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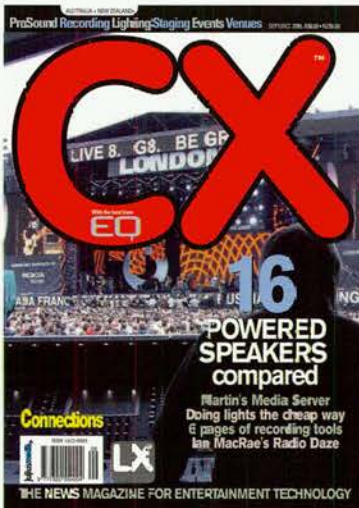
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CX




Mac 700 Reviewed. P 87

EQ



A massive Live 8 concert, a massive cover! We pushed the CX logo as large as it would go, without turning the mag sideways. What do you think?

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FROM THE PEOPLE WHO ONCE PUBLISHED CONNECTIONS MAGAZINE

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Radio Daze. Macca: P35



16 speakers compared! P 41

CHEAP LIGHTING: The story promised on the cover has been suspended in light of the Killer Par Can situation. See P85.



Inspiring technology designed to transform conventional thinking.

The EX Series from KV2 Audio features new transducer and electronic technologies that establish new benchmarks for compact active loudspeaker performance.

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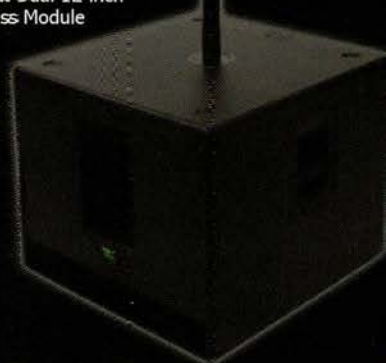
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Warning!

This Editorial isn't fun, and could be read as generally negative. If you are seeking lighter entertainment, we have plenty of that within the rest of the mag. Skip this page.

Mad as hell

"... and I'm not going to take it anymore." It's a line from Network the movie, circa 1976, and it's a line from CX Magazine in this, my 15th anniversary of publishing and deadlines. The magazine business has been brilliant for me, its fed and educated five daughters, and supported two wives and a divorce.

Maybe its time for me to hang up my morals, and hand over to a hired editor who can bland out and make me lots more money. He or she could just run safe press and press releases, and we would get more advertising which would more than compensate for our readership tanking as a result. Profitable magazines worship the advertiser in favour of the reader. I tend to do it in reverse. Most advertisers - certainly not all - respect me for it.

What's making me mad is mediocrity and mean spirited behaviour.

A few examples which arose in compiling this issue....

1. Townsville. A guy is setting up his production outdoors and a mini cyclone hits the site. A lot of things are blown over, no one is hurt. He hasn't FINISHED setting up, so nothing is tied down yet. As he stands there, heart broken and frightened, contemplating the wreckage, his competitor is snapping photos and *laughing at him*. At first glance, the picture sent to us <could> indicate lack of care. But of course there are 3 sides to every story.

2. Novatech Productions in Adelaide have done a stellar job of building their business, based on hard work and long hours AND a keen approach. No other production company in Adelaide has sent me any news of any kind in the last two years. So when I report what Novatech are doing, I get anonymous emails and calls telling me bad and untrue things. Grow up, children.

3. Lethal par can - turn to Lighting, and marvel at the quality control from Kudo, who have managed to wire the red positive wire to earth. This could kill you, or your kids. Or my kids.

4. Neve and Global. There's lots behind this story but wow, what a smokescreen. I've had to weave through legalities to report what we have, but if I didn't go deep the inferences may have placed blame where it doesn't belong. There's 3 sides to every story.

There's plenty more, maybe I need a distemper shot.

I will pass over discussing in detail how a manufacturer somehow blamed me in a very, VERY rude fashion for their speakers not being included when a church did a line array comparison which we published. How can I

decide which speakers the church will choose? I'm still waiting for an apology. Waiting. Waiting. What do you think about all of this? Am I just a grumpy 48 year old? Or should we all strive for some standards? Email me! julius@juliusmedia.com

Bigpond, big - HUGE - bill

I swear I must be the most unlucky Bigpond customer in all of their pond. They overbilled me thousands in 2000, and it was stressful having it resolved. Then last year my cable modem failed and they took 12 days to replace it - at that time you could not walk into a Telstra shop and buy another one.

Now I am looking at an invoice for \$22,867.77 of excessive downloads. No matter that the plan I am on is very old, and that unlimited download plans are now standard. When I ring them, and go through 17 layers of pushing 1 for Cable, 2 for ADSL, I eventually get a call centre where I must identify myself and the person helpfully suggests lodging a claim for credit.

Think about it this way: if you ran a business where the typical monthly client charge was \$80, wouldn't you phone up a customer whose usage had just gone through the stratosphere? It's stressful.

Boring, bad, timewasters

Continuing the mediocre theme, Netgear sell ethernet routers which require very little technical support. But when they launched into wireless routers and firewalls they needed to supply phone support, and when you go to get it, you are speaking with someone in India.

I love Indians. But I don't love bad phone lines, and badly trained humans.

We had two calls to make to Netgear, because we purchased two \$120 routers which could not be commissioned without support. Each call took 45 minutes. 42 minutes of waiting, and then laboriously spelling the name of our street and suburb, as the products needed to be 'registered' before support could start to be given, and about 3 minutes of actual support.

My I.T. guy says if a company launched a product, promoted on the basis of a local call centre, they would be swamped with business.

Citibank and Amex both have similar call centre issues. In the case of Amex, I cancelled the credit card and when they called to find out why (from Melbourne), I told them it was because of the call centre. They then toggled my card number into the system so when I ring, I get put through to their local centre, not India. They gave me a hotel voucher to keep me.

Finally, I saw with great alarm an item on TV where thousands of identity details of Australians were sold, illegally, by a call centre staffer in India. Be careful.

That's all - for now. I hope that next issue, the Editorial will be upvibe - hopefully motivating.

- Julius Grafton

NEWS



VP60 celebration a winner, despite accident

Matthew Fegan, the owner of Talkin' Audio was understandably defensive when we called. "It seems that the photo (above) is floating around the whole world at the moment. Do you want to rip the guts out of us?"

Far from it. On setup day at Townsville for the VP 60 celebrations, a 50k wind blew through and upended a lot of structures. The Talkin' Audio rig was blown over, as it was not yet pegged down and tied off.

"We had two staff members there, and they were actually lowering everything and pulling everything as the storm brewed, and they were actually lowering all the roof system at the time, and before they got to the towers, they'd gone over. Both screens on both sides tumbled over. It was an absolute freak storm; I've spoken with CH&S...had the inspectors

come down...they've cleared us.

"We're a qualified riggers. What more can I tell you? They just said that it was very unfortunate that we were around at the time, and it's something that obviously... we've got to be very careful of.

"It started with rain, in fact, then very, very high winds came up... it was just basically sort of a freak storm that came in over...black clouds as black as velvet black. And ripped through and sliced what it did.

"It came up so fast... we didn't have enough time... and the cyclonic sort of... like a big, huge whirlwind... I don't know what you call 'em... I like a twister sort of thing came through and blew one screen one

way and the other screen the other way... and that was the general sort of gist of it.

We showed all our risk assessment plans to CH&S and all those guys, and they were very happy, and CH&S cleared it, and said, 'these things happen.' And that's the bottom line, mate.

There's people slandering us and all kinds of things. They only know half the story. There's always three sides to a story. The bottom line: I'm happy to admit if we're at fault, but I don't believe it in this case."

The show went on without delays.

"Even the 'Stars' read your magazine."

Rick Evans writes:

I'm one of the audio directors at Channel 10 Melbourne, and I thought you'd like to see who else reads CX. Bert Newton was reading your review on 'The Producers' so I asked him for a quick snap a shot to send you guys and he said 'no probs. Anyway hope you like the picky.....All the best...Rick Evans

• Thanks Rick! Readers - send us more pictures like this! -Ed



Global sues over 'faulty' Neve audio consoles

\$1,361,000 to zero – plus legal costs. Supreme court case writes new chapter in risk management. By Julius Grafton

After spending \$1,361,000 on two Neve Libra Live digital consoles, Global Television suffered failures and problems beyond their expectations. Eventually the two consoles were removed from the outside broadcast trucks, and put into storage. Two new Calrec analogue consoles were purchased in their place at considerable extra cost.

Global took legal action, and just 30 minutes before entering court on June 23rd, Global learned that AMS Neve Plc in the UK had been sold to SAE boss Tom Misner. AMS Neve did not attend or defend the court case, leaving the judge no option but to award a default judgement in favour of Global.

The case is due back in the Supreme Court in Australia on September 6, when Global will learn how much of their claim for damages and costs is entered in judgment. It does appear that the claim will not directly affect the new Neve company, controlled by Tom Misner, as the original Neve company is now dormant in the UK.

Global Television general counsel Mark Toohey told CX that Global would pursue the local Neve agent at the time of purchase, Syncrotech Systems Design Pty Ltd. Syncrotech Managing Director Paul Heaton told CX at the time of the sale of Neve that he had spoken with Tom Misner, and it would be 'business as usual' – yet at time of publication, Syncrotech had removed Neve as a distributed brand from their website.

For his part, Tom Misner told CX at the SMPTE show that the original AMS Neve company had indeed become dormant. Mark Toohey from Global discovered the same thing after winning the default judgment. It appears the original AMS Neve company does not have the assets to meet any judgment.

"We will pursue them in their jurisdiction," Mr. Toohey said, "and investigate any remedies, including relation back, available." Relation back is a legal concept which allows a court to virtually go backwards in time, and undo a transaction by way of clawing back monies paid where the parties may have had knowledge of a forthcoming financially negative event.

As to legal costs accrued to date, Mr. Toohey could not offer specific comment. "Litigation only comes in one variety –



New Neve owner Tom Misner, pictured at the SMPTE convention in August. Innocent in the Global matter.

expensive," he quipped.

Global is owned by a public company, Television and Media Services Limited. In their latest report, they stated: "The Neve desks were originally purchased for use in an outside broadcast environment, but did not perform to expectation and were decommissioned in 2004. Due to the ongoing reliability and performance issues, particularly during live television broadcasts, TMS commissioned an

Neve Libra Live console (below).



Syncrotech boss Paul Heaton in happier times. (This is our only file photo of Paul.)

independent expert in June 2004 to review the performance of the Neve desks. The independent expert stated in his report that the Neve desks were unreliable and not fit for purpose. The TMS Group has since requested compensation from the manufacturers and has written down the value of the Neve desks from \$1,155,000 to nil."

Audio insiders say that the consoles, which were NOT installed by Syncrotech, should be installed with proper regard to cooling and other issues. After failures at broadcasts, the difficult decision to remove the consoles and replace them with analogue Calrec consoles was taken. The Calrec consoles were also supplied by Syncrotech Systems Design.

Syncrotech Systems Design are defending a claim against them by Global. They vehemently deny any liability to Global.

The former directors of AMS Neve may face some difficulties if Global abide by their plan to pursue them through the courts in the UK.

There is no suggestion that Tom Misner had any advance knowledge of this matter when he purchased the Neve brand and the rights to the AMS Neve assets. There have been suggestions made (not by Global) that Tom Misner has made some offer to repair the stored consoles at no cost, provided they are returned to the U.K.

Industry sources suggest that Tom Misner has solid plans and concepts for his new Neve, which recently employed 200 people in the UK. •

NEWS



SSL's new C300 Digital Consoles appear

New console aims at busy post production, film and television markets

The unveiling of Solid State Logic's (SSL) C300 new-generation digital console at IBC in Amsterdam this year is intended to excite the post production and film markets.

"Working closely with broadcast facilities as part of the development of our C-Series family of consoles, we were increasingly made aware that desktop systems don't solve all of the audio challenges for commercial post production," comments Niall Feldman, SSL's Director of Product Marketing.

"For efficient workflow the missing elements are tactile, physical controls, powerful multi-tasking automation and better audio performance than workstation processing can deliver. SSL's new C300 console is specifically designed to address these issues, with a single system that has integrated workstation control, renowned automation and acclaimed signal processing quality."

The C300 Master Studio System integrates Digital Audio Workstation (DAW) control using techniques pioneered with SSL's very successful analogue console, the AWS90C. It has been engineered to be compact, fast and efficient to facilitate the busy, cost conscious non-linear markets of television, post production and film. It is intended to be the happy marriage of console and DAW.

Automation developed from the C200 console provides complete real and non-real time control over the console's signal processing. This allows operators to slow down fast moves to a more manageable pace, or even set-up whole scenes with the press of a locate key. The C300 completes a family of digital production consoles with its sister C100 and C200 models.

Features include: Dynamic Resource Allocation, processing power that can be allocated to any event chosen; Over 500 mix inputs and 80 mix busses, with DSP from a single Centuri processor; Process linking and stacked channel grouping that puts stems and groups under one fader; Unique MoXY controller that provides creative, real-time, cross-parameter control; Integrated multi-machine control including DAW control; Integrated 128 input, multi-format surround monitoring including compatibility checking, useful in modern multimedia productions; Multi-user configuration from a single C-Series processor; and multiple sample rates, including pul-ups and pull-downs for international compatibility.

Feldman adds, "As a member of the C-Series family, the C300 offers complete processing hardware compatibility with the C100 and C200, providing a family of production consoles with single support."

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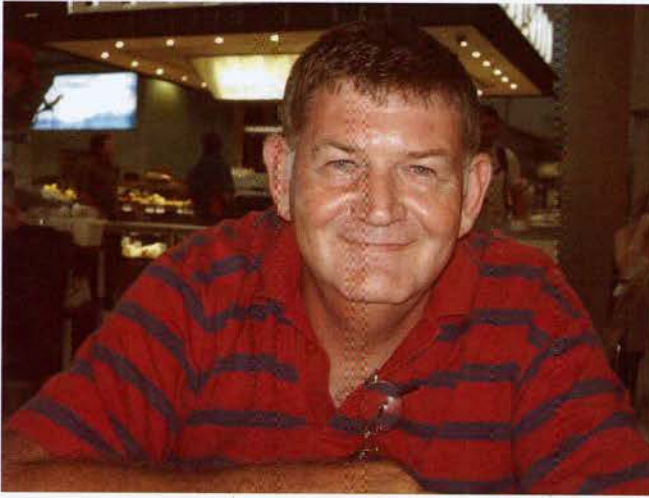
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NEWS



Vale GEOFFREY BIELEFELD

(07 April 1951 – 23 July 2005)

CX was saddened to hear of the sudden passing of Geoffrey Bielefeld, who was considered one of Australia's finest makers of theatrical scenery.

In 1987 Geoffrey's work was showcased concurrently in theatres in three separate states: I'm not Rappaport, Sydney; The Rocky Horror Show, Melbourne, and Kiss Me Kate in Brisbane.

Stars such as Lauren Bacall have graced Geoffrey's sets. Opera Queensland is dedicating this season of The Marriage of Figaro to Geoffrey's memory; he was the Company's Head Mechanist.

Geoffrey's father, Frank, owned the Bielefeld General Store and Hardware in Marburg. The family home was located behind the store. On its long, enclosed verandah, an 8ft x 6ft projection screen hung at one end and a 16mm projector and lots of film were at the other. As well as the many trips to live theatre productions in Ipswich with his parents, Geoffrey's verandah theatre was probably where he got his grounding.

More recently, outdoor screenings had become Geoffrey's passion. On any summer Friday and Saturday night Geoffrey could be found screening films and DVDs in parks, on new housing estates, at (and over) swimming pools and school ovals.

He was technical consultant to Brisbane's International Film Festival for its fourteen year life.

Geoffrey is survived by his wife, Maide.

Vale JOSEPH "LEON" SCHUSTER

(10/05/1971 – 26/07/2005)

CX and the Australian lighting industry mourn the recent death of Leon Schuster, who, together with his family, founded Schusters Lighting Supplies in Queensland in 1997.

Although Leon's business commenced trading from a shed with an inventory of only 6 par cans, it grew to where it operated from 3 large warehouses in Burleigh Heads, becoming a major lighting supplier to Theatre, Corporate, Film & Television, Concert Tours, and Exhibitions.

Leon started lighting when he was at college, where he lit most of the school's events. His interests were weighted towards the theatre and lighting more than academic interests. But Leon's family relates that his most notable academic lesson was learning Oaths Law after he blacked out his entire school by powering up too many lights at one event.

Starting out as a casual, who often hired equipment to light third party events, Leon then went on to make his initial equipment purchase.

It was then that his family assisted him in putting together a viable business, which was originally called Schusters Concert Lighting.

Leon is survived by his wife Donna and daughter Libby.



Kevin Borich fights cancer

On the eve of a benefit concert for Pete Wells, the 'Rock and roll outlaw' who is fighting prostate cancer, we learn that Kevin Borich is also in a grim battle. He has the rare and tricky Nasopharyngeal carcinoma cancer. It attacks the tube at the back of your nose.

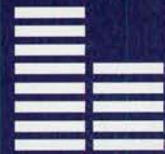
"I was given 6-8 months to live. I'm currently in my third of 7 weeks chemo and radiation treatment at Brisbane Royal hospital where I travel to each day. It's tough going but have been given an 85% cure rate which is great.

"Yoga and meditation is a huge part of my healing process, as is diet and supplements. All's going well.

Kevin featured in a Love report last issue, transpires he was in a haze at that time, having just been diagnosed. Let's pray for him.



Industry Exhibition & Conference



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ENTeCH

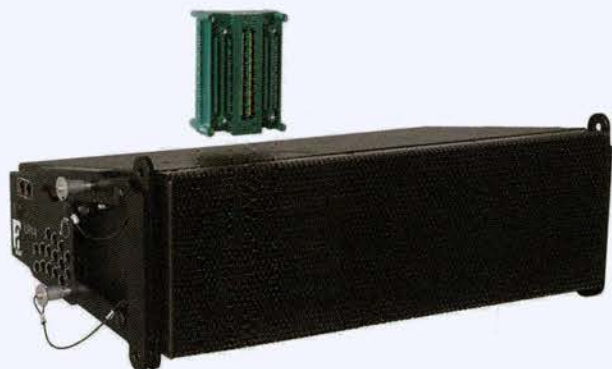
SYDNEY • AUSTRALIA

EXHIBITION & CONFERENCE

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SYDNEY CONVENTION & EXHIBITION CENTRE

NEWS



Australian theatrical debut for Alcons Audio

Loud and Clear Audio's newest sound system is the LR14 line array from Alcons Audio of the Netherlands. The system will debut at the Rockdale Musical Society's production of the musical, 'Rent'.

The system consists of the ultra compact LR14 module, which is comprised of 2 x 5.6 inch Neodymium LF drivers coupled with a 4 inch RBN401 pro ribbon HF transducer on a 'morpher' wave guide. This enables up to 94% frontal radiation and seamless 120 degree horizontal coverage due to the ribbon's a natural cylindrical (isophasic) wavefront. Its transient response and high peak power handling (800W/200mS) produces the desired intelligibility and throw, while offering maximum "gain-before-feedback", even directly under the array.

The production will also utilise the VR12 (12" and RBN601 6" ribbon) for band and cast foldback.

Alcons Audio is a new to the Sydney based Loud and Clear Audio, who specialise in providing sound for theatrical productions. Products in the Alcons Audio range include, modular line arrays, columnar line source array modules, and versatile 8 inch and 12 inch trapezoidal cabinets, all featuring Alcons Pro-Ribbon Technology HF transducers.



Unwired for sound at sound prices

Sennheiser are pitching what they say are new 'high-quality' wireless microphone systems at entry-level price points. There are three new systems that have been released under the 'freePORT' banner; they are Vocal, Instrument, and Presentation versions. All of the new freePORT systems have four switchable frequencies.

Sennheiser say that an installed dynamics processor provides the freePORT systems with better sound. All systems are fitted with XLR and jack plug outputs. They also feature an adjustable squelch to protect against interference. Sennheiser are also claiming a 10 hour life from the 9 volt battery.

The "vocal" system includes a hand-held transmitter with a dynamic capsule and a receiver.

The "Presentation" system is designed for maximum speech comprehensibility during lectures, presentations and theater performances. The "Instrument" system consists of a bodypack transmitter with a jack plug cable and a receiver and is suited for instruments with a jack plug socket.

10 year warranty for Redback

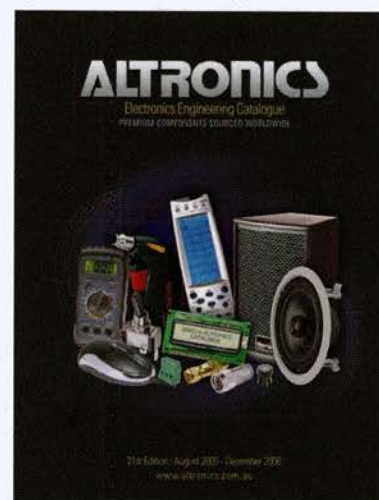
Altronics have reaffirmed their commitment to Australian manufacturing of amplifiers. Their Redback branded amplifiers are made in Perth, and the company has recently taken the decision not to relocate manufacturing offshore.

Manager Brian Sorensen told CX that the range had excellent export success, particularly into the Middle East.

"After evaluating the possibility we decided that though our Australian made product was going to be a little more expensive we could offer several key advantages over imported products. Customers can speak direct with the manufacturer. In the unlikely event of failure we can supply readily available service and spare parts. We listen to our customers and incorporate features and functions to suit the Australian market. And we are now able to provide a 10 year warranty."

300+ page catalogue (right)

• www.altronics.com.au



Clarifications from the last CX

THE PRODUCERS AND MEYER

Thanks for the nice words about our Sound Design for "The Producers" in the July/August edition of CX. I expect our friends at Meyer Sound would like me to point out, however, that "The Producers" is a dv-Disc free zone! The system comprises the similarly-sized Meyer M1D mini line arrays as the main system, UPJs for downfill, 700HP Subs, and the little MM4s and Apogee SSMs for Delays. A Cadac F-Type theatre console and BSS Soundwebcs drive the system.

Glad you enjoyed the show!

- Nick Reich
Co-Sound Designer
"The Producers" Australian Tour

HILLS BUY AUDIO TELEX

I would like to draw your attention to that fact that I too was a founding director of Audio Telex and like Rod Craig and Alan Clarke, I have been with the company since day #1 - 30 years ago next January.

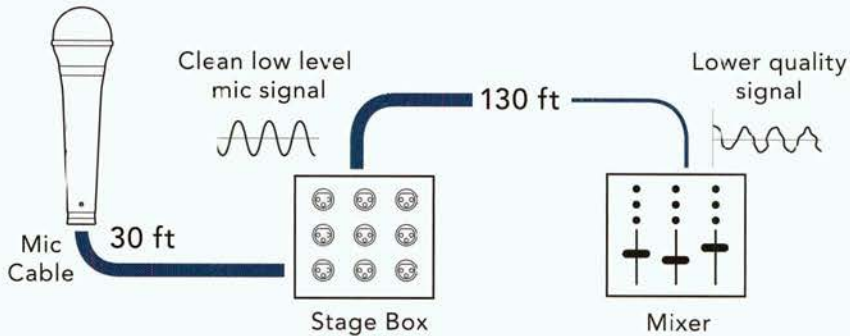
While both Alan and Rod formally 'retired' several years ago, both have continued to make a vital contribution to our success, in a consultative capacity. Rod is particular has to be credited with much of our success over the years and was still critically involved in the business right up until the day of the sale.

So, the impression you give that Audio Telex was sold because the founders were retired is far from the truth, but I do admit that the right offer did come along.

Thanks & Best Regards

- Roy Morgan - CEO
Audio Telex Communications Pty Ltd.

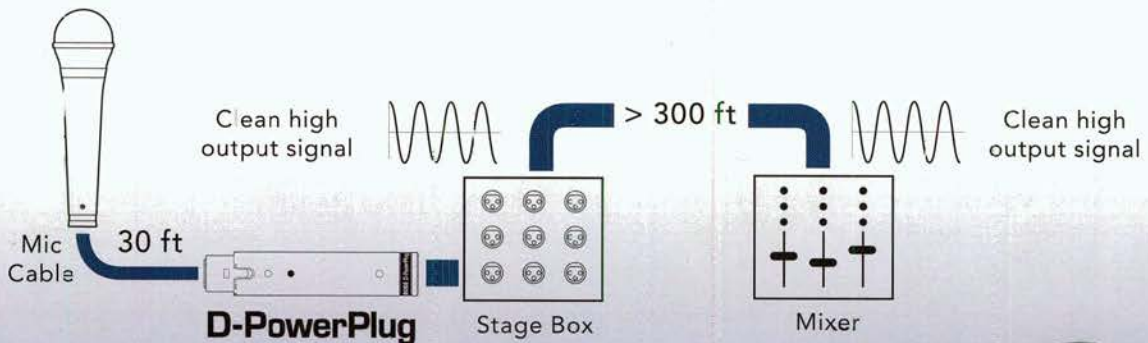
Turbocharge your mic!



Long cable runs can dramatically affect the purity of your sound.

Multicores of 130 ft. or longer are not uncommon in touring systems.

Every inch of cable adds resistance and capacitance resulting in reduced signal quality at the mixer. You are then faced with having to amplify that low quality signal, introducing unwanted noise.



The **D-PowerPlug** incorporates technology used in expensive active distribution systems. Featuring a precision instrumentation grade pre-amplifier, the **D-PowerPlug** will convert any dynamic microphone to a high level low-loss output.

This high level is capable of driving in excess of **300 ft.** of cable, providing improved signal quality and the added benefit of lower noise from your mixer!



D-PowerPlug

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RØDE
MICROPHONES



COMS AND YOU

By Matt the phone guy

About emails on the road...

First there was the phone connection. Some people in the entertainment biz made Tandy laptops work over phone lines using an acoustic coupler – a black thing that sat over a phone handset and squawked. Talk about slow! That was as early as 1991.

Then came the infrared or serial cable connection from your laptop to your mobile phone, at about 9600bps. A guy emailed me 5mb worth of Christmas party photos one year – try downloading that at mobile cost and speed! I was on holidays – I gave up, I couldn't check my work emails for the rest of the holiday.

The next thing was that Windows based PDAs (personal digital assistants) came along, and so did the Blackberry. A Windows based PDA / phone works like any Windows based device. You dial in, and check your emails. If your email has a large attachment, you wait for it to download. Like on your desktop.

Someone who is occasionally out of the office may prefer a Windows based PDA, since they can get their full attachments – things like Excel spreadsheets and PDF (portable document format) files.

At roughly the same time, the Blackberry came along. It is like a PDA, a small handheld device, usually with a little QWERTY keyboard that is like an enhanced SMS facility. It is a stand alone phone, so you go get it on a plan from Telstra or the other carriers.

I got mine about 18 months ago. It has reasonable PDA functionality, like appointments, notes and tasks. It will synchronise with Outlook. Blackberry comes with a cradle that hooks up, syncs, and charges via a USB connection to your computer or laptop.

It's easy to turn off the phone functionality, while flying for example, and still access the PDA functions—and compose emails..

On the road, you get emails as they happen, instead of looking for them. If you're busy, you don't think, "I haven't checked my emails!" If you buy a Blackberry outright, they start at about \$700. There are varied plans, depending on which provider you choose: Telstra, Optus, or Vodaphone. Originally only Telstra had Blackberry.

The newer models with Bluetooth are better for phone use. Until recently car kits weren't available, which was a major nuisance.

You pay around \$50 per month for unlimited emails; although Optus have a different plan based on downloads. You set it up so it looks at your POP emails – your email account. For an 'individual solution', you go into a web type portal that your provider supplies and you set it up. If you have a Hotmail or a Yahoo consumer styled webmail account, you can pay them a little more and option up to a POP type email account, so the Blackberry can hook in. It looks at the account, and pushes your emails out to the Blackberry. The email stays on your home account, so it's there when you get back to the desktop as well. One big Blackberry advantage: going through its own server, it modifies and strips down each email. PDF, Word, Excel, and PowerPoint documents are broken down into basic text, so you can see what it all says. The files are quite small. And the originals are still intact—duplicated—on your desktop email.

The enterprise solution: if you're a larger firm, you'd setup a Blackberry Enterprise server. Your Outlook appointments, contacts, calendar – all those things are updated on your Blackberry in virtual real time. So if your assistant changes or updates things, they happen on your Blackberry a few minutes later.

Blackberry coverage is the same as GPRS mobile phone coverage, and it is also available as CDMA. I'd probably buy CDMA now, but it wasn't available when I got mine.

My Blackberry is an original RIM (brand) unit. I've never managed to send the Lithium Iron battery flat in a day.

• Matt Smith is our telecommunications guru at the Lab, doing voice and data wizardry, plus a little automation and electrical background. He has his fingers in the entertainment pie, via PA and audio visual. Email matt.smith@adeptcomms.com.au

NEWS



Revolver buys more Soundcraft

Revolver Audio recently purchased the first Soundcraft GB8 console in Australia. The new release Soundcraft GB3 32 channel console was chosen primarily for its dual functionality: it can either be a FOH console or a monitor console.

"Its fantastic value for money, a quality desk at a great price with a lot of good features" commented Manager, Keith Clarkson (pictured).

"The dual functionality makes it a very flexible console for our hire department. We needed a new compact console, as we do a lot of van-size events. We now have ten Soundcraft consoles in our inventory."



Madzin takes Day 2 Night, expands rigs

Sydney's Madzin Productions has acquired the assets of Day 2 Night, the production company owned by Jason Cover. Jason has been a senior broadcast engineer at Ausereo for some time, and recently became a dad. The allure of Day 2 Night possibly faded for him. His business had similar clients to Madzin, and the two are friends.

This adds to Madzin's capabilities, which are already at arena levels. An example: the Classical Spectacular (pictured in setup, above) with the Melbourne Symphony Orchestra, using an Innovason 80ch Digital Console, Aviom Digital Multicore, 24 x EAW 730 Line arrays and an orchestra sized kit of Schertler Microphones – the new fave rave for complex classical work.

Frank Madzin runs a versatile production house, they have a solid client base across corporate work in Sydney and Melbourne.



DESIGNED FROM THE GROUND UP FOR SUPERIOR SOUND AND RELIABILITY.

Looking for premium live console performance without the premium price? Then you owe it to yourself to check out Mackie's Onyx 80 Series live sound consoles. Available in four distinct models, ranging from 24 to 48 channels, these all-new 8-bus consoles offer a level of performance and sound quality far beyond anything in their class... and then some.

Designed by people who actually mix live sound, the Onyx 80 Series features Mackie's acclaimed Onyx mic preamps on every channel, British-style Perkins EQ, 8 stereo-linkable Aux sends, a 10 x 2 Matrix Mixer, and no-compromise internal electronics—

yielding dynamic range and fidelity on par with esoteric, expensive consoles costing several times the price.

And because live sound is a tough business, Onyx 80 Series consoles employ a modular monocoque design, reinforced with beefy aluminum extrusions and strategically placed steel bulkheads. It's a design that will not bend or flex, no matter how tough your nightly gig.

Interested? Visit www.mackie.com/onyx80 to learn more about the Onyx 80 Series today.

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NEWS

Sony Australia's waiting game pays off for Anycast Station

Paul Maroni, from Sony Australia's Business Solutions Division, made a conscious decision not to release the AWS-G500 Anycast Station until he considered that it was a "stable useable product" that would be accepted into the discerning Australian market.

Now, with the Anycast Station drawing enormous interest at SMPTE 2005, and several sales resulting around Australia, it seems to have been an astute choice.

The Sony AWS-G500 Anycast Station is about the size of a laptop carry-case, and is designed for the production of live programming, including, staging, presentations and conferencing, and on-site product promotions and display advertising.

Because of Anycast's portability it is ideal for settings where equipment is stored between uses or where it is shared between multiple locations within a facility or organisation.

Maroni says that because of Anycast's streaming ability that sales have been across varied markets, including those providing real-time video of events across vast distances. Productions can be as simple as using "a couple of small Sony dome cameras, which can be controlled by the serial control protocol...which does full PTZ focus function with camera presets. If you have a rostrum set-up and a couple of other shots of the audience etc...you can preset those and recall them, and adjust them as well ...it's all done within the Anycast Station."

Anycast Station combines a six-input video switcher, a six stereo channel audio mixer, a special effects generator, a preview and program video monitor, and Pan/Tilt/Zoom remote control for Sony interface robotic cameras.

Other features include an RGB output for PC and projector display, an encoder and server to handle webcasting and streaming, text typing functionality and, in the near future, optional SDI I/O.

In addition to this multi-function capability, the Anycast Station can ingest diverse media of varying resolutions and formats, including live video feeds, pre-recorded tapes, PowerPoint presentations, DVDs, and still images. These disparate sources can be easily mixed into a presentation without the need for an external scaler.

"The Anycast Station is a breakthrough product that takes the trouble out of setup, freeing crews to focus on event content rather than event logistics," says Maroni, "Fast setup, advanced capabilities and simple operation make it practical for small crews to create a big show out of this little box."

Houses of worship can set up quickly to web-cast and archive a service, and academic institutions can bring advanced distance learning capabilities to any classroom or produce and archive outstanding events wherever they may occur on campus.

The Anycast Station system is also capable of multi-camera HDD ISO recording for tapeless A/V capture.

Maroni states, "Another thing that Anycast can do is ISO record all the inputs so you can actually re-purpose later on. So the idea is that whilst you are switching live you can parallel record each input onto a Firewire drive (i.LINK™ (IEEE 1394)—they use DV based recordings, so there is DV quality—and then hook those drives up to a PC to do a proper edit; you can also do a 'switch live'...It's an evolving product too, so down the track there'll be EDL export. Whilst you are switching, it creates an EDL. So you can then upload that EDL into a non-linear system, and then create an exact cut of what you have just switched on the non-linear platform."

The Anycast Station includes a video switcher with 16 wipe patterns, still picture import (TIFF, TGA, BMP and JPEG), DV program out from EDV I/O port, video input level adjust, fade to black, colour bar and matte, DSK, LOGO and luminance key.

The audio mixer features program/mix/auxiliary outputs, limiter/compressor, EQ, delay adjustment (0-7.5F), four-line intercom and test tone generator. The camera control operates up to six PTZ cameras and can capture high-quality stills as well as high-resolution, full-motion video.

Streaming features include a Real Video 9 encoder with a broad range of bit rates, operated by a menu-driven GUI interface.

The Anycast Station can also be customised and expanded by adding various optional modules, with prices based on individual configurations.

List price of the Anycast Station in Australia is around \$25,000 ex GST.



Ian Woodhouse joins TAG

Audio industry 'old boy' Ian Woodhouse has joined Technical Audio Group in Sydney. Ian fought off a bad prostate cancer, and won. Along the way he battled to keep his audio distribution company, Audio Sales and Marketing, afloat and viable. This wasn't possible in the end, and then the decision was taken to fold ASM into TAG. No one can fight illness and run a business indefinitely.

It's a good fit, since TAG has less strength in the areas that ASM were working, notably bread and butter audio contracting products. Also making the move to TAG is ASM's Cameron Dunn.



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Yamaha have got you covered in all areas of installed sound systems. From digital mixing consoles, system processing, and digital audio networking to amplification and speaker systems, Yamaha has the components to build a complete solution. And because it's Yamaha, you can be assured of receiving the highest level of sound quality and reliability that is essential to modern sound systems. Yamaha - complete digital audio solutions.



YAMAHA

commercial audio

NEWS



Campbelltown Arts Centre

Jands and The P.A. People were recently contracted to supply and install the audio, lighting, staging and video systems for the new Campbelltown Arts Centre, which opened on 30th June 2005.

The \$10 million state-of-the-art facility features a 180-seat performance studio, a large outdoor amphitheatre with seating for 2000, a café, new workshop areas and exhibition spaces.

The performance studio is a basic black box theatre with retractable seating and it is used for a wide variety of events.

"They needed a cost-effective solution that would provide them with a quality, cinema-style replay," said P.A. People's Ken Dodds.

"We've installed a good, multi-purpose audio system comprising of three JBL AC2212/95 speakers, hung in a centre-left-right configuration, with a JBL ASB 6118 sub. These are driven by Crown XS amplifiers and processed by a dbx Zonepro 1261."

Two JBL EON10G2 speakers are used for foldback as well as doubling as portable systems elsewhere within the venue.

The AV system features two modes of operation and this is done via a third party control system through the dbx 1261. In performance mode the audio is controlled by a Soundcraft LX7ii mixing desk giving the user complete control over the system. In simple mode the user has a touch panel control of two microphones and the system's AV and replay components.

The venue also relies on Jands equipment for lighting, which includes ETC Source 4s controlled by a Jands Stage 24 and FP12 dimmers. A simple Clear-Com communications system has also been installed into the venue. Jands also supplied a full complement of staging equipment including drapes and projection screens.

Ethernet Remote Controlled Amplifiers

Ashly Audio, Inc. has announced the introduction of the PE-Series (Protea Enabled) remote controlled amplifiers.

PE-Series amplifiers are high-power, high-efficiency, lightweight amplifiers incorporating the latest in power and control technologies. Each amplifier can be controlled and monitored through the built-in Ethernet port using Proteane Software.

Proteane gives users access to many features, including: input attenuation, channel mute, channel polarity, input level, output voltage, output current, clipping, temperature, and power on/off.

The E00, 1200, 1E00, 2400, 3000 and 3800 are low impedance amplifiers ranging in power from 400 watts to 1900 watts per channel at 4 ohms (20Hz-20kHz, 0.05% THD). All models will drive 2, 4 or 8 ohm loads. All amplifiers are 2RU, weigh just over 9 kilos and utilise high speed switched mode power supply.

Additionally, DC voltage control of the input level and remote power on/off are standard features. Input connections are via XLR-1/4" Neutrik combo connectors and 6-pin Euroblock. XLR male connectors are also provided for looping to additional amplifiers. Output connectors are locking Neutrik Speakon and 4 position screw terminal strip with safety cover. • www.syntec.com.au

NEWS FLASH:

This affects the future layout of these pages. At CX we are compelled to adopt this.....

The European Commission has just announced an agreement whereby English will be the official language of the European Union rather than German, which was the other possibility.

As part of the negotiations, the British Government conceded that English spelling had some room for improvement and has accepted a 5- year phase-in plan that would become known as "Euro-English"

PAY CAREFUL ATTENTION....

In the first year, "s" will replace the soft "c". Certainly, this will make the civil servants jump with joy.

The hard "c" will be dropped in favour of "k". This should clear up confusion, and keyboards can have one less letter.

There will be growing public enthusiasm in the second year when the troublesome "ph" will be replaced with "f". This will make words like fotograf 20% shorter.

In the 3rd year, public acceptance of the new spelling can be expected to reach the stage where more complicated changes are possible.

Governments will encourage the removal of double letters which have always been a deterrent to accurate spelling.

Also, all will agree that the horrors of the silent "e" in the language is disgraceful and it should go away.

By the 4th year people will be receptive to steps such as replacing "th" with "z" and "w" with "v".

During the fifth year, the unnecessary "o" can be dropped from words containing "ou" and after the sixth year, we will have a really sensible written style.

There will be no more trouble or difficulties and everyone will find it easy to understand each other. The dream of a united world will finally come true.

And after the sixth year, we will all be speaking German like they wanted in the first place.

NEWS



SMPTE excels

Every 2 years the broadcast industry gathers in Sydney for the SMPTE conference and tradeshow. This year the tone was upbeat as convergence has taken hold.

Two whole halls at Darling Harbour were sold out, the trade show was at its most commercially successful. A far cry from our incorrect predictions two years ago that this show was headed downhill. We were wrong.

What seems to be happening is that digital everything has driven broadcast and content providers to seek new solutions. The big picture dollars may not be growing exponentially, but Pod casting, digital hand TV, digital radio, and the need to get more content are real.

Sony, Ambeo, Techtel and Magnatech spend up big at SMPTE, and another 100 plus exhibitors all throw big resources at the four day event.

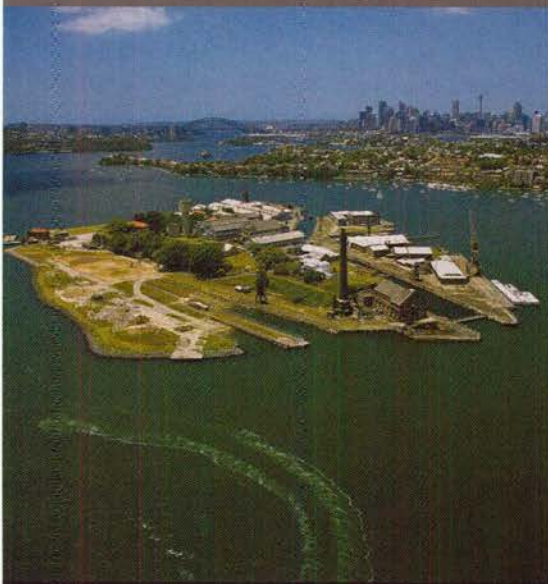
There were plenty of audio and lighting exhibitors on hand too, DiGiCo boss Bob Doyle was on hand at the Group Technologies stand to promote the D5 and the D1 consoles.

The new Smart console (left) drew interest, along with a lot of questions. The demo was very interesting.

Digidesign had a very large stand, showing the Live console and everything else in their catalogue.



UNIQUE LEASING OPPORTUNITIES

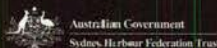


Be part of the future of Cockatoo Island

Call for Expressions of Interest

Cockatoo Island is the largest island in Sydney Harbour. A former convict prison and shipbuilding yard, this historic site is undergoing a major transformation.

Large and small businesses, maritime interests, service providers, institutions, cultural bodies, community groups and individuals are invited to consider the advantages of leasing premises and facilities on Cockatoo Island.



For more information, visit www.harbourtrust.gov.au or call 8969 2100. Applications close 14 October 2005.

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NEWS



New Tannoys released

At this year's SMPTE Show, Syntec International presented two new ranges of studio monitors from Tannoy, Reveal and Precision. Within each of the ranges there are options for passive or active versions with varying cabinet and driver sizes enabling a precise choice to be made to satisfy the user requirements for all listening environments and applications.

Reveal has been around since the mid '90s with thousands in use throughout professional and home studios. The latest Reveals offer improved cabinet designs and enhanced acoustic specification. There's a range of models that have WideBand performance (HF frequency up to 51kHz) and active versions with a comprehensive calibrated EQ facility for optimising mid / near / close field monitoring in full / half / quarter and eighth space environments. Balanced analogue inputs are provided on all Reveal active models allowing either XLR or 3 way jack plugs.

Additionally, Reveal D active versions will accept a standard SPDIF digital input, retaining the signal in the digital domain.

The new Precision range combines the latest Tannoy Dual Concentric driver and WideBand Technology to deliver near field monitoring speaker designs that have paid particular attention to acoustic performance and accuracy. Tannoy claim superior bandwidth, significantly low levels of distortion, very smooth response, extremely accurate phase control and high sensitivity levels with the new range.

The Precision D active versions feature a comprehensive calibrated EQ facility for mid / near / close field working in full / half / quarter and eighth space environments, midband and high frequency trim shelving controls. There is a choice of power and cabinet sizes, input source flexibility, analogue and digital input trim facilities.

Tannoy engineers have researched ways of dealing effectively with the acoustic effects of mid, near and close field listening distances, in order to compensate for the relative size and distance of the acoustic source and resultant spherical / plane wave dilemmas. Additionally, the effect of boundaries near a monitor speaker, such as walls, support tables and mixing console surfaces can change the air load on the low frequency cone piston and consequently the radiating efficiency in the 100Hz to 800Hz region.

DIP switches on the rear control panel of the Reveal D and Precision D Active monitors allow the selection of an optimum speaker response for real life and often difficult monitoring situations so that the frequency response at the listener's ears is always as linear and flat as possible.

Tannoy's new Active D monitors can therefore be optimised for varying listening distances in difficult acoustic spaces; varying meter bridge positions, against and adjacent to walls or reflecting surfaces, in corners, in corners on shelves or brackets, table top / space restricted PC/Mac based sound editing environments and stand mounted or soffit mounted configurations.



Audio Technica moves to TAG

One of the world's largest microphone/headphone manufacturers, Audio-Technica has appointed TAG as their exclusive distributor for the Australian professional audio market.

The change in distribution comes as part of Audio-Technica's strategy to increase its market share globally.

'Audio-Technica manufactures one of the most comprehensive microphone/headphone product ranges available today,' said Mr Shinji Horibe Audio-Technica's Sales Representative for Asia. 'Our focus currently is on developing all sectors of the market and we have made a number of distribution changes internationally to achieve this. In Australia TAG is our ideal partner as it is very active in all market areas and has strong customer and service support.'

Used exclusively for the last three Olympics, including the Sydney 2000 Games, Audio-Technica's range extends from the well recognised Artist Elite hand held microphones to five levels of wireless plus specialist microphones and headphones for numerous recording, live sound reinforcement, conference, broadcast and audio acquisition applications in between.

Celebrating its 40th Anniversary in 2002 Audio-Technica started from humble beginnings making turntable cartridges. The company grew rapidly until the early 1980's when the CD became commercially available. The consequent decline in cartridge sales triggered a switch to microphones and headphones. The rest, as they say, is history.'

Commenting on the move, TAG's Sales Director Stephen Eray said, 'This is one of the most significant days in our history. We are extremely honored to have a company of Audio-Technica's standing endorse TAG in this way. In return, expect some interesting developments in the Australian microphone/headphone business.'

GL SERIES

Meet the next generation...

We're proud to present the new GL Series – 4 dual-function live-sound mixers boasting all the features and quality you'd expect from a company with a 35-year professional audio pedigree.

Built for modern engineering techniques, every detail in these uniquely capable consoles has been carefully designed to provide the very best mixing experience possible:

- superior dual functionality • 10 axes on all mixers except GL2400 • 3rd master fader comprehensive matrix
- new ultra-quiet mix amp for extended dynamic range.

...Innovation comes of age

To learn more about the superb new GL Series, visit www.glsite.com today.



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www.TAG.com.au



ALLEN & HEATH

PH: (02) 9519 0900 - Email: info@tag.com.au



NEWS



Shure debut new UHF-R wireless system

Shure's new UHF-R wireless system is a new premium wireless solution which seems to do just about everything. CX tested the system at presstime, shown the ropes by Jands product guru Jeff MacKenzie (pictured below). The system comes as a dual receiver which is networkable. You can, in theory, get up to 48 channels running. In the old world, to get 48 channels running you needed to spread over 3 different bands - or frequency ranges. This system spans 74 megahertz, between 740 and 814 megahertz.

The benefit is that there is one system, and you can buy it 48 times, and in theory operate 48 different channels - provided nothing external gets in your way.

The software package which comes with the product includes an RF spectrum analyser and scanner, which locates existing usage and aids the operator with the cleanest options. Your laptop will do the scan, via one of the receivers. All receivers are networked via standard ethernet cabling and a standard hub. You can introduce a wireless hub, to remote your laptop or your tablet PC.

At the point of completion of the analysis on software, you choose a setup from the options give, and the system is thus configured across its network. Meaning, all the receivers are allocated their appropriate channels.

There is a new range of UHF-R microphones and belt packs are not backward compatible with previous Shure products.

Your transmitter has infra red communications with the receiver. You hold it in front of the receiver that you wish to sync with, and push a button. This allocates the mic to the receiver of choice.

UHF-R features Shure's new ARC - Audio Reference Companion - which is variable according to signal level, rather than fixed, as in older systems. This improves the

audio dynamic range and behaviour at low levels. The new companion is the main reason the system is not backward compatible.

The new "wireless workbench" software package includes a frequency compatibility calculator, this is not limited to Shure products. If you have the frequency details of other systems, you can input this data and make calculations relating to combining systems. The software package will be available as a free download from www.shure.com

Each receiver has a headphone out, controls are available on the front panel of the receiver or on your laptop.

The price range for the system is about + 30% greater than the current U Series. Release is anticipated as you read this.

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2005 Helpmann Awards

Australian entertainment's night of nights:
And the winner...didn't show up.

By Brian Coleman

Best International Contemporary Concert

Bette Midler 'Kiss My Brass' Tour
Gary Van Egmond, Michael Chugg
and Jack Utsick

Best Australian Contemporary Concert

Kura Tungar: Songs from the River
(Ruby Hunter & Archie Roach)
Melbourne International Arts
Festival, Adelaide Festival Centre,
Sydney Opera House and Australian
Art Orchestra

Best Contemporary Music Festival

The 16th Annual East Coast
International Blues & Roots Music
Festival
Michael Chugg Entertainment,
Definitive Events and TalentWorks

Best Performance in an Australian Contemporary Concert

Kate Miller-Heidke
Women in Voice 14
QPAC in Association with
Queensland Folk Federation Inc. and
Annie Peterson

We attended this year's Helpmann Awards, which were held at Star City's Lyric Theatre in Sydney on Monday 8th August.

The awards annually recognise creative achievement in Australia in a wide array of live performing arts, including musical theatre, contemporary music, opera, classical music, dance, physical theatre, and festivals. The Helpmann Awards also are the venue for the presentation of the annual James Cassius Award, named in honour of James Cassius (JC) Williamson, the renowned Australian theatre owner and promoter: this year the award was presented jointly to Dame Joan Sutherland, OM, AC, DBE, and playwright, David Williamson.

Cate Blanchett, Barry Crocker, Michael Chugg, David Williamson, and Brian Cadd, were amongst celebrities who graced the red carpet at the awards ceremony.

AEIA (Australian Entertainment Industry of

Australia) hosts these awards, which were inaugurated only as recently as 2001 with the principal objective to "nationally and internationally serve and promote Australian live performing arts..."

The awards are intended to emulate New York's Tony Awards, and London's Oliver Awards.

Unfortunately there were a number of pregnant pauses during the 2005 presentation, caused by absenteeism, which created embarrassing silences throughout the audience. Bemused presenters awkwardly accepted awards on behalf of winners who were either the brunt of some giant administrative hiccup, or simply didn't arrange for proxy recipients—or even more unbelievably, didn't bother (or weren't told) to inform AEIA of their non attendance.

Where to exit the stage after receiving an award also seemed to be a task that proved to be quite difficult on the evening. The Lyric had stairs leading to the stage on both Prompt and



Chuggi arrives with a glam



Helpmann's Sound Designer Nick Reich

Best Ballet or Dance Work

Shen Wei Dance Arts
Sydney Festival in Association with
Sydney Opera House

Best Visual or Physical Theatre Production

Compagnie Philippe Genty Vanishing
Point
Arts Projects Australia

Best Choreography in a Ballet or Dance Work

Stephen Baynes
Unspoken Dialogues (Southern
Lights)
The Australian Ballet

Best Male Dancer in a Ballet or Dance Work

Steven Heathcote
Unspoken Dialogues (Southern
Lights)

Best Female Dancer in a Ballet or Dance Work

Justine Summers
Unspoken Dialogues (Southern
Lights)

Best Musical

The Producers – The New Mel
Brooks Musical
SEL & GFO and Bialystock & Bloom
New York Co.

Best Play

The Sapphires
Melbourne Theatre Company

Best Direction of a Musical

Susan Stroman
The Producers – The New Mel
Brooks Musical

Best Direction of a Play

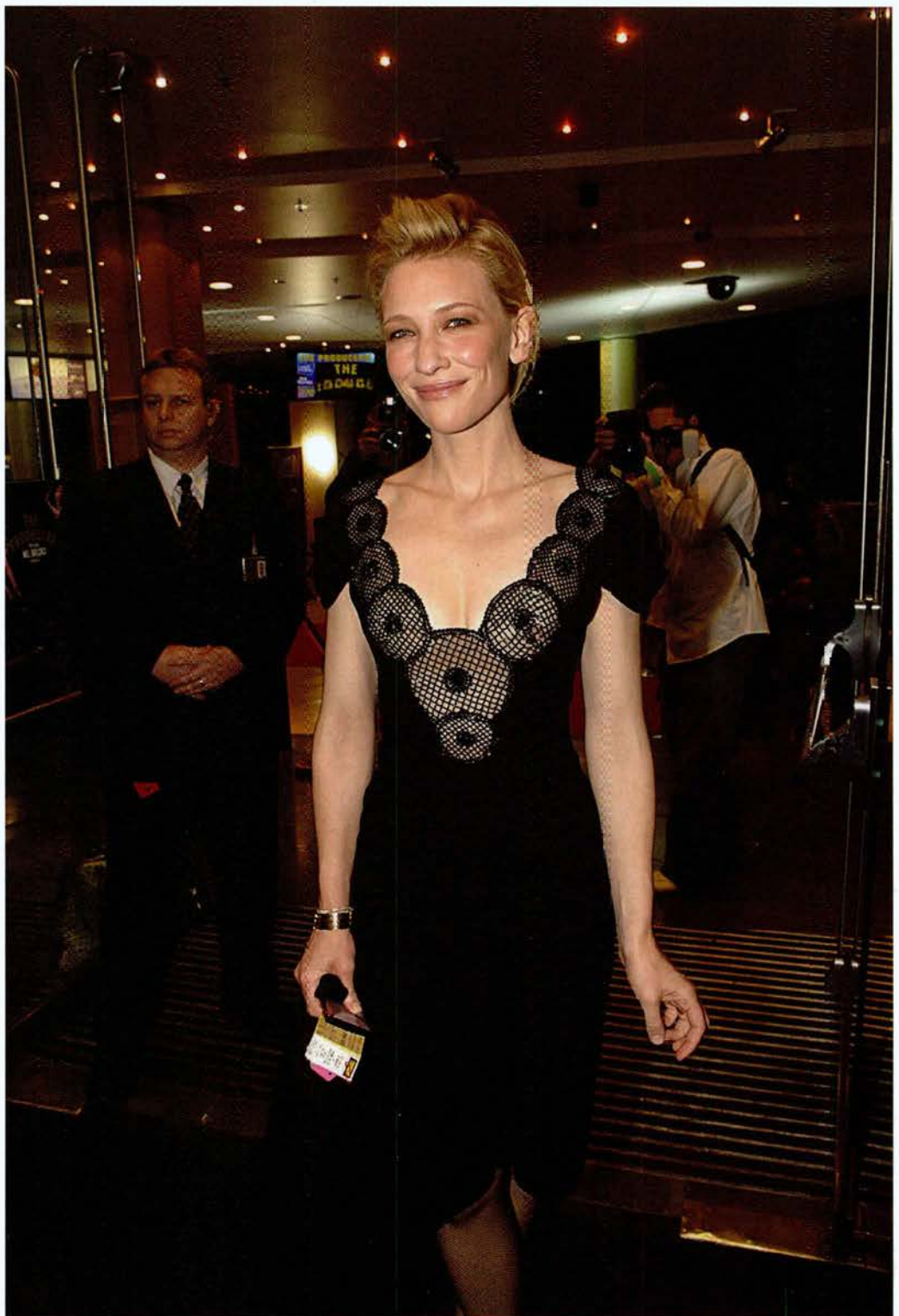
Jim Sharman
Three Furies
Sydney Festival in Association with
the Adelaide Festival of Arts, Perth
International Arts Festival, Griffin
Theatre Company and Sydney Opera
House. Produced by Performing
Lines

Best Choreography in a Musical

Susan Stroman
The Producers – The New Mel
Brooks Musical

Best Male Actor in a Musical

Mitchell Butel
The Venetian Twins
Queensland Theatre Company in
Association with QPAC and Energex
Brisbane Festival



Best Female Actor in a Play, Cate Blanchett arrives.

OP sidas, with presenters alternating between lecterns on either side. The trek up onto the stage went quite smoothly, but there was mass confusion surrounding the descent, even though there were minders assigned to escort the award acceptors to an exit immediately to the side of the stage that the award was presented on.

But recipient after recipient didn't seem to want to go that way—instead, attempting to drag down the stairs they had just ascended.

Watching personnel who literally live on the stage, unable to remember where the previous recipients had exited was quite intriguing; and watching the minders constantly chasing them down the stairs dragging them back up to the pre-arranged side exits created quite a bit of sniggering from the bleachers. Past images of audio engineers accepting prestigious industry audio awards at the ENTECH



Maria Varuti and guest

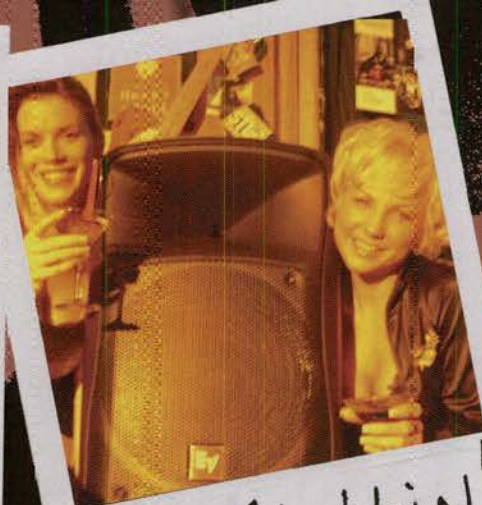
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Breaking News: (13 Sept 2005) EV ZX4 speaker boxes are reported missing from the MN warehouse. Telex Communications have sent out a special team to locate the missing ZX4s. The spokesman of Telex commented on the incident: "We'll make every effort to find those boxes. There is no question that ZX4s will be found on time for our Australia dealer Apac Audio." Apac Audio are anxiously waiting for the ZX4s for a special campaign by Christmas. "Details on that will be released soon" said the spokesman of Apac Audio.

HELPMANN



Best Female Actor in a Musical

Chlöe Dallimore
The Producers – The New Mel Brooks
Musical

Best Male Actor in a Play

Robert Menzies
Journal of the Plague Year
Malthouse Theatre

Best Female Actor in a Play

Cate Blanchett
Hedda Gabler
Sydney Theatre Company

Best Male Actor in a Supporting Role in a Musical

Tony Sheldon
The Producers – The New Mel Brooks
Musical

Best Female Actor in a Supporting Role in a Musical

Amanda Muggleton
Eureka
Simon Gallaher and Michael Harvey

Best Male Actor in a Supporting Role in a Play

Anthony Weigh
Hedda Gabler

Best Female Actor in a Supporting Role in a Play

Zoe Carides
Influence
Sydney Theatre Company

Best Opera

The Ring Cycle
State Opera of South Australia

Best Classical Concert Presentation

12 Angry Cellos
Sydney Festival

Best Direction of an Opera

Elke Neidhardt
The Ring Cycle

awards whilst bellowing their acceptances point blank down sensitive electret lectern microphones gushed back.

Apart from the 'stage stair follies' there wasn't any excess of humour on the night. Presenter Simon Burke had a running gag about the Prime Minister sending his apologies for not turning up, and imaginary live crosses via cellphone to guests at John Laws' 70th birthday party, which was being held concurrently at another venue, didn't really send 'em reeling in the aisles. And Burke's opening review of a prisoner trapped in his cell whilst he was supposed to be at the Helpmann awards (discounting the analogous Shapelle Corby gag, which took a dive) seemed a bit dated to me; a bit unfunny; a bit Noel Cowardish—but alas, it seems I was alone in my critique as the audience loved it; and him.

There was a lot of talk about being Australian, and the Australian industry, and Australian patronage, but the audience mostly warmed to the mere mentions of the nominated imported works, whilst some wholly Australian shows extracted only murmurs and token applause.

The State Opera of South Australia's The Ring Cycle took out 10 awards from 11 nominations, whilst The Producers, the Mel Brooks musical, which had received 12 nominations, reeled in five, including Best Musical.

Best Male Actor in a Play went to Robert Menzies for his performance in the Malthouse Theatre's production of Journal of the Plague Year; Max Lyandvert also won Best Sound for that play. Cate Blanchett won Best Female Actor in a Play for her performance in Ibsen's Hedda Gabler.

Best Play went to The Melbourne Theatre Company's, The Sapphires,

Natalie Bassingthwaight



Lorraine Bayly



David and Krisin Willamsen



Laah Purcell

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Best Male Performer in an Opera

John Wegner
The Ring Cycle

Best Female Performer in an Opera

Lisa Gasteen
The Ring Cycle

Best Male Performer in a Supporting Role in an Opera

Stuart Skelton
The Ring Cycle

Best Female Performer in a Supporting Role in an Opera

Deborah Fiedel
The Ring Cycle

Best Performance in a Classical Concert

Simone Young
Simone Young Conducts Mahler (St John of God Health Care Masters)
West Australian Symphony Orchestra

Best New Australian Work

Tony Briggs
The Sapphires

Best Special Event

The Ring Cycle

Best Presentation for Children

Riverland
Windmill Performing Arts

Best Original Score

Tom Waits
The Black Rider
Sydney Festival in Association with International Concert Attractions and Andrew Kay & Associates

Best Music Direction

Asher Fisch
The Ring Cycle

Best Costume Design

Stephen Curtis
The Ring Cycle

Best Scenic Design

Michael Scott-Mitchell
The Ring Cycle

Best Lighting Design

Matt Scott
Urinetown the Musical
Melbourne Theatre Company

Best Sound Design

Max Lyandvert
Journal of the Plague Year

which also won Best New Australian work award.

The Australian Ballet won three Helpmanns for Stephen Baynes' Unspoken Dialogues.

Best International Contemporary Concert went to the Bette Midler "Kiss My Brass" Tour.

Mainstream live children's productions failed to gain any nominations—testament to the fact that the large television backed acts are performing what works best rather than what is best performance for children. Recipient of the award was Riverland, the WNCMI Performing Arts presentation, which dared to include narration in its production—try finding good storytelling in mainstream Australian children's productions.

There's also a lesson to be learned by artistic newcomers at awards such as these about treading the red carpet: If you're not absolutely sure that the shutter bugs are going to go nuts about shooting you, it's best to do the walk a little later with the rest of the hot polloi. I can't imagine anything more stinging than seeing flash jockeys turning away whilst you parade down the red carpet in the ceathy silence and dim light of non-clicking, non-flashing cameras. The longest walk of your life?

One thing that rang home at the Helpmanns was



how nice everybody was—especially to the media—both AEA, and Publicist. I think Johnson should take a bow for that. In fact, in the media scrum I'd expected to be treated quite a bit rougher by the mass of photographers who dominated the perimeter of the red carpet. But I only got shouldered out of the action, or caught the odd elbow in the ribs a couple of times; a bit of a let-down.

I sat in the last row near Sound Designer Nick Reich, who was actually nominated for Best Sound Design. Here was the guy who did the sound design on the Producers. I was really batting for Nick to win because I knew that he had a long walk to the stage, and, as an old FOH soundman from the '80s, I could have jumped on the mix to help him out during his absence. I thought I could really impress Nick by ripping some high mids into vocal y impressions rumbling out the sub, and, of course, giving the room some 'large hall' echo. However, Best Sound Design went to Max Lyandvert for Journal of the Plague Year. So I guess, in a way, we were denied. •

Shelly Lee

Top right: The Boys from Channel 5's The Alice

Top left: Simon and Maggie in That Item. Send us the punchline...

Below: Barry Crocker with Katie Manning



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Curtain comes down on the old Q. Enter the new!

Is the demolition of Penrith's Q Theatre, Sydney the untimely demise of a historically significant theatrical venue? And can the new Q, housed in the formidable Joan Sutherland Performing Arts Centre, deliver founder Doreen Warburton's original concept of 'theatre for the masses'? Brian Coleman reports.

Now is indeed the winter of discontent for Penrith's Railway Street Theatre Company—now that Sydney's Q Theatre, Railway Street, Penrith, is being demolished. Cue the wrecking ball. The Q is dead, along with the theatre group's name.

Long live the Q, the new Q Theatre, which has now been annexed (in the form of grand new extensions), to the Joan Sutherland Performing Arts Centre, High Street Penrith. And since Railway Street is no longer relevant, the company, which was a merger in 1998 between the Q Theatre Company and New England Theatre Company, will again be known as The Q Theatre Company.

The original Q Theatre, founded in 1963 by Doreen Warburton, had been a lunch-hour theatre in the AMP Theatreette at Circular Quay, Sydney—thus the 'Q'. Warburton, who had studied in London under rebel British theatrical director, Joan Littlewood (Oh What a Lovely War) then brought her troupe, and her aspirations of delivering theatre to the masses, to Penrith. Warburton originally asked Penrith Council for \$20,000 but was turned down; she was however, given use of the former Railway Institute Building in Railway Street in 1977, which was refurbished to accommodate 120 seats, with funds of only \$7,500 (refurbished again in 1983 to accommodate 273 seats).

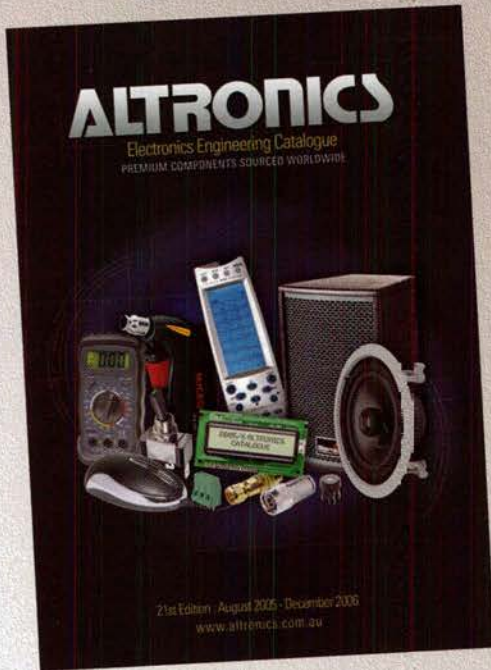
Warburton's first production was Lionel Bart's, *Lock Up Your Daughters*, which was rehearsed and presented in eight weeks.

Many acclaimed artists passed through the Q during its 28 year dynasty. Judy Davis spent her first year out of NIDA (National Institute of Dramatic Art), 1978, (prior to her performance in *My Brilliant Career*) at the Q; and Toni Collette, who grew up in Mount Druitt, had her first professional theatre engagement at the Q.

David Hollywood, General Manager, Railway Street



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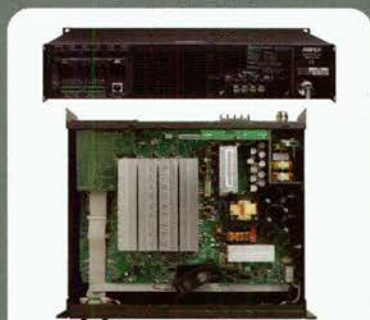
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Theatre Company, said that there was a combination of factors that determined the decision to close the Q. "The theatre itself would have needed a makeover at some point to bring it up to speed," says Hollywood.

It is evident that there is a lot of current development in Penrith; testament to this is the enormous growth of the Penrith Plaza so as to accommodate the sharp rise in population growth. Hollywood says "When that theatre (the Q) was first created, it was really serving a country town...and (now) the land is very valuable. It kind of made sense—that if we were going to develop the Q, or take it to the next level—to bring it together with the Joan Sutherland Performing Arts Centre, because the two organisations share resources; it's easier to manage; and I think that the concept was to develop a fully fledged performing arts centre. The 'Joan Sutherland' is very well known for its music programme, its classical music tradition, also for training a lot of musicians. By bringing a theater there you actually are bringing the performing arts into one centre, which is a good idea."

The official opening date of the new Q Theatre is September 3, but the production, Somewhere, a show "all about Penrith" that has been specially commissioned by the Q Theatre Company, will be the first production listed at the box office in October 2005.

Heritage Value

Whilst the Q Theatre Company will live on, housed in the Joan Sutherland Performing Arts Centre, what of the heritage value of the Railway Street Theatre itself? Aren't even some fibro houses being heritage listed these days?

Hollywood says, "The Heritage assessment on the old Q determined that the building itself was of little heritage value because of the modifications that have occurred over time. Its heritage value is in its use, and that use as a theatre is what's worth preserving; but that use has now been transferred to a new venue. So in terms of heritage the true value of that place is still being maintained by the provision of a professional theatre. A lot of people are very sad about the end of that building...about the closing of the building, even people that used to play pool there (at the Railway Institute), before it was a theatre. So there are sentimental attachments to that building."

New Venue

Hollywood says that the Theatre Company is very excited about the new premises. "We think they've created a very beautiful space for performance that's quite unique, so we're excited to be moving in that direction...The idea of the Q is still going on. Because the building is being demolished doesn't mean that 'theatre' is being demolished."

Hollywood says that the Railway Street Theatre Company (soon to be renamed), is the professional theatre company at the Q that tours NSW regularly. And there are alliances with other theatres. "The main thing that we all have in common," says Hollywood "is that we're trying to bring theatre to ordinary people. We're putting theatre into the suburbs, into the places were people are living."

I asked Hollywood what Australian submissions were considered for presentation:

"We have an artistic advisory panel that meets annually to talk about the programme. We also bring in the best that is available on the touring circuit, so next year we'll be bringing Bell Shakespeare (The Bell Shakespeare Company is Australia's only national touring Shakespeare theatre company), and Belvior Street, here, which is important for this region—to have access to that calibre of work. But our funding really only extends to the point where we can produce 2-3 shows (annually) ourselves. We also run a lot of workshops; we do a lot of outreach programmes."

Patronage

Regarding patronage, Hollywood says, "I'd be lying if I said it was amazing...I think theatre, film... almost every level of artistic activity in this country at the

moment is under threat. There are a lot of reasons for it: the political climate...I think in the suburbs particularly the social infrastructure is being very overwhelmed by commercial interests."

"You can see it in Penrith, physically manifesting in the scale of the Plaza...the message that's going out is that this is the core of life; this is the essential experience that you need, and I believe that it's an imbalance. I think that at the moment people are very caught up in the whirlwind of a culture that's celebrating celebrity, and instant gratification, and theatre doesn't offer that. Theatre is something that you go into, and... it can be challenging...it can be mentally demanding; it demands a different kind of activity between the audience and the product, whereas film, particularly American film, hands it to you on a platter."

Hollywood thinks that people today are reluctant to go out: "People don't want to be with other people anymore... (laughs), or that's what it seems like; people only want to be with their own kind."

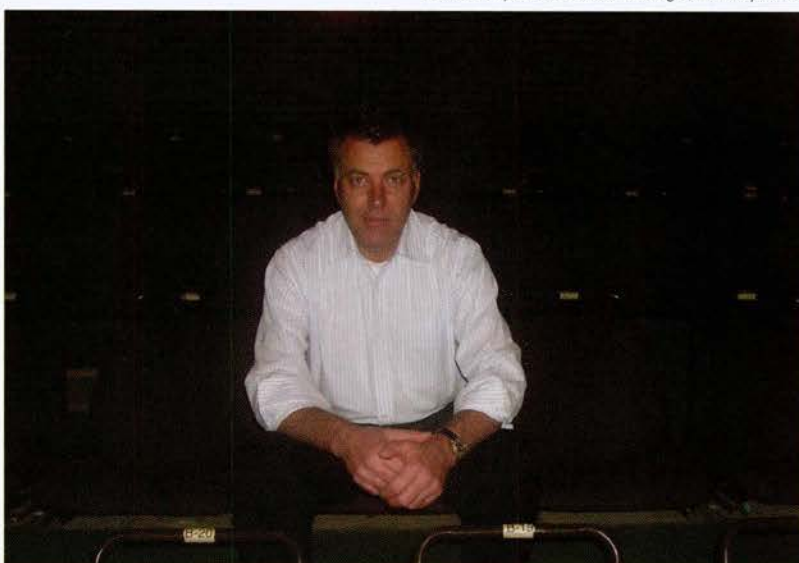
Hollywood also thinks that it's impossible to be able to match the level of marketing that is being pumped into 'mega entertainment'; he says, "We almost become inauthentic, like we're not a valuable experience because nobody's screaming it from the rooftops—so people need to be led, and people are looking to be convinced by big media advertising, which we can't match. But there are core people that care, and there are core people that when they discover theatre, they love it. It's a battle, but I think it's been a battle probably since the late '70s—from the economic rationalist period onwards—and not just in Australia—although it's particularly hard in Australia because artistic practice was only just starting to get off the ground in the '70s, and to be really valued. But it's been gradually whittled away—and that applies also to film, and dance.

But there does seem to be some subliminal conjecture here: Bringing "theatre to the masses", in some circles, might also mean bringing new opportunities to new and contemporary writers and artists; but bringing Shakespeare, and an artistic advisory panel's recommendations of 2-3 productions per year, does seem to limit local creative opportunities.

This may well be because of budgetary constraints, but could be a contributing factor to a shrinking theatre patronage. Bringing theatre to the masses in the current climate of cultural despair could be as simple as appointing astute script assessors, and encouraging and delivering Australian productions that could garner patronage through extolled word-of-mouth marketing.

Hopefully, moving the Q from its former seemingly proletariat location in Railway Street, into the erudite environment of the Joan Sutherland Performing Arts Centre, won't discourage disciples similar to its founder's mentor, Joan Littlewood, who was often penniless, and who, in fact, was the illegitimate daughter of a servant girl. •

David Hollywood, General Manager, Railway Street





CX gets a Macca attack

Legendary Australian radio talent, Ian MacRae's popularity soared in the UK in the '60s during London's pirate radio days. He then reigned for 18 years in both Sydney and Adelaide as the undisputed king of breakfast comedy radio. Brian Coleman profiles Macca - who joins the writing team at CX.

Sifting through the ashes of time lays bare the reality that it wasn't so long ago that morning radio in Australia was about as much fun as weekend detention. Ashes to ashes fun to funny, morning shows now make big money—but where did it all start, this procession of zany comic talent that has permeated the morning air waves for the past 35 years? Does it kick-start our mundane lives as we emerge zombie-like from our beds looking like Philip Ruddock on Serapax?

Well, firstly, if you haven't experienced how mind numbingly boring and unfunny breakfast broadcasts can be, just tune in to any one of today's morning television shows; try Seven's Sunrise. But let's not dwell there too long; let's go back; way back to 1969, when Melbourne born, former UK pirate radio announcer, Ian MacRae, joined Sydney's 2SM, and became Australia's first radio announcer to mix music with a committed comedy breakfast radio show—comedy that started with a few bogus telephone calls, building to some of the most absurd stunts that delighted Sydney and Adelaide audiences for a mam-

moth 18-year-reign of breakfast radio mayhem.

Mayhem of a different kind had formerly visited MacRae in London when in February 1966 he joined Radio City, a pirate radio station housed in the disused Shivering Sands Fort, which had been erected outside territorial waters to 'protect' England in past war years. MacRae quickly gained popularity with his programme, "Monstrous Macca's Music Show", and also legendary comedy show, the "Aunty Mabel Hour", with fellow pirate radio announcer, Alan Clark.

But it was at Radio City that a boarding party of armed rivals for a week in June 1966 held MacRae and fellow crew members hostage.

MacRae was the first announcer back on air after the raiders had departed, but subsequent events after the siege culminated in the tragic murder of the station's owner, Reg Calvert.



Macca's Midgets. Try doing THIS now!

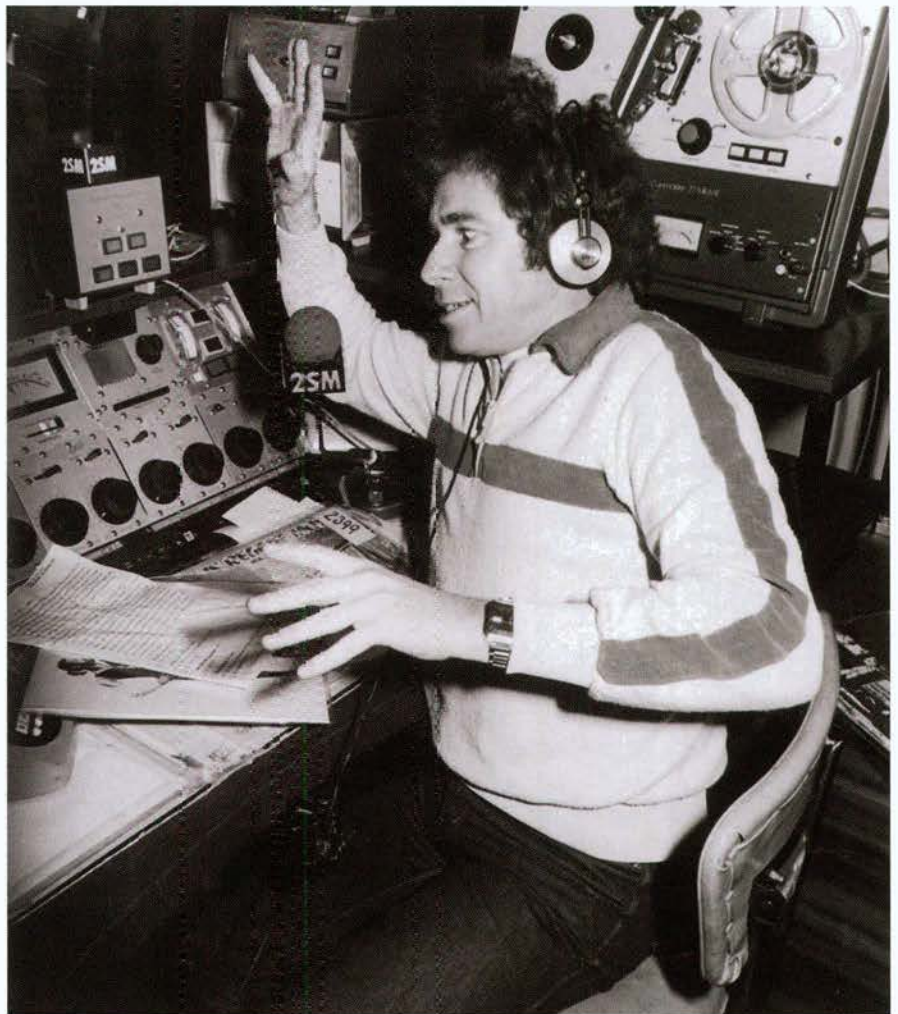
When considering the modern gains fought for at the time, which are now enjoyed by groups such as The Civil Rights Movement, The Women's Liberation Movement and the Gay and Lesbian rights movement, few stop to consider how much MacRae furthered the cause of the humble chicken

Determined to close Radio City, the British Government authorised the Navy to swim a frogman out at low tide to an exposed sand bar, where he planted the union jack, claiming the territory for the crown. Gad, what a day for England!

Radio City was closed down in 1967 but MacRae decided to fight on: He moved to pirate radio station, Radio Caroline, broadcasting from the passenger and cargo motorship, MV Frederica, the first 'anchored' vessel to broadcast pirate radio to the British mainland.

Ultimately, a British parliamentary Bill, which virtually banned the supply of goods and services to pirate radio stations, spelled the end, and MacRae returned to Australia, landing in Perth for a 9 month stint with a local station. But after those heady days of British pirate radio, Perth was "not all that rocking," says MacRae, who headed for Sydney, arriving at 2SM, which was then owned by the Catholic Church.

At 2SM MacRae had to follow the station's 'middle of the road' (MOR) music format, but campaigned heavily for a 'Top 40' format—which he won, together with the morning



breakfast show.

Comedy soon began to drive MacRae's breakfast show, and when he sought out and interviewed the Hon Nick Jones, an eccentric pseudo politician, who had actually started his

own many political party, it heralded that breakfast radio was about to change—forever.

From that interview grew an alliance, not only in writing stunts for the radio show, but a serious political alliance, which saw MacRae and the Hon Nick actually run on a Federal Senate ticket, promising, amongst other things: to build a piggery in Mosman (a plush Sydney suburb), and to declare war on Antarctica.

Their slogan: "Put a stinker in the Chamber." In the truest of ironies, and such was their popularity at the time, the voting result almost delivered them to Canberra. This wasn't the first time, however, that the Hon Nick had upset some of Australia's humourless politicians and bureaucrats, as he had previously gained a pardon from the Queen of England for unpaid parking fines.

When considering the modern gains fought for at the time, which are now enjoyed by groups such as The Civil Rights Movement, The Women's Liberation Movement and the Gay and Lesbian rights movement, few stop to consider how much MacRae furthered the cause of the humble chicken.

In fact chickens featured heavily in MacRae's radio career; his '70s 'Save The Chook' campaign even came close to rescuing the comestible critters from the clutches of KFC franchises — one of which, after a daring morning robbery, was



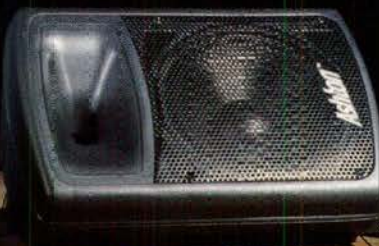
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Macca's radio daze

the venue for a live cross by MacRae who interviewed a cackling chicken who "saw the whole thing."

Cackling chickens were regularly heard during the madcap morning shows — sceptics suggest that not all of the cacophony of cackling may have been actually 'live' in the studio — but no so the chickens that MacRae released into on-air studios on two previous occasions, at two separate radio stations: 3AW and 3CS, during his radio announcing apprenticeship — firstly scattering chicken feed around the studio to augment the frenzy — during someone else's programme, of course.

It was at 3AW in Melbourne that MacRae started his radio career, as an office boy, record librarian and panel operator. The only 'window of opportunity' that MacRae had at 3AW to air his favourite music was when given the one hour test programme from 5-6am on Sunday mornings, wherein he played the 'grunniest' rock 'n' roll' of the time. When I asked Macca how long it took for 3AW to wake up to this, he coyly replied, "About six months."

The radio stunts at 2SM got more and more bizarre; for instance, a swimming marathon, where a swimmer was to swim from Sydney to Adelaide—actually in the back of a truck that was filled with water. But the motion of the truck caused a turbulence that battered the swimmer against the sides of the truck so much that the attempt had to be called off. Another stunt fooled listeners into placing their telephones in plastic bags, because Telecom (now Telstra) was planning to "blow all the dust out of their lines".

MacRae's most notorious (but not funniest) stunt was the 'Jumbo under the Sydney Harbour Bridge' hoax. MacRae and 2SM promised that they would put a 'Jumbo' under the Sydney Harbour Bridge. Yes, you guessed it, but thousands of Sydney-siders who lined the harbour foreshores didn't.

The stunt, which virtually stopped Sydney, did in fact turn out to be a petrified pachyderm decorated in British Airways paraphernalia, floating on a barge, adorned by female flight attendants.

Steve Liebman, who was 2SM's morning news reader at the time, described the event: "It is eight o'clock, and this is Steve Liebman...and I don't think that I have ever seen a sight

more absurd than an elephant on a barge going under the Sydney Harbour Bridge...at this very minute...with a British Airways sign draped over its rump, and a British Airways captain and a Qantas 'hostie', surrounded by a flotilla of boats."

MacRae was decried at the time as a "rat and a fink", but accepted those accolades with great humility.

MacRae's 2SM breakfast show reigned for thirteen years. And MacRae was the king.

Turning the pages of MacRae's scrapbook creates a bittersweet longing for all things past and preposterous—like the Mister Puniverse Competition, which rose to international notoriety, with the Australian Featherweight Champion Mister Puniverse challenging an English waif for world male anorexic supremacy.

In the late '70s MacRae moved to 5KA in Adelaide. "I went for one year, and stayed for

five," recalls MacRae, "The first year was pretty rocky, because when you go to a new market like that, and especially a small city, they (the listeners) are very parochial. You have to know the town, the football teams, and you have to know the personalities, who's in the news, and who they are. It took me a year to get it."



MacRae with long time collaborator, The Hon Nick Jones



Macca's radio daze



But MacRae had a producer who liked comedy and especially appreciated Macca's repertoire of stunts. So it all started again.

Soon a team of midgets called Macca's Midgets were performing strange and wonderful deeds all over the city. MacRae was either the first, or one of the first, to promote 'Dwarf Throwing', which had an enormous

political and ethical backlash at the time—but MacRae still today sees nothing wrong with it: "Fancy banning Dwarf Throwing? He remonstrates. "The Midgets loved it; it gave them real employment and even celebrity status—what employment is there for them now?"

And then there was Punjak, a gorrilla at the city zoo; he actually supplied the weekend footy tips for the listeners. MacRae insists, "We'd put plates of food in front of him, each labelled with the name of a football team, and Punjak would pick one of the teams." In fact Punjak actually came in third amongst the city's football picking experts.

Then there was the Adelaide Bullfighting promotion, where the station had placed bogus ads in the newspapers, one for "an aggressive bull" and another for "a bull fighter, no experience necessary, but willing to learn." Doctored photographs even appeared in the newspapers of misty figures training in the Adelaide Hills for the contentious event—an event that ran as the lead story on national television, and was even debated on the floor of Parliament in Canberra. The misty figures were actually MacRae and fellow hoaxers dressed as matadors. MacRae guffaws, "We couldn't find a bull so we got an old cowboy that was willing to cooperate."

The Bullfighting story got too hot to handle so the station was forced to announce it as a hoax—but a hoax that coincided with Adelaide hosting the first Grand Prix, which 5KA were very ready to say that they were actually promoting—and they were forgiven. Mean-



while the station rocketed to number one in the ratings.

As recently as last year, MacRae, whilst broadcasting on Radio 2 in Sydney's west, would often feature live crosses to a fictitious club called, Club Imperial, where, none other than the Hon Nick Jones headed up a team, which presented the occasional live cock-fight—of course they had to come in via satellite from the Philippines—cock-fighting being illegal in Australia. But as chickens were often heard cackling in the background during the crosses to Club Imperial, one might even speculate that the cockfights may have been staged 'out the back' to save on satellite costs.

MacRae doesn't live in the past. These days he only keeps minimal numbers of chickens in his apartment, and is very active in the industry, running the Ian MacRae Radio School, broadcasting, and writing for the broadcasting industry. He joins CX Magazine at a very exciting time of converging technologies — a time when radio is going digital, and home recordings can be turned into podcasts, opening doors for a whole new generation of broadcasters.

• Macca's new column is on page 54.

Author's footnote:

As insignificant as it may be, I first met Ian MacRae in 1969, during my tenure as a pimply faced, NRMA, Junior Insurance Clerk at 151 Clarence St Sydney, where I attended him at the insurance counter, processing his motor vehicle insurance application. I remember the vehicle as a Volkswagen Beetle, but MacRae recalls it as a much more elaborate tin lizzie. MacRae listed his occupation as "Radio Announcer", and his place of occupation as 2SM, Sydney, on the proposal form; this sent a buzz around the mundane NRMA offices (after all, it was the '60s), the like of which was not seen again—until the following week when Thorpie came in to insure a bloody Ferrari or something.

That's Billy Thorpe - not Ian Thorpe!



Macca's short lived TV show, The Zoo.



C2 has THE rock church

C2 sits like an attractive enigma on Silverwater road in Sydney's central west. It looks like an industrial estate, because it is one, as it has a convention centre, church and a bunch of tenants within. The complex was carved out of an industrial building, and now has a cafe, gym, and a bunch of non church related commercial enterprises as tenants.

The church is called Christiancity CentreWest, and it was born out of Christian City, the Pentecostal movement headed by Phil Pringle, and headquartered at Oxford Falls in Sydney's beach type north. Neil Earl is the visionary and the pastor who devised the C2 concept.

Inside, the auditorium can seat 1000. Technical guy Jason Sage (right) worked alongside the commissioning team to get the systems working. Much of it came semi new or second hand, including the Yamaha DM 2000 mixing console and the Dynacord Cobra line array.

Jason credits Tony Hystek from Action Sound, a Sydney based production and sales company who have cemented a good reputation over the years. Jason says Tony will go the extra mile to source devices and solutions, and he is not profit driven like a lot of outlets. "They bend over backwards - and they are community type of people, who will help you".

Jason also credits freelance lighting guy Greg Yates who helped get the lights sorted. They comprise a variety of cans and Miniscans, driven by a Jands Event 416.

Lights can move, and lights can include haze, but Jason has discovered these aspects can be unpopular with a church audience. Now he uses them sparingly, as a special effect.

Church runs on similar lines to many others, except that the music is right up there, in a tight band format. The musical director is Paula Sage, a talented emerging



Christian artist and also Jason's wife.

She leads a band made up of acoustic guitar, electric guitar, bass, drum kit and her keyboard and vocals - with 4 backing vocals.

Playing mostly originals, the music impacts quite hard, and is very nicely mixed by Jason or his proxy. It rocks. It looks and sounds great!

Jason is slowly building a team, which is hard when the church numbers are still growing at present. They face the same challenge as any emerging church - building a following. If Paula released a CD, extra people would get the message!

Pastor Neil, pictured at right with Paula Sage, is a dynamic and energetic leader who has done an enormous job creating a considerably large and well equipped enterprise that is designed to mesh the secular community with the church.

The church is located at 108 Silverwater road

• Check it: Sunday 10.30 and 6pm.



Hillsong over full

July is Hillsong Conference month, and this years conference overfilled all venues at Homebush Bay, resulting in a logistical problem with planning next years event. The nightly rallies were held in the Superdome, where 2 rallies were held each night to cope with the numbers.

Conference registrations topped 25,000, while many more attended the night rallies.

There were literally hundreds of conference sessions, held across a range of venues. The Technical Production stream followed the theme of the rest of the conference, and boasted yet more people attending sessions.

These ranged from Greg Yates and David Watson talking about the art of special effects, through to a session on in-ear monitors, held in spooky semi silence as 70 people listened through headphones.

The traditional 'meet the production team' session (at right) featured a weary team answering curveball questions from a mainly out of town audience. A big, spirit filled, success.





16

Powered Speakers

TESTED!

WE TOOK THEM INTO THE CX LAB AND RAN THEM HARD. THE SIMPLE ENTRY CRITERIA: RETAIL PRICE BETWEEN \$1000 AND \$2500. THEN, NO HOLDS BARRED...

Ever since Bose released the 802 and EV released the S100 plastic speaker box in ...umm... 1982 or nearabouts, the incredible useability of a molded speaker box took off and went into orbit.

There is plastic, and then there was, is and always will be, timber. Timber seems to sound better, or so we tell ourselves. Plastic melts, but timber burns. Both materials get skuffed, both materials will break.

What's really set the plastic speaker box on a winning trajectory is the advent of the powered loudspeaker, where almost everything happens inside the box.

Our test covered anything with an amplifier inside that carried a retail price of between \$1000 and \$2500 at the time of test. If a box was priced at \$999, then it wasn't included.

Because we used price as a criteria, we have a variety of configuration sizes. The smallest

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The contenders

- JBL EON 15 G2
- DE TECH OPERA 415
- RCF ART312A
- RCF ART322A
- RCF ART310A
- MACKIE SA1521
- MACKIE SRM450
- MACKIE SRM350
- FBT J12BA
- FBT J12RA
- FBT MAX4A
- FBT MAX2A
- DAS DS115A
- DAS DS112A
- DAS DS108A
- YAMAHA MSR400

configuration: 8" woofer and 1" high frequency device, and the largest was a 15" woofer with a 1.75" – but counting big high frequency drivers, we had one box with a 12" woofer and a 2" high end.

All up, the line up looked like this:
 4 x 15" and horn boxes, ranging from \$1595 to \$2245
 8 x 12" and horn boxes, ranging from \$1095 to \$2495
 3 x 10" and horn boxes, ranging from \$1295 to \$1595
 1 x 8" and horn box costing \$1610

All but one of these boxes was made from glorious plastic, the one exception was the Mackie SA 1521, which is a wooden box more suited to installations and production hire.

Most of the plastic boxes have a lay down wedge option where you can lie the box on its side. Some were more suitable than others in this mode. Some were plainly not intended to be used this way. Our photos tell this story. The JEL EON has a different format, which results in the profile being too bulky when used in wedge mode. They have been formatting these enclosures this way for a good five years or more, and this hasn't hurt their market share.

First impressions: some of these

puppies have been to Jenny Craig in a major way. A couple of 12" and horn boxes are under 20kg, one of the 15" and horn boxes is 20kg. Only one box was over 25kg – which is pretty impressive for powered boxes.

Weight is a Big Thing in this market area, the Mackie 1521 really does provide the counterpoint. Powered speakers all once were heavy weights!

Out of the box: feature sets have expanded some



16 speakers

what too, with connectivity the big one. Most boxes can accept a microphone as well as line, these really are portable stand alone PA systems. The FBT Maxx units have a virtual channel strip on the back of them, while the JBL EON has 3 inputs. The DAS 108 has a mic input and a line input, while the dB Opera 415 has an optional slot for a radio mic. These have all come a long way from the first powered boxes which had an XLR input and a power switch.

Not one of these boxes had a locking power connector like a Neutrik Poweron – they all rely on the jug plug, and the good nature of punters not to pull the jug plug out!

THE LISTENING TEST

People buy products like these based on features, price, and how they sound. This part of our test deals with the latter. The listeners



	Manufacturer	Model	Our test	LF driver	HF driver	Weight (quoted)	RRP
8"	DAS	DS108A	95dB	8	1	16	\$1610
	MACKIE	SRM350	100dB	10	1	14.5	\$1295
10"	RCF	ART310A	102dB	10	1	12.4	\$1595
	FBT	MAX2A	104dB	10	1	13	\$1595
	YAMAHA	MSR400	110dB	12	1.75	23	\$1095
12"	FBT	J12RA	105dB	12	1	16	\$1395
	MACKIE	SRM450	110dB	12	1.75	23.2	\$1695
	FBT	J12BA	105dB	12	1	18.5	\$1795
	RCF	ART312A	108dB	12	1	19	\$1995
	DAS	DS112A	102dB	12	1	19.7	\$2000
	FBT	MAX4A	110dB	12	1	16	\$2095
	RCF	ART322A	104dB	12	2	23	\$2495
15"	DB TECH	OPERA 415	108dB	15	1	20	\$1595
	JBL	EON 15 G2	110dB	15	1.75	21	\$1899
	DAS	DS115A	105dB	15	1.5	22	\$2100
	MACKIE	SA1521	116dB	15	1.75	45.8	\$2245

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did not know what the price of each box was.

At Juliusmedia campus we are blessed with many willing helpers, so our pro team of Andy Mackenzie, Julius Grafton and Rob Zimola were joined by Jenz, Andrew, Trev, Matt and Brendan who are all in the final throes of their Advanced Diploma course – specializing in live audio.

We decided to reference the fantastic plastic array against a Tannoy Elipse 8 studio monitor from our studio. We set the boxes up on speaker stands, since this is how the designer intended for them to be heard. Unless they are used as a stage monitor – the secondary design objective.

At the time of testing we still had the large and interesting Digidesign D show live digital concert mixing solution on hand. We sent a signal to each box, which was gain matched using pink noise, so that when listening to each box, the same absolute spl was being presented to us – the listeners.

Because there were 16 boxes, we decided to do them 8 at a time.

The listening test: we ran a selection of tracks through each box, and spoke to the box with a Shure SM 58 microphone. Each reference pass was also sent to the Tannoy. This process was



repeated with long and short passes, followed by a longer pass through the Tannoy. The musical passages included a guitar and vocal track; a voice and piano; a dance track; Jazz big band; and some hard rock.

Each listener was ranking the listening experience, making comments about each box. The students were only told that what they were listening for, was what made a difference



16 speakers

between each box and the Tannoy. The mature ears were listening for more.

With 8 x 16 opinions (a total of 128), some consolidation is needed!

We allowed for the fact that horn loaded boxes tend to sound a little harsh up close, compared to a studio box like the Tannoy.

These are the consensus opinions:

JBL EON 15 G2: Pretty smooth overall, noticeable strength in vocal range out without noticeable coloration to deliver this. Lacked linearity.

DB TECH OPERA 415: Overall pretty good, little harsh in the high mids.

RCF ART312A: Natural even sound, crisp smooth vocal tones, slight sibilance, solid bass but no real low bass.

RCF ART322A: Very similar to the 312, but with more presence.

RCF ART310A: Quite high highs, slightly weak in mid ranges.

MACKIE SA1521: Big and dark, lots of low frequency, lacked definition and lacked mids



Using these guys as stage monitor wedges was mainly a no brainer. You need to be standing where you can see all the way down the high frequency throat. The big wooden Mackie (centre, left) is a trapezoidal box that isn't designed for wedge duties. The little 8" DAS (front, right) is also not intended to lie down. The JBL EON is the 'really different' player of the bunch, designed to 'stand up'. Makes it a little high profile for our taste, but plenty of people use it this way without bother.



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Mackie SRM450: Slightly unbalanced mid, sounded like a little missing low mid and high mid. Hollow in the bottom end.

Mackie SRM350: Nice top end colour, punchy low mid.

FBT J12BA: Slight lump in hi mid, lows were strong but low mids lacked definition.

FBT JI2RA: Quite glassy and again a little weak in the low mids.

FBT MAX4A: Harsh and cutting at highs, lows a bit wooly.

FBT MAX2A: Bit weak in the lows, but bright and clear, a little strong in the high mids.

DAS DS115A: Harsh, nasal, limited highs and lows.

DAS DS112A: Very similar.

DAS DS108A: Sibillant, weak bass and low mids.

YAMAHA MSR400: Bright but otherwise accurate, strong tight lows.



Five of the eight testers were Juliusmedia technical production students. Meet Jenz, Brendan, Matt and Matt. Missing from picture: Andrew. As detailed in the story, the 'mature' ears were Rob Zimola, Andrew Mackenzie, and Julius Grafton. The speakers were tested on speaker stands, 8 at a time. Something we didn't test was the point of destruction. Our 'A weighted' dB measurement (from 4 metres away) was at the point where a warning light (any warning light) came on, which is usually well short of serious limiting. Each box has a different policy regarding when the 'limit' or 'peak' light comes on. It can be some point well under where anything starts to limit, or protection circuits start to happen. A real fun test is where you just keep pushing gain at the thing, until something catches fire or breaks. The sound becomes very untogether usually well before the breaking point.

THE POWER

We didn't note the maximum SPL from the



16 speakers

considerably greater than our reading. One must always ask: how did they measure their claimed SPL? Some manufacturers do go to the trouble of claiming a measurement criteria. Others just throw up a number. After all, there is no noise police. No consumer protection authority anywhere on the planet has ever been remotely interested in checking pro audio manufacturer claims.

SPL is sound pressure level, and in theory, this shows how loud they go.

We validated this item using our own unique testing format, which involved ear protection and a lot of noise. We tested SPL at the point where the limiter or peak LED starts to light up. The LED may be set to show one or more dB less than the actual clip point we just looked for the first light. What this means is that the box MAY go louder without any problem or without excessive distortion. The good news is that at this level, all the boxes still sounded OK.

All EQ settings were flat, as in not happening. We took the measurements at the console, with all speakers 4 metres away from the measurement point.

We used music, not pink noise. The measurement was 'A weighted'. This is where the frequency response is tailored to be similar to the ear. Using music was a real world choice.

There were no real surprises from our test, except that the big Mackie wooden guy was indeed loud! As rated.

This negates all talk about amplifiers and watts. Whether one box has a 200 w woofer amp and a 100 w high amp, and another quotes 300 + 200 w, the issue is relative loudness. This is more about speaker efficiency than amplifier power. 3dB more efficiency in the speaker equals twice as much amp power.

CONCLUSIONS

- Sweetest sounding where these two 10" boxes: MACKIE SRM350 and RCF ART310A.
- Best value was the Yamaha YAMAHA MSR400, at less than \$1100 for a loud 12" and horn with plenty of bottom end.
- Power to weight: This is where FBT shine. They have simply less weight, for more relative power. Some smart electronics in there.....
- DAS need to do some work on the electronic voicing - as in the sound. The firm do make excellent components, and many people have good things to say about their passive speakers, and indeed their larger boxes are well regarded. But these DAS price points are needing some work too. Fix the sound, drop the price, and rejoin the race.

What will you buy? This article will help guide you.

- By Julius Grafton, with help from Briar Coleman, Rob Zirrola and Andy Mackenzie.







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Live 8 sets new standards

Written by Sarah James at Gasoline Media

Twenty years ago Sir Bob Geldorf staged the Live Aid concert in London's Hyde Park to help raise money for victims of the famine in Ethiopia. Geldorf (pictured at right), who often looks like

he's just climbed out of a Kombi Van at a rest-stop, again adopted his 'won't go away' approach to stage the July 2, 2005 event, Live8, to help persuade eight key heads of state involved in the G8 Conference to aid in ending hunger on the African continent. Hyde Park acted as the 'centre-stage' for the event, which was concurrently staged around the world.

Staging

The actual staging in London's Hyde Park was done by Roger Barrett from Star Event's Group, who revived the '60s staging trend of 'back-to-back' bands. Fast changeovers were enacted thanks to a revolving stage from the

Revolving Stage Company, which was inset into the 25m wide by 20m deep Live 8 stage and split into two, so bands could set up backstage whilst an act was playing out front.



All of the on-stage video screens were rigged so that they could be lifted and/or tracked out of the way for equipment to pass beneath. The complex rigging and tracking systems were installed by Star Rigging, supervised by Director, Phil Broad.

Beneath the stage floor there was enough space for band techs and their equipment; this sub-way area comprised inter-connecting corridors accessed from the backstage area and was a hub of activity throughout the show.

"Something we had to bear in mind was that the all stages at the Live 8 shows across the world had to have a common theme, to make them instantly identifiable with each other," said Barrett. "We worked very closely with designer Peter Bingemann, who used the CAD drawings for our stage to produce a very workable design. This was then sent to all the other staging contractors for the other Live

8 shows so they could replicate the London stage image. Peter was a real pleasure to work with and the scenic elements he commissioned fitted perfectly first time when we craned them into position.

"This is the biggest logistics challenge we've ever had," says Barrett.

"And the changing specifications made it more tricky. It took a lot of planning and it worked very well.

According to Barrett, Star Events had never come anywhere close to putting this much equipment in one place.

Although careful planning saw the logistics taken care of, the physical amount of equipment required still stretched the company. "It was a bit of a tall order," says Barrett. "We had three stages out with REM at the same time, plus a new summer series in the moat of the Tower of London, the B-Live festival on Clapham Common, plus being in build for two of the 'summer nights' concerts for Clear Channel. But everything went exactly to plan."

Sound

PA for Live 8 consisted of 200 Electrovoice X-Line loudspeaker cabinets, powered by EV's Precision Series P3000RL remote controlled amplifiers. Six towers of EV X-Line, also powered by EV's Precision Series P3000RL, were used as delays with additional L Acoustic V DOSC towers providing complete audience coverage. The system, which was supplied by Britannia Row Productions, was operated by 25 sound engineers and 18 technicians.

Software programme, IRIS (Intelligent Remote Integrated Supervision), remotely controlled the amplifiers for the FOH.

Stage monitors were Turbosound TFM-450 wedges, with Turbosound

Flashlight side fills, and Turbosound TQ-440/TQ-425 drum fills, powered by Pulse amplifiers. Several computers were used to control and monitor the loudspeakers over three kilometres of signal cable.

FOH was serviced by three DiGiCo D5 Live digital mixing consoles, with a further three D5s for foldback. One console was used at FOH for prepping, with two at the main mix position; the same scenario was used for the foldback.

Preparation was the key. Prior to show day, rehearsals took place at studios across London for some of the performing artists: Sir Paul McCartney, Madonna, Dido, Elton

John, Annie Lennox, Robbie Williams, Scissor Sisters, and Pink Floyd.

"During the week leading up to load in, myself and Amanda Thomson from Brit Row programmed the bands' sessions onto the DiGiCos as they came in," explains Robbie Williams' FOH engineer Dave Bracey. "This saved time and confusion when the engineers turned up on site." This was facilitated by backup from the DiGiCo team.

Outboard FX per console included a TC Electronics M6000, two Yamaha Spx990 effects units and a couple of tube compressors. A Midas H3000 was at FOH for VT and announcer's playback. A ternate mix positions were used to allow for the incredibly short turn around time between bands.

The event engaged over 500 Sennheiser microphones and there was over 3,000 metres of microphone cable used. Sennheiser also provided the in ear monitors, as well as a team of technical staff to assist the PA crew.

Apparently there was a quite calm backstage where things were done quietly, with no panic or shouting.

Crew Catering:

10,000 rashers of bacon, 12,000 sausages, 18,000 eggs and over 900 kilos of cheese !!

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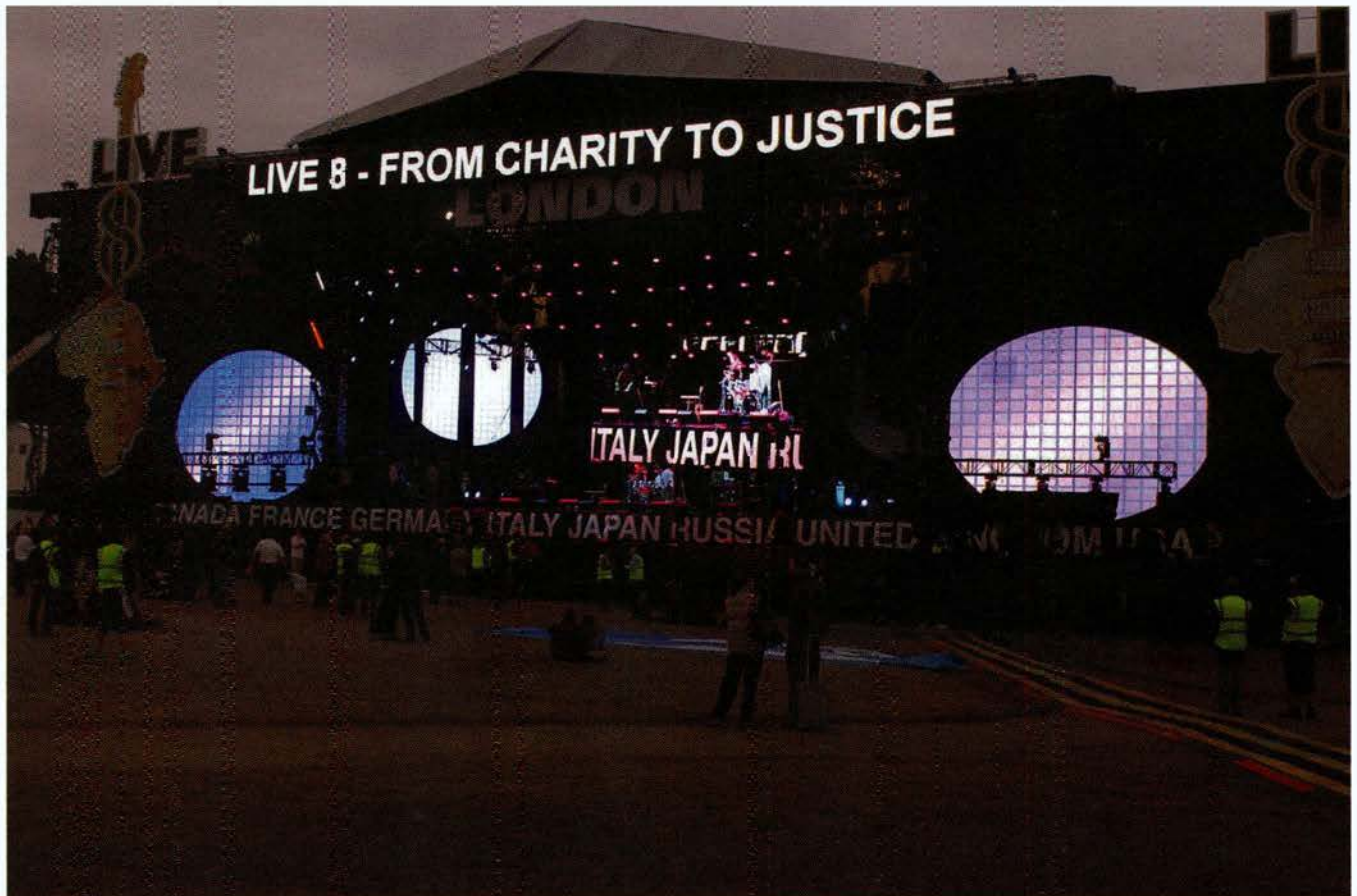
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Acoustic specialists Capita Symonds work closely with Royal Parks in the preparation and development of a noise control strategy. Symond's John Staunton was on site during both rehearsal and show day. "Bryan Grant like Love and their crew, especially Jock and Richard have done a terrific job this year at Hyde Park," he comments. "There were the highest noise levels we've ever had inside the site, with the corresponding lowest levels outside. They've done a really good job of keeping the audience happy and the residents of Marylebone and Park Lane happy as well."

"I have to say, I have never felt so proud to be a part of a team in my life, and not just ours," concludes Grant. "In a few hours, these people turned a site and a system around that would normally have taken a week to construct; and that's while coping with bands rehearsing on and off site and waiting for structures from the previous event to be dismantled before they could even begin to build delay towers!"

"The cooperation between these people and all the elements of production and site made the thing work. Everyone, including the promoters, the visiting production managers and engineers, set designers, lighting and video, knew we were all on the same side, and the camaraderie was something I will never forget."

Lighting

There were 6 articulated truckloads of lighting equipment that rolled into Hyde Park for the Live 8 event. Approximately 25 kilometres of cable were used to carry power to about 47 tonnes of lights, some suspended 10 metres above the stage on approximately 180 metres of truss. There were 150 moving lights, and 120 lights of various combinations; six follow spots. In all, a total of 295,000 kilowatts of lighting was handled by 15 crew.

The lights had been on-site since June 22nd in preparation for the July 2nd event. Pete Barnes, lighting designer for Live8, said: "The challenge for this particular event is to provide lighting effects that meet the artistic values of a huge range of musicians, and at the same time make sure that the 150,000 people there can see what's happening as well as the billions watching on television."

"This is a huge lighting rig by any standards, and PRG has done a great job of making such a large amount of equipment available at short notice," he added.

Dave Keighley, managing director of PRG Europe Ltd., says: "Although it's what PRG is well-known for and we do it for many of the individual acts participating in Live8, it's still a privilege to be involved in an event of this scale and profile. We're happy to help hundreds of millions of people see what's happening in Hyde Park."

Video

Live 8 saw the biggest ever concentration of screens for an outdoor concert anywhere in Europe, with the equipment for both front and backstage supplied by Avesco plc companies Creative Technology and MCL.

With most of the acts performing in daylight, projecting acceptable video relied heavily on modern large screen video technology. Five LED screens were positioned on stage. The main screen comprised 8x6 modules of Lighthouse 19mm in 16x9 format measuring 9.76 x 5.25m. Flanking it were two 6.4 x 4.8m 25mm Unitek screens in 4x3 aspect ratio, which were divided into four equal columns and arranged in a 90 degree arc either side of the main screen to visually 'wrap round' the performers. On each of the PA wings was an 8.54 x 6.44m Lighthouse 19mm screen, configured in 4x3 ratio.

Two delay screens were used 100 metres from the stage. These were 44m² CT/Screenco mobiles with Saco 15mm screens in 4x3 aspect ratio, one of which is based in the UK and the other from CT's Dutch sister company JVR, who also supplied four Barco D-Lite 7 LED screens in 16x9 aspect ratio, each measuring 4.48 x 2.69m to Screenvisions for the Berlin production. These were used as delay screens along Berlin's 'Straße der 17 Juni', whilst two Barco G5 projectors with 300 x 225 projection screens and three 42' plasma screens were supplied to one of Dutch national television's studios for their broadcast of the event.

Towards the back of the Hyde Park arena were three further mobiles, two 40m² Lighthouse 25mm and one 30m² Panasonic, sub-contracted by CT from Sweden's Massteknik. All the mobile screens were fed via digital video delays, allowing the timing on the video signal to be adjusted, to sync with the sound. "Doing that makes a major difference on a site as big as this," noted Avesco's Business Development Director Dave Crump, of the Hyde Park Live 8 gig.

Across the top of the stage 25mm Unitek modules were deployed as



Crew catering

a giant 1.2 x 35m LED banner panel, a configuration more commonly seen at the side of football pitches. Driven by a dedicated text system, it was used to display slogans from Comic Relief, which provided much of the supporting visual material. The control system was operated by scoreboard specialists Technographics.

In addition to the cut front equipment, CT and MCL supplied all the video gear for the backstage area – a 2.56 x 1.92m Lighthouse 10mm screen in the artist's garden and two of the new stand alone Lighthouse PopVision screens in the main hospitality area, as well as a number of plasma screens put in by MCL, another Avesco company based in Birmingham. Graham Thomas, project manager at MCL commented, "We have done the backstage work in Hyde Park for several years now, using the Lighthouse screens as an alternative to Video Walls made our life a lot simpler and resulted in much better images in the artist areas."

Avesco also had the massive logistical task of controlling the entire on screen video production and programming at Hyde Park. Outside broadcast supplier BowTie, which facilitated the main BBC system, provided a dedicated outside broadcast truck for screen production equipped with its own dedicated cameras and multi-channel VT record/playback facilities.

Director of the overall screen programme was Kevin Williams. "My brief from Steve Allen (event production manager) was that the theme had to be very strong throughout the video presentation," he said. "We needed to get the message across, but not ram it down people's throats."

"However, it also had to be a rock 'n' roll show, whose format wasn't dictated to by the demands of the television coverage. We were in charge of the live feeds to the EBC, not the other way round."

To ensure the video element broadcast the message as globally as possible, Kevin employed foreign language dumpers – messages that were displayed on the screens in various languages from Russian to Japanese.

The live footage for the screens utilised three cameras - two on the twin front of house control towers and a third in the pit - the screen production also taking isolated feeds from several of the BBC's cameras.

"The desk was full," said Williams. "There were five separate matrix outputs to the onstage screens so we could switch them independently, and one way switching for the delay screens further back in the park. This allowed us to have graphics on stage and camera relay on the delay screens."



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Sound engineer Jon Lemon - an Aussie - is partially sighted. He pulls a most excellent mix!

This dual use of camera images could have caused problems for the BBC cameramen, so the camera viewfinders all featured a red and a green tally light. The red light indicated the camera was on air on the BBC coverage and the green indicated it was on air on the Hyde Park screens.

V playback facilities were used to play material produced by the Fortobello Studios of Comic Relief Lynchpin Richard Curtis, who had the role of associate producer at the event, while another major element was an EVS hard disk recorder, which allowed the team to simultaneously record six incoming lines from the concerts in Philadelphia, Berlin, Paris, Rome and a couple of switch feeds from other sites.

"We could record them all simultaneously throughout the day. That way, if a couple of good performances had been recorded elsewhere, we could go back to that footage during artist changeovers and play them back independently of the BBC," said Dave Crump.

Graphic content for the main screens was produced by Richard Shipman, working direct for Steve Aller, using three Doremis and two channels of Arkaos. Further graphics-related services were provided for the SMS and MMS messaging facilities, which were available to the audience via sponsors AOL and Nokia.

This enabled audience members to send images from camera phones via MMS.

Montages of those pictures were then colated live on site and put on to the screens during breaks between acts alongside the SMS messages.

"There were real time counters on things like how many people texted in their support and how many registered on the web site," said Crump. "Names scrolled up at different times between acts of people who have registered. All of this was sourced from the Avesco's Graphics Portacabin by the stage. From here Richard Shipman, Arthur Jackson (running the content for the banner panel screen) and a host of others supplying the MMS, SMS and

real time web information were based amongst a stack of computers and other links.

As you might expect, Kevin Williams' day was extremely hectic.

"The insert VEs from Portobello Studios, which were to go behind tracks of bands didn't come in until the last moment and every band came in with their own ideas of visual material, which they wanted playing in. That all had to be re-formatted as well," he said.

During REM's set, the band's video director Blue Leach took Williams' place, but otherwise he was at the helm throughout the

production. He is full of praise for the team effort that everyone involved strived so hard to achieve.

"The highlights of my day were the Who and Pink Floyd," said Williams. "I could hear the cheer when I put Dave Gilmour on screen at one side of the stage and Roger Waters on the other."

At the end of a remarkable day an exhausted Dave Crump commented: "This has been one of the most incredible shows we have ever been involved in. Stuart Young and his team on the screens, Kevin in the truck and Richard Shipman in the - at times chaotic - Portacabin have all done a fantastic job and proved once again that we Brits are the best in the world at putting on a show."

Food, Security, Amenities and Rubbish.

Production crews aren't noted for their low cholesterol diets. Over the three weeks of the build of the Live 8 production in Hyde Park, caterers Eat to the Beat, supplied crew with 10,000 rashers of bacon, 12,000 sausages, 18,000 eggs and over 900 kilos of cheese. On a less fatty note, 8,000 bananas, 5,000 apples and 50,000 litres of water were supplied to crews. Almost 2500 meals were served during the course of the event.

A team of over 2000 security and stewards was employed.

Stage monitor land. DiGiCo D5 consoles for days.....



The back stage area consisted of 300 Portacabins, 20 marquees, 200 toilets and 20 showers. The infrastructure to run the site included over 300 telephones, 50 individual high-speed connections and three wireless broadband systems.

It was estimated over 3,000 tons of rubbish was removed from the site.

The Artists

Last, and in this case definitely not least, were the artists: Annie Lennox, Coldplay, Dido, Elton

John, Joss Stone, Keane, The Killers, Madonna, Mariah Carey, Ms.Dynamite, Paul McCartney, Pink Floyd, Razorlight, REM, Robbie Williams, Scissor Sisters, Snoop Dogg, Snow Patrol, Stereophonics, Sting, Travis, U2, UB40, and Velvet Revolver, and of course, Bob Geldorf.

Geldorf sang his Boomtown Rats hit that he penned in 20 minutes in 1979, which narrates the January 1979 shooting deaths of the school principal and custodian of a San Diego school, and the wounding of eight



students and a police officer.

The perpetrator, 16-year-old schoolgirl Brenda Spencer, had

suffered from epilepsy and depression, and claimed long-term sexual abuse by her father (who bought her the 22 calibre weapon that she used). She explained the carnage in words that inspired Geldorf's song, "I don't like Mondays."

It is one of life's ironies that such a tragic event spawned a hit song, which in turn spawned Geldorf's notoriety, which now assists him in organising such humanitarian events.

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RIGHT OFF THE DIAL

What's all this about then?

Once upon a time there was radio. To hear radio you needed a radio receiving device. And to generate what you heard on it there had to be a radio transmitting device. And that's the way it's been since the first (and still surviving) Australian commercial station 2UE Sydney came on air on Australia Day 1925.

And, up until a few years ago, that's the way it was, radio being secure in the knowledge that it was a stand-alone medium with a captive and loyal following who had no direct say in what was broadcast and when.

Now technology has changed all that. And the changes have all come at once, leaving the radio industry in rather a state of shock amidst a mad scrambling to adapt to a whole new world of communication—a world where the listener is now in charge.

Today you can listen to radio through your computer, your TV, and soon through a digital receiver, complete with all its bells and whistles including a text readout and multi-channels on each station.

And then there's the mobile phone. Combine its size and portability with wireless technology and you have the heir to the transistor radio. Many of the costlier mobiles already include the ability to receive FM signals and their numbers will increase as the manufacturers look for more options for their cheaper models.

In the U.S. the two new satellite radio networks now have between them over 4 million subscribers and growing daily. There's talk of Australia and the Pacific region being covered within a few years by World Space whose AsiaStar satellite already services SE Asia and sweeps the NW coast of Australia including Darwin.

Then there's internet radio, which looked a bit wobbly for a while, but is currently becoming a force to be reckoned with.

Now there is also what I regard as an even bigger threat to terrestrial radio: the iPod. It's hard to believe that just over a year ago the iPod didn't exist. I bet your spellchecker doesn't recognise the word! And already the iPod's functions are being expanded with Griffin Technology in Nashville putting an FM tuner into the iPod and calling it a iFM, and Motorola in Illinois testing iRadio, which is a podcast type technology that lets internet radio play through your mobile phone into your car radio system. Whoa! Where's this all going to end?

Amongst all this cross-media confusion it was essential to find an umbrella word that summed it all up. And that word turned out to be...convergence. Convergence is what this page will be covering in ongoing editions of CX. I'm confident there'll be no lack of material.

Now hear this!

New technologies always come with benefits and drawbacks.

As far as iPods are concerned, according to researchers at Sydney's National Acoustic Laboratories, it seems that one out of four users is damaging their hearing by listening to players at volumes similar to small power tools.

According to researchers at Sydney's National Acoustic Laboratories, one out of four iPod users is damaging their ears by blasting audio at unsafe levels. This could lead to tinnitus (constant ringing in the ears), and eventual loss of hearing, which would make users iPods irrelevant anyway.

Podcast Fever

Actually downloading MP3 files is nothing new. It's just the fact that



the iPod player looks cool that's helped make it the most popular of all the digital music players. In the first year of its existence nearly 22 million have been sold.

Now with iPods comes Podcasting. Instead of using the player just for listening, special software lets you download pre-recorded programs, some from radio stations and some from amateurs, onto the device.

A few politicians in New Zealand involved in a tight election even got into the act by recording half hour podcasts of their election policies, and now the White House is making the President's weekly radio address available.

Quickly recognising a new market, the first wave of podcasting books has hit the market.

As far as I can see they all seem to cover the same topics...what are podcasts, how to hear them and how to produce them. They'll no doubt all sell well even though all they do is state the bleeding obvious!

Background to a rescue

Remember that Russian rescue submarine that itself needed rescuing when it was stranded underwater in the Pacific?

An interesting but little reported background story came out of that incident.

It seems that initially there was the usual official Russian silence, which they were eventually forced to break after a woman in tears called her local radio station, Radio 3, in the major port and naval base of Petropavlovsk-Kamchatsky.

She said that a mini-sub had become stranded, with seven men aboard, in the Bay of Berezovaya some 70 kilometres from the port.

A journalist at the station managed to get onto Rear Admiral Viktor Gavrikov, Commander in Chief of the Armed Forces in northeast Russia who said "No comment" and hung up. This, of course, convinced the journalist something was up and within five minutes the station broadcast the story.

From there it spread world-wide, which forced the powers-that-be to look abroad for help in organising a rescue operation.

And that, in a nutshell, is the potential power of radio, without which seven men may well have died.

IN MEMORIUM

Radio mourns one of the great innovators of the past, Hilmer Irvin Swanson, who has died at the age of 72. Swanson has been described as a "gentleman farmer," who was an environmentalist who grew his crops organically, and who also experimented with solar energy in his home.

He was a quiet man of few words, but when he did speak it seems people listened.

During his 35 years at Harris Corporation Swanson is accredited with inventing the modulation techniques used in modern AM broadcast transmitters.

Any comments, questions or contributions?
Email me: ian@allaboutradio.net



From left: Frank Castel - Sound Design and Orchestra main mix (Adelaide Festival Centre), Grant Walsh - Band FOH and Orchestra submix, Milenko Novakovic - FOH system Engineer (Novatech Production Services)

Zepplin Flies Again – The Adelaide Symphony Orchestra with The Zep Boys

What a great concept. This was a collaboration that wouldn't work without new generation audio, because Led Zeppelin and Symphony are performed in totally different audio modes. It looked dangerous on stage..... a backline of Marshalls and a big, bad bass rig, with the Zep Boys set on the orchestra lift and the orchestra on the stage behind.

The backline was for looks only, and the band was on in-ear monitors. The drums were encased with a drum shield. This kept the stage level low, and the whole ensemble could be close mic'ed with confidence.

Patrick McDonald from The Advertiser reported the show thus: "If the first half was about shades of subtlety, the second was about pure power. Messenger's extended introduction brought in all the mystic swirls, eastern influences and curious percussion devices which exploded like a powderkeg into Kashmir."

The Festival Theatre hired Grant Tosh Walsh as the sound engineer. He was joined by Frank Castel, who was responsible for Sound Design and Orchestra main mix on the venue's Langley FOH console in the control room. He sent 10 sub mixes to Grant Walsh, who had the 30 band lines and the 10 orchestra mixes on a Midas XL3 console. Grant says: "Anyone who has engineered for a rock band combined with a 60 plus orchestra would instantly appreciate the clarity and the head-room the Kudo system provides".

Novatech Productions supplied the system and the XL3. It was one of the first outings for their new L-Acoustics' KUDO Line Array. 9 boxes per side were flown, along with 2 SB 218 subs per side. Another 2 subs were flown in the centre.

There were 4 XT 115 hi-Q as infills and another 8 XT 115 hi-Q speakers for on-stage monitors, albeit at relatively low levels. The monitor mix was done by Harry Gum, a Festival Centre sound person.

The system design and the predictions were validated by Jands

engineer Warren Wilson who happened to be visiting a week prior. He visited the venue with Novatech's Marcus Wet. "We rigged it to prediction, it was spot on," said Leko Novakovic from Novatech. "Menko (Novakovic) used Smaart to time align to the conductor's position."

Doing the setup was easy with a new XTA wi-fi kit on a laptop, running XTA Audio core software. There was an XTA processor in every amp rack. You could walk around the room, set delays in place, set sub levels in the stalls, and check all the seats are getting the proper levels - and that there are no time delay issues.

Novatech also used to gig to break in a new FOH drive rack, with XTA DP428, and 3 XTA GQ600 EQs. They had a TD remote EQ, for inserts over 8 sub-groups groups. The main effects rack was also loaded with new things: 6 XTA C2 dual channel compressors, 4 XTA G2 dual gates and a range of effects.

• (See also editorial, this issue)



That's why I fell for the Leader of the Pack

I don't know what it is about girl groups, but deep down in my 12 bar blues 'n' boogie heart I've got a real soft spot for the sound of three or four girls singing in unison with lots of reverb, castanets and a wall of guitars and piano behind them. The Crystals and the Ronettes, both produced by Phil Spector, and I've always loved the 1964 hit, 'The Leader of the Pack', by the Shangri Las. It's a modern day classic about teenage lovers and motorbikes and parents; written by Ellie Greenwich, produced by George 'Shadow' Morton trying to get some of that Phil Spector sound, and by and large succeeding. It's also widely believed to be one of the most successful songs ever recorded because it has appeared on so many oldies compilations.

I don't go to the theatre much, if at all. Apart from the annual school productions, the last time I went was to a preview of Grease, the original stage show, long before the Bee Gees and John Farrar tipped in some decent songs to turn it into a hit movie.

However I have been sorely tempted to go and see 'The Leader of the Pack - The Ellie Greenwich story', just to see the correct version of the song performed, because for the last 30 years or more most of the world has been listening to a butchered version.

Back in the 70's I bought a Shangri Las EP (Extended Play - 4 songs on a 7 inch at 45 rpm) from Lee's Music Shop in Mentone and I noticed the problem then, but put it down to either a bad pressing or a bad stylus on my HMV 3-in-1 Hi Fi. On a visit to the States in 1989 or thereabouts I picked up a reissue single of it at Tower Records and it played perfectly, so I never bothered listening to my EP after that.

However, earlier this year I was in the UK visiting some relatives who'd tracked me down over the 'net, and the Sunday newspapers were all giving away a free CD of rock classics with every paper.

It's a strange music scene in the UK, isn't it? Who on earth would have thought that "Is this the way to Amarillo...every night I've been humping my pillow" by Tony Christie, would be a number 1 hit again? Not me, that's for sure; the first time round was bad enough.

But there he was on Top of the Pops, singing his pacemaker out, and the original track was being given away free on a CD included with the Sunday Express.

The Sunday Mail was also giving away a CD-full of classics too. It wasn't all classics, of course - half the CD was full of nothing songs sung by that well-known band 'people you never heard of', but there was an original Elvis 'That's all right Mama', and, much to my surprise, the original Leader of the Pack by the Shangri Las. Great, I thought, I won't have to digitise, de-hiss and de-click my 45 onto a CD now that someone has done it for me professionally.

Regular readers will have realised by now that music of the 60's for free is my kind of price, so I eagerly popped the CD into the rentacar CD player and fast-forwarded to the track. Imagine my horror when the same problem with the song reappeared on the CD track, at least

30 years after I discovered it on my EP.

What's the problem? Well, a whole line of the song has been chopped out, ruining the flow of the song. It's not a obscene line - nothing controversial that might encourage teenagers to rise up in the streets and overturn the status quo (that's the established order, not the band, you young kids), so we're not talking censorship or anything like that. As the old saying goes "If it comes down to choice between a conspiracy or a stuff-up, it's a stuff-up every time!"

The missing line is the first line of the second verse, which goes "One day my Dad said find someone new..."

It's gone. As if it were never there. All you get is a bad jump into the second line "I had to tell my Jimmy we're through"

Originally released on Red Bird label in the USA, the problem seems to have occurred when overseas licensing went to Philips.

On close listening it sounds as though the master they have used for the last 30 plus years has been taken from an original vinyl pressing, which just happened to skip at that point. Nobody noticed then, and obviously no-one has noticed (and cared) up till now.

Record execs will probably excuse it by saying "Well, just because we sell dog food doesn't mean we have to eat it" (in other words, who gives a shit we've already got your money) but the problem goes deeper than that. It's about selling something that isn't true to the artist's vision, isn't what was recorded, and isn't what it purports to be.

OK, I'm fully aware that it might be a tad churlish to complain about something that I got for nothing with a Sunday paper, but the point is that it's the same track as the one that they have been selling. I and thousands of other Shangri Las fans in Australia and obviously throughout the UK and Europe have paid out our money for a product that is not up to standard, a product that is just

plain faulty.

When the going gets tough, the tough go online. What's out there in Kazaa and WinMX land, I wondered?

A random downloading of ten MP3s of the song produced nine of the faulty version, and just one of the original correct version, so anyone wanting it needs to download with care. I imagine that when

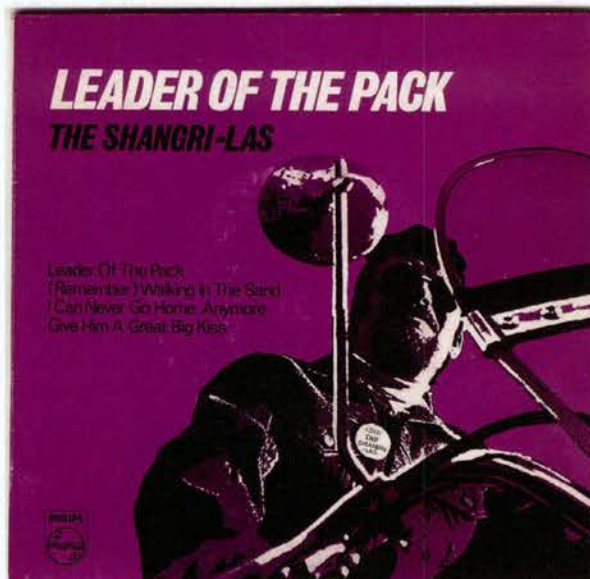
Sony/BMG finally decide to stop blocking iTunes and embrace making money for nothing, we'll all be able to download the correct version for a price. Until then we're in the paradoxical situation of being able to download the proper version free, but having to pay to buy the flawed version.

Listening to Magic 693 radio the other night on the way home, they played the crippled version, too, so like Chickenman, it's everywhere.

I never did get to see The Leader of the Pack - The Ellie Greenwich story, but I wonder what she would have made of this.

A random downloading of ten MP3s of the song produced nine of the faulty version, and just one of the original correct version, so anyone wanting it needs to download with care.

I imagine that when Sony/BMG finally decide to stop blocking iTunes and embrace making money for nothing, we'll all be able to download the correct version for a price.



Duncan Fry is the author of 'Live Sound Mixing - the New 4th edition' available from outlets everywhere, and also online at www.dunkworld.com

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Doing the Combo Mambo

...Or why we stopped worrying and learned to love this amp collection

by Craig Anderton



Fig. 1: Native Instruments' Twang Combo and IK Multimedia's AmpliTube 2 are being treated like a guitar setup that splits into two different amps. Each plug-in is inserted into its own track, but fed by the same guitar signal.

Ever lusted for an amp collection? Of course you have. A big Marshall stack for that wall o' sound, a cute Fender Twin for blues or country, and hey, throw in a Vox AC30 when it's time for Brit Pop.

Apparently the developers at Native Instruments lusted after an amp collection too, so they created the Guitar Combo series of virtual amps, which work in stand-alone mode or as plug-ins (VST/DXi2/RTAS/AU). The line consists of the Plexi Combo, Twang Combo, and AC Box Combo — available individually or as a Triple Pack.

So is this going to be a *review*? Naaahh, I helped write the manual so I'm recusing myself. But *because* I wrote the manual, well, I've logged a *ton* of hours with these little guys. And as I've often said, the most frustrating part of writing manuals is all the cool stuff you find out about *after* it went to the printers.

So, here's some of that cool stuff. But also note that these techniques apply to any guitar amp plug-ins, even though the Combos are obviously well suited to these applications.

SUPER STEREO, TAKE 1

Although adding reverb can create a stereo image, the main Guitar Combo sound remains centered. But just as guitarists split their guitar to two amps, you can get some great stereo textures by splitting your guitar to two sequencer tracks (or copying an existing guitar track to a second one if you're re-amping). Insert a different amp in each track, select complementary presets, then pan them toward the left and right (Figure 1).

How you pan makes a huge difference. Extreme left and right creates a "hole" in the middle, and sounds almost like two guitar parts playing in unison (adding a short delay

plug-in before one of the amps can heighten this effect). Another useful option is to pan one amp full left, and center the other one. This weights the image toward the left, which creates room in the mix for, say, a piano panned more toward the right — yet still gives a huge guitar sound.

After setting up the amps in stereo, you'll probably want to tweak their settings. For example, the image will be weighted toward whichever amp is "crunchier." If that's what you want, fine. Otherwise, crunch the other amp a bit more, or vary panning or levels.

SUPER STEREO, TAKE 2

Now try the same thing, but flip one channel's phase switch and vary the channel's level — you'll hear major tonal changes. With sounds panned left and right and full cancellation, you can drive a truck through

How you pan makes a huge difference. Extreme left and right creates a "hole" in the middle, and sounds almost like two guitar parts playing in unison (adding a short delay plug-in before one of the amps can heighten this effect).

the center of the stereo field. Just remember to check for mono compatibility at the master bus.

Tweaking settings is unpredictable, because boosting may cause an increase or decrease in level or frequency response, depending on what is or is not being thrown out of phase. Experiment!

SERIAL KILLER SOUNDS

Putting two hi-gain amps in series will likely give the same out of control crud you'd get with hardware devices. But if you use one amp to "condition" the sound and the other to ultracrunch, the results can be pretty cool. Interestingly, the results were never quite as expected — for example, one time there was a big midrange peak, yet neither amp by itself seemed to have this kind of peak. So what? It's all about more options.

RIDING THE BUS

The Twang and AC Box have reverbs. The Plexi instead has a delay module that produces standard delay effects, but can also do sweet "backwards tape" sounds that are sooo '60s.

So there I was, with the perfect Twang sound. Yet I wanted to add the backward tape effect. Solution: Insert the Plexi Combo into an effects bus, set it for minimum crunch, turn up the delay big-time, and send some of the Twang signal to the bus. I ended up with mostly Twang crunch, and an overlay of light-the-incense echo effects.

SIGNING OFF

Sure, guitar amp plug-ins do a credible job of fulfilling their intended function. But in a virtual environment, they can pull off a few other tricks as well . . . just like these. **EQ**

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Look Ma, No Hands!

Controlling your Cakewalk host with DigiTech footswitches: An object lesson in *ease*

by Craig Anderton

You know that punch-in footswitch jack on recorders? You remember that? Well, that was me. Yup, when TEAC introduced the 3340 back in the 70s, I figured out how to wire up a footswitch. The guys at TEAC saw it and thought it was a good idea. From there on, their recorders added punch-in footswitches. Other manufacturers then followed suit.

So why'd I do this? I mean outside of my total inability to leave well enough alone?

Simple: I play guitar. Playing guitar requires two hands, and in the days before automated punching, you had to punch *exactly* where you wanted the punch to occur. So I really needed to, in the immortal words of James Brown, get on the good foot.

concept (I've since done several tutorials on it for the www.guitarworkstation.com website).

Until recently, though, you could use only Pro Tracks Plus (PTP) with the RPx400 or GNX4. But along with PTP, Cakewalk's Sonar 4 and Guitar Tracks Pro (GT Pro) use a plug-in architecture for control surface support, and it's possible to install the PTP hands-free plug-in with these other programs as well. (And note that as RPx400 owners traded up to the GNX4 or the GNX2000, the RPx400 is starting to show up used for prices that make it tempting to use as a control surface, even if you're not interested in its other features.)

Furthermore, the GNX4 also accepts the GNX FC remote footswitch unit, which parallels the existing footswitches but is used

- Locate the following folder on your computer: C:\ProgramFiles\Cakewalk\Shared Surfaces.

- Copy the DLL into this folder.

- Go *Start > Run* in Windows.

- Type the following *exactly* as shown (but as a single line) into the Run field. (Note that there is a space between exe and "C:\ as well as between Program and Files, and also Shared and Surfaces; also, the quote symbols are required):
C:\WINDOWS\system32\regsvr32.exe "C:\Program Files\Cakewalk\Shared Surfaces\DigiTechRPX.dll"

- Click on OK; a screen should say the DLL was registered successfully.

THE HOST

You'll need to install the USB drivers included with the DigiTech device so it can communicate with your computer, and in your host, make sure DigiTech USB MIDI is selected under *Options > MIDI Devices*. Once that's done and the plug-in DLL has been registered:

- Go *Options > Control Surfaces* in Sonar, Guitar Tracks Pro, or Pro Tracks Plus.

- Choose DigiTech Hands Free as the Control Surface.

- Select the MIDI port connected to the DigiTech unit for the program's MIDI in field (USB for the GNX4 or GNX2000, your MIDI interface's MIDI port for the RPx400).

And now you can control your program from the footswitches. There are subtle differences between what the footswitches do with different programs. They work as expected, but note that with Sonar 4, if you press Record to stop recording and press Record again, you'll start recording in the same track but in a new layer. If you press Stop to stop recording and press Record again, recording begins in a new track.

For more information on using Sonar 4 with the GNX4, and details on what the footswitches do, check out the tutorial and video I did at <http://www.guitarworkstation.com/Tutorial17/tutorial17.htm>. EQ



Fig. 1. DigiTech Hands Free installed as a control surface within Sonar 4.

THE NEW HANDS-FREE RECORDING

Two years ago, I reviewed the DigiTech RPx400 guitar processor for *EQ*. It spun my crank because — when used with the bundled Pro Tracks software — you could use the footswitches not just to bring effects in and out, but to control recorder functions (and with more sophistication than just play, stop, and record). The RPx400 appeared just as I was recording the "AdrenaLinn Guitars" sample library, and it saved me an amazing amount of time. I've been a fan of the concept ever since, and later graduated to DigiTech's GNX4 — a more complete implementation of the "guitar workstation"

for recording only. This is helpful if you're using the GNX4 as a tabletop device (e.g., for convenient editing) yet still want to have footswitches on the floor. The GNX2000 works similarly and offer similar control capabilities for Cakewalk hosts.

THE SOFTWARE

If you've installed PTP, the required control surface DLL was already installed and will show up in Sonar 4 and GT Pro's Control Surface options. If you haven't installed PTP but use Sonar 4 or GT Pro, then install and register this DLL as follows:

- Go to <http://www.eqmag.com>.

- Download the file **DigiTechRPX.dll**.

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CURVES OF STEAL: Three Fabulous Frequency Felons

Psst, want an EQ curve? Used only once on a hit?

by Craig Anderton

Bob Ludwig . . . Doug Sax . . . Bernie Grundman . . . They're masters of mastering. They produce hit after hit, with nothing at their disposal other than . . . well, experience, talent, great ears, the right gear, and superb acoustics.

So maybe you're missing one or more of those elements, and wish that what came out of your studio sounded as good as what comes out of theirs. So, why not just analyze the spectral response curves of well-mastered recordings, and apply those responses to your own tunes?

Why not, indeed — but can you really steal someone's distinctive spectral balance and get that magic sound?

The answer is no . . . and yes. No, because it's highly unlikely that EQ decisions made for one piece of music are going to work with another. So even if you *do* steal the response, it's not necessarily going to have the same effect. But the other answer is yes, because curve-stealing processors can really help you understand the way songs are mixed and mastered, and point the way toward improving the quality of your own tunes.

As to the tools that do this sort of thing, we'll look at Steinberg's FreeFilter (which was discontinued, but still appears in stores sometimes), Voxengo CurveEQ, and Har-Bal Harmonic Balancer. So similar, yet so different . . . (Note: CurveEQ and Har-Bal are currently PC-only, although a Mac version of Har-Bal is forthcoming. FreeFilter was available for both Mac and Windows.)

HOW THEY WORK

FreeFilter and Voxengo split the spectrum into multiple frequency bands in order to analyze a signal. These create a spectral response, as from a spectrum analyzer, while a song plays back. During playback, the program builds a curve that shows the average amount of energy at various frequencies. You can apply this analysis (reference) curve to a target file so that the target will have the same spectral response as the analyzed file, as well as edit

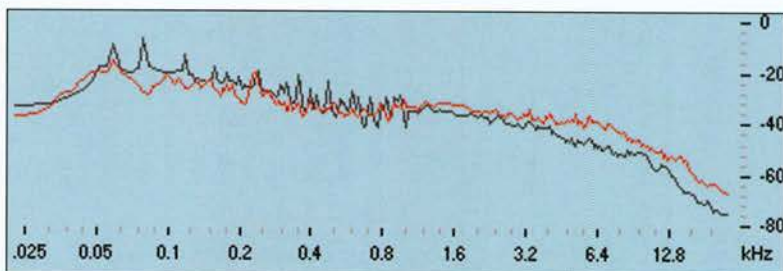


Fig. 1: The black line is the spectral response for Madonna's "Ray of Light"; the red line represents a Fatboy Slim mix. Fatboy's has a lot more treble, while "Ray of Light" has a serious low-end peak.



Fig. 2: Steinberg's FreeFilter was an early curve-stealing/EQ program. Its sound quality is lacking by today's standards, but its functionality set the paradigm for this type of software.

and save the reference file.

Har-Bal isn't curve-stealing software per se. While optionally observing the response of a reference signal, you can open another file, and see its curve superimposed upon the reference. You can edit the opened file's curve so it matches the reference signal more closely, but this is a manual, not automatic, process.

The manual vs. automatic aspect is in some ways a workflow issue. FreeFilter and Voxengo start by creating the reference curve,

but give you the tools to adjust this manually because you'll probably want to make some changes. Har-Bal takes the reverse route: You start out manually, and use the tools to create something that resembles the visual reference curve, which was generated automatically when you opened the file.

Also remember that curve-stealing is only a part of these programs' talents. They're really sophisticated EQs, and would probably prefer to be judged on that basis. But given the

Head Gearhead Gear

theme of this issue, we figured investigating the curve-stealing aspect would be the most interesting angle.

So what do some typical curves look like? Check out Figure 1. The black line is the spectral response for Madonna's *Ray of Light*, while the red line represents a Fatboy Slim mix. Past about 1kHz, Fatboy's curve shows enough high frequency energy to shatter glass. *Ray of Light* has a higher response below about 400Hz, due mostly to a prominent kick. It has a more thud-heavy, disco kind of vibe, whereas Fatboy Slim leans more toward a techno style of mastering. Apply these curves to your own music, and they'll take on the characteristics of the reference tunes — but the results may not be what you expect, as we'll see.

THE SOFTWARE

The software needs to analyze two files: the reference and the target. It compares the two, and raises or lowers the target curve's response to match that of the reference.

Figure 2 shows the spectral response graph for Steinberg's FreeFilter; it illustrates what happens after applying the source's curve to the destination. The green line displays the target curve, while the red line shows the result of applying the reference. The yellow line shows the response correction curve generated by FreeFilter to match the two curves. The 30 sliders are like those on a graphic EQ; they modify the curve represented by the yellow line.

It's crucial to be able to change the degree to which the reference influences the target. With FreeFilter's morph control at 0%, you hear the original destination sound. At 100%, the two curves match. You can even go past 100%, which exaggerates any changes. Generally, it seems settings in the 20%–50% range almost always gives better results than 100%, because then the

source curve influences, rather than dominates, the destination.

With Voxengo CurveEQ (www.voxengo.com, \$99.95), you can again see the filter's frequency response, input spectrum. It also includes goodies not found in other programs: The "GearMatch" feature includes impulse responses of pieces of classic gear you can apply to a tune. Additional limiting, saturation, and voicing can further color a piece of music.

When you want to capture and apply a curve, you can load a reference file, or play a file (in real time) into CurveEQ and capture its response. You then load the target file you want to process, and match the two. CurveEQ generates a filter response that matches the current file to the reference (Figure 3), which you can then tweak by dragging on the small handles.

With its vintage gear and dynamics processing options, CurveEQ is intended to be more of a complete mastering solution than FreeFilter or Har-Bal. Of course, if you're not careful you can overdo things, but a hint of saturation of vintage compression can indeed add some sparkle. And as it's a plug-in, CurveEQ can work with individual tracks as well as program material, although you need to be careful about delay compensation.

Har-Bal (www.har-bal.com, \$95) has several interesting aspects. First, it's stand-alone, not a plug-in, and runs under ASIO, WDM, or VME. The interface is extremely easy to use and responsive in terms of drawing curves; you can adjust peaks, average, and a mean of the two separately (see Figure 4). For example, you would bring down excessive peaks on the peak line, and bring up "holes" in the average line. Har-Bal also has a volume compensation feature so that the equalized and bypassed sounds have the same apparent volume. This allows you to base your judgements solely on what



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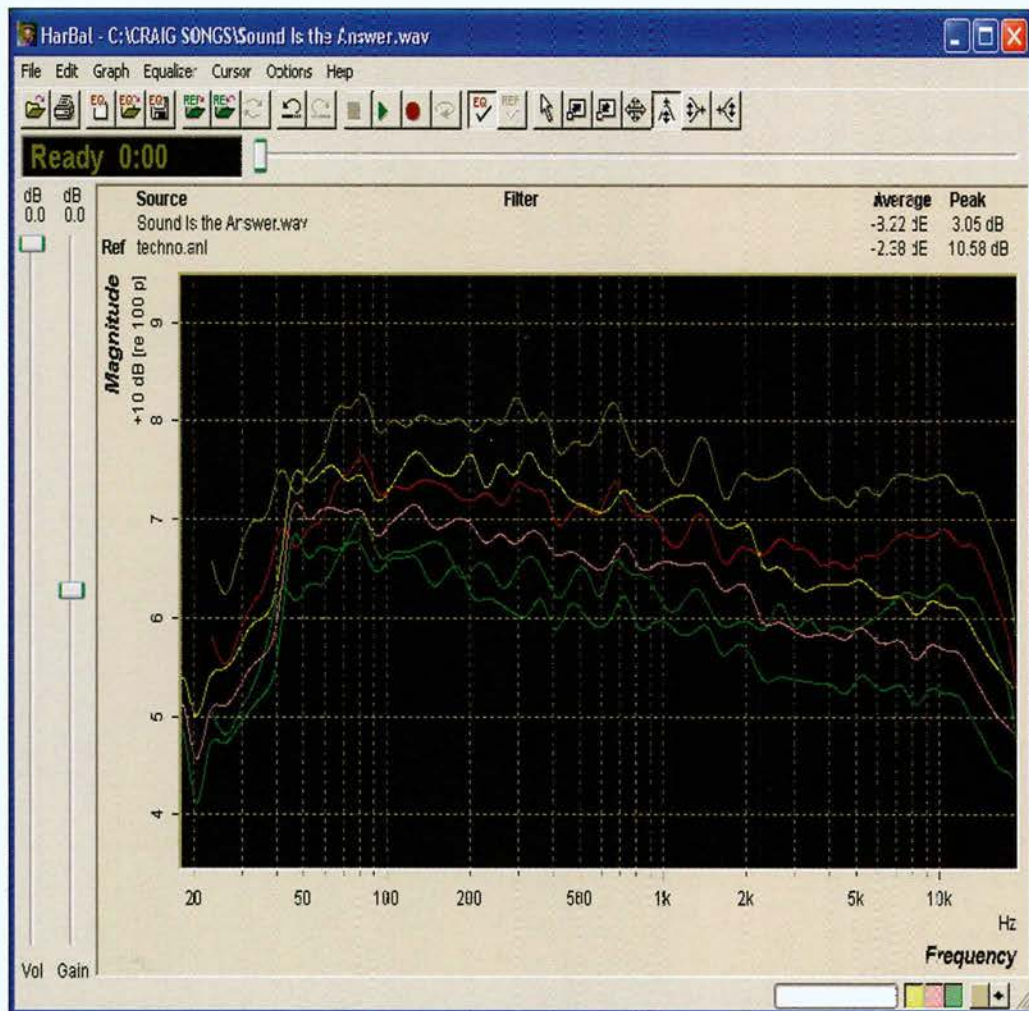


Fig. 4: Har-Bal's display shows the peak (yellow), average (green), and mean (red) response for the file being equalized. Each line can be tweaked independently. The faint lines in the background are from a "techno" reference file.

EQ contributes to the overall sound, rather than being influenced by level differences. Another talent is the ability to match average levels among tunes.

Because CurveEQ and Har-Bal seem superficially similar, they're often lumped together as similar programs. But actually, they do things in very different ways, and have very different workflows and optimizations. For pure EQ curve adjustments to fix problems, Har-Bal gets the nod. But that's all it does. CurveEQ does a lot more, including automatic curve-stealing with the ability to "morph" curves à la FreeFiter, but is not as versatile in terms of having separate control over peak and average amounts. Frankly, you kind of need to have both if you want all the features, but fortunately, both have downloadable trial versions so you can determine for yourself which one satisfies your particular needs better.

SOUNDS GOOD, WHAT'S THE CATCH?

For EQ adjustments, these are extremely useful programs. But if you're into stealing curves, be forewarned — here's a

fundamental flaw in the concept. For example, I grabbed an audio reference from a Spice Girls CD (yes, I'm not ashamed to admit it, so sue me) because it had a nice, overheated kind of pop mastering approach and I was curious how it would affect some of my cuts. There's a serious treble boost on the girls' voices to make them airy; it sounds great with the Queens of Auto-Tune, but when applied to one of my tracks, the treble boost made the overdriven guitar screechy. However, reducing the influence of the reference tamed the treble boost, trimmed the bass, and did produce a more pop-sounding curve.

Then there are times when curve-stealing doesn't really make a difference. I had a dance tune and thought hey, *Ray of Light* was a big dance hit, let's see what happens when I apply it to my tune. So I did, and... nothing. Then I realized why: I had mastered my tune with virtually the same spectral response.

So does that mean I had mastered my tune as well as the big-bucks experts who did *Ray of Light*? Well no — my tune needed a bit more high end than *Ray of Light*. So a curve can point

you in the right direction, but won't necessarily complete the job.

SO WHAT DOES WORK?

Using your ears to compare your work to a well-mastered recording is a tried-and-true technique, but it shortens the learning process when you can actually compare curves visually and see what frequencies exhibit the greatest differences.

I've found a few reference comparison curves for Har-Bal that work well for certain types of music: Fatboy Slim for when dance mixes are too dull, *Ray of Light* for a house music-type low-end boost, Cirque de Soleil's *Alegria* for rock music, and Gloria Estefan's *Mi Tierra* for acoustic projects. On very rare occasions I use their curves, but when I do, they're more like "presets" because they end up getting tweaked a lot. Automatic curve-stealing just doesn't do it for me, but "save me 10 minutes by putting me in the ballpark" does.

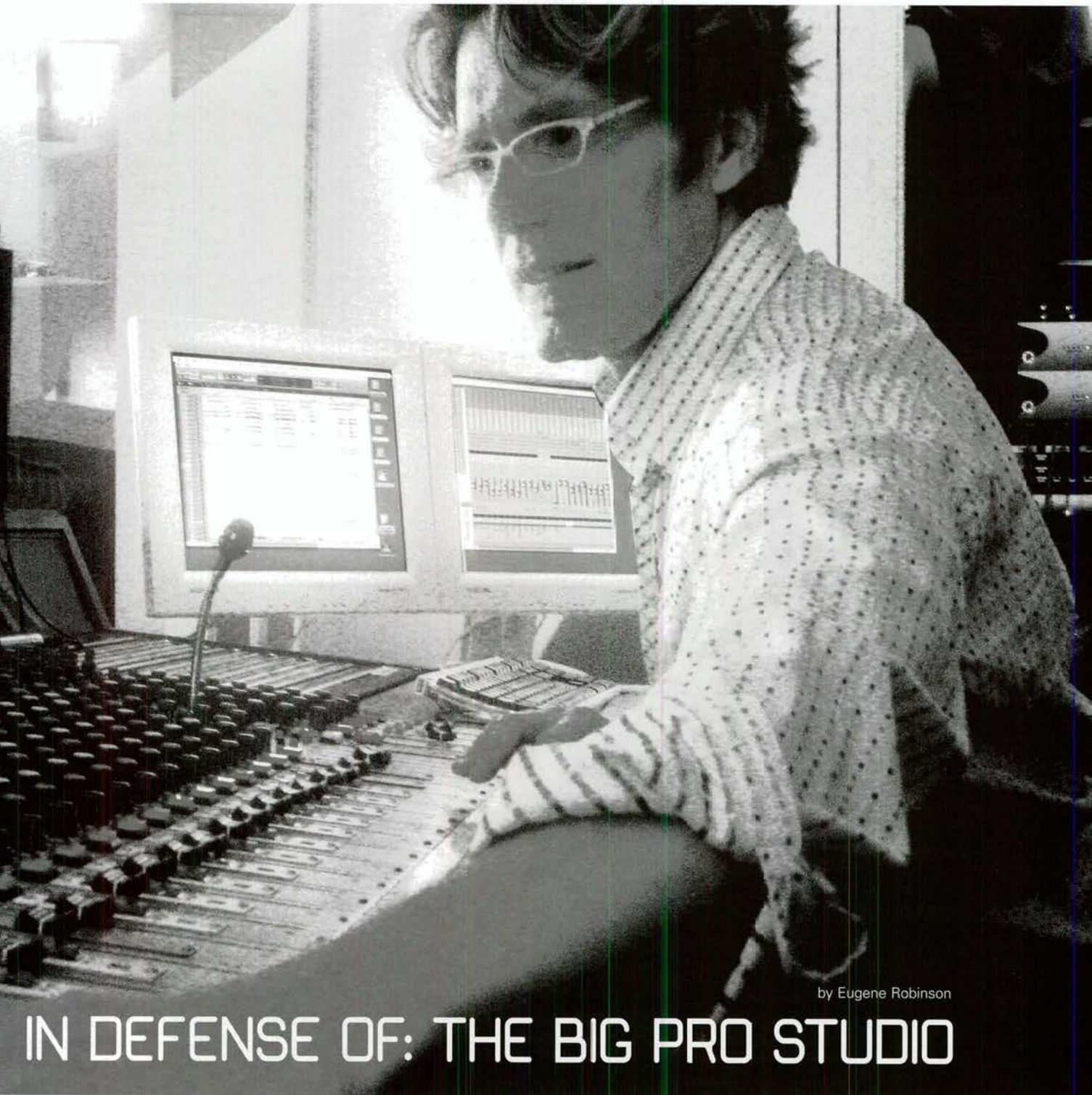
But my main use for curve-analyzing software is for stealing from myself. After

mastering a music project for a soundtrack, one tune sounded a little better than the others — everything fell together just right. So, as an experiment, I subtly applied its response to some of the other tunes. The entire collection ended up sounding more consistent, but the differences between tunes remained intact — just as I'd hoped.

Another good use was when German musician Dr. Walker remixed one of my tunes for a compilation CD, but used a loop for which he couldn't get clearance. Rather than give up, I created a similar loop that wasn't a copy, but had a similar "vibe." Yet it didn't really do the job — until I applied the illegal loop's response curve to my copy. Bingo! The timbral match was actually more important than the particular notes I played in terms of making the loop work with the rest of the tune.

This does produce a weird paradox, though: I used a piece of curve-stealing software to avoid stealing a piece of copyrighted material. I guess it's all part of the living in the 21st century. EQ

DEVIL'S ADVOCACY



by Eugene Robinson

IN DEFENSE OF: THE BIG PRO STUDIO

Not that it needs defending, but to anybody with a pair of functioning eyes, what's become increasingly clear is that studios are locked into a full-blown cage match with both *cheaper and easier* on one hand, and *MP3* on the other. With passionate defenders increasingly rare (and usually with extant and aggressive commercial interests), is there not one true believer who will speak for the tired, poor huddled masses of Big Studionia?

And two not-so-tentative hands go up in the back of the room.

AL HOUGHTON and STEVEN ALVARADO from NY's *Dubway Studios*. To the rescue.

EQ: Big studios . . .

AI Houghton: Well, a "Big" studio is a funny terminology. Anything too big to adapt to a shifting business environment is liable to have problems surviving and . . .

EQ: Well, the claim is that if it's bigger than a bedroom, it's too big and if it's too big, well, it's struggling to survive today as well, yes? And so again, why a professional studio at all?

AH: Look, due to shrinking recording budgets and the business lost to home studios, *all* studios must face up to a smaller pie from which to draw revenue. So, yeah, the massive capital outlays and overheads associated with "big" studios are increasingly untenable.

I mean an old-school studio accustomed to giant recording budgets from record labels will not be happy when the record labels themselves are reigning in spending.

That all being said, there's *still* a market for professional studios big enough to record entire bands live. . . .

EQ: Well *is* there? Where? Who?

And with what money? I guess the issue is, can you guys crank it down to be cost competitive with the home studio alternatives given that there are so many variables beyond your control (tape costs and availability and so on)?

AH: Some artists still use rooms big enough to hold the myriad pieces of gear required for such a session and the buildout for soundproof rooms that sound good, and are big enough to accommodate the extra personnel involved in a "big" session (talent, musicians, producers, managers, hangers-on). . . .

EQ: None of which are germane to the real task of making music. A chill spot is one thing but why would I care about space that the drummer's girlfriend is going to like if I'm in a band that can't afford to be there for more



MP3 is not proof positive that the audience doesn't care about the quality of a recording. If that were true, why do teenagers across America spend thousands of dollars on big sound systems for their cars?

than a day? Not to be totally antagonistic but purely in the name of devil's advocacy: If the audience doesn't care, and the MP3 is proof positive of that, and the labels only care about what the audience cares about, and the artists can't afford it, isn't there something about this model that has to change?

Steven Alvarado: I have to jump in here. I totally disagree with this. MP3 is not proof positive that the audience doesn't care about the quality of a recording. If that were true, why do teenagers across America spend thousands of dollars on big sound systems for their cars? They want good sound and they are used to good sound. What about the millions of audiophiles out there who have elaborate sound systems in their homes so they can listen to a classical recording of a single violin? The fact is, most music you

hear is recorded in a pro studio. You have to start with a quality recording in order for an MP3 to sound as good as they sound. A poor quality recording sounds like crap in MP3 format. The only thing MP3 proves is that people demand a format that is easily delivered and that is portable. That's why cassettes were so popular. But as soon as CDs came along, everyone changed because of the quality. iTunes, the most successful seller of MP3s doesn't even sell MP3s, they sell MP4s, which are very high quality.

Listen, you can record an album in your bedroom and everybody knows it. Most artists don't do that because of the limitations. The ones you hear about that do like Moby, have "home studios" that hardly fall into that home studio category. Moby can afford microphones that cost \$10,000 and his studio is filled with some of the most expensive gear you can get. The idea that everyone is now recording their albums in their bedrooms is a myth. What we are seeing is that everyone is recording the demos for their album and maybe some

ancillary parts and then bringing the main portion of the album into the studio. There is also the engineer factor. There are pro engineers for a reason. I'm sorry but a pro engineer knows how to record you better than the bass player in your band does.

So, OK, the days of the really big houses are definitely over. They're just too much to manage and the overhead is enormous. It's extremely difficult to make any money that way. It was sad for all of us to see the Hit Factory close because there was a lot of history there. That studio certainly had that "wow" affect, but the times have changed. People don't like to work like that anymore. The smaller, intimate environment is more appealing to most people these days. It's a more human level and people feel comfortable in that setting. These days it's better to be a



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smaller studio with big clients. That's how you make money. We are somewhat small and we have a client list that can afford to go anywhere, but they love it here because they're comfortable and we treat them really well.

EQ: But is there enough of that type of recording going on for you all to stay in business?

SA: All, no. Smaller studios that run lean and offer quality in every way, yes. The ones that don't are dropping like flies. The ones that do are busier than ever, like us. We do it right and people know it.

AH: And home studios *are* valuable for musicians at all levels of the industry, from Bruce Springsteen's 4-track to the hobbyist's GarageBand. And not just for fleshing out song ideas — with a few pieces of decent gear and some know-how, one can get quality production tracks at home. And the same technology that allows professional studios to run quicker and more optimally works in the home recordist's laptop.

Home studios will keep getting better and more versatile, and more people will be teaching themselves how to use them. And if they can afford some extra expertise in mixing or drum tracking, for example, they'll opt to do that at a professional space. This combination gives an artist the best product and the most autonomy.

SA: Well, I've done the home recording thing and I think it's a drag. It can be fun sometimes, especially to work out ideas but there is still nothing like the magic of going into a real studio to record. You create your own world when you go into the studio and it becomes all about the music.

EQ: So you're trying to sell the studio space on the grounds that you're nice guys and you have enough magical space to record a ska band? That's it?

AH: Like I said, some recording can't be done in your bedroom. Can you turn your guitar amp up to 11? Can the drummer play at 7 pm? Can he fit? Do you have enough mics and processing

Just because you
can record your
band in a phone
booth with a bunch
of digital gadgets
doesn't mean that
people aren't willing
to pay for the real
estate and sonic
space that a
studio offers.

to get the drum sound you want? And God forbid that a rhythm section wants to track together. . . . They'll get arrested for disturbing the peace. Not that these issues are impassable. Sure, your resources may force you to track players individually, or to use a digital amp simulator, which may be fine, but *it is not the same* as playing through your amp, live with your band.

Let me add, by the way, that the original Dubway Studio was a very funky affair — a quarter-inch 4-track reel-to-reel, a 10-channel PA mixer, a tape loop echo, a lousy drum kit, and some amps. It was not a "pro" studio by any stretch. In fact, it was more of a "home studio" in terms of recording gear. But people booked it because they needed a *place* to record their band.

So, in other words, *space* and a *sound-friendly* environment are what a pro studio has to offer. Not everyone needs them, but plenty of people do. In addition, these features are not necessarily expensive for an artist to rent for an evening or a week. They are expensive to build and maintain long term. And, frankly, you can't underestimate their value in making music. Just because you can record your band in a phone booth with a bunch of digital gadgets doesn't mean that people aren't willing to pay for the real estate

and sonic space that a studio offers.

All this ignores the recording gear itself. Studios have better gear. And even more important, they have staff that earn their living by knowing how to use it. And that staff are typically musicians who love what they do, so they're the type whom a musician would want as their comrade/guide in recording.

As far as gear: Plug-ins are versatile and recallable and cheap and convenient. An Mbox A/D converter is OK. MP3s don't sound so good, but they certainly get a song across. Your laptop and that gear will all enable you to get a certain sound. If the sound you're after is like the Beatles' *Revolver*, or Led Zeppelin's *IV*, or Miles Davis' *Kind of Blue*, or Beck's *Mutations*, then you're out of luck. Even when it's distilled down to an MP3. At this point, good mics, discrete class A mic pre's, tube compressors, plate reverbs, and so on all sound better than their digital equivalents.

But, the home studio is a great device, always has been, always will be. Especially for exploration and creation of musical ideas. You don't want to be paying by the hour during that seminal process. At the risk of going too philosophical: Music is music, recording is recording. Your choice of gear and environment will reflect the extent that the *sound* of your music matters to you, as well as the *process* of recording. There are occasions for pro studio recording, just as there is a place for home recording.

AL HOUGHTON has worked on more than 1000 projects, built Dubway studios, and is an active musician on New York's club scene, whose credits include They Might Be Giants, the documentary film Five Films About Christo and Jean-Claude and Richard Barone.

STEVEN ALVARADO, Dubway's studio manager, used to record as a solo artist for the Hollywood-based Del-Fi Records label with founder Bob Keane of Richie Valens fame. He later moved to Nashville and worked off-and-on at Star Song/EMI and DreamWorks Records SKG before settling in New York City. EQ

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The FX Placement Trinity

It's not just how you stick it, but where you stick it

by Craig Anderton



Okay, let's talk about where you can stick your effects. Hmm, that didn't sound quite right . . . what I mean is, there are several places in a virtual or physical signal path where you can insert effects. And these places are definitely not created equal — which one you select can impact both the overall sound and CPU power consumption.

Insert, Master, or Send?
Let's find out.

READY FOR INSERTION

Insert effects got their name from the "insert" jacks located in the channels of hardware mixers. By plugging into the insert jacks, you're *inserting* (duh!), the effect into the channel's signal path.

In hardware mixers, you'll find channel inserts after the input preamp and before the fader/panpot circuitry. This allows finding the sweet spot for gain-changing, as effects

Fig. 1: With Steinberg's Cubase SX3, insert, send, and master effects all have six pre-fader and two post-fader slots, and look similar. Send effects go in a separate FX track (1), which returns to the mixer. Individual channels have inserts (2), as well as eight send controls (3). The master outs (4) have a similar structure.

generally want a diet of high-level, not mic-level, signals; the preamp can bring up the incoming signal to a consistent level for feeding the effect. Also, if the effect generates any noise, pulling down the fader reduces both the signal and the noise. With software hosts, the hardware audio interface has already set the level going into any input channel, so gain-staging isn't much of an issue.

Insert effects affect *only* the channel into which they are inserted. Typical insert effects include dynamics control, distortion, EQ (because of EQ's importance, it's often included as a permanent insert effect), flanging, and other effects that apply to a *specific* sound in a *specific* channel.

Insert effects are patched in *series*, where

output of one feeds the input of another. One exception is Tracktion 2, where you can insert a "rack" of effects connected in series and/or parallel (see Power App Alley, July 2004 issue). A program may have a maximum number of inserts, such as the eight found in Cubase SX. Other programs allow for an unlimited number, although "unlimited" translates to "how many effects your computer can run at one time without screaming pathetically for mercy."

In a hardware mixer, insert effects are mostly mono. But in a virtual mixer you usually want to apply stereo insert effects to stereo channels. While it's often possible to insert stereo effects into mono tracks, there may be unintended results. For example, if you use a mono effect with a stereo signal,



Fig. 2: Adobe Audition can add not only effects, but "effects racks" (1) into tracks or buses. Note that the tracks let you choose a wet/dry amount (2) for sending into buses, which are brought together in a separate bus mixer (3). As with Sonar, there's no "master effects" slot per se, because any bus can serve as a master bus, and include effects.

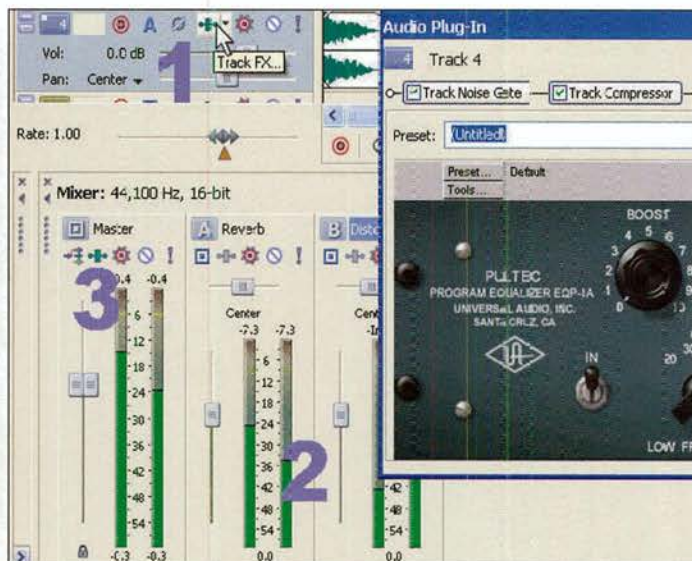


Fig. 3: Sony Vegas 5.C has inserts (1) and buses (2), but a channel can feed only one bus (although the bus can feed any other bus, or a master bus). Therefore, any send effects need to have a wet/dry balance. Note that it's possible to insert effects directly into the Master bus (3).

perhaps only the left side of the stereo signal on that channel will be processed. On the other hand, some programs won't let you use a mono plug-in with a stereo channel, and will return an error message if you try. Mono/stereo protocols vary from program to program; check your manual for details.

MASTER EFFECTS

Master effects are patched in series like insert effects, but they insert in the mixer's master output section, after the separate channels have been mixed to a stereo or surround signal. As a result, master effects process the entire mix.

These effects usually patch in prior to the

master faders, so turning down the faders also reduces any noise contributed by the effect. However, with virtual mixers, there may be post-fader effects slots as well. This is important in case you want something like a reverb or delay "tail" to continue even after you've pulled the main fader down. A post-fader slot is also where you would apply dithering (at the very end of the chain). If you applied it before the master fader, moving the fader would re-create a high-resolution audio signal, and defeat the point of dithering.

As master effects process the entire mix, these effects are generally mastering-oriented processes like limiting, multiband compression, noise reduction, EQ, loudness maximization, etc. If you want to add more than one master effect, the options are the same as for insert effects.

For mastering effects, you want really clean-sounding programs . . . which unfortunately, have a reputation for being greedy when chowing down at the CPU Cycles Café. If you throw a lot of quality master effects on top of insert effects, your computer might go on strike (and ever file an abuse complaint). One possible solution is the bus (send) effect, which uses one effect to do the work of many.

SEND EFFECTS

These effects receive their signal from an aux (send) bus, and therefore process only signals that get on the bus. The signals that show up on the aux bus come from the send controls on individual channels.

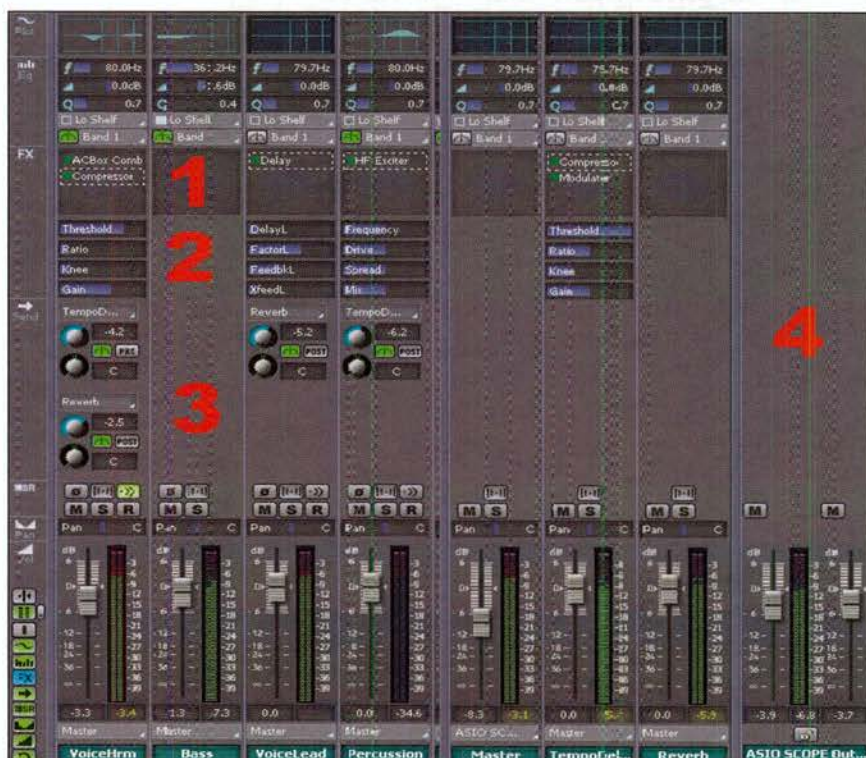


Fig. 4: Just below a channel or bus EQ section in Sonar 4 Producer Edition, you'll see the effects bin (1). Below that are four realtime controls for effects parameters (2), then the send controls (3). All insert effects are pre-fader, but all sends can choose between pre and post. Note that the hardware out on the right (4) has no effects slot, because master effects are handled through a master bus.

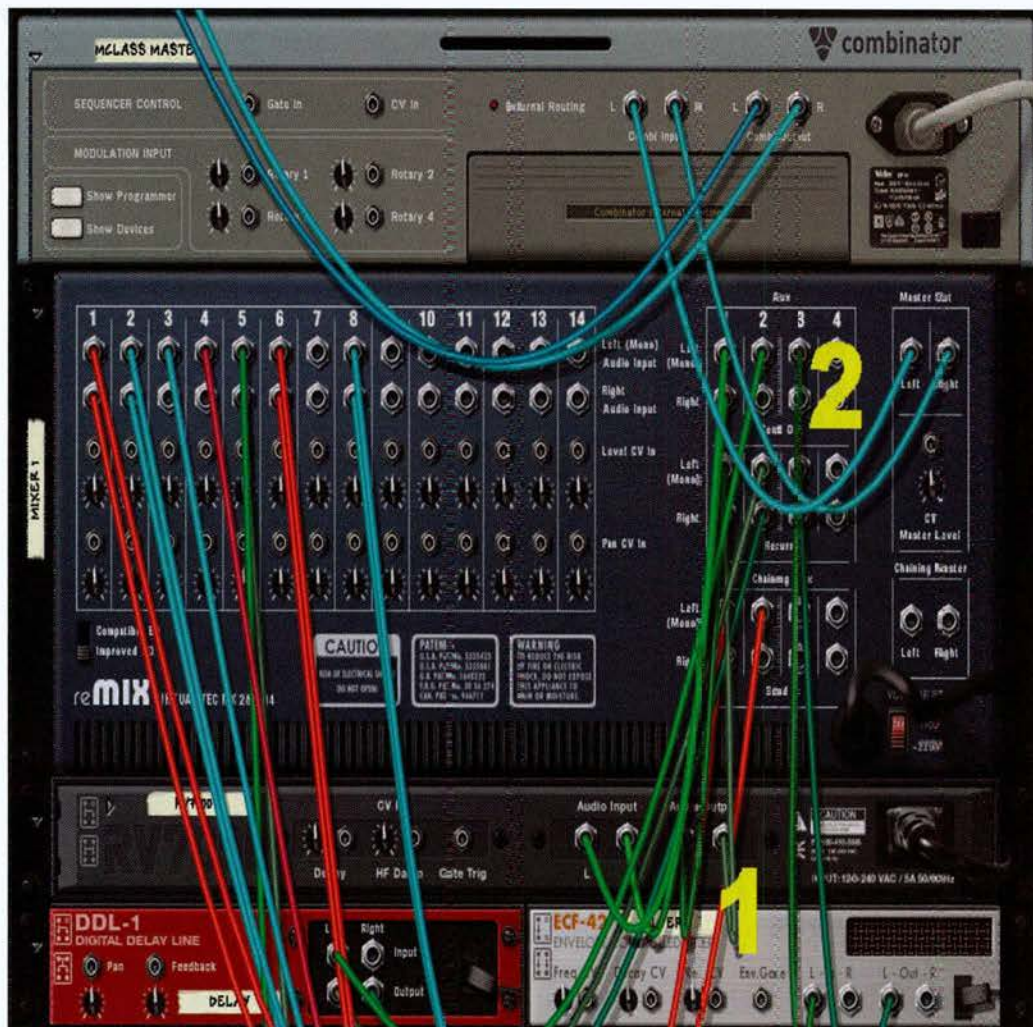


Fig. 5: Reason has an extremely flexible “insert” implementation — you can patch effects wherever you want in any audio signal path by using software patch cords (1). Effects can be turned into send effects in conjunction with the mixer module (2).

For example, suppose you want to add reverb (probably the most common send effect) to the instruments on channels 1, 5, 7, and 10. Each of these channels will have one or more send controls, each of which sends some of the channel signal (the amount depends on the send control knob setting) to a dedicated aux bus.

If a channel has multiple send controls, each can feed its own bus. So you would turn up like-numbered send controls for channels 1, 5, 7, and 10 that correspond to the bus feeding the effect. The aux bus output then goes to the effect input, and the effect output comes back into the mixer so you can hear the processed sound. The processed sound's level depends on either the mixer's return level control and/or the effect's output control.

Cubase SX3 has an interesting take on send effects, as it makes it easy to treat external hardware processors like a plug-in. The only catch is that you need an audio

interface with multiple ins and outs to send signals to the processor then pull them back into the computer again.

Note that because send effects produce sounds that are mixed in with the main channel faders, the faders take care of sending the dry signal component to the main output, so the send effects generally produce only the processed (wet) sound. Blending the unprocessed signals with the processed sound returning from the effect is what gives a good-sounding balance.

Send controls often have a pre/post fader switch. This chooses whether the signal going to the aux bus comes from before the channel fader (in which case the amount of signal feeding the aux bus is constant, regardless of the channel fader level), or after the fader (pulling down the fader also reduces the amount going to the effect). In other mixers, some sends may be permanently set as pre-fader while others are post.

If you want to add more than one send effect, you can usually patch several effects in series: Feed the input to the first effect from the aux bus, and feed the last effect output back into the mixer. However, if you want to have a number of separate send effects, you need an equivalent number of buses. For example, suppose you want to add reverb to some channels and delay to some other channels, some of which have reverb and some of which do not. You would then need two aux buses: one to feed the reverb, the other the delay.

How does this save CPU power? Easy. When using plug-ins, every effect you add requires more computing power. If you want to process several channels with the same effect, it makes more sense to stick a single plug-in into a send bus and use the channels' send controls, instead of inserting, for example, a reverb into each channel that needs reverb.

INTO THE FUTURE . . .

Most recording software follows the hardware mixer paradigm fairly closely. But as people become more familiar with operating in a virtual world, this is starting to change. For example, Samplitude can treat effects as something you attach to a single audio object; if there are multiple objects on a single track, each can have its own processing.

Another trend is the inclusion of onboard effects in virtual instruments, making additional processing unneeded. However, in some cases you still might prefer the sound of separate plug-ins compared to what's included in the instrument.

Finally, although you can't do parallel effects inserts with most hosts, remember that there's a simple workaround: "Clone" the track and put one effect in one track, the parallel effect in the other track, then mix both tracks together.

And now you know where to stick those effects. Happy processing! EQ

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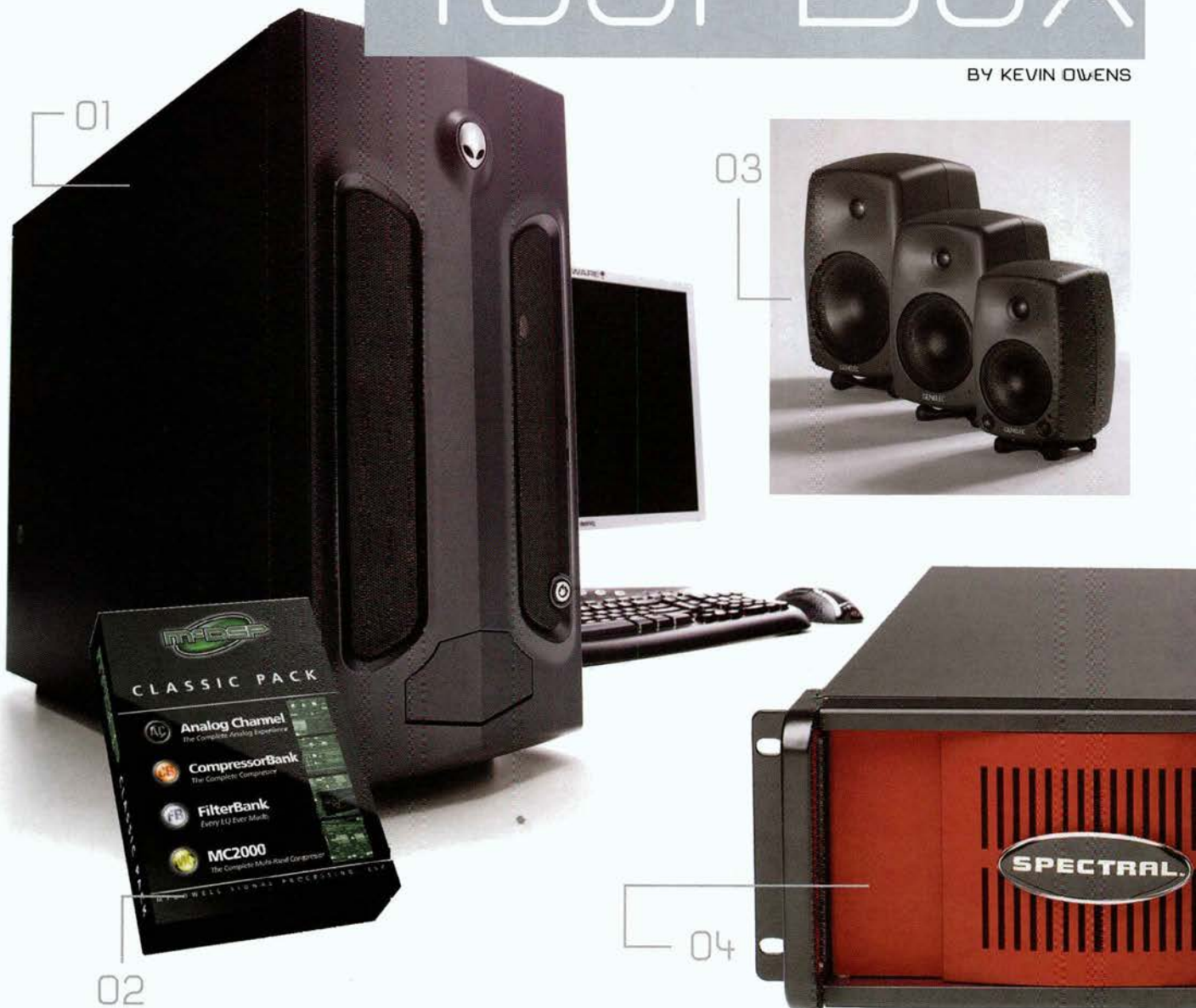
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Tool Box

BY KEVIN OWENS



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Alienware
www.alienware.com

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www.mcdsp.com

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04 SPECTRAL RM-5000, RM-7000

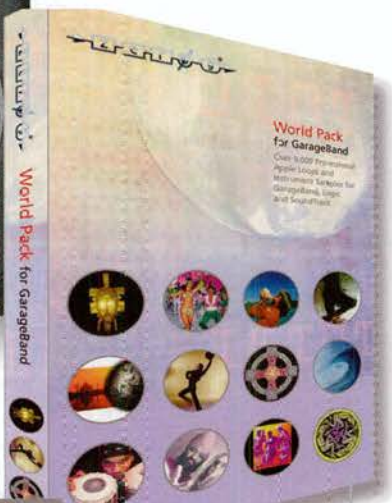
(A\$3998-\$5198est)

These Windows-based computers have been "built, tested, and qualified as meeting or exceeding the system requirements" of major software suppliers including Digidesign, Steinberg, TC Electronic, Cakewalk, and others. Yeah, but can we use it to crush our enemies?

Spectral Computers
www.spectralcomputers.com

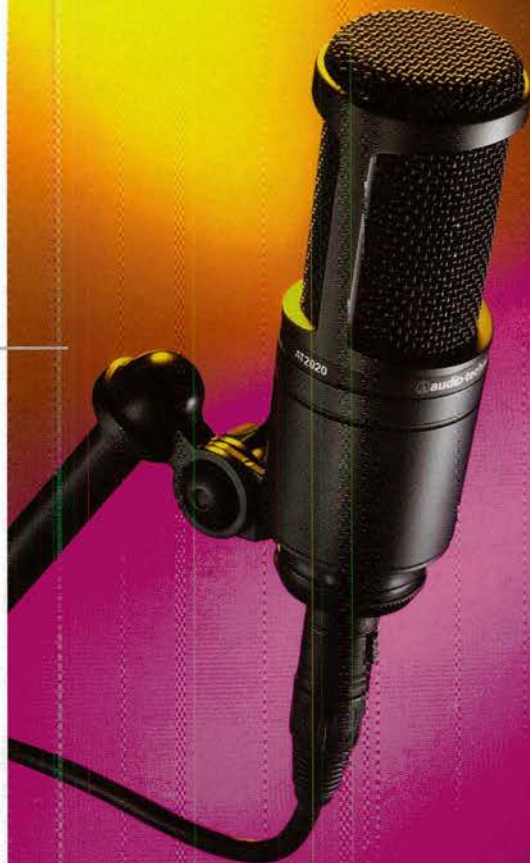


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www.zero-g.co.uk

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www.audiotechnica.com

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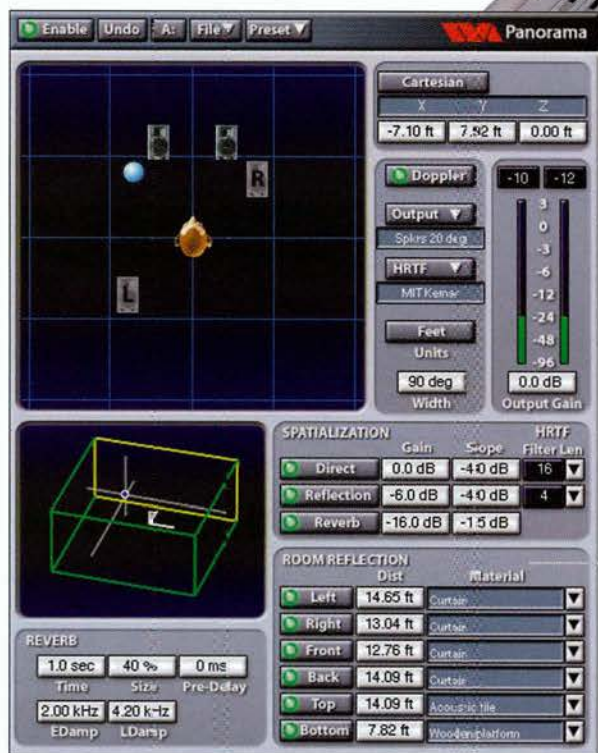
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Waves
www.waves.com

10 WAVE ARTS PANORAMA (A\$499est)

Primarily intended for headphone listening, this virtual acoustic processor plug-in lets users position and move sounds all over the place: left, right, up, down, front, back, near, and far. Mac and Windows compatible (VST, MAS, AU, RTAS, DirectX).

Wave Arts
www.wavearts.com

11 ROLAND VS THIRD-PARTY PLUG-IN DEMO (Free)

This DVD features in-depth video demonstrations of a number of third-party plug-ins for Roland's V-Studio DA-Ws (pictured) by the experts that created them. Includes trial versions of, and documentation for, each covered plug-in. Daily not: Supplies are limited.

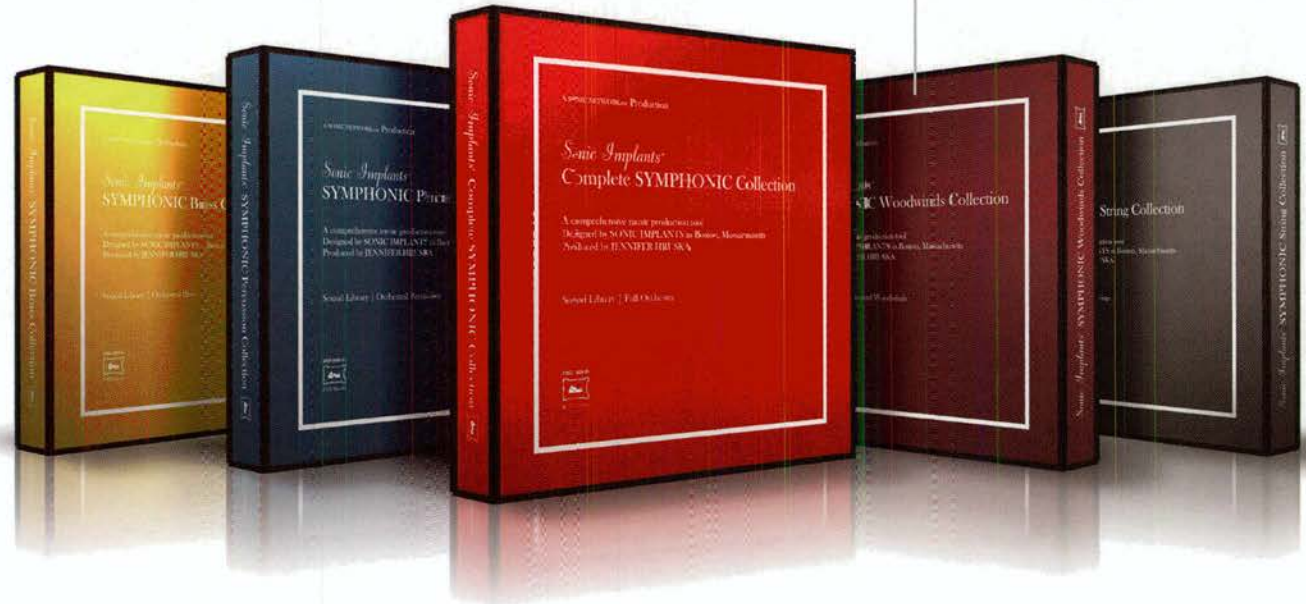
Roland
www.rolandus.com

12 SM PRO AUDIO A08 (A\$298est)

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www.kaysound.com

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SpinAudio
spinaudio.com

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Phonic
phonic.com

22 CYCLING '74 MOMENTARY INCURSIONS (A\$198est)

Depending on your definition of the word "incursion," this fourth entry in Fon MacLeod's Cycles series of audio source libraries could provide perfect background music for your next brief hostile takeover. Includes more than 900 non-looped samples ranging in length from a fraction of a second to over a minute.

Cycling 74
cycling74.com

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ams-neve.com

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by Dan Daley

"Everything is fixed or tuned to some extent," says **Jan Folkson**, who's done time with both Phil Ramone and Nile Rodgers. "There's this subculture of people that have evolved to do it, and I guess I'm one of them."

And like many programmers, Folkson has a host of stuff worth stealing when it comes to making the most of managing your mechanics.

WORKING THE PLAYLIST

"My technique of vocal comping makes extensive use of playlists. If you aren't hip to playlists in Pro Tools, you should really take the time to learn them. When I track vocals I record each successive pass onto a new playlist on the same track. When it comes time to comp, I'll first create a new playlist and name it 'vocal comp' and then start listening to each take phrase by phrase. Once I've chosen the one I like most, I'll select it and hit 'copy.'

Changing playlists keeps

my selection 'in place' in the edit window, so now I just need to hit 'paste' and the phrase is in the comp track. I'll then 'tab' to the end of the region (so I know exactly where the new paste needs to start) and move on to the next phrase and repeat the process.

Once I've got the whole song comped, I'll go through and clean up all of the edits."

Playlists also come in handy for other edits. "I do a lot of jazz and orchestral work where there often isn't a click track," Folkson explains. "On nearly all of the projects that I record, the ensemble will do multiple takes of a piece. It'll be my job later on to cobble the best bits together. The orchestra is typically recorded live with no overdubs. I'll group all of the tracks and create playlists for each successive take. When it comes time to edit, I use the same approach as I do for comping vocals, even though I'm usually cutting across lots of tracks. Typically, I'll make notes so we'll have a map to work from. I'll create a new playlist across all of the tracks that will serve as a comp and I'll go through each take (playlist) and copy and paste each section to the new playlist.

Because tempi, dynamics, and start times are going to be slightly different for each take, editing becomes a bit trickier and requires some critical listening. I often use the up and down arrows in Pro Tools, which allow you to mark in and out points on the fly. So I'll listen to the existing take and hit the down arrow where the edit needs to take place. Hitting the 's' key (with focus key commands enabled) will trim all of the tracks at the point I marked. So now I've got my 'out' and need to get my 'in.' I'll select the playlist that has the next bit of the song and mark the 'in' the same way that I marked the

'out'. I'll then copy the selection and paste it at the 'out' point of the comp playlist that I've already trimmed. Usually the edit will require a bit of adjusting. One technique that I use all the time is control + +/-, allowing you to keep your edit point where it is and nudge the audio within. Once the timing is good I'll often need to caress the edit point of each individual track. Since the orchestra is often recorded all in the same room and the room is a big part of the orchestral sound, you need to take the leakage into account when considering your edit point.

Tal Herzberg, Folkson's counterpart on the West Coast, has spent years working closely with Ron Fair and Jack Joseph Puig. "Programmers are the engineers of the 21st century," he proclaims, "and engineers without programming chops face the problem of losing out on some of the more technically challenging but more lucrative gigs."

Like?

Like flying in vocals, or other parts, to other sections of the same song

2 THE BUT HOW? CHAPTER

Herzberg measures all of the passages in bars and beats, creating a verified tempo map for the entire song. Then, he will include one previous measure to any section he is about to transfer.

"If chorus 'one' starts at measure 17, and I need to insert it into the second chorus at measure 43, I'll copy from bar 16 and insert it at bar 42," he explains. "It gives me a blank header that I don't need to trim."

Creating a drum track, though, is considerably more complex. "If I have a song that's supposed to have a funky sort of groove, for instance, I'll look into my own musical experience to recall a song that has a groove like the one I'm looking for, something in the same pocket," he says. He'll choose two bars that epitomize the feel he wants, record them into Pro Tools, then trim and process it so that it fits the exact timing and BPM of the track he's working on. Next, using Beat Detective in Pro Tools, he'll overlay what he now calls the 'groove template' over the track he's working on, fitting the new track eighth-note by eighth-note (sixteenth-note, if necessary) to the new track. This allows the live drummer from the sampled track to "play" the parts for the new one.

"Since I'm repeating the same two [sampled] bars over and over again, you get a very consistent rhythm pattern," he says. "But since the drummer is actually playing the new samples,

you get a little of the human feel — the hits that come a little before and after the beat. It's not a 100 percent, mathematically precise, drum program: It has humanity to it." [Herzberg then scrupulously erases all of the original sampled groove templates so only the new samples remain. IP law, it should be noted, has yet to get around to allowing a copyright on the movement of a musician's arm. —Editors.]

Programmer **Mark Dobson**, working with Jimmy Douglass and Matt Serletic, is a speed freak out of sheer necessity: The pace of sessions lately has him more often in the studio and more often needing to do things as fast, and as completely, as possible.

3 FASTER VOCAL COMPING

"If I have four lead vocal tracks that I need to comp into one, I'll lay five tracks out on the [Pro Tools] screen," he says. "The top track is the comp track; the four below it are the sources. As you get your comp track together and you want to audition individual lines, just leave the section to be auditioned blank on the comp track. Pro Tools will automatically play the next unmuted track below it in that open spot. So you just unmute each track where you want to compare the vocal and mute the other three tracks."

Jim Wilson, moving beyond editing and other digital manipulation, programs musical parts. Drum and synthesizer tracks, developing custom sound patches, and recording and customizing drum samples in the process, Wilson's trick is to tend to put programming into the production process at an earlier stage.

4 MAKING THE PARTS FIT

"I had co-written a song with a young artist whose style is Latin pop with some hip-hop elements," says Wilson. "In putting the arrangement together, I used Stylus RMX for the loops and used the drag and drop feature to place the loops as MIDI files within the project window using the most current version of Cubase SX3 on an OS X10.3.8 Mac dual 1GHz G4. I had him sing the melody over the loops with a basic keyboard part for pitch. I put a simple chordal synth part down to outline the harmony and give me an anchor for the arrangement, then tackled the bass part. Next, I went back to the loops and deleted certain parts in sections to give the song dynamics. We then brought in a guitar player to add two acoustic steel-string strumming parts *à la* flamenco-meets-pop. I still needed an acoustic gut string ad-lib part but we were running short on time. Rather than point out specific places to have him fill around the vocal,

I decided to just let him play a bunch of licks over the track. He understood the style of playing that we wanted so I just made three comments: Make the fills short and groovy — no more than a bar or so and 'in the pocket' — leave a little space between the licks (natural breaks for editing), and have fun. I told him I would edit the parts later so don't worry about mistakes or even stepping on the vocal. Needless to say, he played some great stuff because of the lack of confines.

"First, I listened through the entire track with just the rhythm and gut ad lib parts playing, noting which guitar licks I liked. This allowed me to concentrate on the groove and feel of the licks regardless of the melody or chords in the pitched instrument parts. I did the same at the end of each lick but placed the splice a couple of beats beyond the end and added a two-beat volume

ramp. This allows any 'over-ring' or ambience around the microphone to trail off naturally but keeps any additional noise floor out of the soundbite. I created two adjacent mono tracks and used the drag-and-drop feature to place the best licks on one of the tracks. (Hold 'option,' click and drag the waveform, then before releasing the mouse, hold 'command' and release the mouse, then release 'option' and 'command': This leaves the original track intact.)

"Next, I started listening to the full track again minus the gut string tracks and noted what places needed fills around the vocal or instrumental parts. I used a few of the licks in their original location and copied those to the third track. This is where the eighth-note grid tool pays off.

After copying the lick to the approximate area that needed a fill, I would try listening back with the lick nudged forward or back in time to hear where it would sit best in relation to the vocal and track. For some of the licks, I just pasted in a different ending note to match the chord and it worked.

Rhythmically, some of the fills ended up sounding more syncopated because the original accents were delayed or advanced an eighth-note in time."

Brian Montgomery's work with Al Schmitt and Arif Mardin is legend. While he's currently working on edits for Donald Fagen's new solo record (produced by Fagan and recorded by Elliot Scheiner), Montgomery will dish."

5 ON TUNING: DRUMS & GUITARS

"On all of these projects, as the Pro Tools engineer, my main objective is always to keep the recording process as transparent as possible to the artist," says Montgomery. "The key to achieving this is through speed and organization, and key commands are crucial to making anything happen quickly with Pro Tools. There is nothing worse than when a session comes to a screeching halt while a bunch of people stare at a screen as someone pokes around menus to complete an edit.

Montgomery on editing: "Editing loud, distorted rock guitars is challenging. Heavy distortion can often make it difficult to visually tell where the actual attack of a note is on a waveform display. Try recording the direct output from a D.I. (before the signal hits the amplifier) along with the amp signal to two separate tracks. Mute the D.I. track so that it's not heard and assign it to an edit group with the 'amp' track.

When editing, using the D.I. track as your visual guide will make seamless edits much easier. The added bonus is that now you also have a clean guitar signal to 're-amp' in case the original amp tone needs a makeover at a later date."

And on stereo drum replacement: "Many people are very familiar with using Digidesign's SoundReplacer to replace drums with mono samples. What many people don't know is that SoundReplacer can be used to trigger stereo drum samples as well.

Next, create a new stereo-audio track to be used as the destination for your stereo sample. Select the regions in the original snare track to be replaced while also selecting the empty area below on your new dummy mono-audio track. Open SoundReplacer and choose the new stereo-audio track as your destination. Be sure that SoundReplacer is set to Stereo Mode and assign either a stereo interleaved or dual-mono audio file as your sample.

HOT GUITAR PLUG-IN TIPS

Plug-ins benefit from higher sample rates; you can really hear the difference in the distortion of the NI Guitar Combo plug-ins. But this stresses out your computer more, so sometimes it's best to record guitar parts early, get the plug-in settings the way you want, then "freeze" or render them as hard disk tracks so the tone is captured early — before you start adding lots of other tracks and plugs. —SK

The point at which point latency becomes objectionable varies for different people, but we've found guitarists are really annoyed if latency approaches 20ms, and ideally, you want it well under 10ms. This includes the latency from your audio interface's converters, the USB or FireWire bus buffering, the recording application's sample buffer, and any additional latency introduced by any other factor. —PO'C

Using headphones can really help tighten up the feel, since each millisecond of delay corresponds to about a foot of air. If your amp's speaker is 10 feet away, that's 10ms of delay through the air; so if your digital simulator has 10ms of delay, listening to it through headphones gives about the same feel. —JB

Re-amping is one of the strongest points of plug-ins like Guitar Rig and Guitar Combos, and one of their most popular applications. It doesn't get much more comfortable than re-amping completely within your host — no patch cords! —SK

For re-amping, a lot of guitarists like hardware-based systems. They'll use Amp Farm to record a track unprocessed while hearing the plug-in live, then the amp modeling gets tweaked in the mix. —PO'C

One of the main difficulties with amp simulators is that the tone is defined by more than just the plug-in; the sound will be very different with different guitars/pickups, DI's, and converters. You can't just plug your guitar straight into the line in and expect it to sound good. It's not just impedance; a good converter with at least 24-bit conversion is necessary to provide enough dynamic range and a low noise floor. —JB

Some guitarists make the mistake of using a variation on ASIO, like ASIO DirectX or ASIO MME. They think they're using a low-latency driver, but they're not. Always use the driver that was supplied by the soundcard manufacturer for that particular piece of hardware, and check the Web for updated drivers. —SK

Many users run Amp Farm on already processed tracks from an amp, PODxt, etc. to give the tone a bit more of a slant one way or another as part of a mix. —PO'C

Although people always talk about latency and drivers as the most important part of an interface, the input impedance is crucial. We even provided a dedicated hardware guitar interface with Guitar Rig. With our Guitar Combos, we recommend that people use interfaces with dedicated "instrument" inputs designed for guitar or bass. —SK

Amp plug-ins aren't just for guitarists. It seems about half of what's run through Amp Farm is non-guitar tracks — punching up and munching up drums, keyboards, vocals, and pretty much anything else. —PO'C

It's a misconception that latency relates to the microprocessor you're using. Through-latency is affected mostly by system architecture and the soundcard's design, not CPU power. It doesn't matter how fast a computer you have if the soundcard drivers are poorly written. —JB

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Room with a VU

by Carly Milne

- STUDIO NAME:** Centerline
- CONTACT:** Lawrence Wells
- LOCATION:** Santa Monica, CA.
- KEY CREW:** Patrick Hildebrand, Willie Brown, Howard Lipp
- CONSOLE:** Yamaha 02F with TC Finalizer, Yamaha 4416
- MONITORS:** Mackie HF824, HFE, Alesis, Custom monster sub
- EFFECTS:** Vintage Tape echo, the usual outboard stuff, and a host of digital plug-ins. Reason, Re-Cycle, BFD, Sylus
- OUTBOARD:** Avalon pre's, a large collection of vintage and modern/array of floor pedals, in 6 guitar and bass pods, Marshall, Orange, Fender, Leslie.
- MICROPHONE PREAMPS:** Avalon VT737 sp, Pre Sonus Digimax & VXP, dbx 383
- MICROPHONES:** Neumann U87 A, Shure 57s, 53s, AKG C-414/C-1000, and Audix D-1 D-2 D-3 D-4 clip on drum mics
- COMPUTERS:** Apple Dual G4s MOTU 2408 interface, Mac OS X running Logic Audio loaded with plug-ins and soft synths.

In Santa Monica, California, nestled among buildings holding entertainment powerhouses Viacom, HBO, Sony, and MTV sits Centerline, just 26 blocks from the ocean. "We call it the Wizard's Kitchen, they call me the digital wizard," says Howard Lipp, president and producer of the studio. "Just about every TV and film and agency, as well as the big management firms and entertainment law firms are right here. You can ski an hour from here and surf down the street. The weather is the best. Unfortunately the traffic is the worst, so paradise has a price."

But the price seems to be worth it, as Lipp's love of music has paid off. A musician for 32 years, Lipp studied computer engineering and physics in college until a career in cable TV gave

way to pursuing his dream career, which led to the opening of Centerline. "I've been involved in recording and studied at Newhouse School of communications and interned and engineered at a lot of studios, so designing and opening a studio was as natural as falling asleep," says Lipp. So why the name Centerline? "The Centerline to me is the road less traveled, the untraveled path. The fall line to skiers, the death alley to bikers. Straight ahead, balls to the wall, no fear."

Though Centerline does boast a celebrity clientele, Lipp notes the studio is giving out his dual ambition to develop both film/TV projects and independent musicians. Lipp is most passionate about this aspect of the studio. "I believe that there's room in the hearts of music fans for all music — there just may not be room on a store shelf," he says.

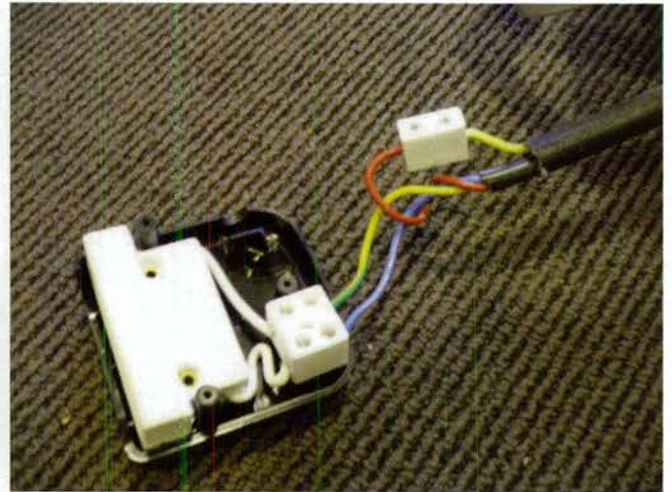
With the coolest vibe of a converted schoolhouse circa 1941, Centerline offers a control room with a 20-foot a-frame ceiling sporting a huge fireplace and great sounding drum room, musicians with years of recording and producing experience at your service, the ability to sync to picture, and 72-hour turnaround on most composing projects. Notes Lipp, "We have turned around tracks for film, television and advertising in under 48 hours from phone call to master. The single most important part though is our context around producing. Our job is to bring out the best in whatever project is in house."

But for this music lover, the best part of running the studio is — obviously — the music. "I love music and musicians and creating and helping fledgling careers get a leg up," says Lipp. "To me, music is the first true universal language. Music expresses the full range of human experience, emotions, and feelings... ever those that are hard to put into words can be fully expressed in music." Amen.

**HEY, CX READERS. WANT US TO FEATURE YOUR STUDIO?
SEND PICS AND INFO TO mail@juliusmedia.com**



Someone could DIE soon unless SOMETHING is done about this



Vista goes live on Footy Show

After first trialling Jands' Vista lighting console in the Channel 9 studios, Andrew Veitch, lighting director for Channel 9 in Sydney, decided to go live to air with the desk using it in the outside broadcast of the Footy Show held at the Gold Coasts Convention Centre last month.

"I liked how you could use the pen to group things easily - you could copy, paste and add things very quickly," said Andrew.

"It was great how you had all the gobos on the tablet in front of you so you could quickly grab a

colour, grab a gobo and lock it all in. It's a very different way of using a console but I liked that. With a Wholehog it's much more laborious; with the Vista it's all there in front of you; just do it, record it and play it back. Simple!"

Channel 9 lighting operator Mark Albright noted, "Once you get used to the fact that the Vista is nothing like a Wholehog and more like a PC, it's a great operating system," he said.

"It's user-friendly, has good help functions and has nice lay out. It's also got a really extensive effects library, which is excellent, and you can easily make up your own effects, which was fantastic. It certainly is a good console to use."



Here's the story: This par can is branded KUPO, and straight out of the box **this can was wired RED wire, positive, to EARTH**. The guy who purchased the can, (at this time we will not name anyone), says that his RCD saved his life. Otherwise he would have been badly electrocuted.

While at SMPTE, with Louise Brooks as my witness, I challenged a factory representative from Kupo, who was exhibiting under the KUPO banner (which means, and lets be clear about this, it was a KUPO factory employee, not an Australian). I said to the guy: "I am concerned about safety issues and quality issues with your Par Cans. Why are some made to a reasonable standard, and some made to a completely poor standard?" He relied that they have a cheaper range of KUPO cans available from another factory in another country. He (the KUPO employee) was point blank uninterested in the conversation, or me.

There have been previous concerns regarding KUPO Par Can safety. I call on anyone importing or selling this brand to publicly withdraw all KUPO electrical products AND to properly check any KUPO before sale.

If nothing is done now, and someones kid dies, anyone profiting from known faulty product could face time in jail.

- Julius Grafton.

Do we REALLY need RCD's?

Someone asked me the other day at a bump in, "Do we really need one of those; don't they just cause problems?" So I got to thinking, do we really understand why we use RCDs (residual current devices)? Don't they just cause problems?

What is an RCD, or be it an ELCB (earth leakage circuit breaker), Safety Switch etc.?

RCDs, or residual current devices, have been around for a long time. They are not devices that have popped up in the last 15 years just to make life difficult.

I grew up in a mid '60s house, which had a big, black ELCB installed in the switchboard; years later, working as an electrician, replacing 30-year-old ELCBs was not an uncommon task for me to perform.

An RCD basically works on the theory that "what goes in must come out". If there is an imbalance between active and neutral, that imbalance must be going somewhere, and that is to ground (Earth). This current can be deadly if you become the means of the imbalance getting to ground. This is where the RCD comes into play, breaking the supply.

There are four different types of RCDs: Type 1 through to Type IV. The main differences are the trip times (measured in milliseconds), and the trip currents (measured in milliamps). Types 1-2 are used in 'people protection' etc., and range between <10mA and <30mA with different trip times. Types 3-4 are mainly used in situations where nuisance trips may be a problem, and in the protection of equipment and cables; they range between <30mA through to <150mA-<300mA with different trip times.

In the Standards for Film and Television, Shows and Carnivals, and AS3000, an RCD of 30mA or less shall be used on all final sub circuits. Why 30mA or less you ask, and why are some people using 100mA RCDs?

Studies have been done on the effects of electrical currents and what they do to the rhythm of our hearts.

That's not the groovy type of rhythm, but the pacemaker in our brains that keeps our heart beating to the right beat. Basically any current over the 30 mA does unpredictable things to the heartbeat and can send the heart into ventricular fibrillation (irregular heartbeat, like a wobble or a quiver); this has the potential to cause death. Yet under 30mA the chances of ventricular fibrillation are much lower than if the current was 40mA; it becomes very unpredictable what happens over 30mA.

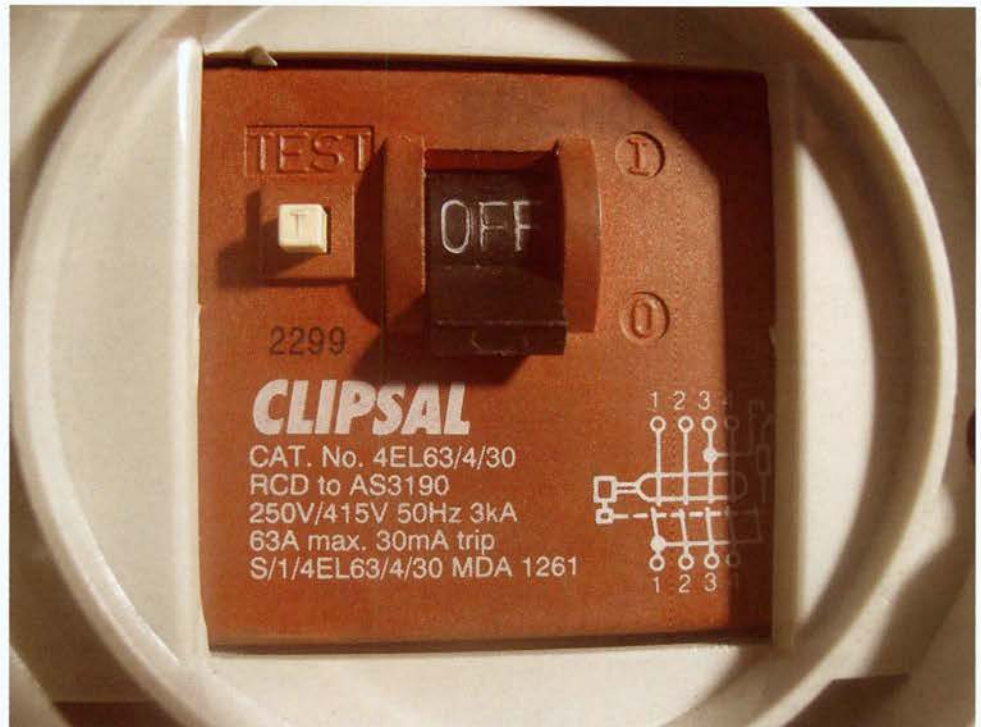
You may find 100mA RCDs in some installations, and these may be of a 'solid state' type or of a 'magnetic' type (solid state/electronic RCDs are said to give less nuisance tripping due to the fact that the solid state device is not affected as much by transients and harmonics caused by things like switchmode PSU ballasts), yet the Standards say you must have an RCD of 30mA or less on your last circuit; so the 100mA RCD may be used on your main supply or main generator etc. and then a 30mA shall be used on the circuit that your lamp, desk, fogger, power amps, or followspots etc. may be on.

So we have an RCD on our circuit; do I still need a circuit breaker (CB)? Yes!

The CB is there to break the power supply in the case of a short circuit or overload.

Suppose there was a fault on your followspot; the resistance to earth is really low (being almost a dead short) so the circuit breaker breaks and all is good. If that resistance is very high, and not enough to trip the CB, you might come along and touch your followspot while standing bare footed on grass. The current is going to say, "Hey fellow electrons, here is a much easier way to Earth, via this guys hands and feet." Zap! One very smelly followspot operator. Yet, if there was an RCD in line, the slightest bit of current flow via the high resistance path would still have been enough to trip the RCD, and the circuit would have been broken: No smelly operator, and no trip to Emergency.

RCDs are not going to solve every electrical situation that may



occur; electricity is a weird and wonderful thing; care and sensibility still has to be taken...and wearing shoes could be a good start!

An RCD is an important part of your distribution system. It is written in the Standards that you shall use them. Not should; not maybe should; and not omitted because they may cause problems (they will only cause problems if there is a problem to start with!) They are there to protect you and me and make sure we make it home to our wives/husbands/partners and kids. They are part of a safety system, not the only system, but designed to work along side of Tag and Testing and common sense. So the next time something trips an RCD during a show, don't think of it as a just a nuisance problem, even though the producer and client are yelling at you. Just be glad the RCD worked, and that you and your crew are safe, and you get to go home at the end of the gig.

By Jeff Morgan
Senior Lighting Technician
Electrician

Martin MAC700

After wetting our appetites with the release of the MAC550, Martin have just released the highly anticipated MAC700 moving profile fixture. Richard Neville arrived at Show Technology as the first units came out of their road cases.

The MAC700 marks Martin's entrance to the increasingly popular 700w class of moving light – a class already made highly competitive by fixtures such as the High End X.Spot and Vari*Lite VL2500. With these fixtures already established in the market, Martin might appear a little slow off the mark. However, from the moment you fade up the MAC700, it's clear that this fixture has been worth the wait.

Martin's latest fixture is easily the most fully featured moving light the Danish company has ever produced. It boasts an array of features including improved CMY colour mixing, rotating prism, one static and one rotating gobo wheel, iris, animation wheel, variable strobe and 14 – 30 degree zoom, all of which sit in front of an extremely bright 700w Osram HTI lamp.

The 700 shares an almost identical body to its brother – the lesser featured 400w MAC550. This similarity in design also extends to the parts inside the fixture which will prove to be a smart move by Martin. The new 550 / 700 use the same road case, and parts such as gobos can be easily swapped between the two units. Show Technology's Andrew Winslade also pointed out that servicing the fixtures would also be easier with the shared design. Like the other newer Martin fixtures, it takes less than half a minute to boot up. After that, you strike the lamp, and that's where the similarities with the 550 end.

If there's one word that sums up the MAC700, that word would have to be bright. In open white, the 700 projects around 15,000 lumens – not bad considering that the MAC2000 sits around 16,000 lumens. While the output is nothing short of stunning, it's worth considering that the MAC700 is one of the few non-1200w fixtures that have enough lamp power to compliment their extensive range of colour and graphical effects. The 700 still looks bright with a gobo, animation wheel and a mixed colour in place – something that is unfortunately not the case with many similar sized fixtures. The 700 also boasts an incredibly flat field in comparison to many other fixtures, and the advanced dimmer system ensures a perfectly smooth fade almost all the way to 0%, with very little beam distortion or unevenness on the dim down.

While the 700's gobos contain a few familiar patterns from the 550 and older MAC 500, a new selection of gobos will give designers more than enough to work with. The rotating wheel houses six indexable rotating gobos, while the static wheel holds 9 metal gobos. The standard set of gobos contains some great 'theatre style' breakups, a number of nice patterns for aerial effects, and an unusual 'pizza' gobo made up of shattered dichroic glass fragments. An interesting addition to the usual array of gobo rotation, indexing, scrolling and shaking is the 'random gobo' feature, which jumps through different

gobos at the touch of a button. A number of additional gobos are supplied with the MAC700 which include a traditional cone gobo and a few other designs that are reminiscent of older MAC250 and MAC500 gobos.

The animation wheel is the same in design and operation as the wheels found in the MAC2000 and MAC550. It's easily interchangeable and works well with the standard gobo set in a variety of focuses.

The CMY colour system has been slightly tweaked, offering operators a CMY mixed red that is easily closer to a primary red than any other Martin fixture. Elsewhere in the spectrum, the 700 mixes a great primary green and continues to mix a good range of pastel colours like other Martin fixtures. Colour mixing is incredibly uniform during fades, and more than fast enough during quick snap changes. Speaking of snap changes, the MAC700's colour wheel seems to have



Tested

learnt its speed from the smaller Martin 250 series – colour bumps are quick and precise, making them perfect for dance party or concert environments where fast colour bump speeds can be taken advantage of. The colour wheel features standard primary red, green and blue filters, an orange and pink dichroic, one CTO and one CTB filter, and interestingly, a half minus green filter, which along with the electronic ballast, should make the fixture appealing to the television market as well.

While the 700s zoom has by no means the largest range on the market, the 14 – 30 degree zoom does offer the operator enough to work with. Upon considering the size of the fixture and the number of features packed into the relatively small head, it really is a surprise that they managed to fit the zoom system in at all!

Control of the fixture will take up 23 DMX channels in its standard 16bit operating mode – just one channel less than a MAC2000 – or a whopping 31 channels in 16bit extended mode. The 700 has three speed modes that can be set using the fixture menu, and can also be switched between normal and 'studio' modes – with the studio mode being quite possibly one of the quietest operating modes heard in any fan-cooled moving light.

While the 700 weighs in at 34.5kgs – a few kilos heavier than the 500 and 550 – it's been well designed to keep riggers and maintenance technicians happy. A new style of Omega clamp can be fitted to the square base of the fixture which allow clamps to be adjusted to compensate for different truss sizes. Features such as dual 3 and 5pin connectors, tilt locks and quarter turn screw access to the fixture head have been carried over from other MACs, as has the easy to read and almost universally understood menu system. Inside the fixture, the modular design each component has been made even easier for service with the addition of a new spring-loaded release which allows for the quick release of any internal module. Service techs will also be please to know that it's possible to clean both sides of the front lens assembly simply by sliding the zoom lens back – there's more than enough room to get around inside the front of the fixture to clean the main lenses.

The MAC700 is in short, an excellent fixture. It's almost like the Martin R&D team pinched the best features of the company's MAC range – the 250's movement and colour speed, the 2000s animation wheel, the 550s size and varied gobo selection – and merged them all into one feature packed unit. It's bright, offers a great package of features that compliment each other and is sure to be a winning



The Mac 2000 inspired lampgate has been moved for easier access

product for Martin. In my humble opinion as a designer, I think it's quite possibly Martin's best fixture to date.

Tungsten, Anyone?

This year, moving light competition seems to be centering around the race to build bigger and better tungsten fixtures. While tungsten moving lights have been highly popular and respected since the introduction of the Vari*Lite VL5 around ten years ago, it seems that the release of the VL1000 tungsten profile fixture (right) has sparked a new wave of moving light innovation. Robe, Clay Paky, ETC and Coemar have all released new tungsten products in the last year and the internet is abuzz with rumours of what Martin and Vari*Lite may have in store for the upcoming major PLASA and LDI trade shows.

Tungsten moving lights use external conventional dimmers or internal single channel modules to dim a globe similar in appearance and operation to any profile or fresnel lamp. The result is a beam with a colour temperature

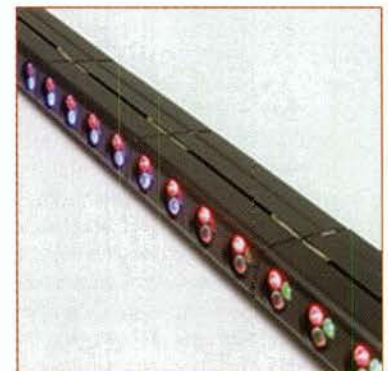
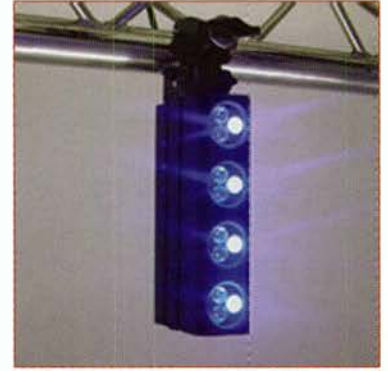


around the 3200[K mark, which makes it more suitable for theatrical use, especially for front light onto people's faces. Lamp costs are generally cheaper than discharge lamps, and many designers favour the great colours that can be achieved with the combination of tungsten lamps and dichroic colour mixing systems.

In the last year, fixtures such as the ETC Source 4 revolution and the VL1000 have made their way into television studios with their near silent operation modes, thanks to their cooler operating temperatures and need for fewer fans than discharge moving lights.

Stay tuned for more reviews on the expanding range of tungsten moving lights as competition heats up around the world.

- Richard Neville



CHROMA-Q Color Block

One Fixture - Endless Solutions

The Color Block DB4's modular design, comprehensive range of fixing options and advanced effects engine allows users to easily create a powerful and versatile LED system using stock or just one generic fixture type.

The Building Blocks of Intelligent LED Lighting

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ACN: R U UFC

(Up For the Challenge)?

by Richard Cadena – PART ONE

"The march of science and technology does not imply growing intellectual complexity in the lives of most people. It often means the opposite." – Thomas Sowell

L8R on this year, there's a possibility that one of the most anticipated control protocol standards will be approved at long last. In preparation, I've been practicing my acronyms. Check this out; OMG, ACN is S2B approved ADN. Translation: Oh my gosh, ACN is soon to be approved any day now.

Why all the TLA (three-letter acronyms) and XTLAs (extended three-letter acronyms)? GYA (glad you asked). FYI, ACN is a suite of protocols that work together by dividing and compartmentalizing separate functions associated with controlling a lighting (and whatever else is on the network) system. About the only thing it has in common with DMX is that they are both TLAs. Beyond that, ACN is far more complex and it involves many more concepts, many of which are represented by three letters. At times, it's challenging just to tell your PDUs from your UDPs. So FGS (for goodness sake), B ready 4 the onslaught of the TLAs.

The ACN Suite of Protocols

ACN is not a single protocol like DMX but a suite of control protocols and languages that work together in order to distribute data for the control of entertainment technology over a network. It is designed as a flexible system that can adapt to a number of hardware environments as well as to advances in technology. For that reason, the functions of the suite are split up according to function and divided into layers, each of which concerns a narrow portion of the entire process.

Because it is bi-directional, not only can a controller send data to a fixture, but the fixture can also send information back to the controller, much like RDM. For example, the controller might ask the fixture for its current address or its current operating temperature. The fixture can then respond by sending the correct data back to the console. ACN uses portions of TCP/IP (Transmission Control Protocol/Internet Protocol), which is the set of communications protocols on which the Internet runs. As such, the transport layer of ACN, or the part that sends packets of information, has similarities to the Internet and to Local Area Networks or LANs.

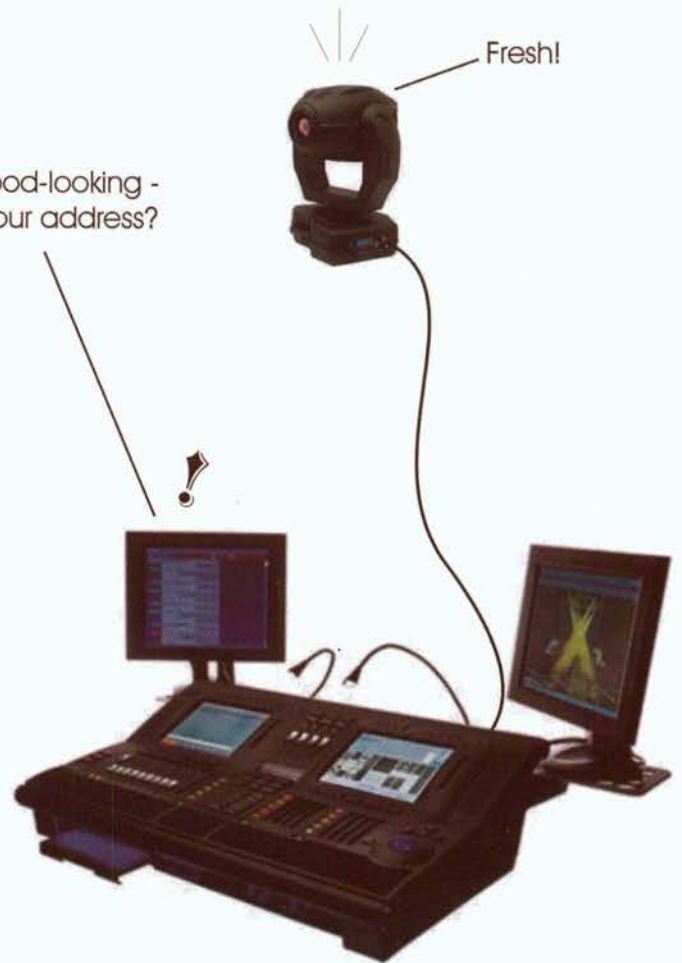
ACN is strictly a software protocol, not a hardware protocol, and it does not specify how to build the infrastructure such as the cables, hubs and connectors, that are needed to physically transmit data. It does not specify the type of cable or the type of connector to use, as does DMX.

Instead, it relies on existing technology and infrastructure such as Ethernet, WiFi, Firewire, optical fiber, Token-Ring, FDDI, PPP, etc., to carry the data where it needs to go. It can take advantage of existing hardware and off-the-shelf accessories such as routers, switches, bridges and hubs by riding on top of the underlying infrastructure. It will accommodate several controllers functioning on the network at one time, thus allowing several programmers to program a show simultaneously in a multi-user programming environment.

Alternatively, it will allow the network to be subdivided, allowing, for

Hey, good-looking - what's your address?

Fresh!



example, a controller in one hotel ballroom to control the lights in that room while another controller in another ballroom simultaneously controls the lights in that room. It will also accommodate the use of remote focus units or remote consoles which can be plugged into the network at various locations. In general, it will allow a lighting control network to behave and operate in a similar manner as does the Internet. And in fact, it is designed to operate just as effectively over an application-specific network, such as a network of consoles, as it will over an existing LAN or WAN infrastructure, including the Internet. An operator should be able work over a network thousands of miles away from the system with the same effectiveness (minus the live visuals) as working in the same room as the system.

Unlike DMX, ACN is a scalable protocol, meaning that a system can be designed for any system, large or small, using any number of addresses or channels up to 4,294,967,295 (32 bits). It will be a "plug and play" system with a utility which monitors the data link and discovers which devices are on the line, much like RDM.

Each device will be monitored, managed and controlled using a Device Management Protocol (DMP) by "Getting" information about it and "Setting" the values of certain properties of it. Anytime a new device is added, it will be automatically configured after the system discovers its properties using a Device Description Language (DDL) as part of the ACN protocol.

ACN Elements

At the heart of the ACN protocol are three main elements; the Device Description Language (DDL), the Device Management Protocol (DMP), and the Session Data Transport (SDT).

Device Description Language

Device Description Language, or DDL, is a text language for describing the characteristics of a device, its properties and how they are used to control that device. The essential job of DDL is to describe a model of a device representing its functions as a set of variables or properties in order for the console to be able to parse the data.

It tells the controller what the device does, which variables or properties are involved, and it describes the behavior of those properties. For example, in an automated light that can pan 540 degrees, the root property is the automated light (called the "parent" property), and the pan function is one of its "child" properties. The maximum allowable pan value (540) is a child property of the pan function. How the maximum value (540) is to be interpreted is a function of the "behavior" of that property. For example, 540 could be degrees or it could be stepper motor steps. A separate DDL specification describes the behaviors associated with a device, and there is an Annex to the DDL protocol with a standard set of behaviors that will be appended as necessary.

A root property can have several child properties, such as pan, tilt, color, gobo, etc., and each of those properties may have several child properties, and so on. The entire hierarchy of properties defines the device in terms of a written model.

The device model is written in a subset of XML, or Extensible Markup Language, which is a standard for describing data in such a way that it can be understood by computers and humans alike. For example, the following information is a portion of DDL describing the pan and tilt properties of an automated luminaire.

The first line indicates that it is a DDL packet.

The second line indicates that it is in reference to a device.

The third line is a comment line to help the operator (not the machine!) understand what is to follow.

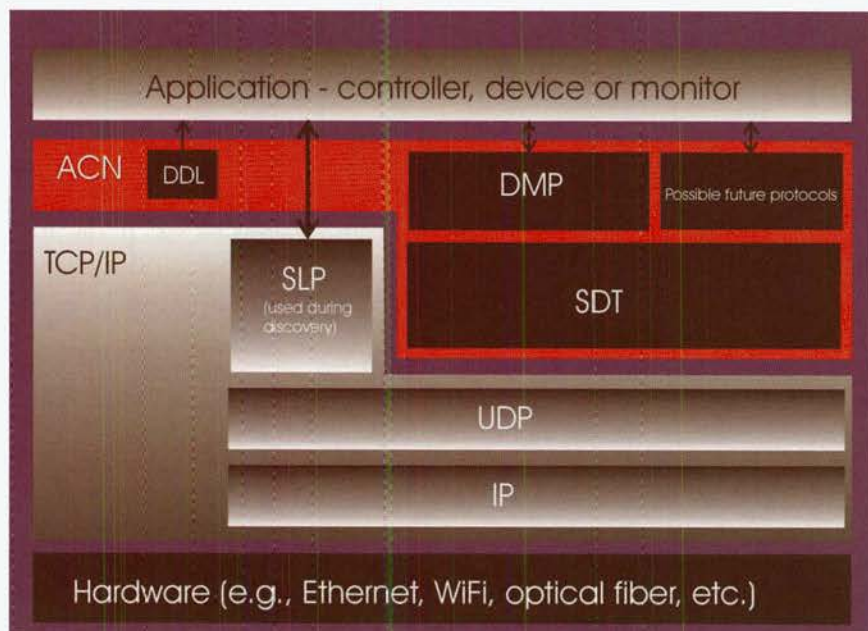
The fourth line assigns a label to the property being described.

The fifth line is the access protocol.

```
<DDL> (this is the root property)
<device> <!-- description of an automated luminaire -->
<property label = "Automated Luminaire">
<protocol protocol="ACN-DMP-1" address="1"> (this is the access
protocol) <property>
```

The Protocol Interface is that part of DDL which helps map it to various protocols. If the property in question is, say, the intensity of a device, the Protocol Interface gives the controller the proper information it needs to use a particular protocol such as DMX or DMP.

To be continued in the next issue of CX.



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Cold laser show

Laserpro has provided a 7.5 minute laser animation show at Thredbo, NSW to be shown over 8 weeks, which will be followed by a flare run and fireworks display. The show, which commenced on 17th July starting nightly at 6.00pm each Saturday will run until 3rd September 2005. The laser show highlights Toyota's involvement in bringing people to the village to enjoy the surrounding natural wonders.

The laser animation depicts the 4 seasons at Thredbo. Various 3D models of Toyota vehicles are used in the animation. The animation then moves to the theme that Toyota leads the field in pioneering hydrogen based environmentally friendly fuel cell technology.

The animation was created through the use of 3D animation and modeling software, and rendered into laser art comprised of over 9000

frames. The laser itself is the latest in full colour diode based technology, modified especially for the icy conditions. Recent advances in diode and scanning technology have made the whole project possible as complex images are no problem for the laser unit, which projects over 300m onto the base of the mountain at the Merritt's chairlift. The laser animation is the most ambitious laser project to date. The result is a highly reflective snow covered mountain that lights up with laser art for a spectacular show.

"The challenge with laser projection in the past has been the ability to project clean, crisp images. This has now been resolved as the scanner mirrors now can move at 60 000 points per second. As a result we are developing new markets and a new core business: laser as an advertising medium," said Chris Tooley, from LaserPro International.

Robes for Velvet Rope

Velvet Rope in Cairns recently undertook a lighting revamp utilising Robe fixtures supplied and installed by Progear.

The Velvet Rope included a combination of Robe ColorMix 250AT's, Robe ColorWash 250AT's and Robe Scan 250XT's.

The Robe ColorMix 250AT is a static colour changer with a Fresnel lens featuring CMY colour mixing plus an additional colour wheel of six dichroic colour.

Other features include beam shaper, frost filter, dimmer shutter and barn door. The fixture can be floor standing (floor stand included) or ceiling mounted.

The Robe Wash250AT moving heads include ultra smooth CMY colour mixing that offers a fantastic spectrum of hues, a motorized zoom effect ranges from 3 - 32 as well as the



extremely silent cooling system and movement. The colour wheel offers 6 saturated colours + open, using Robe's renowned SLOT&LOCK system. Frost filter and a beam shaper are available on the effect wheel.

As with all other Robe AT moving heads, 16-bit resolution is available for movement, colour wheel positioning and dimming.

The Scan 250 XT is also ideal for the clubs environment where an element of colour and sparkle is required. Features include gobos wheel with 6 rotating, indexable, replaceable gobos - open; colour wheel with 11 dichroic filters + open; remote focus, rotating prism, frost effect and dimmer and shutter.

Andrew from Progear says, "We have been watching the Robes for long time and have been impressed with their reliability, and with the value for money: you can't afford to ignore such good products."

Martin Maxedia

Richard Neville roadtests the new Media Server from Martin

The Martin Maxedia system is one of several media server products that have become popular in recent years for their ability to control vision content using DMX 512 or similar lighting-friendly control methods.

You might not know that the Maxedia was born from one of the 'original' media servers that first brought about the 'digital lighting revolution' – the Eureka 3D – which came on the market around the same time as the early versions of High End's Catalyst and the RADlite media system. The product was developed by the same team who produced the Case and later, the Maxxyz console, and it's operation and appearance shares a similar look and feel to it's console counterparts. It's been interesting to follow the development of media servers, and the Maxedia's development has taken a few steps in a different direction to many other media servers in the last eighteen months.

The Maxedia system is neatly packaged into a well thought out road case which houses the main computer, keyboard and input and output terminals. The system also supports an external touch screen monitor, although a standard mouse or trackball could be used in place of the touch screen.

The supplied hard drive gives users around 200Gb of space to

store an enormous amount of media on both internal and removable hard drives. Expansion ports allow for the addition of even more removable hard drive space, and the several USB and Firewire connections could also be used for other removable drives. Maxedia uses a portion of its hard drive to run the embedded Windows XP system, much like the Maxxyz console. The system also comes pre-loaded with an arsenal of video and plugin content too, so it's ready to operate out of the box.

The Maxedia accepts an easily broader range of file types for playback than any other media server. Users can import files in AVI, Quicktime, WMV, MPG1, MPG4, JPEG, BMP or even Macromedia Flash format. Regular users of media servers will recognise the benefit of this – it often gets frustrating having to convert file types on the fly to use with other servers, so the Maxedia's ability to cope with a wider variety of files is sure to attract operators.

When you first see the user interface of the Maxedia, you'll notice that this media server is geared more towards content and cue creation through the PC interface, as opposed to via the lighting console. A series of graphical menus allow you to quickly and easily import files into libraries, each represented by a pictorial thumbnail of the content the file contains. This makes it easy to locate and identify files, which also do not need to be renamed or re-formatted to import into the library.

The software can function in a number of different modes, and



Tested

operators can choose to run the system solely from the PC interface, solely from the lighting console, or interestingly – using a mixture of both. For example, the vision operator might be able to control the actual content, but the lighting console can be assigned to control colour grading and the dimming of the content.

Users can assemble 'cues' using the monitor – mixing content, adding two and three dimensional effects, masks and other editable functions – and construct a cue list on the Maxedia system, which can then be triggered by the lighting console using the system's DMX input. Alternatively, cues can be triggered, assembled or crossfaded just by using the lighting console.

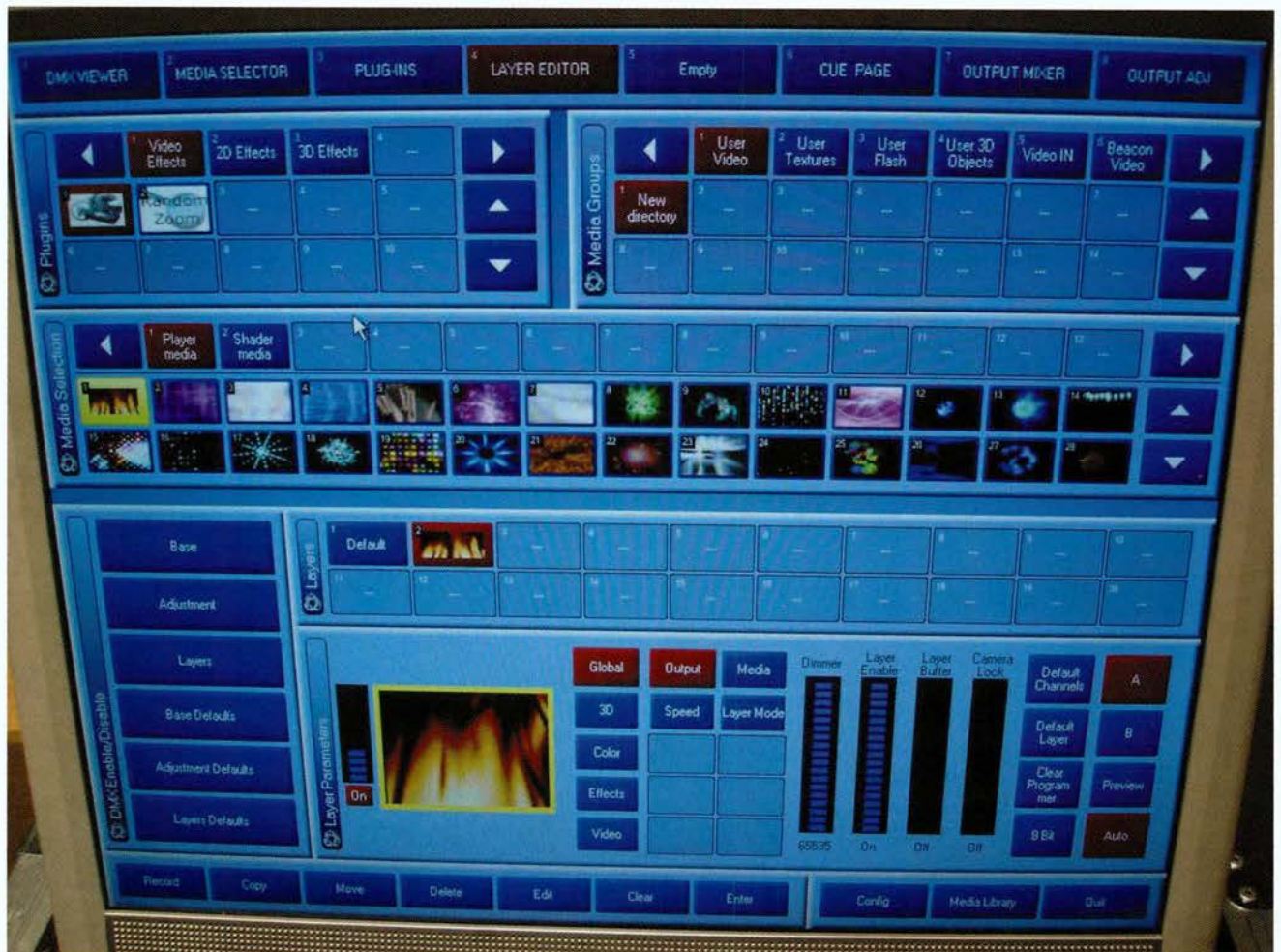
Another mode allows for the simple crossfading between different media files with a huge range of customizable transitions, morphs and other effects. In a dance party environment, this simple mode of operation will let you select a clip and transition before hitting the "Go" button to execute the fade. The highly graphical monitor interface has large, clear buttons that are optimized for use with the touch screen, and the system can easily be figured out by spending a few minutes playing with the different functions.

The advantage here is that the Maxedia is a system that can easily be used by either one or two operators. In my experience with media servers, it's often a rush to juggle both lighting and vision programming and content manipulation on the job in a limited amount of time. The Maxedia allows for two operators to work on the same system – one could create and cue up all the content, and then, come show time, the lighting operator can assume as much or as little control as they want over the vision content.

Other neat features include the ability to setup user profiles with customizable layouts suited to how individuals like to control the system, and a series of pre-loaded masks which can be easily applied and modified to the video output – perfect for when you have to project onto a unusually shaped screen. The Maxedia even has the ability to keystone images.

On top of all this, the cleverly designed rack unit for the system hosts connections for composite video, SDI video, S-Video and DVI devices. There's also a spot for a live input, so you can easily introduce a live camera feed to your content, for example. Left and right XLR connections are present for audio input and output, so in addition to controlling the lights and vision, you can also put your two cents worth into the audio department! Console control is via DMX512 or ArtNet and is straightforward, made easier by a DMX input screen that can be viewed on the Maxedia which gives the operator an in-depth view of everything they are controlling. For those lucky enough to have experience the Maxxyz console, the visual layout is almost identical, and the control panel for the Maxedia can even be loaded onto the Maxxyz's main touch screens for fully integrated control.

The Maxedia has come a long way even in the last twelve months, and I'd strongly recommend taking a look at all the new features it sports. The multiple user and control interface will be particularly attractive to any lighting programmer who has ever been stressed trying to program video and lighting at the same time, while the simple, intuitive user interface make it usable for almost anybody – you don't really need any lighting knowledge at all to control the Maxedia via the PC interface.



ETC AVAB Congo

Richard Neville discovers that Congo doesn't have to be just your favourite gel colour...

The Congo is the first lighting console born from the new ETC / AVAB development group, following ETC's purchase of the respected French lighting manufacturer in 2003. Since being released at PLASA a year ago, the Congo has enjoyed growing popularity, perhaps climaxing when a small army of the consoles were used to control the lighting and vision for this year's Eurovision song contest where they received nothing but praise from the design and programming team, cementing the Congo's reputation – at least in Europe – as professional, stable and fully featured yet theatrically minded lighting console.

When the Congo landed in Australia, ETC's Controls Product Manager Sarah Clausen came out to run us through the theory behind the Congo.

The Congo successfully merges the traditional fader based theatre console with a powerful moving lights controller, using the best of both worlds to come up with a unique, easily understandable operating system and user friendly layout.

Looking at the console, it can easily be divided up into several physical sections that sum up its design. In the top left corner, forty "direct selects" offer the operator 40 hard keys (per page) with adequately sized LCD labels for each. These buttons can be assigned to groups, screens, palettes and effects.

Below, 40 masters give fader and flash button access to sequences, again with clear LCD labels for each. Two master playbacks give the operator precise control over two sequences, or cuelists – much like other ETC consoles. Faders can be mapped to dimmer channels quickly so that levels can be set with real faders as opposed to a keypad – something many programmers will appreciate. The fader mode is easily set with a small knob that switches between channel mode, master mode and a "Jam mode" which is being developed as a way to use faders to 'busk' through a live show with moving lights. The faders are not motorized, presumably a sacrifice made to keep the cost of the console as competitive as it is. The main playback even offers two spring loaded rate controllers so fade times can be manually slowed, sped up or held at the touch of a button.

The navigation area of the console contains the main user interface – a large, clearly labeled keypad, intensity wheel and dedicated hard buttons for parameters such as time. A centrally located trackball arguably negates the need for a mouse to navigate the three monitors supported by the console, and also reminds the operator of the console's current operating mode as it glows in different colours. Sarah suggested that the imposing ball could also be used to represent the operator's mood: "If it's red, go away!"

A small LCD window provides a command line style view, meaning operators don't have to search for a view of what they're typing on a monitor.

The moving lights area of the console offers quick, customizable

control of both fixtures and media servers – something the development team is incredibly proud of. Operators are able to define custom channel layouts and real world values for all the parameters selectable via the four encoders, and choices made are clearly displayed on the large LCD screen above.

Finally, the Congo features six assignable "Independents" – six knobs that can have any number of channels assigned to them for dedicated control that run independently to the rest of the console. Again, the theatrical background of the console shines through as Sarah suggested using the section for control of house lights, work lights or even haze and fog machines. Their prominent position on the console and ability to run and be adjusted without affecting programming means a few less things for the programmer to think about, and also allows non-lighting people to quickly and easily adjust house light controls, for example.

The Congo also has an interesting 'output mode' dial too – a



three position switch that allows you to switch between "black out" for instantaneous black outs, "on" for normal use and "freeze" which effectively freezes the DMX output, allowing the operator do anything on the console without affecting the frozen DMX output.

ETC / AVAB have approached the design of the console with the operator in mind. Everything is clearly labeled and allows the operator to label any LCD with customised, detailed labels. Sarah described the console as being extremely intuitive and easy to navigate, to the point where regular users would easily be able to use it without searching for buttons or scrolling through multiple levels of menus – what the ETC tech team call 'muscle memory'. Even the colour scheme of the monitors has been carefully thought out so that the colours and layouts don't distract the operator from their view of the stage, but are clear and bold enough to display all the necessary information. The Congo prides itself on minimizing the use of soft keys, which reduces the dependence on soft menus or touch screens.

Like the encoders and labels, the content of the external monitors is also highly customizable. The console's output can be viewed as a graphed display of dimmers or channels, a spreadsheet style parameter view (called the 'attribute view') reminiscent of the Hog output windows, or even as a completely user built graphical

layout, with fixtures positioned around the screen in configurations based on the lighting design. When we loaded the Congo's media server show file from Eurovision, a graphical display of little Catalyst icons provided an easy way to select a server and view its current settings at the touch of a button. Custom symbols can also be applied to different fixtures so as to easily distinguish different parts of the lighting rig.

The Congo is heavily dependent on its monitors, and an operator would probably need to use at least two with the console for general use – something worth considering in Australia where it's often difficult to get one monitor supplied with a hired console. That said, the amount of information available to the operator through the monitors is almost overwhelming.

Playback views provide exact graphical representations of crossfade structure and allow for the direct adjustment of fade times and other cuelist parameters in a spacious, easily understandable environment.

A fully integrated help system offers a full user manual that is searchable, and even includes animations to help operators through some of the more difficult programming aspects.

Fixture libraries can be edited in full or built from scratch through the main patch menu in a spread sheet view, while other programming and console setup options can be easily accessed through a familiar 'tree view' menu structure.

For anyone not experienced with earlier AVAB and ETC consoles, the Congo's operating syntax takes a bit of getting used to. The operating syntax is based on the "reverse Polish" used by early AVAB consoles, which makes some commands seem a little backward for users, like me, used to more modern lighting consoles.

The Congo comes standard with 2 5pin DMX512 outputs, but can be expanded with the addition of a ETC Net2 or ACN Ethernet unit which can increase the output to 12 universes of DMX. Network connections allow for the networking of consoles in possibly the most simple way seen, and user privileges and settings are easily and quickly defined. A remote focus unit is also available, as is the capacity for PDA remote control. An offline version of the console software is available for free on the

www.avabconnect.com website – something well worth downloading if you're interested in learning more about the Congo. The Congo is definitely a well thought out, high end control console. Perhaps the most interesting point is that Jands, ETC's Australian distributors, have not priced it in line with other high end consoles as one might expect. For any company looking for a powerful alternative to the Hog 1k or equivalent consoles, the ETC Congo should be first on your list to check out. Contact Jands or your dealer for more information.

* Thanks to Sarah Clausen from ETC, and Tim Kennard and Alex Mair from Jands for showing me around the console.

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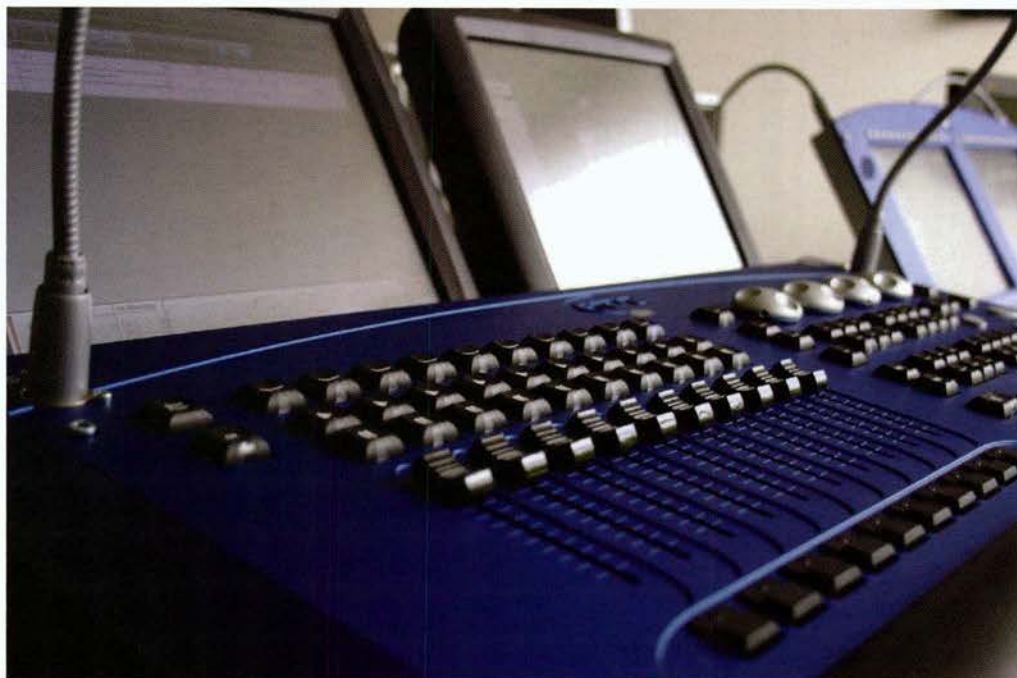
Hog iPC

Richard Cadena maps the latest iteration in the Hog saga

In the early 1990s, a young lighting designer named Robert Roth was on the Flying Pig Systems stand at LDI touting a relatively new console called the Wholehog. His enthusiasm for the product was contagious and one couldn't help but wonder why he was so fired up about it. As the years went by it became more apparent that he wasn't the only one who was enthusiastic about the 'Hog. The second version of it, the Wholehog II, became the most popular automated lighting console of its time.

This story would have a fairytale ending but for the slight hiccup the company experienced during the transition from the 'Hog II to the 'Hog III. While they were busy developing the next step in the evolution of the console, they were caught short when some of the hardware for the II became unavailable and they were forced to rush the development. But the Wholehog III was quite an ambitious leap, incorporating what they privately called the "Grand Unified Theory." The gist of the approach was that they were changing, among other things, from linear fader values like percentages and DMX values in favor of more real world values like degrees and names. And before they could deliver on their promise of the 'Hog III, the 'Hog II became unavailable, presenting an opportunity for competing manufacturers to gain market share and crack the vacuum lock the 'Hog had on the market. In short order, the company moved to correct the problem by releasing the much-anticipated 'Hog III. Still, two problems persisted. First of all, the syntax of the new console had changed from the 'II to the 'III. As a result, some programmers were not excited about learning the console all over again and they viewed it as an opportunity to try other consoles, which further contributed to the erosion of the 'Hog market share. Secondly, some programmers reported problems with stability and the rumor mill started buzzing with stories about it.

To make matters more interesting, a group of Flying Pig Systems employees walked off the job in England during the most critical



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part of the product release. Not to be derailed, High End Systems, the parent company of Flying Pig Systems, rallied and replaced the vacant employees with some industry veterans including Robbie Bruce, Brad Schiller and Scott Blair. Since that time, they have wasted no time cranking out software upgrades to the III to make it more stable, as well as developing new products, the newest of which is the Hog iPC.

The Hog iPC is a bit of a chameleon in that it can emulate a Wholehog II or a Wholehog III, depending on how it is set up in the Configuration Panel. Other than the two vertical wheels on the Wholehog III, the Hog iPC has the same hardware and layout as its big brother. Although the software can emulate the syntax of the II, in many ways it's actually much improved. For example, the USB ports (it has five of them) allow you to save your show to a flash drive, which is much faster than saving to a floppy drive. The bump buttons have been improved in that they have a more tactile feel and the housing around them has been recessed so they feel much better. It has ten faders instead of eight, and it comes with a rolling road case that has an integral handle so it can be transported like carry-on luggage.

From a software vantage point, it is virtually identical to a Wholehog II, if you want it to be, or a Wholehog III. The only difference between the Hog iPC and the 'Hog II is that the buttons are laid out and labeled like a 'Hog III, but their function is the same. So if you can program without looking at the console then you won't know the difference. Like the II, it has four universes of DMX, SMPTE, and MIDI in, out and thru. But it can be expanded to seven universes with Hog 2PC or eight universes with Hog 3PC, DMX widgets or a Super Widget. Plus, it can interface with one Hog PC Playback wing to expand the number of playbacks to 18, or up to four Hog PC Playback wings for up to 50 playbacks. It also has two external 12" Accutouch ELO touch screen monitors and it can be set up to use an optional third monitor. Because the hardware engine is a standard PC with Windows XP-embedded software, it uses off-the-shelf parts like power supplies, hard drives and CDRW

drives.

As a Wholehog II replacement, it offers total compatibility from a software standpoint and it's virtually identical from a hardware standpoint. But the real advantage is that it offers an easy path for the programmer to move from the familiar II to the III. The impetus for doing so is powerful. Though the syntax is changed from the 'II to the 'III, the new syntax is more logical and, once you get used to it, makes more sense. In addition, the 'III offers so many upgrades and improvements far too numerous to include here. Lastly, the software for the 'II is no longer being upgraded, so from this point forward the 'III will eventually far surpass the 'II.

The Hog iPC retails in the U.S. for \$20,328 and is currently being used on several tours including Chicago/Earth, Wind and Fire, Nine Inch Nails, Garbage, Krezip and the new Austin City Limits 31st season.

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