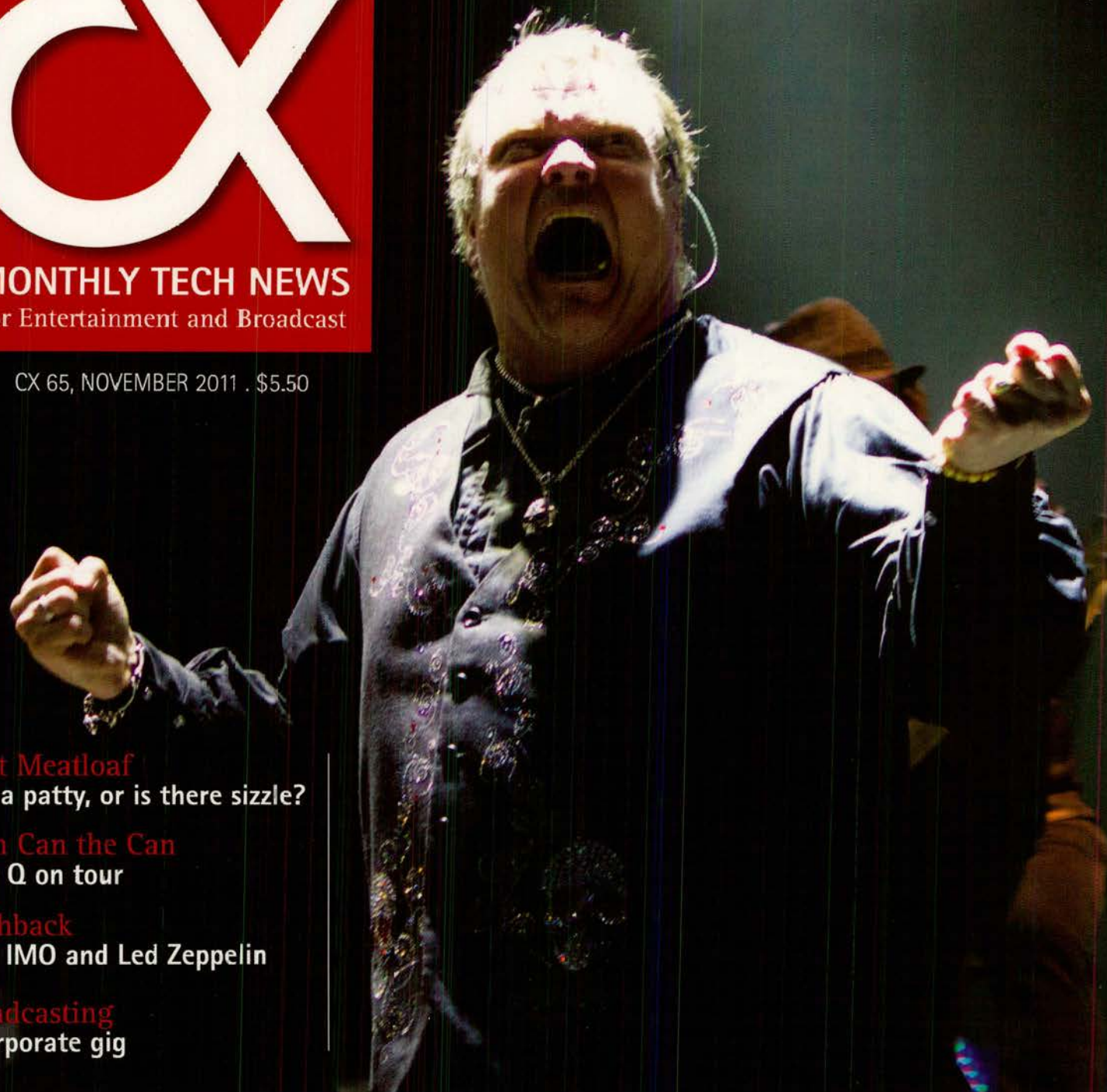


CX

MONTHLY TECH NEWS
For Entertainment and Broadcast

CX 65, NOVEMBER 2011 . \$5.50



Meet Meatloaf
Just a patty, or is there sizzle?

Gran Can the Can
Suzy Q on tour

Flashback
with IMO and Led Zeppelin

Broadcasting
a corporate gig

ISSN 1320-5595



REVIEWED:

EV Live X speakers
ETC Source Four fresnel
Inflating device for events. Really!
TC loudness meter * Phonic PAA

NEWS AND VIEWS:

Staging Boss goes under cover
Workcover - a strange verdict?
CX Outdoor Safety Conference
Concourse - yeah! * XL8 rentals

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ETC
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AUSTRALIAN MADE

The design lab at LSC Lighting at Dandenong South is on the top corner, behind secure doors. The five engineers build their own prototypes, to better understand how their design will assemble. Now the firm is rolling out the LX 900 console, largest in the Clarity line. Three years ago they launched Clarity as PC/Mac software with wingboards. Its an impressive venture and the world is their stage. More about this inside. Meanwhile we should celebrate and support Australian Made.

EPIC SEASON

Just try to hire concert production this month. The market is overloaded with tours and festivals, not to mention corporate gigs. Then there's Christmas. Despite the collapse of some less sensible festivals, such as Rewind, there seems to be no end to the growth of the market for live shows. As long as the artists don't cancel. Brickbats to Janet Jackson who flaked out on three Melbourne shows in October.

A.V. EXPENSIVE

Choosing national venues for CX Roadshow we noted extreme variations in AV policy. If a Hotel or Centre has an external AV provider in house, they demand supervision fees for load in/out and a lockout fee if we brought our own. The actual AV charges are now eye-watering. Some hotels refuse to rent their ballrooms without a \$20,000 catering spend, then called to negotiate far too late when they had no booking for our date. But we found affordable venues. Makes you wonder?

CX EDITORIAL**HD TRUCKS**

CX is yet to get a handle on just how much it costs to actually build a HD OB truck. With sporting fixtures planned a year out, it's a line of business that has great predictability. But what happens when the Kenworth breaks down, or perish the thought, someone falls asleep at the wheel? Imagine the penalty a network would impose if a sports fixture didn't go to air?

CELEBRATED

CX HQ at Chatswood was the venue for our launch of CX Network last month. Invited guests heard broadcast guru John Maizels articulate how our editorial is pitched and spreading wider across the converged world of technical. Expect to see some new programming on CX-TV very soon.

RETRO

At the back of the mag, our stalwart contributor Duncan Fry has hit the nail on the head this issue with his tale of Led Zeppelin live in Melbourne. It was that same tour, but in Sydney where a junior Julius saw the light and decided this was the industry for him. Brian C writes about the Suzy Quattro and the Meatloaf tours inside as well. Makes CX look like a bunch of old farts, right?

- Julius

**PUBLISHERS PANEL**

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Mail: Locked Bag 30 Epping
NSW 1710 Australia

Web: www.juliusmedia.com

Email: juliusmedia@mc.com

Phone: +61 2 9638-5955

Publisher: Julius Grafton

Business manager: Steve James

Technical editor: Jimmy Den Ouden

Broadcast advisor: John Maizels

Video advisor: Les Bishop

Church TV: Brandon Rhoda

Senior feature writer: Brian Coleman

Codger at large: Duncan Fry

Photo journalist: Bob King

CX-K9 unit: Lucy and Billy

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Coffee: Rob Forsyth

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Accountants:

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NEWS

α INDUSTRY NEWS



Undercover Boss Tony Chamberlain goes inside

Staging Connections Brisbane driver Shane lets rip. "There's a lot of pissed off people on the job who don't want to tell anyone what's going on - they don't want to lose their jobs."

Shane's passenger Douglas is nodding on camera. A TV crew is following him around - his 'cover story' is a supposed return to the workforce. Doug and Shane are in a 5 tonner, Shane is eating a burger and driving the truck with his other hand. Doug looks worried.

Douglas Holden is a fake. With a strange wig, a cap and a five day stubble, 'Doug' is Tony Chamberlain, the CEO. He featured on a TV show called 'Undercover Boss'.

Next stop is Sydney's Luna Park where it is hard to believe senior Staging tech Rocco doesn't recognize the boss who works just one flight of stairs from his desk.

The next session, held in the scenery workshop, opens with Dave building a New York skyline set. Doug is taken aback when Dave enthusiastically attacks the

MDF with no safety gear. Walking around a corner, a keen female worker is spray painting some flats, again without a face mask. Douglas, AKA Chamberlain, slips out the back to call the General Manager, who somehow stages an intervention.

At Crown Casino Doug encounters a young AV technician called Caitlyn who demonstrates over/under cable rolling.

Then it is repair time as they try to turn two broken lecterns into one, but by helping, Douglas further breaks one. It's a funny and insightful exchange, Caitlyn has been with the firm for three years and is clearly a great crew member. Her 'x' factor burns an impression with the boss, who identifies

with a family issue that she raises under his inquisitive questioning.

Then comes the reveal at the end. Tony Chamberlain, shaved and suited is upfront about the feedback he got. The workers he encountered are all given a small reward, and the changes they encouraged are promised. Chamberlain says management will now work on gigs regularly. •



Wedding at high cost

Sydney sound guy Michael Orland was booked for a large wedding reception on Saturday September 17th at Sylvania Waters Doltone House near Sydney.

"I rang them a week before, because I remembered the horrible narrow stairs up to the reception venue. The girl on the phone confirmed they have installed a lift, and said I could use it to get my P.A. equipment up there", he says.

For the Armenian function band, who would appear with other artists, some flown in for the night, it was a very important wedding. The event was hosted by an Italian and an Armenian family who spared no expense. The Italian side hired a vocal act called Figaro.

The band wanted to sound check at 4pm, so Michael arrived at 1 in his van, loaded with a medium sized PA.



>>>> Continued page 10

INSTALLATION SERIES

Loudspeakers for Worship



Hillsong Church Greater West, NSW

- Installation Series Loudspeakers
- DME Series processing
- Tn Series amplification
- LS9-32 digital mixer with digital multicore



Bridgeman Downs Christian Outreach Centre, QLD

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- Installation Series Loudspeakers
- PC-N Series amplification
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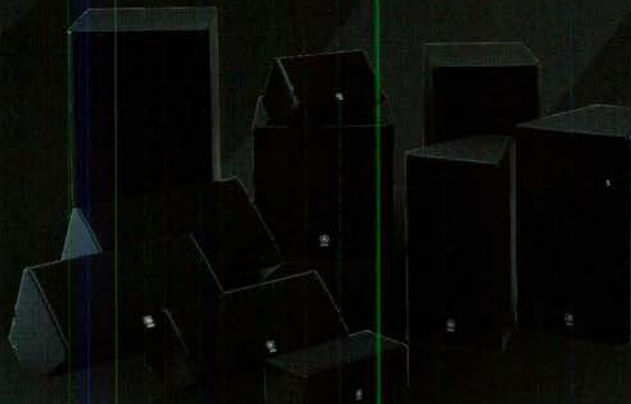
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Not wedding bliss

(continued from previous page)

"Normally I can handle this on my own, provided there is level access", he says.

As Michael started to unload, "a manager started yelling at me to move the van. I said sure, as soon as I get the gear in the lift. He said no, get it around the back".

DAMAGE

At the stairs, narrow and coated in kitchen residue, Orland set about hauling his stuff. Four powered RCF speakers, not so bad. Two dual JBL array subwoofers, at 50kg each, bad.

Mic stand case, cable packers, rolled, hauled and grunted up those narrow stairs, watched by a cluster of unsympathetic kitchen hands who were on their break.

"When I got up there the last time, I was lying on the dance floor, panting and groaning. It really hurt".

At the end of the night, Michael was again denied use of the lift. "By then I was furious", he said, "so I pushed through and told them to get a gun and shoot me."

Next day, in pain, Michael did his usual post gig back exercises and noticed in horror a lump either side of his groin. A large bruise on his side was less concerning. It should have been, as he had a total of three hernias, caused he claims, because the venue directed him to work via the stairs

AFTERMATH

"I could have just driven away, but how could I do that?" he told CX. "These families had put everything on the line, it was their biggest day ever. How would they feel to know the sound guy had driven off, and turned off his phone?"

Now Michael can't do physical labor, so the part of his business – TPAC – that supplied affordable one man audio production is over. It is costing him around a grand a week in foregone revenues. He was required to report his injuries to Workcover.

WORKCOVER VINDICATE VENUE

"The guy from Workcover rang later", Michael told CX. "He went to the venue and inspected the rear stairs, and declared them perfectly safe – adequate for loading gear".

"He has told me that if I was not happy with the arrangement, I should have driven away, and that in staying, I was entirely responsible for my own injuries. As far as Workcover is concerned, that's it."

"For years I have heard crew telling stories that if a venue has a lift and they refuse to let you use it, they are breaking the law. The Workcover guy assures me this is total nonsense. It is up to the venue

whether they allow you to use a lift or not. In staying, one is accepting any associated risks."

"All I am hearing is 'Why didn't you drive away?' I was raised on a 'Show must go on' ethic. But people now say "F**k the show". Perhaps there is a lesson (albeit a sad one) there."

The venue were not available for comment at presstime. •



Sydney gains a venue Chatswood Concourse is brilliant!

The former Willoughby Council site in the middle of Chatswood CBD, NSW now has a 1000 seat concert hall, 500 seat theatre, a Civic Pavilion, a studio, and a rehearsal space. Named Concourse, the venue is managed by Century Venues – people behind the Enmore, Factory and Metro.

Jands Staging were responsible for design, supply and install of dimmers, wired lighting bars, orchestra lift, power flying systems, DMX network, acoustic banners, stage managers system, drapes, tracking and backstage paging.

The recital hall has a house system from Technical Audio Group based on a Martin centre cluster, with an Allen and Heath iLive console. CX's Jimmy Den Ouden

mixed the first rock concert at the venue, featuring Richard Clapton and Wendy Matthews and reports good results.

Concourse has a beautiful atmosphere, and is a valuable addition to Australia's performing arts circuit.

www.theconcourse.com.au

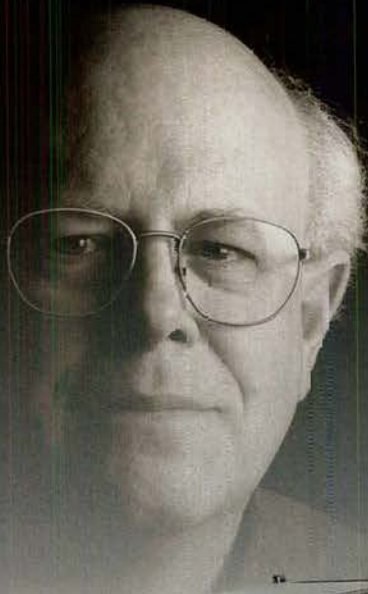


CX COHORT JIMMY DEN-ODEN MIXES FIRST ROCK CONCERT AT CONCOURSE

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Tony Miller (Mighty Rock); Graham Rowlands (NAS); John 'Hendo' Henderson

Midas XL8 Rental

New console hire firm

The first Midas XL8 to be based in Australia is the flagship console for new Melbourne company Mighty Rock Performance Technology. Supplied by Midas distributor National Audio Systems in Melbourne, Mighty Rock's XL8 is joined by a Midas PRO9 digital sound system, with a Midas PRO2 series planned within a matter of months.

Mighty Rock is the brainchild of husband and wife team Tony and Tonie Miller, CEOs and founders of pioneering events outfit Production Works based in Hobart, Tasmania and sister company to Mighty Rock. Tony Miller has long been a Midas fan and holds an XL200, several Venice consoles and a Midas PRO6 in the Production Works inventory. It was the acquisition of the PRO6 in 2009 which first turned him on to Midas digital systems.

In 2010, Production Works upgraded its PRO6 to the PRO9, but with this year's acquisition of the top-of-the-range XL8, the Millers decided it was time to create a new company dedicated to Midas digital to cater for the growing demand for these sought-after systems.

Location of the new company was a key consideration. "Our long established Hobart office will handle the admin," explains Miller, "but we deliberately sited Mighty

Rock's storage facility in Melbourne to facilitate hires to Australasia and beyond. We are set up to support worldwide tours and as well as hardware we offer technical crew for touring, system integration, patching and programming support."

Business has started with a bang for Mighty Rock with the XL8 delivered direct to Adelphia Studios in Melbourne for two weeks of production rehearsals ahead of the eight week John Farnham Whispering Jack-25 Years On tour. John 'Hendo' Henderson, Farnham's monitor engineer was delighted to snap up the XL8 for a complex and demanding show.

"Until I knew the XL8 was available, I was having real trouble trying to spec my rider," says Henderson. "John divides the show into two sets: one acoustic, one electric. The opening acoustic set alone encompasses drums, Wurlitzer, sax, harmonica, guitars, banjo, electric bass, double bass and four backing singers and with the electric set we're adding full drum kit with octo pads, 16 channels of keys and two electric guitars... and nearly everyone has stereo in-ear monitoring.

"Only the XL8 can provide the 36 outputs I need, and the sound quality is a real bonus. There's no brittleness or break-up at the top end like I've experienced with other digital consoles." •

Outdoor Event Safety Seminar

National Conference at CX Roadshow

Following recent accidents overseas, event production and venue management are increasingly concerned about their outdoor structures and planning. The recent CX-TV Stage Safety report hit 62,000 views in a month as people pondered 'can this happen here?'

New OH&S laws in January add concern into the mix. Now CX are hosting a special Seminar at the CX Roadshow trade show and conference touring all capital cities next February, with the keynote session called 'Outdoor Events: The Safety Seminar'.

Hosted by Julius Grafton, the seminar will detail the confusing morass of standards and regulations as they apply to events in 2012, and propose a straightforward management system for structures and crowd planning.

The seminar will be held at 11.00am and end at 12.15pm on these CX Summer Roadshow 2012 dates:

- Brisbane Monday 20th February, Brisbane Conv. & Exhib. Centre.
- Sydney Wednesday 22nd February, SMC Convention Centre, Golbourne and Castlereigh streets, CBD.
- Melbourne Monday 27 Feb, Melbourne Convention & Exhib. Centre.
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ACETA NEWS

aceta



**Australian Commercial & Entertainment
Technologies Association**

The question of trade shows

For a concept that has been around for a such a long time it's something of a surprise that trade shows have caused our sector so much concern in recent years.

There are a number of issues going on. They include:

- The number of events
- When and where these events are staged
- How often an event is staged
- The involvement of manufacturers and distributors in many segments (broadcast, production, consumer electronics, integration, musical products and so on) which increasingly requires their participation in more of these events in an environment where marketing funds are limited
- The relevance of these events at all, given that one of the major pillars on which these events have traditionally been built, the gathering of information, can easily be gained by delegates via the internet
- The question of cost versus benefit associated with participation and how that is measured by the various parties involved
- The ability of the promoters to secure a viable audience of appropriate quality for the exhibitors to speak to

Amongst the most critical question of

the many that need to be resolved is; What is the motive that drives a given event? In short, is there a real purpose or a sustainable proposition that will ensure that both the exhibitors and trade delegates will actually benefit from coming together?

These are the two groups who need to garner the most benefit from a show if it is judged to be successful. Achieve that outcome and there is no objection to the promoters, hall managers, stand companies and the myriad of other suppliers taking their share.

Over the past twelve months or so we have seen several events staged where the number of attendees could not have been anything other than a disappointment to all concerned. Certainly, many exhibitors have expressed this disappointment to the ACETA Board over the past few months. That said, it seems that a poor event for one exhibitor can be a positive event for another.

Trade participants and industry delegates also need to be considered in this. The question of value and purpose is as dear to their hearts as it is to exhibitors. Like the exhibitors, delegates are limited by budget and time and are

therefore often having to make choices as to whether they attend one of these events or which one they attend, and with nearly 50% of survey respondents to date saying that they travel from interstate or overseas to attend these events they clearly have choices to make. It is no longer the case, if it ever was, of build it and they will come.

As a result of these recent events ACETA has commissioned two surveys, one each for exhibitors and attendees of the recent round of trade shows. They can be found on the ACETA website www.aceta.org.au.

ACETA's goal at the conclusion of the survey period is to have a basis for discussion and review of the trade show program. We believe the views we are gathering from both exhibitors and delegates will help the sector at all levels and, including show promoters, re-imagine these events in the future for the betterment of all concerned.

If you would like to add your opinion then please visit the ACETA website and complete the survey. The results will be posted and shared in late November.

www.aceta.org.au

NEXT

MONTH:

An update on the transition of wireless audio products as a result of the digital dividend.



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Profile



Spot HPE



Beam



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ON AIR*Church
Production
News*

Hillsong Church chooses Yamaha Installation Series Speakers

The Hillsong story is spreading across the world, with the Sydney based church now boasting campus-styled facilities in Brisbane, London, Kiev, Cape Town, Stockholm, Paris, Moscow, New York and Germany.

Back at the main campus in Sydney's Baulkham Hills, a growing number of extension services complement the other major Sydney sites in the City and South West.

The Greater West extension service has recently upgraded to an integrated Yamaha PA system featuring Installation Series Speakers. Every Sunday sees the worship team running a 9 AM and 11 AM service, meaning pump-ins are early, fast and need to be done right.

Hillsong's Technical Facilities Manager Steve Le Roux was tasked with finding a PA solution that could not only deliver the quality and coverage that Hillsong need, but

also be secure and flexible.

"When I first looked at a solution for this venue" said Steve, "I wondered 'How can I get all the power and coverage it needs and still have something that is plug-and-play?'. The biggest priorities we had were even front-to-back coverage and the security of the system - we needed the processor to be locked-out for most operators."

To this end, Steve decided on a combination of an LS9-32 digital mixer and digital multicore connected directly via Cat5 to the processor, a DME&c-ES. This enabled one Cat5 to run between FDI and stageboxes, and a short Cat5 patch between the stageboxes and the DME processor.

"Running one Cat5 cable from Front of House down to the stageboxes makes it really quick", agrees Luke Fairbairn, "and one of the big things with the DME is that it also means a really easy set-up for us."

With mixing and processing taken care of,

Steve turned his thoughts to a speaker system. Understanding the benefits of an integrated one-supplier solution, Steve thought of the Installation Series;

"I had heard some very positive comments about the Installation Series from respected audio consultants and when I heard them I wasn't disappointed", said Steve.

The speaker system Steve specified consists of two IF211E/95 15"s with 60x40 horn underhung with two IF2112/95 12"s with 90x50 horn. Two IS125 dual 15" subs provide the bottom, and the whole rig is powered by T5n power amplifiers. "In the end, I was excited about the way the whole system came together", Steve added.

Luke Fairbairn, Technical Director at Greater West agrees; "At this price point, offering a digital mixer that can be operated easily, a speaker system that gives full coverage of the room and a quick easy set-up just makes it for us" •

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LAWO comes to The OB Group New HD Truck on the way

Sydney's The OB Group provides coverage for many events, including boxing, cycling, tennis, and light entertainment shows. Their new HD truck, being built now, will be wired for 10 cameras and 3 EVS replay units, all switched via a Sony MVS-6000. Routing and multiviews are covered with a Harris Platinum unit, with a Chyron HyperX3 taking care of VCG duties. A ClearCom system facilitates communication.

The existing Innovason SY48 audio console is currently being replaced with a LAWO mc256 system. At this stage wired for 144 inputs and 64 outputs, with a 16x16 remote DALIS box, this can be ex-

panded at any time. As The OB Group uses only freelance crew, they say it was important to select a system which was well known and widely understood among the pool of available crew. Reliability and flexibility were two added reasons behind the choice.

The OB Group hasn't run multicore for some years now, opting previously for an Aviom based system. This will now be replaced with the LAWO Dallis system, again running over fiber. The OB Group boss Colin Rothenberg mentioned to CX that while the learning curve for the new LAWO and Harris systems has been a steep one, the benefits are quite apparent.



Picture of the new Lawo prior to installation. From left to right: Chris von Schulenburg (audio director), Ken Fryer (the guru) and Colin Rothenberg.

Panasonic add live switcher

Panasonic's new AV-HS410 Live Switcher is a compact, all-in-one device with nine signal inputs (expandable). The 7-inch colour LCD panel displays settings in an easy-to-read format, and ease-of-use is further enhanced by the new memory preview function, an improved multi-view function and a simple key layout optimised for live broadcasts. Expandability is provided by optional board slots enabling support for a variety of input signals, including 3D cameras, and by the provision of a Software Development Kit (SDK) that makes it possible to add software-based functions.

Mathew Alexander, Product Manager - Broadcast, Panasonic Australia, said: "The AV-HS400 is very popular, so with all the additional functions available on the AV-HS410 broadcasters and rental companies will welcome this new switcher. The AV-HS410 is compact, expandable and easy to use and meets the demands of the live broadcast environment."

The numerous built-in effects include standard wipe, mix and cut effects in addition to DVE transition effects such as squeeze and slide. The chroma keyer employs the powerful Primatte algorithm, which has a proven track record as plug-in software on many high-end non-linear editing systems.

Primatte high-end chroma keyer technology is widely used in motion picture and TV production, as well as in the creation of music videos and commercials, and provides the high-precision compositing capabilities demanded by professionals.

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Global HD 4 is rolling

HD4
with big
Volvo

Australia's latest OB truck HD4 has a shell built to coach standards by A. Smith: Gt Bentley Limited (ASGB), a UK-based company internationally renowned for premium build quality.

The technical fit-out for HD4 was done in Sydney under the management of Global Television's Engineering Services team, which has designed the unit from the ground up.

Global Television CEO Keith Andrews

said: "Global is proud to have worked with Smiths to create a world-class OB van shell – truly the Rolls Royce of its class, and especially cost-effective at the current exchange rate. This has helped Global continue to give our clients the best production environment, highest reliability and value for money.

"We are excited that HD4 is already slated for action from the moment it becomes fully operational.

"HD4 is Australia's most technically-advanced and very fast deployment High Definition OB super truck. I congratulate Global's Engineering Services team and Smiths for setting a new standard for our market with HD4."

David Newton, Commercial Director at ASGB, said: "Smiths have thoroughly enjoyed partnering with Global Television for HD4, which will be of significant international interest.

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Shure camera wireless mic receiver

Shure's UR5 provides in-field portable wireless audio for users of cameras and DSLR's. Compatible with the current UHF-R series transmitters the UR5 shows Shure are moving back into the broadcast market.

Other new professional broadcast products include the VP89 shotgun microphone series (available in short, medium and long), the VP68 Omnidirectional wireless capsule, and the soon to be released UR3 – a plug-on transmitter for UHF-R series.

The UR5 provides all the power and functionality of a UHF-R single rackmount receiver in a small belt-pack style chassis, plus some nice little tricks designed to help make life easy.

This single camera mount receiver, available with many options from Anton/Bauer, provides full scan abilities to either automatically

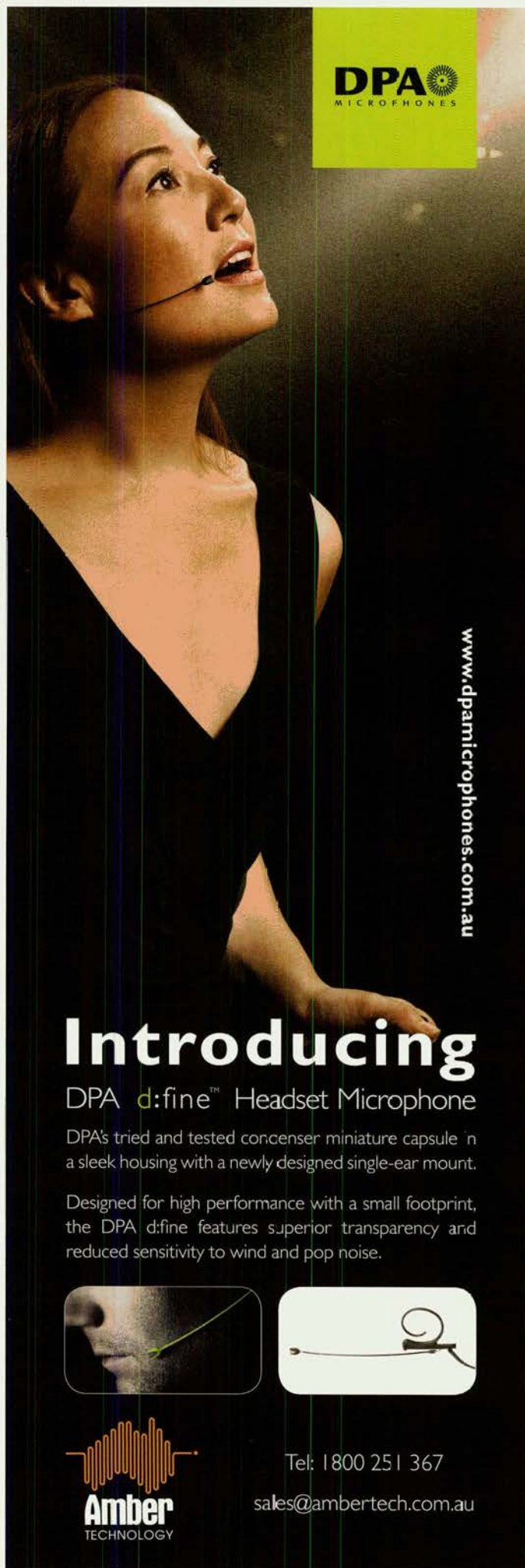
provide the clearest frequency and apply it to the receiver, use a group or channel scan or you can use a frequency you have specified previously. The scan resolution can also be user defined from a 60MHz view (full bandwidth), 9MHz view and 1 MHz view providing the user with more information on the bandwidth or area of the bandwidth with ease.

The UR5 also features a mode call MTx or Multiple Transmitter mode. This enables the user to have a preset list of up to 20 transmitter frequency sets which can be easily accessed to switch from one receiver to another for multiple transmitter situations. This list can also be copied and pasted to another UR5 for redundant or multiple camera applications.



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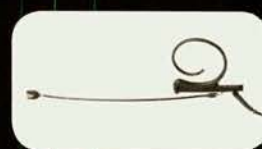
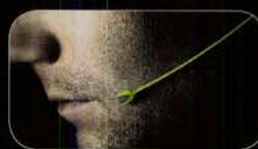
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Fresh Start for Colin Baldwin

Event Services are the largest AV firm in Dural



WHEN THE A380 FIRST FLEW it came to Sydney and Singapore Airlines threw a party. Colin Baldwin had the enviable task of lighting the new jumbo. Since then Showcorp has moved on, and so has C.B.

This is just like Vibe Light-shows all over again, after forty years. Colin Baldwin is showing CX his neatly packaged lighting gear, in a modest warehouse on the fringe of Sydney. Only this time, there's everything you need to run a medium sized corporate gig. They have lights, sound, vision and staging inventory. Along with a bunch of new drapes.

Colin and Fiona Baldwin launched Event Services last February, after a year where Colin was the Project Director for Laservision at the Grand Opening of Marina Bay

Sands Integrated Resort in Singapore. Before that, he ran Showcorp (Sydney) which was a big hitter in corporate and event technical production.

So why start again? "I sold Showcorp to a shareholder of Videoplus", Colin explained, "with the idea Fiona and I would later move on and set up a small boutique audio visual firm in the Southern Highlands of NSW".

Several months after Colin's departure, Videoplus imploded, with a messy collapse and a resurrection that has left a lot of people asking questions. Colin prefers not to say much about Videoplus, other than poor management decisions contributed to their situation.

Instead of the Southern Highlands, Event Services is now the largest – and only – technical production firm in rural Dural, a beautiful district on the northern fringe of Sydney. "It's only ten minutes from home", Colin says.



ONE OF THE LONG PARTNERSHIPS
Colin & Fiona, Baldwin celebrate their new firm

Every kind of event

Vibe Lightshows graduated from school halls in the suburbs of Sydney when Colin started touring with bands like Hush, and chart toppers of the 1970's like Jon English, Marcia Hines, JPY and Dragon. Soon Baldwin Lighting was able to do arenas, which didn't exist before.

"I remember seeing Steve Miller Band at the Greek Theatre in LA., and what I thought must be six followspots, suddenly started to perform dramatic moves all over around the stage. I realized they were not followspots at all – they were Morpheus moving lights. I saw the future that night", Colin recounts. Seeing the lights for Queen and Genesis inspired him to do bigger and more interesting lighting designs.

After Strand Electric installed flash buttons on theatre consoles for him, he started to develop his own lighting desk, called Trogboard, as there was a lack of lighting control surfaces that had scene masters via a pin matrix or programmable chaser. "The Trogboard disgraced itself on a Cliff Richard tour when the chaser wouldn't stop", Colin laughed.

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- Lou Mannarino, Live Engineer for the New York Philharmonic Orchestra



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Bronco Sound, they formed BaldRat Productions and toured packaged lights and sound. They cracked a small but fast growing corporate market, with events for leading brands in the growing collection of five star hotel ballrooms across Australasia. The convention centres were only just starting to be built. Sydney Convention Centre came on line first.

In the 1980's there were two kinds of show. The rock and roll show, any night of the week on tour across the country, or the corporate show. These shows paid somewhat differently.

It's fair to say BaldRat and Baldwin Lighting surfed the wave of the (then) new fusion of technical production and corporate events. The band and artist managers partied hard on the fees they extracted from the corporates for their acts. Nothing much has changed.

Today Event Services

With a loyal staff of two owners, and a roster of casual and freelancers, E.S. has already had a stellar year. "Look, we only need a couple of gigs a month. Recently its been crazy", says Colin.

So what do they offer? 'full range of Meyer Sound, we can do almost anything with Meyer, Its nice kit. We just bought a Yamaha LS9 digital console and someTurbosound wedges to round off our foldback rig"

In video land it's all high definition, from Barco switchers to HD projection, cameras and plasmas" Clients expect high-def these days" says Colin.

Over in the lighting dept, C.B. is enthused by the new Robe Robin 300 moving LED fixtures. "Fifteen to thirty degrees spread, very bright multichip LED's and awesome colour mixing, ideal for TV use"

For a backdrop, they have a large Colourweb Soft LED, which allows a 125mm pitch for animated graphic display.

So what is the factor for a successful production firm, we ask? "It's about passion for the

craft, I dare to say. Over the years I've seen people come and pass through, if you're not passionate about the technology or the industry, then you'll probably not make a career of it".

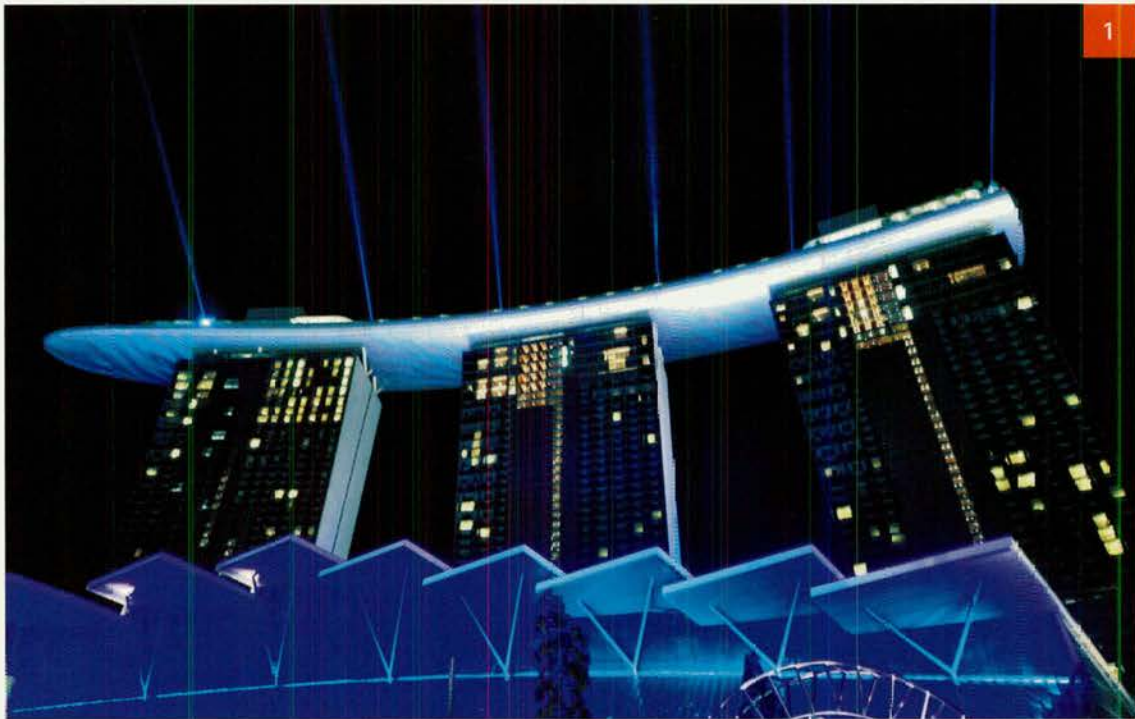
Now they do a variety of work, including TV shoots. "When a TV show needs some visual floss, the gaffer calls us in. We work with some great film and TV guys, like Strauss Productions".

So CX leaves Dural, with a warm summer glow over the anonymous industrial unit, up the road from nowhere and near enough to the big smoke.

Colin and Fiona have the best crew, client contacts, and gear to make things happen.



Colin Baldwin with LSC rack



1) Marina Bay Sands 2010

2) Halloween Concert S.E.C. 1992

3) MO' Awards 1997



CB has a fantastic history museum of material from the 70's through to now at his website -www.colinbaldwin.com



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Lighting Control Made in Melbourne

Sold around the world. That's LSC

WHO WOULD THINK that South Dandenong is one of the global hubs for top end stage and architectural lighting control? And that Australia can manufacture and sell to the world?

By Julius Grafton

At the back of the secure zone of the LSC facility in Melbourne is a testing rig. A little motorized machine works around the clock to try to kill the latest control desk button. Click. Click. Click.

To the right a prototype LX console from the Clarity range is cooking at 49 degrees centigrade in a climate control room. Earlier it had shivered at minus 15 for two days. A shaker table, like they have in paint shops, is torturing some assemblies into believing



David Nolte
Production
Technician

they are on a non-stop road train to Darwin and back.

Over in production, Director Alan Graham is shaking his head as a batch of boards is tested under load. Several have not passed, and he wants to know why. The line worker looks concerned. They still talk about the backwards labelled capacitors that infected the line when a supplier, formerly trusted, shipped components which should have been rejected at creation.

"It's an international problem", founder Gary Pritchard tells CX, "that grey, parallel or even counterfeit components supposedly from brand name suppliers, turn up and surprise us".

Global lighting control

LSC sell dimmers, desks and the bits in between to 40 countries around the world. The sales team, headed by Pritchard and International Sales Manager Pete Floyd with Technical Sales and Support Manager Richie Mickan tour the trade show circuit. UK today, Orlando next month and Frankfurt in March. With all stops in between.

They build all the products at their custom built factory in Dandenong, where around 20 people are responsible for the manufacturing. It's a long way to many of the global markets, so the mantra of reliability becomes apparent as soon as CX walks the floor.

"We do component validation", Alan says. "Literally, you can't trust the suppliers now". Richie chimes in: "We had an integral part, I don't want to say what, but it was rated for a ten amp dimmer channel and it failed at five amps. You only find that in testing. Lucky we did". They show me an RCD combination circuit breaker. "This one doesn't like RF. No idea why. Put a two-way radio next to it, and it turns off", says Richie. "In the world of lighting, that might be a problem".

A recall or warranty claim from the far corners of the LSC network is a cost they prefer to avoid by prevention – but the overarching impression is that the firm is critically aware failure of its products is a serious issue for lighting technicians in the field.

What sells?

"The high exchange rate hammers us for dimmer sales in the UK", says Gary. "Not long ago we were 42p to the dollar, now 66p. So we don't sell as many dimmers there anymore". For those without a calculator, at 42p, a product worth one hundred Australian dollars sold for 42 quid. Now it sells at more than 66 quid – no

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LSC
factory
floor



R & D crew - Nathan Fleming (Mechanical Engineer); Voytek Szapirko (Software Engineer); Trevor Sykes (Product Development Manager); David Burchell (Hardware Engineer). Missing in action: Dejan Deletic (Software Engineer).

Electronic
assembly
at LSC



math required. Australian manufacturing is in deep trouble when the mining boom pushes up our currency.

However control desks are another scenario altogether and this is where LSC have a generational change underway. "We are currently known for our maXim product", says Gary. "Although we have dimmers at the top end of the market, we haven't had a control desk at that end of the market". As stage lighting has expanded to include control over LED screens and devices, the number of control channels has done a huge leap from DMX 512 (512 channels) to multiples thereof. The demand for channels is such that people talk of 'Universes' of DMX that multiply the outputs. With ArtNet, 100 plus universes is possible.

maXim was - and is - a product with a limited number of channels that best suits smaller users. To move up market, LSC teamed up Nick Denville from Open Clear, created Clarity and launched it three years ago with a wing board controller that connects with your PC or Mac. "LED fixtures drink channels", said Richie.

Clarity landed ready to ship, and with the wingboard, found new users who fed back their impressions to the firm. A new operating environment was out there for the users.

Bottom up

The Clarity software was debugged as the research and development team worked on a new large format range of desks. At LSC five design engineers work in the top corner of the facility, behind secure screening.

"The wing boards and the software will do most things that most people require", said Richie. "But there is a solid part of the market who wants the console with the software embedded, not a USB wing-board hanging off a laptop."

First of the Clarity Consoles is the LX 300, with a 10.4" touch screen and individual mini screens for each of the 15 playbacks. Midrange comes the LX 600, with a 17" touch-screen added in place of the 15 mini screens. This one has motorized playback faders. At the top end, the LX900 is loaded with three touchscreens and thirty motorized playback faders.

LX consoles also do LED pixel mapping, Media Server Integration and have a new concept of an Abstract Programmer - allowing the operator to control virtually any type of light using a common set of controls. There is also Audio playback, timecode synchronisation, tracking back-up and all the other features that one expects at this end of the market.

Richie is deeply immersed in the product, to the extent that he is intimate with the code written into the chips. "We currently have a 35 second boot-up, which we think is industry leading. But we will do better, because currently the BIOS is looking for potential hard drives that are not there."

LSC are in a staged release program with the consoles, having shown two LX300s at PLASA in the UK in September, and again they advised us that they are showing the LX300 and the LX900 at LDI in the USA.

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"We're doing this carefully", says Richie, "and left the UK consoles there for Beta testing on some touring shows. It is going really, really well."

Last minute changes are being made to the hardware, such as a different jog-shuttle encoder, after the prototypes were found to wobble slightly. From R&D to the factory floor is a set of stairs. "If we made these in China, it would be a nightmare – people would be on planes all the time".

31 years

LSC developed the Focal 1 modular two preset lighting desk in the early 1980's. At the time, Strand Electric – by then known as Rank Strand (Rank Industries were a global conglomerate involved in many industries that head office did not understand) had the majority of the market.

In Australia, Jands and Q Engineering also built lighting control systems, with Jands the

survivor of the latter pair today. LSC found a ready market in school halls and some rental firms. But Focal 1 was not cheapo – with quality faders, push buttons, and a sexy chassis with machined timber end pieces.

At the other end of the analogue multicore with expensive military specification 14 pin Cannon 3106E twist lock connectors, was the Series A dimmer rack – a blue metal product that did an honest job. The breakthrough for LSC came in 1984 with the Precept – a revolutionary 12 channel memory desk that had 12 scene memories, and another 12 associated with the chaser function.

By 1987, Precept had grown to three models – 12, 24 and 36 channels – and the revolutionary DMX-512 protocol (of which Gary Pritchard was one of the eight creators) was adopted in the 36, removing the need for those expensive analog multicores. Precept was the best selling lighting desk of its time.

In 1986 the Tour Series dimmer rack was first with DMX-512, and solid inroads into the

touring market were made. The Atom and Axiom consoles came around the mid 90s, followed in 2003 by the maXim which is popular world wide today. LSC have a wide range of DMX splitters, data and power distribution products. And that's where the company has been, until Clarity was launched as a software product for PC or Mac late in the naughties.

Forwards with clarity

Today LSC employ around 30 people, including a NSW representative (Jonathon Ciddor) and a Queensland rep, Greg Hughes. Both these guys have decades of experience running lighting sales, installation and production firms. "If we could find guys like them in other states, we'd hire them!" says Richie.

A high exchange rate hurts some of LSC's business, like dimmer racks, yet they sell these into almost twenty markets. Each of which needs a different output connector. "We have dimmer racks sitting almost finished, waiting for the order to specify which output plugs", says Gary. "But with a control desk, it's one power supply, one package. Much easier".

There is a lot of attention to detail at LSC – the Redback installation dimmer comes with the installation instructions neatly taped over the front of the product, to alleviate paperwork thrown out with the packaging.

The R & D guys build the first prototypes, so that small problems in assembly can be reworked. R&D manager Trevor Sykes hovers around, as Nathan Fleming and Dave Burchell screw together a LX 300 for the LDI trade show. "If something needs to change, we change it", he says.

As to the business plan for Clarity, Gary says that the trade association PLASA, based in the UK (which merged with ESTA from the USA some years ago) has an excellent sales reporting scheme which shows members like LSC how many products in a given category were sold into each market. This informs the price and feature set that LSC load on to their releases. Before this kind of information was available, it was all guess work.

So that's the story of LSC up to now – an Australian firm, building high tech lighting control products for the world. •

CLARITY LX CONSOLE Australian launch is at CX Summer Roadshow.



Heather Ellis
Sales
Administrator



Allan
Graham
Director



CEO Gary
Pritchard



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 enjoys the increasing complexity of our industry where 'Gig' meets 'TV' every day. Plug and play? Forget it. When the client says 'we need to broadcast or video this gig', things can get expensive and complex very quickly. So how do the industry insiders deal with this? Especially these days, when iMag ("image magnification", meaning pictures of the presenters or a big screen) is becoming a regular requirement. And while viewers

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expect a corporate webcast to have production values of the Logie Awards, you can bet that the client would be delighted with that result provided there's no additional budget.

To find out we assembled a panel: Daniel Daley (a former event manager and producer at a large convention centre), Ian Whitworth (director of Scene Change, 'The #2 AV Company') and OB guy Peter Collis from Mobile Image Co. The debate was moderated by John Maizels for CXtra, our new CX-TV channel.

JOHN: If we are asked to produce for the web – from a live gig – what problems do we face that are different from regular broadcast TV?

DANIEL: You need the resources, equipment and the client understanding.

JOHN: What happens when the client says 'we want iMag in the room and we want to send good looking pictures to the web as well'?

DANIEL: You need the back end, the right company to do it. They need access to the big networks to the net. You need a pipe without constriction.

IAN: Yeah, and the next line is 'and we'd like it to go viral'. The perception from marketing clients is a so that because it is digital it should come at no cost. Is it a marketing video, or a video of an event? Bandwidth is important – our techs say if they are going a live streamed event, they go and check the venue internet first. Today it's OK. Suddenly



*If there's time and planning
you can do anything!*

the place has filled up, and network demand is higher on the day and your broadcast stream collapses.

JOHN: So how does the discussion with the client go – when you say what high production values is really going to cost, how quickly does the client shift from full production crew down to two cameras?

IAN: Look, it doesn't necessarily call for TV level production: low tech is OK for many clients. But if it's, say, a national campaign or a big pharmaceutical co, then production quality is important.

JOHN: Peter, you run an outside production van – what do you see as the requirements when the program is going to the web?

PETER: The problem is when web production is treated differently from traditional television. You can watch web on TV, and TV on the web. At the technical and operational level, we [still] need to control the quality and performance of lighting, sound, sets,

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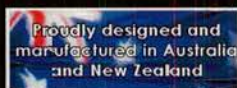
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staging and the scheduling of the production so it makes sense.

JOHN: How often can you do all that?

PETER: People aren't encouraged to be across this kind of thinking – clients suffer.

JOHN: Ian, how do we make the experience watchable – iMag or web : what's the difference?

IAN: The subject matter. It's hard to sit and watch someone talking for longer than 30 seconds. You can read four times faster than someone can say it, so you should just put the words on the web. To work as video it needs to be a demonstration, or educational, and visual to be useful.

JOHN: You can integrate that into the presentation. How much of the TV-specific material do you capture live at the event or fix later in post?

IAN: From the AV company side, very little goes out live. Putting on an events hat, you have to integrate the presenters with the Power Point, so you have the technical challenges of intercutting both. **JOHN:** At the big events, is the client saying they are worried the audience won't turn up because the event is streamed?

DANIEL: Well why would you spend mon-



The first law of events is that:
if things fail, it is when
the CEO is on screen.



Planning, allowing sufficient
resources, and don't think
it's simple.

ey on a beautiful event and then stream it around so no one will go?

IAN: One question to ask is: why have the event in the first place if you are going to stream it? A statutory reason, like an A.G.M. is one thing. But streaming live and doing a good job is more expensive than providing a video later with post-production. It's cheaper to record, and broadcast the event later.

JOHN: OK, what is the hardest thing to deliver?

DANIEL: If there's time and planning you can do anything!

IAN: TV takes certain setup time, but AV people by their nature are MacGyver 'can-do' people, they say 'yes' to changes all the time, so clients expect AV companies to make changes. But with streaming you can't change the Power Point at the last minute, and if there is a bandwidth issue then no amount of enthusiasm will fix it.

JOHN: The client comes up with late technical requests all the time. What can you do?

PETER: Carry extra interfaces, for graphics and non camera elements. Recording facilities for things they don't think they need, and extra audio and video gadgetry for working around things.

JOHN: How do we then get the program out onto the web?

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PETER: UStream has huge potential; it's not owned by a web streaming company. There are encoders you can get yourself. But you still need to plan to run everything in a broadcast way, with redundancy.

JOHN: So what are the risks today, how well does the web work for live delivery?

IAN: The first law of events is that: if things fail, it is when the CEO is on screen. If you create an elaborate broadcast system the expectation it is bullet proof, like TV. And it isn't. For some events, we've used Skype – customers know that can fail, so they chill.

JOHN: But, for instance, we have used Skype to bring two US presenters into a SMPTE conference, and it worked well. What is the big 'gotcha' – audio, vision, or lighting?

IAN: Our techs tell me audio. Vision delay has to be managed, to avoid the Kung Fu movie vibe.

PETER: The biggest problem is that audio work (in the room) is split between audio visual and broadcast – appropriate strategies need to be worked out. Plus we need to start and finish clean – start properly, and come off with a clear ending, not a lock-off shot with people randomly walking out of the room!

JOHN: So if there are multiple teams involved: to ensure that you generate a good and watchable webcast from a live event, how far in advance should you get the crews together?

DANIEL: You have to make sure you have the right people on the job. Don't just get them together 3 hours before the gig.

IAN: In your view, is it best to use one company to do everything, or what should be separated?

DANIEL: If one bit fails everything fails – so get all the right people together. Keep your ears to the ground at other events, to see who has been burned.

IAN: As an AV company owner, we've learned our responsibility ends when the video and audio leaves the desks and goes into the Codecs. You need specialists to do the network delivery.

JOHN: So a tip: Make sure everyone is talking to everyone else. Ian, how hard is it to get the client to sign off on this, as time is money and meetings cost!

IAN: Client says 'why are you doing this', and get shocked at the ratio of cost against the number of people watching.

JOHN: So the cost per view can be too high. And if the client cuts costs because only 5 people are going to watch it live, but something is put together afterwards and it goes viral with poor production values....

IAN: The odds of going viral are against you – some clients want



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an Atom bomb, put all their budget into one thing. There's a bell curve of early adopters, people come to it later and it spreads. It's better doing something modest but consistent.

JOHN: Is there a correlation between what you spend and whether it will be viewed?

IAN: No correlation.

PETER: If they're interested they will put up with it.

IAN: Sometimes you can have too much production values.. Have you seen the clip with soldiers sitting in a clearing, and a chimp picks up a gun and starts shooting away? It was produced as a pre event promo for Planet of the Apes. It was beautifully made, but it didn't go viral because it had an intrusive level of production gloss.

JOHN: So the panel agrees that there's no correlation between production levels and viewing levels. How do you get your event watched?

IAN: You have to embed it elsewhere. You're better off setting it free, so people can put it places. Don't keep it imprisoned on your own web site. The nature of marketing departments is they must be in control, whereas the new law of this is you have to set it free – produce something not too complex, so it can be downloaded, cut up, made fun of, and re-jigged by your customers. People who stick to the Brand Standards Manual say: 'they can't do this!' But it is still promoting your brand. The incredible importance of the YouTube thumbnail – is to produce the clip so the middle frame is something that looks excellent. Put something in there – like a kitten! People love kittens.

JOHN: Talking about this – if we are to make production values work on the web, what recommendations would you make?

DANIEL: Essential components are lighting and FOH audio and all in the right venue. Make sure the (production and broadcast) companies are talking. Keep behavior productive.

JOHN: Ian, how do you handle what you know to be true; against what the client has asked for.



IAN: Balance up how important the stream is against the live event. If you're doing iMag to put images on the screen in the room, that's going to have a different requirement to the stream. Get a sense of where the dividing lines go. Some AV companies have a sketchy idea of what is pro equipment, a lot of gear used is not up the standard which introduces fail points. Is it broadcast professional stuff, or does it come from a department store?

PETER: There's a lot of good low cost broadcast equipment you can use, but you have to be judicious in what you use, with experienced people.

JOHN: What goes on the screen? iMag has big people so its visible to people up the back. For the web the last thing you want to see is a large head on the screen. But the wide context shot you want at home looks silly on screen in the venue.

DANIEL: You need two different vision switchers or two feeds. One is an SEI path to the screen, then that same camera goes into a vision switcher for the webcast paired with a fixed off wide shot. That's a simple event. On a bigger event, multiple cameras cut for a live screen with close shots, and another switch feed with extra cameras and whatever else goes into the broadcast.

JOHN: What skills do people need to pull off a live webcast?

DANIEL: Treat people well. It depends on

what the job is. Having technician skills is half the job – the other is dealing with the client, turning up on time, and knowing how to integrate.

JOHN: What are the latest and most interesting toys for this?

PETER: Small digital vision switchers, small boxes like Stream Box, latest 3G from Telstra.

IAN: Our guys tell me to get over the variability of venue uplinks, there's a system that runs multiple 3G cards.

JOHN: Like the LiveU device, which dials up many 3G connections, and aggregates them... then if any drop low or out, it still gets a picture out.

PETER: And it requires a comparable device at the other end!

DANIEL: Avoid analog, go hi-def.

JOHN: Originate in high-def? That's going to create a challenge for online delivery...

DANIEL: But capture high-def and down-scale.

IAN: Look on Flickr – there's a lot of camera phone photos, and a lot of great SLR photos, but not much in the middle.

JOHN: Wrapping up: top tips.

DANIEL: Think about why you are getting it out, and what is the story people want to watch. Then decide on the effort, and the equipment for the broadcast.

IAN: Ask "what on earth makes you think people want to watch this"? People may not be as in love with it as you are, so the delivery has to be compelling.

PETER: Planning, allowing sufficient resources, and don't think it's simple.

JOHN: And spend the money, take the time. So there you are. If you're going to deliver a webcast at the same time as a live event, don't forget that the average viewer is used to watching TV and will judge what they see with the same critical eye that's used to pick a winner on prime-time episodics. •

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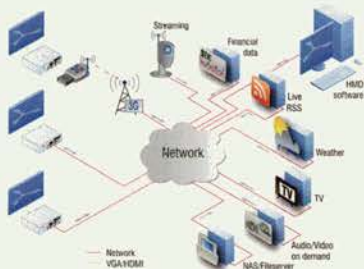
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Virginia
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Meat
Loaf

Meat Loaf Tour

The meat in the mix

"IT'S FUNNY BECAUSE I'm using a digital console, which has all the great things that digital does, but most of the plugins I have are made to make it sound more analogue."

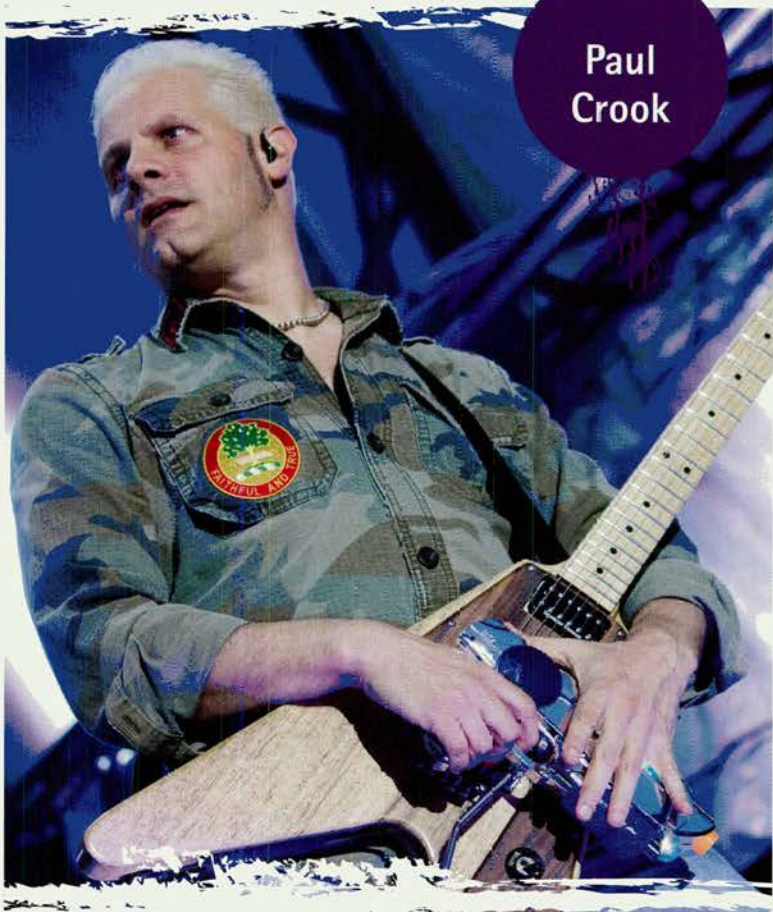
George Wehrin, Audio Engineer, Meat Loaf.

It was Meat Loaf who put the ch c in calories, the trend in triglycerides and the glitz in gothic with his 70s *Bat Out Of Hell* album trilogy and subsequent performances, which highlighted his imposing figure, gothic lampoonery and grandiose vocals.

The former *Rocky Horror Show* star emblazoned the Bimbadgen winery stage,



Patti Russo



Paul Crook

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awakening promoters A Day On The Green from their winter hibernation--ironically on a wet and muddy October Saturday night. Such was the quagmire that the winery car park was ultimately closed off and motorists were directed to park some

four kilometres down the road and then bussed back to the venue.

"What a mess, you should see my multicore. Holy cow! I gotta tell ya though, the people stayed," exclaimed Meat Loaf's veteran sound engineer George Wehrlin to CX.

The Band

The band is made up of Meat Loaf (Marvin Aday); Patti Russo, backing vocals; Virginia Luke, backing vocals/violin; Paul Crook, guitar; Randy Flowers, guitar; Danny Miranda, bass guitar; John Miceli, drums; Justin Avery, piano keys; Dave Luther, Keys/Saxophone.

"The band is fabulous. I love the band, it's so tight, and they're a great, great band. There's the joy. The drummer and I have been together a long time (since 1993), and he's like a rock, and that makes it even better; and he knows how to tune the drums and that's a huge part of my sound. If I get my drums sounding right I'm feeling good," says Wehrlin. "Although we have two guitar players they both have drastically different sounds, so they don't compete with each other. That helps. In the old days we only had one guitar player and it was a lot different, you know, the music was straightforward. Now music's produced differently. We've got more textures and layers and things like that. And we've added instruments. We've got sax now, which is quite nice actually. It's pretty easy to get a saxophone into the mix.

"The newer songs from the last two records are featuring much heavier guitar sounds than Meat's older records. So now you have a big, big guitar sound, and you have to mix the piano; the piano has always been a big, big sound on Meat's music. So the piano has to be right in there all of the time--and now we've put the violin right on top.

"I have to make sure my balance is correct and I have to use my compressors correctly or else the mix can just get in one big mud ball. I've been doing it quite a while and it's sort of an evolved sound. It's thicker now than it's ever been," says Wehrlin.

"I instinctively know what Meat's going to do nowadays, because I've done every show since 1989...but I don't really ever take my finger off his fader during the show. Honestly, my right hand is always on his fader," says Wehrlin.

Meat Loaf



"Ginny did a beautiful violin solo on Two Out Of Three Ain't Bad while it was pissin' rain down," added Wehrlin.

Wehrlin who hails from Boston, Massachusetts has been with Meat Loaf for 22 years, starting out as a system technician in 1989 before moving onto the monitor mix and then taking over the FOH on the Bat Out Of Hell 2 tour in 1994.

Ginny is 20-year-old violinist and backing vocalist Virginia Luke, who has just signed on with the band.

"This girl has just joined the act for this tour, and the violin is brand new. We were trying to figure out where we could fit her in because it's quite difficult to balance the dynamics when there's a lot of information coming at me all the time. But so far I've been able to get her in the mix pretty nicely.

"Up until the beginning of last year, or maybe the year before, we had two girls singing--the other girl didn't play any instruments--but then she left and we didn't replace her. So Ginny came on board as violinist and she's a good singer, so she took over the other girl's part," said Wehrlin.

Meat Loaf's mainstay backing vocalist is Patti Russo, who has been with the act since 1993, which was the year I'd Do Anything For Love (But I Won't Do That) was released. However it was actress Dana Patrick who lip-synced to singer Lorraine Crosby's vocals on the memorable video. But Patti Russo, who also sings back-up for Cher in Las Vegas has always done the live performances.

"She's a very big part of the show. Without Patti the show isn't the show," says Wehrlin, who points out, "She's not a young girl (Patti Russo is 47 years old) but she looks fabulous and she sings fabulous. She gives it right back to Meat. She's from New York and she has the right attitude. She's a tough girl and she doesn't take any crap. And it's good because this music has always been about boy against girl. It's always been that image, you know, him with the girl," says Wehrlin.

FX plugins

"I use the Eventide Anthology 2 bundle, mainly for the harmoniser, which is set just as a micro pitch shift, and it's just a bit of a doubling effect. It's very subtle but it's a big part of Meat's studio sound too. And then,

depending on the venue, if it's outside I would add reverb, but if it's inside I wouldn't put reverb on him. I'm also using a lot of Waves plugins, specifically I'm using the new C6 plugin on Meat, which is invaluable because he tends to cup the microphone and it gets a real sharpness to it and I have to compress just this one frequency. It's like a parametric compressor.

"I'm also using the Crane Song Phoenix, which is a great plugin; I use it on a lot of my stuff. It's basically a tape saturation plugin, but there are different ones with different characters to them. It's funny because I'm using a digital console, which has all the great things that digital does, but most of the plugins I have are made to make it sound more analogue. It's true, I have a lot of plugins that do that--warm it up, make it more analogue," says Wehrin.

Mixing console

Wehrin comes from the analogue world and still sings the praises of the Midas XL4 console, however he wouldn't go anywhere without his Digidesign Venue Profile.

"We've been carrying all our own control gear for quite a number of years, which is supplied by Scorpio Sound Systems in Boston Massachusetts. We just get racks and stacks if we have to," says Wehrin.

"It was probably about six years ago when I started on the Venue (Digidesign). But the last time we were in Australia in 2004 I brought a Midas XL4 with me.

"But it got to the point where I would need two of them because we kept growing with inputs, more and more inputs and I just couldn't fit them all in. I didn't want to carry around two of these giant boards that weighed a ton, with racks and racks of outboard gear. So it got to be a practical matter, although the Midas is still my preferred console. I would still use it as it sounds the best to me of anything that I've used. I was always a Midas guy. I was going to die with that board," he said.

"I fought, and went screaming into the digital age. I'm 62-years-old now. I came from way back. I saw the whole evolution of this thing. When I started with my band, we were using public address systems, you know Bogan PA (US intercom and paging system). Horrors, you know, they were on poles because there wasn't anything. So I've seen the whole thing. And now we get to this. And I love the digital thing, the convenience is amazing, everything you can do with it is just fabulous. The routing, the patching; it's quiet. Everything is great but you know, at the end of the day I still want those Midas pre-amps that give me that sound I like. Now I've got all these plugins to try to make that sound," said Wehrin.



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Monitors

Meat Loaf's monitor technician is TC (Tim Coakley). TC has been doing the foldback since 1999. Wehrlin explains:

"We carry the wedges, which are D&B Max wedges and we carry the side fills, which are D&B C series boxes," says Wehrlin

Meat Loaf uses in ear monitors, but he likes to listen to a lot of the band in the wedges, and the voices in the IEMs. His voice is in the side-fill as well. And Wehrlin says Meat Loaf likes it quite powerful on stage. "That's why we have a big side-fill, because Meat likes to hear a lot of drums and he has quite a bit of guitar in his mix as well," adds Wehrlin.

Lighting Meat Loaf

Lighting designer and console operator with Meat Loaf of some 20 years is Bill Sheldon who travels with his own Avolites Diamond 4 vision console.

Phaseshift Productions supplied all the lighting fixtures and rigging, and also a back-up console.

"We supplied a Diamond 4 back up, which is actually a rack mount set-up with a small console. It's an Avolites D4 Pilot that actually runs the back-up off a laptop," said Michael Corbett, Systems Technician and Lighting Crew Chief on the tour.

Phaseshift had a four-man crew with Michael Corbett, Matthew Spiker, Robert Oswald and Owen Lugg.

Meat Loaf travelled with their own rigger Bob Powers, who was the head rigger in charge of all the lighting points, video points and the audio points. And All Access Crewing, Brisbane also supplied a local head rigger Emmanuel Economidis.

The lighting rig largely consisted of 36 Martin MAC 301 LED moving washlights, 12 Martin MAC III profiles, 24 Martin MAC 700 washes, 6 x MAC 700 profiles, 10 Atomic strobes, 12 Molefay blinders, 2 x Jem Glaciator dry ice machines, 4 DF-50 diffusion hazers and a Highend F-100 smoke machine.

The dimmers were 48-way LSC dimmers, and the show used 4 x 2.5K Robert Juliat Aramis follow spots. Crew communicated with the Ezicom 400 talkback system.

The huge amount of light on this stage actually took some of the intensity off the 2.5K follow spots.



George Wehrlin
Audio Engineer



Tristan Johnson
L-ACOUSTICS
K1 specialist

"Like with the video screen and the MAC III profiles, which are really bright, along with the Mac 301 LEDs, which are fairly bright as well, the follow spots had a lot to compete with," said Corbett, who added, "But it's a good show. It's full of production and it's not just about one guy. There's a lot in the air and there's also a lot on the ground lighting-wise, and it's a great set, which really fills up the stage. There's a lot to look at," he said.

Stacks racks and tuning

JPJ Audic (hereinafter referred to as Jands) contracted specialist systems technician Tristan Johnson to set up their much sought-after L-ACOUSTICS K1 system on this Meat Loaf tour.

"K1 is the newer L-ACOUSTICS box. It's the must-have PA in the world at the moment," said Johnson who points out that the system has been so popular that Jands has been kept busy with the current demand.

"When you get the K1 you get the K1-SB. It's a dual 15", which is a long-throw at

the low end of the box. It's not a sub...it's just a low extender. Then you get the K1 itself, and then they've released the new sub-bass, the SB28," said Johnson

The SB28 contains two 18" speakers in a bass-reflex tuned enclosure, which delivers +5 dB peak SPL output compared to its predecessor.

"So they've refurbished the whole system, and they've put it onto digital amplifiers, which are called LA8s, which are proprietary from L-ACOUSTICS," said Johnson.

"On this tour we have K1s as the main hangs, and then we have V-DOSC as the side hangs. And everything runs off the one amplifier now whether it's a K1, a V-DOSC, the little in-fill boxes or the subs. Everything runs off the digital LA8 amplifiers, which all then meet together on a network. So I can control them from front-of-house, turn them on and off, turn them up and down, check the temperature and everything like that. It's all taken a big leap forward again.

"The amp rack world for the K1 is so small compared to what we were doing with the V-DOSC with the old analogue amplifiers...I mean I took four amp racks to the side of the stage and I did the whole arena," said Johnson.

"I design the system as well. I've got like a 3D presentation of the venue on my computer. So I sit there for like a couple of hours, moving the boxes around, changing the angles between the boxes, moving the arrays around, like where we can rig them. And then in the morning I come in with two guys--I've got two guys on the tour with me, both full-time Jands' guys, Simon Farrel and Glen Duncan, both really good young lads." •

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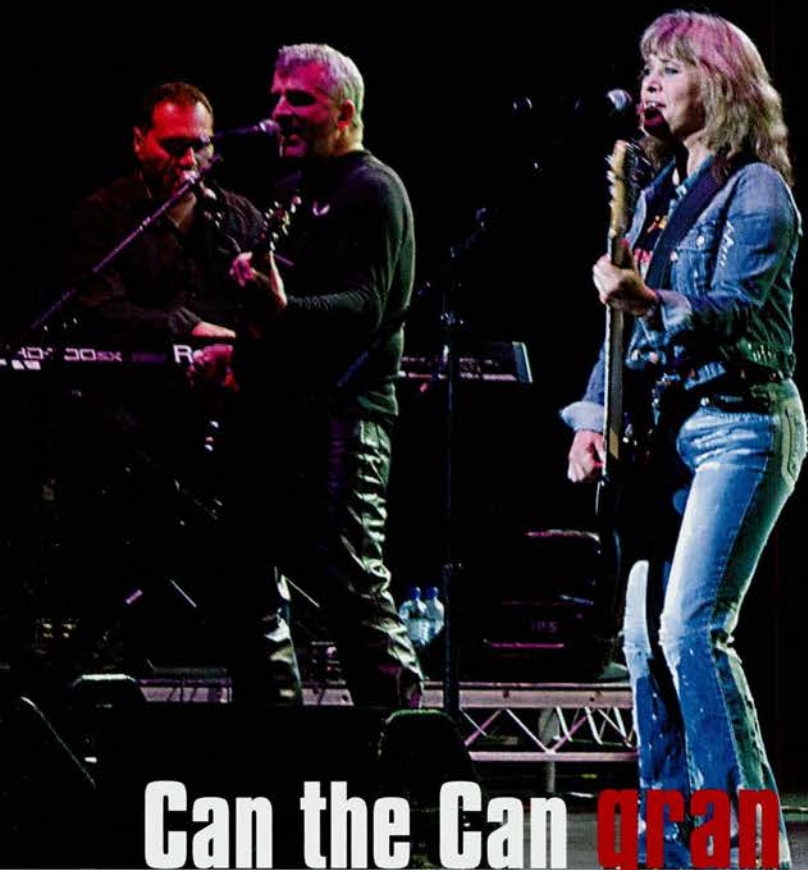
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Oh Suzi

Q...



Can the Can **gran** still can rock 'n' roll

Story and pictures by Brian Coleman

Suzi Quatro loves to rock 'n' roll. The sprightly 61-year-old grandmother played to packed audiences on her recent Australian tour, adding even more mileage to her 40-year long touring career.

CX caught up with the cast and crew at Newcastle's stately Civic Theatre where the house was kept hopping from the moment the band played Suzi on stage with the Everly Brothers classic Wake Up Little Susie, until she belted out her final number.

FOH Console

The industry's first Queen of Rock 'n' Roll specifically requested local sound engineer David (Hendo) Henderson for the tour, thus Hendo was enjoying his third Suzi Quatro Australian tour. And this tour saw Hendo's first introduction to Soundcraft's Vi6 digital console.

"What I loved about it was that it was instantly intuitive. At the first gig the techs

were out having lunch when I turned up, but I was able to configure the console myself without any advice from anybody, and I'd never seen the thing before," says Hendo.

Of course Hendo is not the first technician to point out that Soundcraft has placed a lot of emphasis on giving the Vi6 a hands-on analogue feel.

"It's very user-friendly. It really resembles an analogue console, everything's there at your fingertips, as opposed to going to



different pages and such; just one tap on the screen and you're where you need to be," says Herdo.

The day before Hendo was to use the Vi6 he sought some advice, and was simply told, "Just touch whatever you want and it will be there."

"That was absolutely right. You just touch what you want on the screen, EQs, compression, whatever. There are plenty of knobs there and they're all labeled up. It's very easy to use," says Hendo.

Audio, EQ & FX

Suzi gave Hendo her latest album *In the Spotlight* prior to the tour, asking him if he could pull up a similar mix. Whilst this would be challenging to some engineers, Hendo actually EQs sound reinforcement

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equipment purely by ear without ringing out the system, so the task wasn't all that difficult.

Hendo explained that one of the main effects that he uses in the show is a digital simulated tape delay plugin on Suzi's voice, which he says is a very 60s/70s sound. "I also use a little bit of reverb on Suzi's

voice and a tiny bit of reverb on the drums. As far as plugins go, I compress Suzi's vocals--to sit the vocal on top of everything else--and I also use a de-esser on her to stop the esses being too extreme because I do mix very vocal-heavy with this act; after all, it is all about Suzi," says Hendo.

Hendo also compresses the dynamic range of Suzi's bass guitar so he can push it up in the mix without any particular dynamic of the instrument going into overload.

"The way Suzi plays is very dynamic because she doesn't use a pick, she uses her fingers, and during her bass solos she slaps the bass and it really gets out of control if you don't have compression on it," he says.

Hendo points out that even though he mixes Suzi's vocal quite loud there isn't anything obtrusive about it. And it certainly didn't sound obtrusive through the L'Acoustics V-DOSC system.

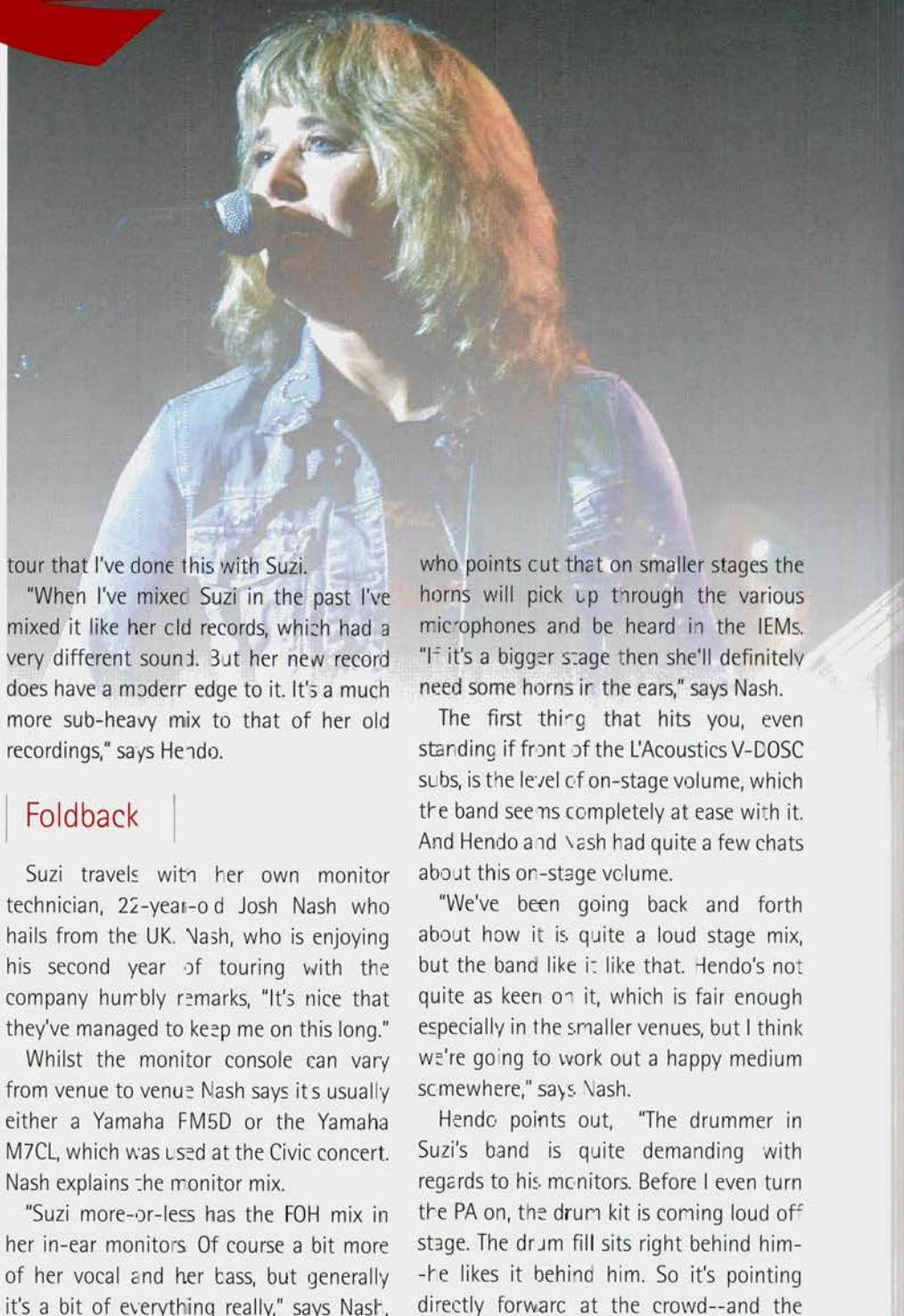
"Considering the age of the crowd, the majority of whom are 45-65 years old, I still seem to get away with running at a fairly high level, and everyone enjoys the show.

"That's another thing I loved about the Soundcraft console, it has a really smooth sound about it. A lot of digital consoles have a bit of raspiness, a bit of harshness, but with the Soundcraft nothing was really obtrusive; it really blew me away as far as its sound went, as well as its functionality," says Hendo.

"I probably mix a little bit bass-heavy with Suzi because she is the bass player. And, once again, like mixing her voice, it's all about Suzi. I generally tend to go for a big bottom-end sound, but this is the first

Q

IF YOU TOLD ME TWO YEARS ago that I'd be drinking a beer at nine in the morning out the front of the Sydney Opera House, I'd have giggled." Josh Nash, Monitor Engineer, *Suzi Quatro*.



tour that I've done this with Suzi.

"When I've mixed Suzi in the past I've mixed it like her old records, which had a very different sound. But her new record does have a modern edge to it. It's a much more sub-heavy mix to that of her old recordings," says Hendo.

Foldback

Suzi travels with her own monitor technician, 22-year-old Josh Nash who hails from the UK. Nash, who is enjoying his second year of touring with the company humbly remarks, "It's nice that they've managed to keep me on this long."

Whilst the monitor console can vary from venue to venue Nash says it's usually either a Yamaha FM5D or the Yamaha M7CL, which was used at the Civic concert. Nash explains the monitor mix.

"Suzi more-or-less has the FOH mix in her in-ear monitors. Of course a bit more of her vocal and her bass, but generally it's a bit of everything really," says Nash,

who points out that on smaller stages the horns will pick up through the various microphones and be heard in the IEMs. "If it's a bigger stage then she'll definitely need some horns in the ears," says Nash.

The first thing that hits you, even standing in front of the L'Acoustics V-DOSC subs, is the level of on-stage volume, which the band seems completely at ease with it. And Hendo and Nash had quite a few chats about this on-stage volume.

"We've been going back and forth about how it is quite a loud stage mix, but the band like it like that. Hendo's not quite as keen on it, which is fair enough especially in the smaller venues, but I think we're going to work out a happy medium somewhere," says Nash.

Hendo points out, "The drummer in Suzi's band is quite demanding with regards to his monitors. Before I even turn the PA on, the drum kit is coming loud off stage. The drum fill sits right behind him--he likes it behind him. So it's pointing directly forward at the crowd--and the

vocal microphones. But I usually find that by experimenting with phase I can correct that," says Hendo.

Analogue graphics are on the spec for the foldback but the graphics are usually omitted in favour of the on-board graphics on the Yamaha digital desks.

"I've been having a few thoughts on the graphics. I started off using the graphics on the desk 'cause that's what everybody does, and in the spec it says analogue, but in practice, using analogue graphics on a digital desk doesn't really work out. On the M7 I've been opting for the parametrics and using the monitors on parametric EQ because I find the parametrics are a little more predictable than the graphics," says Nash.

Clair Bros 12AM wedges powered by Crown XLS 5000 amps were in use at the Civic for all the players except Suzi who prefers in-ear monitors.

"If it's a particularly bad sounding wedge then there'll be quite a lot of work, but generally I'll just roll off feedback and then mix the instruments to the wedge rather than trying to get the wedge sounding fantastic if it's not a fantastic wedge. The AM wedges do the job, a little bit aggressive, but they're loud," says Nash.

"The drummer likes it loud, and he'll have a little bit more-or-less of everything in the monitor mix, although it's drum-heavy and weighted to Suzi's vocal as well. He doesn't have the horn section in the mix because the trumpet and trombone players are standing right next to him. I mean he doesn't really need the horn section in his mix; it's not as if they're keeping rhythm for him or anything like that.

"I've got a pack (IEM) that runs on the same frequency as Suzi. I'm listening to her first song pretty solid just to make sure Suzi's happy. And then I'll put it in once during each song just to make sure everything's still there and the levels are roughly right. But I don't have it in the whole night," says Nash.

Lighting

NSW Central Coast lighting company GRB was contracted to supply the lighting fixtures complete with its General Manager Greg Butt at the helm of a Jands Hog 1000 lighting console.

"It's a very relaxed atmosphere and a very enjoyable show to do," Butt told CX, adding, "It's very old school, with 48 narrow spot Par64 cans making up the bulk of the fixtures. Suzi wants the show to look like the older Suzi Quatro shows," he said.

The rig consists of the 48 NSP cans, 8 x MAC 250 Entours, 8 Molefay Duets, 7 x Source Four Profile spots, 2 Unique hazers and a single follow spot, which Butt calls on comms from the console.

"I prefer a colour correction when using most follow spots, usually a CTO (colour temperature orange) or CTB (colour temperature blue), because it just takes the hard edge off. A lot of the modern follow spots are discharge lamps, so there's a completely different colour temperature that comes out of a discharge follow spot as opposed to a tungsten spot."

The narrow spot pars are used both in lighting the talent and also to achieve an old rock 'n' roll 'ray-light' look.

"It's not a lot of fun focusing a can rig but it's worth the effort because they look fantastic. There's a lot to be said for the old can look. It's a classic look, but these days with modern technology it's all



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moving into LED and you just can't recreate those colour temperatures. I suppose given its heat and power draw the poor old par can is not the most environmentally friendly lighting fixture on the rigging these days, but it's still a fantastic look" explains Butt.

GRB had a choice in the use of colours and how Butt operated the show. There were no specific requests for lighting cues in the show except for a couple of single issues. "It's nice to have that freedom."

"The ability to be able to use par cans and create that 'can' look, and also use the moving heads--and not have them wobbling, doing circles and moving all over the place--gives you the option to use the moving heads just like a can. You can change the colours and you can change the positions and highlight particular band members. So you can use the moving lights just like they were a moving par can, and the show doesn't look like you're at a dance party or something like that," says Butt.

Veteran lighting engineer Jeb Bales who also works for GRB assisted Butt at the concert. "I'm very lucky to have an amazing console operator and general all-rounder like Jeb working with me," said Butt.

Butt says that the whole show was up in approximately one hour fifteen minutes.

"I guess that comes down to careful planning, and although we aren't one of the biggest lighting companies by any means, we do a lot of work in prepping and organising before we send a show out. Everything that is put together in our factory is numbered, coloured and pre-packed and rigged basically ready to come together," said Butt.

"We're also using Jands' new HPC Air Gap Dimmer on the show," explains Butt. "This is the first rack that a company has put out that is completely switchable per channel--from dimming to hot power to switchable... to DMX switchable.

"In the past if you had a 48-way touring rack you would generally have some source of hot power to supply moving heads and foggers and things like that, which we regularly use. And then you would have racks of HP dimmers and things like that, which you would specifically use for cans, profiles and tungsten, incandescent lighting. Now with this controller we are able to put four of those differing units in a 48-way touring rack



Greg Butt, GRB Stage Lighting



David Henderson

and direct whatever we want in our patch. We now can utilise any of those channels to become hot power or dimming. So if we only need 12 channels, we might have 8 profile spots and say, four moving heads, we can use the same rack unit to have 8 dimmable DMX channels and then the other 4 channels become hot power".

"There have always been issues with power distribution systems that weren't technically 100 percent 240 hot power. Some can be mistaken for that, but essentially all they are is a dimming channel at 100 percent. This can cause great complications with the moving head market, and particularly with warranty on new products," says Butt.

Whirlwind Tour

In the true sense of the word this certainly was a whirlwind tour, in fact so much so that Hendo says that a single production system couldn't have kept up with its fast moving

pace. In spite of the fact that a number of different production systems were used from city to city and from state to state, there were still some long overnight hauls on this demanding schedule.

The tour now moves on through Europe where Suzi Quatro's huge.

On a lighter note, some true professionalism shone through as FOH tech Hendo and Suzi's monitor tech Josh Nash, who had great respect for each other, debated the pros and cons of the solid on-stage volume on more than one occasion over several beers.

Nash was very down to earth about how he felt about the Australian leg of the tour.

"This Australian tour is more-or-less a dream come true, to be honest. If you told me two years ago that I'd be drinking a beer at nine in the morning out the front of the Sydney Opera House, I'd have giggled," said Nash. •

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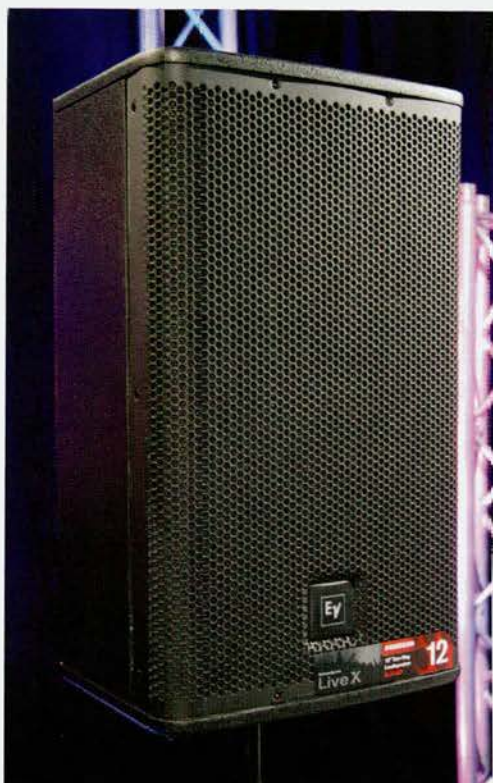
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Source: MI SalesTrak 2011



By Jimmy Den-Ouden



Electro-Voice Live X ELX 112P Powered Speaker

EV has come to the consumer party
with their new line of powered speakers

Brand loyalty is a funny thing. People tend to pick a brand (or a selection of brands) and stick with it (or them) when stocking their hire inventory. EV has long enjoyed a loyal following in the Australian production market, and probably not undeservingly so.

I recently rocked up to a walk-in gig and

encountered a brand of powered speaker system I'd not previously seen. It was really awful, but apparently it was what the venue could afford. Wildly unpredictable frequency response and serious lack of headroom left me wishing they'd just gone with some decent second hand gear instead. The good news is that second hand is no longer the only choice for such users.

Powered speakers are nothing new, and most well known manufacturers have at least one range if not several. What is new however, is a more affordable price point for this technology, and this where the X Live range sits. It even ships in a pretty retail style box, so potentially will sit quite nicely in the MI sector. The X Live range includes a 12" and horn, 15" and horn, and 18" sub. They're all available as powered or passive units, and the passive range adds a dual 15" model as well. The unpowered models will suit users who already own amps.

We had a good long play with the 12" powered unit, and discovered there's a lot to like about it. It's lightweight – for a wooden cabinet it weighs what a plastic one should; yet it doesn't feel or sound

Brand: Electro-Voice

Model: Live X ELX 112P and 118P (sub)

RRP: ELX 112P – \$1349.00 inc GST, ELX 118P – \$1649.00 inc GST

Product Info: www.electrovoice.com

Distributor: www.boschsecurity.com.au

flimsy. The weight (or lack of) makes it an easy lift, this perhaps accounting for the single carry handle. Lifting it onto a tripod stand is easily managed by one person.

The 12" driver is complemented by a 1.5" compression driver, coupled to a 90x50 degree horn, and the whole lot is bi-amplified and internally processed. Power is stated as 1000W class D amplification, though we don't know if this is RMS or peak output. Similarly nebulous is the frequency response – 50Hz – 20kHz, but with no further info. It sounds like the spec was written by a marketing specialist rather than an engineer, which is a bit of a shame. The box does actually sound good, and is capable of producing very respectable output level.

The back panel is sensible and easy to understand – there are two inputs with various mic/line options, as well as a loop output with switchable function. There's also a master attenuator, and a switch to illuminate the front panel logo. There's also a "with sub" switch, which rolls off some of the low end and leaves the ELX 112P sounding not unlike a T112M wedge. In this mode, it's extremely workable as a wedge. Plugging in a standard vocal mic to the back of the unit we were able to get a good level out of it before we eventually hit the internal limiter. With the unit running in full range mode, the bottom end takes off wildly and makes it much less practical as a wedge, but suspiciously much better as a DJ box. Running some well-known tracks, everything just kind of sounded like you'd want it to. It doesn't seem to exhibit the 1kHz rise that is characteristic of some EV cabs, and the top end is maybe a little more crisp than in other models. Without over-analysing it too much, we think it sounds good.

Ultimately for what looks and feels like a retail or MI product, the ELX 112P actually has some pretty decent chops as a production workhorse. For those who are fans of the brand, it would do well in small to medium corporate gigs, either as a stage monitor or equally as a front of house cab, provided you add some low end support. At the price, you certainly can't argue with the value either.



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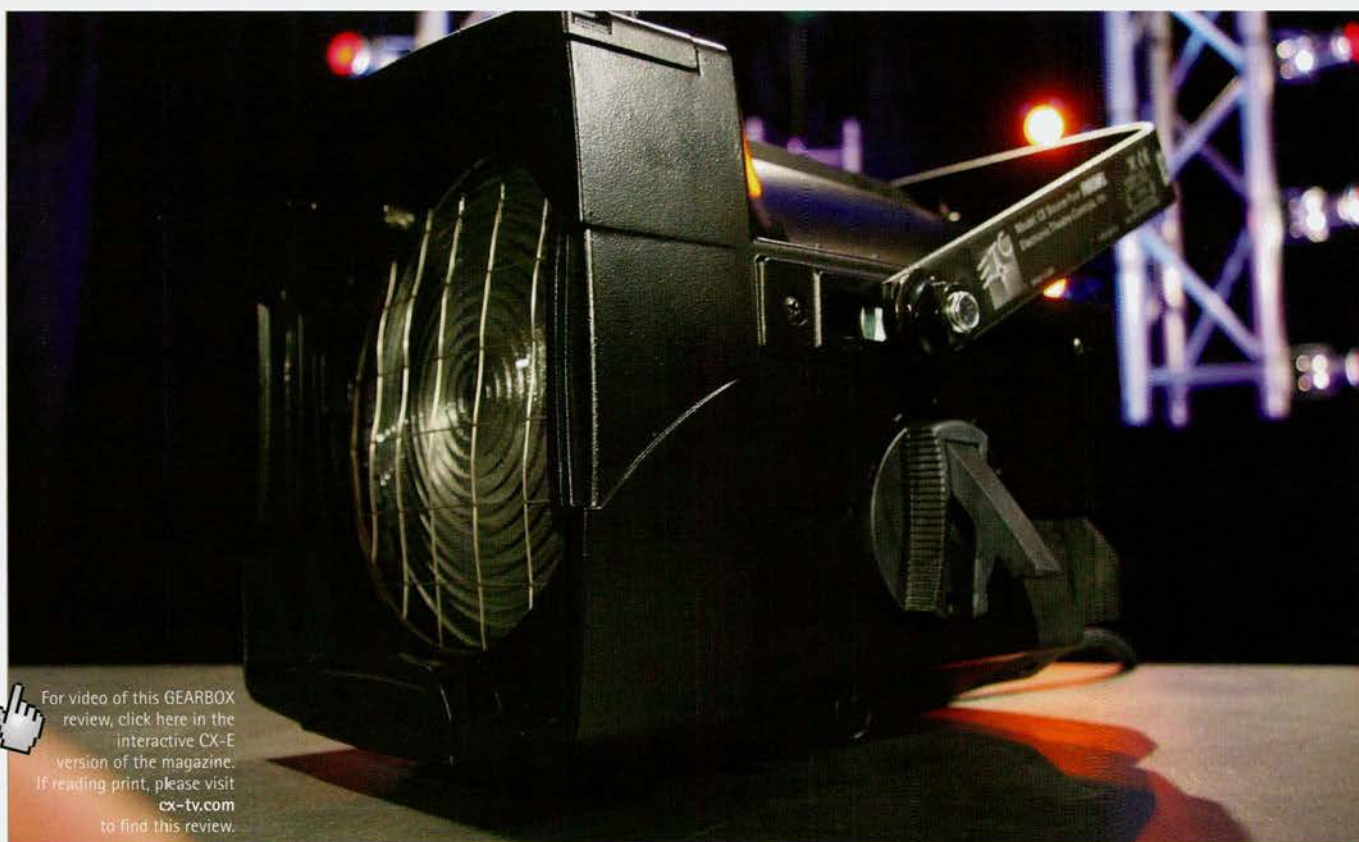
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By Jimmy Den-Ouden



ETC Source Four Fresnel

ETC keep it in the family with the latest addition to the Source Four line

Back in 1822, French physicist Augustin Fresnel probably didn't imagine that the lens he'd just invented would find widespread use in theatre, after all it was designed to increase the efficiency of lighthouses. Who knows if Augustin even went to the theatre?

Anyway, on the topic of efficiency, ETC has taken the successful HPL lamp base and built another type of fixture around it – this time with a Fresnel lens. The HPL lamp has achieved popularity due to its output efficiency – a 750W filament producing output comparable to that of a 1000W GKV lamp. So what you once used a 1k Fresnel to do, can now be achieved on 25% less power. That's got to be a good thing. You have the option to run 750W or 575W lamps, and the light field angle ranges from 20 to 65 degrees.

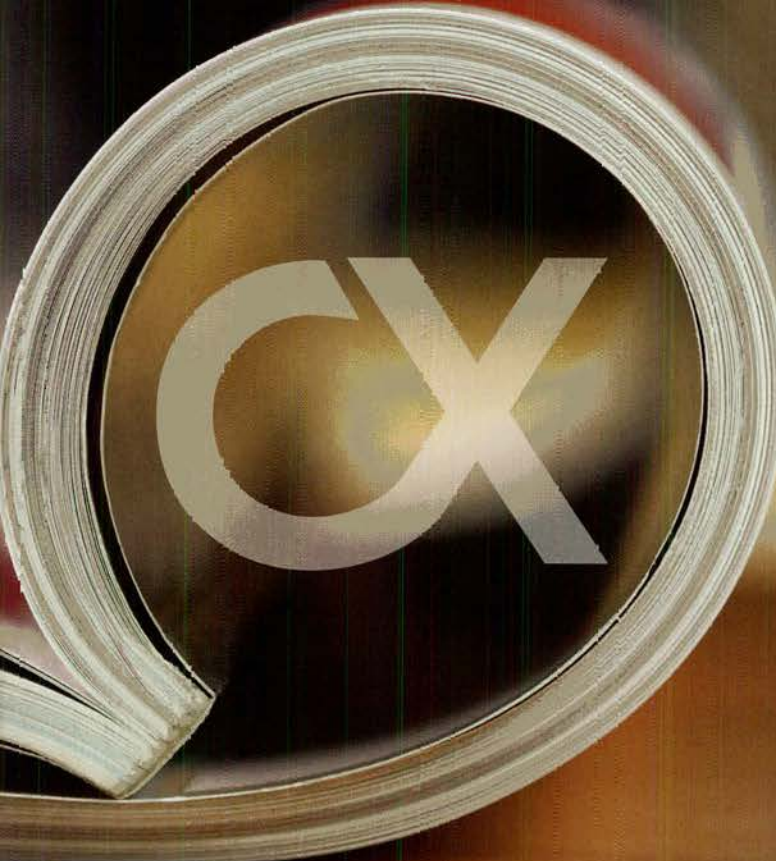
Lamp choice aside, the ETC Source Four

Fresnel isn't fantastically revolutionary. It's just a really nicely built fixture, which feels solid enough to last. It's been designed for a wide range of applications. The yoke pivot can be slid back and forth on the fixture housing, allowing you to balance it correctly with beam accessories fitted. There's a little vent in the door which holds the gel frame in place – presumably to let the heat out of the gap between the lens and the

gel. The focus mechanism is smooth and fluid – a pop-out tab on the handle enabling it, and locking the whole mech when popped back in. You can replace the lamp without breaking focus too. The lamp base is formed from a seriously large chunk of metal – so it dissipates heat effectively, thus extending lamp life.

Relative to the market, the Source Four Fresnel sits basically on par (get it??) with other Fresnel fixtures of comparable quality. The difference is that it runs on the same bubbles as the rest of your existing Source Four fixtures, so you don't need stock control for yet another type of bubble. Made from cast aluminium it's going to last the distance too. Lastly, with safety at the front of everyone's minds, there's an integral safety chain attachment point, which is part of the fixture body – not just attached to the yoke. We like it.

Brand: ETC
Model: Source Four Fresnel
RRP: \$540 inc GST, plus \$100 for the barn door
Product Info: www.etcconnect.com
Distributor: www.jands.com.au



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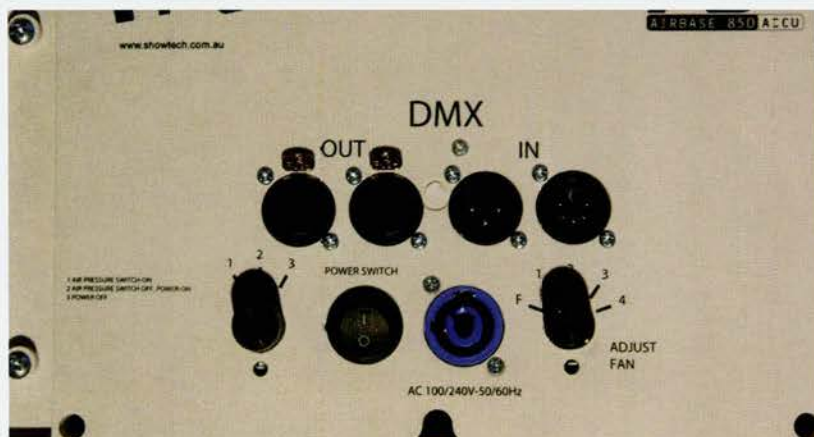
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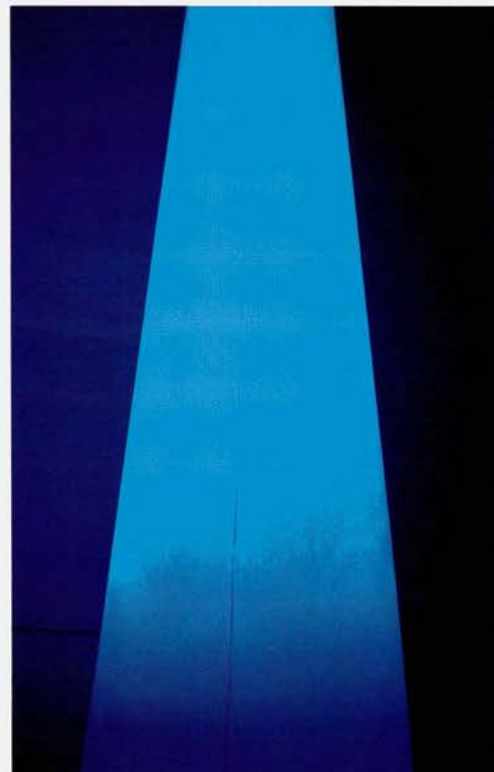
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By Jimmy Den-Ouden



ProShop Airbase All kinds of inflatable amusement...

It's affectionately become known about the office as "the dirigible", but officially it's called an Airbase and it's made by ProShop. So what does it do?

Um, it inflates... The base itself is a large silver disc shaped thing, with handles built into the top making it a fairly easy 2 person lift. 2 removable panels in the middle of the disc lift out to reveal several inflatable "caps" – each stored in its own pouch. Also inside this recess are power and DMX in and loop connectors. The idea here is that you stick your lighting fixture into the base, then

attach one of the inflatable caps.

Within the base there is a variable speed fan, as well as a pressure sensor. The idea is that you can run the fan flat out to inflate the cap, then dial it down to a quieter, slower speed. The pressure sensor somehow interacts with fan control to maintain the inflated state of the cap. In the event you lose power, there's an internal battery on the unit that will keep the fan running. This is a smart idea, since it avoids the situation of a big pile of plastic or nylon landing atop a hot moving light.

Our unit came with a clear dome, as well as 5 and 8m opaque cone attachments. Being as how the office is about 4m high, we went for the smaller of the cones during testing. We stuck a LED par can inside, attached the cap using the Velcro tabs on the sides, and hit the go button. The cap takes only a short while to become fully inflated, at which point the quieter fan speed becomes a good choice. Visually, it looks

quite impressive. We had a basic colour cycle running on the single can, and this was enough to light the entire surface of the dirigible with strong colour. I left the unit running from its internal battery for a while, just to make sure it would hold up. Test successful – more than enough time for a moving light to cool down before the cap deflates.

The Airbase is a cool looking thing, albeit one with limited applications. It's not IP rated, so while you could use it outdoors it would pay to check the forecast prior to deployment. Being quite tall as well, you really need a decent height roof to let the machine work to its full potential. Something like the Hordern or the MCA would be ideal.



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Brand: ProShop

Model: Airbase 850

RRP: \$1,999

Product Info: www.showtech.com.au

Distributor: www.showtech.com.au

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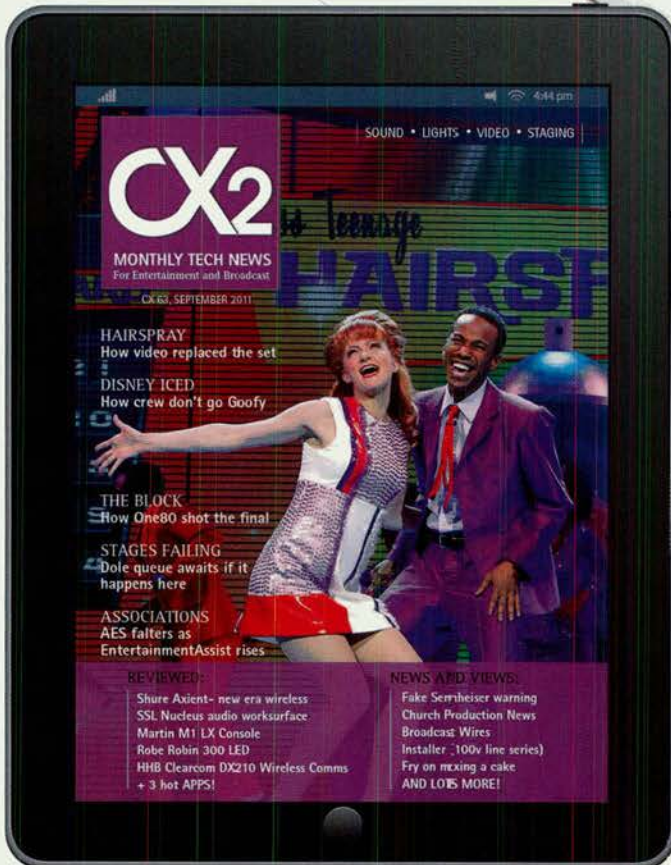
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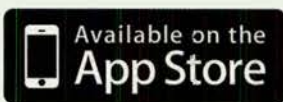
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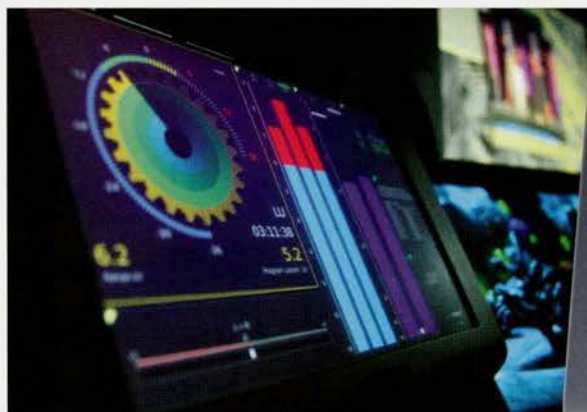


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TC Electronic TM9 Loudness Meter

Standards compliance just became sexier

By Jimmy Den-Ouden



For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit cx-tv.com to find this review.

Remember back in the 80's, when Ford released the Laser and at the same time Mazda had the 323? From a distance it was hard to tell them apart – probably because they were basically the same car, save for the badging. The TC Electronic TM9 Touch Meter bears a similar resemblance to the RTW unit of the same model name, and indeed the TC website explains that RTW did the hardware development. The big difference between the two is the included instruments – though each manufacturer offers options to license the other's software. The TM9 is designed to bring all your metering needs into one easy to view location. Included on all models are basic software – stereo PPM with analog and digital scales, as well as over indicators and phase meter. The TC TM9 also includes

a Loudness and SPL module, which allows you to meter in accordance with EBU R128 and ITU 1771 standards. Optional modules are a surround analyzer, Premium PFOM and Vectorscope, RTA, multi-channel support, and the TC Radar display. In short, just about everything you could want in a broadcast situation.

Instrument modules can be arranged

however you want them on the screen. Re-sizing and re-positioning is a little bit fiddly, but you can save 5 different presets so once it's done recall is simple. The most difficult thing about using the TM9 is understanding what scale you need to be looking at on what meter.

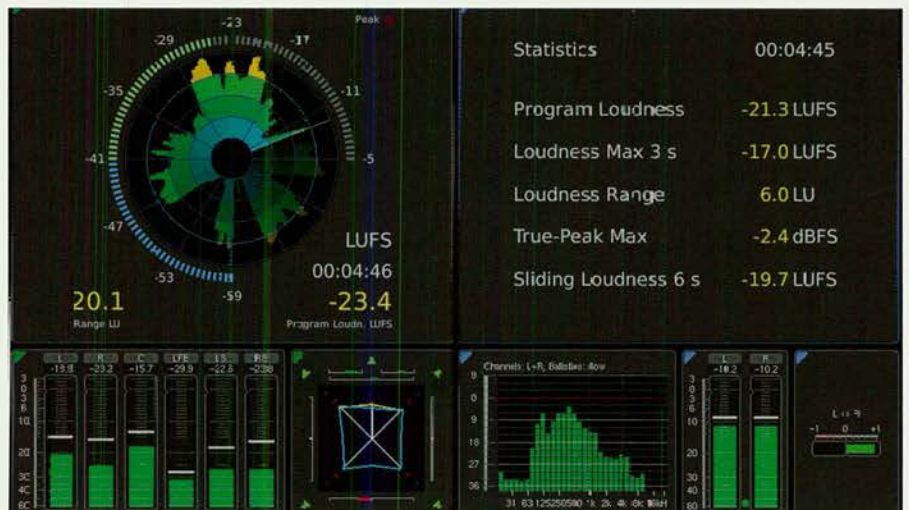
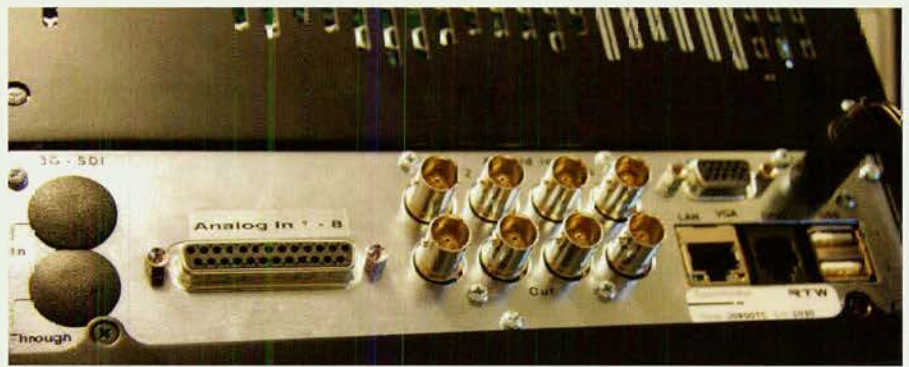
Physically, the TM9 is compact, the border being about an inch wider than the screen itself. It's quite heavy, so you can press anywhere you like on the touch screen without the unit wanting to fall over. There are no front panel controls since everything is touch based. Around the back, there's a power supply connection, USB and Ethernet ports, VGA output and of course audio I/O. The USB ports seem a little out of place, and indeed I wondered if they were functional. Plugging in a mouse confirmed they were – it

Brand: TC Electronic
Model: TM9 Touch Meter
Pricing: Starting at around \$5000 depending on configuration
Product Info: www.tcelectronic.com
Distributor: www.ambertech.com.au

worked immediately.

Audio I/O is available in a number of flavours, starting with 8x analogue and 8x digital inputs/outputs on D-sub connectors. Other options including AES on BNC, and even audio embedded on SDI are also available – the idea being you specify what you need at time of ordering. The VGA port allows you to output the metering displays to an external screen, and you can rotate the screen layout 90 degrees to allow for vertical mounting of both the TM9 and external screens.

Boot time on the TM9 isn't real fast, in fact at over a minute it's quite slow, and response to touch screen commands also feels laggy. For the other 99.99% of the time however (when you're looking at the meters rather than pressing buttons), the TM9 is excellent. The response of the actual metering is fluid, smooth and accurate. Correctly set up, this unit is an incredibly powerful tool to assist broadcast audio folk to ensure their content is up to spec, but be prepared to do some learning to understand what scales and meters are relevant to your own situation.






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Phonic PAA6 Personal Audio Assistant

Add some science to your ears...

Time was when a personal audio assistant was the unpaid pimply-faced youth whose job it was to bring the engineer a steady supply of cold beers while they mixed the band. Phonic has adopted the term and applied it to a far more useful breed of tool – the audio analyzer.

The PAA6 is a compact little box which performs a host of different audio analysis functions. It's based around a color touchscreen display with three adjacent buttons

managing commonly used functions. Flip the device over and underneath you'll find not one but two omnidirectional reference microphones, which swivel out to point forward. The back panel houses 2 XLR input connectors, plus a third XLR for output,

while the battery charger connects around the front next to an SD card slot.

Switching the device on, it takes a little time to boot up but once this happens you're presented with a selection of tools. The interface is stupidly simple – just press

By Jimmy Den-Ouden

the screen to access whatever function you require. Both boot up time and function load time are a little on the slow side, but not by any means unworkable. The device is flat, which means there's no easy way to tilt it toward you when it's just freestanding. Most users will probably lean it on a console meter bridge, or just use the included mic stand adapter – this would give the added bonus of a little more physical isolation too.

The three buttons to the left side of the screen are for power, signal generator start/stop, and analyzer start/stop. An adjacent LED illuminates when each button is active. Initially getting around the interface on the touch screen seemed a little bit fiddly – some of the buttons are a bit too small to activate easily with your finger. Turns out you're supposed to use the integrated stylus

– housed in the back of the unit. The screen actually works pretty well just with a fingertip, but the stylus gives you better accuracy.

There are a lot of included tools on the PAA6. The first and to us most obviously valuable one is the LEQ function, which allows you to measure noise dosage. OHS is an increasing concern on gigs, and the ability to measure SPL exposure over time has gained more importance as a consequence.

The RTA is simple and easy to read. Whether you use it to help tune a PA system, or notch out problem frequencies or monitors it seems to auto-range to give a useful visual indication of what's going on at which frequencies. I really like that you can hit the stop button and freeze the display.

With turnkey PA systems gaining popularity, pre-fabricated speaker leads have reduced the chances of polarity / phase problems with in speaker arrays. It is however still possible to flip legs 2 and 3 on an XLR and wind up with stuff out of phase. The PAA6 has a polarity test function – this requires you to feed the signal generator output into your system, and the analyzer will tell you what's going on in the land of phase. It's a good idea to mute everything before you start, then measure

each component of your system one at a time to ensure accuracy.

The meter function will measure in a variety of scales using either the internal microphones or an external input. The external input connectors are labeled as line inputs, so presumably you can't connect your own reference mic to them without adding a mic pre-amp into the chain. For quick reference, the SPL function is a good one, and the ranges are quite wide so unless you're somewhere really loud or really quiet the default setting will probably be fine.

RT60 allows you to measure decay time of a sound in an environment. Once you start the analysis, the PAA6 listens to the ambient noise then waits for an impulse signal above this noise floor. I had varied results with this func-

tion, possibly using a better impulse signal would make it more reliable

There are a bunch of other functions including THD measurements, a scope, and phase measurement. I don't quite understand the point of two internal microphones, and indeed two simultaneous analyses which are the same as each other. I couldn't see any obvious way to break away and make one mic do

one thing while the other did a different function, though this may come with time in the form of a software update. Being a carefully calibrated device, it's important to treat reference mics with a little TLC. The included carry case goes some distance toward this aim.

All up, the PAA6 is a groovy little piece of kit which would certainly be at home on or next to any console at any gig. The array of functions make it useful not only for operators but equally for system techs. It makes it easy to take measurements without needing to know too much about how to setup metering scales and such, and it seems accurate. Price wise, it's very attractive too. If you need less functionality for fewer dollars then check out the slimmer PAA3 model – fewer functions at less than half the price.

Brand: Phonic
Model: PAA6
RRP: PAA6 – \$1749 inc GST, PAA3 – \$699 inc GST
Product Info: www.phonic.com
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Overnighters

we have known

These days you have a designated driver. Back then we didn't know that phrase.

A colleague rang at dinner time. "We had some equipment failure just now in Albury - I'm driving up overnight to get replacements". It opened a creaky door to a memory straight from 30 years ago about an overnight drive.

I was on the road with Francesco Calvi, Jon Pope and 'Herbal' Dave. He got the name because earlier we did a gig at Echuca on the Murray, and a lovely old duck who ran the hall wanted something moved. "See Herbal Dave", yelled Francesco who had just made the name up on the spot, probably due to Dave's prepondency to brew - and she wandered around backstage yelling "Herbal Herbal Where are you, Herbal?" Laugh - we nearly cried.

Sawtell RSL came at a point in the tour where I had flashed back home to Sydney to see the missus and kid. The guys took the Isuzu up there, and I hired an RX7. It seemed like a cool idea - a new sports car, a quick trip up and back.

We were working for the inspirational Simon Gallaher, who had found fame playing his dreaded perspex Kawai grand piano on the Mike Walsh show. Back then this was a massively watched midday show. Imo, as we called him, was a good client of our road company and we had plenty of

fun with him, often at his expense. Such as when we toured this big Simon sign, where the S was formed out of a treble cleff.

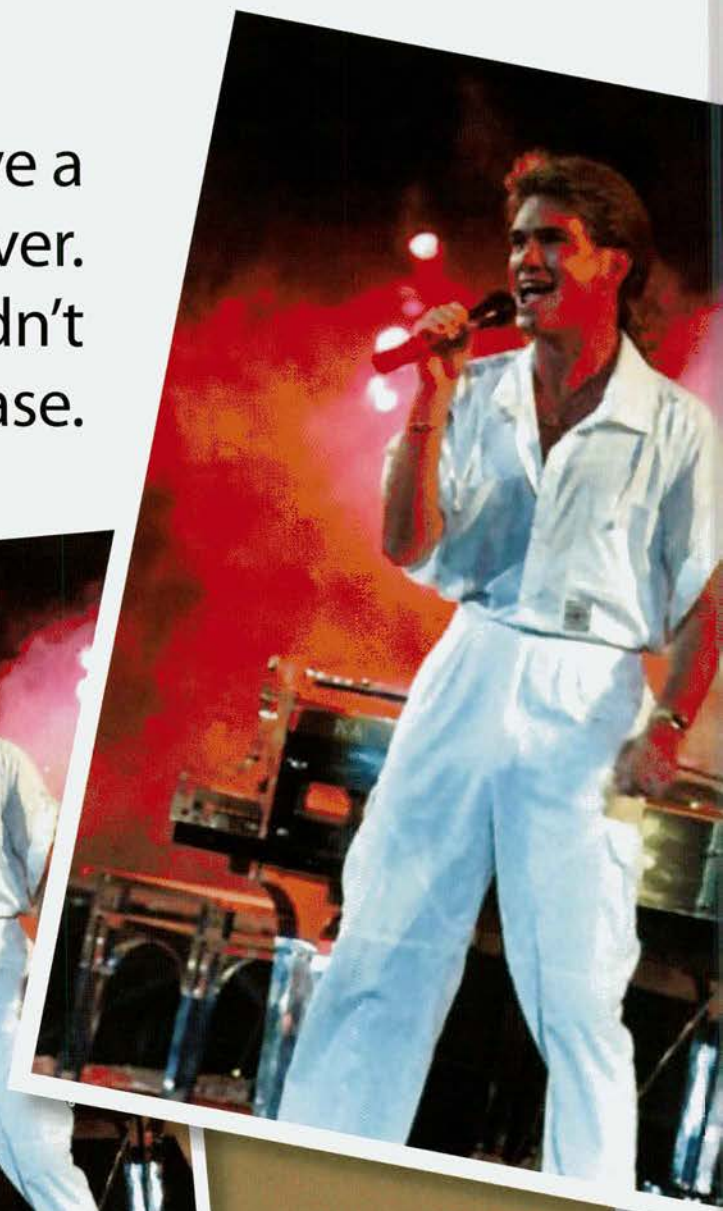
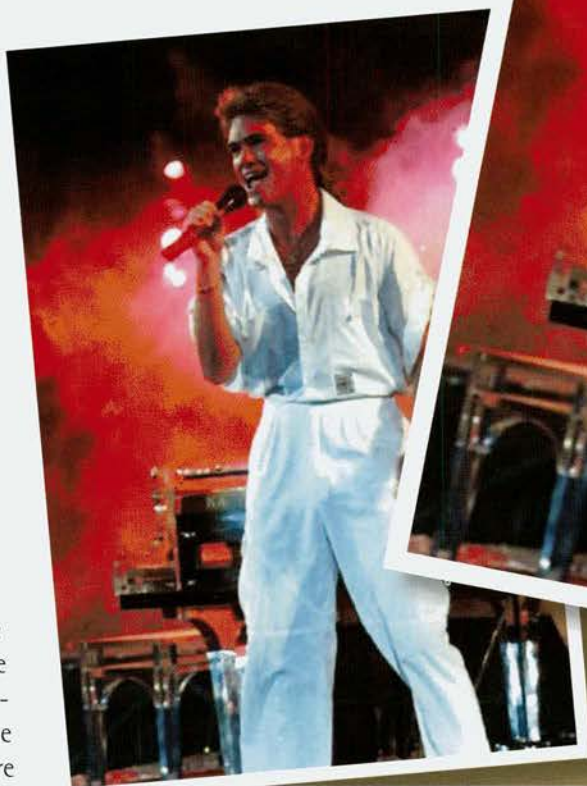
Calvi arranged the theatre flyman to drop the thing in during the intro at Caloundra and it came down fast and braked like a train crash. The S and the N at the end kept going, leaving IMO up there, nicely lit.

Another time Calvi also changed the show so that imo would do the entrance on the orchestra lift, but the motor failed. You could see the band, and hear the voice.

Every line or two, he would throw in 'up', and then 'UP!' But no imo. Around about the second last verse, the audience were flabbergasted to see the top of a ladder appear, with our star climbing up out of his prison still singing.

At Sawtell we met with Simon's newest investment, his Beyer wireless microphone system. 30 years ago this meant VHF and single antenna - no fancy diversity system here.

To be truthful the Beyer system sounded



*Simon Gallaher
in full flight.*

pretty bad, but hey – it was wireless. The show was classic club fodder, a mix of Vegas and standards with a session band of deviants who all dressed nicely in tuxedos.

The crescendo was the Barry Manilow song 'One Voice', which Calvi and Herbal lit beautifully.

*Singing in the
darkness,
All it takes is
One Voice...."*

Pause for effect, and then: "Number 32, your mixed grill is ready" crashed over the club PA.

Backstage afterwards no one would blame the boss for having a bit of a vent, a little download, in his dressing room to

his assistant. But the boss had every right to be very upset with me, because I didn't mute his wireless mic and the audience got the whole spray in high fidelity through my PA.

Much later that night, Herbal and I rocketed through the dark on the empty Sunday morning highway. Little towns flashed by, the RX7 rotary happily spinning at 7000 rpm. We sat on 140, spurting up to 190 and even 200kmh to step around the occasional lazy truck. We listened to Little River Band 'Days on the Foad' "I remember the days on the road, I almost died there...." on the cassette player, and then Stylius's 'Musical Man'. "It's going to be so long, until I get home, little mamma...."

We stopped at Kangy Angy for some hundred mile coffee like we always did. Dark and murky and almost certainly created from Pablo instant coffee powder. But it woke you up better than almost anything else. Most early mornings if you waited long enough, a band truck would roll up and you'd talk with the crew, comparing laughs. If it was a Ranger truck,

they were from Melbourne.

As a thin dawn light broke, we hit the misty edge of Sydney, up the hill from the Hawkesbury. It was just 4 hours after we left. It was going on 30 years ago and there were no speed cameras or random breath testing.

We went on some more tours with Simon, in between a roster of bands that ranged from Ska (Allnitters), boogie (Cyril B) and rock (Kev Borich). The stellar Christian band Avion charted and then faded, Spy V Spy appeared, Hoodoo Guru's added a bass player (they started without one!) and we did all kinds of one off's like corporates, outdoor gigs and theatre shows.

It's nice to run into the guys as well – Calvi, Pope and Herbal are all out there, at the top of their respective specialties. And our fearless leader imo (Simon)? He has had (and is still having) a sensational career, one of the very few truly business minded and entrepreneurial musicians we know. And one of the few who actually came to a crew party, after a tour.

- Julius

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100V

LINE SYSTEMS

NOW THE REAL WORK

part 6



By Paul Matthews

Work is piling up. That shopping centre down south? On the phone again. Delighted with your initial work they paid your first invoice in 5 days. The new manager has finally realised that while he can hear the system everywhere else – the gleaming front entrance is still quiet.

You glance over at the faulty amp sitting on the bench, not touched since you plonked it there 4 weeks ago. Rats. Now you're going to have to actually do some real work.

You start with the amp first. It's only a 60 watter – who uses 60 watts nowadays? – you think to yourself, opening the lid. Replace the fuses, then it's on to the variac for a slow mains wind up and sure enough – before you even get to 50v one of the fuses starts glowing red. It's a short circuit output transistor for sure – possibly more. Fix it yourself? Half hour plus parts and you have to honour the warranty. Back to the importer? Hmm. Add freight both ways plus a long wait.

Time to start sizing up the client. How much are they willing to pay? Figuring that 60w is too small for the likely load anyway you wisely decide to abandon the repair and recommend a 120w replacement. Fortunately you have a "near new" good one (also your favourite brand) in your shop recovered from an upgrade customer last week. Let's see.. charge the shopping centre half price of a new one and everyone wins. That's that one fixed. 10 minutes.

With the "new" amp in the van, you remember that silent horn out the back of

THIS TIME WHEN
you get there, the
manager even offers you
a cup of coffee for saving
his arse last month!

Woolies just before turning the key. "Better put the long extension ladder on" you think. This time when you get there the manager's home and invites you to park the van "wherever you like". He even offers you a coffee, thanking you profusely for saving his arse back last month. Now we're talking.

After 15 mins "researching the customer's needs over a Nescafe" you're back in the office with the grey PA rack in the dusty corner. It's the shopping centre front entrance the boss is still whingeing about so you figure that would be the best place to start. Another check with the impedance meter over the "electrical" 2.5mm Twin (which used to be fed by the cooked 60w amp) confirms what you already knew : 10 ohms.

"Too high to be a dead short especially on cable that thick" you think. But definitely way too low for just a few ceiling speakers. Time to get the ladders off the van and

start poking human heads through ceiling tiles. Just before you leave the office you get that Santana CD back out and let'er rip – this time nice and quiet – just loud enough so you can hear it when you put your ear close to a speaker.

The "new entrance" is a typical architect art on a budget. After a while looking you count a total of 8 x 8" ceiling speakers and two paging horns just outside – none of them working – so bet is they're connected to the "new" sector. The horns look fine being standard pagers with a tapping switch on the back. Something about the ceiling speakers tells you to take a closer look.

After obtaining a few suitable barricades from the manager to close off a small work area from the public, off the van comes the 12" step ladder and up you go. Sure enough – once the speaker is out of the hole the reason for the low impedance reading becomes obvious: No line transformer.

Yep, that's right – all six of the ceiling speakers are 8 ohmers! In yet another daily example of standard industry ignorance, the builders' electrician who installed the speakers at the entrance as part of the building contract – when confronted with the need to "do something about the PA speakers" only four hours before the inspection for handover – has bolted into the local electronics store in the centre itself, bought six of the only speakers he could find and shoved them in the ceiling all wired in parallel. "Speakers are speakers" in the building world, you guess.

Funnily enough the cable here is all fig-

ure 8 – so you've got no idea where the thick cable back at the office joins on to the thin wires at the entrance. Or even if they do join at all. Do we care? Better get that impedance meter again. Before long you confirm that the wiring is otherwise OK and that the two horns actually work fine when the six bodgy speakers are disconnected and the sector is driven by the meter.

You don't have six speakers in the van so after explaining the situation to the manager (along with why the original 60w amp had been damaged) it's off back to the workshop to grab a bunch before returning and installing them all properly. Then you install the "new" 120w amp and complete a test much to the manager's satisfaction – with a more respectable impedance of 167 ohms.

On telling the manager about the "dead horn" out the back of Woolies, he promptly announces that he knew nothing about it. You could just leave it.. but you know the only reason the rest of the system now works is because you found Sector 3 "short circuit" on your first visit and left it disconnected. Bets are on that this sector and the dead horn are related somehow. The manager – having been fairly happy with your cost estimates so far – is keen to complete the job properly so off we go again!

It's round the back dock with the van, off with that big extension ladder and up to the pigeon poop covered horn. The impedance meter here confirms that the old horn itself is actually fine – 330 ohms, but the line back to the PA is showing around 4 ohms. Simple math tells you that with the rack end reading 2 ohms, there's a reasonable chance the short is closer to the rack than it is to the horn.

With another 90 minutes of poking around to determine the approximate cable route between the two points – you eventually find the fault in the plant room not far from the office, through which all the PA cabling passes. It's a shelf bracket crushing several fig 8's and obviously been that way for a long time. "How long was that 250w amp driving two ohms?" you ask yourself. Nobody knows.

It's been six hours now since the call and you now have a fully working and reliable system which you're happy to warranty. The manager seems glad to pay your huge hourly rate for completing a repair which nobody else has been able to fix for as long as anyone can remember. Total new equipment used? Six cheap ceiling speakers. Time for that beer!

WITH 90 MINUTES POKING around you eventually find the fault – crushed cables....

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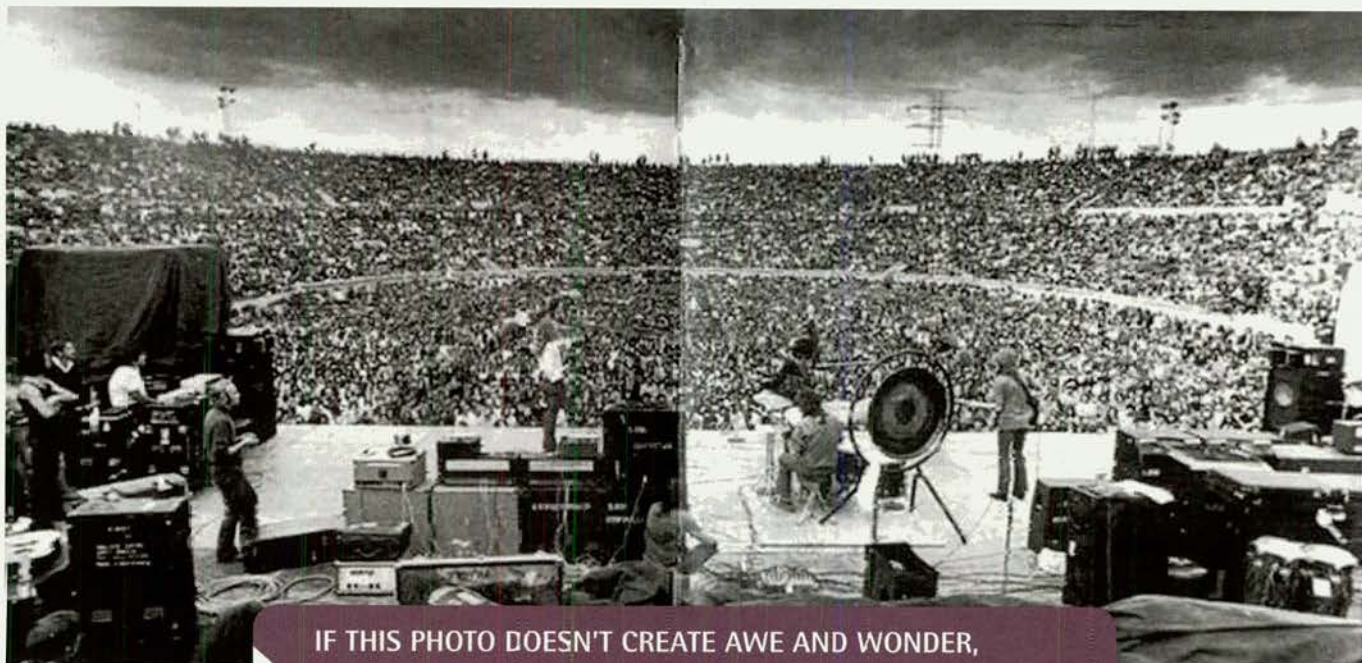
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**IF THIS PHOTO DOESN'T CREATE AWE AND WONDER,
WHAT WILL? LED ZEPPELIN IN MELBOURNE**

run it all. A lot of watts for those early days!

The concert starts with Robert Plant walking up to the mic and saying "Wanna tell you that we're sick and tired and poorly...but we're gonna rock on!" And with that they launch into Immigrant Song, then straight into Heartbreaker followed by a perfectly timed Black Dog.

The tracks on the CD are pretty much as recorded. I left most of the hiss in, because I think it adds a sense of realism, and if sometimes the sound seems to wave around a bit, well, that's just the way it was! The weather got so bad that the band left the stage after Rock and Roll, coming back for Whole Lotta Love when the rain stopped. No wireless mics and stuff in those days - electrocution was a real danger in the rain!

The phasing that can be heard towards the end of Whole Lotta Love was caused by the wind - it really started to blow a gale by the time they played it.

People who've listened to the CD always ask 'Where's Stairway to Heaven?' The truth is, I didn't tape it. It wasn't a standout track at the time. The band came and sat on chairs on the edge of the stage for the acoustic set, played Brony Aur, Tangerine, and Stairway, and to be honest none of them sounded much good. Not wanting to waste any tape (I had only brought along a blank C60) I stopped the tape halfway through the song and rewound to the start of it, so all that I have on cassette is the first few notes, and

then a click! Who knew?

Tangerine suffered from booming and popping, a consequence of too much bottom end and acoustic instruments in front of the PA stacks. Plus, it was all acoustic and the beautifully flowing electric solo was missing. And I had to wait 20 years for the Page and Plant tour before I could hear Hangman!

The standout track of the concert was Whole Lotta Love - tight, focussed, with razor sharp lead guitar and a great sound. The sound engineer was Showco founder Rusty Brusche, (who also went on to start up Vari-Lite) mixing from the side of the stage, and he had really pulled the mix together by the time they played this track - too bad it was the last song!

The CD stopped and I gradually returned to reality, which that day consisted of putting an IKEA bookcase together, surely a harder task than assembling the most complex PA system!

A few weeks later LL and I were in the Palais theatre, waiting for the show to start. After a mix-up with our seats, we were eventually seated about ten rows from the stage in the orchestra stalls. Swe-e-et.

If I had had any misgivings about the show, they were thrown out the window by the first song. With a bang the band launched into Rock 'n' Roll, with female singer Natasha Stuart doing the vocals. So there was no problem hitting the high notes!

It was the start of a full on Led Fest for the

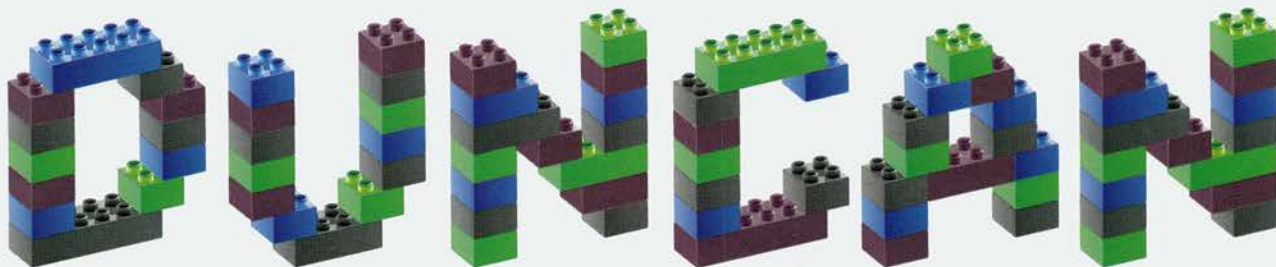
next few hours, with song after song played by a succession of great guitarists and singers, firmly anchored by the rock solid Greg Royal on bass, and Gordon Rytmeister on drums, who sometimes appeared to have the ghost of Bonzo guiding his sticks.

When Musical Director Joseph Calderazzo snapped a string just coming into the solo in Stairway, guitarist Jak Housden took over without a missed note and delivered a solo that would have had Jimmy Page nodding in approval. And Jeff Martin playing slide on an open tuned electric 12 string (the doubleneck, of course!) left me green with envy.

As well as Natasha and Jeff, vocals were superbly handled by Simon Meli and Steve Balbi, a possible highlight being Steve's soloing on guitars during one number!

The Palais can be a very tricky place to mix - the mix position is at the back of the theatre under a large balcony, with a large ornately plastered void over the desk, and I was expecting some audio problems. But no, the sound throughout the show was excellent; full credit to Brendan Keane at FOH for a flawless mix. Lately I come away from shows very unhappy with the sound, but not this time showing that a digital desk and a line array can deliver decent sound in the right hands!

Apparently this was the eighth annual one of these productions - I'll certainly be there if they have number nine.



FRY



Get the LED out

Led Zeppelin – 1972 and 2011

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I had a call one Saturday a couple of months ago from LL, the drummer in the Tweedz, the disparate group of old farts for whom I both mix and play. (How's that for good grammar, Julius?)

His rasping dulcet tones filled the phone.

"Mate we gotta go and see this concert," he wheezed

"Who is it?" I asked, always cautious in case it's something like Mel Torme, Chris Cross, The Turtles or yet another of yesterday's heroes coming out for the inevitable 'Paying the Mortgage' tour.

"It's a Led Zeppelin Tribute show, mate, called Whole Lotta Love. Sounds great doesn't it?"

"Are there any Zeppelin people in it?" I asked.

"No, it's all local hotshot players. Looks like a fantastic lineup."

"We-e-ll," I wavered. Having played in a ZZ Top tribute band (the semi-unforgettable LegZZ) in the early 90s I knew how good/bad tribute bands could be!

"We've gotta go," he said, "I've just booked us a couple of seats down the front."

"Oh, so it's your treat?" I asked disingenuously, knowing what the answer would be.

"Pissoff!" he gasped, and paused while his heart-rate stabilised! "Anyway, it's at the Palais, St Kilda, so it's not far. You can give me the money later!"

"Yes, but..."

"Stop ya whingeing - it'll be great. See

you at my place and we'll go together." And with a final wheeze he was gone.

It was not that I didn't like Led Zeppelin – far from it. Their one and only Melbourne concert back in the 70's was a milestone in live production as far as I was concerned, and has become my personal benchmark by which all rock concerts are judged. Recorded for posterity from the fourth or fifth row on my Phillips portable cassette recorder, I just didn't want the memory of it tarnished.

way. We stopped about 18 feet from the front of the stage, right in front of the left side speaker stack! When finally the band came out at around 3 pm, 'Bonzo' Bonham did a quick roll around the kit, and the girls in the audience started squealing from pain, not angst! This was a LOUD concert, especially where we were sitting!

Production information on the very comprehensive official Led Zeppelin site says the system was part Showco and part Jands. Full technical JBL model numbers

FRY BLENDS ALL HIS SINS AND PASSIONS INTO ONE STORY, reminiscing about Led Zeppelin live, comparing them to a tribute show, and listening to his horrible old live bootleg cassette recording. That's rock and roll.....

I put the phone down, leaned back in my chair, popped on a CD dub of my original cassette, and let my mind wander back 40 years (40 years? expletive deleted!) to the time a bunch of us went to see Led Zeppelin, Feb 20th 1972, at Kooyong Tennis Centre in Melbourne.

For this show we had tickets for the lawn, and the seating there couldn't be pre-booked - once the gates were opened it was every man for himself. So the ten of us formed a flying wedge as soon as we got through the gates, barrelling towards the front, knocking everyone out of our

are there, too, for those with an interest in such things.

I seem to remember a couple of W bins each side of the stage – one a regular and the other an RCA bathtub, some horn loaded dual 15 boxes, and a stack of those hernia provoking JBL radial horns. No wedges but from the pictures the sidefills look like those Altec boxes that were at Woodstock and The Isle of Wight festivals. Plus 12 Jands 150w Power Amplifiers to

Continued Page 65

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