimise spillage between the stages. In order to graphically demonstrate the parameters set out in the Martin Audio design proposal, Cousins and Baird made exhaustive use of Martin Audio's proprietary 3D predictive software, Display™. >>





<< Display™ is a proprietary, stand-alone application that simulates the acoustic performance of Martin Audio line array systems by predicting multiple element vector summation and interdependence using high resolution loudspeaker data. This proves invaluable for predicting real-world performance reliably (see *pic 1*).

Architectural or terrain details are entered in 2 or 3D mode and accurate coverage predictions are plotted for selected ISO frequencies or for total (flat, A or C-weighted) SPL. These coverage plots may be per audience plane but sectional views are available where propagation studies are required. Sweep frequency (animated) plots are also possible.

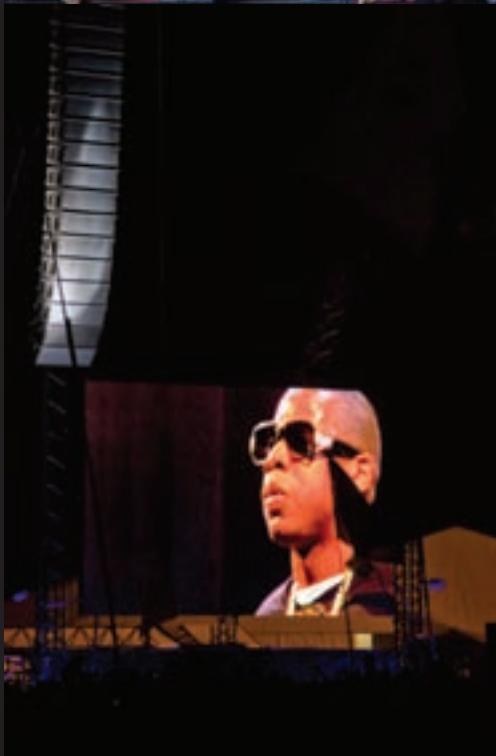
Display™ further provides horizontal and vertical polar plots of individual arrays plus spot frequency response measurements (like placing a virtual microphone in the venue). These virtual microphones are usually placed in audience areas but may also be used to analyse on-stage, back-stage, adjacent stage or off-site characteristics where required.

Since the Pyramid Stage field is 350m deep and around 200m wide, the obvious choice for the main system was the Martin Audio Longbow. Fifteen W8L Longbows (plus a single W8LD downfill) were used for the left and right arrays, while the sheer width of the field also dictated the same complement to be used for left and right side hangs.

As well as coverage within the site Martin Audio also had to be cautious of any spillage beyond the perimeter. Extensive off-site noise monitoring by Mendip Council and Capita Symonds was designed to ensure that the festival remained within the levels set down in its license. Display™'s 3D mapping facility enabled Jim Cousins to accurately map the terrain right out to surrounding residential areas and predict the Pyramid Stage Arena's contribution to the festival's noise leakage with considerable confidence (*pic 2*).

The ability to demonstrate graphically how the system would meet CBA's specification played a dominant part in the design selection process.

In order to cope with the effects of temperature gradients all the flown arrays were zoned so that the top four cabinets could be independently attenuated. This proved to be an essential hedge against the variable temperature and wind gradient effects that bedevil outdoor events. From the mix engineer and Pyramid Stage Arena audience perspective it resulted in consistent arena sound as only those zones in danger of leaking off site due to changes in propagation conditions were being attenuated. For the majority of the festival, there was no need to adjust the system.



## GLASTONBURY 2008





Another important feature of Display™ is its ability to calculate the effect of air absorption depending on temperature, humidity and static pressure. Longbow's very high HF sensitivity and high power handling provides plenty of headroom for air absorption compensation. Display™ simulates the system's digital controllers, allowing 'what-if' HF compensation, for instance, to be evaluated before implementation.

The high HF sensitivity and constant directivity characteristics of the main inner and outer Longbow cabinets and tilting the arrays downwards made meeting the SPL criteria both in and outside of the field straightforward.

The greater challenge was to design a sub array with similar properties. One of Martin Audio's acoustic engineers, Andy Pardoe — along with Jason Baird — devised a central array of 54 x WS218X 2 x 18" subs, a third of which were facing backwards. The whole array was mounted along the stage apron and driven in a cardioid configuration in order to control the levels on stage as well as spillage to the other stages.

However, a long, straight array of subs has a laser beam-like dispersion pattern. A technique had to be found to widen this beam to cover the whole width of the field and to match the coverage of the main and side hang system.

This required the use of sophisticated software-based modelling techniques for sub arrays, currently being developed by Martin Audio (*pic 3*). This allowed Pardoe to demonstrate that manipulating the drive signal along the sub array, from its centre to the ends, could broaden out the beam to exactly the right coverage pattern. A significant benefit of this single cluster approach was that the 'power alley' created by widely spaced left/right sub arrays was totally absent. The low end was remarkably smooth over the whole of the field. What was equally impressive was how the system maintained this controlled coverage characteristic right to the back.

The delay system comprised three arrays of 16 x W8LC, tilted downwards to sharply cut off at the back of the field. Each array was augmented by eight WLX subs, again driven in a somewhat unusual cardioid configuration, in order to yield excellent forward projection required without rear leakage.

The W8VDQ compact, three-way system, which combines line array and differential dispersion technologies, made its festival debut when two were used for infill behind the mix position. They provided plenty of SPL, yet their diminutive size did not obstruct the video screen directly above them.

## Implementation

Turning a sophisticated system design into a successfully executed job requires commitment, cooperation and a willingness to work around the last-minute changes that are inevitable with a project of this size. CBA Associates' and RG Jones' experience of previous Glastonbury Festivals was complemented by Capital Sound Hire's extensive touring experience with Longbow systems

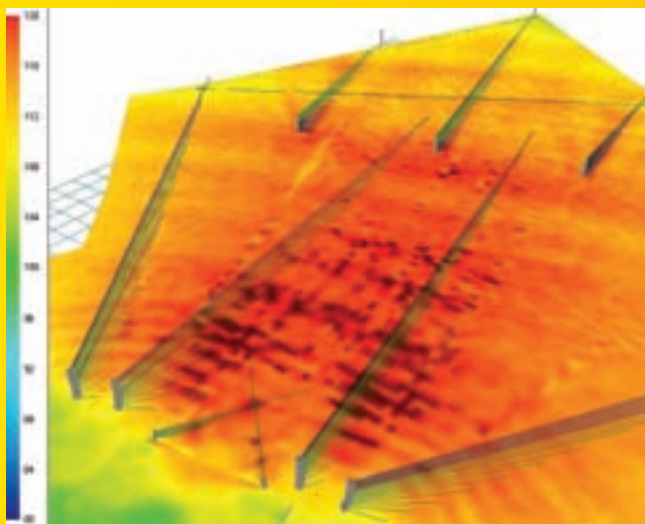
(which were provided for Glastonbury from their own fleet). Finally, Martin Audio's detailed system design and prediction facilities combined to provide a system that met spec in an easily controllable manner.

In fact RG Jones and Capital Sound's well documented ID'd drive systems, plus their adherence to standard Martin Audio user configurations and gain structures, ensured seamless system integration. Mark Edwards and the team from RG Jones plus Ian Colville from Capital Sound provided combined rigging and systems expertise that was second to none.

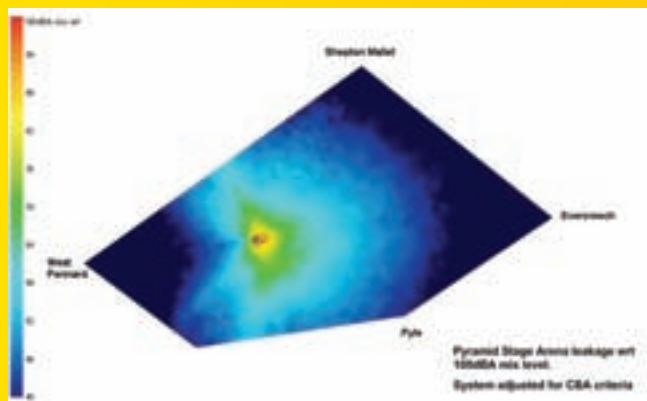
Summing up, Simon Honywill of RG Jones said, "Performance was everything it needed to be for a festival of this kind and the design conceived by the guys at Martin Audio proved exemplary."

Martin Audio sales director Rob Lingfield, added, "This collaboration was a triumph for the Martin Audio rental network. As much as the combined inventories, it was the pooling of these companies' expertise that was the foundation of the festival's success."

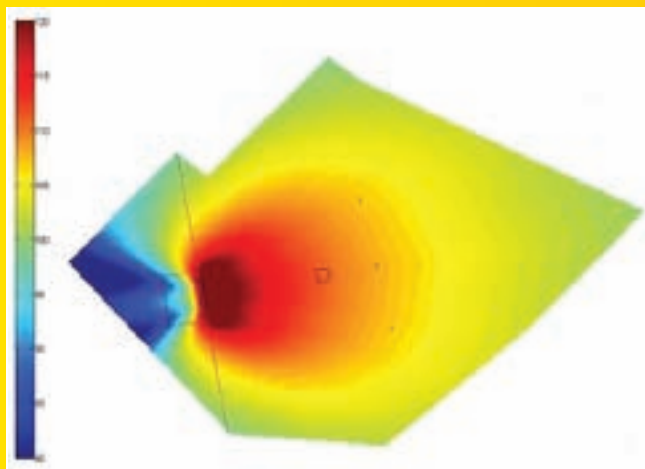
And Chris Beale agreed: "Melvin Benn [festival production director] paid very close attention to the system and walked the arena with us, and he's extremely satisfied. We've got a great result, because of the amount of effort that everyone's put in — the thinking and co-operation that's gone on between everyone involved has been really good. And following the weekend, the local authority have declared themselves very happy too, which is great news for the festival."



Pic 1.



Pic 2.



Pic 3.



# A MATTER OF FACT

A new three-floor, 32,737 sq.ft, 2,600 capacity venue is about to reshape the face of London's music and club scene.



Cameron Leslie (left) with Dave Parry

Named *matter*, and forming part of the successful O2 Arena Complex in Docklands, the new all-concrete, heavily soundproofed building is the brainchild of *fabric* owners, Keith Reilly and Cameron Leslie, and represents a multimillion pound investment. Their brief to Most Technical's Dave Parry was to take the use of entertainment technology to a new level.

This he has done by a bespoke integration of sound, lighting and video, with the mainstay of the sound system being a Martin Audio W8L Longbow line





server (The Addict Server) to create an ever changing canvas, in sync with the sound. This includes 12 high output video projectors on moving mirrors.

The system has been configured so that all the lighting, sound and video are controlled from an Avolites Diamond 4 desk (with MIDI signals triggered from the Timax) — something that has never been done before. Martin Audio's own vast armoury of power amplifiers — including the MA12K — form the bulk of an engine room that has been placed on full display on the bridge, high above the control booth. In addition to the 55 amplifiers and the Timax 2, other processing devices include the Yamaha DME, providing 128 output channels.

The mainstay of a system that can create either a complete sound field — up through the core of the triple height venue or in separate zones as required — is the Martin Audio Longbow, driven five-way.

At one point the owners had considered upgrading the *fabric* system with a Martin Audio dance stack, and relocating the existing system — but once the decision had been made to specify afresh, Martin Audio's Sales Manager, Simon Bull introduced the company's proprietary Display™ 3D predictive modelling tool into the equation, ensuring that the performance was fully optimised.

In the main room multiples of wall-mounted AQ8's and AQ12's cover the Bar area, along with AQ215's while the main room system consists of a L/C/R line array system comprising W8L Longbow hangs and W8LD Downfills, complemented with three W8LMI enclosures and a W8LMDI Downfill. Six H3H+'s are mounted at balcony level to provide further coverage and eight WS218X provide the overall sub extension. A pair of Blackline F12+'s and S18+ sub bass provide the DJ monitors.

High up in the Main Room, 17 x AQ8's and six AQ210 subs provide further infill.

For Room 2 (on the second floor) Dave Parry has created more of a conventional Martin Audio club sound, using four stacks of H3T+'s and WS218X's — one stack for each corner. Blackline F12+ and S18+ sub provide the DJ monitoring.

The third floor offers VIPs an uncompromised view of the stage from the balcony, with access to the Sky Bridge. Here 16 x 50in plasmas are set in the roof over the VIP Bar which match up to the 50in LED panels in the floor. The 12 x Panasonic projectors and a big screen covers the roof void with dry ice (above the gauze), so that it forms a stunning view from the Sky Bridge.

"I have always been happy with Martin Audio systems," said Dave Parry. "We love the sound at *fabric* but we also love the service — and UK manager Simon Bull was an unbelievable help. So when we came to spec *matter*, Martin Audio were already two furlongs ahead."

In summary, he said, "I have wanted to do an operation like this for ten years. I have taken it to a whole new level and included full Pro Tools HD recording and a video editing suite. The recording studio links to a separate studio and I have put camera points in for full HD transmission."

This is the first live venue project for renowned architects Pentagram, and their project team of William Russell and Sarah Adams have created a completely holistic build that is as imaginative in its design as it is architecturally sympathetic to its surroundings.

Along with the core team, O2 owners AEG have been instrumental in making this exciting new venture possible, and in time *matter* looks forward to developing this relationship into an interesting creative collaboration.

array, which incorporates Timax Outboard Processing; this allows the sound to be mapped in three dimensions and be manipulated around the entire space by the operators. Another core element is Djenerate's new BodyKinetic interactive dance floor system — described as "80 transducers on steroids" — with some 75,000W of sound are pumped through the floor, which is underfitted with eight strobes.

Meanwhile, the entire visual creativity is a story apart, as advanced architectural mapping techniques have been employed using Pixel Addicts' media





# PRIMATE SOUND



Situated in the 'KÖ', the city's well-known boulevard featuring stylish restaurants, shopping arcades and malls, the minimalist club has become a 'Who's Who' of the DJ community, who have streamed in and out of a place that is also attracting members of the media, art, fashion, design and advertising worlds.

Atlantic Audio's project manager Jörg Sandmann, has specified a sound and lighting system, knowing that the secret of a successful dancefloor lies in providing an accepted worldwide standard of professional sound equipment when catering for the riders of DJs of the calibre of Laurent

Garnier, Tobi Neumann, Onur Özer, and many other international turntablists.

For the main system Sandeman has installed a pair of Martin Audio LE2100 low-profile biamp monitor loudspeakers, with a pair of Blackline S218 subwoofers adding the bass extension and three AQ10's the infills. DJ monitoring is provided by a pair of Blackline F10's.

The Monkey's Club is also characterised by the unmistakeable art of the famous German painter, Jörg Immendorf, creator of the Monkey's logo.

UNITED KINGDOM

The Assembly, Leamington Spa, is a 1926 Grade II-listed building owned by Nigel Dalley which has reopened as multi-purpose 1000 capacity multi-purpose venue after a £3.2m refit.

TV celebrity interior designer, Laurence Llewelyn-Bowen, was responsible for the interior design whilst the responsibility for the sound was passed to Leamington Sight & Sound.

Due to the operational needs of the venue, a versatile system was required to cover from speech only to full music production. LSS' Ian Potter comments; "It came down to a choice of two line array systems but the client chose Martin Audio based upon our recommendation after trials — the W8LM gives us an incredible amount of controllability. The support of UK Sales Manager, Simon Bull, and the use of Martin Audio's Display™ predictive software helped tip the scales."

The system comprises two hangs of five W8LM's and a W8LMD each side of the proscenium arch (driven five-way), with four S218X subs recessed under the stage; ten low-profile LE1500's stage monitors and two F215+'s for either drum- or side-fill. System control is via Martin Audio amps and dedicated DX1 processors.





Atlantic Audio has allowed Düsseldorf's new Monkey's Club to deliver an exciting mix of Deep House and Techno, with the help of Martin Audio's legendary dance sound.

Pics: ©Monkey's Club Düsseldorf



Martina Kamp, business manager of the club says, "We are thrilled with the quality of the Martin Audio sound system, and the impact it is having on our DJ bookings. Word of mouth on the DJ scene persuaded us to invest in the same brand that has also caused so much furore in the legendary Robert Johnson Club in Offenbach and *weekend* in Berlin. The Martin Audio sound system has given us the possibility of making new DJ contacts and provided an extraordinary feedback from music creatives."

And Jörg Sandmann added: "We are always pleased to hear when our reference projects have become topics for conversation — particularly when such a project has taken place practically on our doorstep."

"Aside from offering DJs an international standard, the extremely tight time frame provided a real challenge. The modification, installation and redevelopment had to be finished between two opening days — but at least we managed to achieve our purpose of enriching Düsseldorf's club scene with a Martin Audio system."

The *iTunes Live Festival '08* is an annual event that runs for 31-days throughout July at Koko, London.

Among the 60 bands appearing this year were The Feeling, Suzanne Vega, N\*E\*R\*D, James Blunt Hadouken! and The Ting Tings.

W1 Productions purchased 14 x LE1500 low-profile floor monitors for the event which now complement their already substantial Martin Audio rental fleet. Stuart Turvill, of W1 Productions, said, "The Festival provided the trigger to move up to a bigger stage monitor. The LE1500's have proved very popular and an amazing showcase for the product — largely due to the impressive sound and curved profile. The bands love them and many of the visiting monitor engineers said how happy they were with their performance."



Alphabeat on stage at KOKO with the new LE1500 floor monitors.  
Pic courtesy of Mallinsons



UNITED STATES



# THE PAPAL MASS IN D.C.



As the first non-baseball event for the new Nationals Stadium and the initial step of a high profile journey across the Eastern U.S., the Papal Mass in Washington D.C. presented a unique set of challenges for leading production company, MHA Audio.

Owner Mike Scarfe explained, "We couldn't use the existing audio system because, as with all stadiums, the sound comes from above and behind the audience; and since the stage for the Papal Mass was at one end it would have been impossible to time-align it to the stage. We provided sound for the entire stadium and 47,000 people from 60-foot towers on either side of the stage. Basically, we had a 550 foot throw from the speaker tower to the farthest seat."

Working with Jim Cousins at Martin Audio in the UK and using Display™ software, MHA were able to come up with optimum angles for the line array. They fielded 16 x W8L Longbow enclosures on each side firing forward, and 12 x W8LC's a side, firing sideways. A further six W8LC's were fired to the rear of stage left, and the production also used six WSX subs and two WT3's.

It wasn't just about clear spoken word reproduction, because a 700-member choir and an orchestra of 50 appeared on stage behind the speaker tower.

The programme started at 5.00am once the gates were opened and there was a variety of entertainment including opera singers Placido Domingo and Denyce Graves preceding the start of the mass at 10am. The choir, cantors and orchestral accompaniment continued throughout the mass until noon.

The MHA crew consisted of FOH: Zane Marshall, assisted by Peter Maher; Monitors/Orchestral Stage: David Colella Assisted by Tom Buckley and Monitors/Entertainment Stage: Gavin Pearce, assisted by Bruce Coffman.

MHA's client, Showcall, is an event production company which specialises in large format, high threat events — and they were extremely happy with the sound. Concluded Mike Scarfe, "We received positive comments all around, and everybody was impressed, including the representative from Vatican Radio. He'd already had positive experiences using Martin Audio in Europe and was happy to see it again."



# COOL STRULE

## Omagh Welcomes £10m Arts Centre

The new £10million Strule Arts Centre — funded by Omagh District Council in conjunction with the Arts Council of Northern Ireland — has now opened in the city.

Rea Sound (NI) Ltd was awarded the specialist sub-contracts for stage and dance studio lighting, house light control, stage and foyer PA, all comms (including CCTV), recording studio and the 60 facility panels throughout the venue.

The main PA system was based on the Martin Audio W8LM line array system. Two clusters hang left and right of the stage comprising three W8LM enclosures, a W8LMD and WSX sub. A W8LMD Downfill enclosure has also been installed for centre fill.

Rea Sound (NI) Ltd also opted to use the new MA6.8Q power amp for the main PA, in conjunction with a dedicated DX1 system controller, while the W8LMD is powered by an MA2.8s.

The main PA was designed to run in different formats and hence a dedicated flying bar was installed, with all cable being carefully cable managed to each of the arrays.

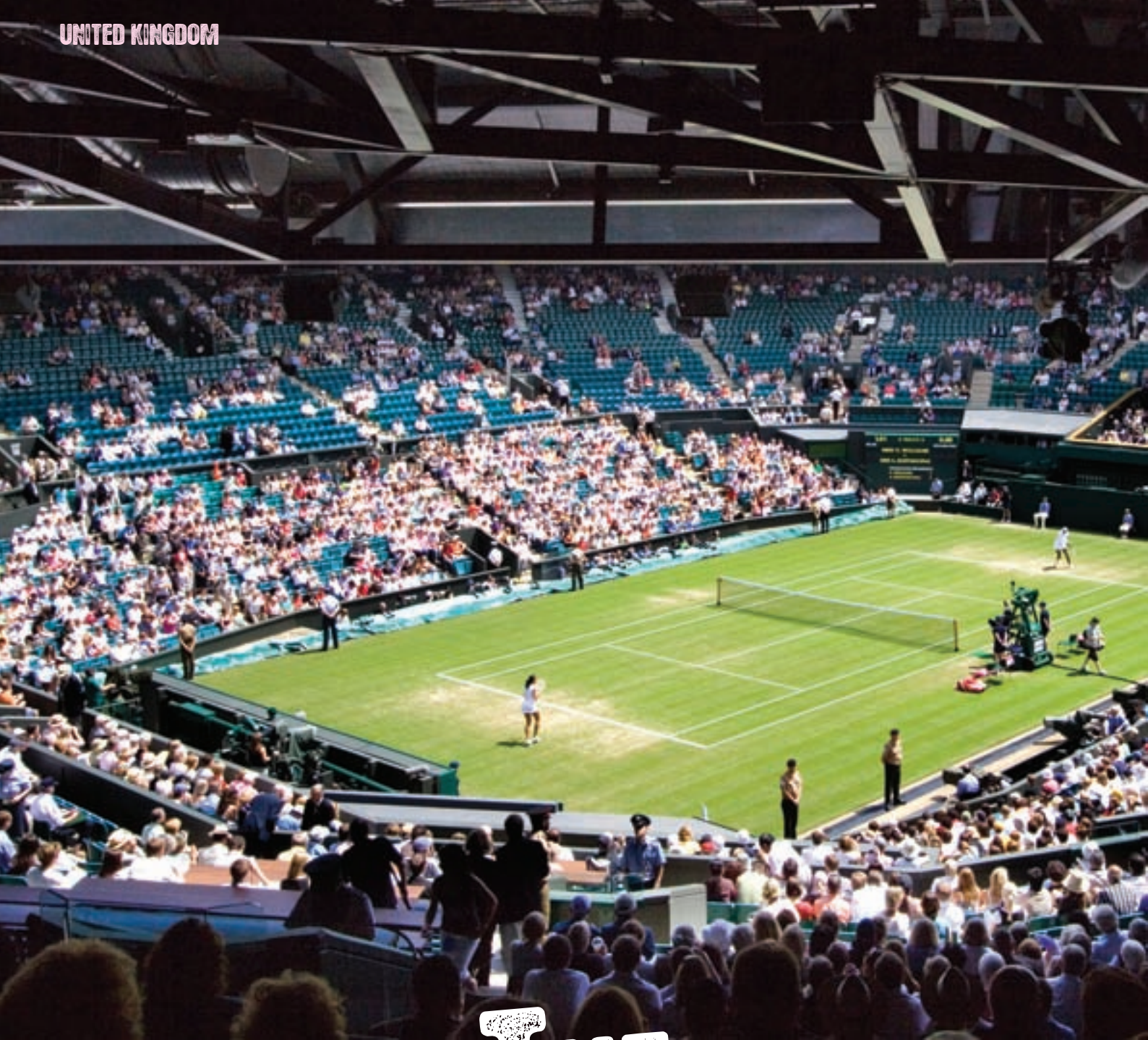
The coverage in the auditorium is exceptional giving a good clear sound image across every seat. Flying the subs allows for the venue to have full use of the stage floor space, which is at a premium.

Each of the 92 mic inputs can be patched into a 48-way splitter which allows for the signal to be sent directly to the control room, recording studio, monitor mix position and an OB link. The main control console is the Allen & Heath GL4800 48-channel.

A four-way monitor system utilising the LE1200 floor monitors was also supplied.

The 399-seat Omagh venue has already won numerous awards across the architectural and building fields and is highly regarded as one of the most technically fitted venues in Ireland.





# LIFTING THE ROOF OFF

The second phase of The All England Lawn Tennis Club's three-year plan to transform the Centre Court at Wimbledon included the installation of a major public address system.

After going roofless in 2007, Centre Court this year assumed a more traditional look following the installation of the permanent non-moveable new roof.







The dilemma facing Jon Berry from RG Jones Sound Engineering Ltd, the All England Club's long-term pro audio contractors, was in finding a sound system that could be installed for this year's Championships, knowing that immediately after the event it would need to be temporarily removed in preparation for the third phase — a retractable roof which will be added in time for the 2009 Championships, complete with a moving, sliding section, carried on ten trusses.

In conjunction with engineering consultants a number of different approaches had been considered, including several hundred ceiling speakers and a ring of traditional, horn-loaded public address enclosures.

A long search eventually led Jon Berry to his preferred solution ... a purpose-designed AM Series Stadium system from Martin Audio.

RG Jones already had proof of pedigree since they run both the Martin Synco system and the manufacturers' own proprietary (W8LC and W8LM) line array systems in their hire fleet, and have installation experience of the AQ Architectural series. They knew they could depend on 100% back-up as well as modeling data from Martin Audio's EASE expert, Peter Child.

The company thus requisitioned 71 of the AM10 enclosures, which have been specifically designed for use in stadiums and arenas where high SPL and weather resistance are critical.

However, as the roof itself contains so much air conditioning ducting, allowing little space to operate, the EASE plot had to be remodelled several times to gain the best positional options available.

After studying the venue drawings a system was proposed, utilising front and rear facing AM10 loudspeakers which offered uniform coverage and good intelligibility.

A further prerequisite was that the system not only had to be weather-proofed but custom

coloured to blend in with the roof soffit — thus the standard AM10 finish has been modified to either BS12B25 spruce green or RAL 7009 green grey.

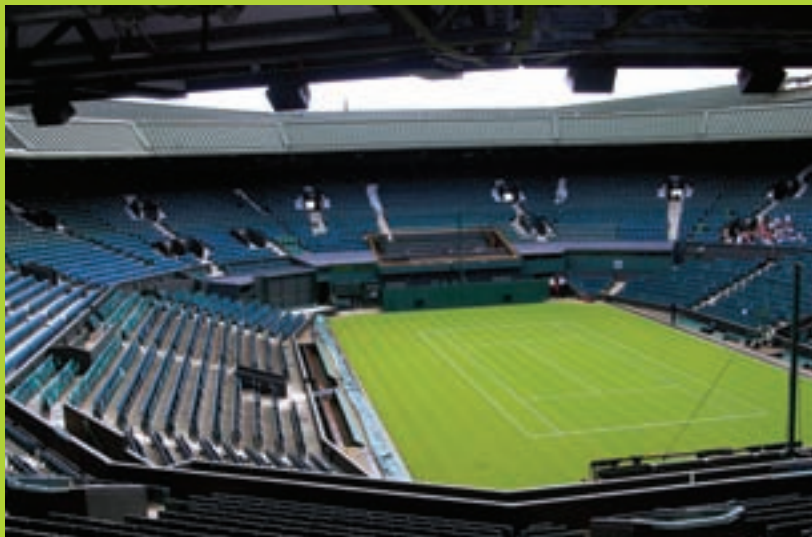
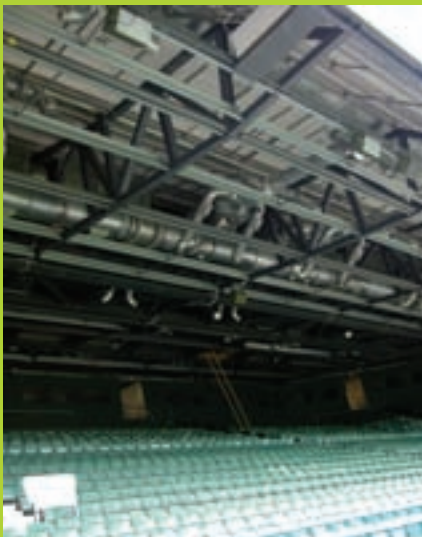
Meanwhile RG Jones commissioned custom bracketry from local fabrication company, Bobak Engineering, made up in the the same colours and fixed in temporary positions which loosely conform to Peter Child's EASE plot.

"The design of this bracket allowed us to clamp the speaker, yoke style to the sides, allowing us to angle and tilt the speakers accordingly and then lock them off to a fixed angle with a separate bolt," says Jon Berry. Despite the temporary nature of the installation (and intrusion of aircon) the coverage, he says, is even throughout the Bowl with no sign of any hotspotting or drop-outs.

The speakers are driven by 100V line amps and split into 24 four-wire speaker circuits. In time, RG Jones plan to implement separate line monitoring as part of a full PA/VA system.

The PA in the bowl will relay the paging calls as well as a mix of sources. These include the umpire's microphone, courtside radio microphones and wet weather microphones, and other virtually routed sources. "We can route any input we receive from the BBC or other providers, using our Soundweb system, into the court mix," explains Jon Berry. "Although we no longer have a Cyclops line beep due to the Hawk-Eye line call system, we now have audio sources that are required to accompany the VT and flash interviews shown on the new active video scoreboards."

With the 2008 Championships now over, the system will be temporarily removed as work begins in preparation for 2009; the next time the AM system is installed it will be on a permanent basis — fixed to Centre Court's brand new soffit, which will extend right to the edge of the roof's underside, enabling all the AM10's to be positioned as determined in the EASE model.





# FIRST OMNILINE® FOR HIGH-GLAM KINGLY

The first UK installation of the new award-winning OmniLine® Micro Line Array has been installed in the stunning new, three-storey, glass-fronted Kingly Club in London's Covent Garden.

The scalable system was specified by Bernard Mani, head of London integration company Systems Etc, after witnessing its launch at PLASA 2007 and seeing it immediately adopted in America for *Star Trek® The Tour* — billed as “the largest interactive *Star Trek* exhibit ever.”

The Kingly Club is the brainchild of entrepreneur Dezzi Mc Causland, founder and creator of the original award winning members club of the same name in Soho — on which Systems Etc also worked.

The new operation in St Martin's Lane consists of a contemporary Japanese restaurant, Kyashii, a lounge bar, a VIP mezzanine area and al fresco seating during the summer months.

Overlooking the ground floor with a private bar, DJ and the largest floor to ceiling screens of any bar in Europe, the VIP mezzanine area offers fabulous views. Downstairs, the restaurant comprises three dining rooms, the Blue Room, The White Room and the Chef's Table.

The challenge for Mani was to provide even sound coverage. “Not





combination of 17 distributed C4.8T's and two C6.8T. ceiling speakers. Likewise the floor-mounted sub-woofers needed to be invisible and both the eight CS265's on the ground floor and three AQ210 subs in the mezzanine have been concealed within the furniture carcassing. Blackline F10+ provides the DJ's reference monitoring.

In order to balance the levels of the source inputs Systems Etc have again used Martin Audio's new Engineer 418 DSP working in conjunction with a separate zoner, which distributes the sound to 14 different zones.

Summing up, Bernard Mani says, "OmniLine is great looking kit and it really works — delivering the right SPL. Everyone at the venue is delighted."



only did we have to provide even distribution through three floors but the system needed to be tiny and near-invisible." It was important that the sound reinforcement blended in with the high-glamour design concept created by the owner himself, and architect Phillip Watts.

The main system comprises seven hangs of four OmniLine® boxes — some flown from the ceiling and some wall-mounted.

Full range infills are provided by Martin Audio's architecturally-designed white C115's with 11 mounted to the wall, along with a



UNITED STATES

# HISTORIC BLUES CLUB UPGRADES



Wise Fool's Pub, Chicago, a double storefront space on Lincoln Avenue, originally opened in 1968. Since then, blues legends like Muddy Waters, Willie Dixon, Son Seals, KoKo Taylor, Lonnie Brooks, Buddy Guy and Mighty Joe Young have played there, as well as George Thorogood, who made his first Chicago appearance there.

Owners Chris Perry and Big Bill Vance recently undertook a total upgrade on the club's audio system with local installers, Frequency Audio. Designer Nathan Short chose premium components for the

makeover, including the first Blackline F12<sup>+</sup> speakers installed in the U.S., with dual 18 subs.

Asked why he chose Martin Audio, Short stated, "It is based on our long-term relationship with Martin Audio and our success with the brand over the years. We needed a system that could handle live bands and DJ's for some time to come and with the understanding that they were buying the best. And the F12<sup>+</sup> is the loudest and most musical-sounding 12" passive speaker I've ever heard."



# CROWES AT BAYFEST

Held for six days at Centennial Park in Samia, Ontario and a centre point of the summer concert season, *Rogers Bayfest 2008* features a premier lineup that included Bon Jovi, Fergie, Mötley Crüe, Big & Rich, Rascal Flatts and the inimitable Black Crowes on July 18th.

Given the bands' longstanding reputation for playing LOUD, longtime monitor engineer Drew Consolvo and FOH engineer Scott "Scoobie" Scherban were well equipped for the challenge. Since the Crowes don't use in-ear monitoring and like any true guitar band prefer the natural sound of their amps, the crew relied on Martin Audio LE2100 monitor wedges to get the job done right.

This tour was Gonsalvo and Scherban's first experience with the Martin Audio LE2100's, provided by Delicate Productions. They'd been using Martin LE700s for years, but the new LE2100's feature a pair of 12" speakers with a 6-1/2" midrange device and a 1" exit compression driver mounted on a differential dispersion horn and offer a much higher profile sound from a low profile enclosure.

FOH Engineer Scherban, who's been with the Crowes on an off for more than decade feels that when it comes to Martin Audio speakers, "it has to be one of the best sounding and musical boxes out there. I can't find any other box that has that kind of sound right out of the box, without using a massive amount of EQing.

"It's the most musical and easy box to deal with. Unlike others which sound like they aim only for the highs and lows of the sound spectrum. Whereas the Martin box, to me is designed around the vocal mid range, which is really where the mix is. I wish, more people would get hip to the Martin box, finally a box that sounds like it should."



# PACHA'S UPGRADE

London multiple venue owner Billy Reilly has upgraded the sound system at Pacha, the legendary Ibiza club brand which he set up in London six years ago.

As part of an £800,000 refurbishment, he commissioned Bernard Mani at Systems Etc to replace the old system with a new Martin Audio WT3 rig, processed via Martin Audio's new Engineer 418 DSP.

Pacha London is the latest in a long line of premier London venues that have been seduced by the potency of Martin Audio's dance systems — including fabric and the Ministry of Sound.

But Mani wanted to achieve a more theatrical sound. "I knew all the components of the WT3 so was confident in what a fully active system would sound like — and that is predominantly a much smoother midrange and greater warmth."

The WT3's are configured in four arrayed pairs around the balcony, with low frequency extension provided by four ground stacked pairs of WS218X subs.

"We consulted a number of DJ's and promoters, and we knew that with Martin Audio the back-up and support would be there," added operations director, Gemma Ross.

Berni Mani instinctively knew he wanted an "adult" system, sacrificing a few dB's in favour of highest definition, but at the same time meeting club manager Alex Anderson's brief to get a massive SPL of 120dBA on the dancefloor without causing fatigue — more than sufficient to appease top dance promoters.

Martin Audio Blackline F10<sup>+</sup>'s provide balcony and peripheral infills, as well as sound for the alcoves and VIP gazebo booths, while the stylish AQ range will broadcast the sound — routed by the Engineer 418 DSP — up to the roof terrace.

Bernard Mani is especially complimentary about Martin Audio's powerful DSP device which uses unique algorithms to keep sound systems automatically performing at optimum level — the built-in programme level/tonal control compensating for variations in programme sources.

"In a club set-up this unmaintained sound processor is the perfect device," he believes.

While DJ's in the Global Room will be treated to top-drawer reference sound from a pair of Blackline F12<sup>+</sup> monitors, Bernard Mani has opted for a pair of low-profile LE1500 floor monitors more generally found on top concert stages in the main club. These are yoke-mounted to the underside of the overhanging canopy and fire back to the newly-relocated DJ booth — effectively converting floor monitors into ceiling monitors. "That way it won't block any sightlines and the DJ's receive a great reference sound."







# AMPACO'S "LARGEST PA SYSTEM EVER"

Ampco Pro Rent has specified what's thought to be the largest PA system ever rigged at the Amsterdam Arena – an elaborate in-the-round audio design for three sold-out shows by the Dutch supergroup Toppers.

Over 300 Martin Audio and Synco by Martin Audio line array cabinets featured in the shows, along with the first ever deployment of the Synco Europe Network's brand new, custom designed Synco by Martin Audio WS318X triple-18" subwoofers.

Brought in by Dennis van der Haagen of leading Dutch production specialists Sightline Productions, Ampco created a system that featured inner and outer rings of line array around the giant four-sided centre-hung video cluster.

Over 300 cabinets of W8L Longbow, W8LC and W8LM, controlled by Dolby Lake and XTA processors, formed the backbone of the rig, along with 24 of the new subwoofers, which were arranged in a ground ring around the stage's circular outer catwalk.

John Kriek mixed FOH on a Midas XL4; Sydney van Gastel and Merijn Mols mixed monitors on two DiGiCo D5s; Hugo Scholten was system engineer and Kees Heegstra production manager for Ampco.



Pics: Mike Lethby



# DA VINCI'S CODE



The Da Vinci/Ferrari Club is owned by Lambros Samourelis (architect) and Virginia Kavrakis (interior designer) and located in the centre of Agia Paraskeyi, Athens.

Da Vinci is an all-day café-bar/restaurant, backed up by Casus Ceni restaurant. Exclusive business and corporate private parties are catered for in the Champagne Hall and Sistivari Hall.

KEM Electronics, the local Martin Audio distributor, were contacted and asked to provide a sound system that would compliment the elegant décor of the club. The system they suggested and installed was a combination of the AQ series of architectural speakers controlled by the dedicated AQX device and powered by MA900 amplifiers, with C8.1T ceiling speakers and CS10 ceiling subwoofers.

The Martin Audio sound system provides hi-fi clarity across a range of musical genres while the subs add low-frequency presence late at night. Each of the three rooms are equipped with discreet Martin Audio components, with high priority given to the aesthetics, since colour-matching to the décor was important.

General Manager Dimitris Tzouanopoulos, said, "This aesthetically-designed place deserved an excellent sound and our goal was to offer a complete music hall. With Martin Audio we have the best there is universally in the pro audio market. All the DJs have told me that we have a terrific sound and we enjoyed great co-operation with KEM Electronics."





# CITADEL Music

*Citadel Music Festival*, Berlin, is staged at the renaissance fortress located at the Havel River, with more than 100,000 visitors last year.

This series of 30 concerts are promoted by Trinity Concerts and run from May 29th to September 1st.

André Rauhut, general manager Complete Audio Berlin, who provide technical project management, states, "The atmosphere is created by the correct placement of the stage, creative illumination of the citadel and performance of the sound equipment. Scores of world class artists perform different types of music so that one day we are reinforcing classical music with a chorus, on the next it will be a group like Rage Against The Machine. The PA must fulfill all production riders — and Martin Audio has always been our first choice for that."

Complete Audio plan a detailed logistic for the delivery of all technical equipment as it is not possible to truck it directly since there is only a draw-bridge access to the stage. The Martin Audio system remains in operation for all performers during the entire season.

PA Components (FOH): 24 x W8LC; 4 x W8LCD; 4 x W8C; 20 x WS218X subs, driven four-way stereo by Crest amplification.

Monitors: 12 x LE1500 floor monitors, 1 x S18 sub, 4 x W8C and 4 x WLX subs.

To fulfill the huge demand for Martin Audio W8LC Line Array from other events, André Rauhut has now invested in a W8L Longbow system.

*Pics Copyright: Citadel Music Festival 2008*

— photo: Bauchspiess



# DUBAI LUXURY

The Westin Dubai Mina Seyahi Beach Resort & Marina is a nine-storey high, five-star hotel with 294 guest rooms and suites, Heavenly Spa and Westin Workout Gym, ten food and beverage venues plus extensive conference and banqueting facilities located opposite Palm Island, Dubai.

The venue features over 1,560 sq. metres of function space for events catering up to 5,000 guests. The centrepiece is a magnificent Italian-designed conference centre together with nine meeting and conference venues and 890-metre ballroom.

Sharjah-based installation company, Tectronics, provided a complete Martin Audio system for the ballroom comprising C8.1T ceiling speakers and AQ10's (fitted into acoustically-treated in-wall chambers) and AQ212 subwoofers. The seven multipurpose meeting rooms, named after the seven different Emirates, were given a similar treatment with multiples of Martin Audio C6.8T ceiling speakers. Further C4.8T, C6.8T and C8.1T ceiling speakers are found throughout the complex.



INDIA

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## BELGIUM

With a capacity of over 12.000 people, the Antwerp Sportpaleis has taken delivery of no fewer than 72 Martin Audio OmniLine® micro line array cabinets — divided over 14 Arrays. Each array comprises four, six or eight enclosures, for coverage of the refurbished central entrance and upstairs foyer — all under the control of an Engineer 818.

With technical responsibility for the Sportpaleis, Geert Torfs had asked Steven Kemland from Ampco Belgium to design an appropriate system that could deal with all the technical specifications needed for this venue.

First of all, the installation needed to be able to present announcements with high intelligibility and background music with hi-fi quality. The system also needed to be implemented as a delay system in the foyer area, when an event is taking place in the main hall.

For this reason Ampco Belgium didn't propose a split system, but decided to place all the arrays at the side of the main hall, so that the delay times at the sides could be arranged perfectly with the main hall. "The OmniLine arrays will be a great benefit to the mids and highs of the subs and low frequencies that enter the side areas through doors and hallways," says Steven Kemland.

The 14 arrays are divided over three floors. Each floor will have an Engineer remote to select the desired input and to determine volume in that zone.

Whenever there is a show taking place, or background music is required, the Engineer 818 will compensate for any colouration and stabilise the volume, bearing in mind the loud ambient noise around the bars.

Because of the Deep Bass function in the Engineer, there was no need for additional subs. And even with relatively loud music the entire zone will be bathed in a full range sound.

Steven Kemland concludes, "This is something I've been waiting for many years: a commercial solution to receive focused sound at an appropriate volume level in terms of both announcements and background music. Place an Engineer on top of that and you have a lot of happy people!"

# 72 OMNILINE IN SPORTPALEIS



## MINI IN MURCIA SPAIN

Disco On is a uniquely situated discotheque, around an ancient rainwater collector in Murcia, Spain.

The installation was a collaboration between, DMG, On Disco and Adagio.Pro.

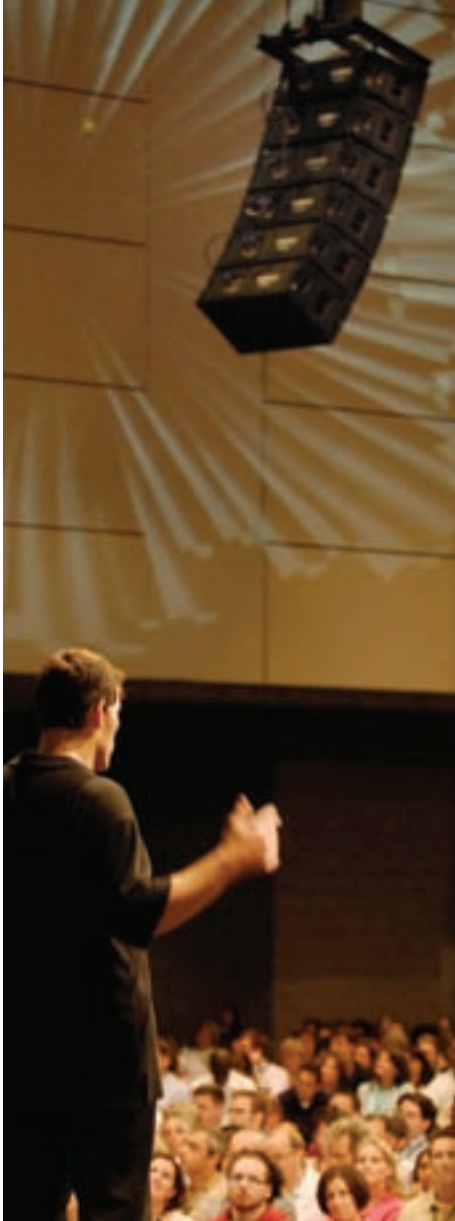
The owners of the famous nightclub On wanted to make a radical change in aesthetics and sound of their new disco. In their quest the sound technicians and DJs of the Disco On travelled to B3 in

Seville (equipped with Martin Audio) and finally found the sound they were looking for.

Adagio Pro engineers Marc Rovira and Bernat Camacho in consultation with the On crew settled on the following configuration for the disco: Dance system — 12 x W8LMD; 4 x WS218X, with MC² amps and XTA processing. 2 x AQ10 DJ monitors. Pub Bar: 4 x AQ10 and 4 x AQ112



# UNLEASHING THE POWER



Held from July 25th through the 28th at the Metro Toronto Convention Centre, Tony Robbins' popular seminar *Unleash The Power Within* was an unqualified success on every level.

Robbins is known for his high energy delivery. The world's leading Personal Development Coach led the 4,000 participants through a dynamic programme designed to make positive and lasting change in their lives. Robbins delivered 40-plus hours of teaching in a span of 3.5 days.

Stanco Productions provided turnkey production as they have for the past 15 years. Owner Stan Nickens is the event producer, Curtis Kelly is the audio director and Justin Slazas is the system tech. Asked about the challenges, Slazas mentioned controlling Robbins' 'tremendous 'from-a-whisper-to-a scream' dynamic range. This is handled using a unique gain structure and insert tools. "Plus Martin Audio speakers are very natural sounding boxes and speech intelligibility is very easy to achieve given the crossover points," Slazas adds.

Summing up, Nickens concludes, "Robbins' delivery style is like a rock and roll show. His teachings are punctuated with high-energy music and visuals. This keeps the audience energized, engaged and focused."

A staff second to none coupled with the Martin product line allows Robbins to focus on *Unleashing the Power Within*.

# PATRICK LAU TO SET UP ASIAN OFFICE



Martin Audio are pleased to announce that Patrick Lau has joined the company, with responsibility for setting up a dedicated Asian office, based in Hong Kong.

Patrick previously worked for DCH, the Martin Audio distributor for Hong Kong and China, and has been instrumental in spearheading the huge growth in sales, and generally expanding the company's profile in the territory.

Said joint managing director, David Bissett-Powell, "Martin Audio felt the timing was absolutely right to reinforce our commitment to the Asian market by providing easy access to local support.

"Having worked with the product for several years, and being located in Hong Kong, Patrick was the ideal candidate to serve the region in a timely and efficient manner."

# AQ5's SYMPHONY

UNITED STATES

Named after the founder of one of the country's greatest symphony orchestras, Higginson Hall is for more modestly scaled events, a cappella singers, soloists, ensembles and meetings with seating for up to 600.

The goal for Boston-based integrator Matrix 1 was to convert and upgrade the PA from an Announce system, tied to the rest of the building, to a multifaceted audio system with multiple zones.

As project manager, Chaz Loews points out, "Higginson can be split into North and South zones, so we built a system for the hall in general and for separate rooms at the same time. "We needed clear spoken word and

high-quality musical reproduction," Loews continues. "So we used I6 Martin Audio AQ5's in a distributed system with three delay zones so they could use a podium or microphone anywhere in the room without feedback issues. One room gets six speakers and the other room gets 10 – they can play the room any way they want to."

Summing up, he concludes, "The system sounds great, we used very little processing; the AQ's really don't need much. It's a 100° box that covers evenly and the transitions are really nice. The client is extremely happy about it, mainly because we made it easy and foolproof to operate."



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UNITED STATES

# HARD ROCKING IN BOSTON



A mainstay in Copley Square for 18 years, the Hard Rock Cafe Boston has reopened its doors in the historic Faneuil Hall area on Clinton Street. After the move, it was determined that the original audio was unsatisfactory, with low intelligibility, headroom, poor coverage and low frequency reproduction. As Chaz Loews of Matrix 1 points out, "It was a poor match for the room, and the level of shows they were doing. After many complaints from bands, audiences and the client, we were called in."

As the house sound company, Loews continues, "we recommended the Martin Audio W8LM speakers, since we used the larger W8LC speakers for their bigger shows with great success."

"Ultimately, they wanted a system that was unobtrusive, yet one with the punch of a full size line array, so they went for a smaller system with four W8LM's per side."

"The client was especially happy about the clarity and usable gain of the speaker system. The pattern of the Martin W8LM speakers match the room well, making it very easy to mix on."

# AT THE VANGUARD

Like many Hollywood clubs, Vanguard has had many lives. It's been a warehouse, roller-skating rink and, more recently, Qtopia club. Now it's a multifaceted venue.

According to Richard Ralke of LA Sound, the club first approached him "a few years back. Adam Dugan, the Technical Director, was looking for a monitoring solution for the many big DJs that play the club. I suggested the Martin W8 system together and it's been there for 2 years!"

"More recently," Richard continues, "Vanguard was doing a facelift and decided to replace the sound systems in the three VIP rooms which we did with Martin Audio. The bigger room has four flown AQ15 boxes for the dance area, two AQ10s for fill and four WS218X subs. The smaller room has four EM 76 box and two WS218X subs. The downstairs room has four AQ15 flown and four W218X subs."



Asked about the reaction at Vanguard, Adam says, "Everyone's been really happy with the sound. When we were looking for a system, the owners wanted more of a 'loungey' atmosphere. If you install a dance system, you can always turn it down, but if it's a lounge system, you can't really turn it up. We have all we need now for both situations."



Held annually at the luxurious Grand Okanagan Resort & Convention Center in Kelowna, British Columbia, the 2008 Telus World Skins Game VIP Gala Dinner was hosted by sports agency powerhouse IMG for their sponsors, players, media and VIP clients of this world class golfing event.

The goal for Kelowna-based production company Northwest Global Entertainment was to create an 'ultra lounge' style venue for the guests at this event. They designed and supplied the lighting and visual effects along with the audio support that transformed this hotel ballroom completely.

With a crew that included Steve Williams (FOH engineer) Jose Antunes (system tech) and Matt Perry (systems tech), Northwest Global provided a system consisting of W8LM and W8LMD Mini Line Arrays with WSX subs; MA 4.2s and MA2.8s power amplifiers with DX1 speaker processing.

Asked about the equipment, Williams said, "Martin Audio was the obvious system choice for us due to it's size and performance capabilities. It is extremely small, easy to fly, and gives excellent coverage and control for the engineer, a real wolf in sheep's clothing!"

# W8LM SKINS 'EM



# FIRST OMNILINE® CHURCH INSTALL



Magheralin Parish Church, situated 20 miles south of Belfast, has become the first recipient in Ireland of Martin Audio's new OmniLine® system.

Magheralin first approached Rea Sound back in December 2007 to discuss the possibility of installing a new PA and visual system. After numerous meetings, site visits and a tender process Rea Sound was awarded the contract.

The original sound specification had opted for the Martin Audio Blackline Series — but it soon became clear that the new Martin Audio OmniLine was the better way forward.

After a demonstration to the consultant it was agreed that the OmniLine system would provide a perfect solution for the church. An important factor was the sensitivity of the installation to the building and its ornate stone work and delicate fabric.

Getting the proper fixings was difficult for the OmniLine positions — but due to the flexibility of the speakers they were able to adjust the height of install and the angles of the arrays to gain secure fixings.

Powered from a single MA1400 power amp and a DX1 system controller the OmniLine provides exceptional sound quality throughout. The Chancel is provided for by way of two AQ5's for infills. The church is extremely happy with the design and look of the speaker cabinets and the overall sound coverage.

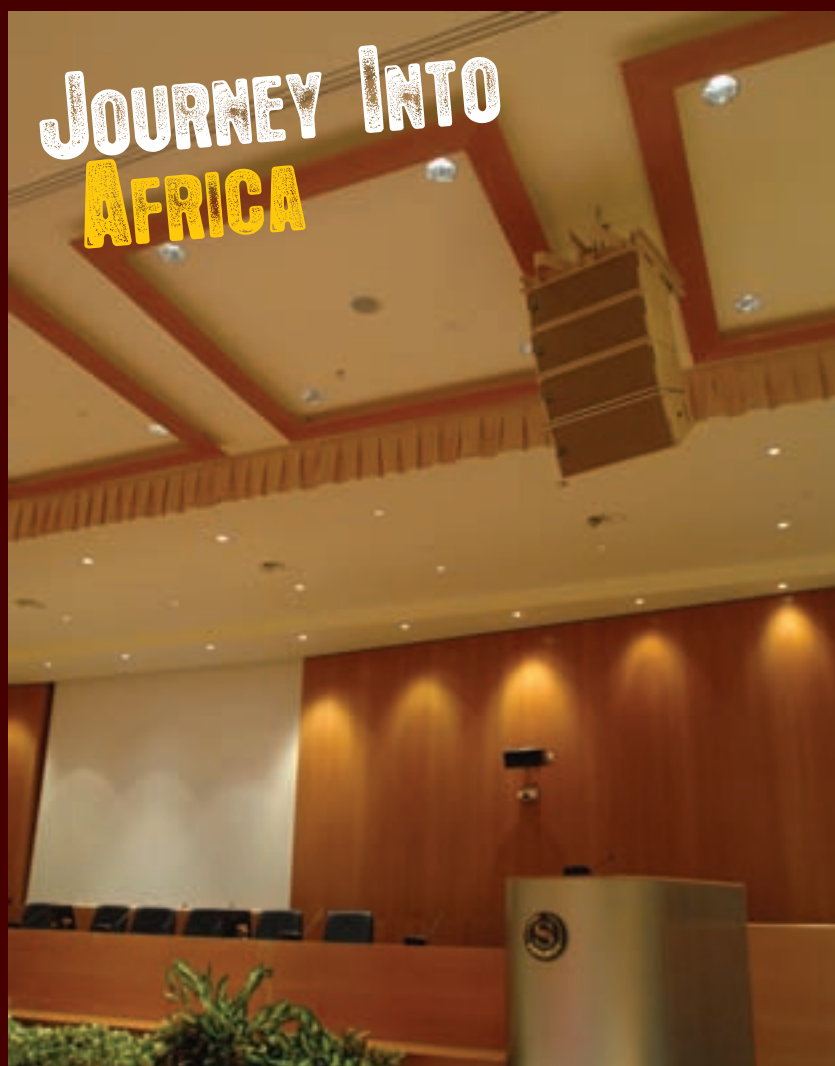
For the past four years, the Audioproduksjon employees have been serving Statoil with sound engineering for their Safe Behaviour Programme in Norway, with sister company Woldcam AS as the main contractor.

Part of Statoil's HSE programme, and with a strong focus on personal safety, the forum kicks off with a stunning two-day show, where managers and managing directors commit to personal safety.

When Statoil set out to produce gas in Algeria they also widened their commitment to HSE to include the African employees who work for Sonatrach (Statoil's partner in Algeria). As Sonatrach have not started any such HSE programmes to date the show has to be adjusted to fit the social environment of a big African oil and gas company.

The Norwegian partners were invited to design a complete package, with cameras, lights, stage and sound system. After careful consideration the Sheraton Hotel in Oran was chosen as the conference hotel. The hotel had a rather limited technical installation so it was decided to pre-build a system in Norway for later installation in Oran.

XL Audio was chosen as the Norwegian supplier of the sound system, and the company's Øystein Wierli advised the use of Martin Audio's W8LMI, with W8LMDI for a perfect down fill, along with S18+ subwoofers. The conference hall also needed front fill speakers so AQ5's were chosen to perform the task.



The speakers were painted the same colour as the hotel's interior, before being shipping to Algeria. All the racks and stage parts were specially designed and built in Norway by Kulissemakeriet in cooperation with Statoil, Woldcam and Audioproduksjon.

The customs papers took a week to satisfy the requirements in Oran — but the equipment was finally released and the team of Norwegians were able to start the installation. Hung from flying frames the speakers formed a majestic spectacle at the stage sides surrounding the three big projector screens.



# OMNILINE<sup>®</sup>



## Hear there and anywhere

The outstanding new versatile Micro Line Array from Martin Audio

- Expect – Omniline<sup>®</sup> to deliver high quality full range sound and crisp intelligible speech even in large reverberant spaces
- Adjust – Omniline<sup>®</sup> with intelligent optimisation software to precisely direct sound over defined areas without spill
- Scale – Omniline<sup>®</sup> to fit foreground applications or provide sound reinforcement in large acoustic spaces

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