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MONTHLY TECH NEWS

CX125 MAY 2017
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Big tour report

+ **ENCODERS**
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- Perth woes build
- ICTECH fails
- Fyre Festival
- Rumours!

> **ROADSKILLS:**
- Istoria
- Bieber
- Port Fairy

> **REGULARS:**
- What you doin with them encoders?
- Biz Talk double down
- Listen Here: Coolit, Pan it, Mix but don't slam it!
- Fry has a long weekend

> **GEARBOX:**
- Cadac CDC Six
- Clay Paky Scenius Unico
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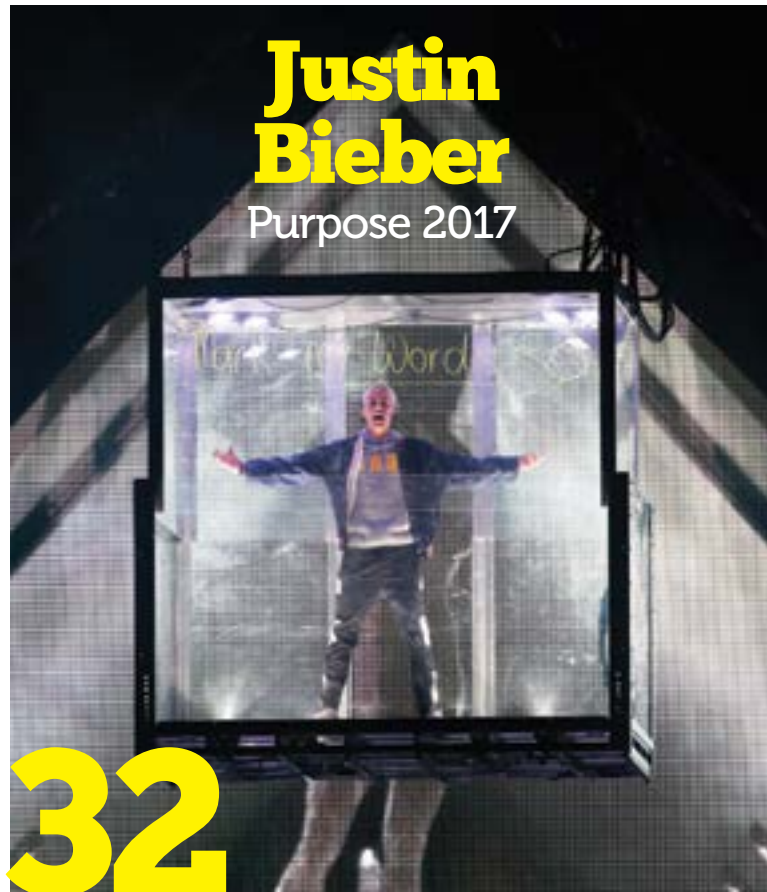• High Density Mode for high channel count applications

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ICTECH Roadshow Cancelled
Failure to hit critical mass

October's ICTECH Roadshow will not proceed, after exhibitors failed to embrace the national tour. First run last October, organisers Juliusmedia (publishers of CX) were encouraged by positive exit polls and verbal commitments to exhibit this year. But the contracts didn't come, with exhibitor hesitation mainly centred on the smaller start last year.

The first roadshow was deemed a success according to a survey of over 900 registered to attend. One exhibitor scanned over 200 leads across the country. Most others rated the tour successful and promised to return. But everyone expected a larger tour in 2018, which cannot be certain. So it was cancelled.

The failure is at odds with other Roadshows run by the firm, this week the third annual SECTECH Roadshow rolls out with solid exhibitor and visitor growth. Next February's ENTECH Roadshow is already ahead of sales targets and promises to continue growth. Roadshows are generally a popular format, offering turn key touring with freight delivered to each exhibitor stand, and a one day format that has very high approval across every survey nationally.

While losing ICTECH is a setback, it is a small impairment for Juliusmedia which has been publishing since 1990 and running events like ENTECH since 1994. The debt free family company will continue to focus on its core business and further build on the SECTECH Roadshow model, which is run in partnership with the security industry publisher Bridge Publishing.

Other tech based publishers are interested in the model, which is backed by the success of SECTECH and ENTECH, both in Australia and New Zealand.

Fourth Crew Reunion
ARCA host Sydney event

The Australian Road Crew Association hosted its fourth annual crew reunion for current and former roadcrew in Sydney over the weekend. Speaking at the event, organiser Ian Peel detailed the challenges faced by retired crew, and Support Act CEO Jo Cave backed this up.
Ms Cave reported that the second largest cohort seeking aid from Support Act are former crew, and she touched on how the fund can assist those in need.
Around 200 crew attended the very well run event at the Bald Faced Stag. The next reunion will likely be in Melbourne next year.

http://www.australianroadcrew.com.au

Pictured: Wyn Milsom, David Quinn, Margaret Jackson, Ian Peel and Nicky Campbell.

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Perth Struggle Amplifies
Downturn bites

Perth's entertainment industry is struggling as the state endures a technical recession, and tours start to stay away. The pressure on professionals working across events and production is building, evidenced by an outpouring on a Facebook page called '100 percent upfront', as reported last month.

On the page audio operations manager Andrew Chambers named several event producers who he claimed were underpaying production suppliers. His employer, Audio Technik then fired him, he claims after being pressured by the event producers.

Chambers says the producers set prices for major outdoor concert production so low that his former employer could not get a reasonable return. Another large Perth audio firm AAA Productions would not work for the prices offered. Boss Neil Campbell said his firm rejected the producer's offers.

The W.A. Events Industry Association weighed into the Facebook stoush. "This really needs to stop. The Events Industry Association is not in favour of name and shame especially when our members are being unfairly treated, association head Cassandra Brennan said.

"We do stand up for the industry even though many of you choose not to join to support the work we do. Rather than making vague references to wrongdoing how about you explain what you mean? You are not helping by doing this."

But the other side of the story is margins falling and in many cases losses accruing for the promoters and producers.

Earlier in April, TheWest website reported that "WA has fallen off the tour list for some acts as music promoters complain the cost of staging concerts in Perth is too high and too many tickets are left unsold in tough economic times."

The report goes on to quote promoters and producers detailing how ticket sales have slumped, and many shows can only be viable on a weekend – if at all. Performers want to go there; but the financial risks are usually born locally.

The production industry in Perth suffers from the tyranny of distance. Where an east coast company can prep a tour and wave goodbye for weeks, a Perth show is often a one-off. Prep and return labour costs are sky high for one show. Even in New Zealand most shows run across a few towns at least, helping to defray the one off costs.

Camille Symmons, Managing Director at Concert and Corporate Productions said: "the cost of putting on an event certainly has gone up but it's not the production costs that are increasing. All our costs have gone up - wages, rent, leases, equipment, superannuation etc, but the prices we are getting for production has gone down considerably."

Canberra Icon Relit
Rugged Environment for Lights

Photos by Peter A Gray Photography

The Captain Cook Memorial Jet in Canberra's Lake Burley Griffin is back – bigger and better than ever – and now with added illumination. It has recently undergone a major $3 million refurbishment, including the installation of a new high-powered Anolis lighting system. "The jet was designed to be lit when operating at night and the original lighting system wasn't as efficient as it could be", explains Malcolm Snow, the National Capital Authority's Chief Executive.

The ULA Group worked with the lighting design team from Norman Disney Young along with Shepherd Electrical in Canberra to specify, commission and install the new LED high-powered lighting system. The Project brief was to deliver a lighting system which is able to enhance the dynamics of the Captain Cook water Jet Fountain in full.

Anolis ArcSource Outdoor 48MC fixtures were selected as the perfect fit for this project. These fixtures carry an IP67 rating, making them ideal for outdoor lighting applications exposed to any water elements. Benefiting from a cleverly designed totally flush mounted 'Watch Glass' frontage, the units are far less likely to suffer from a build-up of debris, ensuring greater performance and lower maintenance.

Eleven fixtures with 11deg optics were mounted to the fountain structure, with the control infrastructure consisting of both cable and Wireless DMX transmission which was powered via a central LumenRadio Transmitter and multiple receiver units built into the luminaires. The dynamic show and static lighting states were enabled via Pharos LPC Control unit.

"With this new lighting technology we now have the ability to be able to light up the jet much more effectively, to change the colour and distribution of the light so that the night time dynamics of the jet can be appreciated," comments Snow. "We now have the ability to enhance the water feature for special occasions and events, on Canberra's calendar".

Meyer Sound LEO for Ed Sheeran
One guy and a guitar needs big sound

With his effervescent hit "Shape of You" topping the charts across dozens of countries, Ed Sheeran continues to single-handedly conquer the world of pop music. Now in the midst of a three-continent, 108-show ÷ ("Divide") Tour, Sheeran takes to a stage unaccompanied by bands, backup singers, dancers or orchestras. Supported only by his acoustic guitar and a custom loop pedal, Sheeran relies solely on his infectious music and an innocently electrifying persona to sell out cavernous A-level arenas months in advance.

Though working solo onstage, Sheeran is ably supported by an offstage crew headed by production manager and FOH engineer Chris Marsh, who has held both posts since the earliest arena-touring days. Also on board, at Marsh's behest and for the fifth consecutive year, is a Meyer Sound LEO Family linear reinforcement system supplied by UK-based Major Tom, Ltd.

"Ed pretty much entrusted production to me since the beginning of our relationship," says Marsh, "and one thing that we've proven over the past four years is that the Meyer Sound LEO Family is the way forward."

As FOH engineer, Marsh depends on the system's long throw and uniform response. "Consistency is absolutely key with Ed, and with the Meyer system I am entirely confident it will sound the same everywhere. For example, in Barcelona, where it was a 105-meter throw to the back seats, it sounded the same there as at front-of-house."

Wearing his production manager hat, Marsh also appreciates how LEO Family's rigging accommodates the tour's up-tempo schedule: "My guys load in the PA and it's up and out of the way inside an hour, and it's loaded and on its way in forty minutes."

In most respects the main Meyer Sound system is similar to past tours, with a couple of exceptions to deal with managing bass frequencies.

"As production manager, I was able to specify a stage only 40-feet wide," he says. "That's plenty of room for Ed, but it gave us space to place end fire arrays with three by three stacks of 1100-LFC [low-frequency control elements] at either end. With Ed, I need frequencies around 50 Hz to be really punchy and uniform everywhere, and this design works extremely well with the 1100-LFC. They are fast and responsive where some other subs can get slow and 'phasey' in that region."

Another departure for this tour is running the main arrays full range, rather than splitting bass off into a separate aux send. "I've discovered that letting the LEO boxes go all the way down really assists in delivering a tighter low end consistently around the auditorium."

SHAPE OF YOU
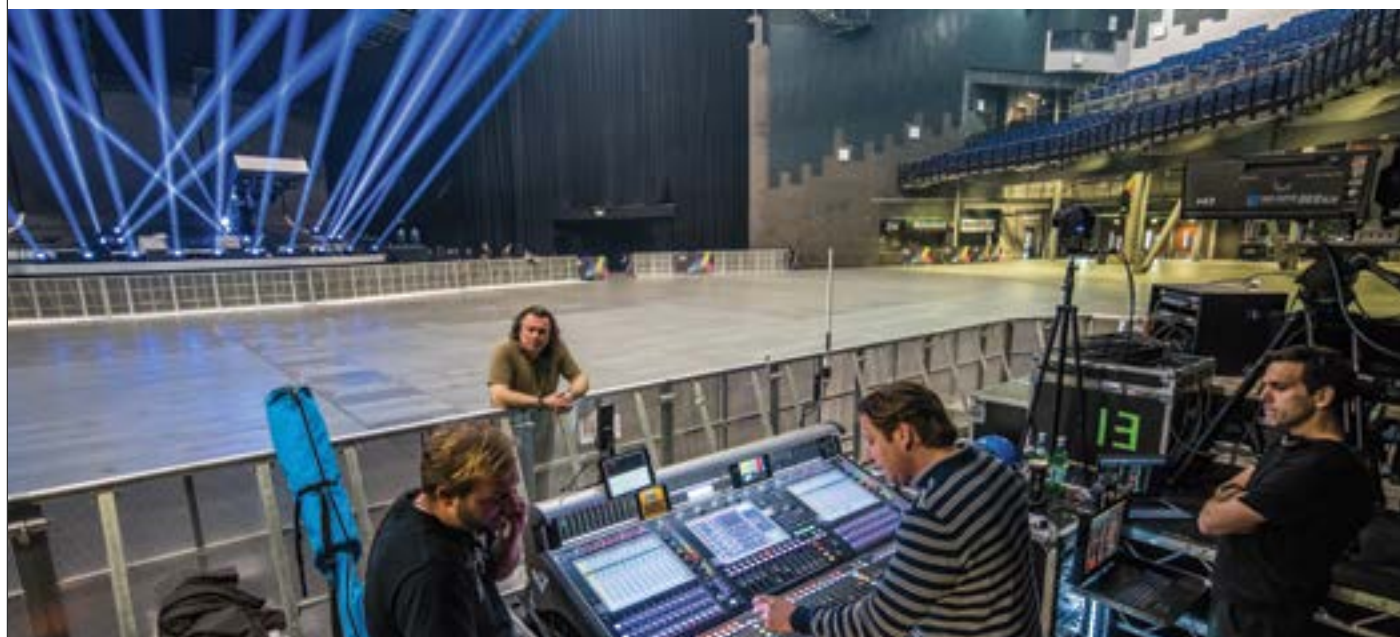
The tour's typical configuration comprises twin front line arrays of 14 LEO loudspeakers flown over four LYON loudspeakers, with extended wide-angle coverage provided by - per side - 16 MILO line array loudspeakers and eight LEOPARD compact linear line array loudspeakers. Twelve flown 1100-LFC low-frequency control elements supplement the 18 in the end-fire floor arrays, and eight UPA-1P loudspeakers supply front fill. The rig is optimized before each show by Major Tom System Engineer Charley Albin, another veteran of multiple Sheeran tours.

Foldback on stage is via MJF-212A stage monitors augmented by two 900-LFC low-frequency control units, while at FOH Marsh listens in the nearfield with a pair of Amie monitors.

Although the relatively new LEOPARD arrays play a secondary role in the current arena tour, Marsh has found them a welcome addition. "I'm blown away by what comes out of such a little box," he remarks. "Last year we did private charity shows with Ed in smaller, conference hall venues using LEOPARD as the mains in ground-stacks. They were phenomenal, and perfectly matched to the 900-LFC."

At FOH, Marsh mixes behind a DiGiCo SD7 console supplemented by an Avalon VT-737 input channel for vocal plus a pair of Bricasti M7 reverb units, one each for vocal and guitar. Ed's primary vocal mic is a Sennheiser 9000 Series with a 9235 condenser capsule, while a secondary 9000 mic - expressly for vocal loop-building - is equipped with a 945 dynamic capsule.

Working with Sheeran has been a dizzying ascent for Marsh, a situation he finds gratifying if somewhat perplexing. "I'm still impressed every day that we're selling out these huge venues," he says, "but we don't take it for granted. We are trying our best to give audiences the same exciting and intimate-feeling experience as when Ed was still out trying to prove himself. We have that same energy, though now it's not trying to impress people but rather demonstrate that they were right to be impressed in the first place."

The ÷ Tour launched in Turin, Italy on March 16 and, after winding across Europe (34 shows), Latin America (14) and North America (60), possibly wraps up in Australia.

NAS ROLL OUT TRAINING

National Audio Systems have announced a series of training days for d&b users. Starting May 30, the training includes one day introductory sessions, through to a three day series early June.

All sessions are free of cost, and are held at NAS' new training venue in Kilsyth, Victoria.

Visit the Training page at http://nationalaudio.com.au/

SONANCE LAUNCHES PRO SERIES

Sonance by Dana Innovations, a highly-awarded designer of residential architectural speakers and outdoor audio, has expanded into the commercial market with the introduction of the Professional Series.

With more than 30 years' experience in residential audio, Sonance has injected its knowledge of technology and audio distribution, and its renowned degrees of invisibility approach to design, into the Professional Series to deliver the same premium sound quality for any commercial environment.

"A lot of residential audio products are installed in commercial spaces because of sound quality and design" they say. All three speakers can be mixed and matched, creating a consistent sound sonic signature and in large commercial spaces multiple pairs of speakers can be driven through one amplifier and a transformer.

HOME NIGHTCLUB UPGRADES
NEW MARTIN AND MA

Located on Cockle Bay overlooking Darling Harbour, Home is Sydney's only true superclub - with a capacity of 2100. The club owners recently decided it was time for a renovation of the venue's lighting and turned to Show Technology for advice.

Darcy Cook, production designer at the club, worked closely with Show Technology's Business Development Manager Stephen Dallimore who said, "The design of Home lends itself more to a New York warehouse vibe, incorporating some fantastic street art work by local artist Lister, rather than a modern nightclub."

The decision was made to go with Martin and MA Lighting. Darcy was keen for all the lighting to be LED for cost effectiveness, low maintenance and ecological reasons.

"I put the idea to Susanah Page, the owner, and Ash Kollmorgan, the licensee, and after several meetings and consultations, including Rob Hardy, the venue's production manager, they decided to go for it," commented Darcy. "I replaced the rig, more or less, one for one with a few new additions. We had eighteen old profile movers in there and I thought that amount gave us good coverage.

First choice was the Martin MAC Quantum Profile, an extremely bright LED profile fixture.

"I was incredibly impressed by the MAC Quantum Profile's optics, the sharpness of the gobos, the brightness and the colour rendering index," said Darcy. "The way the colour system works is very impressive; you get a really nice blue, green and red out of them plus ultra-sharp gobos across the very wide zoom range that they have."

Darcy reports that the eighteen MAC Quantum Profiles have been performing extremely well since their installation with absolutely no issues at all.

Six Martin RUSH MH6 were installed primarily to act as stage light for the dancers onstage and live acts.

For control, Darcy recommended a MA Lighting MA2 light saying it is the standard console amongst the electronic dance music industry. "I rarely see any other console used," he said. All three major clubs in Sydney run MA, it's the only console to go with really."

Fyre fails to ignite
Failure damages all new festivals

Starting with an incompetent investment pitch last year, the Fyre Festival visionaries sought US$25 million from investors while selling tickets to a pair of long weekend events on an isolated Bahamas' island.

The sight of thousands of confused millennials wandering around shipping containers, empty tents, and pallets of mattresses burst onto social media minutes after the first jet load were deposited at the little airport – without their baggage. Pretty well everything they had been promised – aside from the flights – was not available.

They had a great time walking around, without cash as they had been told to load currency onto a wristband. With no vendors to buy from. Airlines were marshaled to make the rescue flights, but many spent a bad night with sandflies and stale cheese sandwiches.

But the writing was on the wall months earlier, according to a production manager who quit after just four days. Sitting in a rented house on the island, the production team eventually completed a costing and a timeline. They needed $50 million and the event had to be deferred a year.

The visionaries behind Fyre, including rap 'artist' Ja Rule, shrugged and said words to the effect of, 'Let's give it a shot'. The production team phoned the tour managers of the acts booked, all of whom immediately yelled "Where is our MONEY?"

Now facing a $100 million class action, there is little information about where the ticket money went.

Punters pressing for a refund were emailed this: "Would you prefer to exchange your 2017 ticket(s) for additional 2018 VIP passes, as opposed to receiving a refund? (Ex: If you purchased 3 passes for 2017 you would receive 6 total 2018 VIP passes.)"

"As you likely know, we've been through the ringer on social media and this has been a challenging week for us as we were unable to realize our dream on the first try. We are now one of the world's most famous festivals, for all the wrong reasons. We want to reverse that sentiment by producing something amazing. We are fully committed to this event next year, and to producing it in the most professional way, with experienced professionals. We have received support and commitments from several musicians to perform at next year's event".

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1204	400 W	300 W	300 W	300 W
2404	800 W	600 W	600 W	600 W
4804	1500 W	1200 W	1200 W	1200 W

KRAMER MAESTRO

Kramer Maestro is an innovative software enhancement for Kramer products that creates automated meeting room environments with minimal end-user intervention. Maestro is easy to configure and manage remotely, reducing service calls and saving IT managers valuable time and resources. Maestro creates a series of actions based on a pre-defined event, like plugging in a laptop, scheduling a meeting, or motion detection. These events can trigger actions such as turning on computers (via Wake-on-LAN) and turning on and off lights, projectors, displays, video sources, and HVAC. Maestro enables automated control over a variety of port types: RS-232, Ethernet, GPIO, Relay, and IR.

Australian Distributor: Kramer Australia
www.krameraustralia.com.au or (07) 3806 4290

QSC K.2

QSC has launched the next generation of K Series powered loudspeakers. The renewal includes the three full-range models, 8" K8.2, 10" K10.2 and 12" K12.2. All feature a new 2,000-watt power/DSP module carefully matched to high-performance woofers and compression drivers. DMT (Directivity-Matched Transition) ensures smooth coverage across the entire listening area. On-board DSP provides Intrinsic Correction voicing and advanced system management to further optimise performance. K.2 is equipped with a library of preset contours for common applications such as stage monitor, dance music, musical instrument amplification, hand-held microphone and more, while also offering storable scenes to recall user-configurable settings such as input type, delay, EQ, cross-over and selected contour via the loudspeakers' LCD screen and control panel. All three K.2 speakers have a foldback wedge angle for stage monitor use and can also be flown, wall- or truss-mounted, or placed on a speaker pole, either straight-firing or with 7.5-degree down-tilt.

Australian Distributor: Technical Audio Group
www.tag.com.au or (02) 9519 0900

TVONE CORIOMASTER MICRO

The new CORIOmaster micro is a half-rack unit video processor. It delivers the same bandwidth and functionality of the exisiting CORIOmaster range in a super-compact form capable of accepting up to three modules, but it also adds audio support as well as front panel buttons for source routing and preset recall. CORIOmaster's modular I/O system provides users with the flexibility of any signal-in, to any signal-out. These all-in-one system solutions can manage up to 4 canvases for supporting multiple video walls, while also performing various other video tasks simultaneously, including real-time 360 video rotations, multi-image processing and transitions, and edge blending.

Australian Distributor:
Corsair Solutions
www.corsairsolutions.com.au or (03) 9005 9861

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BARCO UDX

Barco's UDX range of high-brightness laser projectors offer output from 22,000 to 31,000 lumens. Thanks to their advanced optical design, the UDX projectors deliver razor-sharp, high-resolution images with up to 4K UHD resolution. Constant Light Output (CLO) functionality guarantees constant brightness and colour over time. Equipped with 3-chip DLP technology and a high-contrast optical engine, the projectors excel in brightness, colour accuracy, and stability. The UDX Series reuses Barco's existing TLD+ lens range, offering an unparalleled lens shift of up to 130% up and down without loss of image quality.

Australian Distributor: Barco Systems
www.barco.com or (03) 9646 5833

SHOWPRO LED HOUSE LIGHT

The ShowPro LED House Light has a consistent warm white output suitable for live and broadcast applications. It features silent operation, adjustable PWM frequency to ensure flicker-free performance, three interchangeable lenses to match beam angle to mounted height, and ultra-smooth dimming. A removable yoke and permanent cable anchor enables pendant suspension mounting. Accessories include an optical egg crate diffuser and top hat accessories.

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

CHAUVET MAVERICK MK1 SPOT AND MAVERICK MK3 WASH

Chauvet's Maverick MK1 Spot features an extremely flat field, CMY colour mixing, a 5:1 zoom and multiple control options. Powered by a 350 W LED engine, it features one static and one rotating gobo wheel, a 7 position + white colour wheel, variable frost and 3-facet prism. It can be controlled with DMX, sACN, Art-Net, or WDMX, and can receive Art-Net or sACN in and send DMX out, simplifying cable runs. Chauvet Professional's Maverick MK3 Wash is powered by 27 (40 W) Osram RGBW LEDs. Pixel mapping effects, built in colour macros and gobos, along with a CTO colour mixing option make this fixture the complete wash light package. Control options including DMX, sACN, Art-Net, Kling-Net or W DMX round out this fixture, which can also receive Art-Net or sACN in, and send DMX out, simplifying cable runs.

Australian Distributor:
Showtools International
www.showtools.com.
au or (02) 9824 2382

ACOUSTIC TECHNOLOGIES BLACKBIRD

The TLA039A and TLA521A are compact full range line array systems. 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. Perfect for reverberant areas, the line array can be aimed at the ears of the listeners. It can be rotated from side to side for different angles, without removing the grille. Both cabinets are powered by PowerSoft DSP Amplifier Platforms with a rating of 1200W for the TLA521A and 600W for the TLA039A. The TLA039's dimensions are 560mm high, 210mm wide and 365mm deep, weighing 14kg. The TLA521 is 1242mm high by 210mm wide by 365mm deep, weighing 29kg.

Australian Distributor: Acoustic Technologies
www.atprofessional.com.au or (07) 3376 4122

07

AKG K275, K245, AND K175

AKG's K275, K245, and K175 foldable studio headphones offer professional sound quality to musicians and audio professionals on the go. Designed for content creators who need accuracy at an accessible price point, K275, K245, and K175 headphones combine AKG audio performance with robust build quality and comfort for long listening sessions. The K275 and K245 models feature 50mm transducers that provide low-frequency extension and detailed bass reproduction. The K175 utilizes an on-ear design with 40mm transducers.

Australian Distributor:
CMI Music and Audio
www.cmi.com.au or (03) 9315 2244

08

AKG MDAI CPA

KG MDAi CPA Connected PA microphone adapter uses embedded ioSYS™ technology that makes it easy to use your dynamic mics with the HARMAN Connected PA app and compatible products. Connected PA delivers seamless plug-and-play operation with a variety of HARMAN equipment and enables you to control your entire live sound system with one app. Products within the Connected PA system self-identify and retain presets for effortless setup, and setup wizards help you quickly optimise volume, configuration settings and sound quality. Additional products with embedded ioSYS technology and HARMAN Connected PA compatibility include the Soundcraft Ui24R mixer, JBL PRX800W loudspeakers, dbx DI1 direct boxes, and AKG P5i microphones.

PL+S a little light on, well, new lights

By Cat Strom

> The organisers of ProLight & Sound 2017 shuffled the halls and changed the days around but it seemed quieter than the past couple of years. Add to that a rather lacklustre offering of new products and the general response was a little 'meh'.

I spoke with many attendees and it seemed that there were three products that had a wow factor: the **GLP** JDC1 strobe, the **Clay Paky** Axcor Profile 900 and a piece of truss. Yep, you read that right.

The GLP JDC1 contains a traditional single tube element with a clear, bright white output; this combines with a surrounding full face of RGB LED's. The possibilities are endless as these two elements have independent control and can be used as separate pieces, or combined for stunning effects. It can also work as a high output blinder and wash light. Expect this one to be a big seller and on plenty of riders soon.

GLP GT1

Clay paky new light
AXCOR PROFILE 900

GLP new strobe

Clay paky launch

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The Axcor Profile 900 is the first **Claypaky** spotlight to use an LED light source, instead of a traditional discharge lamp. Notable is the white and coloured light it produces, its ability to form perfectly sharp projections, and the precision micro-mechanics of its exclusive beam shaping system. As usual, pure class from Clay Paky who presented the product within their Immersive Experience theatre, a large room with 270 degree cine projection, which hosted a multimedia show that mixed light, sound, video, stage design and atmospheric effects.

Prolyte presented the BGR70 truss; a low volume truss with extreme load bearing capacity. The truss can handle large spans as well as extreme loads. A pre-camber system to guarantee zero deflection is one of the great features this truss offers. Apparently, compared to conventional 100'er truss systems, the BGR70 truss is 40% stronger and saves up to 35% transport volume. It's also a tool-less system.

RoboSpot

The **Robe** RoboSpot garnered quite a few comments too. It's a remote follow-spot system compatible with any of Robe's BMFL range of fixtures already in rental stock. Great for when it's impractical to install an operated follow spot position. Robe attempted to transform their booth into a mini La Scala Milan. The dome featured two concentric rings of the new Anolis Ambiene intelligent down-lighters which are available in tunable white or RGBW.

Remote follow-spot systems seem to be all the rage with **Litecom** revealing theirs called Spotdrive which can be used with any fixture.

Another chatter-generating product were the **MDG** low fog accessories: one which can be embedded in the stage floor or set wall to conceal a fog output and the other which performs several functions by using a sliding conduit either to split a single source of fog into two distinct outputs, merge two separate sources of fog into a single output, or act as a fog output gate.

The most interesting gadget title belongs to **City Theatrical's** DMXcat™ Multi Function Test Tool, a little thingy you can plug into a moving light which then talks to an app on your phone. The DMXcat™ brings DMX/RDM control plus several other functionalities to your smartphone for use wherever and whenever they are needed.

MDG

Of course everyone was excited to see the latest **Ayrton** lightshow, designed by Stéphane Migné, which has built a cult following. They did not disappoint. As well as celebrating their 15th anniversary, Ayrton launched several new products: in particular the first of a new line of luminaires: the **Merak**. This compact wash squeezes a whole lot of washlight into a package that is less than 40cm high.

Ayrton Merak

cdc six

Why wait any longer?
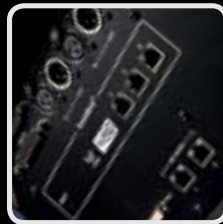## 0.4 millisecond full system latency
(Yes really - 0.4ms: call your representative for a real-time demo)

Intuitive: Gesture navigation allows all channels to be accessed via a simple swipe of the screen.

Low Latency: Less than 0.4 millisecond from input to output including fully automatic 3 stage latency management to ensure phase coherency.

Waves on board: Fitted as standard is an integrated Waves card which provides direct connectivity to Waves SoundGrid technology.

Monitor Mode: A unique Cadac feature developed for the Monitor engineer that allows unprecident speed of access to mulitple mixes.

Integration: 3072 channels of audio can be provided via a MegaCOMMS router. MADI and Dante Network Bridges allow seamless third party integration.

CDC six Introduction

CDC six is the latest digital console from Cadac, featuring 64 inputs and 48 configurable busses accessed via a 23.5î 16:9 optically bonded touch screen.

The screen displays the **innovative**, and widley acclaimed, 'high agility' user interface developed from the CDC eight, which provides a workflow that is **fast** and logical without the restrictions imposed by traditional hardware centric designs.

With a **unique** combination of an **exceptional** user interface, legendary Cadac mic pres, state of the art DSP and FPGA processing with incredibly low industry leading latency, the CDC six makes an **exciting** proposition for those who do not want to be limited by either audio or **creative** compromises.

CDC six Features

> Cadac's unique 'high agility' control surface
> Cadac's highly acclaimed mic-preamps
> 32/40-bit floating point SHARC processors
> 64 input channels
> 48 configurable output busses plus LCR
> 16 VCA groups and 8 Mute groups
> 16 Stereo on-board effects
> Waves integration as standard
> Multilingual user definable labelling
> 3072 channels in one network, including multi console gain compensation, with the optional MegaCOMMS Router

The latest Cadac digital consoles are available at Hills. Book your demonstration today.

Many of the big manufacturers had consistently packed stands even if they weren't launching anything major. **ETC** was chockers as they showed their Gio @5 console and ETC's Source Four® LED Series 2 luminaires. **MA Lighting** was always busy despite only really launching some new software. The **High End** booth looked great and was well populated, but again nothing particularly new was shown.

Also busy were **Philips** with their new Vari-lite VLZ, the first in a new range of spot, profile and wash luminaires. It has a white LED source and features colour shake and colour wheel spin control offering lighting designers a plethora of vibrant effects. New Showline products were also on offer.

ETC

Customised MA Console

MA wall

Philips

High End

Martin video solutions

Martin was showcasing more video solutions that expands the VDO creative LED video range with VDO Fatron 20 and VDO Dotron. They also launched their new plug and play Thrill line for DJs, musicians, and enthusiasts. The fact that these products work right out of the box with easy-to-use presets for customers who have minimal to no lighting experience, set many experienced lighting people sniggering but hey, it's a market. They also unveiled their Exterior Projection 1000 claiming it to be the world's most powerful permanent exterior image projector. However, the most exciting product was kept behind closed doors and only a select few were able to see it. Expect its launch later in the year.

PR Lighting

Elation

Surprisingly, one of the largest stands was for Chinese company **PR Lighting**, one of the few Asian companies that have climbed to be respected and escaped the dreaded Hall 5. They had the new and nifty Butterfly LED effect light which has six high-power OSRAM RGBW LEDs housed in 6 moveable heads, five of which are on the edge of the central disk and rotate individually while the main disk rotates continuously. Makes sense when you see it.

Both **PR Lighting** and **Elation** made quite a show of proving how waterproof some of their ranges were by plonking them in ponds and sprays of water.

Chauvet Professional expanded upon already successful lines with the Maverick MK3 Wash, the Maverick MK1 Spot, ÉPIX Strip IP and Ovation B1965-FC.

Robert Juliat returned with their strange mannequins to preview two new LED followspot models, Oz and Alice that feature a powerful 600W cool white LED source and the same high-quality functions and characteristics offered by the Robert Juliat classic Compact range. As well as new Dalis fixtures, they unveiled SpotMe.

Doughty Engineering revealed their brand new Space Saver which allows a clamp or spigot to be permanently fitted to a luminaire or projector etc and folded into a storage position to save space.

In console world there wasn't anything radically new to report on, just mainly software updates. Fresh from being purchased by Chauvet, **Chamsys** revealed their MagicQ Stadium Wing which is compatible with the MagicQ MQ500 Stadium and MagicQ MQ80 consoles. **ADB** were reborn at ProLight with a new logo to complement the Clay Paky logo. ADB also launched the Klemantis asymmetric linear cyclight.

Robert Juliat

Chamsys

ADB

Avolites

PL+S

The Sound Report

By Jason Allen

It's been two years since I covered PL+S for CX, and in that time, the physical layout of PL+S and MusikMesse has flipped around, and the co-located shows offset by a day. Overall, I think it's had a detrimental effect on both shows, but PL+S is still the healthier of the two. There was certainly no shortage of audio to report back on, even with a few notable brands missing.

With February's ISE in Amsterdam commanding the attention of companies with a strong install business, a little of the gloss has come off of PL+S. Most conspicuous by their absences were Bosch (EV and Dynacord), Sennheiser, and HK Audio – all German firms that would have been on home turf. Meyer Sound were also not exhibiting. Talk around the show put the reasons for these decisions down to the increasing dominance of ISE, alternative marketing spend, and the fading appeal of Musikmesse.

On the last day, I took a walk through Musikmesse and found it a shadow of its former self. Most of the high-tech products like microphones and monitors that crossed-over from PL+S were gone. The instrument halls that remained were 50% of their former size, and all exhibitors looked like they'd spent the least amount of money possible on the show. It felt cheap and nasty, and you could drive a truck down some of the aisles. Back on the PL+S side though, elaborate stands, lots of product and full halls were the norm. So let's have a look at the notable products and releases in audio world, with a couple of peripherals thrown in....

SSL — Live 200

SSL have expanded their well-regarded Live series of desks with the more affordable and much smaller L200, which will be available for around $40K USD for a 64 channel version running at 48kHz. This puts the platform into the grasp of most mid-sized production companies, who haven't been able to afford the larger L300 and L500 models.

The L200 has 144 processing paths, which can be divided as up to 96 inputs, 48 auxes, 24 groups and 6 masters. On top of that, you can also mix to four 32 in, 24 out matrices. The operating system and processing are the same as its larger siblings, so show files can be transported across the range. Total fader count is 38 across three sections,

>> SSL Live L200

including the Master and Focus faders. The touchscreen is a generous 17 inches.

Released alongside the surface was the new Network I/O SB 32.24 Stagebox, a 5U unit with dual redundant power supplies, 32 mic/line inputs, 16 analogue outputs, 8 digital inputs and outputs on 4 AES3 input/output pairs, and redundant RJ45 Dante network connections, all capable of running at 96kHz or 48kHz.

Martin Audio — 10 New Releases!

>> *Martin Audio - 10 new products*

At a show that was honestly a little light-on for new audio releases, Martin Audio bucked the trend with 10 new products on offer. First, the Wavefront Precision Series, a new generation of multipurpose line arrays. Comprising the WPC (2 x 10" LF) and WPM (2 x 6.5" LF), Wavefront Precision line arrays are designed as complete systems, to be powered by the new iKON multi-channel amplifiers, and optimised with Martin Audio's DISPLAY software. The range also added two new subwoofers; the SX118 and SX218, a single 18" and double 18".

On the stage monitor side, Martin introduced the XE Series. The XE300 (1 x 12" LF) and XE500 (1 x 15" LF), which run

>> *Riedel's Chris Johnson and Jake Dodson with Bolero*

Coaxial Differential Dispersion drivers with an additional contour-moulded static third waveguide that increases the size of the HF horn mouth to maintain pattern control over a wide frequency band and avoid spill outside the coverage area. The XEs are built to be powered by the new iKON 4 channel amplifier.

Also in monitor land, the Martin LE Series are an affordable range, including the LE100 (1 x 12" LF") and the LE200 (1 x 15" LF). Using the same Coaxial

Differential Dispersion drivers as the CDD-LIVE range, the LE Series monitors produce a near-rectangular coverage pattern over a listening plane at head height— with a wide horizontal coverage close to the monitor that reduces gradually as distance increases to maintain consistent SPL and tonal balance.

Riedel – Bolero wireless comms

Riedel introduced Bolero, their answer to ClearCom's successful FreeSpeak II system. Bolero is an expandable, full-roaming, DECT-based intercom system in the license-free 1.9GHz frequency range, and claims to support twice the number of beltpacks per antenna for the same audio bandwidth as other DECT-based systems. Fully integrated into Riedel's Artist digital matrix intercom platform, Bolero can be used as a wireless beltpack, as a wireless keypanel, and also a walkie-talkie. NFC makes registering a beltpack onto the antenna a breeze – simply touch and you're done. The packs themselves have a beautifully solid feel, with six buttons for each of the six intercom channels, plus a separate "Reply" button that replies to the last channel that called. The beltpack can be used without a headset like a walkie-talkie radio utilising an integrated mic and speaker, and can even connect to your smartphone via Bluetooth, eliminating the need for a telephone hybrid.

>> *Bose ControlSpace EX audio conferencing system*

Bose – ControlSpace EX audio conferencing system

Bose Professional introduced their new ControlSpace EX audio conferencing system, which includes the ControlSpace EX-1280C conferencing signal processor and three Dante-based under-table endpoints , the EX-4ML, EX-8ML, and EX-UH. The system features connectivity for various types of audio conferencing, including USB, VoIP, PSTN, analogue, and phone. The EX1280C includes 12 AEC processors, 12 mic/line analogue inputs, eight analogue outputs, eight Bose AmpLink digital outputs, USB (stereo in/out), VoIP (2 lines), PSTN, and a 64x64 Dante interface.

All three Dante under-table endpoints feature PoE, daisy-chainable power and networking, and multiple mounting points. The EX-4ML and EX-8ML mic endpoints have 4 and 8 channels respectively, 48V phantom power, +12V LED power and three logic IO per channel (1 in, 2 out), to interface with most types of analogue conferencing microphones. The EX-UH Dante under-table has a 3.5 mm TRS analogue jack, stereo audio USB, and an RJ-9 connector.

L-Acoustics Syva and P1

Syva is L-Acoustics' gorgeous new loudspeaker system, which is actually a line array in column format. It uses a DOSC waveguide fed by three 1 ½ inch drivers, two 5 inch drivers on top, and four 5 inch drivers on the bottom, separated by laminar vents. Its accompanying sub is available either as a single or dual 12 inch, and uses the same driver as the K2. Unsurprisingly, it puts out the same SPL as a K2. Coverage is 140 wide and 26 vertical, split between 5 up 21 down. The arresting curved shape is simple and elegant, and really suits aesthetically challenging environments or productions. For example, one of its first outings was the Louis Vuitton show in The Louvre for Paris Fashion Week, where (shock! horror!), they were actually visible.

>> *L-Acoustic's Syva*

Along with Syva, L-Acoustics were showing their new P1 audio processor. Designed for larger systems, the P1 provides matrix mixing and routing, EQ, and delay. It's AVB compatible, and runs in the same software and network ecosystem as L-Acoustics amplifiers. What's different about the P1 is that you can run four analysis mic ins, tune your system with frequency sweeps, and it automatically calculates delays and EQs, and sends the settings straight into the amps. In the future, you'll be able to gang multiple units together and tune huge systems in one hit.

Powersoft – Armonia integrates with Smaart

Powersoft were showing off some new amp modules aimed at OEMs, but what really got our attention was the

>> *Powersoft's Luigi Chelli demonstrates Armonia integration with Smaart*

integration of their Armonia amp and DSP software platform with Smaart. Operators can have Armonia and Smaart running on the same machine (or network) and import traces and measurements directly into Armonia in real time.

This means you can now take those measurements and work offline to sum, average, merge, and interact with settings in the software. No longer tied to the speaker system for tuning in real time, you're going to save people hearing a lot of tedious pink noise. You can even make an operator view GUI in Armonia and make it available in any web browser.

Cadac — CDC seven

Cadac were introducing us to the new CDC seven, a 96 in, 48 bus (you can get it up to 54 if you're not using LCR) desk that expands on the success of the CDC six. The seven includes dual screens and 36 faders. It ships with version 4 of the Cadac software, which has added handy things like a GEQ button in monitor mode, which drops a bus's GEQ onto the faders. Improvements to VCA navigation means you can spill your VCA contents on to your second screen or fader bank while working away on the first.

The surface connects to its engine via Cadac's proprietary MegaCOMMS protocol, which promises a blistering 37 samples (@ 96 kHz), or just under 400us of latency from in to out.

>> Cadac CDC seven

Luminex — GigaCore 10

Those clever networking Belgians Luminex introduced the GigaCore 10 to their extremely useful range of ruggedised and easy-to-use Ethernet switches. The GigaCore 10 is a half rack unit with four EtherCon on the front, four on the back, and two fibre connections.

>> Luminex GigaCore 10

Adamson — S10n and IS Series

Adamson Systems Engineering added the S10n line array and the install-ready IS-SERIES family of loudspeakers. The S10n is a narrow-dispersion version of the S10 two-way, full-range line array cabinet. With identical specs to the S10, the S10n delivers a narrower 80° x 10° (H x V) dispersion pattern for tighter horizontal coverage requirements.

>> Adamson IS7

>> Adamson IS118

>> Adamson S10n

The IS-SERIES debuted with the IS7 mid-high and IS118 subwoofer. The IS7 is a two-way, full-range line array cabinet containing two ND7-X5, 7" Neodymium drivers and an NH3, 1.4" exit compression driver. The waveguide produces a slightly curved wavefront with a nominal dispersion pattern of 100° x 12.5° (H x V). The companion IS118 subwoofer is loaded with a lightweight, long excursion 18" ND18-S Kevlar Neodymium driver utilising Adamson's Advanced Cone Architecture and a 4" voice coil. The IS-SERIES cabinet construction uses marine-grade birch plywood and aircraft-grade steel. As befits an install range, custom colours, multiple rigging points and other conveniences for the integrator are abundant.

Soundcraft – Notepads and Stageboxes

Soundcraft released three tiny analogue mixers, the Notepad-5, -8FX and -12FX. They're three extremely useful desktop mixing surfaces that include Lexicon effects on the 8 and 12, and USB I/O connectivity. The range comes with one, two, or four preamps respectively, along with XLR outs.

Soundcraft also announced the Mini Stagebox 32i and Mini Stagebox 16i remote controlled I/O for Soundcraft Si series products, including the Si Impact mixing console. The new rack-mount stageboxes are equipped with Studer-designed preamps and feature a streamlined design that provides a MADI over RJ45 connector built right onto the chassis. No local hardware configuration or option cards are needed or required—engineers can simply plug in, power on, select inputs and control remotely using a Soundcraft Si console.

JBL – VTX A12

The new VTX A12 line array loudspeakers have been designed from the ground up with a heavy emphasis on ease of rigging and transport. Packing dual 12s, four 5 inch mids, and three 2 inch transducers, JBL claim they're now getting an extra 16dB SPL at 1m compared to the last generation. A single front panel helps them achieve an IP55 rating, and installers can order them in custom colours. It's the new rigging system that particularly impresses; the A12s live four boxes high on their dolly. Pins can be inserted for angles as they sit, and on rigging, they take weight and lock. To bring the system down, simply drop back onto the dolly and hit a release lever. The rigging frame is made from lightweight steel from the aerospace industry and weighs just 42 kg.

>> Soundcraft NP12FX

>> Soundcraft Mini 32i and 16i Stageboxes.

by Daniel **Cole**

history
1991: **2017**

The archive of Channels, Connections and CX magazines is **online now.** Here are some highlights from five, fifteen and twenty five years ago this month. Read these and every other edition for free at **www.cxnetwork.com.au**

➜ **Channels** 1991 / **25 years ago**

The May–June 1992 edition of Channels (#13) ran to 44 pages and included a new studio and broadcast section. In industry news we reported that the U.S. immigration Act was under the spotlight, particularly an aspect that severely curtailed the number of visas for international musicians and crews. This was felt first-hand by Australian Vari*lite operator Paul Kent who, though invited by band Roxette to join their tour was denied a visa under the Act. In his editorial Julius Grafton raised the issue of crew ratios whereby Australian staff were outnumbered by touring staff. Where are we at with this issue today? Do tours to Australia and their crewing ratios limit opportunities for work by talented local technicians? Email us on juliusmedia@me.com

And there was high drama in the area of moving lights with Clay Paky accusing High End Systems of copying their lighting technology with the Intellabeam. Clay Paky were also upset about High End placing product in the Italian market-place (and also no doubt about being outsold in the U.S. at the time). For the sake of balance we interviewed staff from both companies as part of our extensive coverage of Rimini earlier in the year - we went there, via Alitalia! To top it all off, Julius Grafton bravely conducted a moving light comparison-review of product from Clay Paky, Coemar and High End Systems.

In production, we profiled the Concert for Life featuring INXS, and Rod Stewart's Australian tour had wound up with Lars Brogaard at FOH with his personal Midas XL-3 console. Not all were happy with the tour's sound quality with the promoter Frontier Touring receiving a number of letters of complaint - rare according to Michael Chugg. We postulated tour fatigue or the use of MSL-10s indoors as possible factors if indeed there was a problem with the audio.

In other developments, the ADAT format was news, and we outlined anti-alising filters, often the culprit for 'harsh' digital audio rendering which Apogee aimed to fix. Other products released included the SS1 Moving Fader System and Jands' SR-3000 split-rail power amplifier, supported by a proactive product tour. Jands compared it at full level and clipping with amplifiers from Carver, Australian Monitor and Yamaha and others (through Jands/JBL Sydney 1400 speaker cabinets) with Peter Twartz in the firing line of sound and attendees.

➜ **Connections** 2001 / **15 years ago**
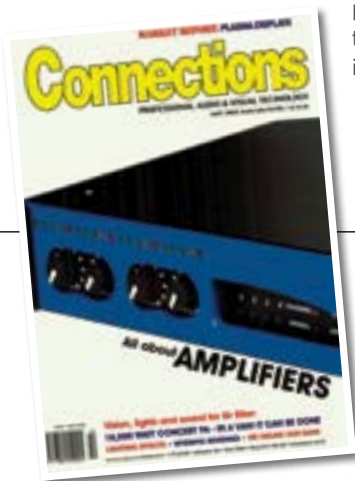
In 2002 The May edition of Connections (#98) featured Market Reports on Power Amplifiers, Plasma Displays, and lighting Effects and Consumables (gobos, gels, smoke and other effects).

Connections was edited at this time by John Grimshaw while Julius Grafton focused on running an innovative training program specifically designed for the Australian technical entertainment industry.

In News, we noted the growth of the church sector for the technical industry, with huge sales of CD and DVDs perhaps explaining how it was that a church put in an order for Australia's first

million dollar live digital mixing console.

We toured Bytecraft's new premises in Melbourne following its recent corporate change. A brand new Kenworth truck and trailer caught our attention, apparently acquired because customer relationships can be jeopardised by less attentive external contractors, they suggested. At this juncture, Duncan Fry's 'Trucking in the 80s' at the end of the magazine provides some contrast…

In features, we covered Sir Elton John's 2002 tour with interviews with key technical staff such as Lighting Director Kevin 'Stick' Bye who operated the Stephen Cowan-designed system on a Vari*lite Virtuoso. Audio for the tour was a Jands Clair Bros i4 line array which sounded so clear according to Connections staff that they could hear the 'harshness' of the VCAs on the FOH console - an 'ancient' Yamaha PM4000 mixed by Clive Franks. The tour also provided the first sighting of a Yamaha PM1D digital live console, used for monitors (also installed at the Hillsong Church in Sydney that year). A photo of Elton John in 1971 in 'Daze of Our Lives' near the end of the issue neatly bookends, or travel to www.jps.com.au/category/history for more 70s production pictures.

Other features included a technical tour of the new NIDA Parade Theatre - all 35 million dollars worth - with NIDA's Technical Director Tony Youldon. Approximately 284 Selecon lighting fixtures were specified and bought.

We spoke with Lance Steweart who was building world class DMX technology out of Ipswich, and with Michael Orland who explained how to fit an 18000w PA (+light rig) into a small white van (one of his 9000w power amp racks could be carried in one hand…).

Finally we noted the 75th anniversary of EV.

➤ **CX** 2011
5 years ago

CX Magazine #68, March 2012 covered the first CX ENTECH Roadshow, how it works and why its a unique offering. The Roadshow seminar Stage Safety was well attended with disturbing reports of local government authorities and others unwittingly purchasing inferior stage and ground supports systems.In touring we profiled the How to Train a Dragon stage show, and Pink Floyd's The Wall, one of the biggest and smartest productions we have seen.

Tungstan vs LED? A debate that's rapidly cooling according to Jimmy Den-Ouden's profile of LED lighting in the industry and its increasing maturity, including a review of the PRG Foton LED fixture. We also reviewed the Atomos Ninja portable HD video kit, DPA's d:fine series headset microphones, the Tascam DR-07 MkII hand-held recorder and Allen & Heaths GSR24M console.

And when is a lectern with two microphones a really bad idea? Most of the time, said John Maizels in his regular column, plus other useful advice including where to go tech shopping in LA. In another regular column The Installer, Paul Matthews wrote about the business of getting paid: "If you can't read and understand all three sections of the tax pack then business is NOT for you!"

PURPOSE 2017
JUSTIN BIEBER

"When he's 150ft in front of the PA and not talking or singing very loud, getting him over the top of the band is the most difficult part of my job."

BY CAT STROM / PHOTOS: DAVID YOUDELL

A fter a year of touring the world with his Purpose arena show, Justin Bieber began a run of stadium shows in Australia, shows that will continue through the rest of the year.

Kenneth 'Pooch' Van Druten built his reputation as a FOH sound mixer with bands such as KISS, Kid Rock, Linkin Park, Guns & Roses, System of a Down and Limp Bizkit. Bieber is a noticeable departure from his usual clients.

"Pop tours are the bigger tours these days so guys like me, who have experience with large stadium shows, are getting asked to do pop stuff," he explained.

The PA was all Meyer Leo and Lyon systems, along with some Milo for delays, provided by VER in partnership with Norwest Productions. The main hangs and the outside hangs were Leo boxes with Lyon boxes on the very outside and for the delay tower, as well as the stadium ring, were Milo and Lyon.

"The Lyon is just fantastic and perfect for this kind of show," commented Kenneth. "The main reason is that it is a two-way box, as opposed to a three-way box, so there are basically low end drivers and then there is a horn that covers all the wave frequencies upwards. What happens with a three-way box is that often the crossover between the mid-point and the high point is a difficult place for vocal and some instruments. The Lyon, being a two-way box, is super smooth in all of that area. Everybody is coming to hear Justin Bieber so his vocals have got to be stellar and this PA does that. His vocal is right up in front, and the rest of it is really nice too, but it's important that everyone can hear what he sings and says.

> **WHO KNEW: a two way PA! Avoids that mid vocal crossover issue that bugs many sound engineers and designers**

Kenneth admits that Justin has quite a soft voice and that there are times when he sings low and that's probably the hardest part of his job.

"When he's 150ft in front of the PA and not talking or singing very loud, getting him over the top of the band is the most difficult part of my job."

The system guys worked all night to ensure that everything was aligned and time delayed correctly, walking the entire venue to ensure it all sounds good.

"We really pay attention to the fact that people pay a lot of money to come in here and we work really hard to ensure that, no matter where you're siting, you all get the same show," said Kenneth. "During the show, my system engineer John Kaler walks the entire venue making adjustments if required on a wireless tablet. There are a lot of zones in a stadium and where those zones meet is the difficult part."

Kenneth mixes on a DiGiCo SD7 saying he favours the super transparency of the front end.

"Whatever mic choices you make in front of something there's no colouration," he said. "You can be really specific about mic choices that you make specific to a specific instrument without having to worry that your console is going to colour that. It's like having a palette that is transparent, when you put a blue on it it's really blue."

The lighting design has changed quite drastically

The second best thing about the DiGiCo SD7 for Kenneth is the way it utilises Waves plugins, allowing him to do a bunch of Waves stuff within the console. Kenneth said the flexibility of the console is what makes it truly amazing; you can have tons of inputs, tons of outputs …. basically if you can imagine it, you can do it with this console.

"I utilise the Waves stuff kind of old school, as if it were a big outboard rack of analogue gear," he explained. "I don't put Waves stuff on everything, I utilise it very sparingly compared to some other engineers. I haven't run up against anything with the Waves stuff that I don't like. I do have some outboard gear such as three Bricasti reverb, a Lexicon PCM96 and Anteler word clock. For speaker management we use a Waves

eMotion LV1 Live Mixer, and for record, I use a Mac mini with Waves DiGiGrid MGB.

"Managing Justin wherever he is in a speaker zone, depending on where he is and how loud he is speaking, there's a bit of EQ management that has to happen so I'm on my toes. I have a video feed in my console of a close shot of Justin so I can really watch him as he sings. If he pulls the mic away and accidently points at something with it, I can see it and pull it very quickly."

The majority of microphones are Telefunkin with Justin's vocal a Telefunkin capsule on a Shure transmitter. A lot of the drum mics are Telefunkin but Royer ribbon mics are used on guitar.

"Everyone on stage, including the dancers, are on IEMs," said Alex McCloud, who has done monitors for Justin the past five years. "We have twenty-four dancers all on the same mix mainly so they can get cues from the choreographer via a talkback system that we have. I've built them a really good left /

right mix that they listen to, they never really ask for anything, it's pretty much what we give them."

The band are all on Jerry Harvey Roxannes with the dancers on cheaper JH3 moulds and most of the techs on JH16 moulds.

"I use a simpler mould for Justin as we don't need anything really fancy," commented Alex. "I find with singers, if I use a fancy mould I end up EQ-ing a lot of stuff out. If I use a mould that has less driver information in it, I tend to leave a lot of that EQ information in getting a flatter response out of the mix. I have Justin on JH11's and then I reference the show with JH11's. I built everything in rehearsals off of the Roxannes for the band mainly, but once I got Justin into the picture, I went to the JH11's. I've had him on JH11's for years now and it just works for him. I find him not messing with his moulds much and leaving them in 95% of the time."

There were a handful of wedges on the show; local sidefills in Sydney consisting of six Meyer Lyon M's

per side, 80 degree version. A bunch of d&b M2's are toured with a couple on the downstage line to help fill the stage in case Justin or one of the dancers pull an IEM out. The drummer had a Meyer 900 drum sub, the bass player a d&b V-Sub and an MQ wedge and the DJ had an MQ wedge plus Alex also had an MQ wedge.

Alex was also mixing on a DiGiCo SD7 running three full SD racks plus a mini rack and also had an SD11 in the loop for opening acts.

"I have Whirlwind splits so Pooch has his own set of racks and I have my own set of racks, so gain wise we're completely independent," he revealed. "It was a choice that I made really early on with Bieber; to get independent control from FOH because both of our systems are so elaborate. By the time you start adding all those racks into the opticore loop plus two consoles, you tend to have quite a few issues so I chose to do it that way and we don't have any issues."

Alex was pretty active during the show as he was very hands on with Justin who, depending on his mood, may use headset or hand held. If he's doing headset, he also has IEMs on constantly so it ends up being two packs with cables down his back and things can go wrong. Alex always has spares ready at all times.

"With 140 inputs going on onstage, it's good that I have quite an elaborate talkback system consisting of 22 channels of talkbacks on stage which gives us all really good communication," he said. "Everyone onstage is in the loop at all times, if we need to stop the show everyone knows, if I need to communicate with just the techs I have the ability to switch and do that."

Lighting director Nick van Nostrand has been working

for Bieber's management on a variety of projects such as Ariane Grande for a few years, although he is freelance. He explained that the lighting design has changed quite drastically from the arena tour.

"The arena show came out over the audience quite a lot with a big trampoline structure that was pretty dominant," he said. "Obviously in stadiums you're limited as to what you can hang in the roof structure so the trampoline had to go and we built a thrust stage with a bunch of lifts to give a variety of effects to the show. We also beefed up the pyros and lasers."

Some of the key pieces of lighting equipment required was toured, as were lights built into the video wall and the Ayrton VersaPix hanging on the front of the trusses, but 90% was sourced locally from PRG.

Six fingers of truss mid-stage held seven Ayrton VersaPix on the front as well as three wash lights (in Australia they were GLP impression X4's) and three Sharpy-type beam lights (actual Claypaky Sharpys in Australia). Upstage were four angled trusses again with seven Versapix and four Sharpy-type beams and a washlight on either end. Side trusses had more impression X4's for side light.

Around the video wall there were Ayrton MagicBlades whilst the downstage truss held a bunch of Vari-lite VL3500 washes, more VersaPix and also TMB Solaris Flares. Cory Fitzgerald, the lighting designer for the show, is a big fan of the Solaris Flares.

On the wings there were Sharpy Washes, twelve on each truss of the three trusses per side so a total of thirty-six per side. Each of those trusses also held six strobes and four blinders. Around the thrust there was a

combination of more impression X4's, Sharpys and for dancer lights pointing in at the thrust, Philips Color Kinetics ColorReach or Solaris Flares.

At the C stage there was an octagon-shaped lift that rises and this was clad all the way around in PRG video panels. Inside the octagon were forty TMB Mozarts for internal lighting. Delay towers have more Sharpy Washes and a bunch of Martin Atomics to help make the audience sitting far away from the stage feel closer to the action.

Cory and Nick spent time in Los Angeles trying to convert some of the arena files over to the stadium version, Nick did some more 3D work but the first time they actually saw it up and running was the Perth show.

"It's drastically different fixtures to what we had in the arena show where we had a lot of Claypaky B-Eyes and Mythos, so there were parts of the show that had to be simplified and modified just to fit with what we could get our hands on, but I think it has turned out very well," commented Nick. "The biggest challenge so far on these stadium shows is the advance and that probably consumes 90% of my time. Getting quantity of fixtures we need, especially when we get into South America, is very difficult. We need 220 wash lights but finding a vendor who has 220 of anything is basically next to impossible."

Control was by two MA Lighting grandMA2, one as a tracking backup, with fibre snake to the stage and the NPUs and Nodes for all of toured equipment is also toured with the local vendor supplying NPU's for their equipment. The show was all time coded.

"It was raining in Sydney so a fair amount of gear was set up last minute meaning we started the show without being able to focus some lights," said Nick. "They were roughly in the right first position but I needed to tweak them as the show progressed."

Four follow spots were positioned out front with two Robe BMFL truss spots in the rig controlled by Nick.

"Australia was a good place to start the tour as we weren't putting the rig up every day and had time to fix things."

Noise control is a big deal when stages are close together

By Cat **Strom**

Port Fairy Folk Festival

The Port Fairy Folk Festival is a popular annual four-day music festival based in the historic fishing village of Port Fairy in Victoria, Australia. Traditionally staged during the local Labour Day long weekend, the first event was held in December 1977, and has been an annual fixture ever since. At first concentrating on Irish traditional music and culture, the focus has subsequently broadened to include a diverse range of styles and influences, from Blues/Roots to World Music.

For the fifth year in a row Monitor City has provided an audio solution for the event.

"The biggest challenge for us is the design to ensure noise control between the tents is correct," commented Ade Barnard of Monitor City. "It is

no more than 15 metres between the end of one tent and the beginning of the next one. Specifically control of the system in The Shebeen, which is the Guinness bar, is the most important. There's a stage at one end that shoots audio down through the bar, out the door and into Stage 1. Stage 1 is where some of the most important shows of the festival happen and some of the quietest, so the design for this is critical. Stage 1 and Stage 2 are virtually back to back so there's a certain amount of noise control required there too.

"It requires some good planning of how the systems work, where it drops off and what is considered an acceptable level for the audience. Port Fairy's audience are generally quiet, usually sat down and they appreciate high quality audio. So what we deliver is really quite quiet and that makes it possible to do what we're trying to do."

To assist in noise control, the Monitor City team spend a lot of time planning coverage using NS1 predictions and all of the sub are in cardioid arrays. They also put delays into the back of the tent and employ the highest quality staff. The festival organisers are more than happy to have two sets of engineers so no engineer does more than two bands in a row. It means no one is tired, no one is pushing it and you get some of the best work out of some great people such as Ernie Rose, Tim Millikan, Gina Hanlon and Sarah Madigan.

A Nexo STM PA system is used in all three venues with Ade saying it is very suited to this type of application, sounding great and working well in the

Port Fairy environment. Stage 1 had five pairs aside with a cardioid sub-array and Nexo M6 for delays. FOH was a DiGiCo SD12 with a DiGiCo SD5 for monitors, twelve wedges on ten mixes of Nexo 45N12's.

Stage 2 had the same delays, four pairs of Nexo STM aside, a DiGiCo SD12 at monitors and a DiGiCo SD9 at FOH. The Shebeen bar had an Avid Profile FOH and a DiGiCo SD10 for monitors, three pair of STM aside and a cardioid sub-array but no delays. There were also a couple of baby stages on site with plastic boxes on sticks!

The festival was the first outing for Monitor City's new DiGiCo SD12 consoles and according to Ade, all of the FOH and Monitor engineers loved it.

"It's a firm favourite and we think it is probably the future," said Ade. "Is it the new PM5D? Probably. It's a great monitor board and it beats the SD10 hands down. The SD12's dual screens ensure the work flow is brilliant and it's really, really quick which you need for doing monitors."

FOH engineer Tim Millikin commented that he didn't feel like he was learning a new console, as the SD12 was very intuitive.

"The surface is extremely ergonomic in its layout, with two screens angled slightly more vertical than an SD10, which meant I felt like I didn't have to stand over the console to see what I was doing," he said. "Twenty-four faders on the surface is enough that I didn't feel like I had to surf through layer after layer to get to things. It's a compact size which means it only takes up two seats, which is excellent, especially for the power this console has.

"Sonically, there is no compromise quality wise, and it is very light, also a bonus, it's an easy two-man lift in its case."
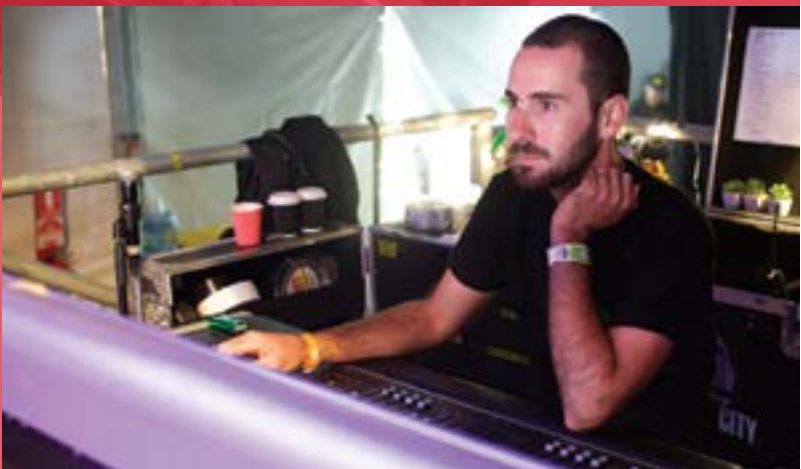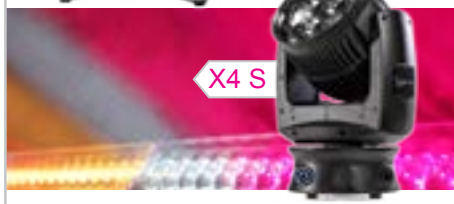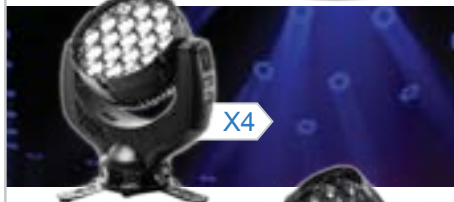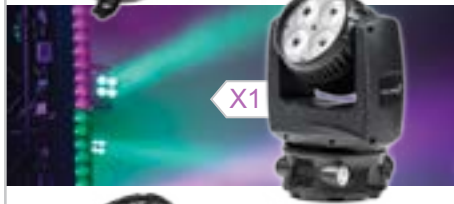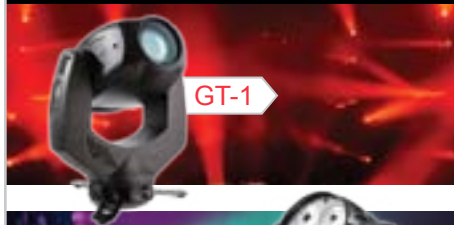

Tim Millikan

Tom Moore

Ade concluded by saying that the Festival is a real pleasure to do and every year when they get to the end of it, everyone asks if they can come back next year which is always great to hear.

ISTORIA

PURE NRG

By Cat Strom

Istoria, Australia's latest arena-sized, trance-themed event, took place at Melbourne's Margaret Court Arena followed by a night at the Sydney Showground Halls.

Technical Director Matt Chromatic turned to MPH to supply lights for his design which was inspired by the art of telling a story.

"I wanted it to have a little more uplifting feel to it as opposed to the hard-style events which are usually raw and masculine looking," said Matt. "I usually start with the size of the room and think how I can fill that space. This design started with the event logo; I took the circular design and recreated it onstage with snippets of the logo turned into a pattern. It worked well as a backdrop and was interesting to light providing a projection surface. Being a new event, it was important to push the branding and logo."

Production budget was tight and so Matt was tasked with making the event look as big as possible with a limited amount of equipment. He designed six pendant drops, each topped with a couple of Robe BMFL's with five Robe Pointes spread down the truss, that delivered a big, strong look through the room without soaking up all the budget into rigging points.

"Let's face it, very few people walk into a room and say 'wow, look at all those slings and span sets' do they?" Matt commented. "I tried to avoid all that and put the money into fixtures and set pieces instead. With the pendants I only required two points to

spread all those fixtures through the room."

Woohah Productions supplied their new Roe 6mm LED screens which Matt was very happy with remarking that the Woohah guys did a very good job fulfilling his spec. Chromatic's in-house designer Matt Osborne supplied the graphics for the screens.

"Some of the content was generated for those screens whilst other stuff was generic and mapped to suit," explained Matt. "One of the most interesting effects that we had on the night was probably one of the easiest ones we've ever done as well – we made an animation of the CNC file that I had the backdrop cut out of and because it was made from the same vector mask as the CNC, you drop that animation into the LED screens and it would essentially trace all of the edges of the backdrop. It looked like we had done some crazy difficult mapping."

Seven High End Shapeshifters were ideally placed within the circle and as they were a mappable fixture that used ArtNet, they could be linked

Production budget was tight and so Matt was tasked with making the event look as big as possible with a limited amount of equipment.

Assistant stage manager, Ox

into the graphics on the LED screens. Sunstrips and Martin Atomics were also included in the circle.

The rig included eight Clay Paky Sharpys piggy backed by a laser unit. Glen Turner from Oracle Liquid has been developing this idea for a couple of years and Matt was very impressed by the outcome. It also included six stationery lasers that were programmed and operated by Craig Devita.

"They work really cool and when they're shining out into the room, they look like a normal RGB 6 watt laser but there were some particular looks where you could tell they were panning well beyond the capabilities of a normal solid state laser," added Matt. "It was really effective having a nice beam out of the centre and a laser cone on the outside of it. As the laser unit is mounted so close to that lens, you only have to be a few metres away from the fixture and it does look like it's coming from the same spot."

The show was run off a High End Hog 3 with Michael Hicks programming and operating, with

From left to right: Liam Ashton (MPH), Craig Devita (Chromatic), Lolli (Chromatic), Matt Chromatic (Chromatic), Matt Osborne (Chromatic), Ben Nickel (Woohah), Tommy Nolan (Chromatic), Scott Lindgren (Woohah), Lachlan Grant (Chromatic), Michael hicks (Chromatic).

feedback from all the team as to how the show was looking.

"I don't do operation anymore, it's more like a director role" Matt said. "We feedback directly to each other all the time. We can then pre-empt what direction we're going and what colours we're going to use. If you go heavy with a whole bunch of graphics at a really strong intensity, there's no point going strong with intensity with your lights as well as the people will think they're looking at the sun! A little instant of that can be great but too much and you lose the vibe in the room as no one is lost in the darkness, it's too bright and they realise the chick they were picking up isn't as hot as they thought she was!"

20 QUESTIONS with

Theatre Lighting Designer Martin Kinnane

Martin Kinnane is busy. As is his way, he's designing all over the place from independent theatre to national tours to state theatre companies. His work has been on show in every state of Australia for every major company. His event work has included Sydney's New Year's Eve, Master's Games, World Youth Day and White Night. Overseas, his designs have reached Japan, the UK, France, New Zealand and the USA with his show Absinthe running in Las Vegas for the last five years.

1. What are the three best things about your job?
Meeting new and interesting people.
Making things look amazing.
Sleeping in.

2. And the three worst things?
Too many clowns in the industry.
Seeing shows that are terrible.
Being too busy to get to sleep in.

3. What has been the strangest request from a director?
Not so much a request but to have creative meetings and discuss having tight evocative lighting, then to see rehearsals and the actors are all over the space all the time. I did hear of a sound designer being asked to make it sound more orange.

4. In your opinion, what's the best show you've worked on and why?
There have been so many. Many years ago I lit Alone It Stands a play about a Rugby Union match between the All Blacks and an Irish team from Munster. It was a fun show with six actors playing 60+ roles. I am still very good friends with them and have worked on many different projects with them, both here and overseas.

5. Which production was a total nightmare and why?
Well I don't think it would be a good idea to name names, but there are a few people I'd never like to work with again. Though I have had a few nightmares with people I would work with again.

6. Which 'known' production would you most like to light and why?
Well I'm probably in the big line of people that would love to design U2's next tour.

7. Who do you admire in the industry and why?
Willie Williams - such a thoughtful designer who doesn't rest on a single idea and Es Devlin, an amazing set designer for theatre, opera and concerts.

8. Do you have a specific style?
I try not to, that would be boring to do the same thing every time.

Simen Bostad and Jeanette Cronin in I Hate You My Mother (c) Rupert Reid

The Chapel Perilous

9. Which venue in Australia is your favourite and why?
Oddly, I quite like the Reginald Theatre at Sydney's Seymour Centre. For a small theatre it has a lot of height and there are bars and pipes everywhere so you can hang a light where ever you want.

10. Do you have a favourite piece of lighting gear and why?
I'm still quite keen on the tungsten VL1000 as it is reasonably quiet and has shutters, making it very theatre friendly.

11. Is there a new piece of lighting gear you're keen to try out and why?
I'm quite excited about all the new "searchlights" that one person can move. The Claypaky SuperSharpy 2 and Mythos 2, the Vari-lite VL6000 etc. Some of the LED profiles are very nice too.

12. What would your ideal rig contain?
The correct lights for the job and also the ones I actually spec'd!

13. What's your preferred control console and why?
For theatre an ETC Ion so I can lean over and push some buttons but for events, the console that my programmer knows backwards. I like the PRG desks but don't get to see them as much as I'd like.

14. Favourite/ most used colour?
L713 JT Winter Blue.

15. If you could invent anything to do with lighting, what would it be?
The beam cutter, I think it would be really useful and I'd make a lot of money out of the patent.

16. What is your pet hate with other people's lighting designs?
Showing off that there is a lighting design when that is not required - playing with toys for the sake of the toy rather than the production actually needing it.

17. What do you think of the Australian theatre industry at the moment?
Due to funding still being up in the air it's all a bit small, not many risk takers or daring productions.

18. Do you have a favourite mantra to get you through the day?
Inexpensive never cheap.

19. What have you got locked in for the near future?
I Love You Now at the Eternity, One Flew Over The Cuckoo's Nest for Sport For Jove, Hurt for White Box, Thai'Riffic for The Theatre Division, and the Wharf Review for Sydney Theatre Company.

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

Woyzeck

Woyzeck

Scorched

The Chapel Perilous

LISTEN HERE

COOL IT, PAN IT, MIX BUT DON'T SLAM IT

By Andy
Stewart

If you're anything like me, you're always on the lookout for new recording and mixing techniques. Here are a few I've gathered together in my head in the last few days that might improve your next project. They're not new by any means, but they're often overlooked and remain crucial to good production technique.

STEREO RECORDING

Mostly, people think stereo recording means sticking an X/Y pair directly in front of a recording source, panning the two channels hard left and right and there you have it – stereo. But the world of stereo is far more varied than that. For starters, when you pan most people's close mic'd stereo recordings hard left and right not much changes, because the two mics are invariably positioned to place the source dead centre in the image. When you mix a bunch of theses stereo sources together the result basically sounds mono. Hmmm. When they realise this, the solution mixers then opt for is to either tilt the images left or right, or sometimes cut one channel entirely – a pretty inadequate solution really, one that tends to beg the question: why was the instrument recorded in stereo in the first place?

A cool trick is to learn to anticipate where a sound will be placed in a mix before you record it, and use a setup that reflects this expectation. So, for example, say you want your acoustic guitar overdub panned quite hard left in the mix: try recording it in stereo with the instrument well off centre in the stereo image. To achieve this extreme panning outcome, one mic should be placed very close to the source and the other aimed into open space beside it. While this might looked daft, chances are it will sound much better than the ill-conceived, default setting you've been taught to always adopt.

Experiment with this as much as you can – the results you get will astound those around you, I promise. (I once recorded a fantastic lead 'stereo' guitar with one mic on the amp and the other 25 yards down a tiled hallway – heavily compressed and cranked with gain. The results sounded absolutely epic, and I will never forgot the lesson it taught me.)

But for a genuinely wide, epic sound nothing beats two hard-panned mono recordings, or two stereo setups recorded using the above technique. Multiple recordings of anything you care to dream up, whether it's snare drums, guitars, or Irish horns will sounds 10 times wider than one instrument mic'd in stereo. This is a simple production technique that's overlooked time and time again.

OBI WAN TONE

This is not so much a technique as a mindset. Be conscious of tone whenever you're recording something, whether it's a voice, guitar, drum or baby's rattle. Everything you record has an inherent tone for which you need to develop a proper insight before you choose a recording chain. Good recordings are made up of a wide variety of tones that combine together effortlessly in a mix. Don't fall into the trap of thinking that every sound you record needs to be made brighter!

I'd estimate about 90 percent of home recordists tend to opt for 'harsh' and 'bright' over almost any other tonal option, sometimes in flagrant disregard of the sound itself. It's as if recording enthusiasts have become convinced they should always alter the incoming sound in some way, and always, it seems, with an EQ to brighten up the signal!

Now, I know not everyone has a million dollars worth of recording equipment at their disposal, and sometimes when a sound is recorded too brightly, cheap condensers are commonly to blame. But mostly this is just an excuse. If your recordings consistently sound harsh and bright, and you think maybe your $300 condenser is to blame, why not

instead use your comparatively dull $150 dynamic mic? Please, don't tell me you've shelved it because it doesn't look the part for recording vocals. That would be a gross act of incompetence, wouldn't it? Alternatively, why not try your $99 ribbon? It's dull and noisy perhaps but in certain circumstances those traits are ideal.

One of the keys to great recordings – that eventually become great mixes and production masters – is that they're recorded with a sophisticated insight into tonal balance. Each sound is carefully considered both for what it's naturally capable of sounding like, and for what its main musical function provides for in a production.

So, for instance, bass guitar is almost always recorded to provide a solid foundation for a track in the low mids and sub-harmonics, so it follows that this tonal region needs to be captured as a high priority. You obviously then don't want to record that instrument with nothing but hyper tops and harsh mids, or you'll simply add glassiness to the bass that mostly just gets in the way of other sounds that naturally want to occupy that tonal space.

Next time you're recording, mix up your tones, and think before you rush to grab the same chain over and over. One recording setup does not suit every occasion.

Which leads directly to my next point…

MIX UP THE MICS

I have long ago lost count of how many times a client of mine has, under polite questioning, admitted that they have used the same condenser mic for nearly all the recordings on their new album. I can always tell when this has happened because these productions invariably sound two-dimensional, unbalanced and harsh in the main.

When I enquire as to why they've done this, they typically admit to only owning 'a few mics', to which I always reply: "So do you have one mic or three?"

The answer is almost always, "three." Sometimes more. You can probably guess where the rest of this conversation goes… "Why didn't you use the other mics to capture at least some of the performances? That way you'd have a bit more variety in the recording tone."

"Because one is just my 58 that I use live, and the other one is an old ribbon I got cheap. And yeah, I guess I was just being a bit lazy…"

The point here is that using one mic on everything you record, irrespective of its tone or monetary value, causes a build up of frequencies in the same areas of every instrument by imparting the same sonic imprint onto everything it ingests. And that's not good.

For this simple reason alone, recordings that regularly miss the mark tonally more often than not suffer from mixing difficulties, and ultimately, sub-standard outcomes. The old adage you can't make a silk purse from a sow's ear springs to mind here…

COOL IT! YOU'RE TRACKING THINGS TOO HOT

Another thing to always watch out for during tracking is excessive preamp gain – too much of which can unduly stress a sound and quickly mangle its fidelity. Bright and distorted sounds courtesy of a heavily cranked preamp that's often feeding an over-cooked compressor can sound – dare I say it – cool in some circumstances, but not as often as you might think. Particularly when a sound is playing a lead role, you need to be careful about the choices you make with respect to distortion levels, pops and crackles etc. Distortion

is easy to increase in various ways later on, but trying to eradicate it from a sound during mixdown is essentially impossible. So when you're even the least bit in doubt, err on the side of less preamp distortion rather than more. When you record everything with too much gain, either because you're trying too hard to 'fill up' your digital waveforms or you haven't calibrated your A-to-D converters properly, you can often end up with certain sounds coming across sounding damaged rather than interesting; thin and clipped rather than fuzzy.

The important thing here is to listen carefully to your recording chain, keeping a particular ear out for analogue clipping distortion in peaks and crescendos, and be mindful of where the sound you're tracking is likely to end up in your mix. Knowing the role it's expected to play is important to being able to make the correct decision about its distortion characteristic.

In general, things sound better and are more easily controlled down the track when things are recorded a little too cool, dull or dark rather than when they're overcooked. And finally, clipping digital ceilings is a no-no – don't do it… ever. It always sounds bloody horrible, and where it occurs on a lead vocal the engineer should be arrested.

DON'T COMPRESS EVERYTHING!

Compression is crucial to the viability of any mix in this day and age – as it always has been to some extent – but it's still useful to leave a few things loose in the mix (as I mentioned in last month's article). In the same way as you choose your amount of preamp gain and the distortion characteristics therein, compression needs to be considered carefully depending on the nature of the sound's role in a production.

But without going into any detail about how much compression should be ascribed to any given instrument, what's more important to understand is that you can't put the same type of compression in the same quantities across everything you record or mix! Variety is crucial here (surprise, surprise) and to that extent, thinking carefully about what you want a sound (or group of sounds) to achieve is of paramount importance.

Most songs that sound over-compressed do so primarily because they have too much compression applied to everything in equal measure, which leaves most elements sounding airless and choked. Stop and think next time before you decide to slam that acoustic guitar with 8dB of fast attacking compression – it may just need to be turned down in the mix. Contrasted with the drums that are heavily compressed, both will probably sound cool by virtue of their difference.

A ndy 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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PRESONUS AIR 15

NEED TO MOVE SOME AIR?

By Jason **Allen**

The affordable active loudspeaker market is, to be honest, crowded, with both worthy and best avoided options. Breaking into that market with a new brand is going to be difficult, especially when you're trying to break customer's decades-old brand loyalty and buying habits.

PreSonus are not an unknown name to most in the market for an affordable active speaker. Everyone has used their computer interfaces at one time or another, and many their digital desks. But they weren't a name we associate with speakers until they acquired Worx Audio back in 2014 and began aggressively expanding their range of studio monitors, then PA solutions.

Under the PreSonus and Worx brands, you can now buy just about everything you need at FOH or monitors, from an active 10" to a compact line array. We at CX were surprised by the Worx XL2 line array speaker on the recent ENTECH PA demo, and intrigued by its unique design. With this in mind, we were keen to hear the AIR15 active 2-way.

The AIR (Advanced Impulse Response) series of powered plastic boxes are the lowest-price point products in PreSonus's PA range, with the ULT series and Worx brands sitting above them. In addition to the 15, the AIRs offer a 10"and a 12", and 15" and 18" subs. All are powered by a 500W class D amp in the lows and a 200W class D amp for the highs. Specs on the AIR15 claim it has a max SPL of 132 dB, and response from 40Hz to 20kHz. All PreSonus AIRs are covered by an impressive six year warranty in Australia.

The AIRs come with some simple DSP on board that is adjusted with one easy knob press. You can put the box into DJ, FOH, Enhance, Monitor and Speech modes. FOH offers the least processed option. Combo jacks give you two ins that can be mixed, there's a 3.5mm jack for playback input, and an XLR out. While the box is relatively light at 21kg, I'm still annoyed at any non-install speaker that only has one handle on the side, as the AIR does.

On firing up the AIR15 at unity, the results are pleasant. There's a peak at around 1.6 kHz near the crossover point, and it's a little excitable up to just under 3kHz, but otherwise, response is flat and musical. I see the extra high mids as a plus for getting a live vocal to cut through a band, as it's easier to notch out than put in what isn't there in the first place. For a cheaper active speaker, there's none of the artificiality I expect around 100 and 200 Hz, and the high end refrains from any extra 'tizz' or 'sparkle' that shouldn't be there.

The only major criticism I can level at the A15 is that it gets unpleasant when you start to give it a lot of level, but I expect that as par for the course at this price point. Though, instead of cracking up, or really nasty limiting artefacts, the unpleasantness is mainly that extra bit around 2kHz getting even more exaggerated. The DSP mode 'Enhance', which in the manual is described as giving a 'warmer' sound, is in reality a 'smiley face' EQ curve that eliminates most of the peak around 2kHz, and helped attenuate the problem when playing at high level.

If you're in the market for a lower priced active box and are overwhelmed by all the options you need to evaluate, then sorry, but it's worth your time to audition the PreSonus along with all the other brands that were already on your radar.
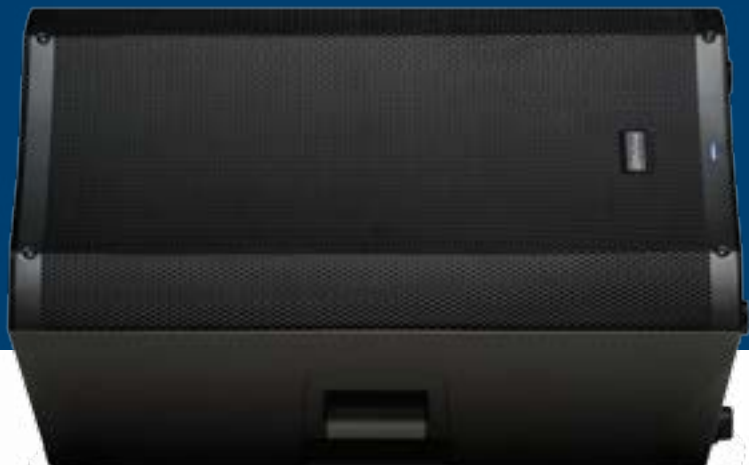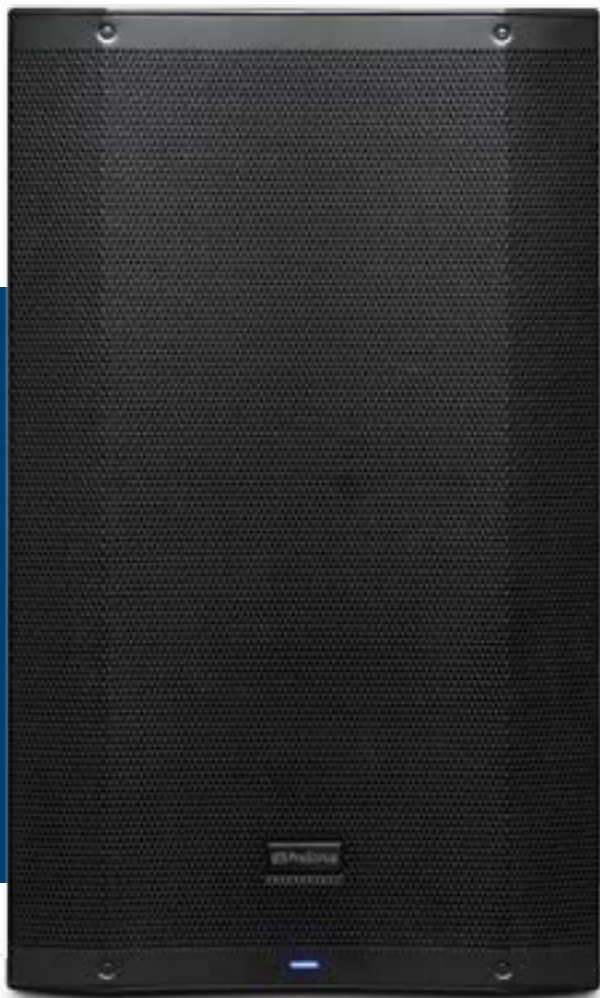
Brand: PreSonus
Model: AIR15 and AIR18s
Pricing: Expect to pay $1099 inc GST each
Product Info: www.presonus.com
Distributor: linkaudio.com.au

CLAY PAKY SCENIUS UNICO

ONE DOES THE WORK OF THREE

By Julius **Grafton**

Unico means 'single' in Italian, and Clay Paky is about as Italian as they come, despite now being a German owned company. It's owned by Osram, who now design lamps specifically with their Italian sibling in mind.

The 'Lok-it HTI 1400/PS Lamp' is the same as used in the other Scenius devices – the Profile and the Spot. It is rated at 750 hours average life. The Unico eclipses its stable mates by doing much, much more. It is a framing fixture, a spot, and a wash device.

To do all this Clay Paky have designed a stunning optical train sitting behind a 180mm front lens.

Mike Gearin set one up for me at Show Technology HQ in Sydney's west. I wanted to see how fast it would zoom out from the tightest beam – 5 degrees. It went out to 50 degrees in a blink – much faster than a followspot operator could open an iris.

Next I wanted to see how it would handle a zoom while maintaining tracking focus with a gobo inline. Mike set up some points on the control desk, and the light obediently did the zoom while adjusting focus as it went.

An important aspect of a device like this with framing shutters is being able to have a focused gobo with the edge framed. As the optics are very close to gobo wheel, Unico gives a sharp gobo with a sharp cut.

The full closeable shuttering system can close on all planes and is something else! The shutter wipes right across, so you could 'wipe' downstage. Hard to describe, but very impressive in action. It's like a robotic surgeon using both sides of each blade.

TV crew love the quality of the beam and that it's a well balanced light – with no greens or light pink peaks, making it good to balance for camera. It'll do 2700 degree K right up to 6500. The lamp is designed for the unit, and not over driven. You'll need to allow about 7.5 amps consumption at 240v.

A new animation wheel does big arial effects – like a tearing pattern. You pair it with a gobo, and get rippling effects. The Unico is an effects generator, with 6 roating gobos, and variable frost filters. Combine the heavy frost with framing shutters, and you have a good fresnel barndoor look.

Outside the fixture is designed to push away water, with double gasket seals. Water is directed away from the fan. You'll need 39 or 43 DMX 512 control channels, depending on how much you want to do.

All that optical trickery comes at a slight weight cost, with the Unico tipping the scales at just over 45kg. But given you could rig less fixtures and get more versatility due to its multi-mission capability, that's a small price to pay.

Brand: Clay Paky
Model: Scenius UNICO
Price: $17,047.05 plus GST
Info: www.claypaky.it/en/products/scenius-unico
Distributor: www.showtech.com.au

CADAC CDC SIX

By Julius **Grafton**

CLASSIC BRAND REBORN

I f you've been near theatre sound over the past decades you'll know the Cadac brand ruled Broadway and the West End. Cadac migrated from recording studios into theatre in the 1980's.

Their analogue consoles were made for the genre, where massive cue stacks and pernickety matrix sends rule. Shows where the designer had the budget to specify two completely separate systems side by side, 'System A' and 'System B', to eliminate proximity phase problems for two singers side by side.

Then the shift to digital caught Cadac out – in the early years of last decade it wasn't clear what the user interface should look like, and the development costs mounted. In 2009 the firm was purchased by Soundking from China, who then invested heavily in R & D.

With UK designers, they launched the CDC line, starting with the CDC Eight. It was a fairly revolutionary step – the console featured a large 24" swipe touch screen, allowing the operator to scroll across the surface rather than use layer switches.

Under the screen are 16 faders, you just scroll left to right or v-v to access all the available channels. It came with one screen and 16 faders, or two screens over

32 faders. You could get up to 128 channels.

The Eight broke with Cadac tradition by moving the LED signal ramps from next to the fader, placing them up on a meter bridge. This left the theatre engineers cold, but placed the console in the sights of broader live sound applications.

CDC SIX

Blake Kirby at Hills in Sydney showed me the console, with a multitrack feed from Waves populating a bunch of the 64 possible inputs. It has a healthy 48 assignable busses, with 8 onboard inputs and outputs.

Let's talk wiring. From the console ('work surface' as these are now classed) you run out on Cadac's proprietary MegaCOMMS protocol (128 bidirectional channels at 96kHz, 24bit) with up to 150 metres of coax cable. MegaCOMMS has blindingly low latency, quoted at less than 0.4 milliseconds. They count this from analogue in, down 150m of coax, through the system (including input to buss, buss to master and master to matrix latency management), back 150m to the stage and then converted out of digital to analog. That's fast.

You have two options for stage boxes – a 32/16 or a 64/48. If you opt for the latter, you lose the 8 in and 8 outs on the console. Or you could patch them if you needed them, and lose a corresponding 8 in

and 8 out on that largest of stage boxes.

There is a Dante interface, as well as AES and MADI options. The console runs at 96kHz.

Networking more than one console is also easy via the optional CDC MC Router.

ON TOP

At the console the screen dominates, sitting over 16 motorised 100mm faders, each with a 20 segment led ramp on the left for very positive input gain monitoring. These are single or dual (stereo), depending how the fader is assigned.

Having the ramp next to the fader is a return to the way Cadac did with the famous 'J Series', which you'll still find in many a theatre.

There's a rotary encoder, and an OLED alphanumeric display strip above. The square shaped OLED goes to 15 characters wide, strangely bunched at the top, leaving the bottom of the thing 60% vacant.

It's in the preamps that the Cadac magic happens, along with the myriad of user interface screens. What is very good is the visual patching display, which shows what is sending to where. With 48 busses, this vertical visual stack of little ramps saves a lot of time.

Those 48 busses can be whatever you choose - groups, auxiliary sends, matrix sends or FX sends.

You'll read the specifications, so I'll skip a lot of stuff. Of note is the master section on the right, with a 6.5" screen for all that pesky stuff. A bunch of user definable keys are there too, of course.

IN FLIGHT

My digital console test is whether I can pass audio without a user manual, and CDC-SIX passes with flying colours. I loved the expanding EQ display for each channel – hit SEL, see the strip, touch the EQ world, do the thing.

I wanted to tweak the input gain on channel one – and the rotary encode above the fader didn't do this. Instead I hit the mic pre module at the top of the channel strip on the screen, which expanded so I could see my control options. The input gain was accessed from one of the eight encoders stacked to the right of the screen.

I love the scene recalls or cues. This is 'theatre cool', you know, where those crazy audio designers sometimes program a cue per LINE OF DIALOGUE. So your average theatre sound engineer knows about following along and not getting lost.

Creating and editing cues is dead easy, as is inserting and moving cues around the list.

It has a 64 x 64 Waves sound grid built in, so you can run tracks live with multi channel record and playback or plug in a server and run your favorite Waves plugins instead, or even a combination of the two!

The Fader Follow outputs feature is for stage monitor uses, and it is easy to set channels and sends pre or past fader, pre or post EQ. This also allows you to access any one of the 48 bus sends with a single touch which then solo's that bus, filters what inputs are views with the mix focus feature, and display the GEQ too, which is then accessed with only a single press of the screen. This makes mixing large numbers of mixes a breeze, and super fast too!

Overall the feel and features seem right on the CDC SIX. Cadac have steered the design a little more towards live audio generally, and away from theatre (at least on the SIX, which doesn't have enough inputs for BIG theatre musicals).

Brand: Cadac
Model: CDC SIX
Price: from 50k
Product info: www.cadac-sound.com
Distributor: : www.hills.com.au

Keep the LIGHTS ON

by Simon Byrne

People in the live events industry operate in a somewhat unique environment when compared to most industries. If for example, a builder encounters delays due to issues out of our their control, it is irritating but not that big a deal. They'll (hopefully) come back tomorrow.

If we are late in completing a production setup or have insolvable equipment failures, the show won't go on! This... would be a big problem. Despite this, we love what we do.

It is the immediacy of events that is what we love about the live production industry. It is the satisfaction of "getting it done" irrespective of the challenges that face us. Combined with the technology, the passion, pride, excitement and satisfaction of the show itself, we are hooked.

We work really long hours. A touring day can start at 8 am, sometimes earlier and go through to 2 am next morning. Yes, an 18 hour day can be normal!

Long hours and setup pressures create an ideal environment for stress. Combine that with rushed and poor food on jobs, the fear of not getting the next gig, flood and famine finances, lack of consistent sleep and it is obvious why we are overrepresented in suicide statistics.

According to research conducted by Entertainment Assist last recently, road crew members experienced suicide ideation almost 9 times more than the general population. For Australian entertainment workers, moderate to severe anxiety symptoms are 10 times higher than in the general population and the levels of depression symptoms are 5 times higher.

Chilling stuff. The reality is that some of people reading this article are likely to be suffering from anxiety or depression right now. If that is the case, there is fantastic help available which you can access right now by calling one of the numbers below. Seriously, people who care are standing by to help you right now.

Big picture, the live production industry must start talking about these issues and recognise that we are in a unique, high stress work environment. A fundamental shift in approach and attitude is required.

For example, I know one employer of a mid size firm who often does 25 - 30 hour shifts and sees that as some sort badge of honour. What is worse, he sees himself as leading by example to his staff. It is actually stupid, even dangerous as young impressionable workers start to accept that the same is expected of them. Tired workers make mistakes. Plain and simple.

Progressive managers recognise that they are instrumental in ensuring the welfare of their workers and serve to minimise the stress at their jobs. It is is done by better planning, supporting their team, providing adequate resources and most importantly, smart rostering of staff.

By getting smart with the roster, they have their experienced workers fresh for when it counts, but long term, the workforce have less cause to become stressed.

Workers also need to take responsibility for their own health too. Do what your Mum said! Look after yourself, eat healthily, get adequate rest, avoid the drugs and alcohol. Employers quite rightly expect well rested workers without the influence of drugs or alcohol so it is Ok to say no sometimes. But importantly, if things don't feel right, talk to someone about it.

Workers are often the first to spot a problem with their colleagues. Sometimes an employer has so much on their plate that they simply do not notice a problem. I'd be the first to admit that I have been guilty of this. The other workers in team just needs to quietly ask the stressed worker, "Are you OK?" as well as bring it to the attention of the employer discreetly.

Start talking people. It is 2017, we can and need to do better at this!

https://www.ruok.org.au/how-to-ask

https://www.sane.org/mental-health-and-illness/facts-and-guides

Suicide Call Back Service 1300 659 467

Lifeline 13 11 14

BeyondBlue 1300 22 4636

Support Act is a charity, unique in Australia, helping music professionals (including crew) who are facing hardship due to illness, injury or some other crisis that impacts on their ability to work in music.

http://supportact.org.au

Entertainment Assist is dedicated to raising awareness about mental health in the Australian entertainment industry by commissioning research, advocating for workplace and educational transformation and identifying support pathways for those in distress.

www.entertainmentassist.org.au

What are you going to do with all those ENCODERS?

by Simon Byrne

The production industry has benefited dramatically from the advances in computer and DSP technology, no more than with audio mixers. The massive cost benefits and flexibility that digital mixers have brought to the live sound industry has been huge, but has also created some real challenges for the manufacturers and users.

The first generation of digital boards were deliberately designed so that seasoned operators would be lured off analog desks to the new paradigm of digital. That mean't that the workflow and layout mimicked analog desks so as to be familiar.

In the analog days, a competent audio operator could walk up to any desk and within minutes get some sound out. In the digital realm, that isn't necessarily the case. The operator has to have some training or familiarity of the device in front of them. Most manufacturers would agree that they are somewhere between their second or third generation of desk. All of them are still getting it right.

Now, a new generation of computer savvy users has come along, many of which have never used an analog desk. This increasingly means that the interface is evolving to meet the wants of the new users who don't appreciate the push for analog feel and that has created some interesting issues.

For example, the unfortunate reality is that because the eq curve and other data is displayed on most new desks, many young operators are mixing with their eyes, not their ears.

Robert Scovill (Avid, Prince, Def Leppard, Tom Petty) conducted an experiment with a group of experienced operators where they used a classic Pultec analog equaliser to eq a source where it pleased the group. Using Smaart, he then did a FFT of the curve that the Pultec produced and displayed it on a screen. It looked crazy. Everyone agreed that it was unlikely that they'd do that curve on a digital desk "because it looked wrong". That is, they would let what they were looking at drive their decisions rather than listening. This is such an issue that Midas seriously considered removing the eq curve display from their high end models.

Because old desks had knobs and buttons, they had a tactile feel. This means the engineer can look up whilst making adjustments which is absolutely critical. With touchscreen control, the
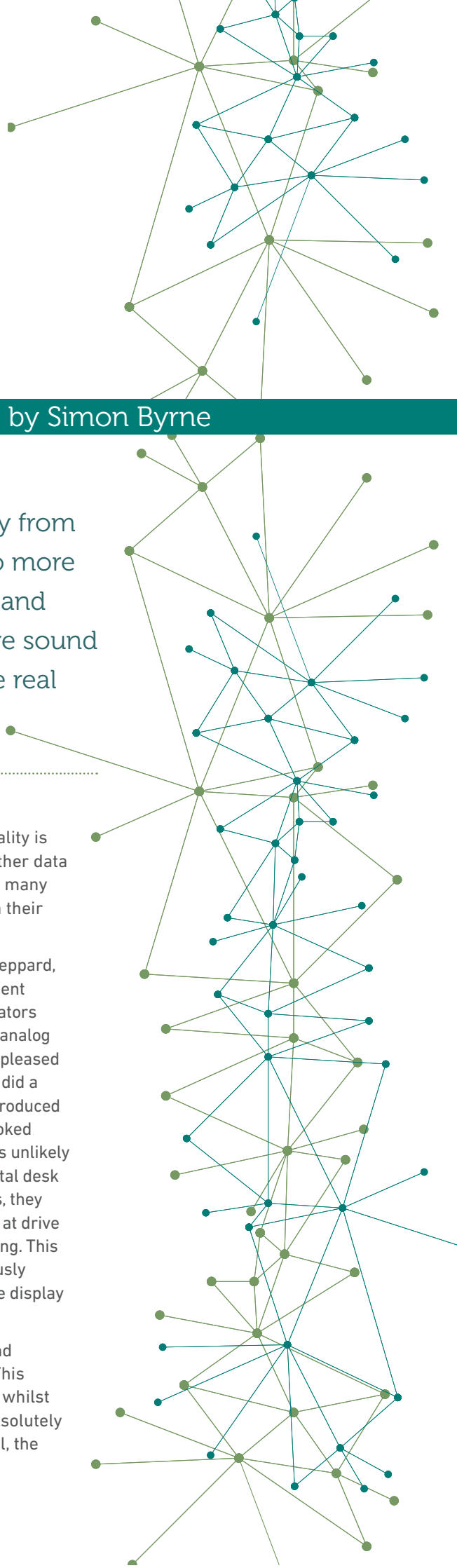
operator must look down to see what they are controlling so cues are missed. I once watched a singer whose radio microphone was muted, attempt to get the sound engineer's attention. When she could not, she literally left the stage and walked all the way to front of house to get the microphone unmuted! The entire time the engineer had his head down, deeply immersed in menus. There is a reason why it is illegal to use your phone whilst driving a car!

Sources within Digidesign (now Avid) have admitted that they stripped away too much visual feedback in their earlier desk software versions. Users were forced to stop and search menus to see what is going on. Now their approach recognises this and actively design out "stop and think". They want their users looking up and mixing rather than navigating menus.

Are you comfortable mixing without faders? It seems most people prefer not, but manufacturers would love to get rid of them. To quote one manufacturer, "faders are a damn nuisance!". Traditionally they are the biggest cause of reliability issues in desks. However, ergonomics is too important for heads up mixing so it will be a while before faders completely disappear, at least from the large format boards.

Is too many toys good or bad for engineer? In analog days, all extra effects had a real cost which mean't engineers had to make value decisions. With digital, there is virtually no limit to the amount of effects and plugin that can be added to a mix. Engineers often bury themselves in a hole with too much going on so the mix suffers as a result. You cannot blame the tools for the results. At some point, the engineers made the decisions that led to the situation.

One feature of digital which is fantastic, is virtual soundcheck. The ability to mix

previously multitrack recorded shows, learn from and build on them is invaluable. I'm surprised that we don't see much more of this. It builds up the skills of operators and refines mixes without tying up the performers.

But when digital desks go wrong, they really go wrong! In the analog world, the main point of complete system failure in a desk was considered to be it's power supply. That is, it was difficult for the entire PA to fail unless the PSU failed, you would still get some sound out, albeit a few channels or a side down. To mitigate this a second PSU was often deployed.

In digital, because everything is in a centralised processing and transport architecture, a failure can mean losing the entire PA system. Anecdotally, It seems that PA system failures are occurring more often, and it is no surprise. It happened to me last month where during an intermission, I lost connectivity between the desk and and digital stage box which rendered the PA dead. In 30+ years that is the first time I had lost an entire PA during a show! I had to power cycle everything to get back up running. Radiohead lost their front of house at Coachella for similar reasons. The rumour being that the AVB card in the DSP engine failed.

The reality is that we'll continue to have these challenges because the professional audio industry is comparatively small, audio manufacturers have to rely on what is available in terms of digital signal processors and networking options from the mainstream IT industry. Audio networking is in the embryonic stages and wireless control is not robust enough for many applications.

Digital mixers are superb tools, but we still have a long way to go on this great journey.

> "
> The engineer can look up whilst making adjustments. That's critical!
> "
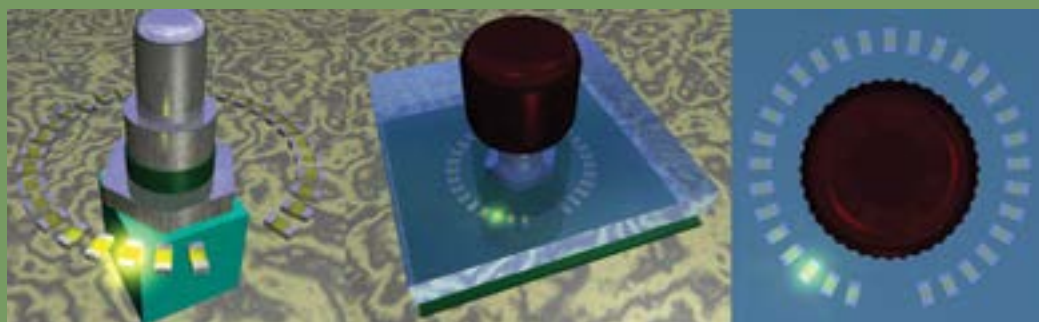
Magnificent Terms!
We will pay. Eventually

By Julius Grafton

I'm continuing on from last months 'Magnificent - Unconscionable Behavior' riff, which centered on the lowly paid and vulnerable in society. Remember the magnificent example of the Radio Rentals 'Rent, Try, Buy for $1' promotion? Where the poor buggers eventually paid $2004 out of their pensions for a washing machine worth about $550?

Now we lift the scope to businesses worth many millions, employing many people. They are helmed by astute and seasoned managers who know the lay of the land. Many of their upper echelon enjoy packages we can only dream of – you know, 800 grand a year for the top dog.

800 grand is about 16k a week, and after tax that is a nifty ten grand. Imagine getting ten grand in your account every Wednesday? WOW!

Turns out some of these SME's (Small Medium Enterprises) are being rogered by Very Big Corporations who dictate How They Will Pay. Nothing new in this, ask any supplier about how they get their dosh and you'll get the same (usually) story about how Government Departments and Big Corporates usually drag the chain.

Thankfully some of them are now offering suppliers access to a bank loan – to bridge the gap between invoicing the multinational, and getting paid. This is to ease the pain from the 120 day settlement period. You read that right – firms like Mars, the people who make The Bar. You know the one….

This is the text of their weasel worded release:

"Mars is committed to manufacturing in Australia across our seven sites in NSW, Victoria and Queensland, providing great jobs in regional areas and sourcing produce from local suppliers. While Australia presents a challenging economic climate for manufacturers, we continue to invest heavily in state-of-the-art equipment, processes and infra---" (yada yada yada).

Here it comes:

"In order to remain competitive and secure future growth for our business and for our suppliers' businesses, we are working individually with them to seek an extension of payment terms while providing them with access to a third-party financing program. Through this program, suppliers can obtain payment for their invoices, typically within 12 days, on very favorable finance rates based on Mars' credit rating. This improves cash flow for our suppliers and therefore gives them greater financial security…." (Much more yada).

Yep you got it, they will only pay suppliers after 120 days and hook the lucky suppliers up to THEIR bank for a loan to cover it. Magnificent! Brilliant too, 'cos if you are shipping container loads of whatever muck goes into their sticky chocolate bars, you are completely at their mercy and far less likely to take a better offer from Cadbury!

Turns out a bunch of multinationals are testing their suppliers with things like a 'formal' terms 'agreement', while some Government departments are routinely taking 90 days or more to cough up tax payer money to tax paying suppliers.

The Australian Small Business and Family Enterprise Ombudsman (ASBFEO) don't think it's so flash, they unearthed this and many more acts of *chicanery from a slew of submissions and over 2,700 survey responses to their Payment Times and Practices Inquiry. We're starting to like this ASBFEO mob!

* (Big word alert. It means: "the use of deception or subterfuge to achieve one's purpose.")

Package Price Wars
Are you winning, as Toll burns $4.7 BILLION!

Just two short years ago the guys running Toll Holdings, the huge transport group, were pictured grinning like Chesire cats after selling the public company to Japan Post for a massive premium.

For reasons best known to themselves, J.P. stumped up an insane premium to buy the group, which has transport holdings across Asia but mainly in Australia.

Japan Post paid $9.04 a share in cash to acquire Toll, which was a 49 per cent premium to Toll's closing price of $6.08. The total outlay was $6.5 billion, so the premium paid was around $3.5 billion. Dollars. Yes.

Keeping the Australian management in place, the group was to benefit from new technology to work the fleet harder. This would increase utilisation. How it dealt with worsening traffic in growing cities wasn't explained; and how the competition would respond was also left off the glowing media releases.

It didn't take long for the wheels to fall off the deal. It appears Toll were price takers, as Australia Post responded to the Japan Post deal by investing an extra $2 billion into its parcel facilities. The Singaporeans took note as well, beefing up their Couriers Please outfit. And of course the Germans stepped up the action at DHL.

Now J.P. has written off the goodwill, and a chunk of the I.P. value at Toll, to book a $4.7 billion impairment. It's a staggering reversal after just two years, and the tip of an iceberg called Global Market Forces.

Most significantly, I think the men at J.P. were mesmerized by the unit cost of Australian freight. Consider it costs $24.95 to overnight a 2kg package from Sydney to Melbourne, or $15.40 if you can wait four days.

Contrast this with FREE DELIVERY to your door in Australia from many online stores in the USA and China. Sure they are paying someone to carry the goods, but it can't be very much. Certainly not $24.95!

Enter the Union Postale Universelle, a busy little mob (under the auspices of the United Nations) who coordinate agreements usually written in French between postal services. Before this lot came to be, a country would need to have its postal service make deals with each other country, for the on-passage of mail and parcels.

Using arcane formulas, Ouija boards, and some chicken bones chucked in the air, they cook up rate splits for each country pairing. Just as well, since Australia Post face exponential expansion of inbound international parcel volumes.

Who in their right mind would run a freight company in Australia, with annoying things like Fair Work Commissions, Unions, all that safety stuff (like 'drive times'), distances, traffic jams, and the highest living costs anywhere this side of the equator?

Australian **Entertainment Technology from where** to where?

It's Our Time if we Want it.

Most of us possess the innate desire to understand our background, who we are and where we come from, accompanied with a curiosity in the central interests that impact our life including the industry that sustains our career and well-being. An all-encompassing history of entertainment technology in Australia is a broad and complex subject impossible to realistically address in this forum, however we can overview its evolution in a snapshot which will help give form to where our industry has come from and the possibilities moving forward.

From the dawn of entertainment, numerous technologies have been employed to assist performance and enhance the audience experience, be it the architecture of an ancient amphitheatre or the stage mechanics of a post Middle Ages theatre. A faithful companion, entertainment touches the soul, challenges the brain and stimulates the heart, healing, comforting, yes entertaining, inspiring, connecting, transporting, informing, daring, providing and rewarding, if we take it for granted we do so at our own peril.

The evolution of electricity and development of new technologies in the 19th century, including the ability to transmit signals and capture images, gave birth to the motion picture, recorded music and broadcasting, all of which was refined in the 20th century. Outside of the written word, these mediums are at the core of most entertainment today, and Australian ingenuity was there at the outset, participating and excelling in the evolution of entertainment technology. Australians created leading edge systems, devices and components, and developed numerous engineering techniques and parameters that underpin the industry worldwide.

The halcyon days for Australian made entertainment technology were the 1960s, peaking in the 1970s, in parallel with the evolution of popular music and associated entertainment mediums of the time. In these two decades, a significant number of Australian organisations produced innovative, high quality audio and lighting products, evident particularly in the field of live sound presentation, resulting in a high proportion of production equipment being sourced locally, assisted by a tariff protection

regime that imposed significant duty on imports. At the same time a considerable amount of engineering innovation was exported, but very little finished product made its way overseas.

As we entered the 1980s, local production began to decline being overtaken by imports and a relaxation of the tariff protection policy. The period saw the growth of a nation-wide network of entertainment technology importers/distributors, which have been the primary source of supply to the present. Over the preceding decades, and due the local landscape, many of these organisations developed skills that set them apart from their counterparts in the rest of the world. Today Australian distributors are often held up as role models to the international industry.

Whilst the entertainment technology industry has always engaged in local manufacture, it has never been unified, or effectively resourced. It has rarely capitalised on its collective creative and engineering skills, and with a few notable exceptions, has not historically realised industry wide international commercial success. However, in recent years, several Australian organisations developed leading edge technology resulting in significant international market penetration. Their achievements should be lauded and signal what is possible for the broader industry.

So where do we to go from here, more to the point what do you want to achieve? One thing is certain: stand still, remain isolated and you will undermine your potential. The formation of our industry's peak body ACETA, has unified the industry for the first time in its long history. ACETA presents the opportunity and capacity to support the achievement of our personal and corporate ambitions and establish entertainment technology as a powerhouse industry in Australia, that is the vision. ACETA has begun interaction with government in the goal of securing much needed and significant export support. ACETA will announce dates and venue for the first entertainment technology industry convention in the coming days, an event that will address and answer many of the challenges we confront. The only challenge confronting ACETA is apathy, we ask again: participate and benefit.

All the best
Frank Hinton
President - ACETA

ADVERTISER INDEX CX 125 MAY 2017 +

DUNCAN Fry

"...First, I got up...Then I went downtown ...To look for a job ...Then I hung out in front of the Drugstore... etc etc" ('Sister Mary Elephant' from Cheech and Chong's eponymous first album)***

"Let's get away from work and the audio biz and head off to the country for a quiet few days holiday," said my gf – let's call her MB – "I'll find somewhere nice and peaceful where we can relax and take Charlie (the dog) with us as well.'

Finding dog friendly accommodation isn't that easy, even with a small clean Whippet (Whippet good!) but MB persevered and after some intense online investigation we settled on the sleepy little country town of Bright, near Wangaratta in the Victorian highlands. We booked a weekend getaway cottage about 5 kilometres out of town in Porepunkah, an easy drive in and out of Bright itself.

To pass the time on the 4 hour trip, we took an audio book from the library to play in the car. "The Eye of the Needle", a wartime thriller from Ken Follett. It was 8

CDs, which we estimated as 4 going there, and 4 for the trip back. It worked out really well, and from now on for me, it's the only way to do country car trips of any distance. So much so that on our return home we had to wait outside in the car for half an hour while we listened to the end of the story!

But I digress.

We left Melbourne at around six a.m. and arrived in Bright around a quarter to ten. The estate agent who had the keys didn't open till ten, so as we were a bit early we sat outside a coffee shop and watched country life go by.

A couple of customised V8s rumbled past while we sipped our English breakfast teas and scones, then another, then a couple more, then all of a sudden

the whole centre of town seemed to be full of them; gleaming shiny 1950s, 60s and 70s monsters throbbing away while the air was full of exhaust and high octane petrol fumes.

We wandered over to the agents and got the keys. While they were doing the paperwork, we asked "Quiet weekend?"
"Ooh no," they said, "This is the busiest weekend of the year! Hot rod and custom cars from all over the country come here to cruise up and down around the town, have a big party in the city centre which goes all night, and a big car show in the showgrounds. It's the biggest thing in town!"

Hmm. Having sold my own 8 litre V8 Plymouth Superbird some years ago, my taste in cars had changed, and the thought of being around that much noise and smell for three days didn't thrill me (or MB!) as much as it once might have. So much for a peaceful weekend.

Luckily being 5 kilometres out, we weren't bothered too much by the action in the town. Occasionally you'd hear a couple of cars hammering along down the highway, the odd burnout or two, but that was it. We lazed around the cottage all morning; I went for a bike ride down one of the rail-trails in the afternoon while MB read a book and walked the dog.
When I got back she said "I know - how about we get some takeaway fish-and-chips and a bottle of wine for dinner and have it on our laps while we watch a movie."

By nightfall, there would have been, without a word of exaggeration, several hundred cars and their owners jam-packed into the town's central shopping precinct and spread out in the surrounding streets.
"Jeez," said MB, "I've never seen so many black t-shirts in one place before!"
We drove as close to the centre as we could, then parked and found the local fish-and-chip shop.

 "OK" I said "I'll tie Charlie up outside and go and order, while you go to the supermarket and get some milk for a cup of tea, some wine and some chocolate to have with the movie. I'll see you back here."

The fish-and-chip shop was super busy - it looked like everyone in town had the same idea as us. There were no poles or small trees that I could tie the dog to, but there was a small table and some chairs out the front of the shop, those lightweight aluminium chairs that you see in the interview rooms in Law & Order SVU. The

ones that Detective Stabler hurls at suspects! I tied the dog to one of them, then went inside and ordered.

As I waited patiently in the queue, suddenly my number was called. I pushed my way to the counter, and as I did so I could hear laughter, clattering and banging noises, and various sounds of consternation outside. I looked over my shoulder just in time to see the dog trying to follow me into the shop, dragging the chair behind her. Unfortunately she had become entangled in the plastic strip curtain that was keeping the flies out of the shop.

Sensing that all was not going well, she turned around to go back outside the shop, somehow collecting another chair and more of the fly curtain on the way. The curtain let go and crashed onto the pavement, and the dog trotted off down the street looking for MB, still dragging the first chair along with her.
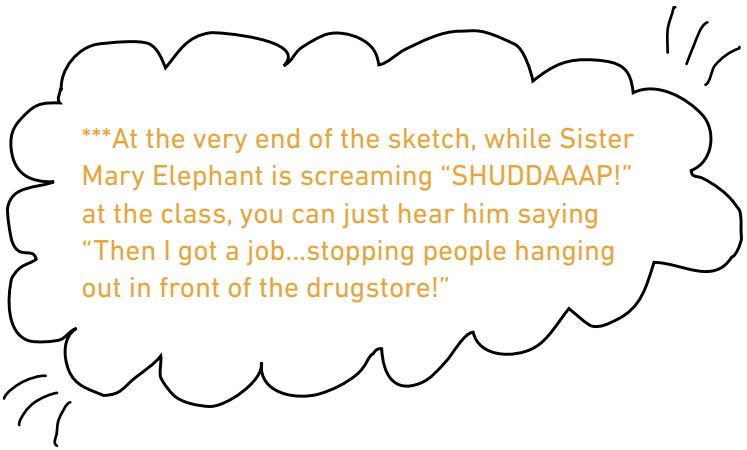
"Look at that poor dog," MB said to herself as she walked back from the supermarket, loaded up with our supplies.
"Oh shit, it's my dog! Duncan," she yelled, "what have you done to the poor dog?" Seeing her favourite owner, the dog accelerated, cutting a swathe through the laughing and cheering crowd as the chair swung behind her from side to side along the pavement!

"Where's the dog gone?" I thought, as I exited the shop, clutching our dinner and trying not to look at the tipped over chair wrapped in the fly curtain and the upturned table! Looking around I heard someone calling my name and the dog barking with excitement. Uh oh!

It was a quiet ride back to the cottage, with the dog on MB's lap soaking up the attention, and the two of them staring at me with reproachful eyes. Then we both started laughing and shaking our heads, while the dog surreptitiously tried to rip open the fish-and-chip wrapping paper.

"That bloody dog of yours," we both said.

***At the very end of the sketch, while Sister Mary Elephant is screaming "SHUDDAAAP!" at the class, you can just hear him saying "Then I got a job...stopping people hanging out in front of the drugstore!"

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