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GEARBOX REVIEWS: RØDE NTR Ribbon Microphone • Martin M-Touch • Soundcraft Si Impact
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Photographer: Troy Constable



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Return Of Tom Misner?

My lead news this issue contains fact and rumor, where the fact that Abbey Road Institute is setting up to sell courses in Sydney and Melbourne is tempered by the red hot rumor that former SAE boss Tom Misner may have something happening behind the scenes.

I'm pointing this out here, away from the article, in the interests of journalistic professionalism. It is a story because prospective students should know if they are signing on to a college influenced by Tom, or not. The college can now say nothing or deny it (they didn't reply at presstime).

Google The Misner Factor and also read the article on Tom from BRW for amplification. I'm headed to our Blog soon to reprint my various stories about Tom as some were rather entertaining.

He was the single most successful audio educator this country has produced, and maybe for all the wrong reasons. After he sold SAE to Navitas in 2010 for around \$50 million, things became very quiet. Until now.

Rise Of The Kiwi

I've spent time in New Zealand lately setting up our office and preparing for the New Zealand edition of CX. It will be different, and it needs to be different. Some observations from there:

We are different. While Australian's pride themselves on being resilient and self contained, the kiwi is moreso. They are less loud, less inclined to fight. They don't really trust us 'Skippies'.

Their government is more efficient than ours. They make it easy for an Australian to move or set up a business. We make it harder for them to do the same thing.

They reached decent accommodation with their indigenous several hundred years ago. We haven't. I don't let CX do 'politics', so I'll stop here and just say I really like and admire the kiwi spirit. And I love their airline with its Men In Black safety demo. YouTube it!

Dob In A Cowboy

After last month's lead story on the North Coast staging co, we've had a rash of reports of potentially unsafe stage roofing systems and non engineered line arrays. While the vast majority of the industry want to work safe, some don't understand.

For every story like that which we run, ten don't make it because we don't have proof. So while you are welcome to continue to contact us, please don't expect or demand a story to appear out the other end.

Most magazines steer well clear of anything vaguely contentious. To actually publish some of the material we do, costs us an enormous amount of time and effort. But it is what CX has been built on, and I'm proud of that.

- Julius



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Abbey Road College
Perhaps with added Tom



SAE (formerly School of Audio Education) until selling to Navitas almost five years ago.

This is where strange things seem to come together.

Tom took around 50 million when he sold out and reclined, out of public view. Until the sale in 2010 he was very visible, walking around Audio Engineering Society trade shows and announcing huge deals inside and outside of SAE. The recording studio college, established in Sydney in the late 1970's, expanded world wide with an opaque structure centered on Amsterdam and a management team populated by hard men from Europe.

After purchase, Navitas got on with running SAE and ceded some ground in Australia to arch rival Martin Cass at JMC which expanded exponentially. While both SAE and JMC grew enrolments, the advertised job openings for recording engineers and producers hit zero.

Students today can access VET Fee Help which is an Australian Government managed student loans scheme which is rumored to face severe sanctions under the Turnbull government after many private colleges (not any named in this article) outrageously gamed the system. Spruikers would sign up non English speakers or intellectually disabled to Diploma courses, offering an inducement like a laptop. The college was then able to claim up to \$18,000 in course fees, which the student didn't need to start repaying until their taxable income exceeded \$54 grand.

Enter Abbey Road with an Australian operation managed by Paul Ledingham and assisted by Gianni Michelini. Ledingham was Misner's Melbourne manager and then spent four years under Navitas running the Melbourne SAE before decamping back to Misner to run Studio 301.

Now he turns up heading Abbey Road in Australia, and the rumors are running hot that Misner is an 'advisor'. As it is slightly less than five years since the sale of SAE he may or may not be still under a non compete clause. He is enormously difficult to find. The sale of Tom's studio to interests associated with Abbey Road are too coincidental.

As to Abbey Road Institute in Australia, it will cause heartburn at SAE, JMC and the other three letter acronym college that flogs Studio courses, AIM - the Australian Institute of Music. The Melbourne Abbey Road is under fit-out at 134 Stuart Street Southbank. Ironically the shareholders are mainly from Hayball, an architectural practice also located at the same address.

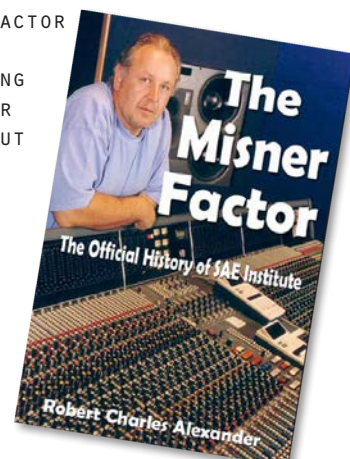
In Sydney the college will need to fit into the working spaces at 301. The course on offer is not yet accredited, which means Abbey Road need students to pay the \$14,000 annual fee instead of flicking it on the tab with VET Fee Help.

CX understands Abbey Road have applied to be a Registered Training Organisation in Australia, and then they can offer VET Fee Help loans to students. As to where the graduates will find work? Abbey Road say their course is the 'first step toward a professional audio engineering and production career.'

Mystery surrounds the Abbey Road Institute which opened in London this year at the historical recording studio. Touted as an international initiative, the college-within-a-studio offers a 12 month Advanced Diploma in Music Production and Sound Engineering in the UK. The mechanics of squeezing this into a working studio are unclear, but it is a step up from the 'purpose built' colleges like SAE which produce graduates with nowhere to go - other than their laptop loaded with ProTools.

Things took an interesting turn recently when Studio 301 in Sydney was sold to 'Abbey Road Institute'. Studio 301 was owned by mercurial mogul Tom Misner, who ran

COLLECTORS ITEM, THE MISNER FACTOR EXPLAINS EVERYTHING YOU NEVER KNEW ABOUT RUNNING AN AUDIO COLLEGE!



Freeman Close In Staging Sale Wraps

Shareholder approval for the sale of Staging Connections to Freeman Audio Visual in the United States should see the deal completed this month. After a brief bidding war with rival US firm PSAV, Freeman emerged the winner, paying as much as \$62 million for the national audio visual and events supplier.



PSAV and Freeman were invited to bid but only PSAV met the mid year deadline, offering around \$54 million, leading to an agreement in July. Then Freeman countered on July 10, PSAV made further conditional offers, and the board settled with Freeman for around \$62 million on August 10.

The purchase price included a break fee for PSAV of \$1,277,000 and incentive payments totaling \$1 million to key Staging management, offered some time ago as reward for assisting in the sale process. A small bonus fee was allocated to the outgoing board members.

At conclusion, Staging's bank NAB will be repaid around \$49.5 million, and the shareholders will receive around \$8.5 million.

CX understands Staging staff preferred Freeman over PSAV as the latter is ultimately controlled by a bank. Freeman is a long established family company. Freeman are expected to rebrand the company in Australia.

This will bring to an end a period of considerable uncertainty where Staging found itself squeezed by a group of former managers and directors who established Scene Change and AV Partners, both of which targeted Staging clients, forcing down commissions and forcing up capital expenditure.

Freeman have both deep pockets and a large multinational client base, which will alter the dynamics in the 'in-house AV' business over the years ahead.

Sydney Uni Denial Seymour Centre Safe?

Recently Sydney University proposed the NSW Government place a subway station under its South East corner, instead of across town at Waterloo. Should the plan proceed, the station box will need to be dug somewhere, but not through the Seymour Centre Theatres, the Uni insists.

Currently the subway, known as the Sydney Metro NorthWest, has eight underground stations being built from Epping to Bella Vista. Each 100,000 square metre site has pre casting and soil remediation plants. Once complete each station occupies an average 18,000 square metres.

CX superimposed the average current construction site over the Seymour Centre and associated university properties. The blue box in our image represents a current work site, the yellow box the finished station footprint.

But the University insist the Seymour will be safe. "There are some buildings already slated for demolition, the best known of which is the Wentworth building,



which may be affected if one of the options on Maze Crescent is preferred but neither option will affect the Seymour Centre", said Kirsten Andrews from Uni PR.

If the government approves the proposal, it remains unclear where the station excavation can occur.

Entertainment Suicide Alarm

Entertainment Assist Reports

A study on mental health and suicide affecting entertainment industry workers concludes backstage is not a good place to work.

Entertainment Assist has been conducting world-first research into the Australian entertainment industry in association with Victoria University. 2,904 people were surveyed across all facets of the industry. The findings present a concerning picture about the health and wellbeing for those working in the Australian Entertainment Industry.

Suicide attempts for Australian Entertainment Industry Workers is more than double that of the general population.

In the last twelve months Australian Entertainment Industry Workers experienced suicide ideation 5-7 times more than the general population and 2-3 times more over a lifetime.

The levels of moderate to severe anxiety symptoms are 10 times higher than in the general population. The levels of depression symptoms are five times higher than in the general population.

In the last twelve months Road Crew members experienced suicide ideation almost 9 times more than the general population. Rates of ideation, planning and attempts are extremely high and indicate a need for early intervention programs tailored to the industry.

65% of respondents earned less than \$60,000 per year. Marijuana use is four times greater than the general public. Cocaine use is twelve times greater, Ecstasy seven times, and pain killers and tranquillizer use 7 and 9 times average.

Horrifyingly from a survey base of 2407 people, 17.5% had used meth/amphetamine in the last 12 months.

The gender mix of the group was female 54% and male 45% with 1% other. Significant numbers reported trouble finding time for family and social life outside work.

www.entertainmentassist.org.au



Integrate 2015

Melbourne had its first taste of Integrate in August with a successful showing of the large 3 day tradeshow.

Around 5,500 trade made it through the doors at the MCEC, and 100 exhibitors showed video, some audio and a little lighting. The show is poised to grow a little with lighting, and it returns to Sydney Showgrounds at Sydney Olympic Park next August.

Finalists

The P.A. People

The P.A. People is nominated as a finalist in the Australian Event Awards for its delivery of the world's largest ceremonies communications system for the inaugural European Games in Baku, Azerbaijan.

The P.A. People was selected from hundreds of entries from across Australia to make the list of just four finalists in this category. The awards are delivered in November.

AMX

Australia

From October, AMX Australia will have access to a wide range of Harman Professional products.

This follows a restructure within Harman, the worlds largest pro audio manufacturing conglomerate. Brands available (in part) to AMX Australia include AKG, JBL, Soundcraft, BSS and others. The move does not affect Harman distributors already in place.

Departing

2015

Richard Neale will leave Hills Limited in November to take up a General Manager gig at a 'smaller audio visual firm'.

Richard was GM at Audio Products Group which was acquired by Hills in June last year. It is not known where he is headed.



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Martin RUSH
MH 6

The RUSH MH 6 Wash is adapted from the popular RUSH PAR 2 RGBW Zoom and utilises the same LED engine and zoom system, while also featuring moving head capability. The RUSH MH 6 Wash offers a fully pre-mixed colour system of 12 10 W RGBW LEDs with a 10°– 60° zoom. It also features full electronic dimming, strobe effects and temperature-controlled fan cooling for quiet operation.

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

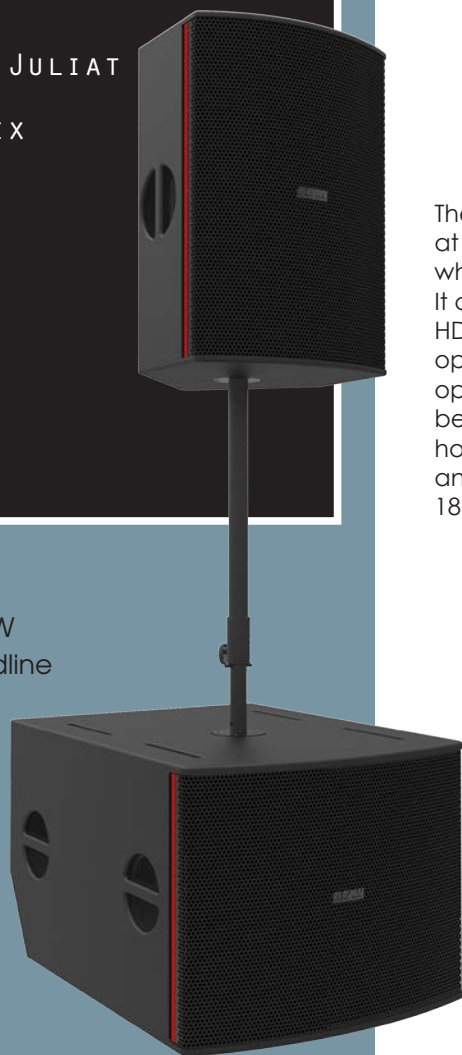
Hitachi
CPHD9321 & FL900



The CPHD9321 projects a Full HD (1920 x 1080) 16:9 aspect image at 8,200 ANSI Lumens, suited to environments such as boardrooms, where a mix of high resolution media and presentations are shown. It contains a built-in dual colour wheel, four digital inputs including HDBaseT, Dual Lamp and a Multi Layer Filter. Designed for 24/7 operation, it's also capable of edge blending. When fitted with the optional Ultra Short Throw rear facing FL-900 lens, the projector can be mounted as close as 0.11m from the projection surface with a horizontal separation of only 0.55m. The FL-900 has an F2.0 aperture and a focal length of 5.3m, weighing in at 3kg and measuring 279 x 181 x 404mm.

Australian Distributor: Hitachi Australia Pty Ltd
www.hitachi.com.au or (02) 9888 4100

EAW
Redline



EAW's new powered speaker range consists of the two-way RL12 12' and RL15 15' mid-high boxes, and the RL18S 18-inch powered subwoofer. Powered by 1,2500W of fanless Class-D amplification, the RL12 and RL15 offer consistent directivity via Beamwidth-Matched crossovers on 90 x 60 degree user-rotatable horns. Three simple user-defined voicing options allow a variety of uses without need of a computer or external processor. Four-aperture ports provide bass support with no turbulence while maximizing transducer-cooling air flow for reliability. The RL18S subwoofer can be deployed as cardioid when used with one or more units, with cardioid mode enabled via simple rear-panel controls.

Australian Distributor: Production Audio Video Technology
www.pavt.com.au or (03) 9264 8000

Robert Juliat
Merlin

Robert Juliat's new touring followspot, Merlin is the culmination of an ambitious project to produce a powerful, rugged followspot for the touring market. With an output that belies its 2500W HMI lamp and a massive 3°-12° beam range, Merlin covers both long and medium throw ranges in one unit. Merlin is designed to outshine the ever-increasing power of LED lighting and videowall backlighting, while newly designed bodywork ensures Merlin is easy to install and maintain, tough enough for the road, and tourable.



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

Extron
4K HDMI Matrix Series

Extron has introduced the new DXP HD 4K Series of high performance HDMI matrix switchers for resolutions up to 4K, including 1080p/60 with Deep Color. They are HDCP compliant, and support HDMI data rates to 10.2 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats. Extron technologies such as SpeedSwitch, Key Minder, and EDID Minder, along with automatic input cable equalization and output reclocking, ensure dependable system operation with exceptional switching speeds and compatibility between devices. The matrix switchers also feature built-in de-embedding, enabling digital audio from any input to be assigned to the digital or analogue stereo outputs for streamlined integration. Available in I/O sizes from 4x4 to 16x16, the DXP HD 4K Series is ideal for use in applications that require reliable, high performance routing of digital video and digital or analogue audio signals in professional AV environments.



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

Dynacord
PROMATRIX 6000

The Dynacord PROMATRIX 6000 is a combined public address and voice evacuation system with flexible, modular system architecture for small- to medium-sized installations, including sports facilities, hotels and educational venues. Components include a controller with DSP functions, a 24-zone router, a two-channel amplifier, call station and call station extension. Up to four audio signals can be simultaneously distributed to different loudspeaker zones, while individual announcements in any zone do not interrupt music in the other zones. "Basic" and "Expert" configuration modes



Australian Distributor: Bosch Communications Systems
www.boschcommunications.com.au or (02) 9683 4752

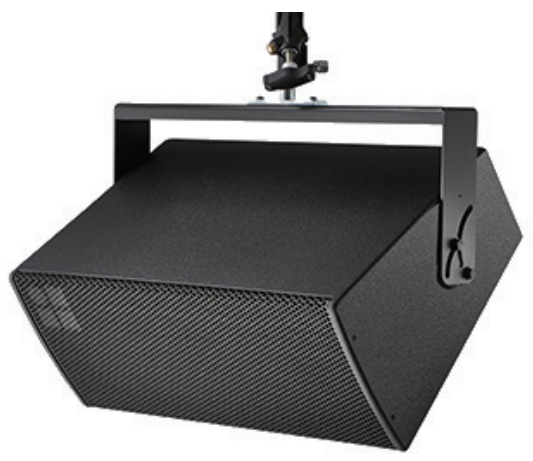
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d&b audiotechnik
V Series Point Source

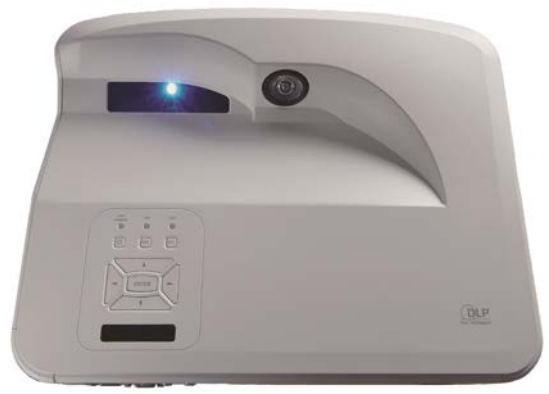


The new d&b audiotechnik V Series Point Source range consists of three models, the V7P, V10P and V-GSUB. Building on the 3-way passive design of the V-Series line array modules, the V7P and V10P point sources house two 10" drivers and one 8" MF driver plus single 1.4" exit compression driver with a constant directivity horn. The frequency response extends from 59 Hz to 18 kHz, offering flexibility as a stand-alone solution. The V-GSUB cardioid subwoofer requires only one amplifier channel and shares the same cabinet design and driver arrangement as the V-SUB: an 18" driver in a bass reflex design facing towards the front and a 12" driver in a two chamber bandpass system radiating towards the rear. The V Series is also available as installation versions with installation specific rigging systems.

Christie
Captiva Series

With the choice of standard HD (DHD400S) or ultra wide (DUW350S) aspect ratios, the Christie Captiva Series allows you to create and share unique user experiences whether it's in the classroom, conference room or retail environment. Based on laser phosphor illumination, these solid state lampless projectors provide 20,000 hours of low cost and reliable operation while offering a suite of easy-to-use features, multiple mounting options and instant on/off, creating canvases up to 140" diagonal in landscape or portrait mode, while easily adding interactivity capabilities and running multiple applications simultaneously.

Australian distributor: Christie Digital Systems
www.christiedigital.com or (07) 3624 4888



dbx
500 Series

HARMAN's dbx has introduced its 500 Series processors; five compact half-rack-space recording studio signal processors. The new 500 Series models include the 560A Compressor/Limiter, 530 Parametric EQ, 580 Mic Pre, 520 De-Esser and 510 Sub Harmonic Synth. The 500 Series are designed to be housed in a vertical configuration in the PowerRack8, which is a 19" rack-mount power source.

The rear panel sports eight slots of balanced XLR inputs and outputs along with eight slots of unbalanced 1/4" inputs and outputs. A 48V phantom power switch is located on the front of the rack for easy access. The PowerRack8 boasts rugged, all-metal construction, is designed to be fully compatible with the 500 series format, and features flexible onboard signal routing.

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Symetrix
Dante expanders and
SymNet 4.1

Symetrix has launched three new products allowing integrators to quickly and easily add extra inputs and outputs to their SymNet DSP systems. The xIn 4 is an audio input expander for SymNet Dante-scalable systems featuring four mic/line inputs with +48 VDC phantom power. The xOut 4 is an audio output expander featuring four line outputs, and the xIO 4x4, is an audio input/output expander for SymNet systems sporting four mic/line inputs, including +48 DVC phantom power, and four line outputs. All three devices are configured using SymNet Composer software, thereby eliminating any requirement for hardware DIP switches, front panel menus or third-party software. All models come supplied with PoE injectors whilst rack mount and surface mount kits are sold separately. To ensure seamless configuration of the newly-released devices, Symetrix has also released an update to its SymNet Composer



software. Version 4.1 expands on the previously-announced integration of Shure, Audio-Technica, Attero Tech and Stewart Audio products to also include British microphone manufacturer Clockaudio, and its CDT100 mic-to-Dante interface product which has features including LED powering and microphone motor control.

Australian Distributor:
Production Audio Video Technology
www.pavt.com.au or (03) 9264 8000

Video Devices
PIX-E



PIX-E monitors feature a compact, die-cast metal housing and an LCD display protected by Gorilla Glass 2, making them the ideal choice for cinematographers and videographers looking for a monitor that can stand up to the rigors of the most extreme production environments. PIX-E includes PIX-Assist, an impressive suite of monitoring tools including TapZoom for unrivalled focusing speed, false colours and zebras to help set exposure, guide markers for framing and a range of scopes including waveform monitor, histogram and vectorscope. These new on-camera monitors incorporate a user interface that combines easy-to-access tactile buttons and intuitive touch screen. With their ability to record the highest quality Apple ProRes edit-ready video, the PIX-E recording monitors are an affordable tool for any video production professional.

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

Optoma
EH320UST



The new EH320UST 1080p ultra-short throw projector produces 4000 ANSI Lumens with a contrast ratio of 20,000:1 ensuring the best possible viewing experience, even in bright, outdoor settings. A 1080p Full HD resolution provides sharp and detailed images from High Definition (HD) content without the need for downscaling or compression, making it ideal for playing Blu-ray content and video games as well as HD broadcasting. The EH320UST is also equipped to display true 3D content from compatible broadcasting servers, Blu-ray players, and the latest generation games consoles. In addition, support for 144Hz rapid refresh rate provides ultra-smooth flicker free images.

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

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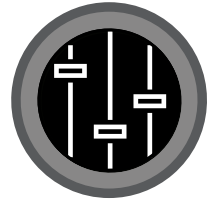
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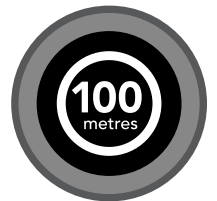
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Integrate 2015

ICT meets AV in the MCEC

BY JASON ALLEN

The Integrate tradeshow made its way down south to Melbourne in August for the first time in its six year history. The Melbourne Convention and Exhibition Centre suits the show well, with the vibe being almost exactly the same as InfoComm in Las Vegas, complete with casino next door. The standard of exhibit, technology and visitor was high, with many of the industry's leading figures making the journey down from Sydney, lured in part by the excellent programme of education seminars laid on by InfoComm.

On the tech side, the dominant themes were 4K and HDBaseT on everything, lasers and ultra short throw lenses on projectors, new ways to deal with IPTV, and AV control evolving to become a human resource management tool. Jason Allen prowled the show floor to bring you this round-up of new and notable technology, including news on movements in product distribution and personnel changes.

Introducing Australis Pro Audio



Australis Pro Audio: L to R Ben Ruut, Trevor Morrow, Adam Goglis, Kurt Schramm, Dave Kelly, Peter Costello, Nik Buchanan

Australis chose Integrate to introduce Australia to its new stable of professional brands, now falling under the Australis Pro Audio banner. Having acquired distribution of the Music Group's Behringer and Turbosound, Australis recently announced the TC Group of brands, including lab.gruppen, Lake and Tannoy, are now also in their stable..

"We've been looking after the artists for 40 years with brands like Ibanez and Tama," said Australis CEO Trevor Morrow. "Now we're also looking after the stage, front of house, the audience and the technician. We know what the artist wants, and now we're giving the technician what they need. Our new brands are integrated into our business using the same logistics, marketing, and accounts team, but we've brought in technical expertise and talent to make sure we supply what's

required. New recruits Nik Buchanan, Dave Kelly and Peter Costello are very experienced, service-driven, and fit fantastically into the culture of Australis."

Crestron – more HR than AV



Crestron Fusion is an enterprise management platform that in addition to enabling remote monitoring and management of AV equipment, also handles room scheduling, lighting control, climate control, and energy consumption measurement and control, all from the same software, run either on your own server or through the cloud. What's really interesting about it is what's possible when it's paired up with customisable personal profiles and individual device control.

Using handy gadgets like PinPoint, a tiny USB/Bluetooth device that plugs into USB wall sockets or chargers, a user on the Fusion network can have their preferences follow them around a building, or even from home to the office. Through their iPad or iPhone, AV controls relevant to the space they're in appear on screen. PinPoint sensors outside meeting rooms let the user see availability and make bookings. Temperature, lighting and shade preferences can all change when you enter a space. The possibilities are huge, customisable and food for thought for any integrator.

Interacting with Hitachi



With huge players like Microsoft entering the interactive panel market with its oversized Surface model, the sector is about to get very crowded. But companies like Hitachi have the drop on the newcomers, having occupied the market for so long. The HITFHD6516 offers six person multi-touch interactivity, a bright LED anti-glare screen, wide viewing angle and 15W front facing speakers. It's compatible with Windows 7 or 8.1, has wireless capability and the option to include a built-in PC.

Left: Hitachi's Michael O'Connor demonstrates the HITFHD6516 65" full HD interactive flat panel

Collaborating with Wolfvision

The market for wireless collaborative devices for small corporate and education spaces continues to expand. The Wolfvision Cynap is one of the most flexible and useful devices I've seen for this application. It's built-in wireless supports connection up to four BYO devices on iOS, Android, Mac or PC. Cynap can play, display, record, and stream all commonly used media simultaneously, from local storage, connected devices, cloud or USB. It supports both AirPlay and Miracast, and can record video and audio of sessions direct to internal memory or USB. Connectivity includes HDBaseT, multiple HDMI in and outs, network port, four USB ports, and audio in and out.

Below: Hill's Himal Jekishan with the Wolfvision Cynap



Above: Crestron's Stephen Beck uses his iPhone to book a meeting room via Fusion and PinPoint



OHRCA Spotting

Roland's new M-5000 made its Melbourne debut on the Hills Stand, ably presented by Roland's Marc Allen. The open architecture system isn't really measured by ins and out, but by 128 processing paths, completely user configurable. And that's what Roland's OHRCA (Open High Resolution Configurable Architecture) system is all about – the ability to make the desk do just about anything you want. Compatible with all existing Roland stageboxes and M-48 personal monitors, you can also connect the M-5000 to Dante, MADI, Waves SoundGrid, REAC, XI-SDI, XI-SFP, and XI-DVI. You can set-up three inputs per channel (input, track and alternate), make ins and outs stereo or mono, reorder EQ and dynamics processors, setup a Mix Minus, Solo In Place, and run and monitor in 5.1. Topping it all off are 24 DCAs, 8 mute groups, 8 FX engines, 32 GEQs and parametrics, two RTAs, and a built in 16x16 USB interface.



Above: Roland's Marc Allen with the M-5000 Live Mixing Console

Audio Brands Australia presents Univox



Audio Brands Australia's Don McConnell with Univox

Rapidly growing distributor Audio Brands Australia were happy to announce their distributorship of Univox, an industry leading hearing loop manufacturer. Founded in Sweden in 1965, Univox export to countries including Norway, Denmark, Finland, United Kingdom, The Netherlands, Germany, Hungary, Poland, Italy, Switzerland, USA, New Zealand and China. Long-term dedication to R&D has positioned Univox at the forefront of the induction loop industry, with the range featuring high voltage and high current models with long-lasting casings. Univox were also deeply involved in the creation of the enhanced IEC 60118-4 standard for induction loops, which was adopted in 2006.

EAW goes Redline



PAVT's Ben Clarke with EAW Redline

Production Audio Video Technology brought the cool to Integrate with their craft beer bar and musical act playing through their enormous EAW Anya adaptive line array. But the focus wasn't on the mighty Anya, but the latest from EAW; the Redline range of active speakers. The Redline family consists of two powered, two-way loudspeakers – the RL12 12" and RL15 15" – along with the RL18S 18-inch powered subwoofer. The top boxes feature 90 x 60 degree user-rotatable horns and 1,250W of fanless Class-D, Power Factor Corrected amplification. On-board processing lets you choose between three user-defined voicings. The RL18S subwoofer runs a single 18" powered by a 1000W amp. When you've got two or more, you can use them in cardioid mode via simple rear-panel controls.

Extron in control



Extron's Marc Booth with the CCI Pro 700

With a huge presence near the front door of the show, Extron had its full range of switching, routing, processing and control products on display. But what caught my eye was this not-very-Extron-looking bit of gear, the CCI Pro 700. It's a control system and user interface for conferencing, collaboration and AV control. Looking like a phone with an LCD screen, it includes a 3.5" colour information display, a numeric keypad, and backlit buttons. The information display can be used to show contact information, call directories, and call status. Buttons directly below the display can be used to navigate custom lists and menus. The display and all buttons can be customised using Extron software. This is a good looking, powerful piece of control hardware that will look at home on any boardroom table.

Q-SYS goes Corporate

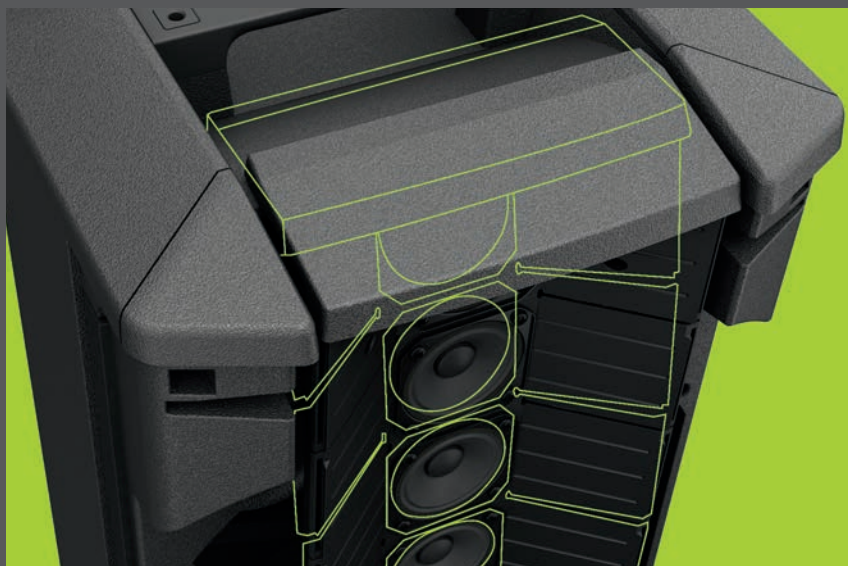
The expanding range of QSC Q-SYS processing and control options at the TAG stand



Technical Audio Group were showing off the expansion of the Q-SYS range to include both processors and control aimed fairly and squarely at meeting rooms. The QSC Q-SYS Core 110f is the latest addition to the Q-SYS line-up of network audio solutions, with 24 I/O, USB, POTS and VoIP simultaneously. It integrates with QSC's own suite of software-based conferencing technology which includes next generation acoustic echo cancellation (AEC), multiple-instance SIP softphones, gain sharing and gating automixers. Complementing the new processor are new control options like the TSC-7T table touchscreen and the TSC-7w wall mounted screen.

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BSS expands control and connectivity



On the Jands stand, BSS were showing their new BLU-DAN Dante to BLU link bridge. With Dante now the dominant digital audio network standard, the BLU-DAN lets BSS users simultaneously transmit and receive 64 channels of Dante via BLU link to any BLU link device, including amps and processors. Two more handy options for BLU systems include the BSS EC-V Ethernet Wall Controller, a volume control compatible with BSS Audio Soundweb London, Crown DCi, and other HiQnet devices, and the BSS EC-4B Ethernet Wall Controller, a four button controller compatible with the same range.

Below:
Sennheiser's
Jason Grbevski
with Speechline Digital



After being nice enough to invite us to their 70th birthday party at the David Bowie exhibition running at ACMI, Sennheiser wowed us with SpeechLine Digital. The range consists of mobile transmitters tailored for presentation, with speech optimised microphone capsules and an easy-to-integrate stationary receiver. Batteries can be recharged in multi-device chargers or via USB, and give a 15 hour operating time. Running in DECT (1.9 GHz license free range), Automatic Frequency Management keeps channels interference free. Automatic Sensitivity Management makes the setup even easier, with gain settings made automatically. Speechline can be controlled over a network via AMX, Crestron iOS and Android apps.

Lightware in the Matrix

Lightware were showing a handy range of new matrix switchers, the MMX Series. Designed for smaller meeting room and classroom environments, the range has three models. The MMX6x2-HT220 has six video inputs and two video outputs - four HDMI 1.4 and two TPS (HDBaseT) inputs and two independent HDMI outputs which both have mirrored TPS (HDBaseT) outputs. With 4K@30Hz, 3D capabilities and HDCP fully supported, the device also has four audio connectors for audio insertion and two audio outputs for de-embedding purposes. PoE 48V remote powering is available on all TPS ports on both input and output. The other two models are variations on the HT220; the HT210 has the same specs but only one TPS output, while the HT200 has only HDMI outs.

NAS in the Cloud



National Audio Systems distribute a range of extremely useful integration product, not least the Cloud range. Operating in the UK since the 70s, Cloud make products specifically for commercial audio installation. In the rack pictured, Cloud products from the top down include the DCM1e 8 in 8 out digital processor, CDR1 remote control, LM2 input and volume control wallplate, CX263 three zone, eight in mixer, and 36/50 two zone mixer amplifier.

National Audio System's
Shane Bailey with Cloud
and Ashly

ULA's Pixel Pitch



L to R: ULA's Cuono Biviano, Blair Terrace, Lenka Šatánková,
and Nathan Wright with their Vuepix S1.8 screen

Vuepix's S Series are serious LED screens for serious applications. Proudly hanging in pride of place on ULA's stand was a screen made up of S1.8 panels, which measure 465x465mm with a depth of 78mm, contain 256x256 pixels per panel, put out an impressive 800-1,000 nits and have a very satisfying 1.81mm pixel pitch. Assembly is practical and well designed, with some really well-thought out features for protecting the sides of the panels from damage if it's going into a hire situation where its regularly assembled and disassembled.



Lightware's Jacques van Deventer
and Jason Wright
with their 25G Hybrid Frame

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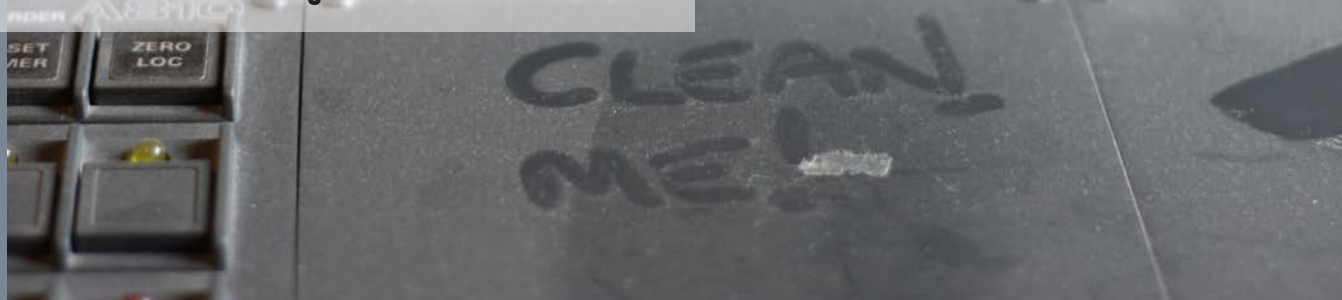
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THE MILL REPORT

People, it seems, are re-discovering analogue tape... again!

Just when you might have felt certain the format had gone the way of the steam engine, it's back! How long analogue tape will return for or how the machines used to spin it will survive another resurgence is another matter.



When the analogue tape recording format went away a few years ago (for the second time), soon after most of the world's tape manufacturers went out of business, I really thought that would be the end of it.

'R.I.P. my beloved Studers and Ampexes', I figured. But no... it would seem the recording industry is on the same magic roundabout as the fashion industry. Get your old tape machines out folks, it's 2015 and analogue tape is back!

or is it?

It's a bit hard to judge these things really. The noise surrounding it (if you'll pardon the pun) is a bit like vinyl – everyone talks about its comeback periodically, but how many people actually play records at home I wonder?

Similarly, a few people having a discussion about recording onto tape doesn't a resurgence make, but I think the new shift is probably much bigger than that.

A new generation is discovering tape for the first time, along with other stuff like analogue synths and mics, and that's having a broader impact on the way people are judging what's 'cool' and 'hip' about their approach to recording, at least within a few pockets of the industry. It's also encouraging those of us who grew up with the format to discover it anew, and in many cases dust off old machines and tape reels for the first time in 10 or 20 years.

LEADER TAPE

I've had several albums either recorded, part-recorded or mixed here at The Mill this year that have been all about a 'retro' sound. Because I still maintain a couple of two-track tape machines for mixing (as well as a Neve console and outboard gear) we were regularly calling upon the Studer half-inch valve two-track to add a final touch to the sound of many of these songs.

But make no mistake, these albums haven't just been tinkering with the analogue format, they've been immersed in every aspect of it, from recording onto 8-track one-inch Ampex machines with nary a computer in sight, to replicating Beatles mic techniques and guitar overdubbing processes to great effect. These albums by some great new Australian artists have sounded amazing both in terms of the captured performances and the power behind the productions...

Andy Stewart owns and operates the mill studio in south gippsland, victoria; a world-class production, mixing and mastering facility. He's happy to respond to any pleas for technical help... contact him at: andy@themillstudio.com.au or visit www.themillstudio.com.au

But not for every overdub, or all of the time.

Sometimes the outcomes haven't sounded so great. In a couple of cases in particular there have been maintenance issues with the machines that engineers haven't picked up on, perhaps blinded in some cases by the romance and novelty of the tracking method. In the same way that some engineers can get blinded by new technology, others it seems are easily blinded by the old.

This year, without doubt, there's been a small push to reclaim a tone to which analogue tape was fundamental. Whether this resurgence gains much more momentum in coming months or years as the reality of what's involved in the maintenance of tape machines hits home, only time will tell.

TAKE THREE

I'm a bit on the fence with this resurgence myself. As much as I love the sound of a good analogue tape multitrack recording, I've spent vast numbers of hours over two or three decades living with, managing, and in some cases fighting the format. I know its strengths and weaknesses all too well, and I'm concerned...

Not for the musical outcomes so much; I'm sure there will be some interesting stuff produced and discovered by people who've not worked with a medium that's bound by so many physical constraints. (A good sounding format like tape, which limits your capacity for endless overdubbing and 20 playlists for every track can be liberating!)

No, my concern is that there's a lot forgotten about the format, and much that's attributed to the 'sound of tape' that, in fact, had very little or nothing to do with it.

The complexity of the analogue chains, the sounds of the rooms where recordings took place, and the abilities of the performers themselves for instance are often grossly overlooked and understated by those who like to romanticise the tape-based recording era as if there was nothing more to the process. You could be forgiven – based on what some people say about it – for thinking that all you had to do back in the day was roll tape and the rest took care of itself.

I hate it when people rewrite history like that.

Tape was a costly, limited and high-maintenance format. It wowed, it fluttered, it distorted and occasionally broke. It was other things too of course. It was great sounding (if you had a decent, well maintained machine). It was good at adding 'red-light pressure', forcing performers to step up and get the job done, knowing that the moment tape rolled it was make or break. Ironically to me now, tape was also liberating (back in the '80s 24 tracks seemed to offer a huge capacity for songs to be fully realised. Two 24-tracks sync'd together... limitless options!

Now 24-track seems tiny.

But please, let's not talk about tape like it's some sort of modern panacea for ridding the world of everything that's bad about music. I've heard that one before! It's garbage.

And let's not resuscitate the tedious analogue-versus-digital debate again please... I don't think I could survive another round of that circular discussion.

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There's no doubt about the fact that tape, as an ancillary format in your studio, has a role to play once again. If you have a decent tape machine that still works and that can be brought up to spec without too much drama, get to it. It's time, if indeed your machines have survived all these years in their role of indoor plant stand, to power them again up and get them working on some new projects.

I've even been contemplating another multitrack machine for The Mill (I can't actually believe I'm saying this as I write it on the page!) I haven't thought about it too much, and if I do I'll probably talk myself out of it. But at the moment the idea is percolating.

It wouldn't take much to re-establish the format here – I have all the looms and patching ready to go. It would be almost plug-and-play (he says, laughing quietly to himself.)

It's a huge can of worms though. Maintenance and tape costs are two things mostly forgotten about the format that have scarred me permanently, which new engineers are yet to experience the joy of first-hand. These issues alone have the capacity to wear away the romantic lustre of tape in quick time, which is why I think it came and went so quickly last time around.

If you're going to go there (or go back there), good luck with it! Remember to keep your ears open for problems during recording sessions. Tape machines, while they may look cool, have a habit of going haywire when you least expect it!

IN MEMORIAL CALUM ORR

Yesterday I went to the memorial of one of my oldest and best friends, Calum Orr, who last week passed away peacefully after a 15-year battle with cancer. I'm still in shock and feel sick right now at the prospect of reducing my friend to a bunch of hopelessly inadequate words on a page.

Sitting in the studio we built together – The Mill – I can't help now but reflect on how strange it is that the inanimate objects we build outlast us so easily.

Cal and I spent many long hours over several years slogging our guts out on this place. Cal's energy and enthusiasm for the studio's construction back then was infectious. Now these walls stand as permanent reminders of his craftsmanship and selfless, unwavering work ethic.

The man himself is no more, though as Andrew Bencina pointed out during his eulogy yesterday, while Cal's life may have ended after a long fade-out, the albums he wrote, recorded, mixed, mastered or in other ways inspired play on through the speakers and memory banks of countless acts who worked with him over the last 25 years.

Today this control room sits in silent reflection, a giant hole torn in its side.

Cal built so many things. Apart from his own recording spaces, which sprang up like blackberries wherever he happened to reside, Cal was also the builder of a vast and disparate array of things: confidence in others, vast plug-in libraries, cutting-edge computers (for himself and friends) and a reputation for inventiveness on a shoestring.

Cal was an engineer of the recording, mixing and mastering varieties, a multi-instrumentalist, band manager, confidante and producer. He was a roadie, a tour manager, a tech, an accidental psychotherapist and a teacher. He was a surfer, a philosopher, a father, a husband and a moral compass for others.

He gave advice freely – when it was sought – even if he knew it would put him out of a job, and facilitated and inspired countless bands to help themselves in this world of zero-budget productions. He would build them a recording computer if necessary, or loan them equipment for free if that's what it took to get the project over the line. When Angie Hart of Frené made an album recently with essentially no budget, it was Cal who loaned her the gear without question, and picked it all up again when she was done – for nicks.

And in the face of illness Cal was



THE ENIGMATIC ENGINEER

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courageous like no-one I've seen before or will ever see again.

Cal always thought and spoke outside the box, always looking for new ways, more efficient and cutting-edge methods of doing things. He abhorred lazy conventions and railed against establishment in whatever form that took.

He was also one of the most elastic and engaging conversationalists I've ever known; equally at home talking to a fellow surfer as my mother. He was truly gifted at inspiring others, passionate about virtually anything that engaged his voracious mind, and an enigma of sorts. No sooner had you figured Cal out than he would confound you.

His strong will for life and unwavering commitment to everything from music recording to social justice continued right to the end. Always looking forward, Cal inspired us all with his wit, his charm, his lack of charm, his inappropriate comments and his anarchic tendencies.

One thing he always strove for – which is perhaps most relevant here as a parting thought about Cal – was a passionate performance each and every time he pressed 'record': a good strong funky groove, a powerful vocal, a screaming guitar line. He was fascinated with, and wholly committed to, getting the best performances he could out of everyone he worked with, filling musicians with positive vibes about themselves... making them feel like a star.

He was himself a star... unique, loyal, affable and brave.

He will never be forgotten by anyone who knew him.

Rest in peace my friend.



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d&b audiotechnik

Partner Meeting 2015: Festival Hall, Melbourne, 25 August

BY JASON ALLEN



d&b's
Gert Sanner

Brian Vayler

d&b audiotechnik do things a little differently to other manufacturers, which is one of the reasons they're the market leader in touring PA. The way they interact with their customers is also refreshingly unique, and their regular international Partner Meetings are a cornerstone of their strategy. Jason Allen spent the day with d&b at their second Australian Partner Meeting at Melbourne's grungy but beloved Festival Hall...

Hosted by Australian d&b audiotechnik distributor National Audio Systems, this second Australian Partner Meeting drew existing and potential d&b customers together from touring, production, venues and integrators around the nation. Cannily timed to coincide with tradeshow Integrate running down the road at the MCEC, the day was a mixture of new product demonstrations, insights into future releases, listening sessions and education. Gert Sanner, German by way of England and Regional Application Support and Education Manager for d&b, was flown in to run proceedings. His co-host was recently relocated Brian Vayler, ex National Audio Systems, who has taken up a position with d&b as Technical Sales Specialist.

V-series

The big new product news of the day was the V-Series point source range. The range consists of two top boxes – the V7P and V10P, which both house two 10" drivers in a dipolar arrangement, a rear-mounted 8" MF driver attached to a dual chamber horn, and a single 1.4" exit compression driver with a constant directivity horn. The V7P has 75° x 40° (h x v) dispersion while the V10P has 110° x 40°. The top boxes are complemented by the V-GSUB subwoofer, a cardioid sub with an 18" driver in a bass reflex design facing towards the front and a 12" driver in a two-chamber bandpass system radiating towards the rear. All three models have a wide range of

rigging options, as well as an installation model variant (Vi7P, Vi10P, Vi-GSUB) with installation specific rigging.

These are relatively small, lightweight boxes. The V7P weighs 33 kg, and measures 70cm x 30cm x 46cm (H x W x D). However, as you'd expect from d&b, the output is impressive, at a quoted 142dB (max. sound pressure at 1m, free field, test signal pink noise with crest factor 4). The V-Series will be at home in a huge range of applications that appreciate quality, from small events and touring to premium installs.

ArrayProcessing

The educational portion of the day's proceedings gave us all an insight into what's going on under the hood of d&b's ArrayProcessing line array optimisation software. ArrayProcessing is an option available within d&b's ArrayCalc predictive software, and aims to provide the same level and tonal balance to everyone in the coverage area, even making arrays of different models sound the same. Gert talked us through the development of the software, including a lot of details on the dead ends and results that didn't meet expectations the engineering team experienced which eventually lead them to the final product.

The proof, however, is in the listening. NAS and d&b had rigged one hang of J Series covering the centre of the hall and one hang of Y Series covering the bleachers to the side, with a bit of overlap of their coverage. Gert first let us hear the J unprocessed, and we walked the room listening to how level or tone changed as we got closer to the back or the front. He then demonstrated different optimisation settings, including equal level to the whole area, louder at the front, and louder at the back. The software does exactly what d&b set out to do. The most impressive achievement to my ear was

hearing a Y and J optimised to sound the same. We walked across the boundary of the two arrays as they played tracks unprocessed, noting the differences in tone, level and coverage. Gert then hit the switch, and the transition became totally seamless; the two models sounded exactly the same and there was no discernible boundary in the sound field.

The social network

Between sessions, coffee and conversation flowed freely, which is a major feature and attraction of the d&b Partner Meetings. "We aim to hold a Partner Meeting every two years," explained Shane Bailey, Managing Director of National Audio Systems. "I find the most benefit for the attendees is the social side. People mill around and talk over the whole day and catch up. Bruce Johnston just told me he's caught up with some people he hasn't seen for years."

Bruce, legendary FOH mixer and owner of JPJ Audio agreed. "I like the Partner programme. It gives you an overview of everything that's going on with the products. For example, the other day we were talking about buying more Q, but now we've had a good look at the Y, that's where the future is. We'll be buying that and maybe some V. It's good to be able to hear them, too, and do things like walk behind a PA during a cardioid demonstration, which you don't normally get to do."

While I had Bruce's ear, I asked what had drawn him to the brand. "The first time I heard the d&b J-Series I was mixing Oasis," he recalled. "It gave me incredible vocal quality at loud volume which, with Oasis, I had generally struggled with. It made the vocal brutally clear. From my point of view, it was like a big studio monitor. It didn't seem to colour the mix like other PAs. On that tour, we picked it up in every country; Japan, Europe, USA, South America and Australia. We had no problems getting it and it was all identical."

In the family

In bringing the d&b message to Australia, Shane Bailey values the role the Partner Meetings play. "Staying connected to customers is what we've hoped and strived for," he confirmed. "d&b have always had a family vibe. It's the way d&b present in Germany, and we try and emulate that here. It works really well, and now the range has expanded into installation products, we're finding that at the Partner Meetings there's system integrators as well as production and rental partners."

ArrayProcessing in action qantas darwin turf club gala ball 2015



Set for dinner

Adelaide's AJ Sound had the pleasure of deploying d&b's ArrayProcessing on August's Qantas Darwin Turf Club Gala Ball. A seated dinner for more than 2,500, the outdoor event poses more than few coverage problems for a PA. "This year we put a proposal together in conjunction with Total Event Services," reported Andy Gayler. "They have a number of speeches, and we ascertained that using ArrayProcessing would be a solution to the tricky problem of a lectern and a large area. We had a rig of 12 V Series flown per side, 3 J Infra subs and 4 V Series Subs, with a throw distances of 70 metres. The aim was to get the coverage as even as possible, and, for the later part of the evening, be able to change the configuration so it would be louder on the dance floor."

"ArrayProcessing gave us the ability to preset different configurations that we recalled by simply hitting a button," Andy continued. "The results were stunning. It's quite odd to listen to a PA at a distance, walk towards it expecting it to get louder, but it doesn't. Its SPL and tone stay the same. The client was initially confused as to how it could be that the sound level at the front at his table was exactly the same as the sound level at the back. That's when he realised the benefit of it."



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"We do these all over the world quite regularly," said Gert Sanner, d&b's Regional Application Support and Education Manager. "We show our next generation products to our current partners. We want to share ideas, and often get them involved very early in the process, so we can use their feedback in R&D." This reinforces the message that d&b are heavily focussed on developing better products for their customers. "d&b are a technologically driven company," agreed Shane Bailey. "Their products come from an innovative base. They're not trying to release 'just another loudspeaker', it's always about thinking laterally. Their marketing has always been product driven, and that's a good thing."

• Left: ArrayProcessing Off

Fly in, Fly out

Making the trip over from SA and ACT respectively, Andy Gayler, Managing Director of AJ Sound, and Darren Russell, Managing Director at Elite Sound and Lighting, talked shop while catching up on new tech. "In the audio realm, d&b do this kind of event better than anybody," said Darren. "I've attended international Partner Meetings, and now Asia Pacific and Australia, and they're a very good thing. We've networked with other users and generated business out of Partner Meetings in Germany. We've developed relationships with other businesses and they now cross-hire from us."

"You can tap a broader wealth of knowledge and experience," added Andy Gayler. "That helps guide you towards what suits your local market." Having recently deployed ArrayProcessing to solve technical challenges on a major event (see sidebar), Andy sees a change in strategy necessary to upsell clients to the superior results the technology offers. "The new challenge for us is to try and educate our clients to understand the benefit of this new technology," Andy illustrated. "Doing the actual work is becoming the easy part. Selling the sizzle is becoming the challenge."

Regional development

Currently working in Nailsworth in the UK, d&b's Brian Vayler updated us on their plans for an Asia Pacific subsidiary. "For 2016, the plan is we build a subsidiary office in Singapore," said Brian "It will house a team of sales and technical people, a service centre, and a warehouse, like our other offices in Germany, UK, Japan and the USA. We'll service all of the Asia Pacific, including India and China. We're in the process of choosing a location." Once it's established, Brian will relocate again, and will make regular appearances servicing his home country.



• Andrew Gayler & Darren Russell



• Critical listening session



• NAS's Shane Bailey



• Bruce Johnston



• d&b MAX2 monitors set for "one, two..."



• Gert Sanner in session

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LISTEN HERE

BY ANDY STEWART

STAYING ON TRACK

HERE ARE SO MANY EDITING AND PROCESSING OPTIONS AVAILABLE TO ENGINEERS AT THE MIX STAGE OF A PRODUCTION THESE DAYS THAT THERE'S A VERY REAL POSSIBILITY THEY CAN TAKE OVER YOUR ENTIRE WORKING METHOD, CORRALLING YOU AND YOUR MIX DOWN PATHWAYS YOU NEVER INTENDED TO GO. HERE ARE SOME TECHNIQUES TO HELP YOU COMBAT THIS PHENOMENON, AND STAY IN CONTROL OF YOUR MIX'S DIRECTION.

ESTABLISH A PLAN

Not having a strong mix plan for the task at hand is probably the best way you can leave yourself vulnerable to the vagaries and corruptive influences of technology. There is so much potential for distraction during a mix session that the last thing you want is to be taken further off course by the temptations of the equipment around you.

Staying focused on your mix can be difficult when enticement lurks around every corner – plug-ins by the thousands for every occasion and editing facilities that were science fiction only a decade ago – especially when there's no plan for the mix at all.

Diving blindly into a mix session with scant regard for the road ahead, trusting that 'inspiration' will always strike, can be a recipe for disaster. If there's no plan for, or method behind, your mix you leave yourself wide open to the technology potentially skewing your perception, tempting you to do things to the mix that may only make things worse.

The most fundamental thing you can do to achieve a successful mix is listen to the track and develop an understanding of what makes it tick before you touch anything, and preferably with the artist and producer present. Once that's established you can plan your approach and set goals for the mix.



Without a road map of this kind, even if it's fairly broad – 'I reckon this song is all about the beat, and anything that drives that is going to be crucial to the success of the song' – you may find yourself up the garden path very swiftly.

Maybe the song is dominated by a big vocal group, in which case it might be wise to build the mix around the vocal sound from the beginning while your plan is clear and your mind fresh. Maybe a crucial guitar hook lights up the song, and this should receive some love and attention early on in the piece. Or maybe it's all about an established groove in the rhythm section, in which case you may want these elements sounding full-toned and strong in the mix within the first hour of the session.

Whatever it is you choose to highlight – and remember, being flexible about what's important to any given mix is crucial to making the right observations about the song – try and stick to the plan as much as possible.

Write down the key points if you have to. Stick them on the side of the computer screen or chuck a few random Post-It notes around the room if that's what it takes to keep the main aims from evaporating like a mirage (though you may draw comparisons with Metallica's psychotherapist if you do that).

DEHUMANISING SONGS ONE TWEAK AT A TIME

One of the most insidious characteristics of modern technology that's often overlooked by mix engineers is its extraordinary capacity to dehumanise a performance via its editing and processing facilities.

Regardless of the musical genre you're working in, a good rule of thumb for combating this is to make sure you find problems with your ears, not your eyes. If you use your eyes to make decisions about an EQ setting, or determine what's 'loose' or 'pitchy', panned incorrectly or too dynamic about a sound, you'll often process things unnecessarily (and as has been well documented by now, too much processing can really mangle your phase relationships).

For instance, how a snare drum/tambourine combination 'looks' in terms of its timing on screen may not correlate with how it ultimately sounds. A kick drum and bass alignment similarly might look like a shambles

on screen, but if it sounds groovy, it is groovy! How it looks is irrelevant.

Some of the best vocals are imperfect in their timing and pitch, and some of the greatest grooves are apparently all over the shop with respect to their time-alignment, so don't be tempted to meddle with any of this stuff simply because it looks messy. If you do you may kill the groove outright, and all thanks to the dominance and unconscious influence of technology over your work, and a lack of planning on your part.

Remember, some of the greatest records of all time are a bit 'loose' here and there, and pitch-imperfect most of the time, but in the end none of that matters. It certainly doesn't make the music inferior. On the contrary, in many cases it's what made it great. And just as importantly, when analogue tape technology dominated the show it prevented this sort of tampering because there were virtually no facilities with which to tamper, and more importantly no-one was 'looking' at the audio, only listening to it.

MORE ON TUNING & PITCH

One plug-in category in particular that temps almost everyone these days is pitch correction. The virtual eradication of anything resembling an out-of-tune instrument or vocal has become a compulsion to some, and in many cases with disastrous consequences.

Now while this is a very subjective realm, and despite the fact that one man's perfect pitch is another's poison, there's no question that its overuse can dehumanise a performance. When taken to the extreme, pitch correction can sound quite unnatural, sometimes to great effect of course, but at other times to the detriment of the music. Here again it pays to have a plan for how little or how much you intend to use it, and stick to that plan. Remain the master of the process, not a sucker for it.

The obsession around pitch perfection can also affect your perception of instruments like guitars and bass. Where once upon a time things would occasionally drift in and out of pitch, often to great effect with the natural chorusing of stereo guitars and backing vocals

etc, these days it's often seen as a problem no matter what the circumstance. But applying pitch correction judiciously is vital because, whether you realise it or not, the more you use this process on one element, the more everything else then tends to feel pitchy by comparison, causing a knock-on effect of more and more elements then demanding it.

Some would argue that establishing a slightly wider, more forgiving grey area either side of the line of perfect pitch can make everything sound fuller and, thanks to the affect of chorusing, thicker. The narrower this line of tolerance becomes, the more everything then starts requiring artificial adjustment.

NO PLUG-INS? SO WHAT...

Just because a channel in your mix window or on your console has no processing strapped across it doesn't mean that channel is unfinished or incomplete. Not everything needs treatment or modification!

Again, judging a channel by simply *looking* at it is a dangerous practise, and as a general impression I would say some of the worst mixes I've heard have been over-processed rather than undercooked. Too much processing can start to dissolve the fidelity of a mix, again, often without the engineer necessarily realising it.

Going overboard with compression and limiting can be particularly damaging, especially when you're less than confident about what these control devices actually do. Sometimes the dynamics of individual performances, when played together, naturally highlight the important riffs and nuances of the music, leaving the rest to drift into the background where they belong. Compression and limiting can undermine this musicality, presenting every sound at the same volume from one end of the track to the other. Shoving all this information into a pair of speakers via so much compression can be confusing, fatiguing and sometimes indecipherable to the average listener. Louder is not always better.

So the next time you're mixing a song, make sure you start with a plan. That way you're far more likely to get the result you want, rather than some other outcome that no-one really expected or likes.

The image is a promotional graphic for NW Group. It features a large, blue, stylized 'NW' logo in a circle, centered over a background of a large outdoor stadium filled with spectators. Below the logo, the text 'NW GROUP' is written in a large, bold, blue font, followed by 'COMPLETE EVENT SOLUTIONS' in a smaller, white, sans-serif font. At the bottom, there are five logos for partner companies: Norwest (a blue square with a white waveform), Cairellie (a red and orange circular logo), Oceania (a white script logo), spuglass (a white circular logo with a black dot), and Phase 1 Audio (a red and white logo). At the very bottom, the text 'Sydney, Melbourne, Brisbane, Auckland, Wellington, Perth' is followed by the website addresses 'nwgroup.co.nz' and 'nwgroup.com.au'.



THE LED STROBES ARE TAKING OVER

BY MARCUS PUGH AND BENJAMIN COPPEL

THE UNASSUMING LIGHT EMITTING DIODE (LED) WAS DEVELOPED IN 1962 AND SPENT YEARS ON THE COMMERCIAL FRINGE, USED MOSTLY IN IR REMOTE CONTROLS, DIGITAL CLOCKS AND AS INDICATOR LIGHTS. NEW DISCOVERIES IN THE 1990S AND VAST TECHNOLOGICAL DEVELOPMENT IN THE 2000S HAVE HELPED TO USHER IN ... WAIT FOR IT ...

THE AGE OF LED

LEDS now illuminate everything from our homes to our phones, and of course our stages. Unless you've been pushing faders in a cave for the past 10 years, you'll know that LEDs have seriously permeated the production lighting world - most productions are partially lit with LED fixtures, some entirely. Technically and aesthetically, we've come a long way from the first PARs and battens of the early 2000s, and the maturing market now features hundreds of different washes, moving lights, effects and high-res video screens, all powered by LED. Conspicuously absent from this list, however, is every heavy-metal LD's favorite face-melter - and the curse of any programmer who has sat staring at them for hours - the one and only strobe.

It has taken time for LED technology to achieve output levels that rival the traditional xenon strobe, but the LED strobe market is now on the definite upswing. SGM effectively led the way in 2011 with their innovative X-5, and almost all of the major manufacturers now offer LED strobes.

For this article we gathered many of the production-quality LED strobes available in Australia and put them through a variety of tests to analyse them and determine which units are best suited for different applications. In the interests of fairness and simplicity, we have focused only on white strobes, although there are many great coloured LED strobes available.

SGM X-5

Ever since Peter Johansen took over and revolutionised SGM in 2010, their products have been remarkably innovative. The X-5 Strobe was one of the first products released under Johansen and also the first real LED strobe, making it the benchmark for all that have come since. With almost 3,000 surface-mounted LEDs, the X-5 delivers a wicked kick. Despite being the oldest player on the field, it is still one of the brightest units that we had the unfortunate pleasure of staring at from close range.

The X-5 sports a sleek design comprised of a flat yoke-mounted face over a minimalist base housing control and connectors. Build quality is paramount, with the latest version boasting an IP65 rating for outdoor use in almost any condition. The face can be split into three separate control segments and the various control modes and macros offer common effects and xenon-style strobing.

SGM offer an RGB version in the XC-5 strobe. They have also brought a similar design into the architectural market with the Q-7 (RGBW) and Q-7W (white only), as well as the compact Q2 line.

Pros:

- Build quality
- IP65 rating
- Segment control
- Low power draw: 1.1A

Cons:

- No flood mode

Verdict: ★★★★★

This is a great strobe and can't be beat for build quality. The X-5 will fit into most concert and festival rigs smashingly, either as a traditional strobe or by showing off its own unique effects. Bonus points for the IP65 rating.



TOURPRO STORM 1000 WHITE

TourPro's Storm 1000 brings a familiar form with a rectangular grid face, but its kick is anything but ordinary - being in the same room with this unit at full output is downright unpleasant. Add to that a strong design and rugged build and TourPro's LED strobe is performing alongside the big name brands.

The Storm1000 features nine-segment control and a flood mode that drops the LEDs back to a more palatable 40% at full. The simple control system offers good flexibility and the overall construction feels robust enough to stand up to even the most ham-fisted loader. Given this unit's rock and EDM target market, its greatest drawback - its loud fans - isn't a deal breaker.

TourPro offer the Storm 1000 in an RGB version, as well as a compact Storm 400 line in white and RGB.

Pros:

- Great output
- Rugged design and build
- Segment control
- Flood mode

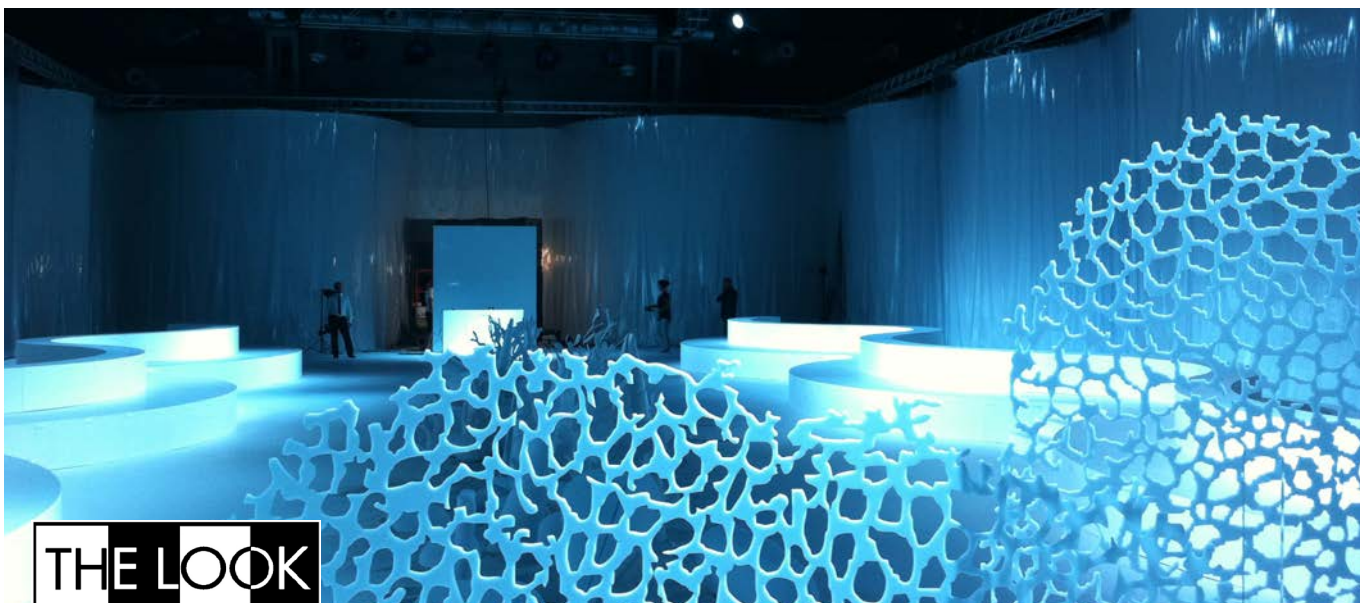
Cons:

- Relatively loud fans

Verdict: ★★★★★

Good design, strong build, output kicks like an angry mule. The Storm 1000 is sure to make a great impact on any concert stage.

TOURPRO STORM 1000 WHITE



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CLAY PAKY STORMY

CLAY PAKY STORMY

Surrounded by grids of diodes and square faces, the Stormy's curves are a sight for (literally) sore eyes. Rather than develop a strobing LED face like many other manufacturers, Clay Paky have instead opted to evoke the optics of the classic xenon strobe with their offering. This sleek-looking fixture features a large curving reflector bisected horizontally with a concentration of small but powerful emitters that are spaced in a faux random pattern to help create a classic strobe effect.

Clay Paky's Stormy, which is also available in a RGBW model (Stormy CC), features two different control modes, optional barndoors and a yoke with multiple mounting points. It has a very wide beam angle and is very effective as a flood.

Pros:

- Looks and performs like a traditional xenon strobe
- Variable dimmer curves to suit different applications
- Flood mode (constant on)
- Quiet mode
- Bright and impressive

Cons:

- No segmental strobing or pixel FX like the grid-style strobes
- Relatively high current draw: 3.2A at peak

Verdict: ★★☆☆½

The Stormy is punchy enough for music at any scale and more than classy enough for theatre. The well-executed optical design, complemented by the selection of polished dimmer curves, yields the best analog-style strobing we've encountered. Bottom line: the Stormy is a well-rounded, grade A face melter.

CHAUVET STRIKE 324

Reminiscent of the days when the Dataflash reigned supreme, Chauvet's Strike 324 introduces a cylindrical option to the market. If you thought Vegemite in a tube was a great invention, just wait to experience retina abuse in a can.

This fun little strobe features a flat circular face in a compact form factor - basically the size of a small PAR. With multiple control channels, a split yoke for floor use and fun FX macros to control different rings on the face, it is a feature-rich offering like many of the others.

Output is unfortunately where this little guy falls short. The Strike 324 is unsurprisingly the least bright strobe we encountered - you just can't get proper face-splitting output from such a small fixture.

Pros:

- Unique circular design
- Ring FX
- Split yoke

Cons:

- Low output
- No flood mode

Verdict: ★★★

The low output of the Strike 324 is not sufficient for use in large productions, but it is a unique and feature-rich option for clubs or small tours.



LITECRAFT MEGA STROBE ST2000

Right out of the box the Litecraft Mega Strobe ST2000 has the look and feel of an old friend: 'Great to see you again, Martin Atomic!' With a very familiar form factor and identical channel layout, Litecraft have again emulated Martin's tried and true design, this time in LED.

While most other strobes in this range exhibit either a single center strip or a complete grid, the ST2000's face features three separate horizontal strips of emitters for 297 LEDs in total. The optical design is effective but we're not wild about how the face looks. We were pleasantly surprised to find that output from those spaced arrays was decent and is comparable to the more upmarket offerings.

The unit performs just like an Atomic including classics like the blinder and lightning effect, so what it may lack in fresh features, it makes up for with familiarity. When testing the power consumption of the Mega Strobe ST2000, we were surprised to find the unit drawing over 6A at peak. This is quite high, and may indicate a lack of power factor correction in the electronics design. Hopefully, the test unit we got is just buggy and production units do not exhibit such power spikes.

Pros:

- Familiar design and performance
- Good output

Cons:

- Budget design
- Lack of new features
- High power consumption: over 6A at peak

Verdict: ★★★

The Mega Strobe's similarities to the Atomic will make it a winner with many people and this strobe will certainly shine in a large night club or rock venue. Lower build quality separates it from the more elite ranks.



LITECRAFT MEGA STROBE ST2000



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- On board delay

- SST Technology
- Cardioid Subwoofer
- Portable and fixed applications
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- *WFX New Product Technology 2014*

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SOLARIS LED SoLED W840

Solaris LED's SoLED W840 is a true pocket rocket. The SoLED's physical design is definitely not innovative, as it unabashedly mimics the classic xenon strobe, but it is a well-designed product that performs well. Bright and punchy for its size, this powerful little flasher has the potential to be a lot of fun.

The SoLED features a thin strip of crisp bright LEDs splitting a long rectangular reflector in a robust but compact housing. Build quality is quite good without adding too much heft to this handy (almost handheld!) little strobe. Multiple control modes are available, including the popular 4-channel effects mode.

Honorable mention: Solaris LED is no newcomer to this market. Another of their offerings, the LED Flare, has become quite popular throughout the industry. The combination RGBW wash/strobe has been well received by industry institutions and has been featured in many high-profile tours and events.

Pros:

- Compact form factor
- Good output for size
- Low power consumption (1.5A peak)
- Quiet

Cons:

- No ability to interlock with adjacent units
- Single mount point on a fairly small yoke
- No flood (full on) mode
- No segments or pixel FX

Verdict: ★★★★★

Size does matter, but good things can definitely come in small packages. The SoLED is a solid offering that will provide good value to the club and festival markets. Due to its miniature size, it also has great potential for use in theater and tour sets.

ROBE STROBE

WARNING: Do not be fooled by the modest name - this light is packing heat. This is one of the brightest strobes we tested; even standing five metres away to get a reading with the light meter was distinctly uncomfortable. Some serious R&D has gone into this new offering from Robe with one main goal: maximum output.

The rectangular-faced unit uses a large array of 120 powerful white LEDs, each with its own lens. The face can be controlled in separate segments up to 12, and multiple units can be mounted flush to each other via built-in connectors on the top and bottom. While the entire unit does not boast a weatherproof rating, we are told that the front face can withstand some moderate wetting.

The Strobe excels not just in output - it is also one of the most sophisticated units we've encountered. The only unit boasting an Ethernet input, it also speaks RDM, Art-Net, MA Net, and sACN control protocols. An optional wireless DMX module is also available. Unfortunately, all of this output and control comes at a cost: size. The Strobe is by far the largest and heaviest unit we handled.

Pros:

- Output beast
- Robust design and weather-proof front
- Multiple control options
- Segment control
- Flood mode

Cons:

- Weight at over 10kgs
- Size



ROBE STROBE

Verdict: ★★★★★½

The unit we obtained was a pre-production version but with this much grunt, you can surely expect to see these powerful fixtures debuting soon on festival and stadium shows. The robust design and rich feature set are sure to entice lighting nerds everywhere.

CONCLUSION

Like an extremely spicy chili, strobes are a powerful element best enjoyed in moderation. Done well, they inject intensity and enhance the power of a performance. When overdone, however, the poor souls on the wrong end of the deal are usually blinking tears out of their eyes and looking for something to hide under.

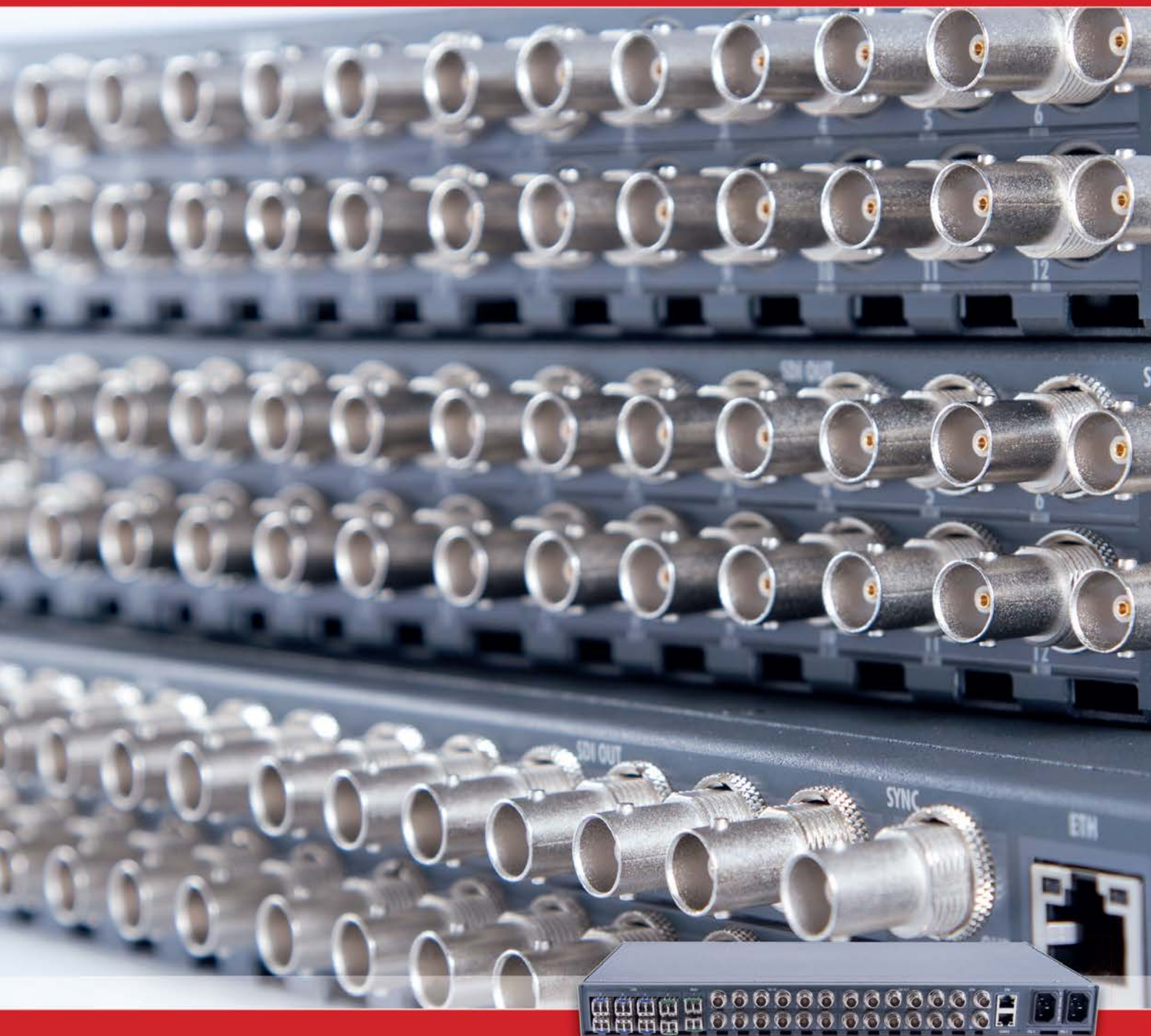
Evident from our experimentation, there is now a wide range of white LED strobes available to suit most production needs. Many of the listed manufacturers also offer LED strobes with RGB+ color mixing. While they are useful in their own right, the color versions are usually not as bright and powerful as their white counterparts.

It is noteworthy that Martin (by Harman), the developers

of the iconic Atomic 3000, have not produced a full production spec LED strobe. There are unconfirmed reports of a Martin LED strobe in development and these two flashed-out strobophiles await more news with eagerness.

As we near the end of this article and take the opportunity to wax philosophical, a few questions and musings arise. Do you even need a dedicated strobe if your rig is already full of other LEDs and moving lights that all have strobing capabilities? And as one follows the blurring line between lighting and video, when is a colour-mixing and pixel-mapped LED strobe just another LED screen?

One thing's for sure - no matter your budget or the area of lighting you specialise in, there is a LED strobe that's right you.



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Just occasionally something so beautiful lands on my desk I'm given cause to stop what I'm doing, and take time out just to admire it. In the case of the NTR I also felt the need to make everyone else in the office stop what they were doing too so they could join in.

RØDE NTR Ribbon Microphone

A thing of beauty

BY JIMMY DEN-OUDEM



BRAND: RØDE
MODEL: NTR
RRP: \$899.00 INC GST
PRODUCT INFO: WWW.RODE.COM
DISTRIBUTOR: WWW.RODE.COM

The NTR is a gorgeous piece of equipment. It's opulent in its design, yet at the same time has an absolute sense of purpose. I liked it even before I'd plugged it in to anything. At just over 1kg it is in one sense almost absurdly heavy, but on the other hand you wouldn't feel bad about handing over your hard earned cash for one. Every detail has been attended to - even the packaging in which the NTR arrives is beautiful.

Ribbon mics are an interesting kind of thing for a number of reasons. First up they're pretty fragile, so they don't generally tour well. Traditionally the application of phantom power to a ribbon mic would result in its complete and assured destruction, though nowadays this is not always true. Finally, ribbon mics have typically been regarded as 'warmer' than their dynamic counterparts.

The practicalities of constructing a ribbon mic mean it is hard to make it more robust without affecting its performance. Looking through the grille on the NTR, you can see the ribbon motor suspended on shock mounts internally within the chassis of the mic. The mic arrives with a transit screw installed, which secures the ribbon motor by tensioning it against the shock mounts. You need to remove the screw prior to using the mic, and replace it once you're done. It doesn't make the NTR indestructible, but it does add an additional level of protection. Note that to install or remove the transit screw the mic must be secured in the directly upright position. Maximum SPL to which the mic should be exposed is 130dB.

Internally the base of the mic houses a step-up transformer and active signal balanced preamp stage. These active electronics not only buffer the ribbon element from phantom power, but in fact they require it in order to operate. 'P48' etched into the base of the mic provides visual confirmation that it's okay to hit the +48V button.

Flipping through my trusty Rycote mic data book, I came to the realization that many (if not most) dynamic microphones roll off somewhere between 50 and 100Hz, and a few at considerably higher frequencies



still. Most ribbon mics by comparison have smoother low frequency delivery, though typically a little bumpiness in the HF response is apparent somewhere between 10 and 20kHz. The NTR plot follows this convention, so on paper it behaves as it's generally expected a ribbon microphone should.

RØDE makes the NTR right here in Australia. The ribbon element is laser cut from a 1.8 micron sheet of aluminium, then shaped and tensioned before being set into the frame of what becomes the 'ribbon motor'. Such high precision operations are

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performed by machine, which means they are repeatedly accurate. The RØDE process results in a ribbon which is very agile, and that means it's able to respond efficiently to high frequencies. This results in a mic that has the low end warmth of a classic ribbon, as well as excellent high end detail. Not to mention a dynamic range of 115dB SPL. It's pretty awesome.

The NTR has a figure eight polar pattern, and it's important to remember that this applies in three dimensions – not just two. The frame which surrounds the ribbon motor gives you a good visual indication of where the 'null' of the mic is located. As with all figure eight mics, some experimentation is advisable in order to find the best combination of direct and reflected sound. RØDE advise monitoring the mic during placement to find the optimal position, and having done some experimentation I can confirm this is a good idea.

I organised a guitarist friend to visit the CX studio, and we spent an afternoon playing around with different configurations of a pair of NTR mics. I made several observations, the first of these being that the pattern is really well controlled. I set up one mic on the singer and the other on the guitar. I was careful to position each mic such that the other mics intended source was in the null of the first (ie; the guitar was in the null of the vocal mic). The separation between the sources was excellent, with each mic only picking up some reflections of the sound source located in its null.

Another observation I made was that the 'lobes' of the figure eight feel almost elongated – not like a shotgun mic, but the NTR deals with a bit of distance well. I used a pair of NTRs spaced about a foot apart from each other, and about 15 inches from the acoustic guitar. According to the conventional rules of avoiding phase problems between two mics on the same source, this configuration shouldn't have worked. But it did work, and moreover it yielded the most pleasing results of all we tried.

I tried the pair of NTRs set at right angles next to each other in a lazy attempt at an XY configuration. I was trying to pick up the vocal and

the guitar all at once, but it didn't work out as I'd hoped. In hindsight, I think the two mics probably crowded each other a little, and this gave a thinned out result. If I were determined to try this again I might invert one mic and use an end-to-end configuration, but ultimately I think the XY configuration is better suited to other polar patterns anyway.

The final observation was more one of practicality – ordinary mic stands aren't up to the job of supporting the weight of the NTR. Make sure you use a good quality stand with positive mechanical locking to avoid 'droop'! I used the NTR off-axis and at a good distance when recording

voice, but with the addition of a pop filter you can get closer and more on axis. Just remember that no ribbon mic responds well to violent plosives.

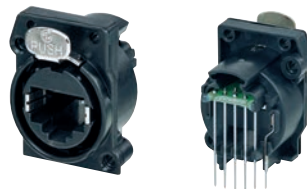
I think the wonderful thing about the NTR is that adjusting its position relative to the source gives you great scope to change what it delivers. It's almost ironic that such a mic of such imposing appearance is capable of such intricate HF response – fricative consonants are produced to the minutest detail without a hint of sibilance or harshness. Everything's there but nothing is overstated, and I love it.

I'm not sure how often I'd break out the NTR (or indeed any figure eight mic) for stage use, since ambient noise would be a problem and I think it's better suited to more delicate work anyway. Putting it on a rock stage would be kind of like driving a Lamborghini down to the shops to buy milk. Sure, it would do the job, but it would be a bit of waste and you might not find it exactly where you left it.

If on the other hand you found yourself in an orchestral situation or even just doing a gig in a nice concert hall, the NTR would be far more applicable. It is a beautiful microphone in every respect, and for anyone engaged in studio recording on a regular basis it should be an obvious choice. It's also about half the price you'd expect it to be, which makes it phenomenally good value.



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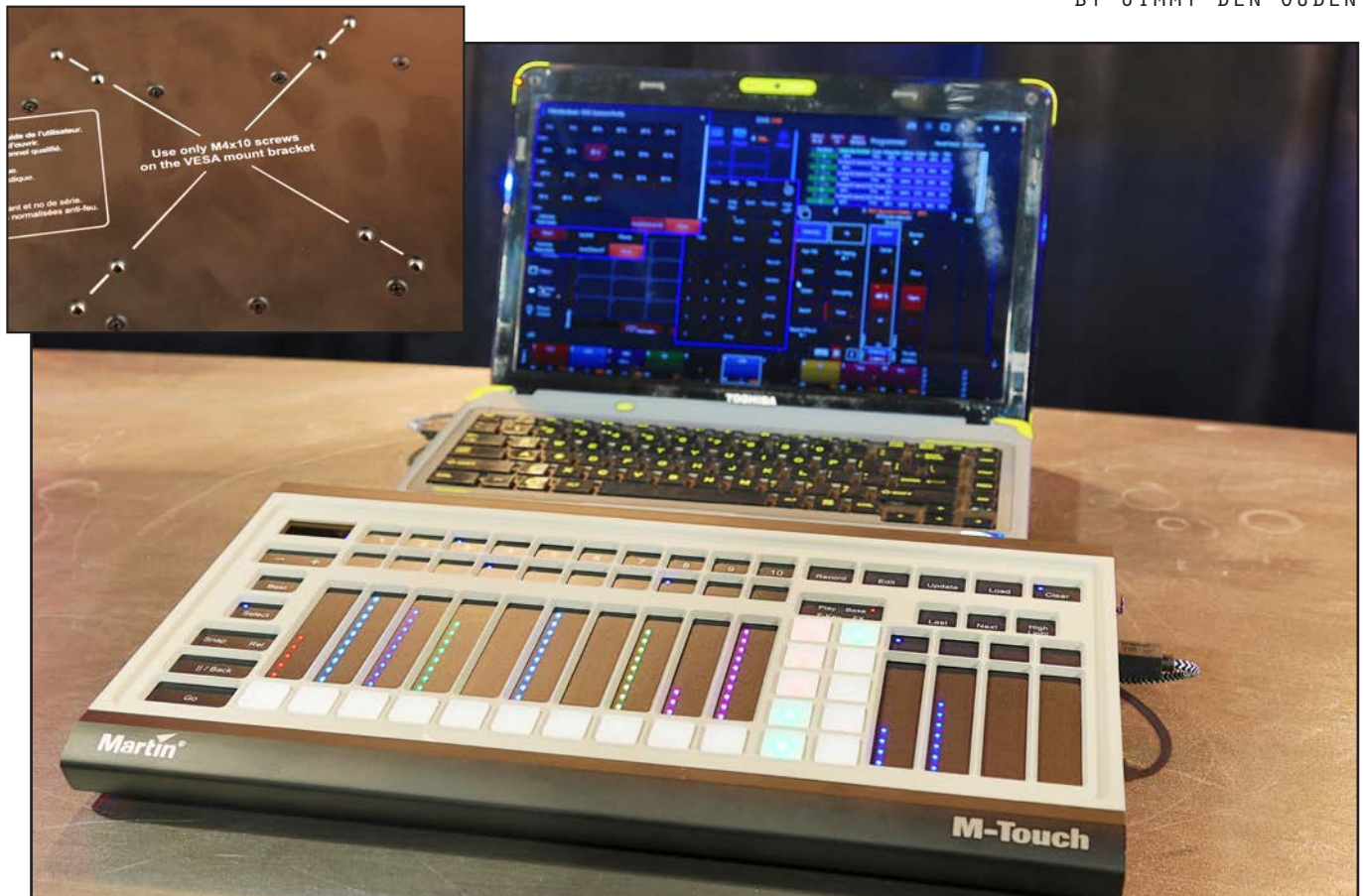
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Martin M-Touch

Lighting control to go

BY JIMMY DEN-OUDEM



M-Touch is a new inclusion to the M series lighting control platform from Martin. It's essentially a control surface with USB connection, as well as a single 5 pin XLR DMX output. It works in conjunction with the M-PC software, available as a free download from Martin. You can also use it as an expansion wing for an M1 or M6 console, so for a nominally 'single purpose' device it's quite versatile.

M-PC is a free download, and even if you don't have any external Martin hardware it allows you to output one universe of DMX over ArtNet or 3rd party DMX node. Plugging in the M-Touch or M-DMX node unlocks additional universes, and if you need it you can buy licensing for control over up to 128 universes. Considering the included control offering, M-Touch sits in a nice spot to fit into schools, churches, small clubs and venues. Freelance operators too will appreciate the portability of the surface not to mention the easy scalability of the platform. It's extremely good value too.

The M-Touch surface itself seems very much a portable device and yet it still has a good robust

feel to it. It uses a system Martin calls 'force fader', which resembles those really cool fader belts we saw all those years back on the Martin Case console, but importantly the force fader system has no moving parts, so there's less potential for component failure. Behind each of the 14 force faders is an LED ramp that changes colour depending on the function assigned to the force fader. The ramps are set to one side of the fader, so your finger doesn't get in the way of seeing them. Because there's no fixed physical fader cap, the force faders have the potential for absolute or relative parameter control. As with conventional faders it's no problem to simultaneously operate multiple faders.

Ten force faders are used for playback functions, and multiple pages of playbacks can be built. Beneath each playback is a 'force touch' key, which is velocity sensitive. The upper left corner of the M-Touch shows the active page, with page up and down buttons located immediately beneath. The remaining four force faders are used for parameter adjustment, and again force touch keys are used to switch between different fixture parameter sets, provide additional playback, or control effects.

Looking at the M-Touch I initially thought the force faders and touch pads might not be very nice to operate, but gladly I was wrong. They're surprisingly responsive, and a far cry from similar looking 'membrane' surfaces of the past. The absolute and relative control modes for the parameter faders switch automatically, which means that the resolution of the fader is always appropriate to the parameter being controlled too. Not every rotary encoder can make the same claim, so this is a really cool point.

The same type of 'touch pad' found within the force faders is used for the remaining buttons on the M-Touch. I understand that it's actually a single membrane for the whole surface. Whereas the flash and function keys protrude from the surface, all other buttons are recessed. I think over time this would see the surrounding frame accumulate a bit of dirt, but nothing a little periodic cleaning wouldn't fix. The recessed key collection includes functions like Record, Clear, Load, Update, Highlight, and all the other commonly used buttons for which a dedicated key is helpful. Large Go and Pause/Back buttons are within easy reach at the lower left corner, and similarly the other keys are all in pretty logical locations. Two touch pad buttons are located above each playback fader.

Normally you'd perform functions such as fixture selection on screen within the M-PC software. A touch screen makes this whole process a lot faster, and cleverly the interface has been designed with buttons that are about the right size to facilitate this. Combine the M-Touch with something like a Microsoft Surface, and you've got a huge amount of lighting control in a package which fits into a backpack. The M-Touch is USB powered (it draws <500mA), so you don't even need a separate power supply. Again, this will appeal to touring and freelance LX folk.

For more permanent situations, the M-Touch includes VESA mounting points on the back, so you can attach it to any generic monitor mount or arm. For small club or venue situations this means lighting control needn't occupy the same footprint as it would using a conventional console – it's a great space saver. I unplugged the M-Touch from the laptop during testing and re-plugged it to find it started up very quickly, and everything came back exactly where I'd left it.

Finally a word on the construction of the M-Touch. Because of the membrane type setup of the surface, there's very little in the way of a direct path down to the PCB beneath. I'm not saying it's waterproof, but I do think it would stand up better to liquid spills (think drinks!) than a more conventional design would. In case anyone else likes the M-Touch even more than you do, there's even a Kensington lock slot to keep it safe and secure. Perhaps the nicest aspect about the device though, is that unlike 3rd party controllers M-Touch was designed by the same people who wrote the software it uses, so integration between the two is perfect.



BRAND: MARTIN
 MODEL: M-TOUCH
 RRP: \$1599.00 INC GST
 PRODUCT INFO: WWW.MARTIN.COM
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Soundcraft Si Impact

More for less

BY JIMMY DEN-OUDEM



We first saw the Si series as we know it in the Compact, then Performer and Expression ranges. The Impact is not so much the latest iteration of the console, but the latest addition to the line. An important distinction is that whereas models such as the Si Compact are available in several frame sizes, the Si Impact is available in exactly one configuration.

The configuration is that of a 40 input console with 31 output busses (LR/Mono, 20 sub-group/aux busses, and 4 mono/stereo matrix busses). The surface operates in four configurable layers, with any channel, buss master or VCA assignable to any of the 24 flying faders. The remaining two faders are masters for LR and Mono (or the selected mix buss). The 40 input channels include 32 mono channels, and four stereos onto which the effect engines return.

The console supports up to 32 mic inputs on XLR, the last bank of eight inputs on combo jacks to provide a TRS option as well. 16 XLRs provide analogue outputs, with AES on a dedicated XLR

of its own. Included with every console is a USB/MADI combo card which supports up to 64 channels across the two connectors – so you can connect 32 inputs via a Soundcraft stagebox and use the remaining allocation to support the 32in/32out USB interface. Or you can plug all your mics directly into the console and share the preamp outputs with another console via one cat6 crossover cable. If all that connectivity isn't enough for you, there's an additional card slot to give you even more options.

The whole console is a light grey colour, not dissimilar to other consoles on the market. Previous iterations in the Si line have used large slabs of metal in their construction, and the Impact basically holds true to this. The plastic end pieces feel a bit naff and cheap, but on the flipside the touch screen looks better, is more centralized, and maybe even a bit bigger than on previous generations of Si console. It's also more precise in its operation and hence easier to use especially for operations such as typing channel names.

Within its frame size, the Impact is the most affordable Si console to date, and one of the ways this has been achieved is by the omission of rotary encoders for each



channel. Thing is that this doesn't really slow down operation of the console much – it's certainly no slower to use than anything else of comparable specs. I found the Si Impact quite 'snappy' to operate, meaning that I can change pages on screens or layers on faders without having to consciously pause and wait for the action to take place. The Si Impact takes its time (around 46 seconds) to boot up, but once it's running it works reliably and without any discernable interface lag.

Some of the included features on the Si Impact are especially noteworthy. First up you get up to 500mS of delay on every input and every output. It sounds like a little thing but actually this function occupies a significant chunk of DSP power, so it's nice to know Soundcraft hasn't gone shy on processing capacity. Every output has a BSS graphic, and every fader has faderglow and a multi-colour electronic scribble strip. VCAs and mute groups are standard.

The user interface on the touch screen will be familiar to users of previous generations of Si console, since it's the same. Functions like 'auto-complete' in the patching menu save time. While there are no dedicated effect returns, the fact they come back on stereo channels (or a mono one if you configure them as such) means that you get full channel processing on your effect returns. The absence of this feature on many consoles is a source of irritation to me, so I was very pleased to see it included.

As with the Si Performer and Expression, the offline show editor for Si Impact is essentially an exact visual representation of the console. This means you're forever trapped in a cycle of zooming in and out, and the buttons are all so tiny they require absolute precision cursor alignment to click. Names are shown above each channel strip, but you can't just click the names to edit them, instead you must navigate the virtual menu screen. Also it only runs on Windows. As offline editors go it's frustratingly slow to use, and one of the worst out there. Of course, if you don't actually need to build shows offline then the whole point is irrelevant...

The iPad app on the other hand is well designed, responsive, and extraordinarily easy to get up and running. Connect a wireless router to the HiQnet port, check the HiQnet address on the console, punch that into the app, and you're up and running. It's fast, it's responsive, and the navigation process is absolutely logical. Even while the console is being used to mix LR, the iPad can be used to mix to the other busses.

I've always found the Si range of consoles very appealing for two simple reasons – they're inviting to use, and they sound good. This much still holds true of the Si Impact. In spite of the horrible offline app, I think the console is great and the overall ergonomics seem to make more sense than on previous generations. I love that the USB interface is included for free, so you can just as easily use it for recording (or even as a multi-channel audio interface for your computer!). It's a great little piece of kit, and certainly capable of more than its demure appearance gives away.



BRAND: SOUNDRAFT
MODEL: SI IMPACT
RRP: \$5599.00 INC GST
PRODUCT INFO: WWW.SOUNDRAFT.COM
DISTRIBUTOR: WWW.JANDS.COM.AU

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Robe Strobe

Rhyme and reason



BY JIMMY DEN-OUDEM

The Robe Strobe certainly has the rhyming part right, but does it have a good reason to exist? It's by no means the first LED strobe to hit the market, but as we discovered it does have a few features that make it quite unique.

The front lens is occupied by 120 high power white LED chips with a native colour temperature of 6000K. The chips are grouped into four columns across three rows, allowing the strobe to be controlled in 12 different sections. The fixture includes a selection of preset control macros, allowing users to quickly generate interesting looks without the need to pixel map. The beam angle spec is 32 degrees at 1/2 beam, or 60 degrees at 1/10 beam. A special rigging system allows up to four Robe Strobe fixtures to be ganged together vertically for really serious strobe effects.

The Robe Strobe is pretty big – its front face measures 450x190mm, and at 300mm it's physically deeper than it is tall. It weighs 10kg, no doubt part of which is accounted for by the rather solid yoke with dual tilt locks. The locks have a nice positive action and secure the fixture well, and in addition to this there are dual safety wire attachment points on the head itself. The yoke allows the fixture to be tilted through about 180 degrees.

We tested a pre-production model because at the time of writing the production units were yet to arrive in the country, and since our unit was built, the housing of the Strobe has been re-designed to provide a higher IP rating. We understand that production units will be usable in light rain showers, so they'll be okay to use on an exposed front truss on a festival stage. Typically this space would be occupied by traditional mole-faye



'user-driven' control modes. Strobe duration is 0-650mS, and rate is 0-30Hz. Four different control protocols allow for control options from full through to basic.

Rear panel inclusions are the same as standard on many Robe fixtures – 5 pin DMX in and loop, PowerCon in and loop, RNS2 touch screen for setup and control, and EtherCon for ArtNet and such. RDM, MA Net and sACN compatibility is standard, and a wireless DMX module is optional.

I like this fixture. Its sheer output alone places it among the 'super strobe' crowd, yet at the same time, its unique aspects place it in a category of its own. I don't have any specs as to exactly how bright it is, but having seen it in person I'd say 'definitely bright enough'. We had to dim the thing WAY down just to get a workable photo of it. As if the Robe Strobe wasn't already cool enough in its own right, there's talk of a colour LED model on the way too, which adds another dimension of interest.

units, so it's nice to see the Robe Strobe provide a more flexible alternative.

As you'd expect from an LED based product, the Robe Strobe provides adjustable strobe rate and duration, as well as the obligatory 'blinder' effect. Each section can be individually dimmed, and there's high resolution master intensity control as well. Ramp up, ramp down, ramp up-down, random flash, single flash, and microphone driven strobe effect complement the more



BRAND: ROBE

MODEL: STROBE

STREET PRICE: \$4675.00 INC GST

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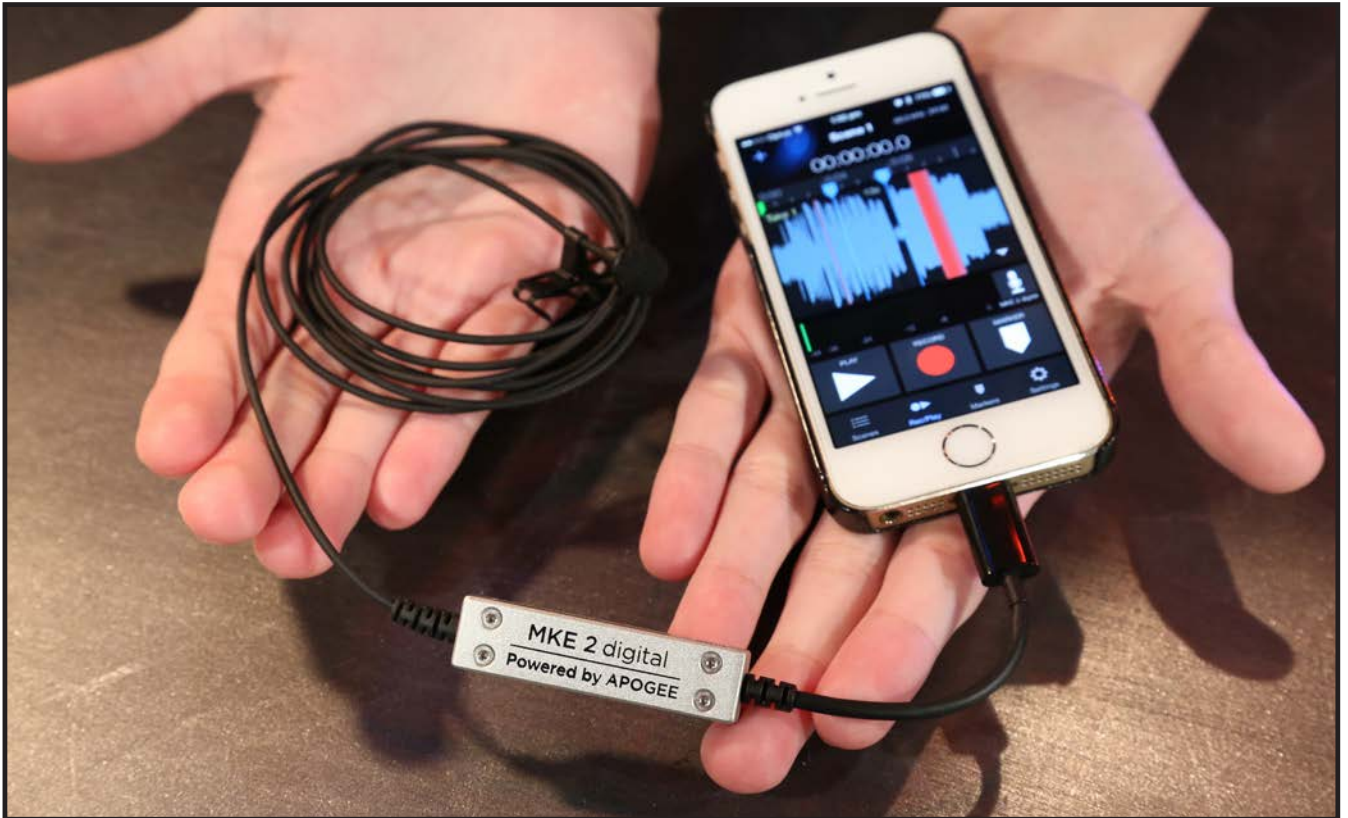




Sennheiser MKE 2 digital

Digital lapel mic for iOS

BY JIMMY DEN-ODEN



The term lavalier microphone is derived from a time when microphones were worn about the necks of people like telephone exchange operators, kind of like extremely large and ugly jewelry. Thankfully technology has progressed significantly since the days of the early lavalier. Modern units are now smaller than ever, plus they sound great and are easy to conceal. Of course it's not just microphones that have improved with time - so to have telephones. Human operated exchanges and cabled connections have been replaced with 4G wireless processing powerhouses, capable of much more than simply making phone calls.

It's poetic that the MKE 2 digital is in some ways a marriage of history with modern technology, and a good one at that. The MKE 2 capsule is a sub-miniature omni-directional lavalier microphone commonly found in broadcast applications. It's very compact, resistant to sweat, and a well-established product. The MKE 2 digital is all that, but with a preamp and AD converter on the end of the cable. This terminates to a Lightning connector, which allows it to plug directly into an iPhone or iPad.

I do want to take a moment to acknowledge the brilliance that is the internal audio capability of the iPhone, because really it is very good. It knows how to cancel background sounds in noisy environments, but at the end of the day it's still subject to the limitations of being built into the device. So you need to put the whole device (iPhone or iPad) near the sound source you wish to capture when recording, which is not always practical. Further compromises exist in the sense that the mic, pre-amp, and AD converter within the phone need to fit within physical and financial limitations in order to make the phone a viable market proposal. Finally there is no control over any kind of AGC applied to the internal mic.

The MKE 2 digital removes all these compromises from the equation when recording sound with an iPhone or iPad. The signal is captured by an external microphone, amplified using an external preamp with manual gain control, then converted into digital information by an Apogee 24 bit 96kHz AD converter. Then this information is sent into the phone to be recorded. The iPhone or iPad microphone and associated audio circuitry are completely bypassed.

Hardware is only half the equation though. The 'Meta Recorder' software is the other half. It's free to download from the app store, and connecting the MKE 2 digital unlocks the full version of the software instantly. Within the software you can add markers while recording, then once done you can rename these, and use them to jump to points within the recording. Files are recorded as broadcast wave, and any markers you place will be retained when you import the files into Final Cut Pro.

The Meta Recorder app is quite stable and overall very intuitive. While I didn't try the Dropbox connectivity within the app there is certainly support for this, which would be a great way to automatically back up recordings made. Another feature worth mentioning is the option to monitor the recording.

Perhaps my favourite aspect of the MKE 2 digital is that its use is not solely confined to the included software. You can plug it in, set the appropriate gain in Meta Recorder, and then switch to the iPhone camera app and shoot video with accompanying audio captured by the MKE 2. I think this is brilliant.

For those who can't quite stretch to the MKE 2 digital, the good news is there's another model available based on the ME 2 capsule – the Clipmic digital. It still sounds great, but it's a bit more affordable. I took a Clipmic digital to a tradeshow and used it to shoot some video interviews with my iPhone. Even amidst the relatively high noise floor in the room I was quite satisfied with the results. The mic did a good job picking up speech from my interviewees even though it was clipped to my shirt. Really the only limitation I encountered was cable length back to the phone!

I really like this product because it's a very convenient solution to a very modern problem. The hardware sounds good as you'd expect, and more importantly the associated software is well designed, stable and user-friendly.



BRAND: SENNHEISER
 MODEL: MKE 2 DIGITAL
 RRP: MKE 2 DIGITAL - \$749.00 INC GST.
 CLIPMIC DIGITAL - \$299.00 INC GST.
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2015

ROAD SKILLS




Editorial by Cat Strom

Imagine Dragons Photography: Troy Constable

Gurrumul Photography: Ash Westwood

Chris Pyne: Band Images - Bob King





IMAGINE DRAGONS are on tour with their electrifying Smoke + Mirrors show that is as bright and flashy as their hometown of Las Vegas. The show at Sydney's Qantas Credit Union Arena ignited the venue with a performance featuring showy visuals and drumming thunder.

Lighting design is by Sooner Routhier with creative direction by Jesse Lee Stout of Moment Factory. The show is a clever blend of lighting, lasers and video with the lighting team able to cue lighting to interact with the video resulting in a total collaboration of all elements of production.

Occasionally playing up the Smoke + Mirrors title of the tour in its presentation, the band opened the show behind a curtain with the band members seen in silhouette assembling themselves on stage as smoke swirled. The show is visually broken up into different 'acts' with the first three to four songs performed with no colour and gradually the visuals build throughout the night.

IMAGINE DRAGONS

Tour Lighting
director
Mitchell
Shellenger

Lighting director for the tour is Mitchell Shellenger whose career with the band started in January when their production manager Matt Miley hired him to light a one-off show for the band. They stayed in touch and Matt recommended him for the position of Lighting Director.

"I was really excited to hear that Sooner was the lighting designer as she's such a great person," remarked Mitch. "Due to other work commitments, I came in towards the end of the programming process although there were still quite a few tasks I could assist with."

The original Smoke + Mirrors lighting includes Martin MAC Viper Air FX, MAC Aura, Clay Paky Mythos, Color Kinetics Colorblaze 72 and Colorblast, VER Blade HD, TMB Solaris Flare, High End SolaSpot, Elation Cuepix Panels and a MA Lighting MA2. However the Australian tour was picked up locally and fixtures changed but fortunately the fixtures were the same in each city although Mitch treated the tour as a one-off from a programming stand point.

"We're taking a show that we spent weeks programming and reinventing it with new gear along the way," he said. "I think the show still really packs the punch it was intended to but with not quite as many lights and a few less video tiles. In Australia we had to substitute the Mythos with Sharpys which works well. We've molded the show, programming wise, to a point where I could show up at a festival, or one-off, not knowing what lights we have but still be able to make the show look like we want it to."

Mitch travelled to Australia with a pair of MA2's as they had just been to South East Asia where they didn't want to risk not being able to get them. Mitch insists that if he hasn't got an MA2, then he's not going to have a good day!

In Australia the rig was broken into three elements; the floor which had MAC Viper Profiles, Colorblasts and Colorblazes, the back wall which has video columns with Sharpys and Stormy CC strobes on ladders in between them, and finally the roof where there are three trusses holding MAC Viper Profiles and MAC Auras. Normally there would be seven trusses but with a tight schedule, cutting down a few points was necessary.

"Initially we designed the show with TMB Solaris Flares which are great but the Stormys are amazing too," added Mitch.

In the US there had been eight convex columns which acted as screens for video projection. Visual tricks were written into the design. For example, from various positions the columns appear concave. Reflective surfaces allowed groundbreaking subtle effects to be created by blending colours in the air. Sooner commented that the ability to bounce lighting off the mirrored surfaces lining the video

Act 1: The Reveal

The band are introduced for the first time. This act is desaturated.

Act 2: The Disappearing Act

This portion is intricate, yet they still haven't given away too much. A lot of texture and volume is used and colour is played with but very sparingly.

Act 3: Blades of Light

This is where the show builds structure. Linear content and heavy hitting lighting cues mesh with the video.

Act 4: The Surreal Realm

Fully immersed in colour at this point, very dreamlike.

Act 5: Perspective Illusion

The structural components mesh with the colour and illusionary elements to create the most visually impactful moments in the show. The drum sequences with cohesive lighting cues create an impactful experience.

Encore: Wonder

The show concludes with a warm, gentle song that builds to an epic ending, accompanied by a unique blend of lighting and content.





**FOH engineer
Scott Eisenberg**

wall made the show very reflective. Most of the time you didn't know where the lights were coming from which would have made focusing a challenge for Mitch!

Other innovations in the US included the use of the Phenom system, programmable eye-safe audience-scanning lasers developed by Lightwave International. 150 refracting mini mirrors created a huge laser sculpture, a sweeping curtain of light.

FOH engineer Scott Eisenberg comments that fortunately for him, Imagine Dragons are a great sounding band and he feels that his job is not to mess that up.

"There's a lot going on and it can be difficult to find the space for everything to fit in," he said. "Even though there are a few less drums on this tour than the previous one, there are still quite a few. In fact there are a lot of instruments and a lot of sound so it's sometimes hard to find a space to fit everything in. There's a lot of synth bass, and low end going on that takes up a lot of space. I have to figure out when things are supposed to happen, carving out an EQ space for things to sit in plus trying to figure out how to get the vocals to work together."

Scott describes mixing for the band as busy and he has to keep a strict eye on what's going on because he never knows what the band members may do unexpectedly. He was using an Avid Venue Profile console complete with a full set of Waves plugins, a handful of which he used on the show.

"It makes it a lot easier to carry all your effects around on a USB than a full rack of gear," he said. "In the US I was using some outboard gear just to add a different colour to the mix but it's difficult to ship all of that stuff. I use the Waves C6 Multiband Compressor Plugin a lot on vocals and also either a C6 or C4 on a bunch of other things such as keyboards and some percussion. I also use some of the SSL plugins on the drums."

For the Australian tour, JPJ Audio supplied a d&b audiotechnik J-Series PA with the main L+R hang comprised of twenty d&b J-8 enclosures and eight d&b J-12 enclosures. The PA LL + RR was sixteen d&b J-8 enclosures and four d&b J-12 enclosures. Added to that were sixteen d&b B2 sublow enclosures and six d&b Q1 line array modules for infills. However in the US the band had used an Adamson Energia PA system provided by Sound Image.

"The d&b rig has been great and I have no complaints about it," said Scott. "The Adamson PA was kind of different and seems to have a lot more girth to throw to a large auditorium. We had a lot of L'Acoustics K1 in Asia and each rig has its' own qualities. It's hard to say which one is better as the improvements in PA systems over the past ten years has been tremendous and they all sound pretty darned good!"

All of the band use JH Audio JH16 Pro Custom In-Ear Monitors run by Jared Swetnam also on an Avid Venue Profile.

When it comes to microphones, the band and crew have been working closely with Shure, a company that Scott describes as very helpful.

"We use a ton of their wireless stuff and they've been a good company to work with," he said.

Looking after the video components, including the content on the LED onstage columns and the IMAG, was James Valpy of TheHippoTech.com. For every show that uses the IMAG, he takes the local directors cut and superimposes effects that were programmed at the start of the tour to coincide with the overall creative look of each song.

In Australia video gear was supplied by Big Picture including eight 1m x 5.5m LED screens, four per side of the stage, comprised of Viper 7B black faced 7.8mm SMD LED in Tait touring frames. Some clever content editing has enabled the use of KiPro and ImagePro2 playback that chases show timecode.

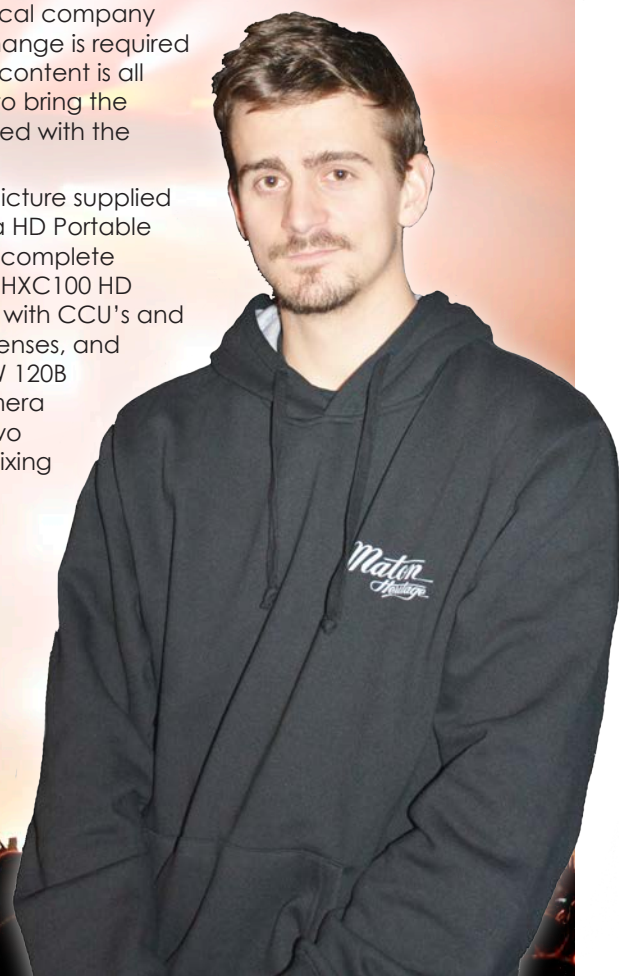
"As we're not touring our own screen for this leg of the tour we had to take our own content and fit it into one raster canvas," explained James. "We then reference the correct number of pixels for the locally provided screen. Here the screen resolution is 128 pixels wide by 700 pixels tall, per column so we cut out each section of the master canvas that is going to go to each column."

The control set up in Australia was simplified compared to the US where Moment Factory used their own X-Agora proprietary media servers which were excellent. The change was due to the fact that touring Asia has a different set of challenges.

"In the US Mitch could control certain elements of the show via ArtNet but we've pretty much done away with that for the sake of simplicity," added James. "To make it tour where every show is a different configuration we needed to make it rock solid and very, very flexible with as few moving parts as possible. We are able to do all of the stuff Mitch would have done from the lighting console in content and as long as the band don't change the length of the songs, everything stays the same but is scalable to whatever LED package the local company provides. If a change is required a simple edit in content is all that is needed to bring the video up to speed with the band."

For IMAG, Big Picture supplied a three Camera HD Portable Production Unit complete with three Sony HXC 100 HD Camera chains with CCU's and RCP's, Fujinon Lenses, and a Panasonic AW 120B remote PTZ camera controlled by two ME Kayak HD Mixing Desks.

Video Engineer -
James Valpy





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Gurrumul Yunupingu



FOH engineer Tim Millikan

Indigenous Australian musician Geoffrey Gurrumul Yunupingu, known simply as Gurrumul, sings in both English and his native Yolngu language.



Born blind, Gurrumul plays the drums, keyboards, guitar (a right-hand-strung guitar played left-handed) and didgeridoo, but it is the clarity of his singing voice that stuns audiences worldwide. In July this year, he released his third studio album, *The Gospel Album* which debuted at number 3 on the ARIA Charts.

Veteran Australian front of house engineer Tim Millikan has been working with Gurrumul the past twelve months and describes his voice as the most incredible he has ever heard. In fact Tim stated that the tour was one of the most satisfying he has done in twenty years.

"You get through your day setting up, time aligning, tuning and line checking then Gurrumul walks on stage, sits down and starts singing and every time I'm blown away," he said. "It's just unbelievable. He's one of those artists you really need to see live because his presence is astounding even though he talks very little as he is so shy. He comes out with this amazing cross blend of cultures that seems to hit home with everyone."

Gurrumul is escorted onto the stage by his musical director and bass player Michael Hohnen who sits him down and hands him his guitar. Michael then moves the Shure Beta 58 microphone into position and once Gurrumul has felt the microphone on his lips, he knows where it is and is on it the whole time.

"From then on it's really easy as he doesn't sway like Stevie Wonder, staying in front of the microphone the whole time," added Tim. "There is something about his shows that are always different although I can't pinpoint what it is. They are never routine; this time we had a twenty-four piece choir that we picked up locally in every city."

Fortunately for Tim, Gurrumul and his band are very quiet on stage which means he is not fighting noise from off the stage. "That means as there are a lot of acoustic instruments being used, I can open everything up and give it all that air and ambience back again which makes it super dynamic," remarked Tim. "But because it's not a loud rock gig, it's got all that control and warmth in it as you can just leave all that stuff in as it is such low levels. It's a rich, open sound that gives the audience more of a connection to the artist."

An identical monitor control package comprising a Yamaha PM5D console, d&b Audiotechnik M4monitors and L'Acoustics 108P speakers on stands for choir fill, was picked up in every city with Cam Elias touring as monitor engineer. However, Tim had to deal with house systems on the tour and everyday there was a different console and speaker system.

"I think there were only two shows on the whole tour where I had the same Venue Profile console," he commented. "I had a Midas Heritage 3000, DiGiCo SD7, Studer Vista 5, DiGiCo SD10, plus Solid State Logic and Studer Vista 8 at the ABC. Most of the shows I have done with Gurrumul have been on a variety of consoles so I have lots of show files, in fact I think I have one for just about every console which is handy!"

Similarly, the PA systems were varied but Tim pointed out that today's modern line array systems all sound good.

"Most of the house systems were fine although some were a bit light on subs as they were theatre systems," he added. "But as we're not a huge rock band I wasn't relying on heaps of sub anyway. The Canberra Theatre show was a particularly good show in the sense that we turned up and everything



was done including patch. We simply walked in and there it was, which was awesome."

Tim is a Waves endorsee and for Gurrumul he uses effects such as TrueVerb, C4 Multiband Compressor, V-Comp Vintage Compressor, V-EQ Vintage equalizer, and an H-Delay Analogue Delay Plugin.

"With the DiGiCo consoles we weren't running Soundgrid so I just used the onboard effects which were all fine," he said. "Over the years I have built a nice vocal reverb which is the basis for everything. You can then open your reverb times to suit various artists. It's a good starting point for me, I can just drop those presets in and away I go. With something less familiar such as the DiGoCo or the Studers, the onboard effects are pretty good - it's just a matter of fine tuning them a little, cleaning everything up with a pair of headphones and a microphone. Once I'm pretty sure that's alright I'll open the PA to check the reverb tails to make sure they're doing what they are supposed to and that they're not going to clutter anything in the mix.

"My idea with effects is that you want to create a mood and depth of field without people actually noticing the effect."

For microphone Gurrumul prefers the feel of a Shure Beta 58 whilst the rest of the microphones are fairly standard. On the drums there were Sennheiser 901 and 902's for kick drums, Shure 57 top and bottom on



snare, AKG 451 on hats, AKG 414 as overheads, and Sennheiser 904's on toms. Audio Technica 3060 were used for electric guitar, Beyerdynamic 88 on bass and a couple of DI's. For the choir there was an assortment of microphones including Neumann KM 184 and eight AKG 414's.

"We had the choir formation in a V-shape with the point of the V at the rear of the stage," explained Tim. "Six of them were on a riser and six on the floor in front of them so we had to make sure they kept close together with the microphones in tight enough to lose the ambient wash that you get with putting multiple microphones up in a big open space. However they mustn't be close enough to pick up one person in particular rather than an ensemble."

Tim admits that although a Gurrumul show may seem fairly standard it can be difficult to mix due to all of the acoustic instruments and the fact that Gurrumul often sings in his native language.

"It's always harder to mix the vocal in a language you're not used to as it's difficult to pick whether it's balanced in the mix or not," he said. "The secret to mixing Gurrumul is to bed everything in together, not to have his vocal up front and then the band down below it. The power comes from the fact that the band are as dynamic as him and that's what gives it its natural power. I can let them do the work as opposed to me having to push everything."



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20 Questions with Chris Pyne



Chris Pyne is an audio engineer of 34 years experience as well as a training/technical adviser for Martin Audio London. Chris began his career at Paradise Studios in Sydney as an assistant engineer before moving on to mixing bands during the 80's & 90's on the pub and club circuit. Artists included Icehouse, Rose Tattoo, Dragon, James Reyne, The Radiators, and Moving Pictures. Chris then moved to the UK mixing FOH for Kylie Minogue from 1996 to 2009 as well as mixing for Jennifer Lopez, Anastasia, Shirley Bassey, Ray Charles, Bill Wyman, and Westlife. Today Chris spends most of his time in festival fields around the world helping sound companies and promoters deal with sensitive noise sites.



1 What are the three best things about your job?

Working with great creative characters and travelling in crazy circuses around the world.

I really enjoy the collaboration with the musicians and the buzz you get when it all starts flowing.

Travelling to amazing locations around the world ... and getting paid for the privilege!

2 And the three worst things?

Airports and airport security, the sooner they bring in naked check-in the better.

Being freelance can be quite mercenary at time.

The occasional unnecessary bulls**t giant egos.

3 What do you never leave home without when working?

It has to be the trusty Mac Book and the front door keys.

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

We arrived in Caracas, Venezuela only to find that the gear had been hijacked on the way to the venue! Eventually the police arrived with it at 7pm when the doors were already open and the crowd in the venue. Unfortunately the monitor board had two giant holes in it from the fork lift used to load it onto the rather sad looking truck. The promoter thought it was a good idea to hand out free booze to the audience till we finished setting up the gear but it wasn't! We eventually got everything working by 10 pm with a totally legless audience pretty much rioting!




5 What has been the strangest request from an artist?
 Not to look at a certain "artist" in the eye unless spoken to first.

6 Who was hell to work with (probably best not to actually mention name but elude to it)?
 A Cult'ish UK based hard rock band in the early 90's who smashed every piece of stage equipment to the point

no one would rent the tour anymore gear. We actually had to hire security to stop them doing it as well as confiscate their passports so they paid their damage bill!

7 What is the most stupid request you've had from a member of the public, artist or promoter?
 Wouldn't say a request but a comment from ligger at a festival being a total wanker: "Don't you know who I



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am, you'll never work in this business again" because I wouldn't let him and his 10 mates stand in FOH smoking and drinking like it was a night club.

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

It has to be the recent British Summer Time Hyde Park festivals. In the past three years it has featured The Rolling Stones, Black Sabbath, The Who, Bon Jovi, Motorhead, Taylor Swift and Neil Young, to name a few. It's a challenge to help design these huge events in the middle of London, controlling the noise pollution off site whilst still giving the audience the best possible audio.

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

Probably Earls Court in London 2002 during the Kylie Fever Tour where there was a group of very rotund fellows dressed as Kylie Minogue complete with gold hot pants, blond wigs and beards of course!

10 Who do you admire in the industry and why?

I have to say Tour and Production Managers these days, it's a bloody tough job to do well. You become the tour parent / travel agent / pay master for grown men and women with not a lot of thanks involved at times.

11 Which venue is your favourite and why?

Rock in Rio USA in Las Vegas. It's a purpose built festival ground with no dB limits and nice weather and facilities. In Australia, I've always liked the Sydney Entertainment Centre and I have many good memories from the early days.

12 Which recent piece of production gear do you view as a game-changer?

I have to say Martin Audio MLA. It's changed the whole approach to sound control and audience coverage allowing noise pollution reduction whilst still achieving higher rates of SPL within the audience area than conventional Line Arrays.

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

Hmm I'm pretty boring. I guess dressing up as Buzz Lightyear for end of tour party yeah I know, rock'n'roll!

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

At an outdoor show in Guangzhou, China, in front 45,000 people when we were hit by a full scale typhoon. It was total madness. The authorities wouldn't shut down the gig, we lost everything on stage except the drum kit and one vocal mic. The arrival of the police with dogs and tear gas didn't help the vibe much either.

15 What would your ideal rig contain?

A Digico SD7 or the trusty Midas XL4, Avalon and SSL outboard gear, TC Electronics 6000 reverb, a Madi multi-track recorder, Martin Audio MLA and any of the great FOH techs I've worked with.

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

Hmm tough one, probably Iron Maiden or Joe Satriani – amazing musicianship and I've always been a fan.

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

Ha! It generally involves a lot of swearing!

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

I've not been involved in Australia directly for quite a few years but like most places around the globe, I think a lot of performing artists have been hurt by the plague of download sites and theft of their music. This impacts on investment by record companies into the development of new acts which has a knock on effect into the live market. The 70's, 80's and 90's pub touring scene in Australia was an amazing time for the live music business I'd say sadly no more.

19 If you could invent anything to do with audio, what would it be?

Not directly related to audio but the transporter from Star Trek would be brilliant and mean no more long haul flights. Or a cross platform show file converter for all digital audio consoles.

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

I've always wanted to be involved in music from the moment I saw The Monkeys on TV! I so wanted the Monkey Mobile.

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CHECK OUT THE LATEST EPISODE ON YOU TUBE!

Australian audio industry legend Faye Reid



Picture this – a crazy cat hanging on for grim death with all fours and a spunky wild haired blonde driving a big truck wondering why people were giving her wild looks.

If you were around in the 80's you may have heard the stories of Faye

Reid's cat, who preferred the top of her truck when napping. Faye didn't realise this initially and would hop into the truck and tear off to the gig. The first time it happened she had to send the cat home in a taxi! It took a few taxi trips before Faye got into the routine of checking the top of the truck before taking off.

Being referred to as an Australian audio industry legend surprises and amuses Faye. She has been grateful to have had this career as owning a PA has always been a great plan "B" to her music. Faye is also one of Australia's premier bass players forming and playing in some of Australia's most well-known and loved bands.

Faye started playing at the age of 13. She left school at 14 to play full time and worked 7 nights a week in an all-girl band called the Fair Sect, (New Zealand's first all-female band). They enjoyed huge success in New Zealand in the late 60's – early 70's and released a number of successful singles. On the back of that success, the band embarked on a tour playing in countries such as Canada and all through the Islands on boats. They disbanded after returning from Canada and Faye joined an Australian band, the Daughters of Zeus and toured Asia before heading over to Europe where she worked 7 nights a week at 7 hours a night. Europe was good to the girls financially and the band toured extensively throughout the world visiting places such as Australia and Africa before returning to Europe. They've had

their fair share of adventures like getting caught up in a coup attempt in Khartoum, Sudan, where Government soldiers quickly restored order by killing more than 700 rebels and arresting scores of dissidents, and at the Berlin Hilton where they managed to sleep through a bomb blast. Girls were always going off and getting married so they would replace them from whatever country they were in. They picked up starving musicians along the way and have found some stellar talent in the homeless who would go on to become successful artists in their own right.

When Faye and Judy Costello (drums) arrived back in Australia they tried, but couldn't get a gig with any band at the time as nobody wanted a female in the line-up! They decided they would form their own band and this was the start of Garbo. Being New Zealander's and coming off the back of years of touring in Europe where all-girl bands were plentiful, they had no idea what they were about to face with lewd comments being thrown at them and no idea what the name meant to an Aussie. The band ended up getting a residency at a bar called French's in Oxford St Sydney. They couldn't afford to hire a PA so they decided to buy a PA and truck. About 3 weeks later the band broke up and Faye's PA career was born.

After French's, Faye went on the road with her PA and did all the usual one night stands which were abundant. She learnt her craft by going out every night and learning from other PA operators doing their jobs. Faye tells me that Todd Hunter from Dragon made her the best trouble shooter in town as he used to engineer bands at the Trade Union Club where Faye had installed one of her PA's. He would play little tricks on her when he packed up from his gig and she would go in the next night and have a heart attack figuring out what he had done. But she figured it and got quicker each time which in the end was a great learning curve for her.

BY TONI VENDITTI

The Party Girls started at a drunken party while the girls were singing harmonies. They thought it didn't sound too bad so formed a band and after a few weeks, they were playing the Sydney Entertainment Centre. They were one of Australia's more successful bands, releasing an album and touring extensively covering over 100,000 kms in a year. They toured and supported many international acts including Annie Lennox, Dave Stewart and Duran Duran to name a few. Faye supplied the PA for the Party Girls and as the band got bigger so did the PA and trucks! Faye recalls that growth stage as just opening up the back of the truck and throwing money in, pretty much returning all of the income into improving and growing the business ending up with a 10 tonne truck, a 3 man crew and casuals. When that finished, the PA and crew were hired out to the larger tours passing through and there was so much work around in the 80's that the company grew to 3 PA's and the business Pink Productions was born.

Faye said she has never experienced any problems being a woman in the PA Hire business which was quite the opposite of the all-girl band trying to get a deal experience.

When Faye had returned from Europe she brought one TL bass box back with her which she loved. They were really light and small and highly efficient so she thought she would get another one but couldn't find any in Australia because at the time, EV were only dealing in hi-fi. She took the box to Eric Selwood who owned EV at the time. He hadn't seen this type of box before and after talking for a while he agreed to have it made for her. Faye has always been a great business woman and by the end of that meeting, they agreed that Faye would sell the boxes and for every 6 she sold, he would give her one. She was so successful at selling that it wasn't long before Eric offered her a job as a rep. He gave her a car and let her loose, all the while understanding that she was also touring at the same time. Faye travelled around with her beloved TL box and her bass and would set up in shops and demonstrate the TL against the JBL and sold piles of them, putting the TL606 on the map. As EV grew Faye's knowledge of their product range grew stronger. EV were always running seminars and Faye learnt something from every one of them. She had the opportunity to try all the new gear and learn what it did the minute it hit the country.

She started her PA with a lot of gear that was given to her by EV as her reward for selling so many of the TL boxes – great deal she struck there! Her first PA consisted of an EV Tapco Catalina 20:4:2, an EV LF215 2 way active system with 4 x 15's a side and horns that were in white flares – an EV60/40 (white flare, DH1506HP 1" driver) and EV90/40 horns a side. Eric Selwood, the job with EV and her commitment to the product produced a lifelong loyalty to EV products and Faye never leaves home without them.

The PA Faye used for the Party Girls consisted of a Soundcraft 400 26:4:2, 6 x FR15/3 a side, (it has been reported that this box was inspired by Faye) with 2 x Electrovoice single 12" w's a side and 4 x Amp Racks containing 3 x Jands 920 amplifiers. They recycled Faye's earlier PA to use as the fold back system with the original EV Tapco Catalina 20:4:2 console as a monitor desk, 2 EV LF215 plus 1 x HR60/40 as side fill and 2 FR15/3's for Judy's drum fill.

At one time Faye became a lecturer at the Australian Film, Television & Radio School where she would cut into a studio sound course and show the difference between recorded and live sound. It became fairly popular and as the size of the PA grew, she brought in Michael Orland (another legend of live sound) to provide further technical knowledge on larger PA's

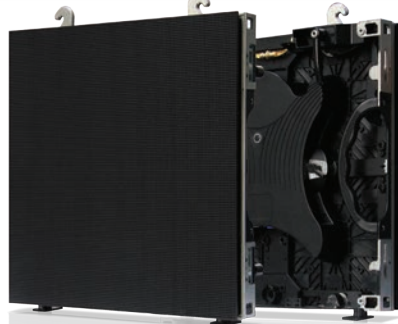
Faye stills enjoys the work and for the past 9 years has worked at Sydney's premier cabaret venue, Slide on Oxford St in Sydney. Faye brings in her own Rane graphics, a 20ch Dynacord desk and EV fold back and the venue has a JBL array system. Faye has always made her own leads and can take an amp apart and solder with the best of them. She also has a regular gig at Cronulla Sharks and still runs a small EV PA.

Faye's PA's were installed in many venues including the Annandale, Vic on the Park, Manly Fisho's and the Arncliffe hotel. She has done it all including running 3 hotels - adding live music along the way. At the Iron Duke, she would run weekly nights for people who wanted to learn sound and there are many working today who attended those nights.

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BIZ TALK

October 2015
Volume 108

with Julius Grafton

HERE AT CX WE HAVE LONG TERM RELATIONSHIPS – ONE PRINTER (SUPERFINE) DID OUR WORK FOR A MASSIVE FIFTEEN YEARS UNTIL THEY SUDDENLY SHUT DOWN. THEY'D RECENTLY INSTALLED A SIX COLOUR PRESS, WHICH WAS ENGINEERED INTO THEIR FACTORY OVER THE CHRISTMAS BREAK. ALL FOUR DIRECTORS SIGNED GUARANTEES FOR THE LEASE AGAINST THEIR HOMES.

Things were fairly good for them, with 18 staff working around the clock. They sold on reputation and always delivered a quality product. Suddenly one lunchtime the press software shut the machine and would not restart. Two hours and thirty minutes later the emergency tech arrived.

I always buy expensive equipment from a well credentialed local distributor with proven service ability. I had to shake my head recently when an audio manufacturer explained their three month backlog was due to machine failure. They bought the machine cheaper from the other side of the world, and were left alone when it failed.

Back to the story: Superfine's machine would not run as it was now not aligned. The floor had subsided due to excavation work next door. They had no choice but to call in the administrator, and that followed the usual trajectory.

CX was on the loose and we had several less than brilliant printing firms over the next two years. A guy we will call Fred* called us from time to time, trying to woo us, he would beat ANY price we could find.

We didn't play that card. Finally he made a pitch we could not ignore – he sent an unsolicited quote. When I opened it, I blinked twice and called Steve over.

'Do you think he's left anything out of this?'
'Well yes, they are interstate so the proofing will be slowed down', Steve replied.

We went with them anyway. The cost saving was around 40% which is huge.

The quality was somewhat less than we were used to, but the errors were ridiculous. This put the pressure on us at proof time to find the problems and then have them fix them. Some things didn't get fixed, and some advertisers needed compensation.

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After a while we grew weary. We put the compensation back on them.

Fred would come around when things got out of hand. He had a certain way, possibly born from his origins in South Africa. He would sweep in, loudly asking for Peter. 'Peter, Peter, where is Peter?' he would bark as he swept in.

'We have no Peter here, would you like to see Steve?' we would say. It happened several times, so we suggested Steve change his name.

Finally we had enough. We had a special issue so we wanted the masthead in a special Gold foil ink. We got mustard instead.

'What do you expect, Peter?' Fred barked. 'You're paying bottom dollar!'

He had a point. But things had moved over the time frame as we found another printing company who were not much dearer, and their quality is back to Superfine standards.

So the moral of the story, you do get what you pay for. The Superfine guys were ruined by circumstances outside their control and didn't have an insurance policy strong enough to save them. They got what they paid for.

And the audio manufacturer? They got what they paid for too, and lost a quantum more than they saved by not buying their machine from a local distributor.

***Actually that is his real name!**

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A round up of this past month's activities. Once you've read it, how about becoming a member?

The more members we have, the more we can do. It's as simple as that!

Fighting for compliance

As you may know C Tick is replaced by a combined new standard called RCM. It's so much more complex. One distributor has already told us they've dropped two lines because it wasn't worth doing the paperwork to apply for RCM certification for them. Are you sure your lines are all compliant? Shortly, ACETA will be running four webinars, presented by ComTest, to outline what needs to be done. The first webinar is free to everyone, but the following three are for members only. What you will learn for free, as an ACETA member, will save you thousands of dollars. That's not just an empty claim. Members have already told us that ComTest has saved them thousands of dollars. ComTest is Australia's leader in the provision of independent, comprehensive reliable compliance testing. They have partnered with ACETA to present at these webinars and also offer a discount service to ACETA members. Don't think compliance is boring red tape. If you fail to comply and someone is harmed could you live with yourself afterwards? And let's not even think about the fines that can be so large they would bankrupt many companies. Watch for your ACETA Bulletin with more information. This is, quite simply, unmissable and a genuine money saver for members.

Fighting for safety

This is an area where more money would make a huge difference to what we can do. There are too many cowboys in our industry and it's far too easy to import some shoddy goods from China and set up as a hire business with no certification and no safe work practices. These people undercut everyone else who is doing the right thing and put lives at risk. Just this week CX has drawn attention to a hire company in NSW who is installing stage roofing that allegedly isn't certified. We have written to every Council in Australia to alert them to this. Only Sydney City Council bothered to reply. If (when) there is an accident we can say they were warned, but that's no comfort to those who may be injured or worse. Last month we wrote to all work cover authorities asking them how they monitor safe work practices at live music venues that bump in and out inside 24 hours. We need to do more. We would if we had the funds.

Fighting for inclusion in standards development

Building standards have significant impact on our industry and ACETA has noted that a number of committees that set those standards do not include anyone who has knowledge of what commercial and entertainment technology can and can't do. For example, a committee currently deliberating is reviewing provision of assisted hearing in public venues such as concert halls, lecture theatres. This standard

BY FRANK HINTON

will then dictate what you can and can't install in those venues. ACETA is writing to such committees to request a seat so we can provide expert advice about how technology can best be employed to achieve these standards. Our goal is to provide input into developing standards which are workable and easy to interpret from a technological perspective. This sort of activity is not anything that any individual company could or would want to undertake, but it impacts our lives in many ways. Often not for the better if the standard is difficult to interpret and the customer has a different view to you. There is only so much of this we can do with the resources at our disposal. More members means we have more money so we can do more.

Big thanks to CX Network

Huge thanks from the ACETA Board and members to Julius Grafton at CX Network for sponsoring the webinar service. As those who attended our last webinar will know, the technology failed. We have now invested in a state of the art service and thanks to CX Network will kick off with the compliance webinars. What other subjects would you like covered?

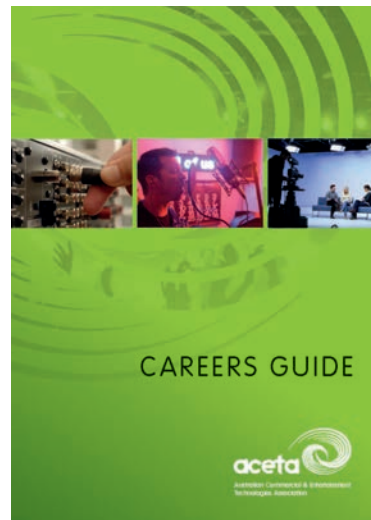
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ian.harvey@aceta.org.au

That's it for this month. Please do consider joining ACETA. We're here for the industry. We do the stuff that you can't and wouldn't want to. We do the stuff that

means your working life is easier and simpler. Without us, you would be on your own.

Check us out at:
www.aceta.org.au

Membership starts at \$450+GST for associate members and \$900+GST for general members. Membership year is calendar year and it's pro rata.



ACETA is your industry body, working to protect and further the interest of everyone who works in our profession. We have a new website at www.aceta.org.au, can be found on Facebook at www.facebook.com/AusCETA

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FACT: Most Australian tech crew and roadies have attempted or considered suicide¹!

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Supporting the mental health of Australian entertainment industry workers

¹Passion, Pride, Pitfalls Dec 2014



PEACE UPON YOU (from a great height)

LL, the drummer for the Harris Tweed band popped into the factory the other day, and over a coffee we started reminiscing over funny things that have happened in the course of earning a living. Mine have been well documented [some might say ad nauseam!] in this column but he has had no-one to write his down except for myself.

At one stage LL was working in publishing, selling advertising in a fashion trade magazine, and consequently his name was on multiple guest lists in the vague hope (pun intended!) that by inviting him, the event would be guaranteed coverage.

They say that being on the beautiful people's guest list is a bit like working for the Public Service - once you're in, you're in - you have to do something really bad to ever get the flick. It's quite possible to go from one trendy function to another without ever stopping, if (a) you're on enough guest lists, and (b) you don't die from liver failure first!

If you befriend the gossip columnists and bloggers there's even the chance of getting your picture in the chatterati pages of the newspapers or online. Even more chance if you're a female and can organise a 'wardrobe malfunction'!

One such night he had been invited to the launch of a trendy new shoe boutique in the city. We're talking late 70's here, and this was one of a glut of such things that mercifully seem to have gone the way of most 70's things including flares - for the moment!

The night was a star-studded affair full of beautiful people all standing around making sure they could be seen to be seen getting absolutely fish-faced. Many of the women were wearing so much gold that they all ought to have had their own personal Armagard truck waiting outside for them. And the guys - I remember LL saying that if you ever wondered what happened to all those kids at school whose heads you wanted to shove down the toilets, well, you needed to look no further. There was also a security guard at the door, an off duty policeman, to ensure that only the chosen ones could enter and bask in the warm glow of self adulation.

The shoe boutique was on the ground floor of a building that was so new that it was the only occupied floor - all the other levels were unfinished and vacant.

There were about a hundred or so guests crammed in for the launch, but since the place was just a little shop, it only had one toilet. The human body (even those of the beautiful people) can only take so much being poured into it before things start leaking out the other end.

Once the guests had all been there for a while, they started to get the urge to 'splash the boots', so to speak

(since it was a shoe shop!) and pretty soon the queue for the toilet was stretching around the walls of the shop.

LL was busy working the room with advertising on his mind, but wasn't immune to this call of nature. With the abundance of free drinks he was rapidly becoming as tired and emotional as a newt. He had resisted the pressure buildup for as long as possible, but now the call was getting louder and more insistent! Deciding that he couldn't wait for what was looking like half an hour or more in the queue for the toilet, he wandered upstairs to make an urgent inspection of the plumbing on the next floor.

Upstairs turned out to be deserted and pitch black darkness. He lurched around banging into locked doors in the dark, but after roaming around for a couple of minutes and cracking his shins on piles of wood and various tools, nature got the better of him and he decided to have a quick leak in the corner.

Well, it was rather like opening the floodgates at Hume Weir. A seemingly endless stream, a veritable Yellow River gushed out until a sizable puddle had formed around him. Unknown to LL, the upstairs floor had been built with a very slight slope on it, which led back to the staircase. It had obviously been designed to cope with any flooding, but was being irrigated now by a flood of a very different kind. LL groped his way to the edge of the stairs, preceded by a coruscating golden stream, which slowly trickled down ahead of him step by step.

Beautiful people standing underneath the stairs were surprised when a gentle golden shower began falling upon them and their drinks, and looked up to see what was causing the miniature Niagara Falls which rushed down the stairs and collected in a pool at the bottom.

Unaware of all these waterworks, LL shakily made his way down the stairs, and was greeted by stony stares from the rest of the guests. Those closest to the stairs made a show of carefully placing their hands over the top of their drinks to avoid catching any drips or splashes!

Sensing that something was amiss, he decided that right now would be an excellent time to leave the party. Grabbing his overcoat, he sloshed his way towards the front door.

As he approached, the security guard accosted him, stepping in front of LL and putting up a hand like a policeman on traffic duty.

"Just a moment, sir," he said,

"What is it, my good chap?" mumbled LL

"Excuse me sir, but did you p15s upstairs?" he inquired

"I beg your pardon," said LL, "What on earth do you mean?"

The security guard ploughed on in a loud voice, as if giving evidence in court.

"I saw you climb up the stairs, sir. After a few minutes I saw that there was p15s coming down the stairs and I have reason to believe it came from you."

A pall of silence hung over the room as everyone watched the little tableau at the front door.

"I'm sure I don't know what you're talking about," waffled LL, rapidly sobering up and becoming aware of what had happened. "Get out of my way this minute and let me pass"

"I shall have to ask you again, sir - did you or did you not p15s down the stairs?"

"Don't be ridiculous, my good man," LL protested. "What an absurd thing to suggest."

And so saying he ducked under the outstretched arm, elbowed his way past the security guard and made a run for the street, ignoring the cries of "Stop, that's him, stop that p15sser, stop, stop" that followed him as he ran down the street and made his getaway.

Strangely enough, his name never appeared on that particular guest list afterwards!

*** P15s - a common euphemism for bodily fluid generated when drinking excessively!**

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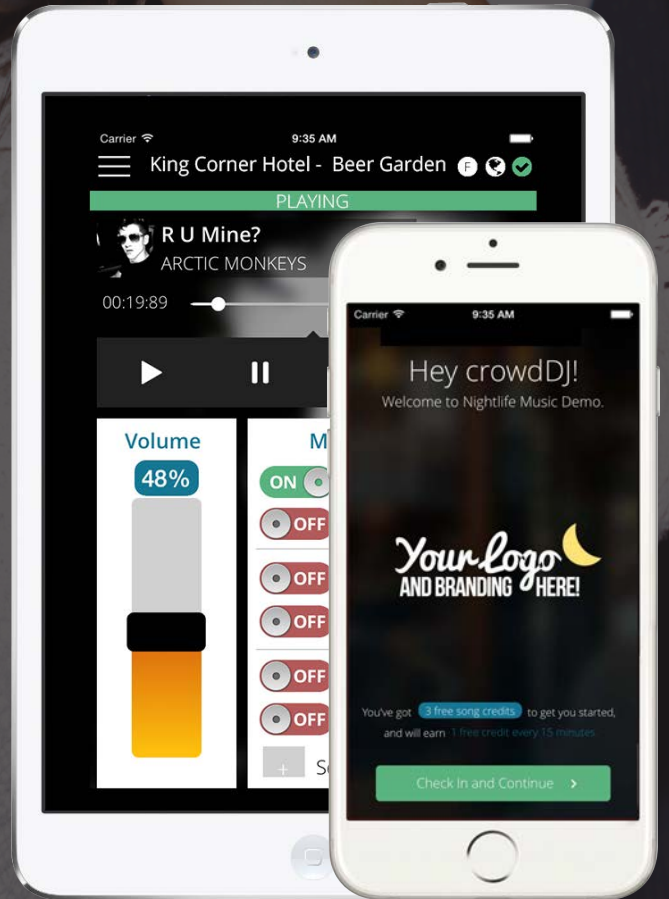
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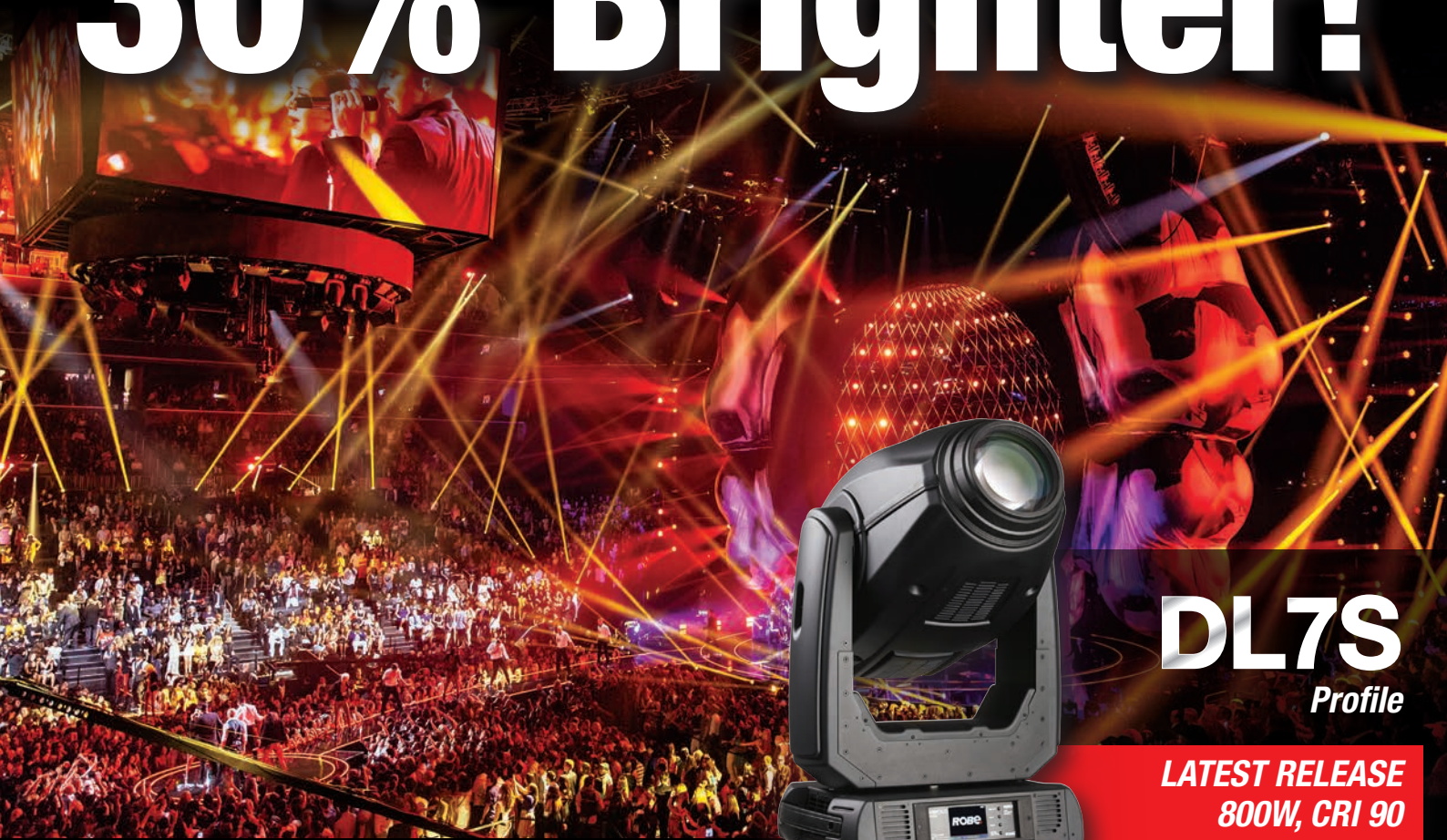
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