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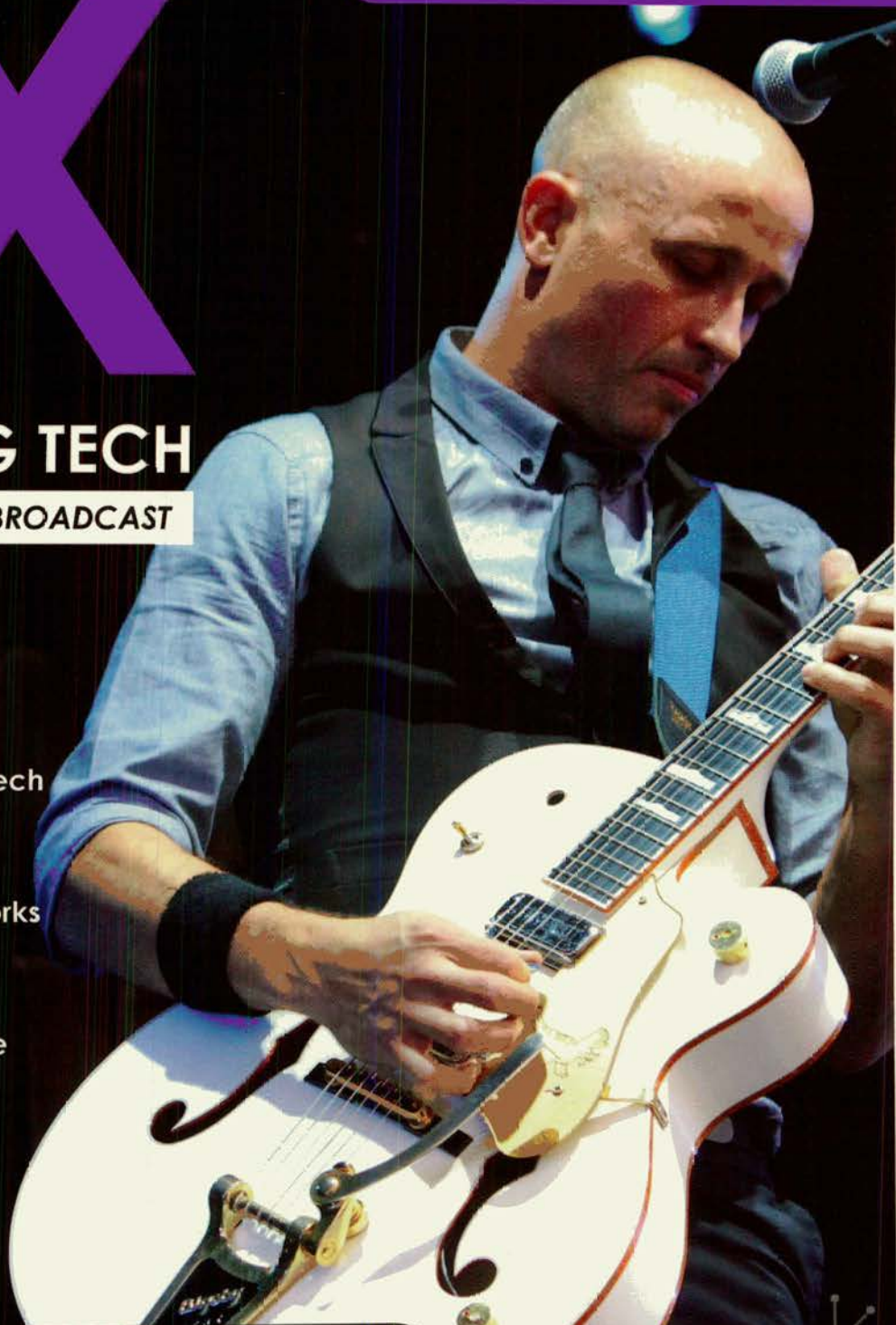
First tribute band on bad fireworks

WRONG!

How naughty AV Techies make
broadcasters mad!

NEWS:

Bytecraft becomes PRG
Wages and contractors



ISSN 1320-5595

09



REVIEWS: PHONIC DIGITAL MIXER • DB DVA MINI
LINE ARRAY PA • PANASONIC HS50A SWITCHER •
JOECO BLACK BOX RECORDER • SONY HD VIDEO
CAMERA • ROSCO LITEPAD LED PANEL

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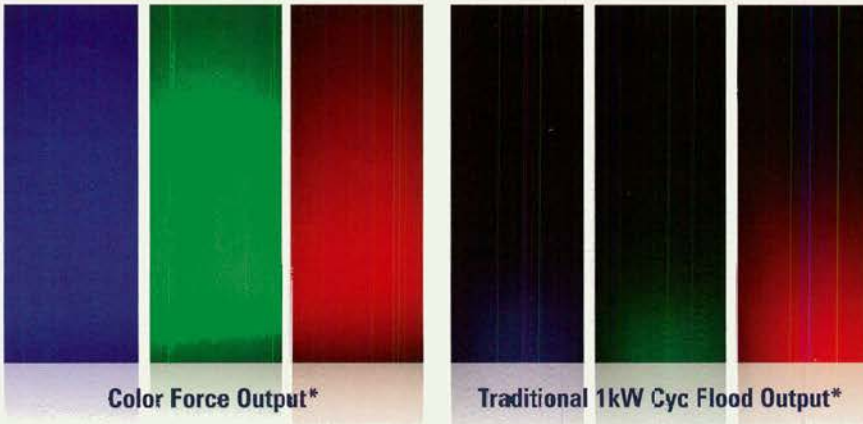
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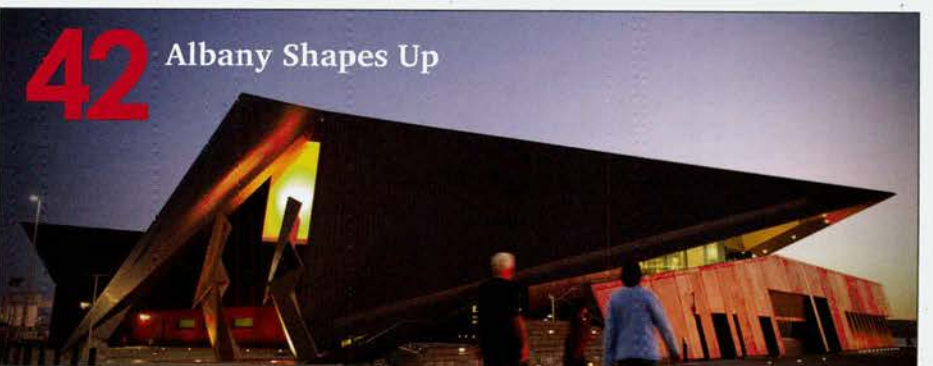
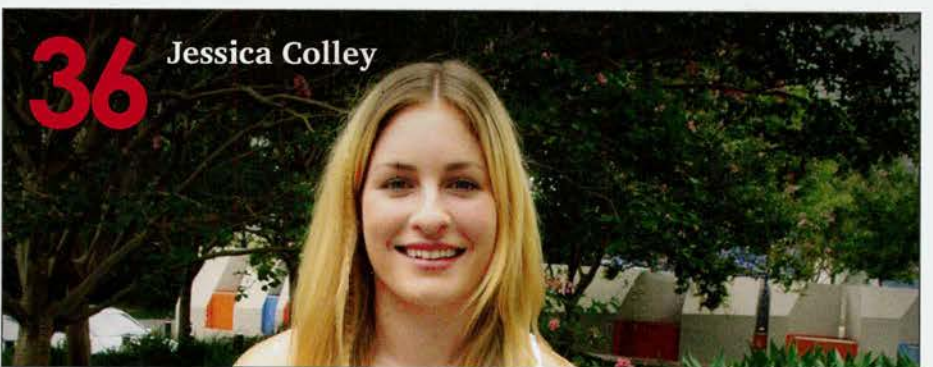
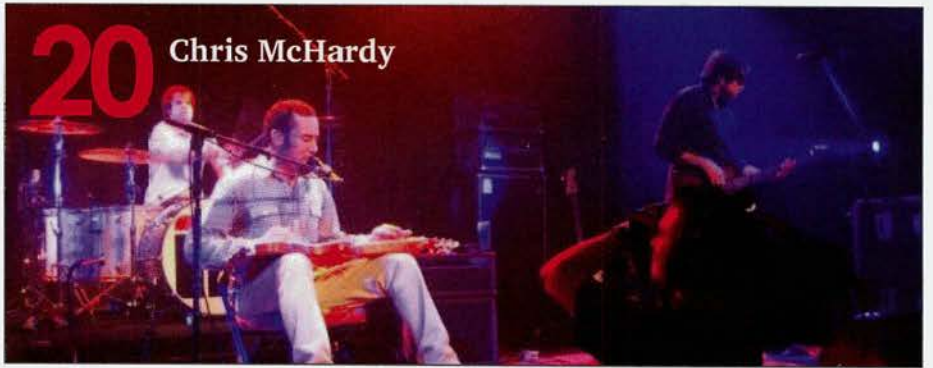
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CX59 EDITORIAL

ACROSS TIMEZONES

This mag issue we travel from Albany, where WA state theatre consultant and long time CX collaborator Graeme Walne (we call him 'Sir', a nicer man is hard to find) talks about his latest theatre. Adelaide gets a big shout out, suddenly we have three correspondents there. Enjoy Paul Curry's handy DIY, and Jeanne Hurrell's audio story alongside Steven Dean's WOMAD words. Then we go over to our brothers and sisters in Christchurch, for a heartfelt memorial concert report. Along the way we have some profiles out of Brisbane. CX is a small media conglomerate, so many thanks to all of you who contribute to our pages!

EXIT CADENA

For many years now Richard Cadena, one of the gentlemen of the lighting industry, has filed a column every issue from his home office in Austin, TX. Last month PLASA hired him to assist with technical standards and writing. Our loss is their gain; we wish him all the very best! And now we have a hole to fill: so if you think you can fill some very big shoes, please write us a sample column of 1,000 words and email to juliusmedia@me.com

THE SCREW THAT CHANGED THE WORLD

Before you get too excited, Dunc is just being practical. See the last page of the mag for more on this. Meanwhile hop online for the latest CX-TV, where we debut GEARBOX. This is where you'll actually see the products reviewed in this issue, and

get some additional information from a panel of people. Come join the panel! Also nested within GEARBOX is our inaugural quiz show, where we play for a subscriber who wins things. Email juliusmedia@me.com

FIFO

How does the mineral mining biz affect CX readers? In the 70's, the wild and mild Joh Bjelke-Petersen Government in Queensland made the mining companies provide townships with performing arts centres if they wanted to dig. Thus we cut our teeth rattling around to Dysart and Blackall and other places where a small town audience of cashed up miners rocked out to our tours. Now we read Queensland is adopting Fly In Fly Out, so the mining firms don't have the expense of building a township. Which makes Joh, the derided (late) premier a visionary. Never thought I'd say that.

TELSTRA

Is it just us, or is Telstra plumbing its worst customer service standards yet known? I spent many hours in January trying to restore dad-in-law's Bigpond ADSL in vain. Eventually went to iiNet. Cancelling the T account took more than an hour, bounced from several offshore call centres back to Australia to resolve that they owed us an \$800 refund. Agreed but then not forthcoming. Another long flip-around call may have sorted this, we hope. At the office, Steve had several hour-plus multi-national phone flips to sort a simple account problem of their making. What gives? The worst of this is that the company is setting its call centre staff up for abuse. We don't like that. At all.

SHORTAGE

In a world oversupplied with everything, skilled AV installers are an exception. Two organizations called me at presstime - Lots of Watts (Sydney) and Wizard (Syd, Canberra, Tasmania) desperate for trainee and experienced installers. We posted the positions on the website - juliusmedia.com - free of cost as always. There's no formal training anywhere for AV Technicians, other than company specific courses. Hills SVL told me recently they've added extra training facilities for Crestron training.

ABOUT THIS TAG



The Microsoft Tag is a high capacity colour barcode that is readable from most Internet-capable mobile devices, including many based on the Windows Phone 7, Windows Mobile, BlackBerry, Java, Android, Symbian S60, iPhone and Java ME platforms.

You get the app for free, visit <http://gettag.mobi>

Now try it! Hover your phone over the tag above, and it will take you to CX TV. We've placed tags at the end of some articles, alongside the web link. In the electronic CX (CX-E) you access this printed magazine online, with all the web links wired up. Thanks to TAGS, you now have a wired print copy as well.

Julius



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Publisher and Editor: Julius Grafton
Technology Editor: Jimmy Den-Ouden
Broadcast Associate: Les Bishop
Theatre Associate: Stephen Dean
CX TV Presenter: Sophie Pearson
Advertising Director: Steve James stevej@juliusmedia.com
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QSC

CX News

DEVICES, PEOPLE & CONCEPTS

Date: 15 April 2011 - 1 June 2011 | Issue: Vol 3, CX59



Crew happy about PRG

BYTECRAFT BECOMES PRG

Iconic Australian lighting firm acquired by global group

Staging Connections Group Limited sold Bytecraft Entertainment to Production Resource Group (PRG) for A\$15 million on March 31st. The company with operations in Melbourne, Sydney and Adelaide has 71 staff. Upon sale it was renamed as PRG Australia.

John Swain, Vice President PRG Asia told CX that the firm is excited about the Australian operations. "We're extremely interested in growing the domestic market", he told CX.

PRG is in acquisition mode, buying SHOWTEC Beleuchtungs- und Beschallungs GmbH, the Europe-based event technology company at the same time as Bytecraft. Acquisitions made

by PRG include Light & Sound Design (1998) and VLPS Lighting Services (2004), High Performance Images (2007), High-Tech Rentals and UK-based Essential Lighting (2008).

In 2009, PRG took a giant step forward into the global marketplace with the acquisition of PROCON, an entertainment technology company headquartered in Germany with offices in Belgium, France, Switzerland, China and South Africa.

Asked how PRG would service audio clients in Australia, Mr. Swain would not be drawn on whether this involved importing inventory or acquiring an Australian audio production firm.

WAGES CRUNCH AS CONTRACTORS GO CASUAL

Broadcast OK but Live Production and AV firms face \$33,000 fines

This winter tours and AV shows will be hotly contested, with many firms failing to pay penalty rates to crew and quoting cheaper labor than those who do. Now industrial lawyers McCullough Robertson have warned employers can face very high penalties for breaching the Modern Awards.

"An individual can be fined \$6,600 and a company \$33,000 for each breach", said lawyer Peta Shanahan. "Plus these are public hearings, so reputational issues arise".

Audio firm Norwest Productions have moved all crew onto Individual Flexible Agreements, which have been ratified as better than the Award. Developed in consultation with crew, Norwest rank skills into seven areas, and pay loadings for Sundays, some public holidays and Broadcast work.

"We were already paying Workcover for our contractors following a Workcover determination we had asked for a few years ago", says Norwest Group Operations Manager, Graeme Whitehouse.

"We made the simple decision to not use any more sole traders for labour-based services. We'll still sub-contract people who've set-up Pty Ltd Companies because they are seen differently by the ATO, and there's

Continued Page 10

Continued Page 10



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-----> BYTECRAFT Continued from Page 8

"We are very committed to provide core services across all operational units geographically. It's premature what that means just now. But we will pursue other market segment growth and evaluate as an ongoing business".

PRG's Australian operations are business as usual, with Stephen Found appointed non executive chairman, and Durham Ritchie continuing as General Manager. Staff reaction to the sale is positive, with PRG seen to offer extended career opportunities in Australia and overseas.

Bytecraft Entertainment was sold to Staging Connections Group for A\$42 million by Tattersall's Limited in 2007. Tattersalls themselves acquired Bytecraft Entertainment from Stephen Found in 2005, having held shares in the firm for some years prior. Tatt's retain the Bytecraft Systems business that was established by Stephen Found and his former partner Ted Fregon to service gaming machines.

The PRG acquisition of Bytecraft Entertainment caps a remarkable history for both firms. Bytecraft Entertainment had its origins servicing Strand lighting consoles, and today has extensive lighting production and rental capability. They have staged productions around the world, and also have a super-screen division that was purchased from Clipsal. Bytecraft Entertainment also offer stage drapery fabrication and lighting sales.



Part of PRG Melbourne

-----> WAGES Continued from Page 8

clear lines of responsibilities for companies."

According to McCullough Robertson, there must be ratified and legal arrangements in place, otherwise employers must pay at least the award rates - which include provisions for double time on Sundays. If not meeting and exceeding the award rates, employers must have either IFA's in place with every employee and casual, or an Enterprise Bargaining Agreement.

Superannuation and Workers Compensation insurance is applicable to all workers, other than genuine contractors. As to what constitutes a genuine contractor, Peta Shanahan explained that a worker who is compelled to issue an invoice as a contractor can have the 'contract' reviewed in court. "It would turn on the facts, the court would want to know the true nature of the relationship".

Since the Modern Awards were established in 2010, any employee (even those deemed a 'contractor') can seek back pay and Super where due - and the employer is exposed to possible heavy penalties on top. This may have already created an invisible liability greater than the worth of some businesses, and will almost certainly be subject to exclusion warranty should a business be sold.

Clearly the cost of underpaying staff or crew is a time bomb, and simple ignorance of the new arrangements is indefensible.

Meanwhile, see our Broadcast page for typical casual hourly rates paid in this side of the industry.



CX SAYS:

- Crew and Casuals should keep all pay slips
- If no IFA or EBA check pay against Award
- If underpaid complain to Fair Work Australia
- <http://www.fwa.gov.au/index.cfm?pagename=disputeabout>
- FWA Help Line is 1300 799 675
- Don't invoice with ABN unless you are Pty Ltd
- If not Pty Ltd expect Super and Worker's Comp
- Do not work for less than the Award, IFA or EBA!
- MA000081 Live Performance Award
- MA000091 Broadcasting and Recorded Ent. Award

The full list of Modern Awards is here:

<http://www.fwa.gov.au/index.cfm?pagename=awardsfind>



ATO "Employee/Contractor determination tool":

<http://www.ato.gov.au/businesses/content.asp?doc=/content/00095062.htm>



VALE HUGH MCLEAN

Melbourne audio identity 1st January, 1955 - 1st March 2011

Hugh founded McLean Audio, which today is part of Norwest. He had sold his part of the business some time ago, and ran McLean Sound which continues to this day.

For close to 40 years his name has been synonymous with the PA industry in Melbourne. Many people working in the industry today have some connection to the history of Hugh McLean. This was evidenced by the healthy numbers at his funeral.

His legacy continues today under the management of Paul Wood and Hugh's daughter Sian (Sharn) and all the crew of McLean Sound in Caulfield.

Hugh is survived by his daughter Sian (Sharn) her mother Carol and his two sisters Dawn and Dianne.



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TEST AND TAG DISSENTER

"A 'Standard' is not a law"
- Production firm

A production in a council venue in Ballarat (Victoria) has become the centre of a dispute about whether or not a hire firm should Test and Tag its equipment.

"The production hired equipment from the local company here in Ballarat, Sound and Light Concepts", says tech Liam Mudge. "The production manager and I were shocked and horrified to discover that none of the equipment had a current electrical safety tag. When the company was called up on this we were told 'It's not a legal requirement that the equipment be tested and tagged, but an organisational one.'"

CX asked Craig Butterworth, the managing director of the firm, about this.



"So, how do we do it? Well, to be honest, we tend to use the tags more for identification than anything else (ie - our lead). As a general rule, we do actually do proper insulation testing typically about every 12 months".

"The important part of how we do it, is that each item is checked (to see that it works correctly) each time before it goes out, and each time when it comes back."

"We have an identification procedure

for production events that all staff know - which is if an item is not working or suss, it gets two knots tied loosely at the plug - this is also the case for if we strike a dodgy DMX or mic lead etc too, and if the item is actually dangerous (Smoke got out, went bang, or spotted a physical defect, etc) then it gets the two knot treatment and a bucket of insulation tape wrapped around the plug."

Craig offers a lengthy explanation, which is reproduced in full in the Forum area of the Juliusmedia.com website. CX does not suggest that SLC have broken any law.

http://www.juliusmedia.com/cxweb/index.php?option=com_content&task=view&id=1041&Itemid=4



CX



CHRISTCHURCH QUAKE MEMORIAL

A service was held to honour the dead in the February Christchurch earthquake. Over forty thousand Christchurch people came together in Hagley Park under beautiful skies to give thanks to the Urban Search and Rescue teams, the NZ & Australian police forces and all the efforts of the civil defence crews, St John, hospital staff and everyone else.

Special guests included Prince William as the queens representative, NZ & Australian Prime Ministers and opposition leaders plus respective Governor Generals plus dignitaries.

A massive effort by the Christchurch productions companies came together at very short notice to present a full scale outdoor performance setting suitable for a very important solemn occasion.

The brief was for 3 stages, main stage for dignitaries and service proceedings, stage 2 for brass band and orchestra, stage 3 for solo musical performance.

Local sound companies Bounce Ltd and The Sound People provided 6 x hangs of main PA consisting of dV dosc cabs and delay towers, all driven from a single digi- design profile console.

The interesting aspect was some of this equipment was trapped inside Quake Red zone and required special dispensation to retrieve for the service. This was done on the quiet, as many businesses are still prevented from accessing their premises. Those of you who have been to Christchurch will appreciate how devastated the city is, with one third of all buildings in the CDB facing demolition.

Hang-up Entertainment, A & C Lighting plus The Light Site supplied lighting and rigging requirements, Trailer stages and Slab Inc provided the structures. All these companies are in opposition to each other but a common cause here draws out the best in everyone.

Aided by superb weather the whole



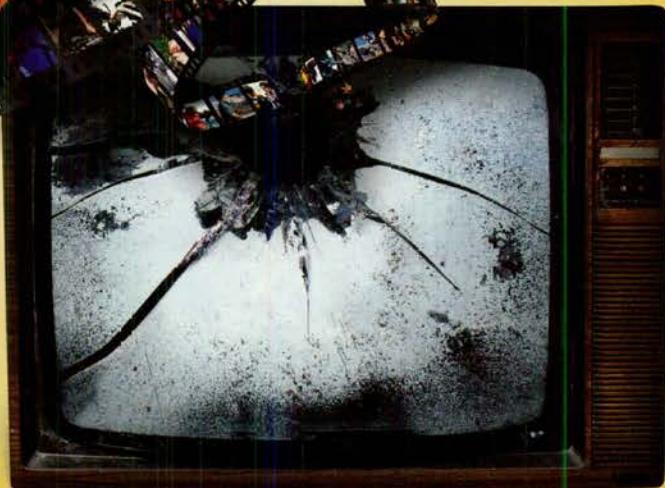
service was a resounding achievement to be arranged in such short order. Sound, lights, video and staging all worked together for a common goal.

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NEW DEVICES



SHURE AXIENT TOPS RANGE

Axient is now the top tier performance wireless microphone system from Shure. It does not replace the current UHF-R system. In fact Axient receivers will work with UHF-R transmitters. Each transmitter incorporates a bi-directional wireless data link. You can do a frequency change LIVE, from your PC or the Axient receiver, without needing to bring the transmitter back off stage. Demo systems arrive around now.

<http://www.axient.net/>



DPA REF. STD. MICROPHONES

DPA go modular. New models include the Reference Standard 4000 Series preamps & capsules which build & improve on DPA's current Standard & Compact 4006, 4011, 4015 & 4017 models. The new 2000 Series twin-diaphragm capsules and any Reference Standard capsule can be transformed into a new configuration by combining it with any of the 3 new preamps.

www.ambertech.com.au



CHRISTIE 3D

Christie's Mirage WU7K-M features a full WUXGA resolution display and dual lamps for 6,300 ANSI lumens output.

Mike Bosworth, Managing Director at VR Solutions explains "the Christie Mirage WU7K-M stereoscopic 3D display system meets the precise needs of the energy markets, life sciences, government, education and medical research where performance, reliability, easy maintenance and low operating cost are critical to project success".

www.vrs.com.au



WALL PLATES

E & EH Series Wall Plates from Switchcraft offer custom connector configurations on standard size wall plates. Options include single and double gang with 0, 1, 2, and 4 connector holes. Plates are available in brushed stainless steel or anodized black aluminium.

www.clarke.com.au



JBL EON 210P

JBL have filled a gap in the EON range with speaker and powered mixer package.

The package comprises of a pair of 10" + 1" loudspeakers, a Soundcraft custom designed stereo powered 150Watt per channel 8 input mixer which clips to the rear of one speaker, and a cable carry case which clips to the rear of the other speaker. JBL even supply the speaker cables.

www.jands.com.au



HDMI Over Single Coax Splitter/Extender



A HD video distribution solution for deployment in digital signage and DOOH applications.

The PCE122 can send ultra high quality HDMI v1.3 over a single coaxial cable! (RG6 or RG59). It can send full HD 1080P at up to 120M or 720P up to 230M, both with full 7.1 channel audio. The conversion is fully digital (HDMI to SDI and back again) with no additional compression and gives you crystal clear HD at long distances. The PCE122 also contains a built-in 1 to 2 Coaxial Splitter to drive two separate receivers and each receiver has a loop-through to daisy chain additional receivers as required. Cables are connected via BNC for a secure, vibration resistant connection. Featuring world leading single coaxial transmission, the PCE122 is designed to simplify installation.

PCE122 Features:

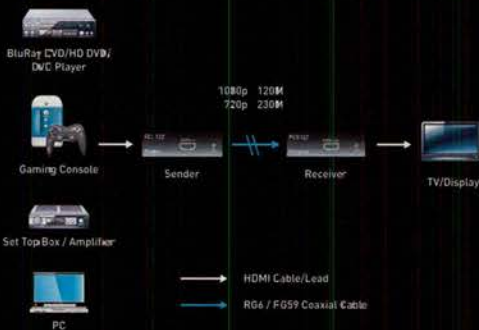
- 120M HDMI 1080p video and 7.1 channel audio One Cable transmission with Ultra High Quality Video
- Features World Leading Single Coaxial Transmission, designed to simplify Installation
- 1080p 120M / 720p 230M long distance Ultra High Quality Video with 7.1 channels surround sounds transmission
- Up to 7.1 channels audio, Dolby® Digital / Dolby® TruHD / DTS®-HD pass thru
- Built-in 1 to 2 Coaxial Splitter in Sender and One Coaxial Cascade output in Receiver for: great extension flexibility
- Support 5 layers Cascadable for up to 600M 1080p video transmission and up to 10 TVs/Displays/Projectors connected
- BNC connector designed for solid coaxial connection
- HDMI v1.3b, HDCP Compliant
- Hassle free plug-n-play, install in seconds



PCE122 Specifications:

- Input Connector - Sender: COAX BNC x 2 (1 to 2 Splitter)
- Output Connector - Receiver: HDMI Type A x 1, COAX BNC x 1 (Cascade Out)
- Video Bandwidth: 2.97Gb/s data Rates
- Dimension: 92.4x 117.8x29mm
- Weight: 249g
- Power Consumption: 5Watts (Max)

1 to 1 Extension



1 to Many Distribution



Madison AV Expands Product Range & Specialist Team

Madison Technologies have recently expanded their range of HDMI distribution solutions to include a suite of products from leading manufacturer Aavara Innovation Corp. These include extenders such as the PCE122 featured above, the PB5000 HDMI over IP Broadcaster, HDMI over Cat5 extenders, Splitter and Matrix products and a complete range of HDMI V1.4 Professional AV cables. These, in conjunction with the range of Hall Research Technologies solutions, and Madison's complete range of AV cable and connectors places Madison AV as the one-stop-shop for Hi-Definition AV infrastructure products.

Also new at Madison are products from award-winning Swiss Digital Signage manufacturer, Spinetix. Featuring the innovative HMP100™ Hyper Media Player, Madison now offer digital signage hardware and software solutions, backed locally by factory trained product specialists.

For more information on this expanded product range, contact the specialist Madison AV team directly on **1800 00 77 80** or email av@madisontech.com.au

NORWEST BRISBANE



Jenny McNamara, Ray Moss
Lester (Doc) Jurrott, Will Davy



Norwest test rack

Norwest use Smaart 5 via a custom interface device and USB pre to test the impedance of all incoming speaker cabinets. Utilising the transfer function gives individual reference impedance traces of the entire inventory stored in the system that is matched to the trace of the particular component in the box being tested.

If any irregularity is displayed in the trace, they test the box further by traditional sweeping and most likely strip the box down to find the fault as there will in almost all cases be one.



Norwest amp rack

"We have found the impedance trace method discovers faults that cant be identified by a simple listening test, any issues with the cabinet even physical such as a loose screw has some impact on the back pressure of the driver in question which in turn affects the phase & impedance trace well before it becomes a big enough problem to be audible", says Ray Moss.

CX

Leon Darcey



Josh Finlayson, Stefan Fuller



Renaë Collett, Luke Symons



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www.claypaky.it



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BROADCAST WIRES

PAY SCALES

Fortunately the TV and Film biz seems to operate well above the Modern Award (see News page 8). We thought it would be instructive to list some indicative hourly rates for casuals, since this is an industry populated by casuals. Even network soaps like Home And Away are mostly casualized, albeit on a permanent basis.

- Cable hand / gaffer assistant \$35
- Audio assistant \$45
- Comms \$60
- Audio Director \$60
- Camera \$50 up
- Tech Director \$60 up
- Switchers \$50 up
- CCU \$50 up
- Tape replay \$60

Note these hourly rates are just a guide; plenty of experienced people earn more. As should be the case!

VOICE OF THE OLYMPICS

The Macquarie Radio Network including the station 2GB and MTR TALK Melbourne has secured the commercial radio rights for the broadcast of the London 2012 Olympics. Radio personality Ray

Hadley will be the main host for the largest Olympics coverage yet.

The MRN is in the process of building a network so it can be heard in both major cities and regional areas as it has for the last 3 Olympic games. Sales Director Mark Noakes says that they will have a captive audience at home and in people's cars as they travel to work. This doesn't get much better than this for radio.

The London games start on July 27th next year.

RADIO STATIONS UP FOR SALE

The Southern Cross Network will have to sell 2 of its radio licenses in Queensland so as not to breach the broadcasting services ownership act. The provision is that an owner cannot control more than 2 commercial radio stations in the same area.

This follows the acquisition by Southern Cross of the AUSTEREO networks which Southern Cross acquired for 741 million dollars.

ONE-HD HAS VIEWERS

Too much sport can never be enough. One HD scored its best viewership since it started broadcasting. On

the first weekend of the 2011 AFL season, and the beginning of the F1 series, channel 10 and One HD got a combined audience of 1.1 million viewers.

On ONE HD, the F1 drew an audience of 425,000. The first game of the AFL season on a Thursday night, ONE HD enjoyed its highest ever ratings with the Richmond and Carlton game with 691,000 viewers.

APP OF THE MONTH

For all those grumpy crew or venue staff who have had one of those nights, this is the app for you!

Have you had a night where you had a little too much to drink, and vented at how bad the lighting guy was at a gig, or how the sound at the gig was mixed by a monkey with 2 bananas in its ears? And you actually Tweeted or Faced it?

A new app doing the iapp lap is called "Last Night Never Happened" which automatically deletes all embarrassing social network activity over a set period. It has been designed to save boozers the humiliation of trawling through status updates, tweets, photos, comments and messages uploaded while half-cut or in an audio engineer rage.



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In this day of non required social media sites, the ability to make a fool of yourself by speaking your mind when you probably should not is so simple now with devices like iPhones, BlackBerries and iPads - replacing the old problem of drunken texting.

Using the app is easy - a user simply enters the time they started boozing, and it quickly deletes all posts from their Facebook and Twitter accounts since that time.

Developed by 22Seeds, it can be downloaded from Apple's App Store.

FOX STUDIOS SYDNEY IS NOW BRIGHTER

In a recent deal, Fox studios have acquired all lighting assets of Panalux, the lighting division of Panavision.

Fox studios say they are the only complete "ONE STOP SHOP" film studio in Australia that can provide the studio space, production facilities and now the full lighting requirements. The move brings the Sydney studios inline with the FOX Studios in the USA.

"We are moving away from just dry hire" says Fox studios Australia's CEO Nancy Romano. "By adding the lighting equipment operation to our studio, it will be easier and more convenient for local and international productions to source lighting equipment whilst shooting on the Fox lot in Sydney, or in any other location in Australia and New Zealand" she states.

Panavision announced last year that it was being forced to sell off its lighting arm in order to survive after a lack of big budget productions being shot in Australia. Panavision's focus will now be on camera and crane rentals for local and international movies, television series and commercials productions.

THREE MEDIA ASSOCIATES

Here's a slightly confusing product for you. We were invited to come and meet these guys at NAB in Vegas. But because no one paid our fare this year, we remain marooned in Sydney.

http://www.three-media.tv/index.php?option=com_content&view=article&id=62&Itemid=94

RIEDEL JOIN AVnu ALL ANCE

Riedel Communications is now a promoting member of the AVnu Alliance. The AVnu Alliance is an industry forum dedicated to the advancement of professional-quality audio/video networking by promoting the adoption of the IEEE 802.1 Audio/Video Bridging (AVB) standards over various networking link-layers.

"We have always understood our products as open platforms for integrating standard protocols such as AES, MADI, SIP and now, AVB. Especially MediorNet as an open platform backbone technology with bandwidth capacities suitable for numerous 3G video signals, will be helping to expand AVB network installations beyond their current possibilities", said Henning Kaltheuner, Product Manager at Riedel Communications.



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What's your gig? Chris McHardy



CX interrupted Digital Cinematographer and Camera Operator Chris McHardy at a recent Moshcam, to see how life is treating him.

CX: What's your gig, Chris?

CM: You'll most likely see me behind a camera, but I also run my own creative/broadcast production company, spanning features, documentaries, music videos, corporate events, live sport and live music.

CX: When and how did you get started in the industry?

CM: I officially broke into the industry in 2005 as a camera assistant on a fishing lifestyle show, it was a baptism of fire! No formal training at a university prepares you for what's expected of you on a production job. Suffice to say I learnt quick, but was heavily tested along the way!

CX: What does a typical day at work involve for you?

CM: Depends if it's a paperwork day or a day out of the house. Every job is different so every day is different. What's common each day is the professionalism you bring but your responsibilities shift- you may only need to look after yourself or you could be responsible for an entire team of camera, lighting and grip crew! People look to you for the answers!

CX: What kinds of venues do you find yourself working in?

CM: For live music I'm commonly in the Metro, Enmore, Factory Theatre, Gaelic Club, Forum... the list goes on. If we talk sport and corporate events the list goes on even further..

CX: What tools do you take to a gig?

CM: When it comes to live music you'll need electrical tape and good quality ear plugs! Tape up the camera cable and it'll stop the director yelling at you if your connection goes down. Block your right ear with a plug and you'll actually hear the director over the comms through your left!

CX: What's the best part about your job?

CM: Capturing those moments of passion and enthusiasm for others to see that if missed would have only been enjoyed by yourself. You'll also get to meet and collaborate with some truly amazing people who bring their own energy into each production.

CX: What's the worst part about your job?

CM: You'll also meet and work with people that will test your patience like you will not believe!

CX: Do you have a favourite band or artist you've worked with and what's your most memorable gig?

CM: Too many gigs! Alexis on Fire and Jane's Addiction were fantastic. More often than not a band which I'll know nothing about and haven't heard of will keep me engrossed through their entire set. The crowd vibe helps immensely.

CX: Which departments on a shoot / gig have it HARDEST and why?

CM: Once in work mode the intensity and demands of the job are evident- 2 hours filming hip-hop off the shoulder and you may not want to become a camera op!

CX: One thing that could make the industry better. What is it?

CM: That's the tough one...getting paid in reasonable time is something that can definitely improve. One solid bit of advice I can give is be prepared to wait months to get paid...

CX: The one misunderstood aspect of your craft?

CM: "Oh, that doesn't look too hard..." Camera operating is fairly simple but you have to concentrate a great deal and not be afraid to get in there to get a shot. Many times the punters don't mind me being in the crowd filming a gig, but sometimes I've been surrounded by people who didn't want me there and it's not a particularly nice feeling. Suck it up and enjoy the gig, you're getting paid to see the band!!

CX: How do people find you if they want to book you?

CM: You can find me on Calling All Crew, www.callingallcrew.com or via e-mail chris@cinegear.com.au

α



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WHAT-IF?

What If your new theatre isn't going to get a grid?

Here at Jands Staging, we come across small (and not so small) theatres, both existing and planned, that do not have a grid in the tower over the stage. When we talk about the stage tower grid, we're talking about that floor made of steel channels with all the slots in it, sitting anything up to 20m above the stage floor, not a lighting grid made of pipes.

The most common reasons for not installing a grid in the stage tower are lack of funds and lack of height in the building or building approval (constraints in the building envelope).

There is only so much that can be done to make that extra height appear when it isn't there or when it can't be added, but if the driving force behind a decision at the planning stage to not install a grid is commercial, then it's worth considering what it is going to cost a venue in the long run, to maintain, service or modify a flying system in this grid-less stage tower.

When a grid is installed, a venue has the option of easily rigging spot lines, electric cables and dead hanging set pieces, and without a grid, these options become problematic.

These issues can be, and often are, worked around with that most valuable of assets - an inventive and diligent crew of riggers and mechanists.

The issues that will cost dearly, both in commercial terms and in terms of continuing safety, are the issues of inspection, maintenance, repair and service of lofting and head pulleys.

During the construction phase of a theatre, the lofting and head pulleys are generally installed and reeved from a scaffold, or one of the high access machines on site.

Take away these construction tools, however, and you are left with the prospect of standing on the stage and staring in frustration at that one loft pulley that has developed an annoying rattle or squeak, and could

The most common reasons for not installing a grid in the stage tower are lack of funds and lack of height...

be fixed in 5 minutes if you could just get to the thing.

Ropes can jump out of sheaves on older systems, rope keepers can come loose and bearings can develop a sound like a mouse doing time in a treadmill. These things can happen no matter how well the equipment is installed and checked before the scaffold comes down - Mr Murphy will always come to the party and make certain that you discover these problems as soon as you can't get to them to fix them.

More concerning however, is the issue of the inevitable compromises in safety that will occur when it isn't really feasible (or it is just plain inconvenient) to make those routine and periodic inspections of equipment that is holding heavy loads over people's heads.

For a system of inspection and maintenance to be effective, that system must be able to be implemented fairly easily, and it must be embraced by both the management and the operating staff of the theatre.

If a boom-arm lift has to be hired, or in the (not uncommon) case of a theatre whose stage cannot accommodate a boom-arm, a scaffold has to be erected, just to inspect,

tighten and lubricate lofting pulleys, then the system of inspection and maintenance is doomed to get, at best, lip-service only.

Given the lifespan of a typical installation of theatre machinery of the order of 30+ years, then the capital cost of installing a grid is not so significant, when compared to the twice-yearly cost of closing the stage for a few days, hiring that boom-arm, or erecting a scaffold in the theatre tower.

If a theatre project is planned with BOTH the initial construction cost (capital expenditure) AND the ongoing maintenance costs for the lifespan of the theatre (recurring expenditure) accounted for, then the added functionality and safety that a grid offers, suddenly becomes an investment with little or no net cost.

This article forms general opinion only and must not be relied on without a detailed, professional risk assessment undertaken specific to your situation. Consult a professional staging company every time you consider anything that may involve risk with flown objects or people.

α

By Andrew Matheison



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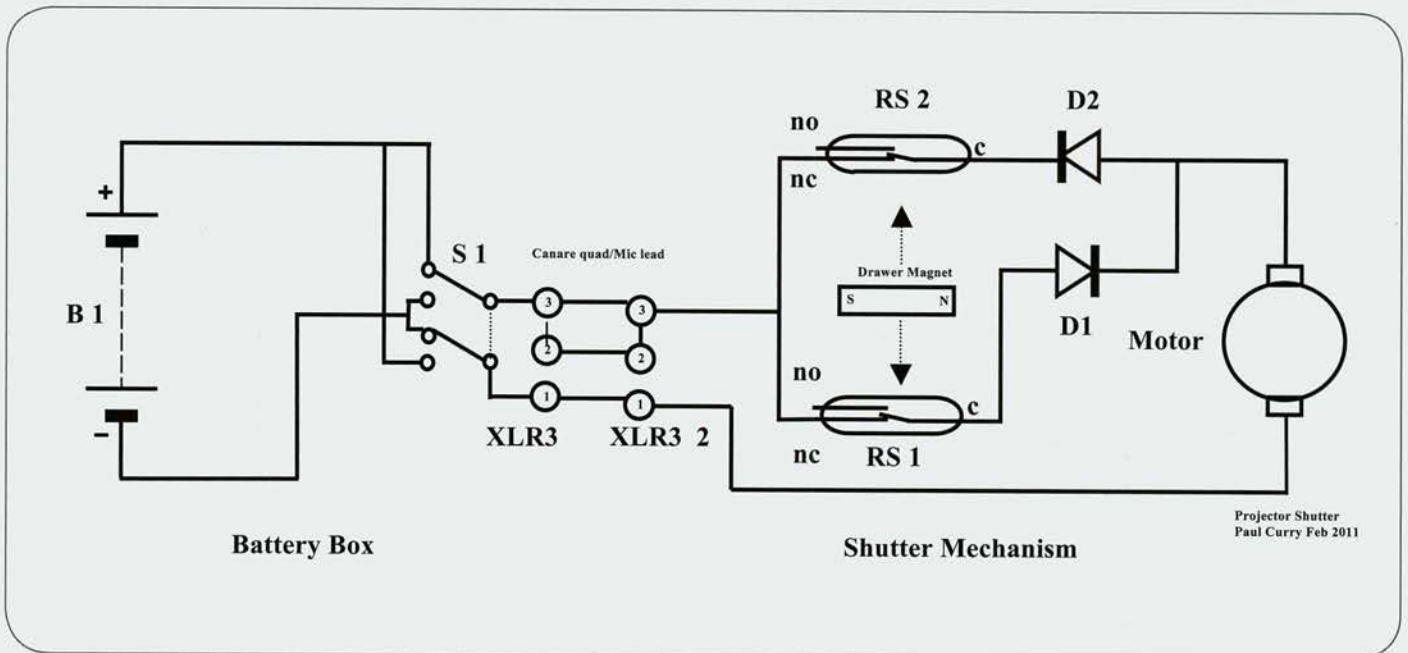
JBL

by **HARMAN**

A SIMPLE PROJECTOR SHUTTER

By Paul Curry

The Students at AC-Arts have come up with various ways of using CD drives as projector shutters. Unfortunately, these usually fail due to motor burn-out or jamming. To alleviate this, here is a basic electronic circuit using a handful of components that will accurately control the CD drawer. There are two states, open or shut.

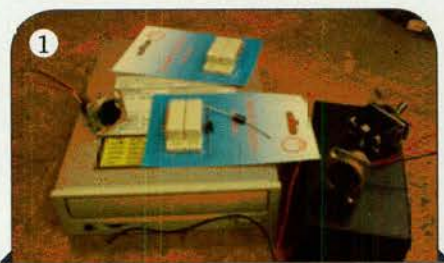


How it works

The Reversing Switch (S1) as shown allows positive current to flow through Reed Switch 1 (RS1), Diode 1 (D1) and the motor moves the drawer out. When the magnet that is fixed to the drawer gets near RS1, it opens, interrupting the current to the motor. Reverse the switch and RS2 allows D2 to conduct, the motor reverses, bringing the magnet near RS2. RS2 opens and the motor stops.

Parts

D1 & D2	2 X 1N4004	1A 400V Diodes	Jaycar Cat #	ZR-1004
RS1 & RS2	2 X no/nc	Reed Switch & Magnet	Jaycar Cat #	LA-5075
S1	1 X DPDT	Reversing Switch	Jaycar Cat #	ST-0572
Skt 1	XLR3/male, panel mount			
Skt2	XLR3/female, panel mount			
AA battery holder	suitable for voltage required (3V suggested)			
Diecast or plastic box	as selected			
Hook up wire				
CD drive	any PC or DVD player should be suitable			
Drawer Magnet	comes with the reed switch (disassemble and re-glue as shown)			



The parts.



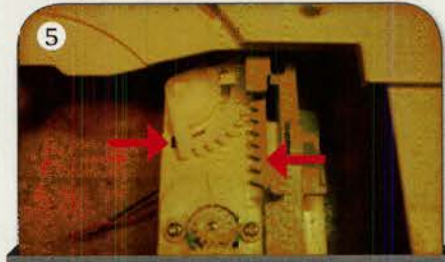
Firstly, build the control box.



Power up the motor and get the drawer open.



Everything must go.



Including this rack & pinion. The drawer can be separated at this stage for easier access.



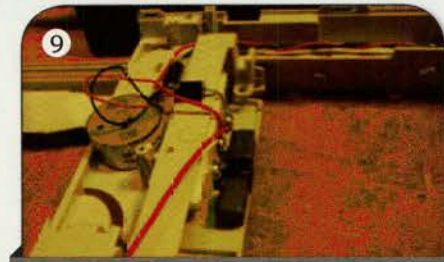
Save two of these silicon suspension grommets from the CD drive.



Use grommets as end stops so that the drawer rack doesn't disengage with the drive pinion.



Crack the magnet out of its case and re-glue so that it has a lower profile for clearance.



'Shut' limiting reed switch mounted and the magnet, gaffer'd in place for testing.



Play with the position of the 'open' reed switch to coax the maximum travel drawer travel.



The shutter which weighs only 200g is ready for mounting on the projector bracket.



The finished shutter permanently mounted onto the projector bracket.



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Diesel:

Australia's great technician
of rock 'n' soul rolls on



By Brian Coleman

Introduced as "one of the nice guys of the industry," at the recent Joe Cocker 'Hard Knocks' concert at Bimbadgen winery, Diesel's reputation seems to scotch the assumption that complex artists are intrinsically difficult.

In getting that complexity into the mix, regular soundo Warwicke Newman and contingent engineer Jay Van Lieshout would know all too well that the true artistry in mixing Diesel is to capture the innovations of both the artist and the artisan.

Of course, both technicians would be conditioned to the incongruity of a Fender-ish electric lead solo emanating from what started out as a Maton acoustic travel guitar. But they would also have to be in-tune to a performer that not only utilises a plethora of guitars in his act but one who is also creatively dovetailing 50's guitar and amplifier technology into the digital domain.

Diesel has never understood why certain artists or engineers are reticent about their craft. And one method of discovering the intricacies that make up Diesel's artistry is to simply ask him—and that's what CX did.

"People come up and ask me things, and I just tell them. They probably get more information than they bargained for; they probably walk away thinking, 'Geez, I wished I

didn't ask that question,' after I've talked their ear off," says Diesel.

And he says the same goes for the fledgling musician, "It's like, 'Look here's what I do, you can try it. Go for it! You're not going to sound like me anyway, and if you do, good luck to you.'

"What gear I've got and what settings I've got is not the reason why I sound the way I sound. I can pick up a different guitar, plug in a different amp and I'll still sound like me. It's frustrating because that's half the reason why I buy stuff sometimes,

“Guitar coming out of wedges is like an ice pick in the head.”

because I want to sound like something else, and then I plug it in and think, 'Ch well, it still sounds like me.' That's in my hands; it's inside of me. Probably not just in my hands but my whole personality coming out. Why be all guarded about that, when it's probably just DNA or something?" says Diesel.

On stage and in the mix

"I used to have a 200-watt Hiwatt with four KT38 valves, which are like these massive 'Coke bottle' valves.

Johnny Diesel and the Injectors was a three piece basically, with a saxophone on top, of which the saxophone was never a threat. Poor Bernie (Bernie Bremond) had to deal with all us bastards on stage with all our quad boxes and everything, and his instrument was an acoustic instrument with a microphone shoved in the bell.

"People still think I'm really loud, but I'm using literally 15-watt amps now, but they've still got that saturated bigness about them. If only they could have heard what my 200-watt Hiwatt sounded like. It used to literally make my pants flap when I was standing in front of it," he says.

Diesel recently re-united with Bernie Bremond on the Project Blues recordings, and on the subsequent tour where he says he repaid him for bygone years when the sax player couldn't hear on stage.

Nowadays Diesel uses Vox AC15 Heritage Collection guitar amps (made in China).

"They have a very small amount of circuit board and they're hand wired and very reliable; they sound great and they've got the blue 'bulldog' Celestions in them. I use two of them with a little Vox Night Train, which is another 15-watt head with a custom made cabinet with another blue 'bulldog' Celestion in it just for my delay. That's kind of a big part of my sound, the fact that I split my delay to its own amp, just delay with no dry signal; it's just wet. It's nothing new; Eddie Van Halen was

doing this back in the 70s. It makes for a very wide sound on stage. It's nice to stand in front of, and then the PA guy can split those and pan one hard-right and pan one a little bit more left.

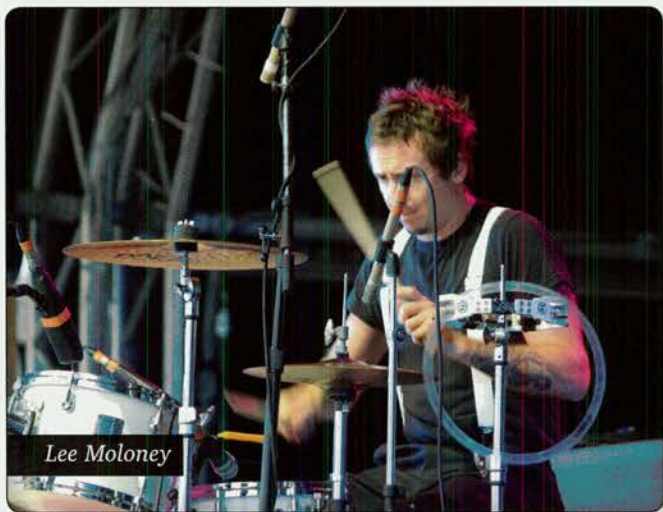
"We don't have the guitar amps in the foldback at all. I only have Richie's (Richie Vez) vocal, my vocal obviously, and a little bit of high-hat. That's about all I have in my monitors. I don't even have acoustic guitar.

"I always carry this personal Yamaha powered wedge, which sits behind me, because I've worked out that I don't like guitar right in front of me. Having it (the Yamaha wedge) in front of the guitar makes it prone to feedback to start with. If it's behind me, my body sort of shields it. So it's much happier.

"The high hat (in the monitors) is really where it's all at. Years ago I'd go, 'Give me some kick and snare.' But it's not about the kick and snare, it's about the hi-hat. If you want to know where you are, get the hi-hat. If you want to be confused even more and clutter up your wedge, put the kick and snare in there. I think for any young band starting out, if they know these things it's a fast track to being able to hear yourself.

"I think the thing with two 15-watt amps is if you stack them together you get what they call the coupling effect. One of them by itself isn't very loud, but you put the same thing right next to it and you get the coupling and it becomes quite big. As soon as you walk away from it it's not there any more; like if you walk ten feet to the left you can't really hear it. I've gotten to know where the sweet spots are, and I can run around the stage a bit

Continued Page 28 ----->



Lee Moloney



Warwicke Newman

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Diesel Continued...

-----> Continued From Page 27

and still be able to hear myself to a degree. But guitar coming out of wedges is like an ice pick in the head - not friendly," says Diesel.

Mini Maton Diesel Special

One sound that has become distinctive in the Diesel repertory is that of the Mini Maton Diesel Special guitar. The Mini Maton, which was made by Mark Malmberg, started out as a 'travel guitar'.

"Mark was the foreman at Maton, and he was making these little travel guitars in his garage from what he called 'off-cuts'. He had one sent over to me when I was living in New York, and it was such a great sounding little guitar. So when I got back to Australia I looked Mark up and said, 'Can you make me one that's got the pick-up system in it?'" explains Diesel.

Malmberg made a prototype with pick-ups, and from there Piers Crocker, who is a Sydney guitar builder and repairer, who has repaired and built guitars for Diesel for over 20 years, got involved.

"The biggest challenge for Piers was to build in a switch that could switch from an active pick-up to a passive pick-up without this big loud 'bang' going through everything," says Diesel. Fitting a Statocaster 5-pole



“I made a blues record with Chris Wilson in a farmhouse with ADATs.”

switch ultimately solved the problem.

"It's been a path of experimentation as far as different pick-ups and things in the sound-hole. I put a Telecaster pick-up in the neck; I made a little bit of a routing and just popped it in there.

'It's a bit of an illusion. People say, 'Acoustic guitars...you can't really make them sound like that!' But I need to have an acoustic sound

that sounds very much like an acoustic guitar. And then I need to flip it to something that's going to be an electric guitar so I can step on various distortions and fuzzes or whatever, and make it into something colourful and non-acoustic,' says Diesel.

When audiences saw Diesel making fantastic sounds with what was virtually an acoustic guitar Maton started to get orders, and decided to move the manufacturing from Malmberg's garage to the Maton factory. That's when Diesel's signature guitar, the Mini Maton Diesel Special was born.

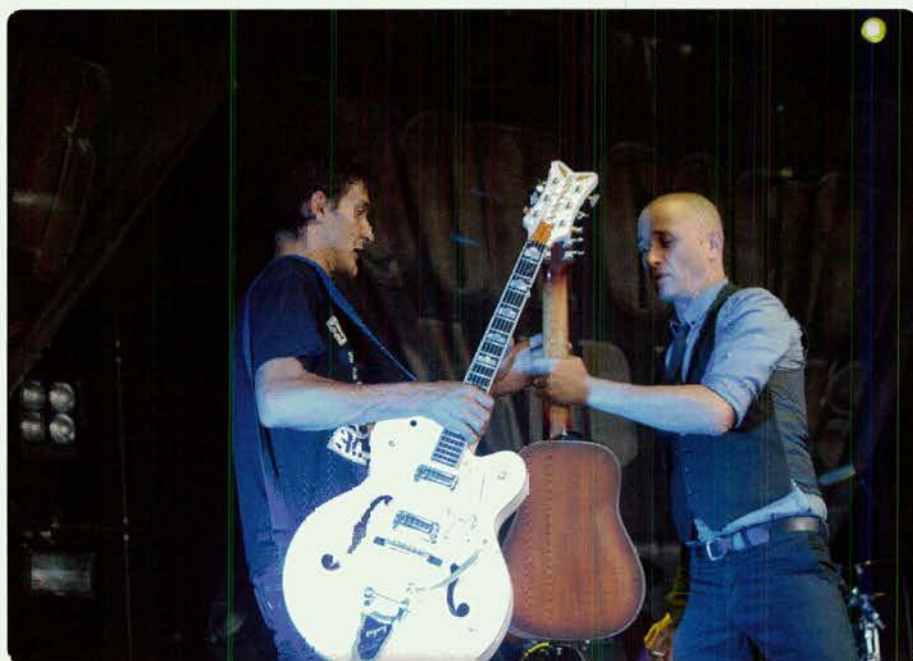
Studio production

The production and engineering process sparked Diesel's interest from the first eponymous album, Johnny Diesel and the Injectors, produced by Terry Manning in Memphis Tennessee in 1988. Diesel went on to co-produce his 1999 single Satellite under his birth name Mark Lizotte, and later co-produced an album for Richard Clapton as well as contributing to the production on the last two of his own Diesel albums.

"Terry never shrouded (the mixing process) or kept us away from the console. He never told us, 'just play and don't worry about this stuff'. From the very outset he could tell - it was probably me more than the other guys that wanted to ask questions. My drummer at the time Yak (Sherritt) already knew a lot about that stuff because he had done live sound. But me, I just wanted to ask things like, 'Why does the mike go there? How does compression work?



Warwicke Newman...



What does that knob do (laughs)?
So I started sucking knowledge from that point on, and Terry was great.

'Some guys I've worked with look at you a bit funny or give you a really short answer, and you think, 'Ok I won't push it'. But Terry was the opposite of that, and luckily, people I worked with after that were all kind

of like that. People like Don Gehman (Stephen Stills, John Mellencamp albums) and Rick Will (Diesel's Hepfidelity album)--he's an amazing mixer. Just people along the way like David Nicholas (Elton John, Sting etc.) when I worked with him in London at Air Studios on the big Neve console. Funny enough, I've just worked with him on our new EP

(7 Axes).

"Just picking up things along the way and putting them in my bag; that's kind of how I've operated. I don't really have any real sort of 'this is the way I do things' sort of way. When I approach things it's kind of different every time," says Diesel.

Analogue and digital recording

"It's funny, you know, our first record in Memphis was done on an old Trident, which is a big, beautiful English board. But that (recording) went onto a 16 bit Mitsubishi 32 track digital machine. When I ended up finishing the record with Don Gehman we transferred it over to the analogue tape. Was there a big difference? I don't remember going, 'Oh, that's better now!' When I listen to that record--it's a great sounding record--but it's not like I can go, 'Oh listen to that analogue tape!' I mean, I started out digital!

"Hepfidelity, my first solo album, was done on two Studers--24 track analogue. The console is still the really important thing to me.

Continued Page 30 ----->



ENTECH TV

Launching at the end of September 2010, ENTECH TV is an exciting new online TV series covering stories from the Live Entertainment and Audio Visual Industries. The organisers of the ENTECH INTECH trade show are pleased to bring you ENTECH TV!

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Put the ENTECH INTECH 2011 show dates in your diary – 19th – 21st July 2011

Diesel Continued...

-----> Continued From Page 29

"I made a blues record with Chris Wilson in a farmhouse with ADATs; they were 16-bit! Doug Roberts (Australian Engineer of the Year, 1994) was masterful at making those things sound great because he had a couple of valve pre-amps and a couple of valve mics and a few bits and pieces, and the rest he did with his ears and his hands. I just think that we've got to stop blaming our tools. You know, digital stuff sounded pretty good 20 years ago, so what's the problem now?"

"I remember turning up (at the studio)-we'd usually get a warning like, the day before: 'don't come in too early because we've got to do transfers; we've got to do slave reels.' But you turn up and you'd be just wanting to work. And there'd be like two or three hours of making slave reels. There was all that maintenance all the time, like waiting for the tape to 'voo, voo, voo' and come back to where you were. You were used to working at that pace. But just recently we did the 7 Axes record

with David Nicholas in 8 days. We were just slamming from one session to the next. It was David at the helm and moving onto the next song. It wasn't like, 'I've just got to get up and swap reels'. We were all at our battle stations and into the next track. That was probably the reason why we could do 18 tracks in 8 days.

"We didn't bank on fixing anything; we just wanted to get it all at once. And then if there was something like where we all didn't quite hit it all at once, we'd fix it. Either that or where we had three takes we'd just take one and plonk it on another. But there was nothing more surgical than that.

"Because of the spill factor, everything spilling into everything else, if your mistake is on your bit it's on the other person's bit next to you as well. But once you adjust to the imperfections, your whole kind of level of, 'it's got to be perfect' goes down, and you just go, 'It's not perfect but it's vibey,' so vibey is the right choice. It's refreshing to be not going for that whole, 'the record has got to be perfect' thing," says Diesel

Foldback wedges

Diesel mostly specifies active foldback wedges, but admits that there are still some good passive wedges, like EAW, that they like.

"There's a couple of companies that make passive wedges, and I've been surprised, and I go, 'These are active are they?' 'Nope they're passive,' and I go, 'Like wow they sound great!'

"Usually if they've got a big, decent power amp powering them they can sound pretty good if the drivers are good quality. But generally speaking on my spec the thing that you'll see is, 'no plastic boxes.' Like, we want real wood. PS15s are probably what we ask for the most. My favourites are Nexo PS10s. Also Bruce Johnston makes Wayloud wedges. They're a really compact little wedge. I think he's got a 12" speaker in them. They sound great! That's an Australian made product, designed by an Australian.

"I looked into buying a pair of Nexos for myself. They're made in France,

Continued Page 32 ----->



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Diesel Continued...

-----> Continued From Page 30

and they're like \$6,000 each, so I said, 'Forget about it'. There's these Chinese copies of them now - we used them once at The Basement (Sydney)-they're unbelievable, and they're like one third of the price. They come with a processor. I think all those wedges that come with a processor really rely on the processor, because I remember someone gave us a pair of Nexo PS15s without the processor and I couldn't believe how bad they were. Or maybe we got some other processor, not the Nexo processor- someone trying to cut corners.

"But generally speaking, the wedges that we used to use in the late 80s and early 90s were like these dinosaur things with massive bum flare horns and 15" speakers that weighed 70 kilos or something (laughs). For the amount of space they took up and the weight they had, they didn't really put the vocal where you wanted it. Even with all that power and everything they still

just spread it all over the place.

"I find these days we've got these wedges that look like they're not going to do anything, and then you hear them and they're just incredible: the stealth kind of technology," says Diesel.

Live consoles & PAs

"We're really leaning towards the digital desks now. Occasionally we still get a big old Allen and Heath or a Soundcraft or the old Yamaha's still kick ass; they're big and they've got

“You can fit a really great little PA now... in a bread truck.”

proper EQ and faders and everything, but you need like four guys to get the road case up on them.

"We did a whole tour up in Queensland recently with a little

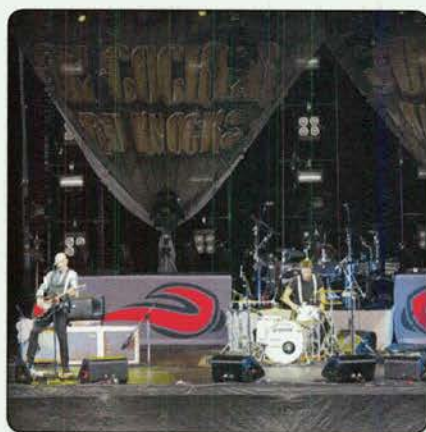
Digidesign digital board. And the size is so compact. It's got all the plugins. It's got the Bomb Factory 1176 (compressor/limiter) and everything. My sound guy Warwicke was just in raptures with all the stuff it could do - and the recall: Warwicke just steps up and pulls up his scenes and off you go. It's hard to not love that. Yamaha makes a really good digital board too. It's definitely going that way.

"PAs today, you just look at them and they're just tiny, and then you hear them and they're mind blowing - like the whole line array thing.

"You can fit a really great little PA now to do say, 200, 300 or 400 capacity rooms, in a bread truck. That was a thing of science fiction 20 years ago when it would be like: you were going out to do gigs there's your 40 foot pan (pantech truck)," says Diesel.

Lighting

"If I can I like to have a follow spot. For me it's like the icing on the cake. It adds a real dynamic element to the



show. And, you'll see on the spec, 'no green'. A couple of moving lights is great. You can do a lot with two or even four is great. Two at the back and two on the sides sort of thing. I usually like to get the set list to the lighting person a week or so in advance and just let them interpret it. I'm always open to suggestions. It's pretty obvious like, 'This is a pretty chilled out song, so we don't have blaring white light here.'

"I'm trying to get used to LEDs. I'm not sure where I am with them emotionally. I'm not sure if I love them yet. I'm, 'Ok, this is the way it's going, and I do love the fact that

they're so much lighter. I can really appreciate that the crew loves them because there's no changing of bulbs. The components last a hundred years or something (laughs). But they're more expensive and it's a different kind of light. I've noticed, looking down at my fret board, it throws these weird little shadows. I've had to say a few times, 'Just be careful where these lights are focused.' Even though I don't look at my hands so much, it's one of those things where if there's weird shadows, you start looking even though you don't need to. It's like, 'Don't look; oh I looked!' It messes you up even though most

of the time I'm playing with my eyes closed. But if I do look down it's all weird and it will throw me off," says Diesel.

Currently touring

Diesel recently embarked on the '7 Axes' tour, promoting his Liberation label EP release of the same name. It started out as live tributes to Diesel's guitar heroes from Neil Young to Jimi Hendrix using some 7 different acoustic and electric guitars, but soon became a recording project after a suggestion by his publisher Michael Gudinski.



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30 Years of Beatnix

First tribute band outlasts all others



By Julius Grafton

When Tony Dean and his brother played together in Perth, they built a following with various tribute segments in their show. But then they got sacked from a residency for, um, inglorious behavior. Tony blames his brother.

"He recorded sound effects which basically sounded like a person having a session in the lavatory", explains Tony. "Then told the audience to use one ladies toilet, not the one nearest the stage. Sure enough a girl goes in the door, and he stops and plays the tape, telling the audience he has a microphone in there. It was too much. She complained to the manager, as you would!"

With the performing Dean brothers thus musically and tastefully estranged, Tony sought solace from - whom else - his mum. She sat at the kitchen table and said, 'why don't you make a new band and just play the Beatles songs?'

Enter Beatnix which has fed the Dean family ever since. Tony met your reporter at his local pub, but not before befriending a stranger who he thought looked like me. So the three of us had a strange talk for a while. Tony is like that - big laughs, and big presence.

“He recorded sound effects which basically sounded like a person having a session in the lavatory”

You need to have a certain personality to successfully own a music act and employ musicians. "I've had some rebellions over the years", he says "and one time they crashed the car and we had to cancel heaps of gigs".

Finding left handed bass players to fit the Paul McCartney role is the hardest, one suggestion was to have a right handed player perform with his back to the audience with a face mask on the back of his head. But Tony is very serious about quality, all jokes aside.

"Essentially there are 35 songs. It has to be done right", he says. Which means some battles along the way. "One events organizer didn't want our drum riser on stage. Another lady who ran a club wouldn't let me take down some lights that got in the way of our video". Tony is inclined to take the fight down to the wire.

He remembers several fireworks encounters, where outdoor shows had purchased fireworks. "One big show the girl comes up before the show and says 'the last song needs to be six minutes, because that's how long the fireworks go'. OK, so the only song we have is 'Hey Jude', and it builds slowly. I explain how it goes, and ask the fireworks tech to build slowly. Sure enough, the song starts and BLAM, BANG, EXPLOSIONS...The band near shat themselves".



Tony Deen

Then the volunteer State Emergency Services episode, when the fireworks were to be called by a short, stout guy in orange overalls. "I'll cue you. Don't go early", Tony told the guy. Guy nods earnestly, looking through very thick glasses at Tony. Sure enough, on Tony's cue the guy speaks into his radio. 'Ten, nine, eight, seven, six.....' and the cue is hopelessly late.

Tony took killer footage from a TV show of the band playing Eleanor Rigby with a string quartet to the UK to try to get work - but couldn't get to see the right people. Which is one of the eternal frustrations of the music industry.

Beatnix have performed at every show size, from a rooftop party to a festival stage. These days Tony has dispensed with video, and has simplified production. Where a decade ago the band had a five-ton truck, now it all comes in a small truck and the music does the talking. No moving lights required.

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WIND, RAIN, DINOSAURS AND CCU

What it's like being **blonde, female** and working on **Outside Broadcasts**

By *Julius Grafton*

Jessica Colley is 23, and a freelance CCU operator in the Sydney broadcast community. She did the TTOC program at Global TV in 2008, when Global took a huge step and obtained government funding for training.

"There were students who questioned whether our pay was the same as charged", she says, "and we WERE paid the two or three days we worked". As far as Jessica is concerned, TTOC was a great training ground.

Imagine you are Jess. She graduated from a communication degree in Newcastle, her home town. "I'm a fan of the Newcastle Knights", she says, since her work these days includes a fair slab of NFL outside broadcast.

“There were students who questioned whether our pay was the same as charged”



Jessica Colley

"The degree was all theoretical, then I saw the TTOC advertised on Seek. It was essentially a paid traineeship".

TTOC was an initiative by Global where 'on the job' training was meshed with classroom from the Global Sydney premises at Homebush - Sydney's new showground precinct.

As Jess tells it, things worked as advertised.

Global Television secured Australian Government support for Television Technical Operations College (TTOC) prior to 2008. The program promised that suitable applicants would have several days of tech training (unpaid) and then several days of paid 'on the job' work.

Jess says her class of 2008 had several paid days work per week. "After about a month or so, we started being rostered to various outside broadcasts". The 28 students in Jess's year came either as graduates of other courses or with some prior experience. None were school leavers.

ON THE JOB

CCU is Camera Control Unit, where the operator monitors between three (outside broadcast) and five (studio) cameras, adjusting each for colour balance and levels. A Camera operator can't usually do that, since outside a shot may pan from bright

sunlight to shadow.

"For NFL (Rugby League) we arrive six hour prior to kickoff", Jess explains.

"We unload the cameras, lights (for the hosting area in front of the field of play), audio, monitoring and communications gear from the grip truck. There are around twelve of us there at that point. The Broadcast Engineer gets the OB truck started up, it's arrived earlier, sometimes from interstate, overnight".

Once everything is sorted, nine cameras have been checked, the backup generator is running, the balance of crew arrive two hours out for a rehearsal and a block through.

This is where each camera angle is checked, the hosting area lighting is adjusted to make the commentators look their best.

By now a meal break - breakfast or lunch - will have happened. "It depends who we are working with - Channel Nine use Grinners catering, others get the ground to supply catering. We have hot breakfast, or lunch might be sandwiches, fruit and chocolate bars. Monday night football we get a hot meal, rice, pasta, lasagna and veg".

"The Toyota Cup matches start at 11am, that means a 5am start and if it's in Newcastle we have accommodation the night before."

Once the match is over, the pickup takes about two hours. It's a ten hour day for a typical football match.

MORE THAN FOOTY

Although the sporting calendar in Australia looks weighted towards winter sport, there is a lot going on around the year. A Golf OB means kilometers of camera cables - the V8 Supercars had several cable techs working days beforehand.

Then there's concerts, tennis, racing

carnivals and the bigger sporting events like Grand Finals where there will be multiple network feeds and satellite trucks.

V8 Super Cars like to use the same crew around the world. Jess went to Abu Dhabi for the race there, and recently came back from Adelaide.

The other staple of freelance work for Jess is reality TV and series work like So You Think You Can Dance, which runs several months at a time. The day CX met up with Jess she was off to Sky Racing to do a night shift from 8pm until 2am, switching feeds from overseas races.

PEOPLE IN THE BIZ

The obvious question is how Jess is received as a young female in a male dominated business. "Some employers say they like to roster women because they say we have a better work ethic and can multitask. We're not part of a 'boys club' and we don't take too long at lunch", she says laughing.

"Women seem to steer towards production jobs like Director Assistant. There are some females in CCU and also Technical Directors now. The old

school, set in your ways kind of thing is fizzling out now. Most guys are actually protective, ask me how I am doing".

"Live TV you're under the pump - everyone talking at once, you have to get things done, deal with pressure. The personality clash syndrome means you're out the door".

"There's a little more pressure to perform on the job (as a female)", she shrugs, "having a partner in the industry helps!" Jess met camera operator Justin Rule while shooting a boxing show on Fox 8. "I was pulling cable for him, we became friends...."

As to where the new entrants are coming from, Jess nominates Charles Sturt Uni at Wagga as the major supplier of new talent. "They have a good work experience program there. I wish I'd known about them before I did my degree".

To the future and Jess thinks she will get into Technical Directing, having already done some switching. Whatever the case, the variety of the work, the outdoors, even the wind and the winter rain at a footy match make this a job Jess loves.

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What AV Guys Do Bad

(When messing with vision!)

By Abe D. Broadcas-Tech

Hi guys and girls,

Nice polyester shirt you have on! With your company logo on there. My broadcast colleagues and myself respect greatly your focus on customer service and cool-under-pressure vibe. Thing. It must be a challenge dealing with corporate noobs who can't switch their Powerpoint to the VGA port on their craptastic laptop. Or stage fright that turns into tech fight.

While having elevensies (Danish, Lamingtons, exotic coffee blend or herbal tea in a nice tent on a shoot) we compared notes about some of the things you guys do. We admire the multitasking thing - we on the other hand tend to be engaged for one purpose only, wear what we like, and speak the universal language of the industry. Colourful.

But before we go further, most techs from broadcast and events do actually work well together, as the common goal is to have a good event and do what is needed to be done.

Although both sides do tend to mutter under their breath, "What the hell are they doing here?"

Usually a larger event has a number of parties all trying to control an event. You have producers or reps that have been brought in to manage the event, they hire an AV company to facilitate the room requirement, and often these days, a broadcaster is brought in to fill the gaps from archive recording of the event to broadcasting an event on the WEB (live stream) or for use for news services or corporate events.

This is where it gets very messy. Producers are usually only concerned with what happens in the room. The nice video screens, the weeks of editing they have done on a laptop and charged the client heaps for, and the colour of the table cloths.

The AV people have a job to do; to make sure that the lighting is good, the expensive gobos (we LOVE the



cheese one) they have charged for are working, that the PA in the room works, and that the mood is set with lighting and video presentations. AV come with racks of gear, lots of laptops, DVD players, some of the higher end companies will come with Grass Valley Turbos, SP and Digi recorders and switching gear. Add in a few cameras and Bob's your uncle.

Owning a camera does not actually mean you know how to drive them technically or operationally. There are a number of companies that put on their staff to point a camera in a nice suit but do they actually have any idea of what they are doing? I'm sure they are being charged out as "real" camera operators. It's not hard to find someone to stand behind a camera on a locked off wide shot, or a fighter pilot who thinks they can shoot on the shoulder.

Now when the job becomes too big, or a higher coverage of the event is required, they will bring in an OB van or flyaway system run by broadcasters. The main reason is that most AV companies are out of their league when it comes to producing content for external of the room.

What is required for a big screen feed is different to what is required for

broadcast. This is the biggest issue that we all see when working with AV companies.

An AV company will normally focus on what's on the screen. A close up of the person at the lectern, some tape rolls and graphics. It's an enhancement to the room for the punters to watch if they're not up close or to get points across in the room.

When a broadcaster comes in to cover the event, they have a slightly different requirement of what is needed. They try and make it look more like an awards night or press conference, depending on what the event is. The broadcaster's job is not only to cover the same speech, but to try and capture the event and its workings as a coherent event.

That means an OB version of the event will probably have cutaways (shots of audience) over the shoulder views, a bit of creative stuff, different camera angles. All so the end viewer is not bored with the event. We usually have supers (eg: names at the bottom of the screen) and things like that to make it look brighter and more professional than just recording the camera on stage and switch to a

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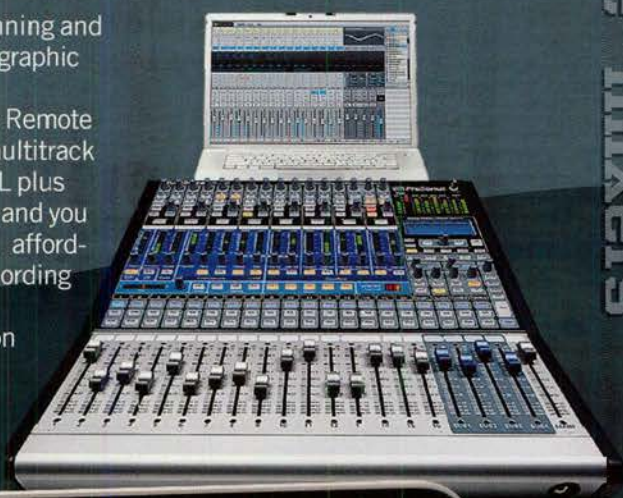
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GOOD AV RULES

A good AV company will understand the differences and work towards 3 groups of people being happy at the end of the day.

One of the biggest issues that broadcasters face is the lack of understanding of video quality and how signal paths work. Broadcasters are trained over and over about retaining the quality of productions. That is why they are used by TV stations. The quality is in relation to both production standards and technical standards.

An OB van or flyaway usually will have a lot more technical monitoring equipment at a much higher level than the AV company. This is what the OB technical director is trained for. They are responsible for the quality of pictures, audio and graphics that leave the equipment.

If AV take an OB feed and then use various different processors to eventually get the pictures on the venue screen, things can go haywire.

We have seen the pictures originate in SDI (Serial Digital) and HD, and end up being sent to a video screen on 300 metres of cat 5. The pictures look soft, green and ringing (like hum and tearing edges) - this is not ok.

It's heart breaking when you go and

bring in high end equipment and find it being used on a pair of \$40 baluns and 100 metres of cat 5 going through a Panasonic MX 20 or 50 vision mixer.

Some of the more modern AV companies that own high end video projectors do normally run their video via DVI-D, DVI-I, VGA or even HD. This is great. But to convert the signals from one format to another, they use all these wonderful devices, some costing up to \$40,000. But they now are slowing down from the number of conversions being done to the video that was sent from the OB facility. This is where you see lip sync errors. We have all been to one of these events where you watch the big screen because we got the cheap seats. You look at the screen and the audio happens before the video.

So here is a list of things for the AV guys who don't really know much about real television.

Aspect Ratio:

This is one of the most important things that we see mucked up on so many AV jobs. Most of the AV techs don't have a clue about the difference between Widescreen 16:9 and 4:3. Some will take a 16:9 widescreen from the OB provider, and then convert it so they can use their own 4:3 camera or replay device, then scale it to a projector.

You get into so much trouble if you don't understand the signal path. The more changes you do make to compensate for not getting the right gear in the first place, ends in video

delay, colouration of the pictures, and introducing noise and artifacting into the pictures. In the last three events I have been too, at least one camera or the graphics were in the wrong aspect ratio. These were in high class venues with well known companies doing the AV.

The Use Of High Definition Signals:

Hi Definition originated signals are either down or cross converted. The once beautiful clean signals sent from the OB provider, are then sent through processors to DVI, RGB, VGA or via a computer, thus degrading quality each time they put it through another box. AV guys should be aware of the delays incurred and minimise the quality loss. This will also improve the quality of the screen feeds.

Colour Temperature and Lighting:

The eye is more forgiving than a high quality video camera. Many AV people don't compensate the lighting when broadcast is involved. Many will use some moving lights, a lot of par cans, some LED lights, and a follow spot. This is all good when broadcast is not involved. With a single camera on the podium it makes not a great difference. But when a broadcast is involved, we are now dealing with different colour temperatures and lighting levels. The usual trick is to put lots of lights on the stage or podium and dress the room with some pretty colour low level light. This brings out the pretty flower bouquet arrangements. Then a follow spot brings on the talent or presenter.

Here's the menu of colour temperatures:

*PAR cans dimmed: 1800 - 2600 k
Profile on stage at 80%: 2800k
LED pars or effects, 3800k - 4800k
Moving lights - 5600k
Follow Spot 5600k*

A broadcast camera does not have the dynamic range your eyes do. If you light the room for 3200 degrees, and then add in a moving light or follow spot, it will be very blue.

Then when you add dimmed par cans in the room, you will see (on camera) a very blue stage, and reddish/orange murky audience.



Focus fairy, Fighter pilot or imposter?



You must use colour correction gel to move everything closer together. You do not want people on camera looking pail blue sick, or under the weather red. We certainly do not like having this imposed on us!

Audio Delay on Big Screens:

We have already touched on this, but, minimise the amount of conversions you do to the signal. A good AV TD will know this and avoid or work around designs to minimise this rather than just blame the broadcaster, which I have seen many times.

Remember, nearly every processor you put your video through will delay it by 1 frame. (1/25 of a second) or for the audio guys about 42 milliseconds. A video wall can have up to 5 frames delay! A synchroniser or one of the new video mixers that have frame stores on every input will also add delay.

Communications:

AV people and broadcasters have a totally different way that they use communications. In AV land, there is usually a show call person or channel, then lighting will have one. So a 2 channel beltback system usually does the trick

Broadcasters have a director talking to cameras and tape, there is a TD talking tech stuff, there may be a producer, an autocue operator, even a floor manager.

Comms can be a painful experience for all when trying to set this up between both.

Power and Isolation:

Both the OB truck or the flyaway comms system will normally have a beltback or PL (partyline) interface. The AV provider will have the same. We must remove the power from one system and isolate the earths between both systems or we will get hum, buzz and crackle. On bad days we sometimes blow the other system up.

Both Clearcom and Telex have a box that does this. Make sure you bring them as soon as you know you're going to interface your comms with broadcast!

Wrap the Gig!

AV firms and show producers should sit down with broadcasters and work this all out before the day so it can be a great event for all. Then the client gets proper images afterwards - that is in the best interests of the producer, isn't it?

Let's all sit down over a nicely made cappuccino and a Danish and talk it through.



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Albany Shapes Up

WA celebrates another brand new PAC



Photography By Geoff Bickford

As WA's Theatre Consultant, Graham Walne has overseen another iconic project. He details the eventual design and the inevitable compromises that arise.

By Graham Walne

Architects are said to design buildings from the outside in and perhaps many readers have personal and professional experience of the consequences! Churchill said "we shape buildings and thereafter they shape us"; he couldn't have known how true that statement was to prove about Albany's new theatre which opened in December last year.

For artists and companies crossing the Nullarbor the new Albany venue is not only about local benefit but also about building a critical mass of venues in WA through which the extra travel cost can be amortised.

This building, like many, has been a long time coming and, has been proposed for several sites in Albany and in many guises. It exists now

on the waterfront in a striking shape which cannot be ignored, and both size and form have been controversial.

Architects Cox Howlett+Bailey Woodland wisely produced two early elevations, an unadorned outline of the mass of the building's blocks - foyer, auditorium, backstage - and then, the same blocks clad in triangular shaped 'sails'. Although the consequent profile of the sails is larger than the basic blocks they clad, the sails won the day. The result echoes the line of the hills, produces both dynamic highlights and shadows throughout the day and, usefully for a theatre, easily draws attention to itself.

GOOD PROCESS

Whilst the unusual shape of some theatres (and opera houses) can restrict what happens inside, for

Albany the architects respected the design brief (which I wrote for the WA State Government - the major funder) and the outer envelope was carefully policed to prevent it compromising the inner volumes and proportions.

In a rare example of lateral thinking the state government's contracts management held a pre-tender workshop with builders to discuss how the design (notably the flytower) could be built, given the difficulty of getting both complex building equipment and materials to a location unused to such difficult constructions. The contract was won by the Doric Group.

Venues are created around a decision about use and seating capacity. In WA there used to be almost an urban myth that regional theatres needed to have 800 seats. But my research for Albany indicated that it was typical for 800 seat

theatres to have 25% of seats empty 75% of the time. These empty seats still incur maintenance, lighting and airconditioning operating costs (plus the capital for the extra foyer and toilet accommodation to serve them). Further research indicated that whilst some promoters of larger touring shows might be deterred by a capacity lower than 800, most would prefer either to negotiate an extra performance or, create a culture of success by having to turn a few people away. Consequently, Albany at 620 seats (including 140 in the balcony) is large enough for most touring shows and yet intimate enough for the smaller ones.

The building actually has two spaces, the main house, christened the Princess Royal Theatre after the local harbour, is a conventional 12m wide proscenium venue. Adjacent is a studio space. Whilst budget 'efficiencies' reduced backstage accommodation, there is still room for 26 artists with a 35 person green room and, for very large (often local) productions, the studio is designed to act as an overflow.

There was much discussion about powered flying with the theatre consultants (myself with Marshall Day Entertech) in favour. Against, were issues of long-distance maintenance and the complexity of needing several highly trained local staff. These issues would have been resolved eventually but the need to keep the capital down broke the camel's back.

HURDLES

The main house is well equipped. There is a Serapid pit lift with capacity for an orchestra of 22, 40 single purchase

counterweight lines (with 3 more to come in 2011) 2 powered panorama bars and 4 chain hoists. It has 204 dimmers of which 132 are patchable in the dimmer room, whilst the remainder are hard wired to a sub-patch on the OP gallery - the crew was closely involved in the design of this arrangement. The desk is an ETC Ion. There is also an extensive network of Pathport, intercom, audio and video and a widespread network of 40A 3 phase outlets. The

“As the state's theatre consultant I wanted the new venue's design and equipment to be agreed in the strategic context of what other spaces Albany already had, or needed as it grew.”

main house has 267 lighting instruments across a wide range of manufacturers and including 14 movers. The Studio is also provided with 24 dimmers but a raise and lower grid was cut.

Few projects are free of such regrettable decisions. Albany has had its share. These are all examples of how theatre consultants can only advise and not instruct those who think their experience is better.

For example, sadly fluorescents have been extensively used because advice from theatre consultants was not

-----> Continued Page 44



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NEUTRIK

-----> Continued from Page 43

followed, with the consequence that the auditorium is not as attractive as it could be; this decision is now being questioned.

Inevitably the final cost exceeded the original estimate resulting in cut backs along the way and, surprise surprise, these fell on backstage spaces and equipment. The saving was miniscule and would not greatly have added to the final figure but, the resultant curtailment of functionality remains a daily issue for staff.

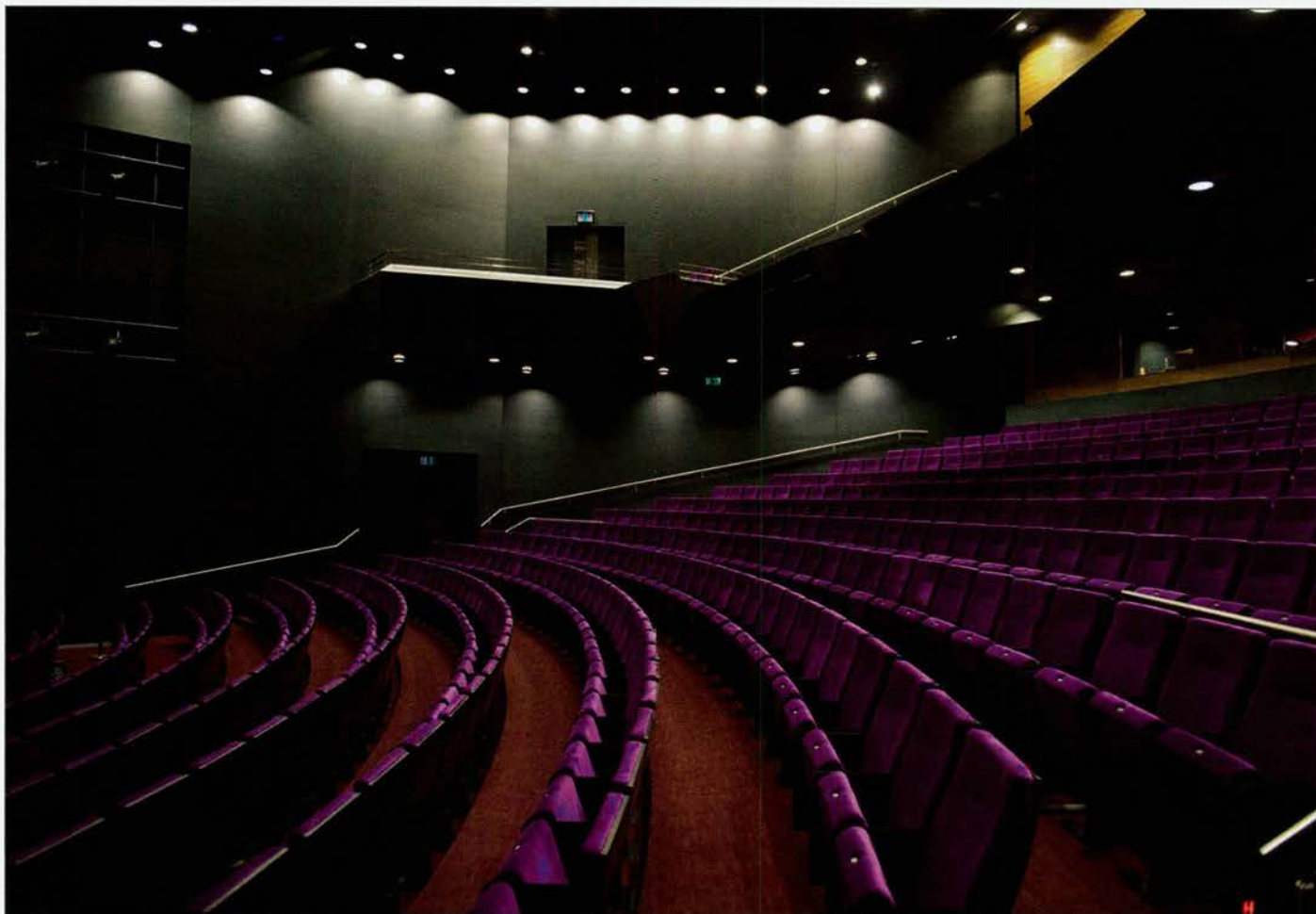
As the state's theatre consultant I wanted the new venue's design and equipment to be agreed in the strategic context of what other spaces Albany already had, or needed as it grew. This deliberation included the future of the Albany Town Hall, a much-loved and cosy 315 seat venue in the centre of town. In the context of the closure of the Town Hall I pushed for the studio to be a full

*Photo Right: By Karen Colbenson.
Photo Bottom: By Geoff Bickford*

performing/function space but sadly those budget 'efficiencies' again have reduced it to a function room, but at least it's right on the beach!

However, the first year's bookings are exceeding projections and the people are enjoying productions of a scale

they would otherwise not be able to see locally. For example, the opening gala presented local performers, a choir and an orchestra all on stage simultaneously and demonstrated very effectively a new dynamic for the arts in the developing city.



Hello Operator?

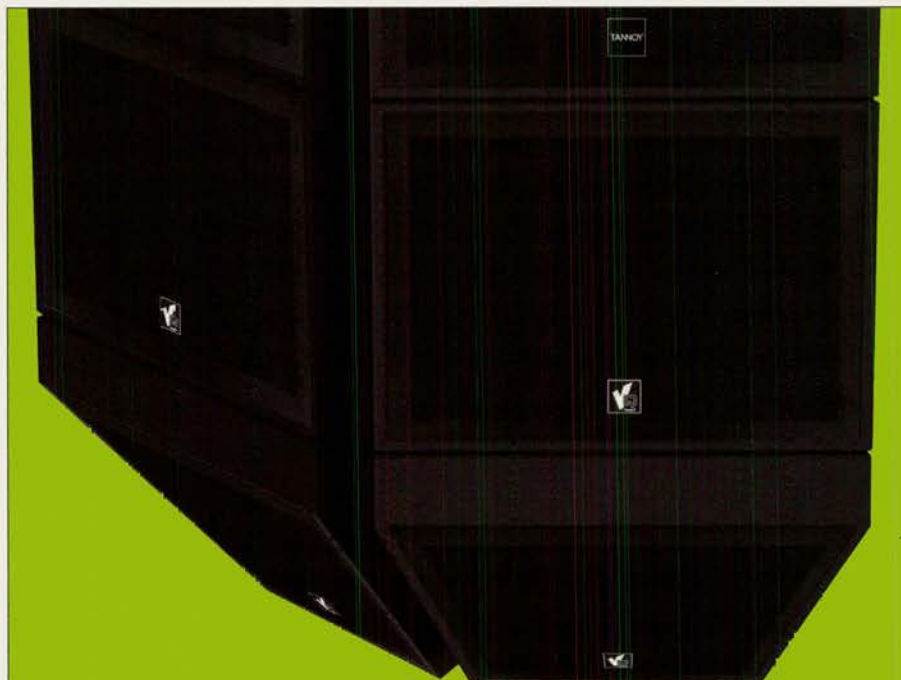
YOU KNOW THE SITUATION: you're doing a FOH gig and you've just lost your bass DI / right overhead / 2nd backing vocal / whatever. Maybe you just want the kick mic re-positioned. So you grab the two-way radio and call your monitor operator. Who doesn't answer, because they can't hear you. You lock the console, and start walking down to the stage. Half way there, the whatever line rectifies itself and starts booming back into the mix - now too loud or crackling. There is a better way.

The "shout box" is a really simple idea, and something the festival crowd cottoned onto a long time ago. It's the easiest audio recipe you'll ever concoct, and one of the tastiest. Method is as follows: Take one switch mic - anything you like (one of my mates is still using his PL88!). Plug it into a spare line on your returns core. Plug the other end into a small self powered speaker at monitor world. Set it to mic input mode, turn up some gain, and test it. Do the exact opposite for the monitor dude/dudette - give them a mic and put another speaker on top of your FOH outboard rack.

If you want a fancier version, you can run the FOH mic via the console and output over two auxiliaries. Bus one of these into the monitor operators speaker, and the other into their talk to stage input. That way, you can talk to the artists on stage or just to the monitor op. Just remember to close the channel or switch off the mic when it's not in use.

The "shout box" a super simple trick, but one which will almost certainly make your life easier, especially in a large gig (ie: festival) situation. It beats the crap out of guessing what mic lines the various instruments will arrive on too!

Jimmy Den Oden



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From Acoustic to Amplified

Each year the Adelaide Festival Centre presents an international guitar festival where all conceivable global guitar genres are represented. This time the audio was clever...



Mick Jackson at FOH position

By Jeanne Hurrell

Three main and several minor venues in and around the Centre resonate with the sounds of a huge range of guitars, from rock to classical, contemporary to folk, jazz, fusion and everything in between.

This presents the in-house sound department with multiple challenges, and, among them, I found the sound being achieved in the Dunstan Playhouse of major interest. They turned the 600-seat drama venue into a recital chamber where artists found an acoustic environment that gave them the 'natural' sound they mandated.

It was day two of the three-day gig when Slava Gregorian, Guitar Festival Supremo, interrupted the

tech tour that the sound department was leading me on. He said, 'Hey, guys. The sound in every venue is wonderful. Thank you very much. It's great.' I'd already heard that the big acts in the 2,000-seat Festival Theatre had been lavish in their

“He had an easy professional relationship with the talent, who clearly trusted his expertise and enjoyed him...”

praise of the production team in that venue.

Then, I was taken through to the Space Theatre, where sound checks with an 8-piece fusion guitar ensemble had just finished, and smiles and compliments were being exchanged all round. Good feel, a buzz, mmmm...

Finally, I reached the Playhouse. Head of Sound, Jane Rossetto, had promised this venue would be more interesting than the others, because of the 'experiments' that Mick Jackson, Playhouse engineer, was doing. Mick's job was to make the theatre reverberant without losing articulation, yet not making it sound unnatural.

Now, artificial reverb systems come in all shapes and sizes, and they are notorious for sounding exactly that. Jane was pleased with the results,

but insisted I judge for myself.

ACOUSTICS TAMED

When I arrived side of stage, the media were setting up for a call with internationally-renowned guitar virtuoso, Karin Schuapp. The first thing I noticed was that, instead of the normal velour drapes hung on stage, there were hard painted scenic flats hung as acoustic panels a couple of metres upstage of the artist. Fair enough, makes sense, I thought. But then I saw the stage floor covered with a carpet square!

Mick explained that he needed it there to deaden the stiletto footsteps of the female members of the 8-voice Adelaide Chamber Singers who joined Karin during her act. But, standing on the carpet centre stage, I could sense the acoustics of the stage were conducive to fine singing and guitar playing. The environment was whisper quiet, but with the stage foldback also providing an artificial reverb, I heard every element of our conversations with a clean, bright sound and nice early reflections coupled with clarity. Neither hum nor hiss could be heard.

Matt Curtis was in charge of the monitor system and the stage set up, and it was elegant and simple (see 'tech specs'). Matt explained that Mick and he were trying to create 'transparent audio, with the kind of room sound that classical musicians would normally work in.'

The gear was positioned to be very low profile - the front stage wedges were outside the LX focus, about 3 metres from the act, at the edge of the stage, and the side fill was way back in the wings, completely out of view from the audience and also about three metres from the performers. It was barely there, but very effective in providing the artists with their own 'natural' sound.

Out at Front of House, Mick was set up in the centre of the rear stalls. I'm familiar with the Playhouse auditorium, and know it to be a good, clear-sounding house. Mick had capitalised on this with some careful use of delay and reverb, using only the treated sound. He sent it to the main L,R line array, centre cluster and front fill, plus to the in-

house hidden FX system of rear stalls and balcony speakers. Still, subtlety was the key. Mick knew that if it got too 'swimmy', the room would develop an edginess and no longer sound natural.

Every number on the set list was sound checked. Mick needed to notate many changes, as no two pieces were the same. He had an easy professional relationship with the talent, who clearly trusted his expertise and enjoyed him and Matt

experimenting with their sound.

In short, the transition from acoustic to amplified was a success. The artists were sensational. The sound techs made sure that the sound matched them. As the music critic, Mike Gribble, wrote in the Adelaide daily newspaper, 'the biggest winner of this richly rewarding festival was the impeccable live sound mix.'

Jeanne Hurrell lectures in sound and technical management at the Adelaide College of the Arts.

Tech Specs:

- 6 x d&b Q1s in two line arrays for L,R PA plus 2 x d&b subs per side, powered by d&b amps.
- In-house PA of 2 x Tannoy 10S for centre cluster, and Quest 5 inch speakers as front fill, and Tannoy built-in rear speakers with AM 1K2 amps.
- FOH mixer was a Digidesign Venue with on-board Digidesign reverb plugins.
- Foldback was via in-house F200 (EV) Fez wedges with Tannoy CPA12s as sidefill, driven by AM 1K2 amps.
- Foldback mix was done on a Midas Siena with FX from a Yamaha SPX 90.
- Main choir mic was a DPA 4091 condenser.
- Guitar mic was a Sennheiser MKHE40 condenser.
- Karin wore a DPA hidden head mic that was used when she talked to the audience.



Matt Curtis at monitors



PHONIC SUMMIT

Julius meets a small digital mixing desk

By Julius Grafton

When Pat Bonham (God rest his soul) sold me some ROSS graphic equalizers in 1985, the Roland alternative was half as expensive again. It was a budget decision, and the cheap graphics did OK for installations. We didn't put them into touring rigs.

A while later Paddy turned up with a Phonic mixer. It looked fairly hideous, but the price was right. There's a dance for every girl at the ball who smiles, even the fugly ones, and over the years Phonic would turn up here, there and everywhere.

I don't think they ever copied anyone's designs either. Some Phonic amplifiers we sold actually did OK - but our benchmark was Australian Monitor (which we made

at the time) and the little Phonic two rackers tended to wheeze and gasp without much provocation.

But oils aint oils, Sol. Your EK Holden doesn't care what grade of oil goes in the sump. But your SS Commodore cares a lot. There's a place for low cost audio devices, and Phonic have been honest about their designs since the late 1970's.

Which brings us to the Summit digital mixer. What they've done here is what they always do: designed something themselves, without copying something else.

I've been cruel in these pages twice before, with two major branded digital mixing console debuts. One had enough spare panel space to build in some kind of drink bar and add on an ashtray. Although smoking isn't my thing, I do remember fondly some lighting console with an ashtray, once. Let me know what it was called?

The other digital mixing console I was rude about had strange ergonomics and a rough kind of grinding sensation when you stroked it. This may be acceptable in a

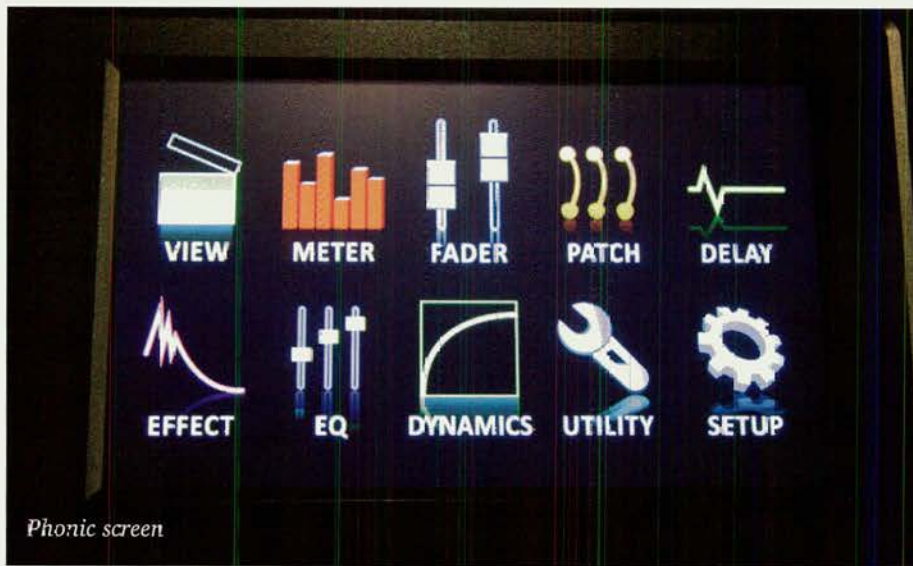
woman at 3am after a lot of cheap plonk but we say no no no for a professional audio engineer. Or for me as well.

Summit. "The highest level or degree that can be attained". Why the hell call the mixer this, when it is clearly the first go at cracking a broader market?

Phonic are so honest. When you turn the thing on, the boot is on the longer scale - not totally unusual, as we've timed worse. But they have a little display, 'Processor 1. Tick! Processor 2 Tick!' and so it goes until it runs out of things to tick and starts to work.

Look, there's nothing bad going on here. It's a 16 input 8 bus digital mixing console with a color touch screen. Like most of its brethren it has all the effects, equalizers and dynamic devices programmed in. This means if it is an installation like a church where you can train some operators, life is good.

My beef with Summit is the lack of encoders, which makes changing EQ into a screen jabbing, wheel spinning hunt and peck session not dissimilar



Phonic screen



Phonic back panel

to watching Goldy the wonder chook chase worms and bugs around the CX garden. Amusing and kind of cute, but horribly time consuming. It took a fair while to find the

low pass filter.

Here's another thing. The little cheap power supply with the round cord plug thing. Like on your modem. OK, OK - I know an external supply is better, and it makes the business of world wide selling easier to put one in there with an Australian mains plug on there. But it just kind of looks low rent.

Physical build quality is good. Digital in and out, you can clock externally. Firewire and USB lights indicate

What and Where

Brand: Phonic

Model: Summit digital mixer

RRP: Only \$2,599.99 (yes, that's actually \$2,600 when you round it up!)

Product Info:
www.phonic.com

Distributor:
www.cmi.com.au



connectivity which comes via an optional card for the one slot.

The noise floor is very low. The input amps do not handle overload - at all. There is an appreciable delay when pulling the fader up and down. The metering can't keep up when you adjust the dynamics threshold - causing the metering to slow.

It reminds me of mixing off a wireless tablet - which some people can do.

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dB TECHNOLOGIES DVA T4 DIGITAL VERTICAL ARRAY



cardioid mode, the voicecoil is a rather hefty 4" in diameter. It was the heaviest part of the whole system, though at 46kg it's still not real heavy for an active sub. The courier guy and I negotiated it through the front door with ease. Controls on the back panel include input sensitivity, 90/120 Hz crossover switch, and a phase reverse button.

The T4 array element is where our real interest lay. It's a 3 way active cabinet, with all components individually driven by Class T amplification. RMS output on the T4 is 420W, and all the driver components are custom made by RCF. HF drivers are 1" units, there's a 6.5" MF driver and an 8" woofer with 2.5" voicecoil. Large voicecoils seem to be the flavour of the day for DVA, and this is a good thing. The input signal is digitally processed on-board, so no external processing is required to run the system. Plug signal into sub, loop out to T4 element, then loop through. The same theory works for power, with the ever popular PowerCon connector serving input and loop through duties on both the S-10 and T4. Our system arrived with some short PowerCon and XLR link leads which made plugging it in a snap. But I'm getting ahead of myself here - first you need to build the thing.

Building the thing

The DVA line array system goes together easily in flown or ground stacked configurations - both make use of the same DRK-10 bracket either as a fly bracket or attached to the sub with two M10 bolts for ground stacks. Other bracketry is available including one which allows you to put a pile of T4s on wheels with a backward rake - ideal for arena or field use. The rigging system is simple - flip out levers with locking pins. Angle between cabinets can be adjusted up to 15 degrees in 2.5 degree increments. A rotary DIP switch on the back of the T4 adjusts the DSP parameters based on how many cabinets are in the array, and what kind of angles they're on. The instructions are written on the back of each T4 so it's very simple.

By Jimmy Den-Ouden

Granted we have a nice loading dock here at CX HQ but even so, we've held off bringing anything big into the office since we moved house. Until now - enter up stage left the DVA line array system from dB Technologies.

dB Technologies are one of the quiet achievers in the pro audio market. Their gear pops up in more places than you might expect, and while it's been a while since we looked at their kit, the last thing we looked at

(the DVX DM28 wedge) we really liked. So it was with high hopes that we opened up the boxes and put together the DVA line array.

What's in the box?

Our test system was delivered in a 3+1 configuration, though much larger configurations are possible. 3x T4 mid-high elements and an S-10 subwoofer. The sub itself is pretty uncomplicated so we'll discuss it first. The S-10 comprises a single 18" RCF driver, runs 40-120Hz (+/- 3dB), has a Class D 1000W amp, and is omnidirectional. There's an optional slot-in module to run the unit in

If you want to get a bit more scientific about building your system, you can download the EASE data from the dB Technologies website. This carries the added bonus of giving you the total array weight. At 13.8kg per T4 element it won't be a lot. The light weight of the T4 belies its performance - flying the system is easier with 2 people but ground stacking could be managed by one person if needed.

How does it sound?

Good question. The DVA system sounds good - even in the confines of our relatively modest studio. The HF directionality seems quite good, though it gets a bit less specific down in the mid-range area. A bit of sound seems to come from the back of the array, though keep in mind that there aren't any reverse phased sideways

drivers to counter this so some spill is to be expected. To my ears, this system sticks together really nicely even through the crossover range between the sub and array elements. We ran ground-stacked mode, so I'm not sure how this would go with greater separation between them but if it was a drama you could always just fly the subs as well. In any case the frequency response was reasonably uniform. The noise floor of the system seems quite high to me, although we were at fairly close quarters with the system. In a venue with an audience in the house it would not be an issue - especially if the system were flown.

Overall output is good. Plenty of level for a small to mid sized venue, though in a larger situation I'd want more of both subs and T4s. dB make a bigger sub too, so that is another option for more low end go. All in all we like the DVA system a lot. It's a good workhorse and especially for the price it runs, you'd need a compelling reason to look further for an affordable workable line array.

α



What and Where

Brand: dB Technologies

T4: \$3,450 retail

S10: \$5,195 retail

Product Info:
<http://dbtechnologies.com>



Distributor:
<http://www.cmi.com.au>






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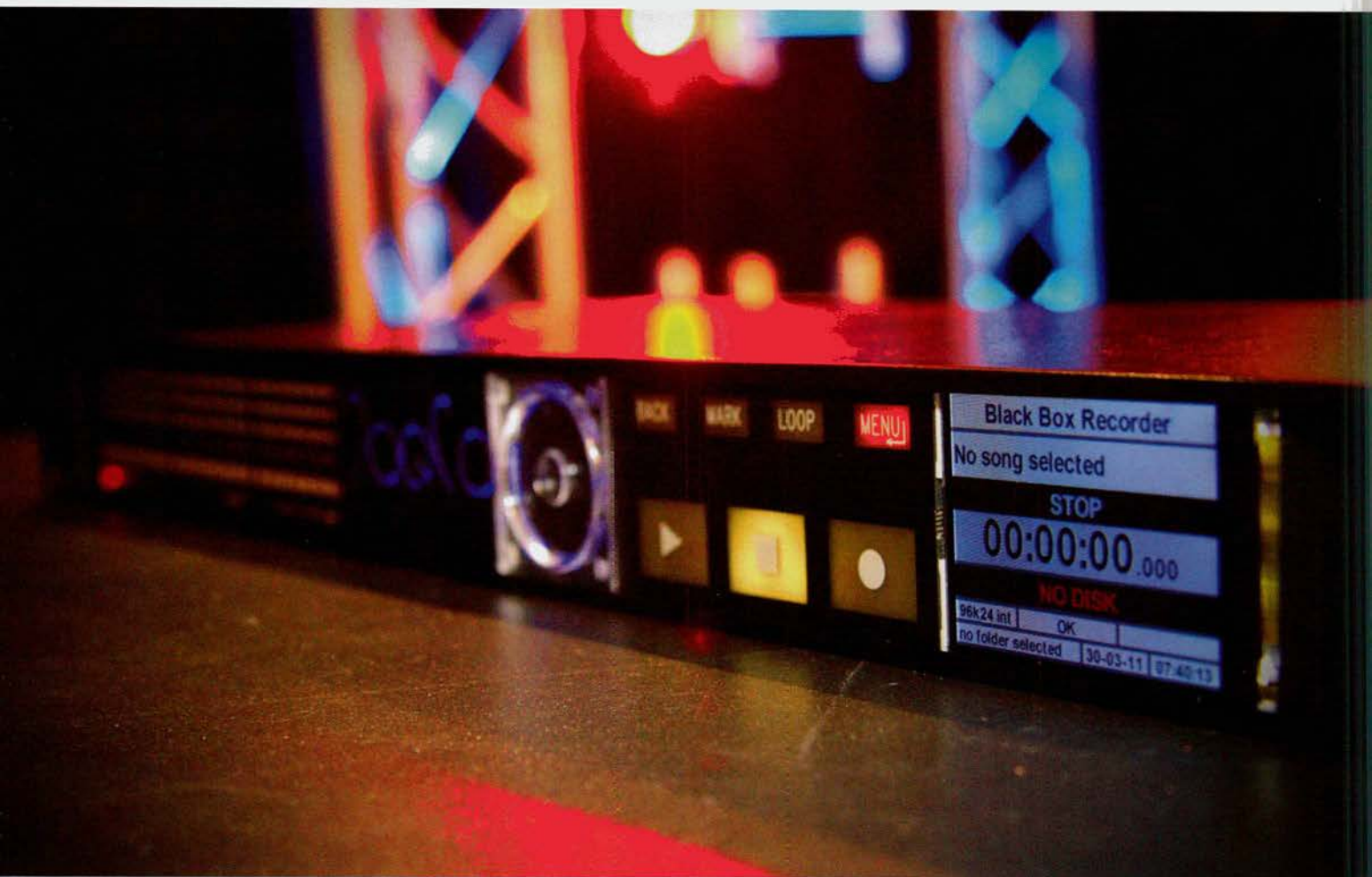
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JOECO BLACKBOX RECORDER

This is a black box recorder you won't find on an aircraft...



By Jimmy Den-Ouden

The BBR from JoeCo is a 24 channel multi-track recorder, designed especially to knock around in touring situations and live gig environments. Live recording of gigs needn't be difficult - even in situations where an analogue console is used.

The idea of the BBR is simple. Plug it in, connect a USB hard drive, hit record. And it's a good idea. The BBR records at up to 24 bit 96kHz, and is available in several flavours - balanced and unbalanced analogue, as well as versions which include ADAT and AES connectivity. Audio is recorded as broadcast WAV files on the USB drive, which can then be plugged straight into your audio editing software with no need to copy or convert anything.

Assuming your console has direct outs (don't assume, CHECK. Many "direct outs" lie post EQ, post insert, and in some cases even post fader) this is a good way to connect up the unit. If no direct outs exist, you can use insert points instead though this relegates such things as dynamics processing on your mix to happen within subgroups rather than channels. I'd probably put the unit at the monitor console since it's likely fewer channel inserts will be required there.

Things we like a lot about the BBR

It's compact - at 1RU it's hardly going to break the bank for rack space. The unit includes relevant cables to connect directly into a console, so it's essentially a no brainer to patch it into your system. The multipin

D25 connectors save panel space as well as cost on the unit, and make patching 8 times faster at least on the recorder end - you're plugging in 8 channels with each connector not just one.

The monitoring section is excellent - there are many external HDD multitrack recorders on the market already but this is the first I've seen with such a nice monitoring stage. You can generate a mix of all the individual channels and adjust each level independently - good for identifying that a problem exists in your record. You can also solo individual channels which lets you isolate such a problem. Monitoring is a BIG shortcoming of other units, so the BBR gets a massive tick of approval for this.

Multiple units can be cascaded

Continued Page 54 ----->

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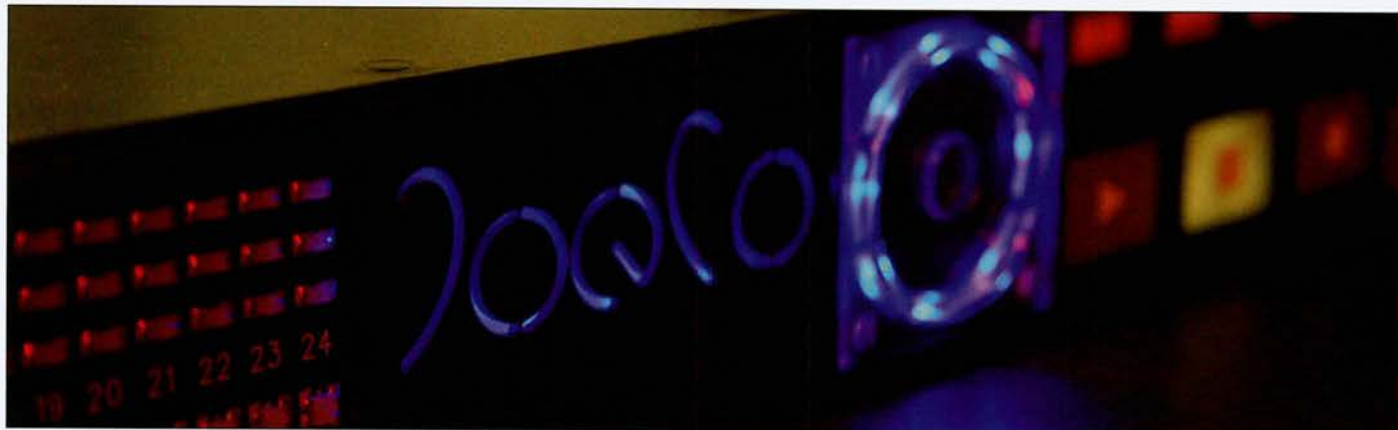
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-----> Continued From Page 52

together for recording of more than 24 channels simultaneously. Each unit needs an external USB hard drive to record to, and drives need to be FAT32 formatted.

Things we're not so keen on

Too many versions - the balanced version would be the smart choice if you want versatility. You can always drop to unbalanced via a different set of looms - a whole different machine seems like a strange way to do things.

The front panel control panel is a capacitive type touch screen, and frankly it's horrible. There's an encoder wheel just like on an MP3 player, but unlike the MP3 player the thing in the middle which looks like a button isn't a button. The idea of all this I'm told is that in a touring situation there are no buttons and knobs to break off and render the unit inoperative. I don't see this as a problem given operation of the panel is already haphazard to start with. It does get better as you get used to it. Good news though, connecting an external PS2 keyboard gives you all the functionality you need to control the unit without touching the front panel, and some of the key functions replicate those of common DAW software. Naming tracks also gets a lot easier with the external keyboard.

Heat - I don't know for certain if it's a problem, but I left the BBR plugged in for about 8 hours and it gets mighty warm. Buried in a rack of other processing gear I imagine it would only get warmer. The power supply is external so presumably the heat is all digital processing related.



Some vents or a small fan would alleviate this. In the worst case that you are running the unit via channel inserts and you lose power, relays on each input click into hard bypass so at least you won't lose your mix.

Last of all, the BBR looks unfinished. There's an awkward gap on the front panel where the controls end and you can see through adjacent to the display. For the money it's worth, I would expect a higher quality finish. It just feels a bit toy.

So all up?

If you need to do some live records and have the content available very quickly as data, the BBR will do exactly what you want. It's compact and even for its several misgivings it's a competent piece of kit which does what it was designed to.



What and Where

Brand: JoeCo
Model: BBR1
RRP: Starting at \$4,499 for the BBR1

Product Info:
<http://joeco.co.uk>



Distributor:
<http://nationalaudio.com.au>



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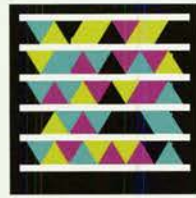
CX TV Episode 1

- ENTECH -V- INTEGRATE
- Kate Cebrano audio mishap
- Black Apartheid update
- Wireless: Shutdown news
- 3D TV a cos-headache
- Powderfinger tour
- Rock Cf Ages is coming
- Robe Digital Spot examined
- Shure Digital Wireless Mic
- Dr Danger Un-masked



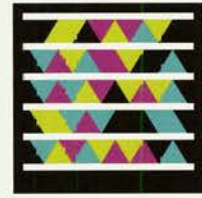
CX TV Episode 2

- Dumb concert security
- INXS on tour
- Coda audio profile
- CODEC your next gig!
- Hillsong buy Adamson
- Industry rant
- Sophie, Jimmy and Julius
- With HEAPS more!



CX TV Episode 3

Watch the whole episode here, or see Chapters.



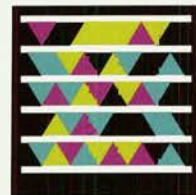
EP 3 CHAPTER 1

- Bruce Jackson & Hugh McLeen. Vale.
- Bytecraft sold to PRG
- ES Group Australia buyout, new era for large stages
- dB DVA advert
- Clay Paky Sharpy advert
- Focle TV is here! Advert



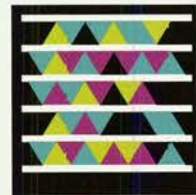
EP 3 CHAPTER 2

- Clay Paky returns
- Cranky Promoter time
- Playground Weekender Festival: crew stop work!
- How Not To Do It: world's longest stage set up? Footage.
- ACETA has been formed.
- Sennheiser Mic advert
- Production Audio Services on how to evaluate a loudspeaker, Part 1



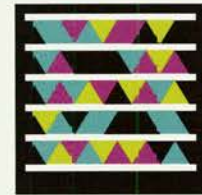
EP 3 CHAPTER 3

- Why the Production Industry desperately needs an association. Disaster footage.
- Performing Arts Centre managers meet, hear call for flying system training standards
- Rental Point advert
- Jands Staging advert



EP 3 CHAPTER 4

- NEW GEAR: K Arcy Lizard; Roland VR 5 video mixer with USB; MyMix networked personal monitoring system; TC Electronic Impact Twin Firewire audio; KME VL750 powered loudspeaker; Robe 600 LED Wash
- Technical Direction Company do largest 3D video
- Tribute to Bruce Jackson, with Joe O'Herlihy and Bruce Springsteen.



EP 3 GEAR REVIEW: (Extended)

- TC Electronic Impact Twin Firewire audio
- KME VL750 powered loudspeaker

PANASONIC AW-HS50A SUB-COMPACT VISION SWITCHER

HD vision control just became an affordable reality.



Panasonic back

By Jimmy Den-Ouden

Any decent piece of HD camera ware outputs HD-SDI - not an easy signal to process, switch or monitor - at least not without deep pockets. The HS50A sets about overcoming this by adopting the mantra "try to be everything to everyone".

First up it's a 5 input 10 bit 4:2:2 vision switcher. Nothing new there. The first 4 inputs are SD/HD-SDI capable - whatever mode you set the mixer to output is what it expects to see on these inputs. Input 5 is DVI-D, and all inputs have switchable frame synchronizers. As a mixer, it includes a keyer and picture in picture function. The PiP function can be switched to do 2-way boxes with scaling options. With me so far? Good. Another two "sources" exist in the form of dual frame memories. Imagine feeding a signal into the mixer, then hitting pause. The mixer takes a grab of the screen at full resolution and stores it into whichever of the two memories you choose - at full res too. It stores these even after power is removed.

Super cool.

There are several output busses on the HS50A - the main PGM bus, Preview bus, and an AUX bus. Signals can be independently routed to the AUX bus by shifting the main panel into AUX mode. Any bus can be routed to any of the available outputs - there are 2x SD/HD-SDI outputs (one with dual sockets) and a DVI-D output.

Monitoring

Great news here - you can use any decent HD capable DVI computer monitor to see what the mixer is doing. Better yet, there's an in-built multi-viewer which has a variety of layouts you can choose from - these layouts show between 5 and 10 boxes. The content of each box can be selected and labeled, and choice ranges from any of the inputs or outputs as well as the two in-built frame memories. You can also adjust opacity of borders, and the SDI inputs also show audio input levels on-screen.

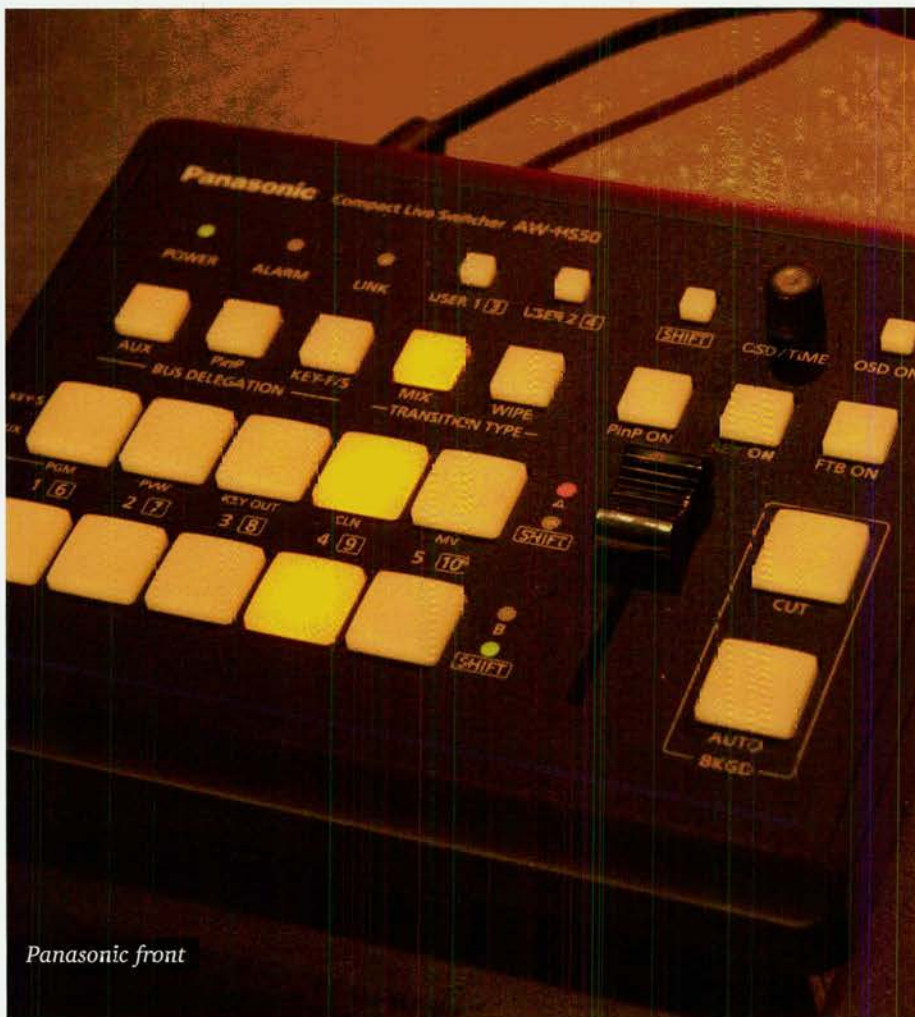
Tally is an important part of any live vision system involving cameras, and the HS50A makes it easy to get tallies up and running. Though not listed in the instruction book, an easy download gives pin-outs as well

as wiring diagrams for the D-SUB connector that carries tallies as well as the GPI contacts. Another nice feature is the in-built test pattern generator - you can have colour bars available as one of your inputs at all times which makes for quick, easy line-ups.

The on-screen menu requires you to hold the menu button down for a few seconds in order to bring it up - this trapped us and we initially thought the thing was broken. A quick look in the book confirmed that it was actually our broken thinking causing the problem. Once into the menu, you navigate it using a rotary encoder. All menu items are clear and self explanatory, and the menu layering is good and logical too.

Flexibility

The HS50A runs from an included 12V power supply which plugs in on a 4 pin XLR connector - just like a camera. This means you could quite easily use it in the field from a battery were no mains power available. So it's great for location shoots. The image quality on monitor and record outputs is stellar. So a quick recap on the features of the HS50A include 5 SD/HD inputs,



Panasonic front

What and Where

Brand: Panasonic
Model: AW-HS50A
RRP: \$5,700 inc GST

Product Info:
[http://panasonic.com.au/
 Products/Broadcast/Overview](http://panasonic.com.au/Products/Broadcast/Overview)



3 outputs, SDI D/A, frame memories, keyer, aux bus and multi viewer. It weighs 1.4kg and you can even control it over Ethernet.

The HS50A might be the most unassuming looking piece of gear we've had through the doors. People who are used to big mixer frames and control panels will have a hard time taking it seriously - at least until they use it. We think its price, capabilities, compact size and performance more than excuse this. Even if it does look like "My First Vision Mixer", we think it's great.



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The **NEW** Jands Ezicom systems are an evolution of the popular, easy to use and cost effective communications system. Intended for use in all stage and theatre productions, they are ideal for low and medium complexity systems and intended to be set up and used by untrained users while still delivering a professional performance.

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Simple Operation

We've simplified the front panel design to make the new Ezicom systems even easier to use. The E401 Master has a reduced control set to ease learning and minimise mistakes. Because there are fewer controls, they've been made bigger and are easier to find in a hurry, plus all controls are backlit so you can always see what you're pressing.

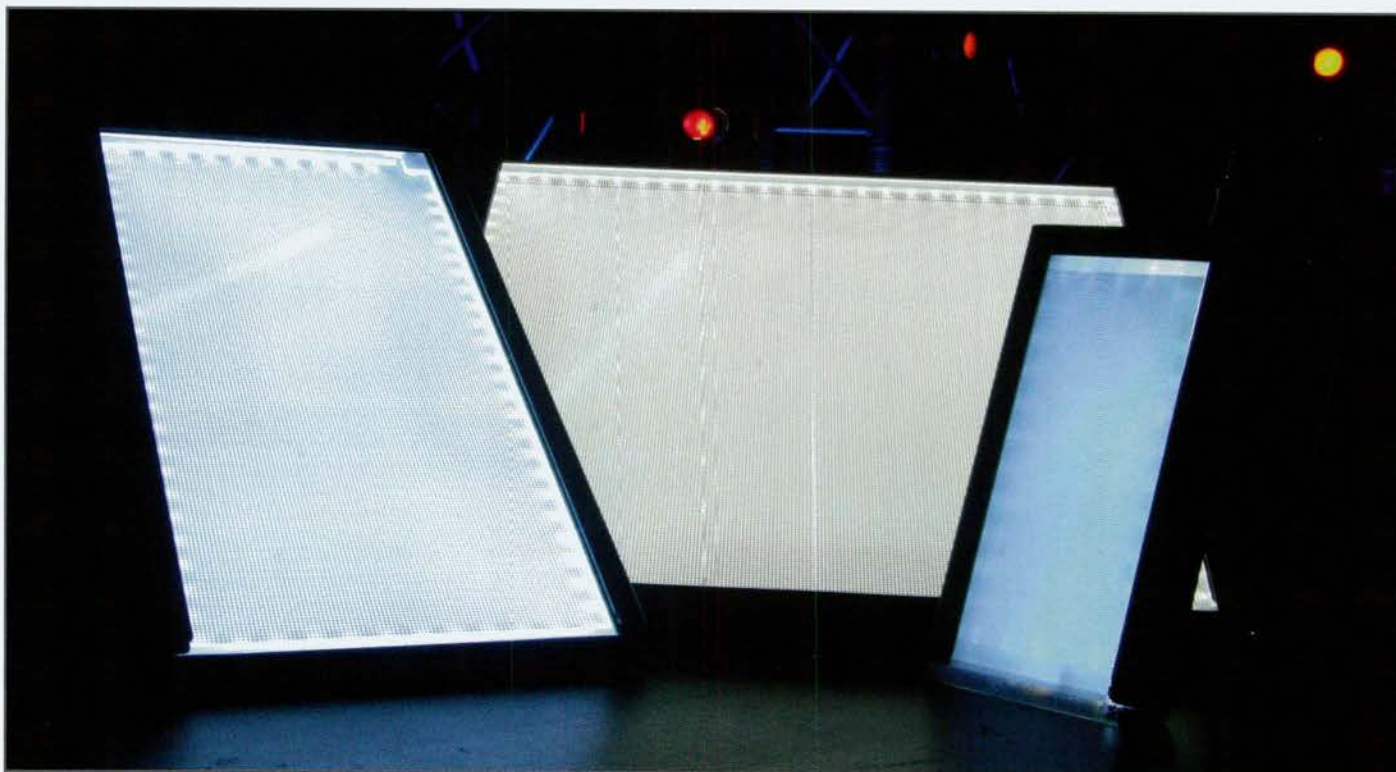
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ROSCO LITEPAD

Lighting accessory mogul Rosco recently celebrated its 100th anniversary. LitePad represents one of its more recent achievements.

By Jimmy Den-Ouden

LitePad is an LED based lighting panel. Doesn't sound real interesting does it? Be pleasantly surprised - it's actually really cool.

LitePad is available in a range of sizes and colours - well colour temperatures at least. At 8mm thick it might be the slimmest light source we've seen. It's useful in a whole lot of different applications, and to coin a cheesy phrase the possibilities are really limited only by imagination. Thus far it's been used in architectural and film set applications as well as on stage.

The two more common models are HO+ and Axiom, which is basically a ruggedised version of HO+. Axiom units travel in a metal frame, which although it adds a little weight also brings a new range of mounting options. At the most basic level, the Axiom units have rubber feet

on the back so they can sit flat. A quick release spigot mates to suitable stands or Manfrotto style clamps. The HO+ model is already pretty rugged by itself - I've seen it deliberately bent and twisted and it just kept working, though I wouldn't advocate this action as good practice. The most vulnerable part of the whole fixture seems to be the DC input connector.

Power up, or down?

DC input is 12v, and the panels consume quite a bit of juice - the 12"x12" panel pulls 2A. Because the LEDs are built around the perimeter of the panel the power consumption doesn't double as panel size doubles - so the 12"x6" panel still runs at 1.5A. Anyhow, the important bit is that they run from 12V so can easily be used without a mains power source. Standard DC connectors make wiring easy - nice to see Rosco has resisted the urge to install a proprietary power connector. There's a tiny in-line DC dimmer unit available, as well as a 2 channel DMX controllable

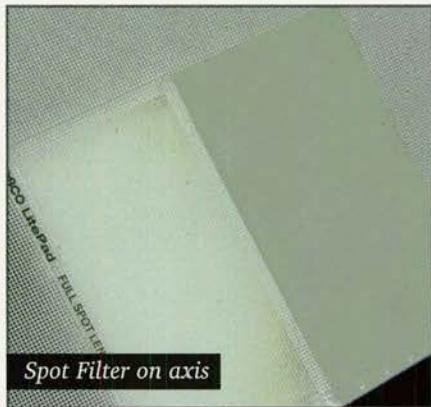
version. The engineering on the 2 channel dimmer is typically Rosco - it's reminiscent of a 1500 series fogger remote.

Dimming is smooth and linear. The lowest output level is very low, and beneath this the LEDs just extinguish. The nature of LED makes it hard to dim all the way down to 0, so the range on these is very good. A bunch of pre-fab cable and power supply accessories are available if you're looking for a quick generic power solution. There's even an 8xAA battery holder, for which a bracket is available to attach it to the back of a LitePad Axiom housing.

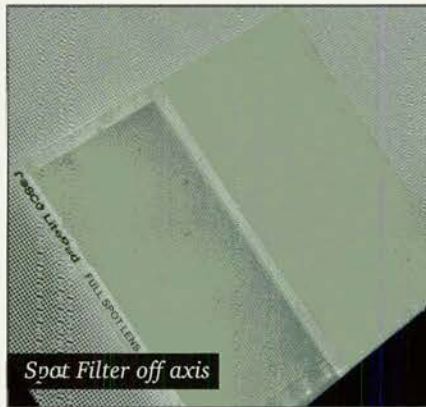
We should probably address light output and quality, given this is a lighting review. Output on the LitePad is very good. We compared it to a cheapo camera light and the light field on the LitePad was flatter and the colour temperature looked much more like daylight than the cheapie could produce. Heat generated on the larger panels is negligible, and while the 3" circle warms up a little it's not so hot you



LitePad Axiom



Spot Filter on axis



Spot Filter off axis

couldn't hold it clenched in your hand for 3 hours comfortably.

LitePad sizing ranges from the very small 3" diameter LitePad disc, through to 24"x24" square. Sizes generally run in 6" increments in either direction, with the 3"x6" and 3"x12" being the exceptions. LitePad is made in two colour temperatures - daylight and tungsten. This means it's easy to colour match to existing lighting conditions, or create contrast if that's the effect you're looking for. I'd probably opt for the daylight model and colour correct down when needed.

Accessories

LitePad is available as single parts or as a kit. Our demo system included bits of both. Rosco has really come up with a complete solution, addressing every accessory you're likely to need. Stands, gels, and diffusers are all available as well as hot shoe camera mounts, and other accessories. My favourite add-on is the super cool spot filter. It's less than 1mm thick, and just slides into the Axiom frame. It turns the light field into a nicely controlled spot with smoothly tapered edges. I don't know how they make it work, but the results are brilliant.

The only real downside here is

price. LitePad ain't cheap. It isn't especially expensive, but the proliferation of cheapie knock-off LED lights makes it look like it is. This said, the quality of the product and the light it generates more than justifies the difference. It comes in 3 standard sizes and Rosco can even do custom panels. The accessories are reasonably priced and just add to the appeal of the product. If you want a quality flat panel LED light source, this is it.



What and Where

Brand: LitePad
RRP: 3" HO+ Circle \$110,
 3"x6" HO+ \$175, 12"x12"
 HO+ \$660, 3"x6" AXIOM \$235.
Tungsten & Daylight are same price for listed models and all prices inc GST.

Product Info:
www.rosco.com

Distributor:
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SONY HXR-MC1500P

HD video - not so horrendously difficult as once before...

By Jimmy Den-Ouden

Looking at the HXRMC1500P camera, you could be forgiven for thinking you were looking at its cousin - the HVR-HD1000P. Perhaps because they use what appears to be an identical body. Weighing in at only 2.9kg when loaded with a battery, media and microphone it still has the appearance of being a "pro" camera. It's the shoulder mount design that does this - straight away your clients have to take it seriously because it looks serious.

We've spent considerable time using the HD1000P camera (which records to DV-CAM / HDV tapes) and we liked it a lot. The HXR-MC1500P brings many of the features we liked about its cousin, but has changed from tape based recording to solid state.

There are many good reasons to do this - the first is a mechanical one. No moving parts in the record system means nothing to get out of alignment. Or dirty. So it's more reliable. The second benefit here is evident when time comes to remove the footage from the record media. With tape, you need to play it out in real time. Solid state allows you to transfer the footage out as a file - faster than real time.

Rank & file

The camera includes 32Gb of internal memory, so in actual fact you don't need to buy any additional media to make it work. But it helps. The HXR-MC1500P records to SD memory cards or memory stick media, both



of which can more easily interface to a computer. The quarter inch Exmor CMOS sensor has been optimized for low light shooting, with a minimum of only 3 lux required.

The camera will record in MPEG2 in SD mode, or in HD using the AVCHD codec. Record time varies depending on available media size, but expect around 2 hrs 55 mins on a 32Gb card at 24 Mbps (AVCHD FX). Battery life is specified to exceed this at 280 mins - and it's compatible with the Sony NP-F970 so extending this isn't too hard. Cross compatibility between models is nice, if not almost expected on a camera like this.

The lens on the HXR-MC1500P has a 12x optical zoom, and runs out quite wide at the short end. There's also a 160x digital zoom which will no doubt impress those who don't mind making image quality sacrifices to get closer to the action - personally I'd leave the digital zoom out of the picture and just move the camera closer. Keeping in perspective the overall cost of this whole camera is less than most broadcast lenses alone, the inbuilt lens is actually pretty good. The irritating power

switch which dropped into photo mode has been done away with which is nice to see - to change modes you now press a button on the opposite side of the camera.

What buttons?

On the topic of buttons, there aren't many to choose from. Most functions of the HXR-MC1500P are driven by the LCD touch screen. It's not the most responsive screen ever, but again keeping in mind the price it's about what you'd expect. Regular readers will be familiar with my touch screen frustrations, but it really wasn't a big deal on this unit. Navigating the menu presents a range of options which are mostly self explanatory. There's even the option to turn on "beep", which enables an array of irritating noises that activate every time you press anything. The noises are very annoying, but funnily enough they did highlight that the internal speaker works well.

Video output connectors are on the right side of the camera, and all on RCA plugs. Past experience tells us

that these can be easily damaged, so if you're using them, best tape the cable to the handle as strain relief. BNC would have been a better choice. There's an HDMI and USB port concealed under a trapdoor. Mic input is on mini-jack, so if you want to plug a real mic in, budget another \$300 or so for a suitable converter. There appears to be a hole in the chassis for a Firewire port, but no port beneath this. It's not really relevant anyway - most people will probably just pull the card out and

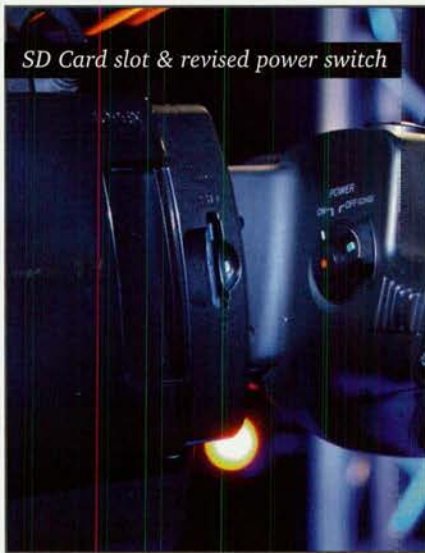
plug it directly into their computer anyway.

Image quality from the HXR-MC1500P is good. The "auto everything" mode is actually pretty intelligent and able to figure out most shooting scenarios. The focus ring can be put into manual mode and is more sensitive than we've previously seen. Maybe too sensitive - though it seems to be acceleration dependant (the faster you turn the ring the faster it reacts). Auto

"exposure" may trip up some folk - it can be manually adjusted from within the menu though this function cannot be assigned to the lens ring as far as we can tell.

The HXR-MC1500P is a good little camera for the money. Suitable for small AV situations, hire companies, wedding videographers and such it's straightforward to use out of the box but provides some additional features for those who want them. Oh yeah, and it looks more expensive than it really is.

α



SD Card slot & revised power switch



Sensible menu system

What and Where

Brand: Sony
Model: HXR-MC1500P
RRP: \$1,925 inc GST

Product Info:
www.sony.com.au

Distributor:
www.sony.com.au



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My Last Business Card

By Richard Cadena

A funny thing happened on my way to becoming a rock star.

When I was 19 years old and full of vim and vigor, it never occurred to me that I would not become a rock star. And then I saw Stevie Ray Vaughn on stage at a small club named Steamboat Springs on 6th Street in Austin. That's when it dawned on me that there was only one thing standing between me and rock stardom: talent. And good looks. Okay, that's two, but the point is, at least I wasn't very smart either.

So I did what any young man in this position would do; I took up the bass guitar. Even then, it didn't take long for me to realize that it was harder to set the world on fire with four strings than with six. Thankfully I had a college education to fall back upon. But I didn't want to go work for IBM or Intel because I didn't want to make too much money, so I got into the lighting industry. That seemed to do the trick.

I spent 13 years working for High End Systems before they came to their senses and sacked me. They called it a layoff, but the end result was the same. Then I worked for Martin Professional for a couple of years before they apparently agreed with High End Systems and sacked

me as well. Do you see a pattern in there?

It was then that I first realized that I would actually have to work for a living. So I made myself handy with lighting rigs and a computer keyboard. One thing led to another and here I am, the author of a few books, freelancing as a lighting designer and scribbling a few words for a living.

I once wrote that I have never made it through a whole box of business cards before getting sacked. Today I made it through an entire box of business cards and it's time to move on.

At the beginning of this year, the Professional Lighting and Sound Association (PLASA), which is based in London, and the Entertainment

“I once wrote that I have never made it through a whole box of business cards before getting sacked.

Services Technical Association (ESTA), which was based in New York, merged and became one organisation. PLASA and ESTA have both been involved in providing a structure for the live event production industry to share resources, channel information, and generally organise the industry.

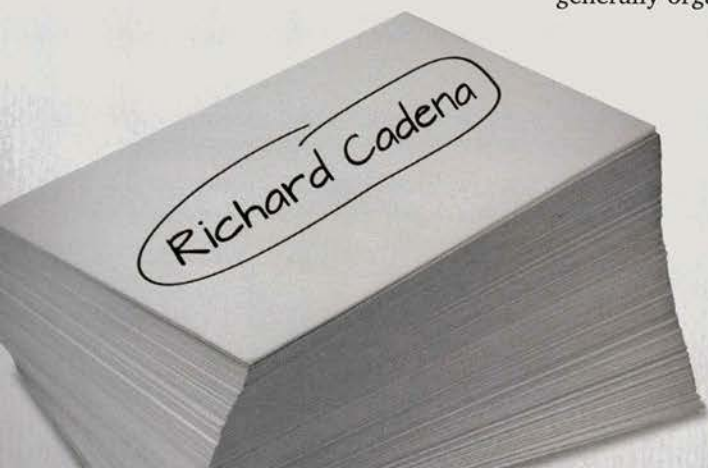
ESTA was, and the new PLASA North America is, an accredited American National Standards writing body whose Technical Standards Working Groups meet four times a year to hammer out new protocols and standards for the industry. There are different working groups that deal with rigging, electrical power, control protocols, camera cranes, smoke and fog, floors, photometrics, and followspot positions. In a similar way, PLASA has been working with British and European standards making bodies to insure that their voices were heard and their interests were looked after.

But in this, the Third Millennium, where the world is becoming an increasingly small and well-connected place, it makes sense to share resources internationally and, where possible, develop worldwide standards or at the very least, parallel standards using similar methods and ideas. The merger of PLASA and ESTA will help to insure a stronger industry and puts us one step closer to a more unified industry.

During the planning phases, I received a phone call asking if I would be interested in a position with the blended organization. Apparently they hadn't consulted with High End Systems or with Martin Professional.

The offer was for me to join the organisation as a technical editor, contributing to their publications, which include Lighting & Sound International, Lighting & Sound America, and Protocol magazines. In addition, I would work as an assistant technical standards manager with the PLASA Technical Standards Program.

I had been volunteering on what was formerly called the Technical Standards Committee, and the prospect of getting paid to do what I had been volunteering for was



appealing. But the real attraction to the job was that I would now have the opportunity to work with the best and brightest minds in the industry, the very people who are building the infrastructure of the industry, taming the wilds of the live event production frontier, and settling the uninhabited areas of the landscape.

And in case you hadn't noticed, the wilds of the industry are becoming more notorious. During the past couple of years alone we have had several rigging and electrical accidents, some of which, like the collapse of Madonna's rig in Marseille, France, were well publicized. The sheer volume of accidents is frightening. Just google "rigging accidents" and you'll pull up more hits than you'll have time to sift through. At one point I counted about 15 serious accidents in a span of about 16 months. And that does not include the very high profile accidents on the Broadway musical "Spider-Man: Turn Off the Dark."

When these incidents appear in the pages of the New York Times as well as in the Sydney Morning Herald, then the government is drawn to it like a moth to a flame. Politicians see a golden opportunity to forge their name in the eye of the public and they spring to action, legislating their way into a lead in the next election. And the industry then has to live with the consequences of the accident as well as the fallout thereof.

If you remember the legislative attempts to outlaw the incandescent lamp, or the State of Texas coming within a hair's breadth of outlawing lighting design except for licensed architects and engineers, then you can see the complications involved when lawyers and politicians run amok with the keys to the industry.

The better solution is for us to be proactive and self-regulate, look out for our own interests, including health and safety, and provide tangible evidence of our concern and actions. To that end, PLASA is also working with state and federal regulators to help them satisfy their duty to safeguard the health and safety of the public. My hope is that all of you in the Great Land Down Under will hop aboard and work towards a safer, healthier, and happier industry. It's a process that doesn't happen overnight and one that, at times, requires a lot of patience and personal sacrifice. But it's a goal that everyone can get behind, regardless of your affiliation, sex, race, creed, religion, or even your nationality. I'll hold the doors for you.

It's been a real pleasure contributing to these pages and I will never forget the volumes of email (thank you both!) and the vast numbers of compliments I've received (I'm still trying to figure out what a clacker is, but I'm sure it's very complimentary) from my friends in Australia.

The next time you visit Austin, look me up and I'll buy you a Shiner Bock (look it up). Or better yet, make a point of coming to one of my training seminars and I'll let you sit on the front row. Until then, stay safe, be cool, and don't forget to write.

Adios.

Richard Cadena (richard.cadena@plasa.org) is now the technical editor of Lighting & Sound America, Lighting & Sound International, and Protocol magazines. In addition, he is the assistant standards manager for PLASA and he continues to teach training seminars on a regular basis (www.APTxl.com).

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screws that each car contained.

What he needed was a screw that used a screwdriver bit that was self-centering and could be tightened up quickly and to a specific tightness every time.

Enter Stage Left: Henry Phillips and his Phillips head screw. The same screws that have an X shaped hole in the head that we use for everything today, from equipment racks to plasterboard, from screwing up computers to screwing the lid back on something that says 'warranty void if removed!' Just put the screwdriver on the screw, turn it and it locks in and tightens up or loosens. So simple, yet without it modern manufacturing would not exist!

Henry Ford's problem was the same one I was facing in the penthouse and the apartment. A job that might take 10 minutes with an 18 volt power driver was taking over an hour by hand, since every screw in both of these places was a slotted head one, in more slot sizes than you could shake a stick at. Or a screwdriver.

I don't know if you've ever tried to undo, for example, the slotted head screws from a door hinge that has never been undone since the day it was screwed up tight in 1962 and has been painted every year since then in iron hard coats of 'landlord's special' enamel paint.

Well I have. And it's not a task I would willingly do again. The thing is, there seems to be no particular standard for the size of the slot. It's always either too big for your small screwdriver, or too small for your big one. I had three flat bladed

screwdrivers - big, medium and small. None of them fitted the screws properly.

Don't they say, "The Lord must love standards because he made so many of them"? Well, I must confess to taking his name in vain a few times whilst trying to remove an unwanted door. I know I'll be forgiven though, because my heart's in the right place. Unfortunately my left hand wasn't, causing the screwdriver to embed itself several times into my palm, and make me wish that someone had spent a little more money on using Phillips head screws instead of these little slotted widow-makers! You really don't know what you've got till it's gone!

Henry Phillips was smart enough to patent his screw design, and charge other screw companies to license it from him if they wanted to use it. Which they did, of course, but they charged a premium price to sell them. Being true tight arses, the chippies who had built these old places had not paid a bit more for Phillips head screws, but still used the medieval ones.

Still, when the going gets tough, the tough get out the 'special' tools. In this case a 5 kilo brick hammer. But not just the hammer, but an impact driver as well. This is a gadget much used by people restoring old cars. It's a chunky piece of steel that you set up to turn left or right, put in the driver bit you want, then push it into the slot of the recalcitrant screw and give it a big whack with the hammer. Which I did. Whammo!

After missing it completely and giving my left hand a good whack with the hammer instead, I once again called upon the Almighty in

my hour of need, but sadly he must have been watching Masterchef and didn't hear me. With two pairs of rigging gloves on my left hand I tried it again. A couple of whacks and the screw slowly started to unscrew. Oh joy - only eight more to go. On number nine, down the bottom of the door, I gave a monster pre-emptive whack... and the screw head snapped off, leaving the screw shaft embedded in the wood. With no screws holding quite a heavy door on, it let go of the door frame and fell on my bloody head! Stuff it, I thought, if this door ever goes back on it's only getting eight screws!

The last patent on the Phillips head screw design ran out in the US in 1966, and a bit later in the rest of the world. From then on it quickly became the standard in screw types, and as they say, 'the rest is history'.

So the next time you've got 10 minutes to put half a dozen equipment racks together, filled with amps and processing gear, think how much time it would take if each of those screws had to be done up by hand, and thank Henry Phillips that now you can do the job and still have time for a coffee afterwards!

And what was Joni Mitchell singing about in Big Yellow Taxi? It was The Garden of Allah, a collection of apartment suites in 1920's Spanish mission style at 8152 Sunset Boulevard in West Hollywood. Owned by silent movie star Alla Nazimova, it was very popular with the movie executives for some, er, 'afternoon delight'. Yet another connection with screws! It was sold and pulled down in 1959 to build a shopping centre and car park, hence the song.





uncan Fry

PHILLIPS HEAD The screw that changed the world (No, not Marie Antoinette!) ©2011 Duncan Fry

'You don't know what you've got till it's gone', sang a young Joni Mitchell in 1970. And it's my guess that she wasn't singing about Phillips head screws but screwing of a different kind, property developers screwing the heritage of old LA. To find out what she was actually singing about, you'll have to read to the end of the story.

So what's old Dunk rambling on about now, I hear you ask?

Well, in the last couple of years I've renovated and ripped apart a couple of dwellings. One was transforming a set of offices built in the 50s into a swinging New York loft penthouse apartment, or the Highett equivalent thereof. The other was an apartment that had been untouched (and uncleaned) since the day it was built, sometime in the late 60s.

In both of these places, there was not a Phillips head screw to be seen; nothing but good old slotted head screws holding everything together. And when I say good old, I have to point out that I'm being sarcastic! (Oh yes, sarcasm - I majored in that in high school).

For those born close to the start of this century, you may never have come into contact with a slotted head screw, unless you've been roaming through grandpa's collection of jam



gers full of old bits and pieces in the tool shed. "They'll be useful one day, you young fel'ers," he would say, again and again and again. Oh how we laughed as we pushed him down the spiral staircase in an old tea chest. "You little basthtardsth," he would yell, once he found where we had hidden his teeth. Ah, happy days.

But I digress. The screws that have a slot in their head were most likely invented back in the days of building the great cathedrals in the Middle Ages, made one at a time by the carpenter's apprentices, and apart from being machine made in the Industrial Revolution they haven't

really changed since then.

In this industry you might come across them on old Telecasters, Strats and Broadcasters. If the guitarist comes over and asks if you could tighten up the scratchplate screws on his priceless 1953 Strat # 000002 (Dave Gilmour from Pink Floyd has # 000001), then I'm recommending you don't put a slotted screwdriver bit into your power screwdriver, crank the torque up to 19, and let it rip.

Because it is almost guaranteed that the screwdriver will jump out of the slot in the screw and go skidding across the surface of the guitar, taking with it your career and quite likely your life savings too!

This was the problem Henry Ford found on the Model T production line. Power screwdrivers don't like slotted head screws - they just jump out, causing expensive damage - and workers were taking far too long to screw in by hand the 500 or so

“Because it is almost guaranteed that the screwdriver will jump out of the slot in the screw and go skidding across the surface of the guitar...”

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