

CX

MONTHLY TECH NEWS

CX126 JUNE 2017
\$7.50 AU

AFTER 
MANCHESTER
Rethinking show security

WHAT CAN POSSIBLY GO 
WRONG?
Plenty if I am your
event manager!

 **GREEN DAY**
With a pink pig

NEWS:

- Adamson wins shootout
- U2's massive PRG video
- Devine's new business
- Bits, bytes and rumours

ROADSKILLS:

- Green Day
- Jessica Mauboy
- Wombats
- 20 questions: Gina Hanlon

REGULARS:

- History!
- Listen Here: the clientless mix
- Biz Talk: Backup and blow up
- Simon Byrne

GEARBOX:

- Neutrik Xirium Pro
- Chroma-Q Color Force II
- d&b audiotechnik 24S, 21S, 30D
- LSC APS power system



Metrix
Ultra Compact
Line Array



Point Series Professional Install Enclosures



S10 Full Range Line Array



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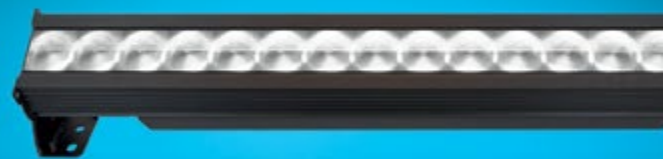
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• Cover photo: Tony Lukeman

Published by Juliusmedia Group Pty Ltd ACN 134170460 under licence from CX Network Pty Ltd ACN 153165167.
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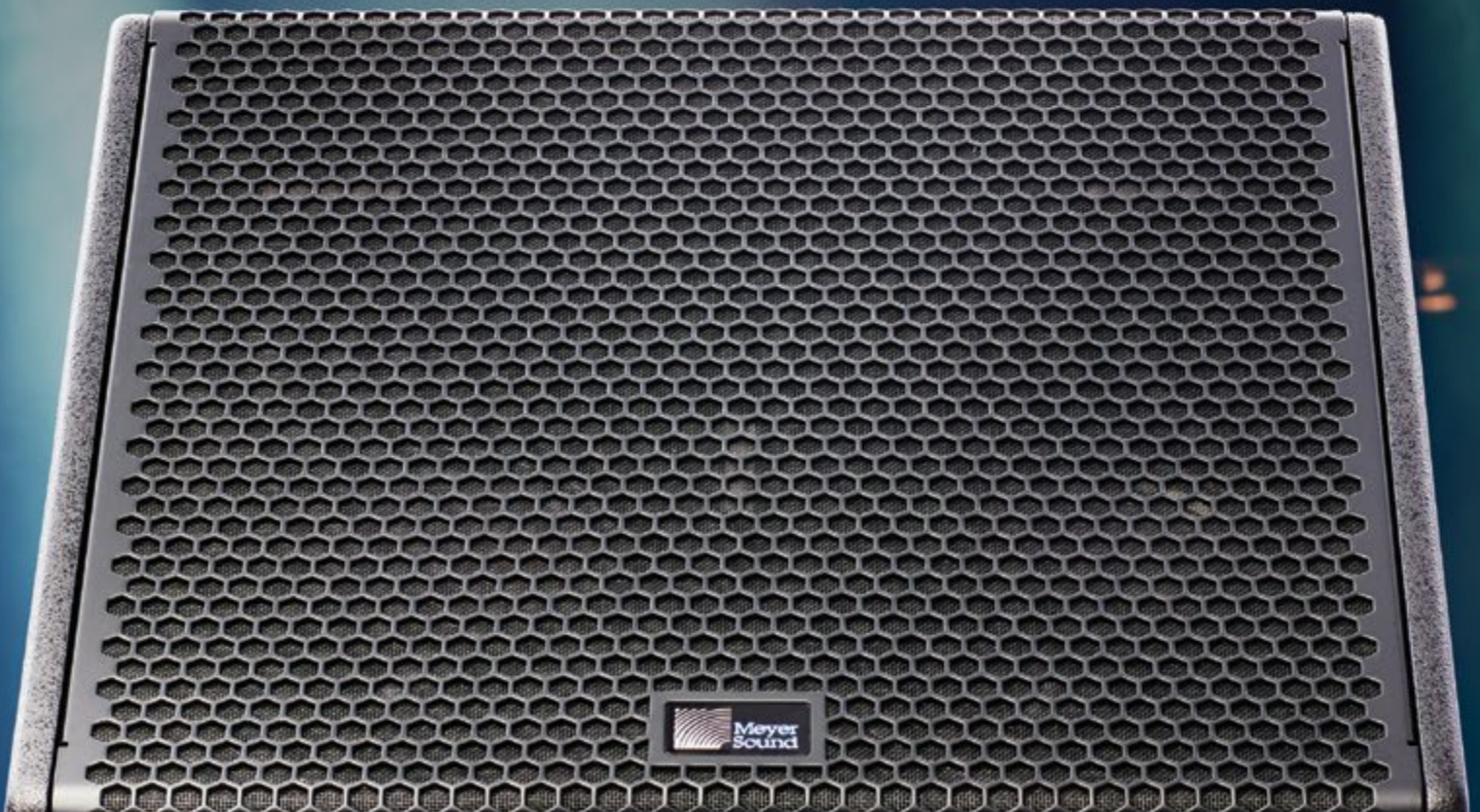


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U2 tour massive video

PRG's awesome new screen frame

It's ENORMOUS, at 200 feet long by 45 feet high and it's fed by a new 4k camera system with just one person doing the switching. Welcome to U2's mega-tour 2017 style.

On the Joshua Tree tour, PRG rolled out a new LED screen framer called SPACEFRAME. This carbon fiber touring frame is ultra-lightweight, collapsible and fully wind braced creating an intensive built-in structural strength. This allows for a free-form approach to stage designs enabling artists and designers to think outside the conventional LED box.

Get this - each 1.2m x 1.2m frame module ships packed down to about 120mm flat. The frame has an inbuilt snap out rigging and wind bracing system. You can pack eight frames

onto a dolly that previously would hold six - and due to the carbon fibre material, the weight is now 35% less than before.

The system is already producing 25% labour savings on this tour, with less trucks required and obviously less air freight for those over-water hops.

"The quality and resolution of LED products have vastly improved over the last decade, but the frames have basically stayed the same. At PRG Projects, we saw an opportunity to innovate the way in which LED walls were assembled and transported, to rethink the construction of the frame and how it might impact the operational side of the business as well as the design experience," stated Frederic Opsomer, PRG Projects' Managing

Director and innovation leader.

Leveraging in-house talent and partnerships already in place, PRG was able to produce the carbon frames from prototype to final product in just 17 weeks, enabling U2 to be the first to take advantage of the innovation.

The LED tiles are ROE (Radiant Opto-Elec Technology) CD8, 8mm pitch. ROE make a same-sized system that ranges all the way down to 3mm pitch, but on a screen so large that would be wasted.

"PRG has been a part of every U2 tour since 1992 and the band always challenges us with pushing technology to its limits," said Wolfgang Schram, PRG's director of video engineering. "We have to be creative and that is the fun part."

Wind brace packs flat



Custom touring rack



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6 YEAR
WARRANTY



Adamson expands its Australian family as Scene Change adopts S10

Operating from six offices across Australia, Scene Change are Australia's most awarded event company, having won the Meetings and Events Australia (MEA) National Award for Best Technical Production Service for the last five years, and being the first AV company to enter the MEA Awards Hall of Fame. With their clients increasingly staging events in larger venues, Scene Change needed to reassess their PA inventory.

"We work with a lot of technical producers who push the boundaries of production," said John Dinh, Director at Scene Change. "In these larger spaces, our point source inventory is no longer the right tool for the job. To be able to get the required coverage in many of these spaces we were flying a lot of boxes. The scope of shows that are coming through our regular venues now require a larger PA in the form of a line array."

Line Them Up

Focussing on the major players in the line array market, Scene Change methodically set about finding the best fit for their business. "Our senior audio technician Nathan Salt spent a lot of time researching our options," John continued. "There were several comparison spreadsheets that we went through, grading each of

the systems on price, rigging, weight, and usability. This acquisition has been in the works for the past 12 months, after a lot of consideration."

Crunch time came on April 18 at Sydney venue Carriageworks. The function space in Bay 17 is a regular workplace for Scene Change, and a challenging acoustic environment. Line array solutions from Adamson and three of the world's leading brands were rigged and tuned by their Australian representatives for a shoot-out, with each company's technical experts on-hand showing Scene Change staff how to prep, configure, rig, and tune their systems.

Rigged for Gigs

Adamson were represented by their APAC Sales Manager James Ritter and distributor CMI's Pro Audio Sales Manager Garry Farmer, with Eighth Day Sound's Simon Farrell bringing in and setting up the S10 rig. "Rigging Adamson systems is a huge part of my job," said Simon. "The rigging's just really simple. It doesn't involve heavy lifting to connect boxes together. You just slide the bars up, lock the pins in, hook a motor on, and pick it up. It's not one of those boxes where you're worrying about cutting someone's finger off. One experienced tech can fly a large array of S Series by themselves."

Hillsong Church's Audio and Infrastructure Director Ricki Cook was also in attendance, allowing Scene Change to ask questions of an existing and impartial Adamson customer. "I was keen to hear Adamson compared to the other systems," said Ricki. "While I consider Adamson the underdog to three of the world's leading brands, I have to say it ate the other PAs alive. After critical listening, the Scene Change staff asked me questions about Hillsong's history with Adamson, why we chose it, and why it always won our shootouts. I told them all the reasons, including all the tiny details we can hear in the PA compared to its competitors. And the pattern control is second to none - it can control low end like nothing else and the HF is like a laser beam."

Point and Shoot

"The shootout process was a critical component of our purchasing decision," said John Dinh, Head of Special Projects at Scene Change. "Being able to have all four of the PA options we were looking at in the same room at the same time was amazing. I wanted my staff to set up each of the PAs with their representatives so that they could experience the rigging, cabling, tuning and tweaking of each of the systems. We thank the other brands for allowing us to listen to and play with their systems."

In assessing the contenders, Scene Change focussed on four major characteristics of each system. "For us, it was rigging, weight, tonal quality and coverage, and ease of system configuration," explained John. "The Adamson system is simple, clear and so, so easy; plot the system

in Adamson's Blueprint software, take your angles, preset pins on the boxes, and then fly the thing out. So simple! And wow, that low-mid and bottom end! It's a nicely balanced tone that holds together very well at extreme volumes - it's very pleasant on the ears. And the HF directivity is absolutely phenomenal. Dante connectivity straight in to Lake processing on the Lab. gruppen amps is another great thing for us, as we can mount the amps in our Yamaha CL mixing consoles and patch straight from there."

Level Up

Eighth Day's Simon Farrell concurs with John about the S Series' tonal coherence through level changes. "The S10s maintain a consistency over your dynamic range," he observed. "You can have it sounding a certain way at a lower volume, but when you push it, it maintains that balance; you don't have to worry about having an EQ on standby as the show gets quieter or louder. And the Adamson S and E Series subs just sound musical, even at 35 to 40 Hz, where a lot of systems don't have definition."

Subsequently, Scene Change have purchased 16 elements of S10 augmented by eight S119 subwoofers, joining Eighth Day Sound, Hillsong Church, Haycom and Perth's DC Productions as major Australian adopters of Adamson. With their Sydney office committing to being part of the Adamson family, Scene Change have another five locations Australia wide, and CMI look forward to introducing the Adamson S10 system to them in the future.



Right Tools for the Job

"Our whole approach to equipment is to give our staff the right tools to deliver the best result possible for our clients," John concluded. "With our S10 system we can now reduce the number of hangs compared to point source, but achieve the same coverage. We'll be deploying our S10s on a lot of our conferences, artistic programmes, theatre, and musical events."

All Adamson products in Australia are comprehensively supported by distributor CMI. "Garry Farmer and the team from CMI have been amazing throughout this process,"

complemented John Dinh. "Being able to speak directly to people who regularly use the boxes like Eighth Day and Hillsong, and having a close relationship with Adamson's James Ritter gives us the confidence that the support is there." CMI's Garry Farmer feels the respect is mutual; "Scene Change have been extremely professional from the word go," he commented. "They have been decisive, articulate and a pleasure to work with. CMI are excited to be developing long-term relationships with high calibre production partners such as Scene Change, who understand the value of creating distinct points of difference for their clientele."



While the hideous attack on the concert in Manchester was apparently from the outside of the venue, it's time to review what we do.

What checks are done on equipment that comes into a venue?

Everyone in technical production should, and some do, adopt a heightened vigilance. The natural sense of security that we inherently enjoy in Australia and New Zealand won't protect us. We're sleep walking towards a catastrophe.

Think about where and what could be used against an audience?

Think about all the places equipment comes from, and all the disparate parts of a show. Until someone slips up and lets something into a show that explodes, we are mercifully free of primary screening. Can you imagine how it would slow us down if we had to submit to searches during loadin?

This problem already keeps some venue ops managers awake at night, and bothers a lot of production folk too.

WHAT WE CAN DO

If it was my show, I'd have a firm idea whose equipment SHOULD be coming in, and look really hard for stuff I can't reconcile. That's anything that arrives on random trucks or with random people.

I'd also want to talk to my crewing agency about how they hire and vet their crew, since those crew usually walk unimpeded into the venue with backpacks and sometimes bulky hi-vis.

The venue will or should look at their catering and cleaning staff and equipment.

If I was running a school musical event I'd be really careful about what is carried in by any adult - and check all notional 'parents' or 'teachers' carrying any musical instrument case or bag. It's a long stretch to imagine a child could bring anything malevolent and probably well beyond reasonable to search them all.

At venue level, I'd sweep all load ins. Armed with a list of contractors, suppliers, and incoming vehicle details, I'd have a couple of well trained and detail oriented security people looking, checking, and asking questions. Not over the top, but with methodology.

While it would add a layer of cost and inconvenience, this kind of regime could now be considered reasonable risk management. Otherwise some alternative regime is required, because to do nothing based on what we now know, is to be negligent. And negligence when people get killed is punishable, sometimes as manslaughter.

What do we now know? We know that bad people target crowds, and we know that they have done that in Paris, and in Manchester. Certainly neither of these atrocities involved stage equipment, but also certain is that by the very nature of entertainment technical production, we have a lot of apparatus that could contain explosives.

Pipe bombs? We have trussing and crowd barrier systems. How do we REALLY KNOW, without weighing them, whether each and every element is clean? Boxes with sealed compartments? We have dozens if not over a hundred speaker boxes and foldback wedges on a large show.

I'd want to know where the keys were to all the forklifts at my venue, all the time.

If we do have an attack using stage technology, the result will be a big re-think on security and the probable exact weighing of everything that comes in, to find abnormalities. Building that weighbridge will not be cheap, neither will staffing it.

HOW SOME DO IT

Sydney venues Qudos, ICC, ANZ Stadium, and The Opera House all do bag checks on external staff coming and going.

Qudos and Opera House won't allow any loader crew in unless they have ID that matches the name on the list supplied by agency.

But Phillip English from Showcall Crewing says he worries about trucks.

"People are easier to search than a truck laden with god knows what. Most venues see the Friendly Clown Logo or The Blue and White Lettering one and wave them in for a variety of reasons."



bombing too close to home

Time to review your security planning

The recent Green Day tour had a very robust security regime, managed by international security guy Ed Mendoza.

He says Australia and New Zealand do not have the crime rate or levels of extremism that Europe or the US have but it is precisely this which makes it more vulnerable to a Manchester event.

"Throughout our recent tour there has been a common theme from venues and mandates to security companies which is to get patrons in as quickly as possible. From venue to venue this has been consistent and the main reason I was told is to avoid customer complaints.

"More and more tours are becoming more stringent with their security policies and we have to accept that this is the world we live in and I'm afraid that it will soon be the norm.

"I know that some of our requests may seem excessive (bomb sweep and law enforcement) but the basics of local security and searches remain the same anywhere in the world. Too often we encountered venues that were inadequately staffed, security personnel not properly trained and queues which were mismanaged or not managed at all.

"Many times we had more ticket takers/scanners than security. Often the queue would push forward and past security for lack of management outside the doors whilst still on venue premises. The reason that I specifically point this out is that as touring personnel check and help manage doors things naturally slow down from your norm. This inevitably creates longer queues beyond the search areas.

"This is why we request a law enforcement presence at main doors such as we had in Adelaide. What ends up happening is that a soft target is created just outside the search areas on ingress and egress. Patrons drive or take public transportation so it is nearly impossible to secure areas beyond the doors. This is what makes a visual presence by law enforcement so important. I'm not saying this is 100% effective or that it would have prevented the incident in Manchester but there is a chance it could have. As you know local security comes in on shifts and near the end of the night when the crowd is already in and for financial reasons cuts to staff at doors are made.

"The financial reality calls for more and better trained security at employed at search areas and personnel to specifically manage the queues leading up to these areas."

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JDA

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BYTES, BITS & RUMOURS

• **Sydney's fireworks** are an international drawcard, but dark forces are conspiring to change the event - into a lightshow. The Lord Mayor's Party at the Opera House was cancelled recently after a campaign by The Daily Telegraph which shouted about the \$750,000 cost. Next is the push (not by that paper) to replace the fireworks with a laser lightshow.

• While **counting the petty cash** the other day to try to find enough coin for a humble coffee, CX mulled the fortunes made from lighting. Top of the pile is Richard White, founder of Rock Industries – makers of winchups, par cans and much more in the late 1970's. His WiseTech Global company floated last year and is now worth \$2.11 BILLION. It sells software to freight conglomerates. Richard is now also a major shareholder at Jands.

• Across town **Dynalite founder** John Gunton cashed out to Philips Lighting a decade ago for something north of \$20 MILLION. You don't need to look too far



to find some (rightly) well rewarded industry folk who share that common factor: they made their pile from building, selling, or renting lights. Our dearly departed mentor, lighting designer Roger Barratt, wasn't short of a quid either.

• **Rose Tattoo** were always true to their fan base. A typical gig attracted hordes of sumpheads, simpletons and bikers – on stage and off stage. Getting a punch in the snout at a Tat's gig was a right of passage. So it came as no surprise when former drummer Paul DeMarco was sentenced last month to six years of porridge for various firearm offences. He did it to feed his Ice habit.

• **Midas just brung back** the Heritage 3000 EQ section, as a stand alone device selling for around \$800. A lot of modern sound engineers would find this quaint if not quizzical, as they have only ever poked an onscreen version - without ever feeling the real thing. Always go for the real thing, guys. Note: remember to switch the thing IN! (Pic)

EMAIL US: juliusmedia@me.com or text +61 408 498 180

Steve Devine's Entertainment Technology Solutions

Entertainment Technology Solutions is a new Australian distribution company headed by Steve Devine. It's debut offering to the Australian and New Zealand market are a suite of acoustic measurement and calibration products made in Germany by iSEMcon.

Headquartered in Viernheim, in the state of Hesse, iSEMcon's expertise spans across acoustic and vibration measurement technologies. They manufacture a range of products catering to every analysis and monitoring application, from live production to installed systems, including analysis microphones, outdoor microphone protection, preamps, and calibrators. In a market where compliance and testing are essential, iSEMcon products offer a high-quality solution without the esoteric premium often associated with analysis equipment.



"iSEMcon analysis microphones and accessories are perfect for any audio professional looking for a decent alternative in a limited market," said Steve Devine. "They're extremely good quality and realistically priced. Their existing customer base are very happy, and we at ETS will only distribute products we would use ourselves."

ETS intend to expand their product portfolio to cover many of the problem areas audio practitioners face at their gigs and venues. Sold via the web, ETS will distribute products

that represent good value, and are used on a regular basis to augment the performance of both touring and installed systems. ETS's staff draw upon years of experience in sound system optimisation, specialising in difficult acoustic environments, and know the challenges of getting the best performance from any given system intimately.

"We see that there's a real lack of support in the market for things like format conversion," continued Steve Devine. "For example, when you need to convert Dante to AVB and back again. There's also a lack of reasonable solutions for signal distribution within venues or in temporary situations like media calls. We aim to find new, efficient, some would say 'quirky', but ultimately better and more reliable ways for audio technicians to solve irritating problems and get on with the job at hand – make the world sound better."

etsonline.com.au



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2404	800 W	600 W	600 W	600 W
4804	1500 W	1200 W	1200 W	1200 W

EXTRON MPA 601

01

The MPA 601 is an ENERGY STAR qualified mono audio amplifier delivering 60 watts RMS output. Housed in a compact convection cooled and UL 2043 plenum enclosure, it meets UL requirements for in-ceiling installations. The MPA 601 employs a highly efficient advanced Class D amplifier design featuring patented CDRS - Class D Ripple Suppression technology providing a smooth, clean audio waveform and an improvement in signal fidelity over conventional Class D amplifiers. Three stereo inputs are individually buffered so three separate sources can be connected simultaneously.

Australian Distributor:
Extron Australia
www.extron.com.au
or (08) 8351 2188



AUDAC PRE116 AND PRE126

02

AUDAC's new PRE116 (single-zone) and PRE126 (dual-zone) preamplifier models now include a front-mounted 3.5mm jack input, integrated Bluetooth receiver and a priority mute contact input. These are in addition to the existing input options which include two microphone inputs (with 3-band EQ, talkover priority and phantom power), three stereo RCA line-level inputs and a stereo balanced line-level input. Each of these inputs can be mixed and routed to either one (PRE116) or two (PRE126) stereo balanced output zones.

Australian Distributor: Audio Logistics
www.audiologistics.com.au or 1300 859 341

HUDDLECAMHD 3XA

The HuddleCamHD 3XA is designed for professional video conferencing. HuddleCam's most popular 3X camera just got better, with the addition of a built-in Microphone Array. Other features include USB 2.0 Plug and Play, wide 74 degree field of view, 1080p at 30fps and a two year warranty.

03

Australian Distributor:
Madison Technologies
www.madisontech.com.au
or 1800 78 88 89



ACOUSTIC TECHNOLOGIES TLA039A AND TLA521A

04

Acoustic Technologies has two new compact self-powered line array systems, the TLA039A and TLA521A. Dubbed the "Fat Stick" by one observer, these are distinguished by their rotatable line array "sticks" that assure sounds are aimed efficiently at the ears of the listener. They are suited for highly reverberant spaces such as big halls, houses of worship and similar applications where room for sub bass cabinets is limited, as the woofers are mounted in the cabinet behind the line array elements. The TLA039A contains 3 x 6.5" long throw woofers and 9 x 2" line array elements while the TLA521A has 5 of the 6.5" woofers and 21 of the 2" line array elements. The elements can be aimed with extreme accuracy and can be rotated from side to side for different angles without removing the grille.

Australian Distributor:
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or (07) 3376 4122



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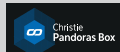
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05 MARTIN M-PLAY

Martin M-Play is a control surface that uses M-PC as software running on a Windows PC. Fully compatible with all Martin M-Series consoles and M-PC software, Martin M-Play is a plug-and-play solution with an innovative control surface like no other lighting console. 12 touch faders let you control playbacks, while 48 velocity-controlled pads let you access playbacks and any function key. Martin M-Play comes with one DMX 512 universe for direct control of any compatible DMX device.



Australian Distributor:
Show Technology
www.showtech.com.au or (02) 9748 1122

PANASONIC TH-75BQE1 AND TH-65BFE1 06

Panasonic has introduced two new touch-screen displays – the 75 inch 4K direct-LED panel (TH-75BQE1) and 65-inch Full HD direct-LED panel (TH-65BFE1). The BFE1 and BQE1 series gain features from Panasonic's whiteboard collaboration software when connected to a PC via USB cable and HDMI/ VGA cable.



With a 10-point precision touch, the interactive panel enables notation using an included stylus pen and allows for multiple presenters to write at the same time. The expanded presentation tools include Loupe, Spotlight, and Fade-out Marker. The displays also have a simple USB memory viewer.

Australian Distributor: Panasonic Australia
www.panasonic.com/au or 132 600

07 RADIAL 4-PLAY

The Radial 4-Play is a multi-channel direct box that has been specifically developed for multi-instrumentalists to enable them to quickly change instruments on stage. There are four balanced DI outputs, each one equipped with a ground lift switch. A dedicated tuner output is always on to allow quick on-the-fly adjustments or to tune between songs. Built Radial tough, the 4-Play is made from heavy 14-gauge steel for added rigidity and greater immunity against stray magnetic fields.



Australian Distributor:
Amber Technology
www.ambertech.com.au or (02) 9998 7600



08 RIEDEL MEDIORNET MULTIVIEWER

MediorNet MultiViewer is a virtual multiviewer app based on MediorNet MicroN high-density media distribution hardware and designed to work within the MediorNet network. Each single MediorNet MultiViewer engine can access any MediorNet input signal and process up to 18 signals. These signals can be placed flexibly onto four physical screens or routed to any destination within the MediorNet system and output at alternative locations. The MultiViewer device provides local signal inputs and outputs to offer further connectivity options, such as playing out the virtual MultiViewer screens locally on the device.

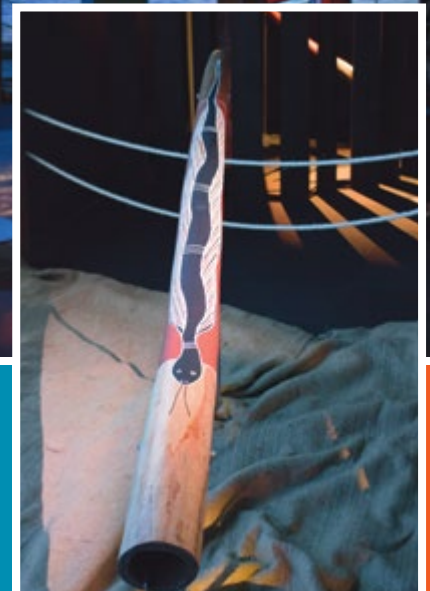
RIEDEL DSP-2312 DESKTOP SMARTPANEL

The new desktop SmartPanel features 12 keys, two TFT touch-screen LCD displays, and an integrated power supply. On-board AES67, AVB, and AES3 connectivity allows for direct connections to Riedel's Artist digital matrix intercom systems without the need for expansion modules. The DSP-2312 also boasts two exchangeable headset XLR connections, high-quality mic pre-amps, three GPIOs, two network connections, a four-wire connection, and support for Riedel SmartPanel Apps – including the Intercom Basic and Plus Apps as well as the MediorNet Control and HandsFree Apps.

Australian Distributor: Riedel Communications Australia
www.riedel.net or (02) 9669 1199

Yidaki

Didjeridu and the Sound of Australia



>> Yidaki

Yidaki: Didjeridu and the Sound of Australia' is more than just a new exhibition running at Adelaide's South Australian Museum – it's the story of Djalu Gurruwiwi, Yolngu elder and the spiritual guardian of the yidaki (didjeridu), whose lifelong work has been to use his instrument to bring understanding and reconciliation to the world.

Through Djalu's story and songline, and those of his family and clan, Yidaki teaches us that they're not just musical instruments, they are instruments of healing, ceremony, social and spiritual life. The exhibition marks a profound change in how the South Australian Museum displays its collection, and offers a shining example to institutions globally in how to celebrate living, breathing, indigenous cultures.

"The South Australian Museum houses the world's most important collection of didgeridus," said Professor John Carty, the museum's Head of Anthropology, "and we have the world's experts in didgeridus living in Arnhem Land." John and a team from the museum made multiple trips to visit Djalu and the Yolngu in North East Arnhem Land, and soon realised they'd need to create a new kind of exhibition to do their story justice.



>> Djalu speaks (two projector blend)

Sound as an Object

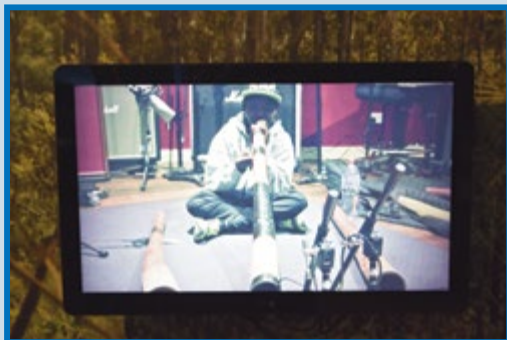
"We came back knowing that we weren't telling a story about the objects, but a story about the world those objects come from," explained John. "We realised we couldn't do an exhibition the way we've done before. We needed to build a forest, a world, an exhibition that celebrates sound as an object. The sound of the yidaki is the heartbeat of the Yolngu world. We needed to bring in someone who could realise that Aboriginal vision in the museum. How do you use sound as a thing? How do you create an experience where you make people feel like they're walking through someone else's world?"

The Museum recruited the services of Adelaide's Novatech Creative Event Technology. "Novatech were

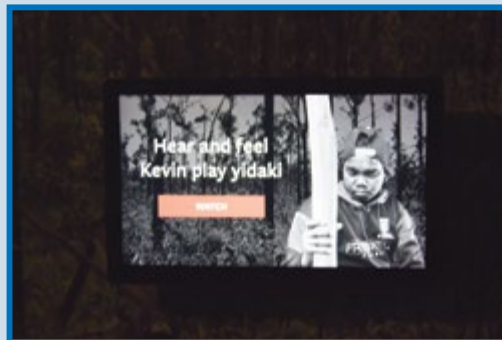
recommended to us from within the museum," said Jeremy Green, the museum's Lead Exhibition Designer. "We started having conversations mid-way through the project about how we could achieve our vision. It became apparent that Novatech had the skills, qualities, and background to not only understand what we were trying to do, but develop solutions that are efficient and manageable. The exhibition needs to work every day without fail, and Novatech delivers a level of responsiveness other companies couldn't."



>> Jeremy Green



>> In the studio



>> Interactivity



>> The 'Outdoor Cinema'

Songline

This is an exhibition told in the Yolngu way, without the usual labels and guides traditional in a museum. It's told through video, sound, and vibration. Dominating one wall is a huge immersive vision of the Yolngu country, building to a climax of a breaking storm, complete with lightning, as Djalu's Barra (West Wind) songline rings out, unifying the experience and revealing the true creative power of the yidaki.

The exhibition is divided into eight major sections, all telling a different part of the Yolngu story. LCD screens, theatrical lighting, curved projection screens, hidden loudspeakers triggered by proximity, and the museum's own 'thunderboards' (hollow boards that you stand on and 'feel' the vibration of the yidaki) are all part of the AV toolbox that Novatech used to bring the exhibition to life. The technology powering the exhibition has been built to run automatically and fault free, and is already road-cased and tour-ready, as the Museum is in talks to present Yidaki in Japan and other countries.



>> The storm gathers

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Automating Media

At the heart of Novatech's design is a d3 technologies 4x4pro media server fitted with two VFC-Quad 3G-SDI cards, sending video out to the exhibition's six Hitachi CPWU600w projectors and three Samsung 82" LCD screens. "The storm sequence runs for 20 minutes and that defines how all of the other audio and video material runs," explained Novatech's video technical lead Tim Gabbusch. "It's quite easy to do in d3's timeline." Six JBL Control 23s and eight JBL Control 65 pendant speakers powered by two Crown CT 875 amps are hidden through the exhibition, with five L-Acoustics 5XTs and an L-Acoustics SB15m sub providing audio for the 'West Wind'.

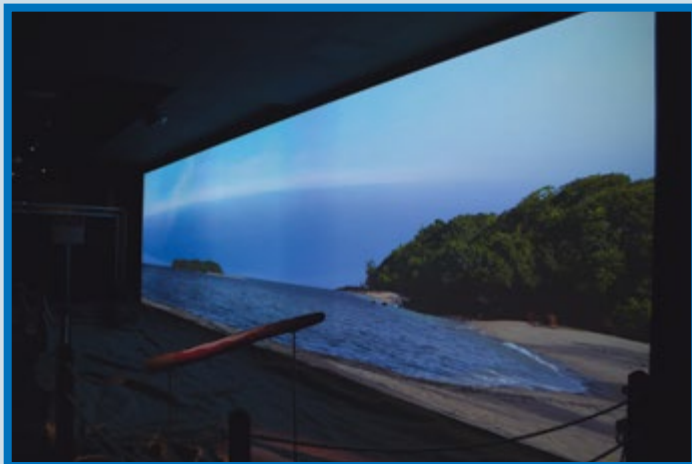


>> Tim Gabbusch

Novatech's lighting technician Rowan Lee worked alongside Tim to create the amazing lighting that brings the story to life, including the lightning storm at the exhibition's climax. "There are lots of stories happening at once, some tied together, some looping on their own, but the overall storyline is a day progressing, a storm building, and that storm breaking," said Rowan. "So, the lighting is pretty spectacular for a museum exhibition!" Rowan deployed a combination of 24 GLP Atoms, five ETC Source4 Juniors, and two ETC Lustr 2s to light the exhibition, with three Litecraft LED Multipars and four SGM X5 strobes used for the 'West Wind' sequence lighting and lightning effects.



>> Rowan Lee



In Memoriam - Tim Gabbusch

Sadly, since this piece was written, Novatech's Tim Gabbusch has passed away. Novatech wish to respectfully honour Tim's memory and the excellence of his work on Yidaki and throughout his career. Our thoughts are with his family and friends through this difficult time.

Please know that if you are struggling, there's always help. Talk to someone, or contact these organisations:

www.beyondblue.org.au 1300 22 4636
www.lifeline.org.au 13 11 14
www.entertainmentassist.org.au

- >> Another Samsung LCD
- >> LCD screen with JBL speakers
- >> 'The West Wind' (three projector blend)
- >> 'The West Wind' through the forest

Rigging and Rolling

Rowan also rigged up an ingenious system for the JBL Control 65 Pendant speakers flown from the ceiling that are used to playback specific recording of yidaki as the spectator stands in front of the objects themselves. "I put infrared reflective sensors on the speakers that constantly measure how far it is to the floor, he explained. "If you walk under the beam, the height difference is enough to trigger an OSC signal to be sent to the d3 that triggers playback of that recording. It turned out to be so sensitive, that when the museum added graphics to the floor indicating where to stand, I had to recalibrate them because of the small change in reflection."

From an Apple Mac Mini, automation software QLab controls start-up and shutdown of the entire exhibition automatically. On the same computer, Martin Lighting's MA for PC software runs the light show in sync with timecode it receives from the d3 4x4pro. All audio sources come from the d3, fed to the amplifiers via an RME MADiface XT USB3 audio interface. When the exhibition tours, the control rack will roll into place, cabling connects, and the show is ready to run after lights and projectors are rigged and focussed.



>> The Rack

Djalu's Voice

"We said what we wanted to do, and Novatech worked out a way to make this a group experience, which is how Djalu wants his song to be heard," said Jeremy Green. "I was particularly impressed by how Novatech took easy questions, which have hard answers, and turned that into something viable for the audience, and for us to manage as a museum."



>> John Carty

"It's the same kind of feeling going to a concert," observed John Carty. "You give yourself over to it, you need to feel it and hear it. This rethinks a museum as a place of theatre, magic and wonder. Djalu is the spiritual custodian of the instrument. He's spent his life travelling the world sharing it with everyone. It's his vision in the exhibition – it's a stage for him to address a bigger audience."

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Monash Children's Hospital AV with Surgical Precision



After a three-year build, the new 230-bed Monash Children's Hospital building in Melbourne's south-east is open to patients. Doubling as a teaching hospital, it's an important institution with a critical mission. CHW Consulting and integrator Pro AV Solutions made sure the tech used there every day is simple, reliable, and bullet-proof.



Melbourne's CHW Consulting were appointed as AV and ICT consultants to the project, working under builder Lendlease. "We were responsible for AV, IT, messaging, nurse call, communications, telemedicine, video conferencing, and technology integration," said Manoj Indraharan, Operations Manager at CHW.

"Basically every device that hung off the network from medical devices, security, bedside terminals, building management and automation."

"There's a number of different AV systems through the building," said Pro AV Solution's Victorian Operations Manager Cameron Hewitt. "There are Meeting Rooms with presentation and video conferencing

>> The wired theatre



>> Theatre view

facilities, Observation Rooms that can observe and record sessions between a clinician and a patient, and Operating Theatres with the ability to plug medical equipment into pendants and display their output on-screen. There are different systems throughout the facility for recording and content management, making it possible for users to record procedures and sessions and store them as part of the patient's case history to be recalled later on."



M Press Multi-channel Press Box



The mPress combines a high-octane active drive circuit with a host of transformer-isolated floor boxes called **Exo-Pods**. This modular approach allows the system technician to distribute Exo-Pods throughout the press gallery while assuring each member of the press receives a clean, hum-free signal.

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Secure Content Management

CHW and Pro AV Solutions installed a specialised Sony Content Management System for video and audio content management and recording. "It's an integrated ecosystem of records, back-end content management and servers," explained Cameron. "It's fairly new to the market, and this install is likely the first in the southern hemisphere. We chose it because of its HL7 (Health Level 7 - a set of international standards for

transfer of clinical and administrative data between software applications) capabilities to tie in with existing clinical software systems in the hospital."

"All of the video and audio data from Sony CMS streams on a separate, secure VLAN," added Manoje. "It automates patient details, embeds them onto the video, and automatically files it securely. It takes video inputs from Sony PTZ cameras, and for audio we've used a combination of Audix and beyerdynamic ceiling and wall mics, and Revolabs wearable mics."

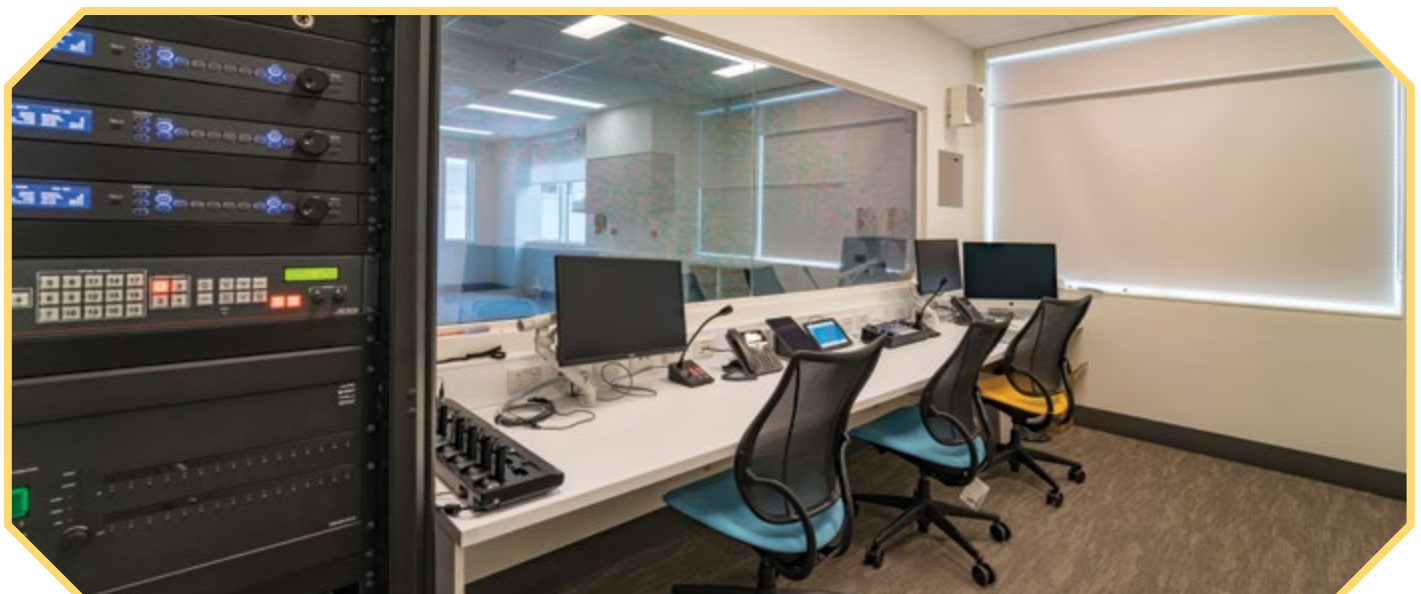
Surgical Precision

In the all-important operating theatres, video is handled through a Crestron DMMD16x16 DigitalMedia Switcher with distribution via HDBaseT. Control is also via Crestron, with touch interfaces on iPads. Multiple NEC and Sony displays are mounted throughout the space. "The staff can connect video outputs from devices like anaesthetic machines or endoscopes, and plug them in through the overhead pendants," Cameron illustrated. "They also have the ability to pull up an image from a display on their touch panel and draw or annotate over top while a surgeon describes a procedure. Being a teaching hospital, that's a big benefit."

"We had several workshops with the end-users about the control interfaces in the operating theatres,"

Manoje elaborated. "They requested specific workflows, like choosing a display destination before a source, because that's what works in their environment. For capture, we installed a number of ceiling and wall cameras, and all four operating theatres have video conferencing capability that allows procedures to be transmitted to Monash University, or other hospitals and specialists. Audio capture is a mixture of AKG wireless, wearable Revolabs and beyerdynamic MPR210B mics mounted onto Sony screens on the pendants. Pro AV's audio engineer went above and beyond on setting those up; in front of the screen, it picks up your voice really well, but it rejects beautifully from the sides and rear."

>> Crestron control via iPad



>> Control room

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>> Meeting space

Wired and Wireless

The multiple meeting spaces, training and seminar rooms all run on Crestron DigitalMedia Presentation Systems. Most rooms feature dual NEC

screens and Cisco video conferencing codecs, with the spaces able to be changed by the users via Crestron control over iPads into different presentation formats. Installing hearing induction loops became problematic because of excessive electromagnetic interference from installed services, so an infrared solution from Williams was used.

Throughout the building, audio is captured, processed, and amplified with a combination of wireless mics from Shure, AKG, and Revolabs, wired mics from Audix and beyerdynamic, processing from Biamp Tesira and Symetrix, amplifiers from Australian Monitor, and JBL Control Contractor loudspeakers. A Biamp Vocia paging system runs over the new building's network, and connects into the neighbouring building's analogue system. Pro Av Solutions integrated the paging system into the new building's EWIS speakers, saving doubling up on cabling and speaker infrastructure.



1.



3.



2.



4.

- 1. Ready for action
- 2. Central racks
- 3. Comms
- 4. Monitors

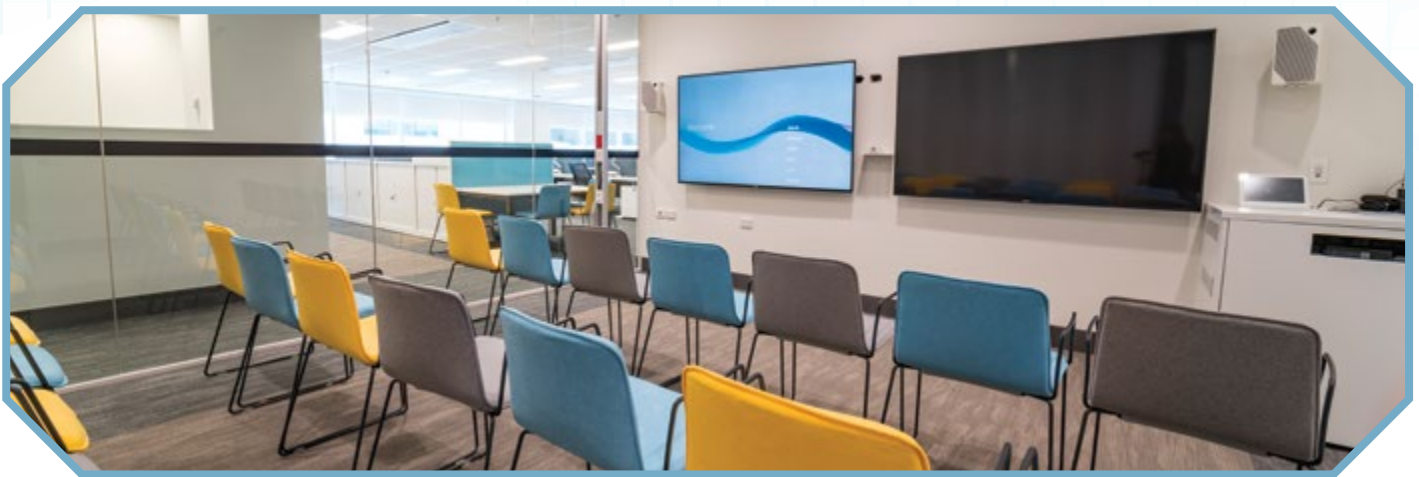
Converged and Controlled

Around 40 spaces have been fitted with some kind of integrated AV, including patient journey boards run from PCs at the nurse's stations, digital signage, inputs for kids to plug in gaming consoles and iOS devices, simulation areas with video conferencing capabilities used for training, and a multifunction space with VC and 3x3 video wall. Crestron's Fusion monitoring and scheduling software has been implemented across the AV network, and is being used to remote monitor, manage issues, track service and faults, and provide help desk service. Since this install, it's been adopted into Monash Heath's AV standards.

"We made sure our AV systems were robust and straightforward," stated Manoj. "We simplified all the requirements and standardised our approach across

the facility. AV is stand-alone per area, but it's all connected to the Monash Health network on a dedicated VLAN. There's a separate VLAN for multimedia streaming content, because there's patient information confidentiality and privacy to consider. But it's all on one network, with the smarts behind it so they don't interfere with each other."

"Monash Children's Hospital is one of the busiest paediatric faculties in Australia," Manoj concluded, "and Monash Health are the most proactive bunch of people I've worked with. They were very clear on what they did and didn't want, and what they did and didn't like, which made my job a lot easier. The systems were designed with a primary focus on useability, making sure that they turn on and off quickly, and display, transmit, record, and share media very efficiently. People in healthcare are probably the busiest around, and they don't have time to waste waiting for screens to turn on or videoconferencing equipment to connect."



>> Lecture style

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history

1991: **2017**

We look back at what was said and done in the industry this month 5, 15 and 25 years ago courtesy of the CX Network archive

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➤ Channels 1992 / 25 years ago

Channels Magazine June-August 1992 was our first colour issue. We marveled at the superior production values and scale of Prince's Diamond and Pearls tour comprising 13 semi-trailers, 67 staff (including 13 in wardrobe) plus set pieces.

Julius Grafton said it was the best live show he had seen. Lighting staff included Mac Mosier, Lighting Director (using an Artisan Vari*lite console) Justin Collie (on an analogue desk) and Roberta Greenburg, Vari*lite crew chief. Sound Engineer David Natale kept it simple, for instance using a handful of Rev5s and a mere four noise gates for the whole system: "It's a really active mix - I like to keep busy" he said.

Neil Diamond's then Australian tour presented an opportunity to

interview the legendary Stan Miller, Mr Diamond's preferred live sound-engineer since 1967. Stan was the first to fly loudspeakers, sometimes referred to as 'Stan's flying junkyard', and experimented with Altec-based speaker designs. A takeaway for all sound engineers: "Don't EQ for EQ's sake!" And Neil's advice to Stan? Once only: "Try to get on with the musicians a little better..."

We also interviewed Emmy-winning Lighting Designer Marilyn Lowey who has toured with Neil Diamond since 1980. Marilyn preferred a Morpheous system over Vari*lite and the design catered for both end-stage and in-the-round shows.

Elsewhere in the edition we compared colour changers and ran an interview with Jands co-founder Paul Mulholland.



➤ Connections 2002 / 15 years ago

Industry training was a keen topic in Connections Magazine in June 2002. We reported on OH&S training, we were teaching a new industry specific OH&S course, and finalizing plans for a conference on the theme. Government agency CREATE Australia was also seeking feedback on a new national

entertainment industry training package.

Industry News included gains overseas by Australian Monitor under the Audio Telex brand, and we had a close look at moves in some U.S. states to ban products that contained mercury, namely metal halide globes, potentially turning high-end AV/lighting equipment

into expensive doorstops. In Production reviews we spoke with LD Brad Gander about the Sydney Symphony Superdome Spectacular, and with Damien Cooper and other lighting staff about The Sydney Dance Company's show Eclipse which featured the creative use of a DeSisti Rembrandt Piccolo 4kWHMI Fresnel.

Elsewhere in Lighting we interviewed Mark Howett about his craft (who sang the praises for theatre head mechs and head electricians), and Martin Kinnane and Paul Rigby wrote about the production for East Timor's celebration of independence event. Market Reports featured Small PA speakers and Luminaires, with a Selecon Pacifica on the cover.



➔ CX 2012 / 5 years ago

In June 2012 CX Magazine also featured Prince on the cover, this time for the Welcome 2 Australia tour. A very different review by Julius Grafton compared to the 1992 Prince story (see Channels, left page.)

Our report was about the dividing line between artistic mystery and chaos - all technically competent and impressive, with 40 tonnes of flown equipment alone, however the show just did not deliver. The tour was overseen by Tour Director and Lighting Designer Demfis Fyssipoulos (died 2014, aged 41).

In Venues, John Maizels traveled to Toowoomba to the Empire Theatres to check out this regional performing arts complex, and Julius Grafton toured a performing arts technical training facility in Burwood, Sydney shared by twelve secondary schools.

Gearbox reviews included the Lucas Nano 300 from HK, Lab Gruppen E Series amps, the Chromlech Jarag incandescent Par fixture, Audix FP7 drum microphones and Furman Power conditioners. In Regulars we talked Tag and Testing; Biz Talk was about how to collect on bad debts; and Live Performance Australia raised the issue of unpaid work. Are you covered? Where do you stand legally as employer or intern?

Finally The Installer provided advice on long speaker runs, such as football fields.



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◆ By Julius Grafton

What can possibly go wrong?

Everything, if I am your event manager

Our touring tradeshow business covers ENTECH and SECTECH, similar yet different events that both travel to five cities around Australia each year. While ENTECH is familiar to most CX readers, SECTECH isn't, since it deals with security technology.

ENTECH is larger but SECTECH is catching up, we just did the third tour in May and afterwards I debriefed myself since I am the event manager. I don't know why, but lots more things go wrong on SECTECH.

In the interests of learning from everyone's mistakes, especially mine, I thought I'd open the door to the murky world of trouble shooting a touring production. A lot of the problems revolve around good old fashioned communication failures, and a disproportionate disconnect involving long distance truck drivers and that intellect thing.

But let's start with loaders. I won't name the city because it will expose the agency involved, who made genuine apologies afterwards. It was the morning that the loaders forgot to actually turn up.

It's raining.

Peak hour is ramping up.

My touring party, which comprised my long suffering lieutenant Steve James and my 19 year old son, are out on the main road stopping four lanes of traffic to back the semi down the dock.

We unload the semi with the driver helping - four guys, not wearing boots, on a wet slippery floor. The whole time I am speed dialing everyone I know in town to get help. Eventually 3 guys arrive after we have unloaded.

Naturally today the old goods lift refuses to work. Eventually a venue guy in a white server jacket arrives to wrangle the thing into action.

Amazingly we only lost 35 minutes, but we sure did bust our guts.

Then there is the time we roll along with our 2 semis and can't back in to the dock because the road is blocked by a cleaner leaning against his street sweeping machine as he fills the water tank with a hose. Smoking a durrie.

'Mate you'll have to move.'

'No.'

'OK, I got two semis and 12 guys. We can move you.....'

'OK, OK. Mutter mutter', some Kurdish curses and death glares as he chugs off to find another tap.

Then we get to the goods lift and its full of AV gear from the night before. The in-house AV firm have left us a message like a middle finger, since we tour all our own gear and don't pay them outrageous rentals. Like \$800 for a 55" screen. I can BUY the thing for not much more!

Then it grinds and groans and takes 7 MINUTES to do the trip up, and another 7 down. So we have a 15 minute journey time which we don't count on. With several journeys to do.

This year one venue did an inspection and discovered a bunch of our exhibitors had no test tags on their electrical gear. That threatened to shut me down - I accepted that it was a genuine problem, and worked around it.

Before anyone arcs up, I hasten to add that the equipment involved was all new to service and technically did not need to be tested. But it did need to carry a tag, and by the next gig it all did. Our touring power distribution gear, three phase and all our AC cables were all current with test and tag.

Everything on our show sits connected to the other side of our touring gear, and our earth leakage breakers. So there was no risk at all.

I hate onerous induction inconsistencies, combined with human ineptitude. One venue event coordinator called me at 4.45pm the day before my 6.30am loadin to say that of my supplied list of crew names from the local crewing agency, seven out of ten were not currently inducted. She could do it at 7.30am the next day.

This was patently wrong, as we had been there just a few



months earlier with the same crew. Turns out she read the list wrong – it was surname/first name. She was typing first names into the surname field. Hello?



We have a standard event manual for each and every venue, which saves us responding to the same question five times. But they still manage to mess up, and the mess up usually is buried somewhere in the five pages of 'event orders'.

It can be as silly as the catering guy confirming we have 17 people for lunch at \$25 each. 'No, it says 17 platters of sandwiches to feed 5 people each at \$25 each platter....'

We had a truck driver last year who was 2 hours late for the load out at one show, and the next state parked the A trailer of our B double down the street at load in. He pulled the B trailer in to the dock, we unloaded as he went to get the A trailer and of course by then it was parked in. He had left it several spaces down a row of parking spaces, and not on the end of the row at the corner. Hello?

Lost freight? We had an exhibitor touring a 3m PVC tube with a screen inside. It got rolled under a curtain and left in Perth. That's an expensive thing to retrieve. A couple of times the venue has called the next day – after our trucks have left – to say there are things left. That's why we have a thing called The Walk Through, at the end of the load out. Yet we still manage to lose an occasional something, which we then pay big to retrieve.

Our event registration system is fragile too, we need a new one. What happens now is that delegates register on EventBrite (very good), and then we download the file via a spreadsheet into the onsite system (not good). The onsite system produces a visitor badge with a QR label so that exhibitors can scan a lead from the QR code.

We tour laptops and badge printers, and rely on the software vendor at the back end of the internet to make sure the onsite system works.

The weak link is the onsite system has twice now refused to take the download, which I do at about 4.30am on show day after registrations have closed. Both times we had a very stressful start of show, manually entering all details for everyone who rolled up. Eventually the software company at the back end sorted out the download and normal operation resumed.

I've had a fair share of my own stuffups too, like booking the wrong date for hotels or flights, or the wrong names. Or not booking everything. Having some status and contacts helps overcome these errors.

The important thing is to make sure that any of the above problems do not impact on the exhibitors or the visitors. In the vast majority of cases you'd never know we were fighting Murphy. A couple of times I've used our SMS burst list to text the exhibitors an advisory that we are running slightly late. If they know about it they are cool. If they don't they are not.

Now, do we have time to talk about the in-house AV guys? Not today.

There's 101 ways a tour can go wrong. I'm working on the rest of them, having made a good start.

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Bad Casino Form

Guys to forget ♠♦♥♣ ♠♦♥♣

By Julius Grafton

It's about ten years ago, and try as I might I can't remember this dude's name. If I did, I would print it right here!

I was in Macau not long after the Venetian Casino Resort opened, invited to tour the complex by the technical manager. Let's call him Pommy Pete. Impressive it was, a 10,000 seat arena out back, a Cirque du Soleil theatre out front, with a full convention centre in between.

The Venetian was modeled on the Vegas original, but quickly started to go bad since the customers were very, very different. As I walked through the acres of gaming floor, I struggled to identify anyone who was not Chinese. They were there to gamble, not to watch a show.

But at the time, Pete had quite a fiefdom under his command – flocks of techs, tonnes of gear, and lots of

puffed up pride. I enjoyed the tour, wrote the story, took the pictures, and went to the show that night.

Much, much later I could not sleep so I went down to the band bar, to find Pete propped up in a corner with a young Chinese babe (I think her name was Shandii) stroking his ego - and who knows what else - under the table.

He was in his cups. Tired and emotional. Pissed as a fart (in a suit).

The band were cool, I knew some of them from Sydney, would you believe it?

A few late night drinks later, Pete was very inquisitive about my training college. The one I ran for the first decade of this century, delivering a diploma of technical production.

"Wow we really need your help here", he slurred. "There's



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serious training money here. You just gotta see the Yank. I'll unlock the money. You come up and do the training!"

Awesome I thought, fits into my plans perfectly. It was hard to make the Australian college work, let alone actually make any money. I was sinking lots of cash into it and trying everything. A nice side contract in Macau would do it.

"Only one problem Pete", I said. "This is a side trip, I left my main luggage in a hotel room in Hong Kong to come here tonight only. I have to get back there by 11am checkout (it was now 2am) and I fly out at 8pm. So I can do it – go back on the fast ferry, get my stuff, put it in storage, come here, see you and the Yank, and take the ferry back in time to get to the airport."

"Great", he sprayed, waving from side to side. He almost knocked Kandii (or was it Bambii?) off her perch, she looked momentarily startled, eyes widening and contact lenses bulging. Her impressive décolletage plunged to unplumbed lows.

"So Pete, just to confirm, I am going to make a big journey of many, many miles and many, many hours, just to see you in your office upstairs. Shall we say 1pm?"

"Of course old son", he said, with emphasis.

You know what happened, right? 'Karma means action, work or deed; it also refers to the spiritual principle of cause and effect where intent and actions of an individual (cause) influence the future of that individual (effect)', says Wikipedia.

The idiot was nowhere to be found at 1pm, or at 1.30pm, or at 2pm, or even at 2.30pm. His mobile was off, his office had no idea where he was. I was surprisingly mild, leaving only open ended messages, no angry sprays from me. Sometime after I got back to Sydney he sent me a text along the lines of, "I was sick". No apology.

Having ridden the fast ferry four times in 24 hours I was very happy to see Macau fade into the distance as we roared across the Zhujiang River Estuary.

* Cirque du Soleil closed down at Venetian 3 years into a 10 year contract due to poor ticket sales.

It's becoming more and more commonplace - mixing songs for clients who never attend the sessions. Sounds ideal doesn't it? In some ways it is. But don't be fooled; while this seemingly autonomous scenario may sound like a dream come true, it's not all gravy and the pitfalls are many. Here's how to get the best from the songs you're handballed when no-one's looking over your shoulder.



LISTEN HERE THE CLIENT-LESS MIX

ANDY STEWART

Of course, the first mistake engineers makes is to think no-one is... looking over their shoulder, I mean. Someone will cast a remote eye over your work sooner or later, and the earlier you realise this the faster your client-less mixing will improve.

Client-less mixing is in many respects harder than working with artists in person. Though this may seem impossible - and I know everyone has their 'nightmare clients' - the reality is that present or not, interaction with artists and their music is as inevitable (at some point) as sunrise.

Without their presence in the room, however, the very

real temptation is to feel like the mix is yours and yours alone, and that the path you choose to take, and the steps therein, cannot be retraced. But of course, being a digital mix, everything remains in play and anything can be altered - you know it; your clients know it. Setting this fact aside in your head is a short road to conflict and mayhem.

CLIENT ABSENTEEISM

To help remind you how inextricably tied to the opinions and preferences of the artist your client-less mix is - though their absence is conspicuous - it pays to understand why they're absent in the first place.

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Firstly, their absence almost never infers disinterest. Any engineer who thinks this way is deluding themselves. If you should assume one thing, it's this: in many cases a client's absence has the inverse affect of focussing their expectations and heightening their involvement, not putting them out of the picture.

Absenteeism typically comes down to one of two things (though there is a third reason that's almost never verbalised): distance from you and your studio, work commitments, or both. And no, 'both' isn't the third reason.

The third reason is far subtler, though arguably more vital to understand than the other two combined, since it most directly affects the outcome. I just alluded to it...

It's digital recallability.

To most clients, a digital mix is one that can be tinkered with from any location, at any time, via their bespoke remote control – you. The fundamental problem with this arrangement, however, is that the artist (and sometimes the engineer) may not appreciate just how slow, time consuming, clumsy and costly (to either them or the engineer) this approach can be. Why? Because very few people appreciate that one of digital mixing's great strengths – recallability – is simultaneously its weakness.

GETTING OUT OF SYNC

When the client does eventually hear your mix for the first time, not only are they likely to be underwhelmed by certain aspects of your rendering thus far – entirely their prerogative I might add – they're also now out of sync with your workflow. In short, you've spent time on it and they haven't.

This is where the first inklings of conflict may arise. Most of the reactions your client would otherwise have had along the way during the natural flow of the session now come at you simultaneously, in frustrating delay like a bad echo. From your perspective, your client's preferences, points of disagreement about the mix, and desires for experimentation with this or that sound can now seem unreasonable, meddlesome even, and – more often than not – far too late in arriving. For you at least, the horse has to some degree or other bolted.

All these deferred requests come as a rude shock because although you've done the work – which you're presumably quite proud of – there's the very real prospect that half of it might count for nothing! Time, energy, a fresh perspective, and the work itself all now seem threatened! This can make you frustrated and defensive.

But you're not alone; your clients feel frustrated too. From their perspective they have responded in good time and good faith. They can only react to what they hear, and their only crime has been their absence from the session. To that end you both share some responsibility in having minimised the significance of working in this disconnected fashion for the sake of convenience.

PREPARE TO DITCH THE EGO

As the mixer of a clientless session, your primary task is therefore to mentally prepare for the wide variety of possible

responses that are inevitably coming your way with respect to all your hard work. The key is to remain flexible, untethered by ego to most of it, and wide open to suggestion. If you're resistant, defensive or argumentative, the mix may unravel completely and chances are you won't get paid for the work you've done. No mix is perfect either, it must be said, and I have yet to experience a client whose contribution – delayed or otherwise – hasn't ultimately improved the final outcome.

THE ZEN MIXER

Remaining Zen in the face of all these disagreements, belated changes and tweaks is hard for a mix engineer sometimes – harder in many respects than the mixing itself. The sense of time wasted can be almost palpable, especially if you have dozens of mixes in play at once across different clients. It's enough to make your head explode.

And to think we thought it would be easier...

Inferred also in this clunky process is a somewhat disturbing blend of inherent dangers invisible on the digital road ahead. The first of these involves the notion of responsibility.

From a client's perspective, tinkering with 'their mixes' (even though you're doing the work) is often assumed to be part of 'the deal'. And fair enough too. It's their music after all. But when there's been no discussion beforehand about how the process will unfold or how the mixing bill will be calculated in dollars and cents, this process can get messy (and ugly) fast.

If any, or all, of the client's mix suggestions (experimental or otherwise) are assumed to be part of 'the deal', does that mean the work is free from this point on? Where is the line here? Should any investigation and resolution of mix 'issues' the client may have come at the engineer's expense? This is a very grey, potentially very damaging area of communication between and engineer and client if 'the deal' is not made abundantly clear at the outset. The potential for conflict here cannot be underestimated.

Generally speaking, an artist will see a giant grey shadow between the clear daylight of what obviously constitutes billable work, and what's a 'repair' to a technical fault or obvious oversight. The middle grey area is where 'artistic disagreement' can be used willy-nilly as a pretext for getting work done 'off the clock'. The more work an engineer does in this shadowy area, the more likely they are to eventually blow their stack!

From my perspective, I would argue that work is work, and that time spent on the mix is costs accrued. But this argument only sticks well when 'the deal' has been clear from the outset. To this end I never quote a price for a mix. I only charge a daily rate. If you would like me to spend all day chatting, cooking, and getting very little done, the price is the same as if I mix in silence all day. The same applies whether the client is present or absent.

SIGN OFF ON THAT MIX!

So many little things contribute to a good mix outcome, not least of which is being good at your job. But this doesn't necessarily prevent any of the aforementioned issues arising when the client is absent.

If he or she absolutely cannot attend the mix sessions here's some other points to consider:

- Don't work on things too long. Make sure you send your client regular mix updates; every few hours if they're somewhere close to an internet connection and can listen to in-progress mixes swiftly. Failing that, don't work for three days in isolation polishing the mix to a fine gloss. The longer you do that the more likely you are to be resistant to change when it finally comes – and it's coming, believe me!
- Don't sweat the little things too much. Make sure that when your client first sends you that giant email replete with 25 bullet points about the mix, that you quickly assess what's small potatoes or a seismic shift in the direction. Don't react before you make this assessment. I would encourage everyone, upon receiving an email like this (particularly late at night) to refrain from writing back immediately. Take stock. Read the email carefully the next day and highlight the small potatoes first.
- Next up, stay mindful of the other person's perspective. This process is as difficult for your client as it is for you. They're not your enemy, your rival, or your combatant. So

don't turn them into one when they want the tambourine turned down half a dB!

- Give clients little tasks. No-one likes to feel powerless in this disconnected situation. As the engineer you're in the driver's seat and less exposed to this feeling, so whenever you can, ask your clients a question about the mix. Get them to offer solutions to a problem, or a perspective on an instrument's significance to the mix. Whether it's large or incidental, a task will make them feel more involved in the process whilst keeping you on track.
- Don't let the bill get out of control. Be up front and clear about the costs. The longer you leave this the more awkward the topic of money becomes.
- Put a written agreement together for your client to sign. Call it a contract or an outline of the working method. Make it friendly and keep it simple, but don't avoid it because it seems awkward or uncool. The alternative – a fatal communication breakdown mid project – is far worse.
- Don't make a habit of mixing client-less. Get them to at least one session whenever you can.
- And finally, get an NBN connection!



Andy Stewart owns and operates The Mill in the hills of Bass Coast in Victoria. He's happy to respond to any pleas for recording or mixing help... contact him at: andy@themillstudio.com.au



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BY CAT STROM

JESSICA MAUBOY

ALL THE HITS
LIVE TOUR



Crew favourite Jessica Mauboy embarked on her *All The Hits Live* tour with the people she likes to keep close including Michael 'Simmo' Simpson designing lights and Ivan Ordenes mixing FOH.

An artist who should really be recognized as a home-grown superstar, Jessica is popular with production crews for her

professionalism, sweet nature and lack of pretention.

Simmo designed lighting for Jessica's last tour and apparently she was more than happy to have him back! For this tour, Simmo designed the show around the theme of 'five chapters of her life' although there was no specific brief for the lighting.

"It was pretty much left to me," he said. "Remember in Australia, we never have much of a budget for lighting as it always seems to be the last consideration. Jessica hires people on their professional reputation and runs with it. She's not an artist who demands to have this or that."

The stage featured two risers for the band which were intersected by a T-shape riser for Jessica alone. At the back of the stage and flanking the two band risers was a LED screen but Simmo didn't want to see a big LED screen all the way through the show so he incorporated a mid-stage projection cloth for images during a couple of the 'chapters'.

Lighting wise, the show built as it progressed although Simmo likes the less is more mantra and with his experience he knows how to do that without taking away the wow factor.

Simmo had eleven ETC Lustr LED Profiles on the front truss acting as key lighting for the band and he was very impressed by their performance.

"Originally I decided to use them as I was going to fly the projector from the



Around the large LED screen were Claypaky Sharpys and Martin MAC101s

front truss and didn't want moving lights on it," explained Simmo. "However, we moved the projector to FOH but as I liked the Lustrs so much, I decided to keep them. The only downside was that someone had to climb up and focus them."

Around the large LED screen were Claypaky Sharpys and Martin MAC101s, with the rest of the rig dominated by Claypaky Mythos which Simmo used for spot and wash, never beams.

PHOTOS:
DAVID YOUDELL



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L S C
LIGHTING SYSTEMS



"I needed some punch to cut through the LED screen and the Mythos were great," Simmo added. "I also had MAC Aura XBs, which are a favourite of mine, for general over stage wash. I added TMB Solaris Flares which are way above any other strobe I've seen."

According to Simmo, Jessica's creative team loved the eye candy appeal of the Ayrton MagicPanels and he was pretty impressed himself.

"I only had six of them but they really stood out as something different," he commented. "I'd never used them before and wished I had more. Every time I use LED fixtures like a strip, I tend to think they're a one-shot pony but at least with a MagicPanel you can get a bit of a pattern happening. You can get them to do quite a few cool things and they weren't right in your face. I'm pretty mindful not to shine lights in the audience's eyes for a period of time, I prefer to light the stage."

Simmo programmed the show at home with Light Converse ending up with around 600 cues. He ran the show on a High End Hog4, a console he is comfortable using.

"I haven't been persuaded yet by PC to go across to the dark side," he laughed. "It seems to me that you

can do too much with an MA console, and I'm a pretty simple person when it comes to programming. I just want my beam, I want my group, I want my position, I want my colour and I'm not real worried about the rest. In my eyes, the Hog is getting better and more powerful and the software is amazing. I was able to take my show into the Jupiters' inhouse rig and pretty much get the same looks as the main show."

FOH Engineer Ivan Ordenes has been associated with Jessica ever since she won Idol and when she plays small corporate shows he does both FOH and monitors. On this tour David 'Hendo' Henderson was the monitor engineer.

"Hendo and I have a very lengthy relationship working for Lee Kernaghan in the past," Ivan said. "We spend a lot of time on the chat feature of the console!"

JPJ Audio supplied the majority of shows with only a handful using in house systems. Ivan didn't specify a particular model of PA, rather a list of requirements such as amount of sound pressure needed at FOH, and he says that JPJ looked after them very well.

"They wouldn't jeopardize their reputation by under-powering in a venue," he remarked. "Every

PA was really well set up, we had tons of headroom and they sent top notch system guys. We mainly used an L-Acoustics PA (either V-Dosc or K2) except for Melbourne where we had d&b audiotechnik.”

Out front Ivan ran his preferred DiGiCo SD5 console with Hendo also having an SD5 for monitors, on an optical loop. There was a fair amount of outboard gear including a Smart Research C2 compressor, Waves MaxxBCL mastering unit, Rupert Neve Portico 2 channel strip on Jessica’s vocal, t.c. electronics M6000 reverb unit, two SPX990, two tc electronic 2290 delay units and an Eventide Eclipse harmonizer.

“On the console I used quite a few reverbs,” he added. “Obviously Jessica’s vocal is the most important thing and then it’s about making sure the band sounds great. With all the outboard gear and the digital console, plus my last ten years working as a broadcast guy, I’ve put together a ‘mastered mix’ of the band; a very solid mix with lots of bottom end and pop heavy. Jessica has a huge spectrum of textures and she can go from 0-100 in no time so I have a mastered version of the band’s mix which I can bring in or out, up and down into the mix in respect to her vocal.”

With his collection of outboard gear Ivan was able to have the eighty inputs on stage condensed down to two faders: band and Jessica.

As an engineer, Ivan is personally endorsed by Audio Technica consequently all microphones were theirs except



Group photo
From Left to Right

- David Henderson (monitor engineer), Ivan Ordenes (FOH engineer), Themeli (JM’s partner), Michael Simpson (lighting designer), Clint Braddick (stage tech), Luis Hird (audio system tech)

for Jessica who used her own Sennheiser microphone encased in Swarovski crystals.

The whole band were using Sennheiser 2000 Series IEMs and there was a sidefill of L-Acoustic Arcs and a couple of subs on the risers.

“I like mixing Jessica’s songs and I’m very attached to what she does, in fact I see her as a younger sister being related to her professionally for so long,” said Ivan. “I have a close relationship with her family which makes it very special and to be honest, a bit emotional at times. I actually canceled my holiday to do this tour!”

THE WOMBATS

Return of the English marsupials

BY CAT STROM

Creative Productions were given the opportunity to show off their latest gear.

English Indie rock band The Wombats headlined this year's Groovin' the Moo festival, throwing in a few side shows along the way. Dave Jackson of Creative Productions was again asked to design their lighting rig, as he did their last tour, and being that Creative has recently invested heavily in GLP products there was no guessing what was in the rig!

There were six GLP impression X4, sixteen impression X4L, sixteen impression GT-1, nine impression X4 Bar 20 as well as an additional eight X4 Bar 10s for the festivals.... well you get the impression. Added to that were eight of the new GLP JDC-1 strobes and eight TourPro Nova 4 blinder interlopers.

"It was a great opportunity to show off the gear," stated Dave. "I recently invested a whole bunch of money into GLP gear and it's not often these days I get to play with my own toys. I like all of the GLP gear we have been buying, so why not? It was a great chance to road test some of the new gear especially the GT-1 because they are so new and I have to admit I fell in love with the X4L as soon as I got to play with it."

Dave revealed that both the X4L and GT-1s were always going to be on the tour but suddenly the JDC-1 was officially launched at Prolight in Frankfurt.

"I had seen the original sample with TLC Global at Entech and

also in the office, but I will admit I wasn't that sold on them," he said candidly. "But then when we saw the completed production version at Prolight it was a different story and I wanted them straightaway, they're so cool. We were lucky enough to get sixteen units - eight from ourselves and eight from Matt Downs of SWS - which we were thoroughly able to road test."

All the JDC-1 strobes were flown above the stage and were often used just for stage wash, pointing straight down.

"Having the ability of a motorized tilt on a strobe is great," said Dave. "I'd often have them pointing straight down onto the band for a different wash look, and throw them out into the crowd as a blinder which is really a cool thing. The other fun thing was doing random strobe effects with a tilt effect running over the top. Unfortunately I didn't get to use the JDC's capabilities as thoroughly as I would have wished due to High End's lack of ability to write libraries quick enough. I love the Hog and I've used it for 20 years but this is one big complaint I have with High End, hopefully ETC will fix this issue."

Creative Productions have had their GT-1s since early in the year and again added more to their inventory for the tour. They were spread across two trusses with a few on the floor.

"It's been a great light and it's worked a treat on tour," said Dave. "All the GT-1s and X4Ls travelled in pre-rig



PHOTOS: BCS IMAGING

and did their job every day without one issue. Being a hybrid fixture we can use them in multiple ways. I use them as a Sharpy-style fixture with tight beams or as a normal spot with a really massive zoom range."

For the last Wombats tour Dave used Robe BMFLs and Claypaky Sharpys but this time the GT-1s had it all covered, cutting down costs quite a bit. It is also fairly light in weight compared to some other fixtures as it is only 25 kilos. This was useful at the Sydney Opera House gigs where we had fly our pre-trusses of the house fly lines where weight was a consideration.

Four of the impression X4L were on the floor providing just about all of the stage wash as there is no front wash with the rest up in the rig above.

"Even for the larger shows such as Brisbane's Riverstage, twelve impression X4Ls in the roof are more than enough," added Dave. "The X4L would have to be my favorite light at the moment especially all the built in macros. The X4L has full pixel mapping capabilities but for us old guys, the macros do more than you could

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ever want without having to run a million universes! I'll leave that to the kids."

In Dave's initial conversations with the band, they were keen to have square blocks as part of their set piece. Together they looked at many ways of doing this but with the routing of the festival this was becoming difficult and expensive. Eventually Dave came up with the idea of using X4 Bar 20s in the roof as they can do solid sheets of light behind the band, giving them the box look they required.

The circular set pieces echoed the album cover which has a circle with a small dot beneath it. Firefly FloppyFlex LED Neon forms the circle and Dave was very impressed with the product.

"It was a last minute idea however James and the guys at Firefly got them made for us in two days," he remarked. "It's bright, it's reliable - we pulled it apart to travel around the country and it just kept going. There's a single RGB to each one of them, we didn't go with the full pixel mappable stuff as we wanted to keep DMX channels down to a minimum for the festivals. This way we could patch straight into the festival rig, roll them out onstage and away we went."

Also on the tour were a couple of MDG HO Hazers, four MagicFX Co2 jets and two MagicFX confetti blasters.



DAVE JACKSON



GREEN DAY'S Revolution Radio tour

>> BY CAT STROM

American punk rockers Green Day erupt on stage with pyros and a pink bunny

Green Day's Revolution Radio tour delivered a blistering, in your face extravaganza lasting an energetic two hours. While the new album was the focus, the set-list covered the history of Green Day which now spans over 30 years.

FOH engineer Kevin Lemoine, who has been with the band for seventeen years, raised a few eyebrows with his console choice of a PMI Trident 88, a 24 channel modern analogue console with a small footprint that can be flown anywhere. The console features separate mic and line gain controls, eight aux sends, all with pre- or post-fade selection accessible on every channel and a four-band, fully sweepable EQ.

"I needed an analogue console as they are an analogue band and I needed something small that we can fly everywhere," commented Kevin. "The PMI Trident 88 fits the bill perfectly and has exactly the same footprint as an Avid Profile console. I have tried digital consoles with Green Day - and use Profiles with other bands - but for this band it doesn't suit. This is the only analogue console that is being manufactured today and is safe on the road. It's built really sturdy.

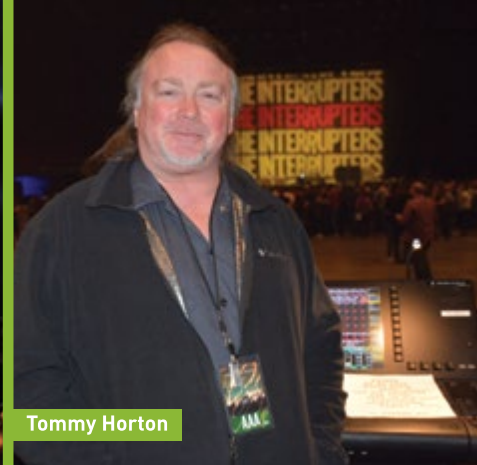
"The Trident 88 has been amazing - I think it's the only one that has ever been on the road, as normally it's a studio console. The work flow layout is perfect as it allows me to pay attention to the band instead of a monitor screen."

Outboard gear included API 3124+ pre-amps for vocals and drums, as well as BAE 1032 mic/line pre-amps for



PHOTOS: DAVID YUDELL





Tommy Horton



Kevin Lemoine

guitars. Added to that were Lexicon PCM 91 reverbs, Eventide Eclipse V4 harmonizer for backing vocals, TC Electronic D-Two multitap rhythm delay for Billie's vocal, and a Chandler Limited LTD-2 on each backing vocal. The rest is light compression with SSL compressor/gates, Maselec MLA-3 multi-band compressor and Chandler Limited RS124 compressor.

"The thing with mixing Green Day is that every person in the venue knows the songs and has been hearing them for the past 20 years so it can't be unfamiliar, it has to be appropriate to the band," added Kevin. "You can't just come out here and show off how good a mixer you are. You have to present the band as they are familiar to the audience."

When mixing the band, Kevin's main aim is clarity at a loud volume. He says that the crowd is very loud and you have to sneak it up to their volume while keeping clarity. Every drum beat, every guitar note, every bass note and of course the vocals, everything is important as the other.

All vocals are Telefunken M80 microphones and there's a Telefunken CU-29 Copperhead mic in the kick and more M80s for the guitar amps and the snare drum.

"I do like the little DPA [d:fine] 4088 which we have on the cymbals and sax as well as the toms," said Kevin. "They're pretty cool, we tried everything on the toms and that works by far the best. We also have Neumann TLM103s on guitars."

JPJ Audio provided a d&b audiotechnik J-Series PA system with a main hang of d&b J8 cabinets, and side hang of d&b J12 cabinets. Across the front of the stage are d&b J-Subs along with d&b J-INFRA subwoofers.

Four d&b J12 cabinets dispersed across the downstage edge are used for front fill. D80 amplifiers were used for Array Processing of the system.

Monitors were looked after by Timothy Engwall running an Avid VENUE S6L. All musicians are on IEMs, in this case Shure PSM 1000 IEM systems were used with 18 transmitters and 36 belt packs. Each band member has an individual mix with Timothy spending a lot of time ensuring they can hear the audience.

The lighting was designed by Ethan Weber with Tommy Horton on the road as lighting director. Ethan was required to design a system that was simple to tour around the world, using easy to source gear and a design that festivals could easily duplicate.

Whilst 78 x Martin MAC Viper AirFXs were specified, local provider PRG had to substitute MAC Viper Profiles for some of the AirFX. The fixtures at the back are AirFX whilst Profiles are used overhead and also on the floor along with some of the Claypaky Mythos.

"We still have the 46 Claypaky Mythos but it took a bit of programming to get the Australian shows to standard," commented Tommy. "The show is pure Ethan Weber; he designed it and did all the programming. I come in and recreate it with the gear I have. We're going to New Zealand next where it'll be MAC2000s and Robe BMFLs so that should be an interesting night of programming! Green Day are all about movement so a lot of the lighting is all chases. You keep some of the gobo rolls together but a lot of it is going to be hitting in time, getting the chases and speeds going - I think I may be able to fake it!"

As well as 22 x TMB Solaris Flares for lighting drops

and Billie Joe on the runway, a total of 46 x Martin Atomic 3000 strobes were used, chosen as no other strobe fixture could deliver the 'decay' an original Atomic can deliver.

"There's a certain tension that the Atomics deliver to the look that no other fixture can replicate," added Tommy. "It's really a simple, rock'n'roll rig built for speed with bat truss and straight lines. It goes up really quick which gives me an opportunity to do more programming rather than waiting for the system to work."

Two PRG Bad Boys, controlled by PRG Ground Control, are on the front truss to act as followspots mainly for Billie Joe, keeping light out of his eyes so he can see the audience.

The set actually has more lights than are in the rig with the risers housing 190 DWE 650 watt bulbs which pull 96 channels of dimming, nearly a 400 amp service.

"It's bright ... in fact I've had to tone it down quite a bit," said Tommy. "Although there are moments when it's meant to dilate the pupils."

The band likes to see the crowd and Billie Joe likes to get a response from the audience so Tommy often pumps the Molefays in order to get the crowd louder or to cue a response from them.

"You border on over using them but that's what he wants," said Tommy.

A variety of backdrops provide scene changes, most notably the Green Day marquee sign comprising of 762 LED bulbs, lowered via a Kinesys automation system.

This is the first tour that Tommy has used an MA Lighting MA2 console, in fact it's the first time he has ever run someone else's show although he says it is an honour to run a show for Ethan, a designer he has a lot of respect for.

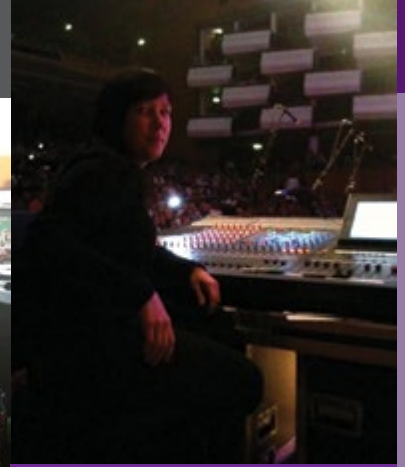
"For me to follow down his path for a show gives me a good foundation for when I go back to do my main act Judas Priest," Tommy said. "I'll probably recue my show in a totally different way and follow him. I own a bunch of Hogs and now they're useless! The whole world is moving to MA2's so you really need to be able to operate one. I find it to be a really flexible console. I can probably achieve the same with a Hog as I'm an old school guy who likes to write his own chases and not rely on effects engines, but the MA2 gives you bit mapping patterns and easy effects to run. You watch kids and you see what they're doing with macros and the things that they are able to pull out of the console are kind of inspiring for an old guy!"



20

QUESTIONS with

Gina Hanlon



Monitor engineer Gina Hanlon has worked in Canada, the UK, Europe and Australia for various bands and companies such as Brit Row, Clair Bros and Monitor City. Gina has previously done shows with Thurston Moore, The Damned, The Blackout, Dr John, Salt-n-Pepa and is currently looking after Australian indie pop band Sheppard.

1. What are the three best things about your job?

The impermanence of it all - different venue, different people (or part thereof), different city (when on tour), different challenges each day.
The feeling of family.
The hours?

2. And the three worst things?

Post tour blues.
The boys club.
The hours?

3. What do you never leave home without when working?

Flashlight, IEM's, Fluoro tape and Sharpie go hand in hand, Rat sniffer.

4. What was the worst nightmare you encountered on the road?

I tend to put these encounters out of my mind once they are over and done with. However, the most recent one that still lingers in my memory was a gig in Papua New Guinea just a couple of weeks ago. We took almost everything with us, except for mic stands, XLRs, an analogue split and PA. Guess what they didn't supply? The split! We couldn't find a working split in Port Moresby anywhere and we had a Digico SD11 at monitors and a Midas PRO1 at FOH, so we couldn't even share a rack. I ended up mixing monitors off of an iPad connected to the PRO1. I could only control levels, leaving EQ and dynamics alone for FOH. Six sends of ears and two sends of wedges. That was a big lesson in trust between myself and the band. However, we ended up having a great gig.

5. What has been the strangest request from an artist?

No strange requests come to mind, though maybe that speaks more about me than them though?

6. Who was hell to work with?

Hmmmm, well, people can be dickheads on one day and not the next, as being a musician or technician/engineer (and a human) and touring can be such an emotional rollercoaster sometimes. I try not to judge.

But there has definitely been a few who stand out, best not to name names.....

7. What is the most stupid request you've had from a member of the public, artist or promoter?

I tend to forget these.

8. In your opinion, what's the best show you've worked on and why?

There have been lots of great shows, but I would say touring with Mumford & Sons would be the stand out. The band, the crew, they are all so respectful and lovely. So easy to work with, they make touring a breeze.

9. What is the most bizarre sight you have ever seen at a gig?

I don't know about bizarre, but witnessing a couple having sex in the front row at Ben & Jerry's festival in Manchester was definitely an eye opener.....

10. Who do you admire in the industry and why?

Karrie Keyes. For helping to promote, encourage and support women in the industry and also for what she has achieved as an engineer herself.

11. Which venue is your favourite and why?

The Roundhouse in London. There's just something about it. I've had some of the most memorable gigs of my life in there.

12. What is the most outrageous thing you have ever done on tour?

I prefer not to answer this one!

13. What has been the highlight of your career?

There have been so, so many, but one that always comes to mind is mixing The Damned at the Roundhouse in London. Those guys were like cartoon characters to me when I was growing up, and having Captain Sensible telling me stories about Sid Vicious and Catwoman and the like back in the day, so incredible. Then to have their guitar tech come to me after the show and say "what on earth did you do? They normally yell at the monitor engineer all night, but Pinch asked for more guitar at the start of the set and Dave asked for his vocals up

once". And to top it off Viv Albertine opened the show. Amazing!

14. What was the worst weather event you've encountered at an outdoors gig?

An outdoor show in Canada where we'd built a stage in the Much Music (Canadian version of MTV) staff car park in downtown Toronto. Flo Rider was to enter the stage on a flying fox (zip line), followed by Rihanna with a whole bunch of dancers etc etc. There were reports of a storm that was heading up from Lake Erie. The night before a different storm had lit up the stage when lightning had struck, so we were a little uneasy. We were armed with squeegee brooms and super absorbent cloths, we covered the crowd with tarps we found about the place, every piece of equipment was covered in Visqueen, as we awaited the dreaded storm. I started pulling people out of the crowd who were freaking out, on to stage and sending them up to first aid. The winds were fierce, the rain was incessant, and then at just the right moment it passed and everything went calm, we squeegeed the last of the water off the stage, rolled the risers out on stage and show went ahead as planned. We were lucky.

15. What would your ideal rig contain?

Digico SD5 console, and if it's wedges I'm using, M2's or M4's, and with IEM's I'm not too picky about whether it's Shure or Sennheiser, though Sennheiser 2050's is what I've been using the most of late.

16. Which band would you most like to work for and why?

The Velvet Underground. No reason other than I think it would be amazing.

17. Do you have a favourite mantra to get you through the day?

No not really....though maybe "can't wait to crack that bottle of red" or perhaps "hmmm, there's a bottle of tequila waiting for me".

18. What do you think of the Australian live music industry at the moment?

I think there needs to be more support and promotion



for independent bands in this country. Radio is just one link in the chain. JJJ used to be ok for this, but has slowly become more like the commercial stations, just pushing what's already popular. We are lucky to have stations like RRR in Melbourne and 4ZZZ in Brisbane and FBI in Sydney. Independent acts are what will keep our industry alive.

19. Do you have any advice for aspiring female sound engineers?

Don't give up. There are lots of nice people out there to work with and work for. Don't let the jerks dictate what you are capable of or what you want to do with your life. I was lucky and grew up with men around me that were respectful and encouraging no matter what gender you were and had strong female role models. This has made it much easier for me to stand up to the male chauvinism and sexual harassment I've encountered at work over the years.

20. What did you really want to be when you grew up?

A taxidermist.

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LSC LIGHTING SYSTEMS' APS



By Jason **Allen**



ADVANCED POWER SYSTEM

LSC's Advanced Power System is a 3RU, 12 circuit power distribution system with an elegant amount of smarts under the hood. Coming from a lighting company, its original design was to help manage power-up for rigs full of modern LED fixtures and movers that don't run on dimmers anymore. But it's found a life way outside that market, with around 50% of the units produced going to completely different applications.

The APS powers itself up when it registers that it's receiving DMX via the five-pin input on the front panel, or via GPI contact closure. In 'manual mode',

If you manage to smash the front screen, there's a recessed reset button

it then turns on each of the 12 circuits in turn, with a time delay between each that can be set from .1 to two seconds by the user. This delay prevents channels tripping from inrush current and from tripping from switch-mode power supplies leaking to earth when capacitors charge up. When you have multiple APS units in a system, daisy-chain their DMX using the 'Thru' connector, and they'll detect each other automatically and power up in sequence. If there is a fault on a circuit, each of the 12 channels has its own RCD-MCB, so it only trips that one channel instead of a whole phase, which can be common behaviour on other distros. To further



protect your gear, you can set upper and lower voltage limits via the screen on the front panel. If the power drifts outside of parameters, that circuit will shut down. When the power stabilises again, the APS waits a few seconds to make sure all is well, then brings it back on.

Other clever functions are accessible from the front panel, including voltage, frequency and current monitoring, which the APS can then report via RDM. If the worst should happen and you manage to smash the front screen, there's a recessed reset button (get your pen or paperclip) that will factory reset the APS back to manual mode, so the gig goes on. If there's a power failure (for example, a generator runs out of fuel), the APS remembers its last power up sequence, and will run that when power is restored, saving you from blowing your upstream feed.

To power down, simply press your



Brand:
LSC Lighting Systems
Model: APS
Pricing:
RRPs - Rack Mount \$1995 ex GST, Wall Mount \$2,495 ex GST
Product Info:
www.lscighting.com
Distributor:
www.lscighting.com

contact closure switch or turn your lighting desk off – when it sees it's not receiving DMX anymore, it goes into shut-down mode. There's a time delay on power-down between 1 minute and 60 minutes, user configurable. There's a warning beep that it's shutting down, though thankfully you can disable that.

The APS is available in rack-mount and wall-mount versions, and can be shipped with standard Australian GPOs, Powercon, Schuko, Weiland, Socapex or terminal connections. You can also specify a 10A, 16A or 25A variant.

The APS is a great piece of cheap insurance for any kind of gear – video wall, line array, or even an entire OB van. It's also an environmentally responsible way to manage any kind of installed lighting rig, be it in a shopping centre, school, or house of worship. It's even indispensable for catering companies working off generators in hired marquees.

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D&B AUDIOTECHNIK 24S, 21S, 30D

FIVE BOX WONDER



By Jason Allen

In combination, the d&b audiotechnik 24S top box, 21S sub and D30 power amp make a formidable combination for almost any install that needs high SPL, wide coverage, great sound, and flexibility of inputs and processing. Far from being a 'cheap install version' of d&b product, the 24S and 21S retain the qualities d&b is known for while giving installers a powerful toolkit and a workable package.

The 24S is a full-range, 2-way passive box running two 12" drivers and a 1.4" exit compression driver. The dipolar arrangement of the 12" drivers means pattern control is really good, down through 500Hz, almost to 300Hz. This becomes very important in difficult acoustic environments.

There's two versions of the 24S available; one a wide 110 degrees horizontal, the other a narrow 75 degrees. Horns are rotatable. The frequency response is stated to go down to 55 Hz, and that is absolutely the case. This box puts out a lot of low and low-mid, making it an option as a stand-alone box for some applications.

The 21S is a single 21" bass reflex subwoofer in a fairly shallow cabinet,

making it easier to fit under stages and into prosceniums. It can be run in 'normal' or 'infra' mode, and if you have two or more paired with 24S, it's worth running one in each mode. While some club types claim a 21" doesn't give you



that SPL-hit-in-the-chest, this one absolutely does. It's musical and very, very present.

Listening to the 21S and 24S in combination is a joy. It's got everything you'd expect from d&b; flat, rich, detailed, clean, and consistent throughout the space and coverage pattern. It excels with the usual vocal duties, especially for things like contemporary classical and jazz, but surprisingly, when this system is hit with a hefty dose of electronica, it really shines. I thought I was going to have a mild cardiac arrhythmia while still really enjoying a mid and top end that was completely transparent, even though it was obviously very, very loud (up to 138dB).

A stereo 24S/21S combination (two of each box) is optimised to be driven by one d&b 30D amp (4x 1000W @ 4 ohms .)

The 24S is a 4 ohm box, and as such, doesn't have any pass-through on the back. The 30D is the hidden star of this package; it has all the same processing of the D20, just no screen -you can still control it with a computer. There are eight inputs (four analogue, four digital), which can be mixed and matrixed. So now you have the ability to install into a club and have four or more modes triggered by GPIO switches or computer; for example BGM, Nightlife, DJ, and Band. And you just saved a few grand on buying another processor or matrix mixer. The D30 also offers two layers of EQ, and the ability to lock people out.

The 24S is designed to rig individually, as it's not really an arrayable box. There's a full range of bracketry to deal with any configuration. It's got more than enough M10 rigging points, which are very thoughtfully covered by removable plugs, giving the 24S a very clean look along with its high-quality finish. Connection is via a Neutrik NL4, or screw terminals. With the coverage options, high SPL, and d&b sound quality, there's not a small to mid-sized venue out there that wouldn't be improved by installing this system.

Brand:
d&b audiotechnik

Model:
24S, 21S, D30

Pricing:
RRPs incGST:
24S \$7,342,
21S \$7,138
30D \$11,922

Product Info:
www.dbaudio.com

Distributor:
www.nationalaudio.com.au



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NEUTRIK XIRIUM PRO SENDS AUDIO ON 5GHZ WIRELESS

This is probably the ultimate combo tool for every live sound co - there are times you can't run cables. Then you need a solution like this one.

By Julius Grafton



Xirium Pro is a Neutrik system for transmitting studio quality audio without cables. It is entirely designed for live events where you need delay towers and remote audio at full bandwidth, high quality and with virtually no latency.

Until now you could attempt this on a 2.4GHz or UHF wireless system, but you'd really notice the quality due to companding (compressing then expanding) and you'd sweat on the frequency remaining stable.

Neutrik have gone where many fear to tread, the 5GHz spectrum, heartland of the Industrial, Scientific and Medical users, otherwise known as the ISM band. They say they've achieved the objective: to make Xirium stable. They developed a proprietary protocol, that is tolerant of lost data packages and it can reconstruct some lost signal.

Importantly the units also have a 2.4GHz channel wholly for control, so if you did lose the audio channel you can quickly switch frequency or go from

stereo to XROC mode - which stands for "Extreme Ruggedized One Channel". In XROC mode, only one audio signal is available for each RF channel.

Neutrik say: "The connection between the devices is much more stable in XROC mode, because external influences do not interfere with the RF signal between the XIRIUM PRO devices as much. External influences include strong reflections of the RF signal in a room or from buildings, or external signals."

It is a wholly modular system, comprising a stereo transmitter, a receiver, and a host of components such as antennas, mountings, and input modules. It will accept analogue balanced audio or AES or a stereo feed from Dante. Note stereo only, not a full Dante stream!

At the very least you need one stereo transmitter at your mix position, a receiver over at your speaker system, with each of these installed with an input or output card.

You can then position them up to 1.2km apart, so long as you have line of sight. If you have to go around an obstruction, you need a repeater that sits between the two points.

Note that using a repeater with the transmitter and receiver in line of sight gives redundancy.

Everything is battery powered with 8 - 10 hours life at full charge. They can all be recharged as you go, so if you have mains you would have them connected.

Each unit is IP 54 rated, which when used in an upright position (with the connectors at the bottom) should happily survive your average downpour.

You monitor the performance on an iPad APP with a screen showing overall system status. Continual monitoring is a good idea as there is currently no email or sms alert function if things go south.

People I trust report the audio performance is as good as via wire, having had repeated A/B blind tests.

This is the kind of tool that every audio firm needs to have a bunch of, for those days when running a wire is either difficult or impossible. And those days are many!



Brand: Neutrik
Model: Xirium Pro
Price: About \$7,000 inc gst for a transmitter, receiver, analog input/output modules & antennas.
Product Info: www.neutrik.com
Distributor: www.ambertech.com.au



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- 2 x E 835 mid/high units
- 1 x E 110 SUB AS sub



Big Base

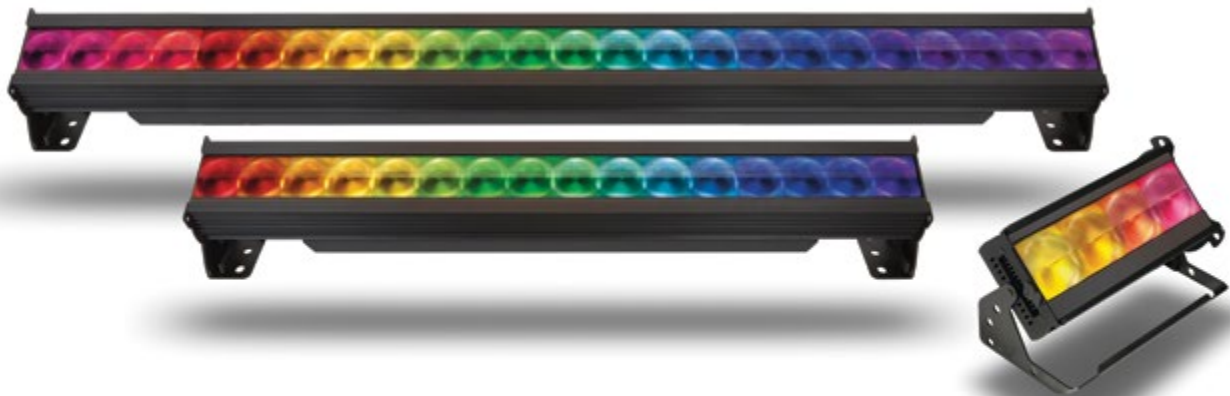
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THE GERMAN AUDIO STANDARD >

CHROMA-Q | COLOR FORCE II



Lighting a cyclorama is a big deal in theatre, since even dispersion is everything and nothing shows up an inconsistency like bad lights there.

Asymmetric reflectors differentiate cyc floodlights from groundrows. A cyc light throws more light up high and less down low, whereas a groundrow is a floodlight that disperses out uniformly.

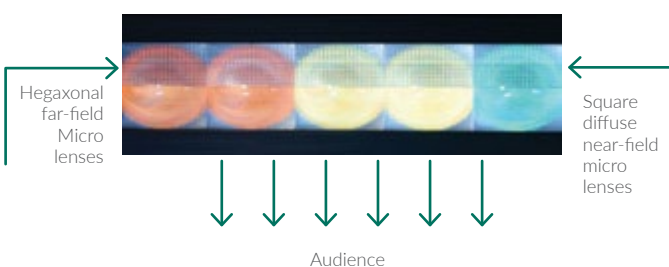
Designers don't want to see anything but smooth and even lighting across and up every metre of the cyc fabric.

Chroma-Q's Color Force has sold very well, now this second version amps up the output by at least 40 percent. This increases the throw, lighting a cyc of up to 12 metres, compared to 8m previously.

It comes in three lengths: 12, 48 and 72". We looked at the most common iteration, the 48" model. The first thing we checked was the dimming curve, since theatre smooth dimming has been the test for LED devices on stage. This unit produced a smooth transition.

Next test is colour, from the RGBA system. There are 16 homogenized led cells evenly spread across red, green, blue and amber. It produced satisfying saturated colours and pastels.

The colour propagates out of the unit quickly, meaning it can be placed relatively close to the cyc without



Brand: Chroma-Q

Model: Color Force II

Pricing: 12" \$2,486,

48" \$6,795, 72"

\$8,622 + gst

Product info: www.chroma-q.com/

Distributor: www.jands.com.au

annoying striations or breakup. Being LED it runs much cooler than a tungsten unit, removing that major safety issue.

The colour system is not quite at the level of ETC's 7 colour system on the Source 4 LED, but it does the intended job well.

The 8 cells can be split so that you have 16 controllable elements on the 48" unit, or 24 on the 72". This allows all kinds of control like cool wipes from the centre outwards. You have control options all the way out to 16 x 4, or as little as a single DMX channel.

The power draw for the 48" unit is about 530 watts, so you could daisy chain 4 off

one 10 amp circuit, drawing less than 9 amps. A pair of Neutrik powerCon true1 connectors enable power in and out.

Optional "Cyc Lens" and "Border Lens" are slide-in optical accessories available to adjust the light output of the Color Force. One accessory slot is provided on the front.

Mechanically this is a touring unit, with a very strong case and a super cool tilt mechanism for the pair of end mounts. There is a fan to help things along, as the unit does warm up. I could barely hear it, so it is theatre approved.

Finally, the guys at Jands tell me the manufacturing system at Chroma-Q ensures the LEDs are 'binned', meaning they are chosen carefully. The units are factory calibrated. This leads to a service life of 50,000 hours.

Running flat out you get 13,550 lumen output with all cells driven, which is an equivalent output to conventional tungsten powered cyc units.

It has adjustable colour temperature from 1,000 to 10k kelvin – but you'd expect to set it between 2,700 to 4,000 for theatre, and up to 6,000 for broadcast.

Overall a very competent, robust fixture.

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back up

Redundancy

But it still blows up

Biz
Talk

June 2017



By Julius Grafton

Radiohead's first set at Coachella was crippled by audio failures from the weakest link, their touring FOH console. While all professional console systems have dual power supplies and battery backup, not too many console systems are duplicated.

But lighting guys decided a long time ago to run dual control systems when some popular computerized consoles were deemed less reliable. It was common to see two consoles side by side – and this was across several major brands.

Norwest have made a name for themselves as the 'go-to' firm for massive event audio at international ceremonies like Olympic Games opening and closings, since the Sydney Olympics in 2000. They get contracted because nothing goes wrong, as their redundancy planning has proved bulletproof. Maybe they swear by the 'Six P's': pedantic planning prevents piss poor performance.

So I was somewhat amazed to read about British Airways going offline – literally – in late May. Pretty well everything from their servers downstream fell over on one of the busiest holiday weekends of the year.

The knock on was disastrous, with flights on tarmacs neither coming or going, tens of thousands of bags trapped in the system, enormous queues of people lined up being told nothing by staff who knew nothing.

Worse still, once the situation became established, staff in the various lounges at Heathrow and Gatwick removed all the grog. Perhaps fearing an uprising?

In the aftermath I collected a couple of corporate disaster stories.

"My large company had its main datacenter go down recently. Basically there was a power outage to the site, which is very rare, the battery backup in the datacenter worked fine, however it was night so the solar panels (a very large array) didn't produce electricity, and the 4 enormous 18 cylinders diesel generators had an unforeseen malfunction : their startup batteries had a too low voltage. UPS batteries got drained before electricians could get to the site and restore power, all the IT equipment shut down. Fortunately restarting everything went OK, aside from a few servers that didn't like it."

Or this:

"In early 2011 our firm had an IT outage. We had an IBM mid-range computer, a small mainframe with mirrored discs. This had battery powered uninterruptible power supply (UPS). There was also a stand-by 150kVa diesel powered generating set which took 2 minutes to automatically power up and chop in, to rest the UPS.

"The wiring to the IBM box was a via a 60 amp supply from our incomer. Separately our various rings supplied to sockets for fused 13 plugs. We has a separate red ring via the battery UPS, for mission critical 13 amp plugged items, including comms to remote depots and some screens. These sockets were red, to avoid people plugging in items with heavy loads which would exceed the UPS capacity, electric fires for instance.

"A contractor working with us had been issued with a brand new PC which he correctly had plugged into a white socket. This non-IBM PC failed in an exciting 'flash bang' manner. The chap was not hurt at all, but he was very surprised, not

to say shocked, but not electrically. Those in the open plan office likewise.

"The IBM box, running 150 screens over some 15 locations, came to an immediate halt, and was down for 6 hours, after which it was re-booted etc. Apparently, some sort of electrical shock wave (I am not an electrical engineer) had emanated from the flash bang of the new PC which was probably a Lithium Ion battery failure. This shock wave had apparently passed through the UPS which was unharmed, and knocked out one of the two independent power supplies within the IBM box."

I worry about my media empire too. We use Xero cloud accounting software which significantly does not allow a data backup. They have all kinds of reasons for this. It means we hard print all our monthly accounts so we can still collect money if Xero goes to zero.

Likewise Dropbox holds our archives and sure, we have local synchronized files but Dropbox also deletes these if they are deleted at the cloud. It's a weak link, and one that I have backups to cover.

We once had a RAID (redundant array of independent disks) system in our server that went down because the power supply failed. That in turn trashed all those redundant disks. We lost a lot of data that wasn't on our accounts backup – significantly my entire dating email cache at the time, which was a disaster.

Finally our (now closed) TV unit had a multi terabyte server connected by a large ADSL link to an identical unit several suburbs away. I've always lived by the maxim that data doesn't exist unless it exists twice.

Training system implodes College failures badly hurt students

Listening to the Australian minister in charge of education and training deflecting blame for the failure of a cluster of large training firms, you'd have to wonder what on earth went wrong.

The training system is very, very broken in Australia. Here's a short explanation why.

TAFE is central to the Vocational Education (and) Training system, sometimes known as VET. Alongside TAFE are private colleges, known as Registered Training Organisations (RTO's) operating under the same framework, namely the Australian Qualifications Framework, or AQF. Modern business just loves an acronym.

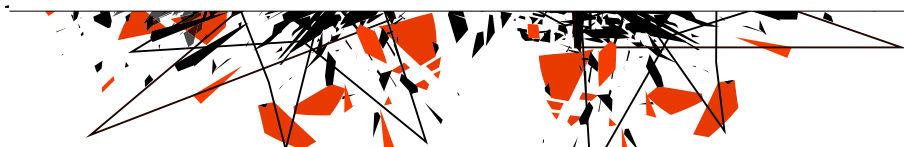
This means TAFE or an RTO deliver the same qualification, ranging from Certificate Three to Advanced Diploma.

In around 2008 the Federal Government wanted to shrink funding to its TAFE colleges and allowed RTO's to access a thing called VET Fee Help. This is where the students could access an equivalent to HECS, a loan scheme for eligible students. The government would pay the RTO up front for the course, and recoup from the student via a tax levy.


For some reason unexplained the government at the time removed limits on what a college could charge for a course, leading to exponential increases. Bad mistake. That government and the one that followed it both failed to monitor the colleges, many of which went on an enrolment binge centred on fraudulent inducements and false representations. Terrible mistake!

The resulting crackdown closed a slew of dodgy colleges and led to endless stories of students left without a qualification, some just days before they were done. 15,000 students just last month, from one college, Careers Australia that shut without notice.

Outcome? No one can really trust a private college, even one that is a public company. Everyone loses. And every government since 2008 has to shoulder some of the blame.

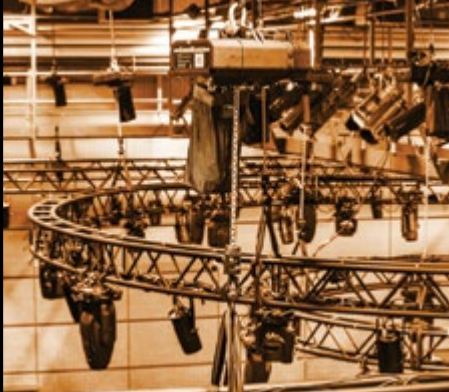





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THIS IS SENSSTREAMING LIVE EVENTS - THE NATURAL EXTENSION

By Simon Byrne

Innovative artists and promoters have recognised that streaming all, or at least a taste of their events, drives interest that can be built upon. For corporate events, it increases reach at low cost and Houses of Worship are dramatically increasing their audiences by embracing webcasts.

To do it properly though, it requires planning and expertise.

The first and most critical part of the puzzle is the upload bandwidth for the internet connection that will deliver the stream. Download bandwidth is of no consequence, we want to get the data out. To deliver a decent reliable stream, at least 5Mbps is required with high reliability and low jitter. ADSL2 is not up to the job as it's usually capable of 1Mbps at best. VDSL2 is capable of up to 20Mbps and fibre to the node (FTTN) can be as high as 40 Mbps. Plenty.

For temporary jobs, Telstra's 4GX cellular network has proven to deliver very high speeds with high reliability. Remember how we lost wireless microphone spectrum in the 700Mhz range? Well that is now being used by (mainly) Telstra to deliver higher speeds and reliability so it is worthwhile ensuring that a modem dongle can take advantage of the new 4GX/700Mhz spectrum.

Unfortunately the other providers just don't play in the same league as Telstra in terms of coverage. In theory though, Optus and Vodafone own some choice spectrum, and the recent announcement by TPG that they are getting into mobiles bodes well as they'll operate in the prime 700Mhz area too. The key is to test prior the connection to the event, preferably at the same time as the event is planned as this the best way to predict connectivity.

Of critical importance with cellular is to get the RF signal out. This means a good quality external Mimo antenna that is up high. Mimo refers to multiple-input and multiple-output which is a method for multiplying the capacity of a radio link by exploiting multipath propagation. An antenna that supports this is very worthwhile.

So we've got a network connection. The next issue is how to encode the content and stream it. There a lot's of ways to do this but I'm going to concentrate on webcast software. The most popular of which is Wirecast 7 by Telestream.

Wirecast is powerful production switching software (Mac/Windows) that can encode to multiple destinations as well as record simultaneously. If Wirecast is beyond budget, try OBS Studio (Mac/Windows/Linux) which is remarkably powerful, and free!

Both applications take in live video and audio sources as well as pretty much anything else you can think of such as media files, twitter feeds, screen captures, web pages and so on. Once ingested, you can switch live between sources and output the streams. A fairly powerful computer is needed as video encoding requires quite a bit of processing and of course, interfaces are needed to bring the video and audio into the computer.

It's at this time, decisions need to be made about the audience profile which will determine how the stream is output. There are numerous options ranging in cost and reliability.

It is important to understand that streaming is a one to one relationship in terms of traffic. That is, if you output a



single 5Mbps stream to a single destination, that is 5 Meg of bandwidth. To 2 destinations it is 10 Mbps, 4 destinations is 20 Mbps and so on. It quickly becomes apparent that the outgoing connection will be overloaded and buffering or failure will occur. The better solution is to output a single stream to a Content Delivery Network (CDN). CDN's are privately owned networks that have very high bandwidth and numerous points of presence (POP's). They take the stream and produce as many copies as needed and deliver them through their POPs. So if you have 1,000 viewers, the CDN has the processing and bandwidth to produce the 1,000 streams needed. For best performance, the CDN need to have POP's located as close as possible to the originating site, as well as the viewer locations. There is little benefit in using a POP in North America if the audience is mainly in Australia. Sydney or Melbourne would be much more appropriate.

Youtube and Facebook are CDN's which are free. In the case of Facebook, you can stream to a profile, event, group or page and in Youtube you can set up a live channel.

However, you get what you pay for. Facebook can be flaky but Youtube has proven to be quite robust. But with these free services it is extremely important that copyrighted music is not streamed. Both services are very good at detecting this and will shut the stream down. In many cases they'll ban the user for a period of time (like months!).

The other downsides are that there is no real support so you are on your own, and the way you set up a connection is not ideal. With Youtube in particular, if the stream is shut down for whatever reason, another key needs to be set up, which in turn means another web address for the audience. Almost impossible to communicate the new address to your audience if you have lost your connection with them!

The alternative is to use a private streaming CDN such as Wowza, Akamai, Limelight, Ustream or Livestream. All CDN's have slightly different offerings and POP locations so it is important that the right fit for the audience is found. The CDN's transcode the streams depending on the audience.

For example, a lot of enterprises are still on older versions of Internet Explorer so Flash video is best for them. Other viewers might be on Iphones so MP4's is right for them. Some may only have access to low bandwidth so a smaller size image will meet their need. The ability to transcode and deliver the right streams, called adaptive bitrate delivery is very important.

With all of this data moving around the place, it is not surprising that there is some delay by the time it gets to the viewers. Usually at least 30 seconds. This means 2 way vision and especially audio is not possible. Webcasters often want a method to get questions and feedback from the audience. The easiest way to do this is by SMS. That is, just assign someone's phone number to receive questions via SMS and publicise the number as the place to send questions. Get someone to write them down and hand them to the moderator. Fancier solutions such as Pidgeonhole and Yammer gives the ability to integrate the question into the webcast. However, they are difficult to implement so there needs to be a reason to go to the extra effort.

If this all a bit too much or it needs to be right, hire a professional. There are lot's of little gotchas that can be the difference between a successful webcast, or an embarrassing failure. Companies such as Streamgate in Sydney, have built and operate end to end solutions that consistently deliver good results and have the knowledge, experience and relationships with the CDNs to ensure your event is a success.

→ **Wirecast 7**

www.telestream.net/wirecast/overview.htm

→ **OBS Studio - Open Broadcaster Software (Free)**

www.obsproject.com/

→ **Streamgate**

www.streamgate.co



The Year Past Positions

ACETA

for a New Landscape of Opportunity

At the Annual General Meeting of ACETA members in May, we celebrated the past in anticipation of the future. Reflecting on the past year there are many highlights we could espouse, but none more so than the considered and necessary organisational re-structure, including a new back office approach and a re-arrangement of roles and responsibilities. Successful in every aspect, these changes have streamlined the association and optimised its capability to address industry challenges, improve standards and introduce new opportunities. This month we will address the new ACETA landscape focussing on association administration and governance, followed by the member endorsed ACETA Business Plan moving forward.

In April last year, ACETA engaged Stockdale ACS to handle the administration of our association, a role they were totally familiar with and one that has provided ACETA with an experienced and highly skilled back office. Stockdale ACS assigned the ACETA lead administrator role to Emily Dittman, who has excelled in understanding and dealing with the association. All administrative needs are operating smoothly including financial management, book-keeping, communication, planning, information technology application, intellectual property development and program management. A year ago, the ACETA board determined not to appoint an Executive Officer, the normal leadership role and practise for an industry association, it was agreed the ACETA Executive, consisting of president, secretary and treasurer, would assume this role in leading the association. This board decision has proven successful on many counts, conserving finances and elevating association potential, resulting in the arrangement continuing for the year ahead. In concert with our administration this short-term leadership model provides a simple and streamlined management structure, one that is as close as possible to the heart and mind of our constituents and the industry at its broadest.

The consequence of the organisational re-structure

is evident on a number of counts, and has had a positive impact on finances due to significant cost saving and membership stability. Cash reserves have grown to a satisfactory level and it is planned to perpetuate this upward trend in the coming year, particularly in the realisation of membership growth. Due the fact there is no down side only benefits in participation, numerous organisations have expressed membership intent, in doing so membership growth will increase the capability and influence of ACETA even further. However, it is difficult getting many organisations over the line, due it seems, to a lack of understanding of what ACETA now offers and the benefit it delivers, despite the fact we have tried numerous traditional and contemporary communication mediums. This is an ongoing challenge and one we will endeavour to resolve as a matter of priority.

Supported by solid management, the following business plan is scheduled for implementation in the coming year and signals we are set for a landmark period which will only be realised in participation growth. The business plan is presented in no particular priority order, does not supersede any pre-existing program nor represent the entire range of initiatives and output of ACETA in the year ahead.

- **THE INAUGURAL ACETA INDUSTRY CONVENTION IS CONFIRMED** and will take place from the 4th through 6th of May 2018 utilising the impressive setting and facilities of the City of Wangaratta supported by the regions administration. The Convention will focus on individual, corporate and industry development, balanced with an array of unique social events. For manufacturer's representatives and service providers the event will address many issues including the challenges they confront in today's borderless market environment and questionable practises that undermine their well-being. For manufacturers, it will open doors including access to development and export assistance possibilities along with the empowering experience of shared resourcing programs.

• INITIATIVES FOR THE CREATIVE / MANUFACTURING SECTOR

will soon be finalised to enable interaction with both state and federal governments, to establish an understanding and recognition of our industry, followed by processes aimed at realising government financial and general resourcing support through the association on behalf of our creative / manufacturing sector members. Interaction has begun at state government level to be followed by engagement with the federal government ministries of trade, industry and small business.

• MEMBER ACCREDITATION and CERTIFICATION PROGRAMMES

are well developed. For the product supply sector, it will be based around self-administration of product compliance, aimed at promoting ACETA member probity and a reliable, compliant supply chain for the benefit of equipment acquirers. For the service supply sector, work has commenced on establishing an accreditation program aimed at streamlining current venue OH&S practises. This may result in the introduction of an ACETA verification of compliance card to the benefit of associate members.

• **MEMBER ADVERTISING** in industry media and forums will commence once the accreditation / certification programs are established.

• **ACETA FORUM** will increase the dissemination of information by expanding the use of the mediums and forums at its disposal including industry and social media, web, mail and industry events.

• **INSURANCE** is an important responsibility for an industry peak body. ACETA is not a passive spectator, but maintains an action policy based on member consensus and realistic capability, including intervention when the well-being of its constituency is undermined.

• **RESOURCE MATERIAL** production is easily achievable with co-operation. The production of an impressive and beneficial 'Members Guide' is being delayed by a slow response from some members, remarkable in the fact that members who promote ACETA membership, report a positive commercial response and assistance in winning new agencies. This no cost publication is a valuable business aid providing global exposure and can be used to advantage in many aspects including, but not limited to sales growth, agency development and employment.

• **SKILLS SHORTAGE** is being addressed in two streams. A delivery medium has been chosen and the catalogue of questions now being tested in preparation for the ACETA Aptitude Test launch. The second initiative is a data base development, containing information on individuals seeking employment in the industry. Both streams will be available to members as a cost/time saving benefit and an effective way of connecting employers with potential employees.

• **TRADE EVENT REFORM** is a constant ACETA agenda item, however since declaring the convention initiative, commentary on the trade event calendar has abated, indicating the convention may have satisfied the actual need of many. ACETA will continue working towards the expressed needs of the industry.

So that wraps up the year past and hopefully tells the story of our industry aspirations moving forward through the eyes of ACETA.

All the best
Frank Hinton
President ACETA

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Called to the Church ...and not entirely ready for it



Dunk finds the Lord working in increasingly mysterious ways.

Just before Christmas, I got a phone call from LL, the drummer from the Amazing Harris Tweed Band. And that's amazing in the sense that they're still going and that people still want to hire them!

"Dunk," he rasped, in the voice of a true forty-cups-a-day man, "Get out your cassock and iron the dog collar – we've got a gig in church!"

In church? This band? In the immortal words of Lord Gnome from *Private Eye* magazine, 'Shurely shome mishtake?'

I found it hard enough to believe that someone had been thinking of hiring a band for a church function without having to accept that their mind had naturally gravitated towards a band solely consisting of members of Atheists R Us. The AHTBs*** weren't organised on the same lines as Alistair Crowley's hedonistic devil worshippers, but not far off.

How on earth had they got this gig?

And then I had a thought. Perhaps LL had realised, as we all must do eventually, that he was on the inexorable downhill path to the twilight years, and

everything that entails. Maybe he was ensuring himself a spot in a church sponsored twilight home for retired drummers – a place where the sole dinnertime conversation consists of "So, what sticks do you use?"

"What sort of church is it?" I asked, as visions of 60 Minutes stories on some of the more exciting brands of religious enthusiast flitted through my mind, making the risk of being stoned onstage by thousands of adoring believers who had no Sympathy For The Devil (a popular opening song for the lads) seem very real.

"It's a church over in Balwyn (a middle class conservative Eastern suburb of Melbourne, immortalised by Skyhooks' song 'Balwyn Calling')," he replied, sensing my unease. "So it's safely out of the Born Again Belt. And guess what? They're supplying full production for us!"

Sensing an easy way out for myself, I saw my chance and took it "Full production? So you won't be needing me then?"

But LL was not letting me wriggle off the hook that easily.



“Don’t be silly – you’ll have to play guitar too. And see if you can find one from your collection that will stay in tune, willya?” Ouch – a below the belt strike referring to my liking for ultra light gauge strings that went flat as soon as my giant sausage-like fingers touched them! He had one more parting shot to impart.

“Oh, by the way, we’ve gotta back Doug Ashdown on a couple of songs, too. I’ll email you the charts.”

And with a click he was gone.

Doug Ashdown. There was a name I hadn’t heard of in a while. Like many other people in the late 70s I had a copy of his hit *Leave Love Enough Alone*, more commonly known as *Winter in America*. It featured heavily on my late night seduction cassette tape that I had loosely titled ‘*Hot Lips, Cold Hearts and Fornicator’s Favourites*’. Along with Paul Williams ‘*Waking up alone*’, Jim Croce ‘*Time In a Bottle*’, The Eagles – anything in 3/4 time – Lobo ‘*I Love You Too Much To Ever Start Liking You*’ – who hasn’t used that as a breakup line – and other favourite songs of relentless, mournful self-pity.

Aided by a cask or two of red, I used to make it to at least the second or third song before passing out!

So, I was quite looking forward to getting the music and finding out what the real chords were to the song.

When LL’s email arrived, I printed out the attachments and eagerly scanned the music. And then my heart sank. The music was in a key that had six flats in it! How could this be? There are only five lines on the music staff; surely no key could have more flats in it than that?

As I type this I can hear in my mind all those keyboard players that I treated in such a cavalier manner in one of the more recent stories are now laughing themselves silly at my expense ‘Six flats? Looxury. We ‘ad to play everything with eight flats in it when t’keyboard got ploogged into 110 volts accidental like!’ (Apologies to Monty Python’s Three Yorkshiremen).

To digress momentarily, at primary school I was a bit of a whizz on the recorder, and entered a school competition to win a delicious second hand lump of stewed liver with onions. Second prize being two lumps! For the final I chose the theme from the *Dam Buster’s* movie, a tricky piece in B flat. Tricky because the descant recorder is primarily a C instrument, and some fancy fingering was required. So, overawed by

the occasion, I fluffed a couple of notes, and lost out to some snivelling, smug little turd who played *Mary Had a Little Lamb* or something equally banal in C, and made no mistakes. I caught up with him in the playground later, and judging from where I left his recorder he was farting in B flat for the next month or so!

But it was a KISS (Keep It Simple, Stupid) lesson I never forgot (and as I imagine, nor did he).

Nonetheless, this music looked way too tough for me, so I rang up RH Positive, the bass player in the band and keeper of the lost chord.

“Have you seen this music?” I yelled down the line.

“Holy crap, what key is it in?”

“Ah, no problem,” he replied, “it’s in G flat.”

“G flat? Who plays anything in G flat on a guitar?”

“Oh, it’s pretty easy,” he explained, “you just use a capo and play it normally.”

Hmm. It’s always good to know one’s limitations, and unless it is something simple like *Mr Tambourine Man* with the Bob Dylan capo position and only 3 chords, then I’m lost. All those dots on the fingerboard just dance before my eyes and the music dribbles to a halt. The joke about ‘how do you make a guitarist turn down? Put a chart in front of him’ is precisely correct in my case!

“I tell you what,” I suggested. “How about you call him and see if he’s got the charts for the Maracca part”

“I don’t think there are any maraccas in it as far as I can tell,” he replied.

“Even better,” I laughed, and hung up!

In the end, the gig went surprisingly well. Doug turned out to be a hell of a nice guy, and GT, the other guitarist, handled the song pretty well, while I just wandered off to the side of the stage and did nothing. It’s what I’m best at!

However, Doug’s final number with us gave me some cause for concern. It was Bob Dylan’s ‘*Knockin’ on Heaven’s Door*’. Rather prescient of him really; as I looked around the rather elderly audience it seemed to me that not only were most of them doing just that – they had one foot in the grave and the other on a banana skin as well!

*** *The band’s name, not Attention Hyperactivity Deficit Syndrome blah blah (A.K.A bored kids), although the similarities are considerable!*

(This is from the Archives, as Dunc was unwell at press time)

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