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INTRODUCING NATIONAL AUDIO SYSTEMS

National Audio Systems (NAS) is how progressive manufacturers choose to establish and grow their brand across the entire Australia Pacific region.

Widely considered Australia's most diverse distributor, National Audio Systems' established network of partnerships includes the dealers, resellers and stores that quality manufacturers need for brand exposure, brand building and product sales. Premium global brands choose National Audio Systems because of our track record in brand building and because we are a trusted and respected source of Professional Audio, Commercial Audio and Musical Instruments.

Since 1998, National Audio Systems has built a strong reputation for quality and service. Actively sourcing products and accessories backed by cutting edge technology and superior customer care, supports a quality ethos that is adopted company-wide and demonstrated daily by a team of dedicated employees.

With a successful distribution model established in 1998, a strategic restructure occurred in 2002 ahead of an Australia-wide expansion. Improved dealer and end user support was achieved by carefully selecting experienced and knowledgeable staff for specialist market divisions. Through its positive impact on productivity, efficiency and response times, this structure lifted sales significantly. Today, National Audio Systems specialist divisions capably support markets in:

- Commercial Audio
- Professional Audio
- Musical Instruments
- Audio Visual

Because National Audio Systems distribute products exclusively throughout Australia and New Zealand our enviable contact database extends through to Broadcasters, Entertainment Venues, Stadia, Retail, Corporate, Healthcare, Hospitality, Airports, Architects, Consultants, Law Courts, Banking, Government and Education via a supportive and active dealer database of over 3,000 accounts.

For more than 10 years, this diverse group of clients have discovered that our breadth of expertise means National Audio Systems enjoys one distinct advantage...

The ABILITY to provide a complete STATE-OF-THE-ART solution for ANY application.

FUTURE FOCUSED VISION

With a clear goal to create a single source for audio and related products, National Audio Systems has forged a secure place in the Australian music industry.

Committed to ongoing organic investment that meets rapid industry growth and changing client requirements, our vision for the future is to set the industry benchmark in Australia.

Our Vision for Manufacturers

By keeping suppliers front of mind with dealers and end users, National Audio Systems offers the best opportunity for Australian Pacific brand growth.

Our Vision for Clients

By enhancing our high value, state of the art product range with distributor unique, value added services such as NAS finance, CAD and 3D system design, EASE modelling and the highest level of system support National Audio Systems offers unsurpassed quality and service. Our "first in, last out" approach ensures that each system we design and implement performs to the highest standards according to not only manufacturers' expectations but also exceeding the expectations of clients and investors.

Our Vision for Ourselves

By consolidating long term partnerships with leading brands, National Audio Systems will hone our industry cutting edge to exceed our own expectations and secure the future.

Much of what has been achieved so far is the result of our dedicated, loyal staff and ongoing development of the dealer and reseller network. National Audio Systems will continue to foster an environment that supports these two vital elements to our success.

In the active pursuit of perfection our unapologetic commitment is to progressive manufacturers that believe in the longevity, stability and support of their own products. NAS will continue to be selective about the products and brands we distribute.

In meeting and exceeding supplier expectations, NAS will protect our sole Australia Pacific distributorship with premium brands. We will continue to offer a range of products to maximise benefits, economies of scale and value to our clients.

By aligning ourselves with suppliers and brands that fit into our markets, NAS will underpin a client service ethic and attain our goal to provide the most outstanding service.

Through continuous
improvement driven by
integrity, teamwork
and dedication,
National Audio Systems
aims to be the leading
distributor of
Commercial Audio,
Professional Audio,
Audio-Visual, Lighting,
Staging and MI products
and related services
in Australia
and throughout the
South Pacific territories.

INSPIRED LEADERSHIP

Shane Bailey ~ Managing Director & Founding Director Shane is the Managing Director and has extensive business experience working with companies and building brands in Australia and New Zealand including d&b audiotechnik, ElectroVoice, Midas, Mackie, Australian Monitor and Telex. Shane has completed almost 5 years of undergraduate education at College and University in Australia with the focus being on audio engineering & recording and sales within the music industry.

As the Managing Director, Shane is responsible for overseeing and steering all operations of the company and setting the future direction of the business.

Shane is a founding director and has played a pivotal role in the growth and success of NAS. Building the company from a small boutique concern to its current status as a leading player in the wholesale distribution and representation of leading professional audio brands, Shane ensures the company provides strong customer focus through the highest delivery of personal customer service and ethics. He practices and maintains a high level of personal dealer and customer communication and is also an active member of the sales team taking personal responsibility for the bottom line.

Paul Anderson ~ Founding Director

Rohan Broadway ~ Chief Financial Officer

James Piper ~ National Products Manager

Dave Jacques ~ Technical Sales, Design & Support NAS Projects Team – Team Leader

Thomas Kelly ~ Consultant Liaison & Projects Team Sales



Shane Bailey ~ Managing Director & Founding Director

There are few private companies that stand the test of time in such a competitive market. Since its inception, National Audio Systems has continued to become a market leader, dedicated to innovate and offer a wide range of successful products and services on the market.

ACTIVE PARTNERSHIPS

The quality of relationships is fundamental to any business. National Audio Systems offers manufacturers the confidence their brand will be represented with integrity and a proven track record.

As specialists in the wholesale distribution to the markets of Commercial Audio, Professional Audio and MI, National Audio Systems enjoys both a firm reputation for quality customer service and a secure footing in the Australia Pacific market.

Quality global brands partner with National Audio Systems for many reasons, including:

- An independent company that is 100% Australian owned and funded
- Long standing career managers with extensive industry contacts and experience
- Clear company structure with set goals and objectives
- Dedicated internal and on road sales staff
- Established network of over 3,000 active dealers
- Strong brand partner relationships and a successful track record
- Proactive marketing utilising traditional, online and evolving social media tactics
- Comprehensive product and technical training and education for staff, dealers, consultants and end users
- Local support and the flexibility to generate ongoing business

NAS Mission Statement

National Audio Systems will grow our business by providing the best service in our industry, coupled with the most desirable products that represent best value for money; that are technically innovative and/or positioned at the peak of emerging technologies. This will be done by supplying in a timely manner and building positive, lasting relationships with our customers, suppliers and staff alike.

- 1. Provide the best possible service and products to our customers
- 2. Respect staff and develop future opportunities for growth
- 3. Build long term positive relationships with our suppliers

If we adhere to the 3 key elements, we will achieve our vision and goals.

Understanding the customer is our key to the market.

WHO WE REPRESENT:







































natic audio











dBTechnologies











THE RIGHT EXPOSURE

A diverse product range calls for some marketing inspiration! The National Audio Systems marketing team are specialists in creating cross media strategies designed to highlight each of our unique product divisions.

From traditional media placement to online marketing, trade fairs and evolving technologies like mobile marketing, all communication is carefully co-ordinated to meet the agreed style and format by our in-house marketing experts. To maintain cohesion with each distinctive brand, every piece is delivered within an overall National Audio Systems framework.

By harnessing the power of the right coverage, National Audio Systems has placed a number of leading brands at centre stage. Just some of the exposure we enjoy is achieved via:

- An enthusiastic dealer network
- Regular media attention in both traditional print format and electronic media
- Well utilised internet presence including the NAS website, NAS Facebook page and NAS YouTube page
- Education, training & support showcasing on location throughout Australia and New Zealand





KNOWLEDGE BUILDERS

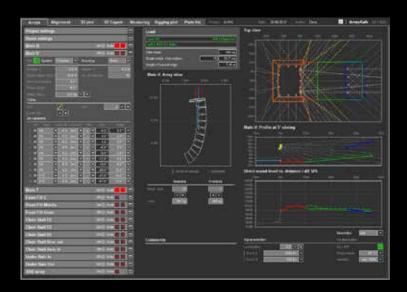
Confident salespeople are the result of product belief. In building knowledge, National Audio Systems empowers others to grow an assurance that translates to lead generation and sales.

Better education enables dealers, architects and end users to associate products and technology with their market. So the National Audio Systems ethic of support reaches beyond dealers to the users themselves. Our robust training resources have proved successful in establishing and consolidating many brands.

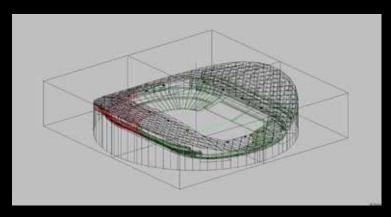
A range of training programs are conducted under expert guidance at our own training facilities. Because each session is structured to meet individual participants' needs and their own market, National Audio Systems is often a first point of reference. Our own experts offer partners, clients and potential purchasers thorough product installation, operation and maintenance training including:

- Familiarisation with the product and its use
- Introduction to audio and the signal chain
- The basics of acoustics
- Application of 100v line
- System design
- Live sound engineering
- Live sound production

Regular training is an important part of our service offering as it helps maintain a healthy level of customer skill and offers a good opportunity to showcase new products and brands.



3D live performance system design



Full EASE design and support



SERVICE WITH A SMILE!

It is reassuring to know that National Audio Systems offers a high quality experience from inquiry to ownership. With a team of skilled professionals, we quickly get equipment back in order should repair or service ever be required.

Clients depend on our advice and the fastest turnaround can be relied upon from our Technical Service and After Sales Department. The choice of an optional on-site repair (as required) or returning the product to one of our authorised service centres also appeals. We have a network of NAS authorised service agents throughout the country who understand and represent the NAS customer ethic.

Because we know out of order equipment can be costly and inconvenient, National Audio Systems guarantee service of the highest standard that:

- Puts equipment back into action as soon as possible
- Keeps clients informed about progress with regular updates
- Is carried out by qualified, professional technicians

Staff pride themselves
on their ability to listen to
customers desires and
to provide effective solutions
that reflect their
knowledge and understanding.





STREAMLINED DISTRIBUTION

Fast, efficient warehousing and logistics are critical to National Audio Systems' success. To best support over 2,200 active dealers our rapid response warehousing and logistics runs on intelligent inventory management operated by an experienced and dedicated team. That's how we maintain adequate stock levels and accomplish smooth, efficient product distribution across Australia, New Zealand and the Pacific Islands.

Localised Sydney, Queensland and Western Australian priority warehousing is supported by a central distribution centre in Melbourne. For added security, all products pass through this centre with most goods delivered anywhere in Australia 48 hours from ordering. Precision tracking means goods can be swiftly located, even when shipping internationally.

Because every item is double inspected prior to shipping, customers can be sure we take inventory seriously.

Armed with a 'can do' attitude, warehouse staff consistently demonstrate our core company values by:

- A passion for everything they do
- Striving to be the best
- Continuous improvement
- Being open and flexible
- Getting it right the first time
- Staying focused
- Caring

The goal is simple - To get products where they need to be, safely and in the shortest possible time.

National Audio Systems
carries in excess of
8,000 different product lines
and over 108,000 stock items
ensuring products
are received when required
and without delay.

SUSTAINABLE THINKING

Considering the impact of what we do is a central to a global view. Not only is National Audio Systems compliant with both regional and national environmental protection regulations, we are committed to taking an industry leadership role.

Through active staff participation, we nurture an environmental management focus. This helps to develop and grow procedures appropriate to our activities, products and services.

Eco Practice Accountability

National Audio Systems is recognised for making sustainable choices and achieving our environment objectives through:

- An effective Environmental Management System adopting legislative requirements as our minimum standard and demonstrating due diligence to local bylaws and formal Government policies
- Employing recycling program partners for recycling of cardboard packaging, scrap steel and metal, magnet recycling and battery recycling
- Educating our people to think sustainably and make the environment policy part of what they do every day
- Measurement of performance against our environmental goals and striving for continued program improvement and best practice management
- Encouraging innovation and practical, cost effective ideas to minimise our adverse environmental impact



FAIRNESS & EQUALITY

Success depends on finding the right people and creating the right culture. National Audio Systems is a proud equal-opportunity employer, where staff can enjoy and expect to go about their work in a discrimination free environment.

ASSOCIATION

It is important for people to enjoy freedom of access to discussion and debate. Our employee's right to organise and bargain collectively in a lawful, peaceful manner is always respected.

HEALTH & SAFETY

The well being of others who visit or work in each of our business units is a paramount concern. Taking active responsibility and leadership, each National Audio Systems site features an advanced health and safety plan meeting all Government requirements. Local coordinators keep fire and OH&S compliance front of mind, which contributes to a prevailing attitude of care.

RECOGNITION & REWARD

To be exceptional, we need an outstanding team. Recognition is vital to motivation, so staff remuneration is designed to foster, acknowledge and reward excellence. Using a Federal or State Award base line, commitment, loyalty and effectiveness are all identified. All staff participate in an across company bonus scheme for performance.

A LEGAL PERSPECTIVE

Maintaining a highly regarded reputation involves conducting dealings with integrity. A registered Australian company, National Audio Systems complies with local, state and national legal requirements.

Ideals & Aspirations

- Passion for everything we do
- Lead the world in our approach
- Learn what works and do more of it
 - FOCUS
 - Together we can attitude
 - Do it once well
 - ...& above all CARE

MIDAS Proves the Right Mix for Sydney Opera House



The AV team at the iconic Sydney Opera House is always looking to upgrade and better the venue's facilities.

Jeremy Christian, head of sound AV services at the Sydney Opera House, says: "We do upgrades all the time and are actually going to be doing a complete overhaul in the near future. But the last project was specifically for upgrading the consoles. We had a Midas Heritage 3000 in the main concert hall and that was replaced along with the other smaller boards in other spaces with digital consoles."

The switch to digital was the driving factor behind the upgrade of the mixing boards and Christian comments: "Basically the industry has switched to digital and we wanted to get in line with the industry moving forward. We also have a very high turnover of shows so the ability to have proper digital recall outweighed most other priorities when we were looking at upgrading the consoles."

A Midas XL8 has been installed as the main front of house mixing console for the main concert hall at the Sydney Opera House. The concert hall also features a Midas Pro9 which handles the monitors in the space as well as the microphone splitting. A Midas Pro2 serves at the third mix position in the concert hall and is employed for smaller talks and sessions.

The Playhouse at the Sydney Opera House has been fitted with a Midas Pro2 while the drama theatre, studio and Joan Sutherland Theatre are equipped with Midas ProX consoles.

A few Midas Pro1 boards are also used in the different spaces when required.

All the Midas boards were provided by distributor National Audio Systems.

The upgrade was uneventful and Christian says: "I can't recall any major issues. National Audio Systems was great and provided training. I guess getting the team up to scratch on a new console was a challenge. But the XL8 is pretty similar to the old Heritage board in terms of functionality and usability. We basically overlaid the new system on top of the old one. The old one kept working all the way through the install and then there was a hard switch over."

The selection process for the consoles was exhaustive and Christian explains: "We did a shootout of all the different console options in the studio. We invited some key manufacturers and they brought their products down and we tested them out. I guess the biggest thing I went in there thinking was that it was going to be all about function and how they connect and what type of transport they provide. But the thing I wasn't expecting on the day was sound quality. I thought all modern boards would have pretty good sound quality and the performance of all the boards would be comparable. But when we tested them the Midas consoles blew us away."

Christian also talks about other considerations: "Acceptance was a big factor. We have a lot of touring people come to the Sydney Opera House and we had to pick a board that was acceptable to the touring market."

Many thanks to InAVate magazine for the fantastic write up!

d&b: A game changer at the ANZ



Now here's a great idea, let's put a really powerful standard concert system complete with full on throbbing low end, into a highly reverberant space and entertain eighty thousand people. There is a way, and system engineers have been managing it with varying degrees of success for years; correctly placed delays, careful array targeting, and good time alignment fit the bill. But have you ever visited a stadium that has such a system already permanently installed? You can now. As ANZ Stadium, Sydney Australia's premier stadium settles into what promises to be a prolonged new era of success, they pose the question; how long will it be till everywhere else steps up to the line?

"Any well run venue will seek to maximise utilisation and when you have exhausted the sporting potential you have to look at other mass spectator events," explains Simon Davies, General Manager of ANZ Stadium. "Stadiums often host big rock concerts, ANZ certainly does, and the sound systems these shows bring to our venues are really potent. But these are concert systems and come with the tour; the only time you see systems of this potency actually installed in stadia is for the big sporting events such as the Olympics, Rugby World Cups or NRL Grand Finals. Look at the London Olympics; the impact of great audio for the opening ceremony was profound. But these systems are only ever temporary. So we asked ourselves, why can't we do this at ANZ Stadium on a permanent basis, and can we achieve this in an affordable fashion? That's the task we set ourselves and I believe we have achieved those

goals on both counts."

Davies and the ANZ Stadium management team led by MD Daryl Kerry were fortunate in one respect; the man who designed the London Olympics sound system is Australian. "Scott Willsallen cut his teeth working on the Sydney Olympics and had over the years, worked with ANZ Stadium on the special events we staged here using the pre-existing sound system," explained Davies. "That familiarity with the venue and the goals we had given ourselves allowed us to set a tough brief." Willsallen it seems was unperturbed. "The main confine of this brief was to use pre-existing rigging points and all cable infrastructure from the old PA system." The thinking being, as Davies so succinctly put it, "I'd rather invest our money in the new system hardware than the infrastructure. Our customers don't value the infrastructure, they take it for granted, but what they experience directly: sound, vision and comfort, all have great importance."

Willsallen's bid package invited eighteen of the world's leading pro audio manufacturers, "Representatives for all bidders were open for feedback, so we could comment on their initial proposals and they could respond to those comments. Besides the broad in depth evaluation process conducted by Stefan Goertz at d&b Application Support in Germany, I also took an integrated approach to the installation process. It is normal for installers to forge relationships with particular loudspeaker brands, but it doesn't follow that the best installer









for your project will necessarily have a relationship with the best manufacturer for your project. So I set out to separate manufacturer from installer in the bid process. We got the best installer and the best equipment."

Once the decision was made Willsallen defined the precise installation, over four hundred d&b loudspeaker cabinets were suspended from the ANZ Stadium roof in the final design. "The system ANZ Stadium eventually settled on was based on a d&b medium format line array system, the V-Series, specifically the Vi installation variant models Vi8, Vi12, and Vi-SUB, the system

was supplied by d&b Australian distributor National Audio Systems (NAS) and installed by integrator The PA People."

The d&b V-Series succeeded for a number of significant reasons, not just by being the best performer on the day. "When I first looked at renewing the system in early 2012 Shane Bailey, Director of NAS, had suggested the d&b new V-Series in its Vi installation variant. From the point of view of stadium requirements the Vi loudspeakers have several compelling features, in particular the fact that they are fully passive. Given the restrictions of pre-existing rigging points and cable infrastructure we had a limited circuit count of just eight channels at each point. Being passive meant we could put in more boxes at each position, that's a huge advantage. Most of the arrays are covering 130 degrees in the vertical plane so more cabinets is a real benefit; also the two types of full range loudspeaker, Vi8 and Vi12, at 80 and 120 degree horizontal respectively, proved ideally matched to the general seating patterns. For the icing on the cake, the cardioid Vi-SUB is also passive, so where a single cabinet to fail there's no loss of cardioid behaviour from the other subs in that particular array. Just one circuit to drive two Vi-SUBs; there's a certain elegance to that."

The new system was revealed to all the various officials of the five sporting codes that regularly grace the ANZ on June 13th, "An auspicious day for us," commented Davies. "They all quickly understood the benefits and potential of the new system and were excited by what they heard. For me as far as I was concerned the d&b system was the best choice. I'm no expert, but the shootout process convinced, it put this system head and shoulders above everything else. We stage some fifty or so sporting events a year, at least six are full houses, and another third draws about a thirty five percent capacity, so they were all very interested. The ability to impart even more emotion to the games was an obvious benefit to them. In some ways we were surprised by how wholeheartedly the various authorities embraced the idea, but you only have to look at something like the Indian Premier League cricket competition to see where that game is headed. The thing with all sports is that people come because they want to have fun; by communicating directly through the high quality sound system that Scott has produced for us we have a way of enhancing the fun and drama. That's the ANZ Stadium vision and we believe this is the future for sport."

With thanks to Scott Willsallen for some of the photographs.

International Convention Centre, Sydney



THE VENUE

ICC Sydney is a venue like no other. As Australia's premier goto convention centre for all manner of high-profile events and conferences, the \$1.5b precinct is a showpiece of cutting-edge design, architecture, and AV technology. 1000 wi-fi access points gives you an idea of its scale. All up ICC Sydney has three expansive theatres catering for crowds from 1000 to 8000, plus a lavish ballroom and dozens of smaller conference and meeting rooms.

THE CHALLENGE

ICC Sydney Theatre is the largest of the public performance spaces, and it's truly immense. Replacing the Sydney Entertainment Centre which was demolished a few years back, the Theatre plays host to headline events be it music, corporate, comedy, or even sports. Within a couple of months ICC Sydney Theatre had hosted Keith Urban, PJ Harvey, Nick Cave, and a tennis Fast Four match with Rafael Nadal and Novak Djokovic.

The necessity of a world class PA was without question. Sure, high-quality sound had to be accurately relayed to every tiered seating row in the expansive space — that's a given. When hosting a rock concert, the system needed low end punch and SPL to spare. For large corporate events, speech needed to be utterly intelligible. But flexibility was also of high priority. The rig had to be scalable. When the stage is replaced with a tennis court, the PA elements had to be reconfigurable with ease and efficiency. To provide all of the above, the decision was to go with a d&b audiotechnik system that would be essentially configured like a touring rig.

THE FIX

The NAS Projects Team provided support during the commissioning phase. Gert Sanner from d&b HQ flew out for the commissioning as well.

Dave Jacques is head of the NAS Projects Team: "The biggest part of our job was in the implementation; as the gear went in we worked with Fredon to help get the most out of the PA. It was a great experience in that regard: the Fredon team was very keen to get a good result. Sometimes there's a temptation on behalf of the installer to knock something like this out and not worry too much about the detail. In this case everyone was very focussed on the detail.

"The ICC Sydney Theatre PA is based on two large d&b V Series arrays per side. The side arrays aren't much shorter than the main hangs, and this is down to just how large and wide the theatre is; you have to push a lot of energy to the sides to cover those areas.

"The SPL targets of the brief were lofty. Fortunately, the design provided an adequate number of loudspeakers and wasn't cut back at any stage, as is often the case — we needed a serious system to meet those targets (105dBA ±10dB with 10dB headroom).

"We hit those SPL targets with something to spare. That was really nice to see in the flesh; to see that the modelling and the EASE data is trustworthy."

Along with the four speaker arrays the design encompasses a flown array of V-Subs either side of stage. Flying, rather than stacking, the subs was always going to be the preferred method, given the tiered design of the theatres. The long array of subs provides greater pattern control and more efficiency in the far field. The sub array sits in behind the main hang and not so far from the side hang. The distances are such that the three arrays operate as one line source in the lower frequencies.

Often the lower tier of seating will be retracted but when those seats are deployed, there are some additional V Subs in the inventory that can be ground stacked to fill in the nearfield. There are also a number of additional V Series array boxes that are positioned at stage level and shoot into the lower bowl. Sound for the stage level V array boxes are timed to arrive slightly earlier than the main arrays to pull the image down to the stage.

d&b D80 amps power the whole system. It's effectively a touring system with touring amp racks, allowing for easy reconfiguration.







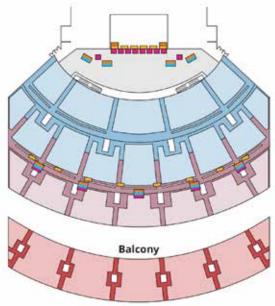
THE RESULT

Thanks to its touring-style flexibility, the world-class PA system at ICC Sydney Theatre has surpassed expectations in both sound and functionality.

Dave Jacques: "I've had feedback from people who have mixed in ICC Sydney Theatre and they've commented that they've looked at the space and looked at the arrays and thought 'I'm going to need a pile of ground stacked subs', but it's not the case — it fills the space nicely. I was very pleased with the results — there's an even full-range feel."

Besides the ICC Sydney Theatre, d&b line array systems were also installed in the Darling Harbour Theatre, Pyrmont Theatre, and Grand Ballroom within the precinct.

Many thanks to AV Asia Pacific for their original write up.





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