

## Another Old Fart Tells – Part 2 – The ‘90s!

**Still.. No Sex.  
Still.. No Drugs.  
Still.. No Booze.  
Just.. More Rock & Roll.**

The 1990s for most lighting and audio types heralded a new era of opportunity. Last decades' roadies had by now long turned their passion into a career as salespeople and division managers hiring and selling audio and lighting gear. Later to become business owners so they could go on to produce the “best Olympics ever”.

Not me.

By the time 1990 came around, original group “Decizion” was starting to wind back to “only a few gigs a year” status. Most of these happened at the end of each year in the “silly season”. The PA and Lighting rig started to become a service looking for a reason to exist. “St Marys technical Ministry” continued on, but with diminished numbers amongst it's volunteer ranks.

Things started to get pulled and pushed in the direction of the people involved. That's no problem for us here, because in most cases this was generally in the direction of more exciting and really wild things!

### HOW MANY LIVES CAN A MIXER HAVE?

When you have no money, you use what you have got. The '80s had been all about **building** “the System”.. but now the '90s was all about **Using** it.

In the early '90s, I became deeply involved with a number of community broadcasting aspirants in Western Sydney. First WOWFM in St Marys in 1991, then with the formation of SWRFM in Blacktown in 1992.

Back then, these groups would stage weekend “test broadcasts” to try and prove their capacity to exist. One of the classic things we did was to hold “Live Bands Days”. The first was not much more than Decision playing in the back yard of the station, mic'd up through the 26/4/2 and then put straight to air.

However the second – in January 1992, for new aspirant SWRFM – set the bar very high for many years to come. No less than nine bands were mixed direct to live radio, again using the Jands 26/4/2 with outstandingly good results and all on “no budget”. People began to notice what us Westies were doing “out here”.

The SWRFM “Live Bands Days” are now an annual industry event which continue today in 2014 **over 20 years later**. The technology has changed, but the purpose stays the same.

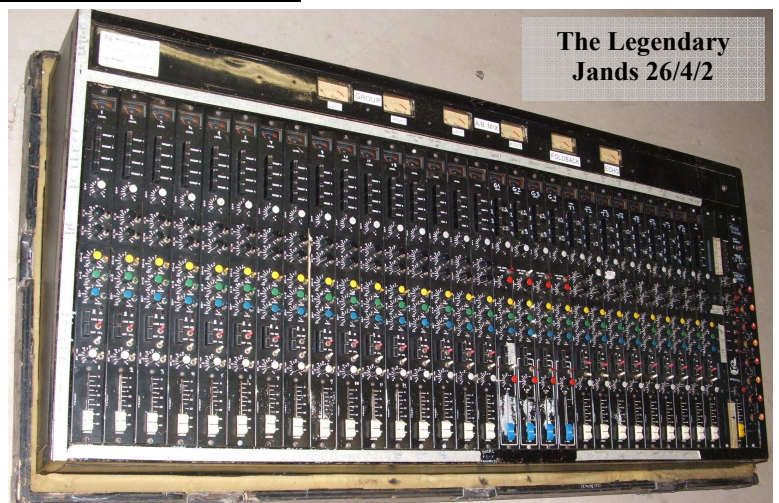
As good as it was, the gigantic Jands 26/4/2 just wasn't the beast for most of our smaller PA jobs. So in 1993 it was back to Smithys again. This time we bought home a “like new” and very compact Tascam M216 mixer. This quickly took it's place at the heart of the PA system. What happened to the Jands unit? Well.. we had spent far too much precious time and money on the 'ole 26/4/2 for it to be done yet!..

This famous and unique mixer no longer had 26 channels – it had 24. In the 1988 rebuild, we had sacrificed two channels to provide a spare parts source for the other 24. So really it was more like a 24/4/2.

*In fact this designation was also wrong* – because the four sub groups were actually STEREO sub groups. This mixer was in reality a 24/8/2 – with eight subgroup busses available. Even that was not quite right – because in reality the two track master had TWO separate stereo busses - an A mix and a B mix. So it's true designation was actually a 24/8/4! Alas like many mixers of it's era, it had precious few auxiliary and FX sends—a total of only two, in fact!



Photo : Paul Matthews & Peter Cunningham at the Tascam M216 sometime in around 1995 at Coachmans Park, St Marys.



The Legendary Jands 26/4/2

At the start of 1990, my brother Keith had established “Barnabas Studios” in Canberra with the help of yet more Smithys’ second hand gear. A Tascam 1/2” 8 track and a Sony PCM501 (anyone remember those? It’s a digital 2 track which uses a standard VHS recorder as recording medium). A few of our other toys had already made their way down there too including the old Hans Overeem Twin 100 (which you may remember was rebuilt as a Mosfet in 1987). Keith’s existing Chinese mixer was a noisy crosstalk disaster. He was looking for a solid replacement which was quiet, had good headroom and good EQ.

So almost instantly, out came the soldering iron once again! With the addition of a set of direct output stages for each of the 8 subgroup busses, the Jands 26/4/2 was converted into a very capable studio desk. A new 8 channel output stage was built and slotted in to one of the spare positions which were created after the removal of the two input channels in 1988. It was a great arrangement. It was used as a 16/8 tracking desk coupled with an 8/2 mixdown section - all in the same mixer with the “A” mix used for stereo mixdown and the “B” Mix used for monitoring.



Finally, with a “real” 8 track facility now at our disposal, “Decision” would get the studio time they deserved. They committed all their original compositions (along with many covers) to tape for their first “album”. All tracked through that same venerable Jands 26/4/2 mixer - which allegedly started it’s journey at the now famous Sunbury 1974 festival in Victoria—nearly 20 years earlier!



Photo : Jands 26/4/2 with last 8 inputs reconfigured for recording returns From the Tascam 88 1/2” 8 Track.

Photo : Close up of the new “Line Out” module (right) next to the original master . To the left is the remaining blank from 1988.

Around 1995 Barnabas Studios was forced out of its accommodation for a few years. While it took a break, the Jands 26/4/2 can back to Sydney and was subsequently sold for \$500 bucks to a newly formed “Christian Life Centre” in Penrith. At the time PCLC was non landed group (i.e. it had no building of its own) and met in rented school halls and the like. Mark, the audio engineer, had previously had experience with the 26/4/2 in the “St Marys Technical Ministry” years. He was confident he could put it at the centre of his newly built touring PA system used for the church.



Once again - out came the hot irons to prepare the 26/4/2 for yet another rebirth. This time to add a full set of multi pins to the ageing mixer frame so that it could be quickly set up as a touring unit without having to use those rows and rows of XLR plugs on the back. The result was quite an imposing (and very capable) system which sounded great, worked reliably and cost peanuts. Most of the multi core cables, multi pins and other materials were.. “pinched from work”. At the time Mark was working as a cabling tech at ATN 7 in Sydney.



Photo : Jands 26/4/2 showing the multi pins and looms Added in 2006 for the PCLC Touring system.

Photo : Close up of the Jands 26/4/2 EQ. The switches (obviously an early modification in the mid '70s) sweep each EQ filter either up or down by about one octave to create a crude but very musical parametric EQ, unique to this design.

In 1997, a rare thing happened. In a world where church splits were the norm, two churches in Penrith *actually MERGED*. These were the aforementioned PCLC and a much older church - Penrith “CFC”, or “Christian Fellowship Centre”.

Now PCFC had a chequered history in Penrith. One of it’s legacy assets was a large 1500 capacity church barn built on Frogmore Rd (near the M4) in the early '80s. It’s a place we all knew well because we had all played there on gigs many times in the past. The building (back then) was by default one of the largest barns in Penrith. As such, it was used by many other groups whenever a large capacity venue was required.

Unfortunately the house PA and Lighting systems “installed” at PCFC were atrocious. Everyone knew this. That’s why everyone always “took our own” whenever a gig at PCFC was pending. By the latter '90s, PCFC had gotten itself into deep financial trouble. So much so that the likelihood of losing the venue to the bank had become a reality. PCFC was dying and had a venue. PCLC was growing—yet did not. It was a symbiotic relationship. A cry for help from one church, answered by another.

It was decided early on that the existing house systems at PCFC were so bad they were unable to be saved. It became a case of scrap what's there, see if any components are worth keeping - and start again. Of course the budget was limited.. So it was proposed that the core of the "new" system was to be the PCLC touring system. Still at the heart of it – of course – was... the venerable and indestructible Jands 26/4/2!

One of the few components of the original PCFC PA system that was recovered was a Tascam 16/8 full size studio tracking desk dating from about 1980. Being less than suitable as a live mixing console, the butchers at PCFC in the '80s had used it by bastardizing the recording section - using unbalanced bridges between the modules to replace the tape machine - then using the monitoring section as a "live" desk.

With new accommodation in Canberra now arranged, Barnabas Studios once again stepped in and put their hand up. The old PCFC console underwent "restorative" work before being permanently housed there in 1998. It went on to record many Canberra based bands and albums before the mixer, the original 1973 Hans Overeem amplifier and other much loved heritage gear was lost. The entire facility was tragically destroyed in the Canberra bushfires in January 2003. Sadly, the original master 8 track "Decision" tapes were also lost in this disaster although 2 track digital masters thankfully remain.



Photo : Tragic scene of what was left of Barnabas Studios after the 2003 Canberra Bushfires. The rear of the Tascam 16/8 can clearly be seen. Underneath, a blob of molten aluminium marks what was left of the amplifier which started it all waaay back in 1979—the Hans Overeem Twin 100. Hmm.. This COULD have been the Jands!

Meanwhile the Jands 26/4/2 soldiered on at the centre of PCLC's main house PA through the late '90s, in daily use and sounding just fine. Despite ongoing maintenance, it had now been 10 years since our "Techmin" rebuild back in 1988. Before long the opportunity came for PCLC to upgrade the house system to something more appropriate. And that's where you might think the story ends.

But no! After yet again returning to our own workshops, the now *un killable* Jands 26/4/2 was sold yet again to another Penrith church. They installed it at the rear of their modest Baptist hall on the Great Western highway. It saw out the remainder of the 1990's there, finally being replaced in 2002 when the 1988 vintage power supply failed after allegedly being dropped by an excited (or perhaps undersized) church parishioner.

The mixer sat at the back of the hall for a few more years before they finally decided to "turf it out". Fortunately a friend of a friend who just happened to see it at the hall one day noticed it, recognised what it was and asked questions about it.

"Oh that. Yeah, please.. we want to get rid of it." *ONE LAST TIME* - and this time without the power supply - the now legendary *JANDS 26/4/2 CAME BACK HOME AGAIN*. Where it has finally been laid to rest, awaiting it's story to be told one day in a "Museum of Rock and Roll".

### So.. a potted history of the Aussie audio cat with ninety lives?..

**1974** – First constructed at JANDS then (allegedly) used at Sunbury festival in 1974. Photos do exist of this festival's FOH position which clearly show (from behind) a mixing desk which for all sense looks identical to the Jands 26/4/2. Photos have also been unearthed of a unit of similar vintage in use at an ABBA concert in Sydney in 1976 with none other than Howard Page at the controls.

**1977 to around 1980** – Allegedly on tour with Cold Chisel for at least part of this time. Still in Jands (now JPJ) hire inventory. Probably the largest Australian built touring console in existence in the 1970's.

**1981 to around 1986** – Unsure – unable to trace unit's history over this period once it left Jands. Likely used as a club house system in Sydney. Suffice to say it ended up at SMITHYS PA & STAGE GEAR some time in early 1987.

**1988** – Completely stripped and rebuilt as 24/4/2 unit with new power supply by St Marys Technical Ministry.

The main change was to completely replace the 16 pin mix bus ribbon cable and all ribbon connectors.

**1988 – 1992** – Used as main mixer in Techmin touring PA. Also used for radio broadcast gigs

**1993 – 1995** – Modified as 24/8/2 Studio mixer and used by Barnabas Studios, Canberra

**1995 – 1997** – Modified (Multi pins added) and used as touring PA unit for Penrith CLC

**1997 – 1998** – Installed at PCFC / PCLC venue in Orchard Hills as main house system desk

**1999 – 2002** – Installed at Penrith Baptist Church as main house system desk

**2004** – Recovered and preserved without power supply. Tested in 2007 using a bench supply and found to be still in working condition. Stored and still in existence in 2014.



Photo : From the JANDS archives. The desk to the right of the legendary Howard Page during an ABBA Concert in 1976 looks like the 26/4/2—however it has since been confirmed as not being the same desk. However this illustrates how this desk began it's life in the earliest days of professional rock sound in Australia. The desk in the photo lacks the EQ mods and has a different channel configuration to the 26/4/2.

## STAGE AND SCREEN

Meanwhile back in the lighting arena - a different kind of gig was waiting. In 1994, the Power Rangers came to town.

For my sudden thrust into the challenge of building futuristic film set cockpits for the spandex clad heroes, a fast and cheap method was needed to create and control a convincing display of little flashing lights. Ironically the quickest way to do this turned out to be sitting right there in the same part of the shed where the PA and Lighting systems were stored.



The entirely home built, 1988 vintage dimmer rack and controller (featured in "An Old Fart Tells 1" ) was used. Addition of a set of 240v – 24v toroidal transformers to each channel gave the display a simple and very effective control system.

Many other components of the system were also adapted to big budget film use during the '90s.



Photo : Rooty Hill Carols—early 1990's. No stage, No power, Brass band. Behind—the ubiquitous storm brews in the west!

## CANDLES BY CAROLLIGHTS

Of all the gigs we did in the '90s, the venerable Carols by Candle light ceremonies that proliferated western Sydney on the weeks leading to Christmas always threw up the biggest challenges. Usually this revolved around the need to stage the event for little or even on a zero budget.

Power, Access, Weather and vast outdoor spaces ruled. There were the one offs, the few offs and then the gigs that ran year after year for decades. Each had it's own distinct challenges to face whenever Santa was seen in the stores.



Photo : Amplification available in and around 1990 at Rooty Hill - both home built "Electronics Australia" Twin 300w units. The lower one still exists and works today.

## ROOTY HILL

"The Rooty Hill" is an isolated 20 acres of grass in the green belt bounded by Eastern Rd and the M7, across from what is now Blacktown Sports Park. Right away it's gentle but solid grass slopes presented many a challenge just getting vehicles up there—especially when wet.

The Rooty Hill Carols gig first started back in 1987. Far from being a community event, it was a hard core church gig organised by a single local church using very traditional church performances. Very much a carols service transplanted onto the hill. A brass band would normally be the music source with a ropey choir following plus a few soloist performances, the most popular being a local Elvis impersonator.

Power was the first challenge. On a zero budget, this invariably consisted of a trailer load of single phase petrol "growler" generators. These would be placed about 30m downhill of the "stage" and have a few vans parked between them and the stage to try and shut them up.

For most of the '90s, the "stage" consisted of nothing more than a rope dropped on the grass to show where the "front" of the sloping grass "stage" actually was. From the very first gig in 1987, the point of difference in our gig was that we would always go to the extra trouble of running a second set of speakers about 50m further back from the stage. It wasn't until the mid '90s (when we got our hands on a digital delay) that these were actually delayed!

With only the odd cancellation, we did this gig almost annually from 1987 right through to 2011 when the organisers unfortunately died—and their event with them. In that time, at least a third of the gigs were pulled mid show due to storms and rain. On many occasions the entire rig would be packed with less than ten minutes from call to door closed on the trailer.

By 1998 - the organisers had managed to upgrade the stage to a Tautliner truck which itself present more than a few challenges when trying to level it on the gentle grassy slope.



Photo : Rooty Hill carols, early 1990's. The PAMAC trailer (affectionately known back then as the "TRON" Trailer for obvious reasons) doubles as a speaker platform with a Bose 802 and Hohner KB180 (2x12") for FOH. The "Useless" Etone 15" sub sits on the grass in front.

In the 21<sup>st</sup> Century, the Rooty Hill Carols gig moved to the other side of the hill where the local council had built a large sound shell style stage - the biggest advantage of which was the fact that it also had three phase power. Alas though, it lacked all the romance of the old site where punters would watch the sun set towards the Blue Mountains behind the stage (with more often than not the Summer storms would shortly follow.)

For many years this gig was done cost free until the mid '90s when a \$500 fee was finally charged to cover costs. This had risen to around \$800 by the final gig in 2011.

### DOONSIDE

Similar to the Rooty Hill gig. The point of difference here was that in most cases Decision were the anchor band on this one. As a general rule, limited three phase was available at both of the two venues that were used.

This gig was always held mid week – generally on a Wednesday night and with a late 8pm start. Very unusual for an outdoor carols gig. It also featured a very nicely presented nativity scene each year. Doonside Carols ran from around 1989 right through to 2005. And tragically once again.. the gig finally died when the organisers did!

The first venue—a field not far from their church in Kildare Rd - called for an electrical “cut in” to a nearby sewer pump switch panel to get power.

The second site was at Nurragingy reserve. This is a massive sprawling venue with a man made lake right in the middle of it. The idea was that the crowd would sit lakeside. The band and tabernacle - would be more than 60 metres over the other side of the lake!

The Nurragingy reserve gig therefore gobbled up *kilometres* of cable. Much of this was laid across through the lake in the water between the “stage” and the rest of the event. It was a huge area to light up with only 20 amps per phase. And a huge expanse of air to move with only around 2kW of power in the amplifier rack!

From memory the price started at around \$300 for the first gig and had risen to around \$1200 by the last one. Sponsors were normally arranged to cover this.

### ST MARYS

The St Marys carols ran for about 6 years in the 1990s in Victoria Park, sponsored by the local Band club across the road. Unlike most of our other carols gigs—this one had a decent budget. More gear. More power. More guys. More sub hires.

Typically a 1500 attendance event. Again - most of these gigs were anchored by Decision (or some other variant) on stage. Lighting was serious - a 24 can show with specials, festoons and two follow spots on scaffolds about halfway back into the crowd which doubled as rear delay stacks.

Audio for all these Carols gigs rarely used subs. It just wasn't required. St Marys was the exception. One of the few outdoor gigs where we had enough money to put a few kW of low end each side of the stage.

It was a long haul gig. Typically a 16 hour day end to end for four guys with a gross of around \$1500 in 1995 dollars. It ended suddenly when the Band club had a haemorrhage in the management dept. The girl who arranged the gig each year walked out - and that was that. Invariably the park must have been too far from the pokies.



Photo : St Clair Carols—Circa 1991. Two trucks back to back, in a retention basin field on Banks Drive, St Clair.

### ST CLAIR

St Clair carols was different to all the rest in that “we started it”. First held on the back of a truck in a retention basin on Banks Drive with Decision on stage and a budget of around \$600. Power was another one of those 50m runs, again cut in to a handy 3 phase sprinkler pump panel. The first one featured a lot of area lighting and a Christmas tree of festoons. Everyone was happy.

After a few years, the gig became a multi church affair collecting a CLC from Minchinbury plus one other. It then moved to nearby Mamre House, a heritage building now used as a restaurant and located on a sprawling acreage just to the West of the suburb. The budget and stakes also climbed—enough to include fireworks, a proper stage, and production to match that which we were also supplying for the St Marys event around that time.



Photo : Lighting trees @ St Clair in the early '90s. Back then these were still the PAMAC push up stands loaded with about 8 cans each, a mix of Par64's and Argaphoto Flood Cans. One needed to have some pretty serious muscles in your arms and hands to push these up when loaded like this!

Alas though, this one went sour eventually. One year, a dispute arose when I had to pull the gig mid show for safety due to rain pooling water on the stage. It got worse - the following year when I refused to put an act on who had *arrived 20 minutes after the start of the show (!)* who had not had any kind of sound check. By this time the Baptist church component had already pulled out of the committee so this had basically become just another paid gig for us.



Photo : St Clair Carols 1991. This was the first event we staged ourselves—not aligned with any other group. It then got bigger, and bigger.. And then exploded.

We suggested that if they didn't like our service.. they should try someone else. They did. I believe the gig did run successfully a few times after that into the early noughties. I have it reliably reported that they went through at least three other production firms in the process - one of them being *dB sound*. The gig eventually died a natural death when the continued infighting and feuding within its committee did its thing and volunteers just gave up and left.

### EAST KURRAJONG

Here was another Carols gig which ran for about 3 years at the height of the '90s - when doing 8 to 10 carols gigs per season within 3 weeks for us was not uncommon. East Kurrajong (only a short drive from where PA Matthews Audio is based today) was arranged by the local Fireys and attracted an unusually large 600+ crowd for this rural area.

Gig on the back of a truck - with some seriously high quality acts on stage! We gave'em a 16 can show with our F500 PA typical of the time. Main challenge with this gig was that they wanted a full light show but there was only limited single phase available on site.

In fact.. there were two single phase services available. The fireys' shed itself, and another in the community hall next door. Both of these were well over 50m from the stage. We wired both our three phase leads for two single phase cut ins (with separate neutrals) at 32A each. That gave us just enough to run the required rig.

From memory the gig was around the \$400 mark. Not sure what happened to it back then or why it stopped - but it certainly doesn't run any more!



Photo : The venerable F500 in use at Kurrajong. In the top left side port can be seen a collection of 12v globes—connected in series with the Peavey 1" throat coaxial horn to protect it against overload. These globes would glow regularly when the speakers were driven to their limit.

### KURRAJONG

This gig came our way in the late '90s. It was arranged by a conglomeration of the local Baptist and Anglican churches. They had previously gone through other production firms - but were unhappy with the skill level of their operators and their gear.

It wasn't a large gig – about 500 crowd. Lighting was a “white only” affair with no control, rather like the Doonside and Rooty Hill gigs had been for years beforehand. Again it was a truck and box stage which was a challenge for them to get in position on the difficult, grass sloped site.

Our main challenge with Kurrajong was keeping the musos happy. At the time, the “band” was formed out of both churches—with a very fussy violin playing female musical director at the helm. This gig demanded no less than 32 channels of PA - initially met through a sub hire. This prompted us to actually upgrade the Tascam M216 to a new Yamaha MG32 in the early noughties.

Forewarned about the fussy director, we took special care to upscale the system with better foldback, more sends and an extra crew member. We then spent plenty of time (more than 90 minutes) in sound check to make sure everyone was happy. They were. So the gig became another annual.

This gig also threw up one other challenge. Getting out! With no 4WD in our fleet, invariably the night would end with the grass wet either through rain or dew. This made it impossible for our ute to lift the packed PA rig and trailer out of the “bowl” that is Kurrajong park - and onto the public street above.

And invariably a solution was found each year. Just before the final steep slope up to the kerb, the Council had built a small Anzac monument surrounded by a paved area. With us loading all the cable, amp racks and as much weight as possible over the rear axle of the ute, the not so powerful 4 cylinder vehicle would be positioned so as to give it as much level gravel as possible to get up speed before hitting the wet grass slope.

Then it was jump in - start'er up - 1<sup>st</sup> gear - floor it and *drop the clutch!* Motor and wheels screaming, the collective hunk of junk would get up just enough momentum to climb the first wet grass mound before coming to a skidding stand.

Then, in a planned positioning of perfection, the ute's rear axle would reach the paved area around the monument. Suddenly the tyres would grab the dry pavers. With all its might, it would then throw the truck forward with just enough force for it to lurch up the final steep grass slope, over the kerb and onto the public road! Once here of course, the ute then had enough traction to pull the trailer up behind it.

Assuming nobody had attempted to drive down the road at that moment – because if they had then a T bone would have surely been the result! This unorthodox “escape method” was *de rigueur* for many years at this event.

Kurrajong started at around the \$1200 mark and stayed there for many years. As these years went on, the gig actually became a bit simpler (the violinist moved on..) so the price remained the same. The ending of this gig (for us) however is also an interesting story.

A number of years after we started this annual gig, PA Matthews Audio moved “into the Kurrajong district” and this gig became a local one for us. My elderly parents even ended up being members of the Baptist church there. Everyone was pretty happy.

However around 2011, they politely called to let us know that they had got someone else to do the job now and that our services were no longer required. Digging a little deeper, we were able to determine that we had been *undercut – massively* – by none other than one of the teachers of the *Nirimba college of TAFE* in distant Blacktown!

Now Nirimba TAFE runs a production lighting and sound course. They have students looking for experience, teachers on state pay cheques and rent free store rooms full of modern gear purchased for them tax free using government money.

So it was no surprise that we had been undercut by them by a massive \$700 bucks! Yep – the TAFE teacher (*using the TAFE students and equipment*) had quoted them only *\$500 bucks* to do the same job which we charged \$1200 to do more than 12 years earlier. This had been considered an attractive price at this time – with us keeping a lid on the price since.

It kind of illustrates all that's wrong with the “industry” today.. and why we no longer do carols gigs here in the 21<sup>st</sup> Century. And we've even had calls from the TAFE since—wondering if we would like to give some of their graduates students a job!



Photo : Emu Plains Carols (at the first site) circa 1995. Still the longest 3 phase cable run we have ever done to date—and at only 2.5mm cable Size!

## EMU PLAINS

The Emu Plains carols were yet another mid '90s carols gig which ran for about 6 years and was run by one of the local Pentecostal churches there.

The point of difference this time was that *for Emu Plains we did lighting only*. The audio was very capably handled by a deep pocketed weekend warrior called Trevor Jenkins. He had spent a fortune on a complete touring rig so he could cruise the suburbs and do gigs for churches for free. All good there. I hate audio anyway. It's a pain.

The first three of these gigs was held on a strategically positioned and very visible piece of grass where two highways met. Problem was, this “venue” was about as far away as it was possible to get from any kind of power. Had this gig been attempted in today's enlightened times of course - a generator would have been ordered before anything else.

However not in 1993. It's not that gen sets were too expensive back then – it's just that good ones always had to travel 60+ Km from Sydney. The cost of the gen set plus all the fuss and bother of actually getting it there, fuelling it and (worse still).. getting it back – led to alternatives being considered first.

In this case “power” was a three phase outlet on the stage of the local community “Melrose Hall”. However this hall was *well over 180 metres from where the gig was held!*

Out came the 100m rolls of flat white 2.5mm Twin and Twin and Earth “power point” cable. You guessed it – these were rolled right out and then junction boxed to every last scrap of our existing stocks of 3 phase cable. This was run out of the hall and across the grass alongside a fence to make sure no vehicles ran over it. Cable ramps? You’re kidding!

This was predominantly only a *2.5mm sq cable run*. The “industry standard” for this kind of work was 6mm Sq – and even then never over such a long distance. There’s a fair bet that at the end, the line impedance was so high and the fault current so low, that a direct short at the stage would still not have tripped the 32A breaker back at the hall.

Yes *it worked* – but there was a problem. If the phases became too unbalanced, the lightly loaded phases would shoot up to well over 240v - while the loaded ones dived below 150v. It was fun to fade up a group of say - six par cans – and the result was that half of the other smaller lights around the place (on the other two phases) would get brighter as a result!

Even more concerning, this same voltage abuse was being placed across Trevor’s PA system - many components of which didn’t like being subjected to the likes of 300 volts occasionally.

The solution used was even more bizarre. An earth stake was driven into the ground at the stage end – and then bonded to the neutral. This (plus some creative phase balancing) reduced the impedance of the super long neutral just enough to keep the voltage drop problems down to something manageable. The show went on. At this venue – for three years in a row. The rig used was a 16 can show with specials and a single followspot.

The gig later moved across the highway to a less prominent but more appropriate and larger capacity venue in the form of the local soccer field. This thankfully reduced the cable run to the nearest 3 phase power to a more respectable 40 metres but involved a switchboard cut in – something we were more than used to at our carols gigs. By the final gig around 1998, this show had become the largest outdoor lighting rig we had ever staged.

It cost them around \$300 bucks each time from memory. It ended when the church split. A significant contingent of them later heading the way of PCLC.



Photo : Emu Plains Carols. The PAMAC 12 channel dimmer rack and it’s associated 3 phase distribution board clearly seen, along with an empty cable drum which held the enormous length of TPS which formed the feed to the gig. Just to the right of the board is the earth stake—driven into the ground and bonded to the Neutral in an attempt to reduce “lazy neutral syndrome” on the long line.

## PENRITH MALL



Photo : The Penrith mall Carols ran over 3 nights in the main shopping district—nowadays High St but back in the ‘90s it was closed off as a pedestrian mall.

This gig was sponsored by Penrith CLC in the mid ‘90s when they were still non landed – before they merged with PCFC at Orchard Hills. The audio was again aptly handled by Trevor Jenkins – meaning this was another “*lighting only*” gig.

The point of difference this time was the location – in the commercial heart of Penrith. At the time a closed off mall where High St now runs. The gig featured a full band and 30 piece choir on scaffold stage in a raked “choir stair” arrangement. The gig ran over four consecutive nights before Christmas amidst the mad shopping rush.

Power – wasn’t going to be a problem this time. Three phase on tap and even somewhere to hide the racks. However being in a public thoroughfare, we were restricted in where we could place lighting supports, towers and cabling.

A single scaffold was provided for a follow spot with the other located on a building awning roof. The remainder of the 16 can rig was attached on to custom welded T Bars strapped to existing light posts in the street. It was gigs like this where the PAMAC Argaphoto “Flood Cans” came into their own – as the distance between the stage and the posts was only about 3 metres. Far too close to use conventional PAR 64’s. The weight restrictions of course also meant any other kind of “conventional” light fitting was too heavy.





Photo : Penrith Mall Carols—FOH Lighting bars strapped to Streetlight poles

Just about every single night, there was a rain storm immediately before the gig. Of course the lights were completely exposed to the weather and definitely had no kind of IP rating on them. In many cases they were soaked when they were fired up. Fortunately the rig had solid earths throughout.

The light posts themselves were steel and properly earthed. Thankfully the rig and supply were not RCD protected.. so the shows went on successfully without incident!



Photo : Penrith Mall Carols—Stand Patt 793 follow spot on the roof of an adjacent Shop awning.

### The Peavey DPC1000

By around 1996, the Jands J1000S (2x500w) amplifier we were using as our main FOH amp had given us so many problems and failed during gigs so many times that it became clear something had to be done.

The J1000S was originally obtained from Smithys in the late '80s and rebuilt by us alongside the 26/4/2. Despite it's weight it performed faultlessly for a few years before failing during a quiet gig in 1992. Thankfully unlike it's earlier 1970's designs, the J1000S had a speaker protection relay and so each time it went DC, the speakers were saved! However the *budget was not*—as each time it went wrong, it invariably meant at least another *twelve* expensive MJ series output transistors would be required to fix it again!



Frustrated and with a bit of money now in the bank, the J1000S was replaced with a new Peavey DPC1000. This marvellous piece of Class "D" modern engineering offered 2x500w in a light, 1RU package. Trevor Jenkins' PA had no less than *four* of these things in it at the time with outstanding success. Unfortunately Trevor's success didn't transcribe to our own.

After a few years of great gigs, the unit mysteriously self destructed one day at a quiet, small school gig shortly after being powered up and before any audio was applied to it. After a long trip back to the importer for repair (who changed the motherboard, costing more for the repair than a replacement unit would have cost) we thought the problem was behind us.

Alas.. No. The unit self destructed no less than *four more times* in it's "lifetime", each time being returned to the distributor who would repair it under the "repair warranty" afforded to it the last time it destroyed itself. Eventually it became pointless taking an amplifier to a gig where you needed to take another one "just in case" so on the fifth explosion.. That was it. The rig has since been powered by Behringer and Inter-M amplifiers which have never missed a beat..

### EPILOGUE—OLD EQUIPMENT PART ONE

This 1976 vintage "ROTEL" brand receiving amplifier remains in our workshops on our audio test bench. It was built this way in 1993, having originally been obtained from a pawn shop.

It was originally chosen because the amp output stage features "plug in" TO3 style NPN output transistors on the back. Over the years these have been blown up on more occasions that could possibly be counted. Often by incorrect connection to or faults within equipment being tested alongside it. No problem—just plug in another set of just about any TO3 NPN devices and it's as good as new!



This unit has been in service for a total of 39 years and remains in service today with no plans to replace it!

## EPILOGUE—OLD EQUIPMENT PART TWO

### THE ORIGINAL TWIN FIFTY

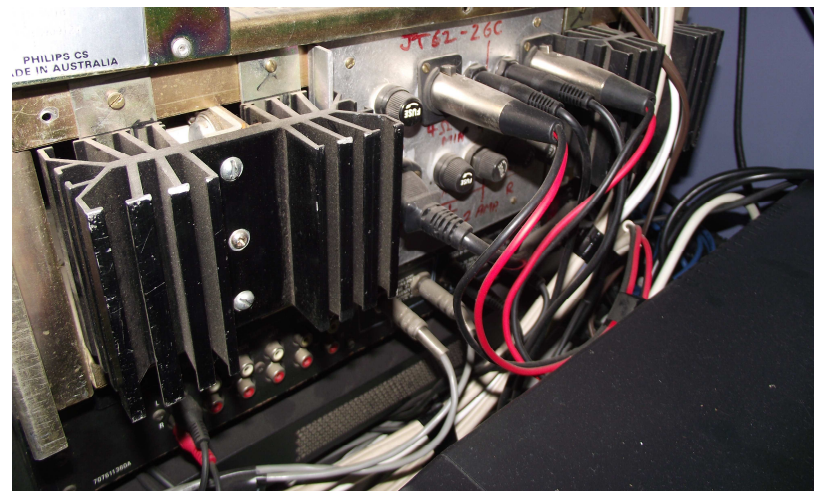
This home built Twin 50w amplifier was “rebuilt” in 1988 however it’s history goes back far earlier than this. Inside, *the components are far older.*

In the beginning, around about 1976, there was a small Sydney made guitar amplifier head called a “Ramps 50”. It served a short history in the very early PA system days as a foldback amplifier before its output stage spectacularly failed, went DC and took it’s associated speaker with it in 1980.



At the very earliest stage of “The System”, (refer page 1 of Part 1 of “An Old Fart Tells..”) there was need for the Ramps to be replaced. Investigation revealed that within the tidy, compact box there was still a perfectly good +-40vDC power supply.

At age 12, one of my very first electronics projects was to construct as a Dick Smith Kit, one of the ubiquitous ETI480 50 watt amplifier boards, then fit it into the Ramps case (using the existing power supply) to replace the original output stage which could not be saved.



It was an *outstanding success*. The original power supply was actually large enough to drive two ETI480 Boards. So in 1981, a second board was constructed and housed in a separate case with a +-40vDC lead between the two. This unlikely twin 50w combo drove the foldback channels of the original “Decizion” PA system in the early ‘80s (and sometimes more.. when there wasn’t enough 240 volts available to drive the Overeem Twin 100!)

The two cases suffered the rigours of the road through the mid ‘80s. So in 1988 the original power supply, plus both of the ETI480 amp boards were reconstructed into this rack case (pictured) along with a DC speaker protection relay circuit. The amp then continued in foldback service for a few more years until replaced by larger units. The Twin 50 then sat in it’s own sleeve throughout the ‘90s and into the noughties, to be brought out whenever a handy stereo amp was required—often as a monitor amp in radio broadcast studios and the like.

In 2007, the cheapie Hifi stereo amp that was located in the PA Matthews Audio administration office, failed along with heap of other gear when the site suffered the aftermath of a local lightning strike. Out came the trusty ‘ole Twin 50—and in it went! *It’s still here*—in **2015**—in regular daily service. *Working perfectly!*

It might not be the quietest or lowest distortion monitor amp out there.. but nobody’s complaining! Taking into account both the 1980 and 1988 incarnations, the power amps in this unit have been in more or less continuous service since 1990 and the power supply since 1976. That’s **36 years**. All from a Dick Smith kit built by a 12 year old. *Not a bad investment eh?*

And to our knowledge, probably with the exception of a few blown output transistors at those very early gigs, the Twin 50 has *never failed* in this time. **Ever.**

And again.. There’s no plans to replace it.

Cheers!

Paul Matthews.