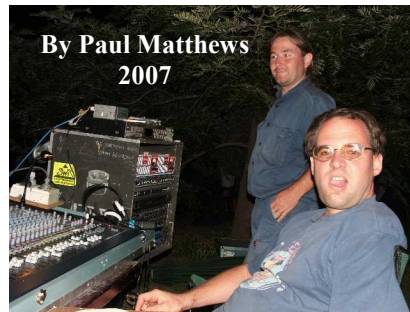


Another Old Fart Tells—Part 1. The Eighties.

**No Sex.
No Drugs.
No Booze.
Just.. Rock and Roll.**



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Not all audio types rose through the ranks of roadies, touring bands, booze, sex and rock and roll. Here in the 21st Century, many of today's up and coming industry people cut their first teeth at Church. My story is one firmly in this category. However it's set *20 years earlier* than the digital teens doing pew audio service today.

The huge advantage of coming up in this way was the lack of booze, sex and all the pitfalls of roadie life that many people suffered through in the early days. Sadly some of the best in fact, didn't make it out. Many still alive today are scarred for life. A shadow of what they could have been or even worse, still wondering if they shouldn't just end it all.

Another advantage of coming "the clean path" was the enormous scope for experimentation that existed in those days. It was always on either no budget or extremely limited. You had to crank the best from whatever you had. Buying the most basic materials (like plugs or cable) just was not an option. The money simply wasn't there. It was all for fun, all just a hobby. We strove for the best—but in the end when things went wrong, nobody really cared. We just shrugged our shoulders, cleaned up the mess and got on with the next gig!

So.. lets set the wayback machine for **1980**. That's with me in Year 8 at high school in Sydney's outer western suburbs. A year beforehand, my family had attended the landmark Billy Graham Crusade at Randwick—resulting in a rash of conversions but not myself at that stage.



Above : The Billy Graham Crusade, Randwick racecourse, 1979.
Photo courtesy Jands.

As a result, our family has just been thrust into Church life. It was always going to be about the music from that point on! I was the only member who didn't play an instrument.. and also naturally the only member deeply obsessed with Electronics. The way ahead was crystal clear. There was not a drop of booze involved and no girls anywhere to be seen (not that I was looking at anyway).

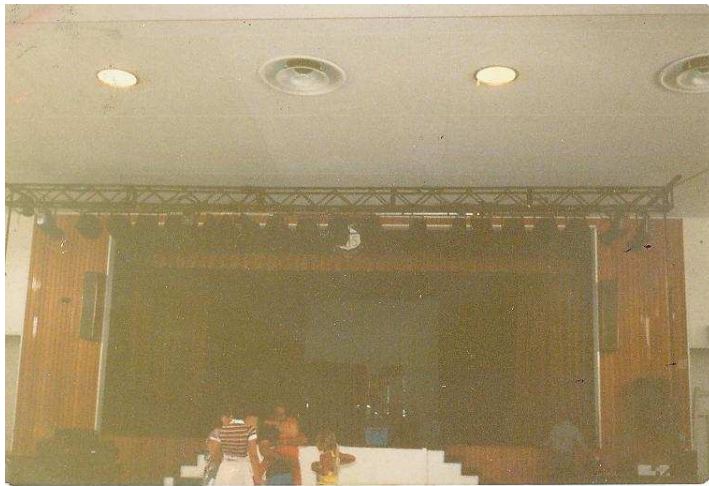
A Band (lets call it "Decision") had just been formed to play a series of outdoor "big tent" evangelistic campaigns in Mt Druitt. I was thrust into a world of temporary power, lights and audio that was to become my life.



The scrounged gear was almost totally home made *AND* second hand. It included the venerable "Dick Smith kit" ETI480 50w Amp, an Overeem Twin 100 (one of his first and a true legend – dating back from 1973!), an ETI414 - 8 channel mixer (anyone remember those?? Can't even find a photo of it today) and a pair of Bose 901's (think 800's but originally designed for a lounge room). Within weeks this became known as "The system". It has lived on in many forms to the present day in 2007.

Today there are kids in Church in their teens, now mixing on the latest digital desks which have more features per channel than our entire rig had back then. They'll have great experience, but probably will never need to pick up a soldering iron in their life. On our early '80s jobs back then it was mandatory to have one ready and hot at the FOH position every night, along with a full box of spares, fuses and even output transistors!

The Bose 901 had 8 drivers facing "back" and one facing "forward". The standard Rock & Roll configuration was to turn the thing around and face the loud bit forwards. 8 Ohms. As with all BOSE speakers, it required a special Bose EQ which we never had—so we generally ran the rig flat with a Dick Smith 1 octave Graphic EQ in line with the FOH. A mild bell curve was then set on the EQ to approximate the sound of the Dr. Bose original.



ACMS'80. Strand 2k's and Patt 263's. Not a PAR in sight. This rig was HUGE in it's day.



ACMS'80 Clear Systems' Miniset. These things were worth their weight in gold (and they were not light) in the late '70s.

In January 1980, off we went to our first "ACMS". Back then a guy called Kevin Craik ran a thing called the Christian Youth Travel Association. He hit upon an idea. The CYTA held substantial assets – including a vast backpacker / accommodation conference centre style facility in Cooma which normally stood idle in the summer. The "Australian Christian Music Seminar" was a fantastically successful attempt to use the spare capacity of this centre to create Australia's first annual Christian meeting with music as it's focus.

Soon over 400 visitors regularly made the journey to Cooma every January. It became very much the "melting pot" of talent in the Christian arena just as rock and worship were gaining a hold. This was *15 years before the first "Hillsong Conference" was held in Sydney.*

ACMS was my first exposure to the "real" world of rock & roll technology in the '80s. Yes—the Single 4 way PA with "W" Bins did get my (and everyone else's) attention. But it was the *lighting that really turned me on.*

On the Friday Night I arrived with my parents, I was immediately asked what my area of interest was. (Remember, I was 13 years old at the time!). Less than 1 hour later I was waving goodbye to my parents. I jumped into the ute for the ride down to "The Hall" at Cooma High School. From the moment I walked in, I knew I was now in heaven.

On the floor – a truss just being prepared. Three sets of four Strand Patt 243 fresnels were ready to go up, along with a collection of motley Strand lights including two of the weird shaped Patt 263's. Fine white sheets had been dropped at the back of the stage, with two sets of four Strand battens pointing up and down at it.

Meanwhile up in the fully accessible roof (My God! The Heavens in Heaven!!) there was a collection of three Minisets. There was 3 phase everywhere, all fed from a temporary hookup that had been bolted onto the back of the enormous 60 amp HRC fuses at the bottom of the mechanical 9 channel resistance dimmer machine that was part of the hall. If I was a pig, I was truly in mud!



ACMS'80 photo showing the original 20 channel 2 preset Strand desk, plus a few other 1970 vintage goodies. The row of telephone style thumb switches at the top of the desk were for "A/B Switching", yet another way of effectively creating a four preset desk out of a two preset one – albeit rather complex to operate. Not a flash button in sight!



Photo from ACMS'80 showing one of Garth's massive Variac based dimmer panels built circa 1938. These were used for various specials and for house lights. As can be seen, each dimmer had three outputs, any of which could be switched to operate from the dimmer or direct from 240v – meaning that three separate channels in a rig could be dimmed using only one dimmer – and a lot of planning!

At FOH, a “new” 20 channel Strand 2 preset board sat ready alongside several “boxes” which contained collections of large, 2k Variacs. It was clear straight away that I was witnessing the clash of two completely separate technologies. Shortly afterwards I found out why as I was introduced to **Mr. Garth Maxwell**.

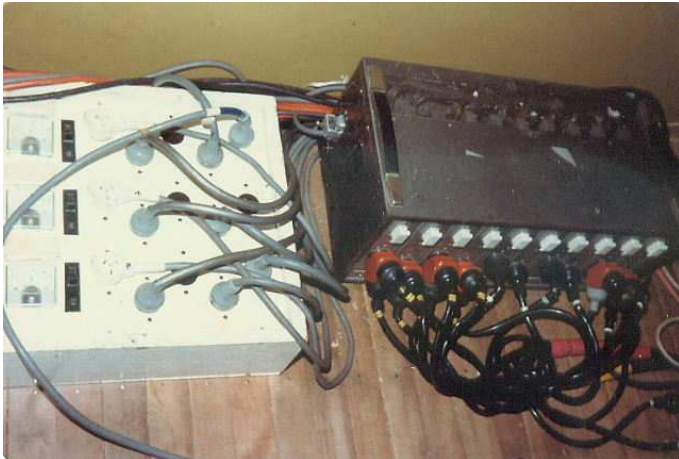
Garth was single handedly responsible for my interest in lighting. Old Garth was a dynamo of energy and never stopped. His eyes lit up as he saw me and never went out.

The lighting task of ACMS '80 had been shared between two teams. Garth's team from Sydney and “Clear Systems” from Melbourne. CS had supplied most of the more modern equipment and Garth had supplemented this with a travelling museum he had used in theatre circles since the pre war days. Back then in Christian circles, to own a Miniset meant as a lighting trog you were in the most envied position. Garth had one, and CS had “one and a half” (i.e. 1 x 10 Channel and 1 x 6 Channel which drove the cyc). That meant this week in January 1980 we had a *massive 26 dimmer channels!*

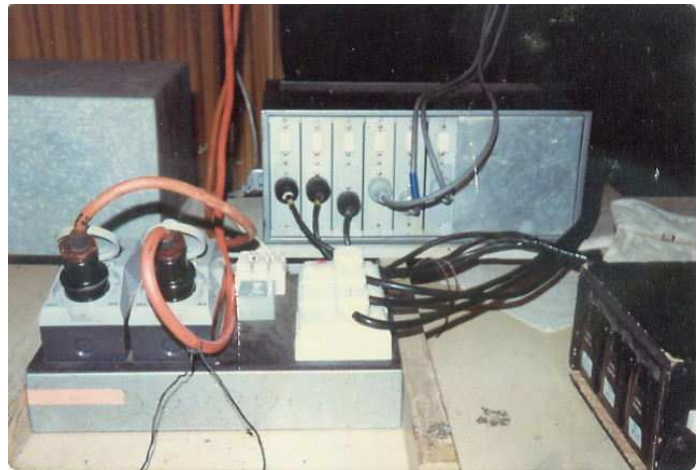
Right there and then that night amongst the chaos of setup, I learnt how to wind leads, load gels, pull cables through the roof and set presets on the panel. To a 13 year old teen used to seeing Par38's, these lights looked like the sun when turned on! I looked around and knew where I belonged. It was **here**.

The CS guys got on with just their jobs and largely ignored me. Meanwhile, Garth got to work on the new kid in town. Garth was one of those guys that you can't stop learning from. No matter what was happening, no matter the rush – somehow he always found time to explain exactly what he was doing and why. He oozed experience. This guy could light a stage with old wet blankets if he had to. Whenever I saw him I saw my hero and mentor.

I would have given anything to have been like Garth. Some who knew both me and him, now say *I have now become him.* Perhaps unfortunately without all of the patience and respect that Garth had for all his charges back then.



ACMS'80 – Above stage Boardwalk – Garth Maxwell's miniset. Each channel was individually fed by a separate flex to handle jobs where 3 phase was not available. For those where it was (like ACMS), the white distro board (left) was added. This is the same configuration I would adopt for my own home grown dimmer rack eight years later.



ACMS'80 Clear Systems' 6Ch Miniset – driving 4 x Strand battens on the cyc. 3 phase distro panel also shown.

Certainly the challenges I thrive on nowadays are in every way equal to those that fired up Garth back then. Today, most of the industry around me has now graduated to the world of unlimited supplies of the latest gear, power and money. My own happiness is always found in taking whatever is available at hand and making the absolute most of it - FAST – to “Blow their socks off”. This approach led me to a prosperous career in the big boys film industry in the 1990s..but that's another story. I loved the limitations of production in the '80s.

The ACMS rig at Cooma High School Hall had a beauty all of it's own. However I knew that a 12 year old from St Marys in Sydney with a musician father on a musos' salary, could never be part of that world of what seemed like unlimited resources. That's where the beauty of ACMS '80 came in.

A quick perusal of the schedule showed that Garth was hosting several “Lighting seminars” at ACMS during the week. These would not be held at the high school as one might expect. They were instead held in a small and very old shed across the railway tracks in Cooma – “The Little Theatre”. This 1950's era facility dated from the Snowy Scheme years when it was one of few entertainment venues in the area. It was a good 40 minute walk from the CYTA Lodge in the hot sun for a 13 year old.

Inside, the ceiling was literally stuffed with Strand Patt 23's. Up the back of the theatre – not a thyristor dimmer in sight. Just tables full of variacs, resistance dimmers and home made switch panels. And more rubber leads draping through the rafters than the mind could comfortably conceive.

On stage, Garth had unpacked a few crates of gear ready for his seminar. The theme - “anyone, anywhere in any Church can do this stuff – even a 13 year old”. After taking a little time to answer questions about the “huge” lighting rig at the high school, he went on to show us how standard domestic Par 38 floods, GLS light bulbs mounted in juice tins, household dimmers from Woolworths, old slide projectors and extension leads could be used to turn any church play or gig into a theatrical extravaganza. Detailed, practical explanations of the difference between spotlights, PAR lamps and floods, focal length, fresnel lenses, colour temperature and colour mixing were then played out—in front of innocent eyes. I only needed to hear it once. *It all went straight in.*

When we left Cooma a week later, the seeds had been sewn. By the time we drove into the driveway at home - my lighting system had been designed. 3 days later? - the first stage had been lit by projector spots. Shortly afterwards, my first lights, dimmers and control panels were manufactured. Thereafter, *every job – anywhere – the band played.* Any church, hall or show – *just HAD to be lit.* Doing mere audio just wasn't good enough anymore.

For the rest of my high school years the only thing I ever wanted for Christmas or my Birthday were.. Lights. I would save pocket money for weeks to get enough to buy a 500w dimmer from Franklins. One became Three, then Five, then Twelve. Then I opened them up to see what was inside them.. And that's where the true fun began.

Early Developments

After the musical success of the tent missions in Mt Druitt, “Decizion” rapidly grew in membership and musical ability, anchored by founding members Bill Matthews, Wil Wildig and Steve Talidu. The band was one of few truly “multi denominational” Christian groups of the time. It was made up of a wide and varied persuasion of people from different churches and areas but united in a distinct musical style.

There was a strong Jazz and Rock influence. In the early years, the group existed as a covers band “Jazzing up” a multitude of old hymns and 1970's Contemporary Christian music. The venues we played were suburban Churches. The band would be invited to play (usually in the evening service) in spaces otherwise very unsuitable for transformation into a rock music stage. Most of the punters would have never seen anything like it in their churches before. Many, many of them were “inspired”. They then began forming their own church based musical groups shortly after a “Decision” visit.

Likewise, our primitive but very effective PA and Lighting rigs were unique to the time. Many an event would see me setting up a large (for those days) rig in a church only to have the ubiquitous little old man come up and say “We have old people here you know”. My reply would always be the same : “OK, I'll make sure it's loud enough for them, then”.

Some of the jobs the band did yielded forms of payment in the form of small amounts of cash. Rather than spend it on fuel or booze, the band decided to open an account and use the money to build up our “production.” *At last.. I had a Budget!* Even if it was only \$500 per year!

The first addition was a replacement for the ancient ETI 414 console. This was by now famous for “Krakatoa” eruptions during gigs. A new “Cutec” 12 channel mixer (with unbalanced 6.5' Jack inputs) was ours thanks to a special at the local music shop. We made a 15m Multicore out of shielded multipair computer data cable. A second hand covered trailer (to transport the gear) was also purchased. This trailer remains as one of several sources of transport for the rig TODAY (albeit repaired many times since).

Equalisation was soon via the ubiquitous Playmaster Dual 10 Band Graphic EQ kit from Dick Smith. I also remember an “Evans” tape echo machine in regular use in the early days, with tape normally requiring replacement several times during a single show!



The original Cutec 12/2, now no longer working. This desk did more gigs than the mind can comfortably conceive in the '80s! It was also heavily modified over that time. It has a complete pre-fade (PFL) section added, amongst many other things.

When the band's work schedule diversified into school dances, the system was suitably modified to double as a disco system. The first outdoor "Candles by Carollights" also began around this time - bringing with them new challenges. The PA was still running primarily as a vocal system.

A small foldback wedge was built up from cutting up an old school table top complete with graffiti and chewing gum. The two 4" BOSE drivers for the foldbacks came from the 901's. Originally the 901's were designed as a HiFi speaker. One driver would face forward to the listener. The other eight would face backwards – the sound bouncing off the rear walls of the room and reflecting back to the listener.

In order to squeeze more power out of the Overeem Twin 100 amp, we rewired the 901's for four ohms. The single speaker on the "front" was then deleted and the hole sealed up. The two redundant drivers were then put to use in the foldback box.



Microphones were a collection of AKG D190s and some cheapie Chinese "Evans" Cardioid electrets. Despite the cheapness of the latter, they really did sound quite good especially on cymbals.

FOH Lighting grew alongside the needs of School Dances held at my local high school at the time. This consisted of a wooden bar holding 16 x "Robinson's Orange Barley" cans. Each had a 100w GLS globe inside. "Gels" were purchased from the local newspaper shop.. the ubiquitous "Cellophane".

Given the medium heat levels of these "cans", the cellophane was quite good for up to 3 shows before it disintegrated into brown powder. A few years later, my FOH bar was replaced by a second similar (but heavier) bar built from Par38 Floods. The fittings were a christmas present sometime in 1982.

Despite being available, the coloured Par38 globes on the market at the time were expensive and under rated at 100w. Instead we used standard white 150w PARs with cellophane as these were far brighter and more effective and a lot cheaper and easier to get.

The cans were then redeployed as Cyc Battens behind the band. Complaints from band members of suffocation from burning cellophane (particularly from the drummer) became all too common. At least we didn't have to choke on cigarette smoke. Ironically with the PARs, it was found that the cellophane would last much longer if it was actually wrapped around the globe and hugged the glass. Standard "Cellotape" was used to hold it there.



Very early 1981 photo showing an early "Bush Dance" at Mt Druitt. The FOH bar is "inverted" to add ambience to the crowd rather than for stage use. The microphone of choice (not that there was much of one) is an AKGD190. *The girls holding up the limbo bar are hot. WHY wasn't I paying attention to THEM ,instead of wasting time with this Lighting and Audio stuff??*



A very early 1981 photo showing a typical Sunday Evening church visit job for Decizion. The FOH "Orange Barley" cans can clearly be seen at the top. This was back when each can had an individual lead. The bar would be occasionally disassembled so the rig could be used for disco lighting – hence the long rows of piggyback plugs.

These "bars" would be supported by anything that would carry the load, often using juggling acts that would be unthinkable today. Ladders were always of the ultra rickety firewood variety found buried away somewhere at the gig.

Stands were non existent. Winchups were completely out of the question budget wise.

Fortunately for me, my Dad had flirted with sailing a few years back. He had owned a number of boats, and had all the associated rope gear, pulleys, cleats and shackles needed to get a mainsail and spinnaker in the air.



Original "Robinson's Orange Barley" cans. Initially used for FOH. Still doing service on Cycs as recently as the late '90s. Low cost stage lighting at it's best.



Early Decizion photo circa 1983 showing "new" par38 bar for FOH and the "cans" relegated to Cyc duty at the rear. In cases where flying of FOH was impossible, the front bar would be dumped on the floor or (as in this case) an old church pew!

The boat.. well it was a sad story. It sat on a wooden cradle. This in turn sat on a standard (and very rusty) box trailer. One day on the way home from a particularly unexciting sailing adventure on the Northern Beaches, our car was coming down Lane Cove Rd peacefully when suddenly the boat *overtook us*. Sufficed to say, it ended up over the bridge and at the bottom of a ravine as a pile of matchwood and steel. It only just missed two old ladies a small white car. It turned out that the nut holding the ball to the towbar tongue had come loose. The "safety" chain had only been "thrown over" the ball - rather than properly shackled to the tongue.

Fortunately for me the boat's steel shackles, nylon ropes and high quality pulleys were still in the car. Since the boat was not going to be replaced (this was "the last straw" it seemed for Mum, Dad and Boats), we suddenly had a ready supply of "suitable" suspension and flying rigging for my light show.

Some 500w QI Floods were added to the rig later on (especially for the outdoor shows). However the control and power for these lights was now becoming a *serious* problem.

After having built and used several simple "wooden block and household dimmer" constructions, I decided it was time to have a serious go at building a dimmer panel. Still very much strapped for cash and without the experience needed to design from scratch, I decided this would use ordinary household dimmers but with the internal 240v circuits removed from their housings and placed in a new complete enclosure. By this time it was 1981, Mondo Rock were on the Radio and I was a veritable and unstoppable (!) electrical genius at 15 in Year 9.

The original load limit of these small dimmers was 500 watts. I soon discovered that by replacing the triac in the circuit with a 15A rated one from Tandy's, the load could be safely increased to at least 1200w before the little onboard mounted interference choke began to get warm enough to start burning the varnish off its windings. The 15A Triac was mounted on a separate (live) heatsink, away from the rest of the control.

A row of eight such units (having been all the dimmers I had scraped up enough money to purchase since those days at ACMS'80) were converted in this way. These were then installed in a new chipboard desk which had clear perspex top panels- the "*Maxidim 1000*". All of the internal wiring and workings were visible for all to see. A comprehensive switching system was also added. It was then possible to have *two outlets per dimmer* (the standard Garth Maxwell approach, remember the giant variac panel on Page 2 ?) It was possible to switch either outlet to 240v directly, or run the load off the dimmer. The *Maxidim* also featured another first. FLASH BUTTONS!

In this way it was possible to dim up one channel, immediately switch it to 240v, turn down the (now unloaded) dimmer again and then connect the second load and dim it up a few seconds later. Operating these early boards required speed, forethought and most of all.. plenty of fingers!

Alas there is not a single photograph in existence of the *Maxidim* panel today. Like may of my other early '80s constructions, it was eventually scrapped in order to provide valuable parts to build the next generation of gear a few years later!



Very early photo circa 1981. Probably the only photo in existence that shows the "Maxidim" in use for lights. That's the back of it in the centre of the photograph, being operated by Adam Simek.

Also seen is the unique aluminum extruded rear of the Hans Overeem "Twin 100" amplifier, sitting next to it on Adam's left. Above it is a second, smaller 3 channel dimmer board in use for house lights.

At this venue (a regular), the church "altar table" would generally be commandeered for less holy purposes!

This took the channel capacity of my new Maxidim to a massive *11 channels*. This was going to need at least 3 x 15A supplies to run it all. These were normally derived from various house power circuits in whatever venue we were performing in.

Upon arrival, the first hour (or so) of set up time was always spent darting about the venue trying to isolate individual power circuits. Venues where an electrician had marked circuit numbers onto the power points were "Heaven". Those without were "Hell". I vowed to myself to do something about this one day. I promised myself I would get a n electricians' license one day so I could do my own "Cut ins". This was a dream not realised until ten years later, in 1992. Mind you - once I DID get it, the next ten years after that were spend doing hundreds of "cut ins". In fact during some of my film industry jobs this became my "de rigueur" task. It had my services highly sought after all over Sydney in the '90s. But getting back to 1981..

The need to keep all this buzzy lighting miles away (both electrically and physically) from the PA was also paramount. Somehow with our attention to detail, we never seemed to have the dimmer buzz problems that other bands always seemed to have in those years. Our PA was forever quoted as being one of the quietest around. This was despite *every signal line in the PA (including the multicore) being unbalanced.* In my opinion that spoke volumes of the competition... which was often truly awful! That said, keeping dimmer buzz out of Steve Talidu's single coil Fender Stratocaster was *forever* a problem!

Around this time I also built another Dick Smith Electronics Australia kit—the EA "Musicolor 4". Separate inlets and switching also allowed it to be switched across different loads within the Maxidim. The M4 was a marvellous piece of kit electronics for it's day. It was famous for containing "just about every type of electronic circuit ever developed" on one board. AC Control, Digital and Analog. Understanding this design led to far bigger things later on.

The "Maxidim" was a marvellous success. It went on to be the main control desk for hundreds of shows in churches, schools and outdoors throughout Sydney, needing only the occasional triac replacement. However its only design flaw came to bight me one day.

One day, the unit was performing otherwise sterling service in my own school hall at St Marys High. It was working alongside a Miniset 5 (you guessed it.. "Half" a Miniset, pinched from Shalvey High). The demands of the show necessitated the loads be spread across three phases. This night the board was being operated by one particularly young Year 7 student who was lighting the rehearsal for a dance routine proceeding the main show, which was in turn a terribly twisted version of "Grease".

All alone at the controls, suddenly there was an almighty flash and bang, followed by darkness!

Once we had been able to restore power, we found our new student had disappeared - never to be seen again!

What had happened? Well.. The Maxidim used standard domestic style 240v light switches. A row of these on each channel had been configured in such a way as to switch between the dimmer and the four M4 channels. One of these switches has "exploded" under the poor kids' finger as he switched it. Fortunately there were no injuries. The resulting flash was enough to take out some of the triacs in both the megaboard and the M4. With a spares box and hot iron available these were of course all repaired well before doors.. *The show must go on!*

So.. Why did it Happen??

Of course the M4 and the Maxidim supplies had been connected to *different phases!* This left a nice 415 volts sitting across the outer terminals of the domestic style 240v light switch used for the changeover!

This chap must have been particularly slow in switching this switch. The result was an ever so brief *short circuit between phases*. The rest, *as they say*, was history!

Careful note was made to always make sure the “Maxidim” was considered a “single phase” device from that point onwards. A special 30 amp single phase circuit was later installed in the school hall (by us, of course) to make sure this was the case for future shows!

In these early years mainly due to cost, most of the lighting cabling was Figure 8 lamp cord. Initially these were made up as (highly illegal) extension leads—deliberately with no earth. We were just careful to make sure they were never used to supply anything that needed an Earth. Later (when I could afford to buy a roll of earth wire) these were taped up in looms of four with a common Earth to all the outlets.

It beat the competition (especially mobile DJs) in the ‘80s for safety! Back then they were regularly still using common neutrals in their “leads”. People regularly received shocks when equipment was then inadvertently run off a lead that had swapped active and neutral. Earth Leakage Breakers (RCDs) were still a long way off. My parents however had (very wisely) one installed on our home switchboard waaaaay back in 1973. That RCD unit probably saved my life at least a dozen times during the early ‘80s!

Bigger shows were bolstered by “hiring” gear from Garth or another old time Western Sydney theatrical stage lighting supplier, “Obique Electrics”. Obique’s inventory likewise consisted of 100% home designed and grown lights and controllers, all of pristine quality and built in an exceedingly well equipped mechanical machine shop in Seven Hills.



Very early photo—Circa 1981—showing Paul Matthews and Adam Simek in “The Workshop”. Note the “ultra modern” audio test centre - photo lower left.



1kW Follow spot manufactured in the early '70s by Obique Electrics in Seven Hills (Sydney). Built like a tank. Unfortunately not very bright!



Rear of the Obique 1k Followspot. The fan was added in the '80s for obvious reasons. This unit saw countless school halls.

On The Road

It's not like we didn't have the same kind of experiences that “normal” (i.e. constantly pissed) roadies had. It's just that we “Christian Roadies” had them for different reasons. Like learning just how much a trailer load of gear can push a HQ Station Wagon when you're trying to stop.. and how it feels to run down two more little old ladies in another white laser (p.s. both the ladies and the gear survived but the HQ needed major rework.)

In the early days, quite a lot of gigs took place aside other events. French's Forest Baptist was particularly active in this regard. They had a penchant for producing musicals, in particular one called “The Witness”. With Garth and his sidekicks not far away in Belrose, the French's Forest production (at least in the Lighting Department) were always guaranteed first class.

This idealism however fell apart when it was time to take the musical on the road. So it was that in around 1983, one “outwest” tour of “The Witness” to far flung Lithgow and Parkes found itself without a lighting guy. It therefore fell to me plus one other almost equally young lighting trog (let’s call him “John”) to fill in the gaps.

The “truck space” on this tour was limited to about one small Ford Laser boot. Armed with a couple of Patt 23’s, a single pair of Par 64’s loaded with the voracious “medium blue” for the graveyard scene, a few variac dimmers and a trusty Patt 23N with the “Cross” Gobo in it, we were to use “whatever we could find” at both of the high school hall venues to make a show. This meant arriving around 3pm at a venue we had never seen before, with doors at 7:30pm. Four and a half hours to walk in with a shopping trolley load of gear and have a complete show ready by curtain time.

Now THAT’S MY KIND OF CHALLENGE. That’s what I call “Lighting on the road”!

Lithgow went without major problems. They even had a 12ch Minipak that worked—and the house lights ran off it. We even managed the deep blue for the graveyard scene and used the variacs on the specials. But Parkes... that was another story!

The school hall was an older style NSW “Whitlam” type. It had a few bars strung out the front, loaded with the ubiquitous Patt 23’s and a patchbay backstage ready for patching to dimmers. The control fortunately consisted of a rather old Miniset on which at least 8 channels seemed to work. The 12 channel Strand control panel however was quite sick. You know the ones—they had wire wound faders. The fine resistance wires inside would inevitably break, rendering the “dimmer” more of a “switch”.

This panel needed a bit of coaxing. Quite a few “bits of wire” were shoved down between the wirewound slider wafers and the side of the slider pot housings. This would bridge the broken wires and restore each fader to something more like a dimming curve and less like a disco every time one was moved.

Using the ubiquitous rickety wooden ladder, the school’s Patt 23’s were then dusted and focused. Specials were installed and the panel patched. It was however becoming clear that relations were deteriorating between “John” and the troupe’s musical director, who had other ideas on what should be done. In particular he didn’t seem to like John’s very un-Christian like responses, language and general attitude. Sufficed to say—I was a solo lighting team before the show started.

I’m not sure if John ever made it to Parkes Railway station. But that was only the beginning of my troubles..

15 minutes before curtain the **entire FOH light bar just stopped working**. All 12 lines between the patchbay and the roof. It was like someone had just gotten in the roof and cut them. I *couldn’t believe it*. I mean.. What are the chances? ONE failing.. Yes. TWO?.. Time to buy a lotto ticket. But **ALL TWELVE? At the SAME TIME?? NEVER!**

Whitlam halls have inaccessible roofs. The conduits for the FOH outlets run directly down the wall and into the patch panel. I *frantically tried everything*. There was power at all the dimmer outlets. The battens on stage were still working OK. *Nothing I could do would get even one FOH light working*.

Time was now out. Curtain time was here. I had to admit **total defeat**. The entire show went ahead under house work lights only. **Every roadie’s nightmare!**

To this day, I have *never been able to determine just what happened at Parkes High School that night*. As soon as the show was over, I immediately returned backstage, switched the rig back on and .. you guessed it. Everything then worked perfectly. Call it divine intervention.. call it whatever you like. God did not want that show under lights in Parkes that night.

The impossible had happened, right in front of my eyes. If anyone else had recounted the story I would never have believed them.

I knew that 15 mins before the show all those circuits were 100% OK. Something happened to open circuit all of them 5 minutes later.. and then put everything back right again after the show.

Maybe “John” knew something I didn’t – I’ll never know. But to this day if anyone ever asks me to recount a supernatural, “impossible” experience in my life, that’s the one they will get. And I was 100% Sober, I promise.



Decizion, Circular Quay circa 1981. A regular monthly gig for "Open Air Campaigners". The entire rig ran off two silenced 300w Honda packaged generators which would refuse to start on more than one occasion.



Decizion Front Line circa 1981. Mostly jazzed up hymns and remade 1970's gospel stuff.

Newcastle Uni

This was one of those "last minute" jobs for Decizion back in the early days. A ring in of musos to support a touring Christian act. The difference this time was that there was a budget – and someone else responsible for production. I was just along for the ride with the band. Ha! *Not Likely!*

The "Lighting" at Newcastle consisted of a (very advanced for the time) "House system". Nobody there knew how to switch it on, let alone drive it. That was the preserve of the university lecturers and students only. The venue manager was adamant nobody other than university staff would be allowed access to drive it. The dimmers were Strand JTM's. It had a humungous triple preset 40 channel board. You know – the ones which had the round thumbwheel sliders and looked a bit like a triple organ. It took two of us to lift it!

There were *hundreds* of Strand lights in the air in this theatre. So much so, that all I needed to do was just *get it working*. No focusing or gels required! We only had the problem of the manager to deal with...

It was the *biggest system I had ever seen*. Bigger even than ACMS. And it was *all (potentially) mine for two hours!*

When the manager later went back to the box office, I grabbed the drummer. We moved fast. We carried the entire desk down from the bio box and on to the stage Prompt side. We plugged it into the focusing point next to the JTM's.

I ran the entire rig from there. For the whole gig! He was none the wiser—until about halfway into the show, when I (assume) he must have gone up to the bio box and found the desk missing. He suddenly realised what had happened. He came on stage and demanded we stop the show. The theatre was jam packed full of punters with the gig going off.

The show.. went on!

Unfortunately at this same show, somebody had also hired a smoke machine. You know—the old oil burner "Jug Kettle" type – which we flogged to within an inch of it's life. At the end of the show the entire stage was covered in a layer of gooey, sticky grease – including most of the backline and drumkit. Photos of the show later revealed that James (our fill in Bass player) had not moved one millimetre for the entire show.

Ahh, the memories.

Cronulla

This was one of those very early "Candles by Carollight" shows for Decizion back in around 1982. At the time our standard outdoor rig for these shows consisted of a pair of sturdy lighting stands that had been welded together from water pipe. The Drummers' dad had built them in the '70s – each had a pair of 500w Q1 floods on top.

The bands' Keyboard (a Roland) was particularly fussy with it's voltage supply. Anything below about 215 volts sent it into a wild detuning frenzy. In turn this would stop the band.

Power was "supposed" to be coming from the local SLSC (Surf Lifesaving Club). However when we arrived and were shown the venue, no "SLSC" could be found. Try as we might, there simply was no building anywhere, let alone a power point or board. "Sure it is, it's over there". Eventually one of the local church folk said. "I told you that you would need to bring some long leads"....

“Over There” was - *and I kid you not* - at least a 200m run from the stage. Over street light posts, a public road, across the beach, up a ramp and up to the 1st floor and into a window of the surf club. But no, that’s not all!

There, on the secretary manager’s desk, was a power point. It looked like it had come off Captain Cook’s Endeavour. But no..that’s not all! *Even this* was fed by another dingy 3 core flex. It snaked it’s way out of the office and around the corner into the kitchen. Here, it shared a wall socket with a double adapter and the ubiquitous pie oven. The venue switchboard was at least further 50m over the other side of the building. Gawd knows where the substation was!

Somehow – *SOMEHOW*- , and with *absolutely no other options available, we did it.*

Combining all our extension leads in one line, along with every lead we could find after searching every cupboard in the surf club, plus a few more bought down from a nearby church, we had enough extension leads to reach the stage. Most of these were of the very thin 10 amp variety and in very shady states of repair.

A check with a multi meter showed about 220 volts at the stage. But connecting only two 500w QI’s sent this tumbling to well under 150 volts!

SO. With a total load of one single solitary 500w QI flood, the ETI480 50w amplifier on FOH in mono, the Cutec mixer, the Roland keyboard, one guitar and one bass amp, *THE SHOW WENT ON!*

There was just enough volts to keep the keyboard happy. Only the occasional unplanned keyboard tremolo burst erupted during loud vocal parts.

Of course that’s to completely not even mention the constant 60kph cyclonic winds that were constantly blowing onshore. But.. that’s another story.



Early Techmin photo Circa 1986 showing Cutec mixer and homemade Eqs. AKG D190 ready as a shout mic. The lighting panel in use (at the back) is the Minidim desk. Underneath it is the “lighting keyboard” (see later). The second box from the top is the Musicolor 4 light Chaser. A Realistic disco mixer also sits ready alongside a Kenwood cassette deck, for the Disco portion of the show. Mark Davies on audio, Stuart Jackson in middle and myself on lights at the rear.

The Houselights.. and the Public Service Years

St Marys High School in outer Western Sydney was the venue for a good deal of my Stage Lighting and audio experiments and experience. The hall (built in 1976 and shaped like a Pyramid with it's top cut off) was somewhat unique. Whilst it was blessed with an abundance of Par56's and Q1's for stage lights, it had a peculiar houselight setup. This consisted of a set of mercury vapours for general sports use and two large rows of 80w twin flouros—front and back. These were attached to a set of “Dimtronics” push button dimmers so the house lights could be dimmed up and down when the hall was used for shows.

Soon after becoming involved with lighting at Smezzy, one thing used to get me annoyed. The dimmer for the rear row of houselights didn't work. It was stuck on 100% whenever the row was switched on. “Obviously a blown triac”, I thought to myself. Unfortunately the dimmer was buried deep in the switchroom. Definitely “Licensed sparky only” territory.

When I was in Year 8 (1980), the teacher in charge advised that if I wanted it fixed then I had better go to the office and get the office staff to write the defect on the Public Works maintenance register. This was duly done. I then waited. And waited.. And waited.

In 1982 (for the aforementioned “Grease” musical) I got so fed up with this defect one evening that I finally went down there with my own tools late when nobody was around. After isolating the circuit, and with a pair of cut up extension leads in hand, I took the cover off the unit. I disconnected the switchwire from the dimmer and routed it plus a common neutral upstairs to the lighting control area and through a 2kVa Variac. This I sat next to the stage lighting panel, taking care to make sure the supply to the filament transformers in the roof remained fed from the original dimmer and on the same circuit.

It *worked perfectly*. Using the (still working) push button dimmer for the front row, plus my *cut in variac* for the back row, I *finally I had dimmer control over both rows of houselights in the hall!* The electrical butchery was duly reversed the following evening after school. Nobody was ever the wiser. Especially not the staff at the school. Except one - who kind of had ideas that something fishy had been going on, but I think he simply didn't want to face the consequences of admitting that he knew that a 16 year old unlicensed school kid had just repatched a potentially complex 240v permanently installed multiphase houselight dimmer through a strange heavy grey box with a big knob on it late one night using just extension leads.

But—as with most of these stories—that's not all!

Later.. in 1984.. and with the HSC looming, I finally retired from the position of “Stage tech” at Smezzy. The official reason? To concentrate on my studies (and weekend production activities). Unofficial reason? The headmaster had had enough of our “antics” down the school hall, some of which had truly got out of hand!

Imagine my face when in 1984, sitting in science class, a messenger knocks on the door. He asks for me by name, stating that I should go to the office.

You guessed it. **FOUR YEARS LATER**, the NSW Dept of Public Works had *acted on my original complaint*. They had *sent a tech to fix the houselight dimmer!* It took him all of ten minutes to change the triac and get the ole' Dimtronics humming away like new. Damn it! Now I wasn't even on the team anymore to enjoy using it! That's life in the NSW Public System in the '80s!

Travelling Carols

One particular Christmas (probably around 1982-ish), some British lunny at Mt Druitt Baptist had a great idea. In “the good ole days” in the Isles of Great Britain, it was customary for choirs to run around in the freezing, snowy streets singing carols outside various homes. Houses containing old farts were generally a target. Some wag in Mt Druitt thought it might be a good idea to try it in steamy Sydney. The stage for action was set!

Of course for our Sydney version, the “Choir” would be so much more than just a few old well dressed nuns. A Six piece group was formed. This consisted of Keyboards, Bass, Drums, Brass and vocals plus some “Hangers on” for choral backup. A list of “stopping points” was drawn up. Western Sydney's newest (Pub Crawl?) event was ready.

Only one problem. Our Aussie Jazzed up “Methodist Choir” needed power - or nobody would be singing anything.

The budget? \$0.00, of course!

One quick look at the “Venue list” revealed that most of the venues were outside various blocks of flats. Each of these had the ubiquitous glass lampshaded “security” lights out the front or in the entrance stairwell—but no power points.

Our solution (of course) was to get a *bayonet cap adapter*. (you remember.. those little 2 pin plugs that look like the back end of a light globe, but have a flexible cord coming out the end). These are normally designed to run those cheap orange 1970’s round pendant lights that go over your groovy woodgrain dinner table in the dining room.



A Bayonet Cap Adapter

In this case, one cap powered the entire band, the PA and a 500w Flood – at each of the venues. At least one venue had the ubiquitous “push button timer” switch in the stairwell - which meant someone had to keep going inside and pressing it, or the “choir” would fall very silent very suddenly!

Godspell

This 1982 extravaganza was Decision’s first foray into amateur theatre. The Castle Hill Players were doing Godspell and as everyone knows, it needs a band. In this case the “band” was split exactly in half. Bass, guitars and brass on one side—and keys and drums on the other. The stage and performance was in between. A Foldback nightmare.

The show played for four nights a week for three weeks to packed houses. Back then, the lighting system in the Pavilion Theatre at Castle Hill was typical amateur theatre. A piecemeal affair. In particular the control system was interesting. All the patching ran back to the bio box. Very (very) little of anything having an Earth wire attached.

However for me the challenge on this gig was an audio visual one – to capture the event on video using 1980 technology. This meant bulky camcorders and VHS backpacks.

The PA system at this show was very basic. Only soloists were miked, plus the synthesizers off the band. Everything else went raw. This meant I had to work out a way to capture decent audio as well as vision. I deduced this would be best served by installing a few shotguns down near the stage. A long XLR then ran back to the rear where my main camera was.

The only problem? Electronic instability of the domestic backpack was such that whenever the remote mics were plugged into it, the unit would randomly go into “pause” mode! When unplugged the unit ran fine!

Two nights were spent trying to work out how the hell connecting an audio line to a camera could cause it to randomly (not always) pause a live recording. Reluctantly, I had to admit defeat. I then used the camera mic along with a separate cassette deck to capture the audio separately. This was then painstakingly matched up to the vision several months later in short 6 minute segments.

Unfortunately the (only) copy of the tape was then given to the musical director to view. He later had a divorce and.. well.. Sufficed to say.. it’s all gone now. I only have the crappy and error ridden version recorded on the first night!

The Bush Dances



By late 1982, Decision had developed quite a reputation for becoming a Bush Dance band in Sydney.

Churches, Schools and clubs would call us up for a booking.. and the idiots in the band just kept saying yes. This generated a frenzy of activity for me and pretty much formed the “core” of my “on the road” experience.



In 1984 (My HSC year..) we did no less than *45 bush dances in 53 weeks*. Almost every Saturday night would be booked in halls large and small around the city and outer suburbs. Not a single beer or smoke in sight. There were however *plenty of babes*. What a shame I was so busy with lighting and sound.. I never saw any of them.

Each bush dance would carry our full production and lights. Nothing less was ever considered.

Rick Swancott would do the calling. In between sets of dancing, the band would thrash out it's usual array of jazzed up gospel and rock. By 1982, this was also being sprinkled with a few original compositions. This generally kept the band on stage for hours at a time.. no breaks in this game!

School dances usually also included a "Disco" component. This of course was hosted right off cassette by Yours Truly. Each show always ended with a very uncontrolled and heavily "thrash metal" version of "Hokey Kokey". More than a few bodies were in severe collision by nights end.

There were so many venues, that after a while a "Gig guide" was written up. It soon logged more than 50 venues. This showed the major disadvantages of each hall so we would be "prepared". The "PFA Conference Centre" in Thornleigh had a huge hall, but literally *only one power point* – in the whole building!

Church PA Life

Apart from being on the road with the band, life also went on "at home".

Our church was one of those peculiar Baptist types with several split congregations. Everything seemed to be a big deal. PA was no exception. Every month they would hire the local school hall and have a "combined" service.

The PA guy (Lets call him Damien) was once a PMG liney. He had it all sewn up.

FOH consisted of 4 x homemade wood columns on old fan stands. These were filled with old speakers ripped off from old black and white TV sets. The columns were wired to the "FOH Position" at the back of the hall using the ubiquitous ultra light duty Tandy Figure eight.

Amplification was from two monstrosly huge 3 watt stereo amplifiers, ripped off from old record players. A series of Tandy mixers ganged together did all the work summing the numerous unbalanced mic feeds from the stage. Microphones were Tandy plastic specials. Just about everything that hadn't been brought back from a trip to the local tip, had been bought from the local Tandy store.

Most of the system had no connectors at all. If you were lumbered with setting it up, then you needed to be a good dab hand at twisting wires together. A few of the mic lines had 6.5 jacks, but that was about it.

What was amazing about this "system" is that it *worked*. Not only did it work - but it worked quite well (for raw speech, anyway). Every seat in the house generally had crystal clear sound. Amazingly enough, the system was actually otherwise very quiet.

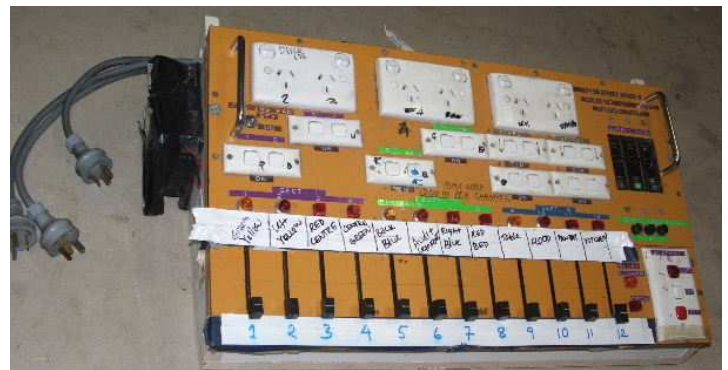
If there ever was an example of making a touring PA system out of absolute trash, this was it.

Eventually we became so fond of Damien, that Techmin offered to take his system away for a weekend and "finish it" for him free of charge. It returned to his garage with connectors on all the speaker lines, 100v line transformers in each box, a "multicore" to the stage with XLRs and a massive 100w PA amp to drive it all.

From that point on, there was always careful thought as to who would be rostered on to the "PA" job at these combined events. We wanted to make sure that whenever any music was to be on the schedule, an "alternative" PA system was sourced!

A New Lighting Panel – but still no Miniset

In 1985, after successful use on over 100 productions, the clear perspex topped "Maxidim" finally ended it's life as spare parts for a new 12 channel, 1.2kW per channel dimmer board. This new panel featured such refinements as slider pot controls and reused (yet again) quite a number of components from the old Maxidim.



"Minidim III" 12Ch x 1.2kW unit built in 1985 and still in occasional use in 2014. Dimmers are all at 240 volts. Many of the components inside are much older!



Above : PAMAC brand 4 leg "18' Pushup" stand in folded position. 100% home designed and build. Putting two on a roof rack is a piece of cake. These things can safely and easily handle the same "T Bar" load as an 18" Winchup – if you can find some blokes with strong arms to push it up!



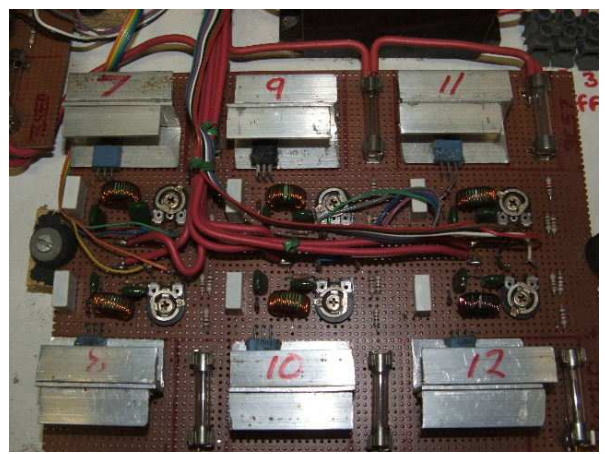
Another view of the famous "Minidim" in 2007. 12 x 1.2kW dimmers. The additional inputs for the original Musicolor 4 unit have long since been removed.

The difference though is that this board (which affectionately became known as the "Minidim") remains fully functional today here in 2014.

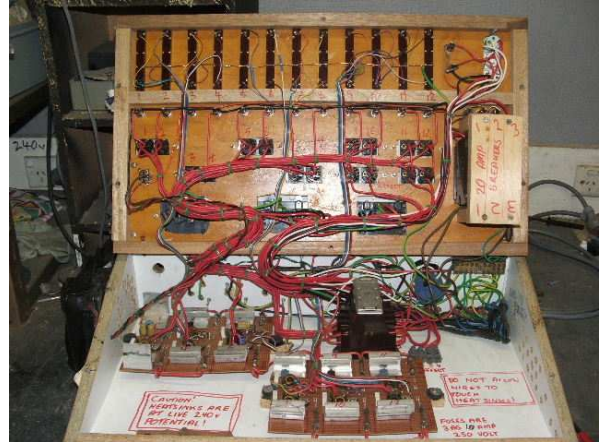
It is still occasionally hired out to small drama and theatre groups in Sydney nearly 30 years after it's construction. The technology behind it is still very much the same as the megaboard was. 240v "diac fired" dimmers and standard 15A triacs. The front panel is made of switchboard grade Formica. Each slider pot has to be specially double insulated as there is effectively 240 volts across each one, millimetres from operating fingers. Definitely not one to drop the Coke on!

It became the mainstay of most of our shows in the late '80s. Of course it still lacked that all important ability to control the unit from the back of the hall without all that tedious mucking about with 240v multicores and long power runs. However it was a serious and useful contender to available four channel units available both then and today. There has never been a commercial equivalent built or available—anywhere.

Another feature added to the "Minidim" was a unique controller known simply as the "Lighting Keyboard". This new expansion of the flash button idea consisted of an entire 60 key organ keyboard which had previously been scrapped from an old Lowrey. The piano keys were boxed into a new portable enclosure. The key contacts were then randomly connected to a 12 channel bus. This fed into the minidim and connected across the dimmer channels. When the keyboard was "played", the lights would follow. The entire unit of course ran at 240v, although the high currents were switched by the dimmer triacs. There was at least one Decizion job done which I can remember, where this marvellous device was placed on top of the Electric piano in the band and then "played" by the band's keyboard player.



Close up of the very simple circuits driving the "Minidim". Identical to a standard household dimmer but with larger triac, heatsink and "minimum level" adjustment.



Inside the "Minidim". Remember - this unit was built just after I left school.. It has stood the test of time with hundreds of gigs under it's belt.

St Marys Technical Ministry

Job at PCLC Circa 1988. The two "Etone" 805 bins are clearly visible along with the old carpeted converted Bose 901s.

FOH Amplification is lower stage right, showing the rebuilt Overeem amp (blue front) and a second twin 300w built one year earlier.



St Marys Technical Ministry

The late '80s heralded a new era of opportunity for "the system". With two other friends, "St Marys Technical Ministry" was formed. This was a loose group of loonies dedicated to doing sound and lighting on a shoestring for whoever wanted it - in particular church and evangelistic groups.

The Budget continued to gain strength. Visits to "Smithy's" became more regular. "Smithy's PA & Stage Gear", was a second hand rock & roll equipment shop located in inner city Stanmore. It was originally owned by the legendary Neil Smith (later of "Cannon Sound" fame). He sold it in the mid '80s. It continued on under Gary Fox and Peter Astley as a standard depository in Sydney where old PA mixers, amplifiers, speakers, lights and sundry assorted ex roadie bric-a-brac could be had with just a haggle at the counter.

Here in the '80s, a cash strapped audio nut could go wild. The place was absolutely stuffed with hard worn second hand rock gear fresh off the road just waiting for some electronic TLC from our enthusiastic team. By now, most of us were either just out of school, still in it, or enrolled in various TAFE electronics courses.

Much of our original PA system gear got some badly needed TLC during this time. The 1973 vintage Overeem amp finally self destructed. It was rebuilt with 2 x AEM Mosfet modules and used the original dual power supplies. The 901's received a carpet cover. Two new Twin 300w home made kit amps (based on the ubiquitous 1982 "Electronics Australia" designs) started to do the hard work – and work hard they certainly did!

This was an extremely experimental period, when due to money constraints just about every component of the system was either home built or heavily modified.

A pair of Etone 805's were added in 1986. These finally gave the system some badly needed bottom end. However the boxes had been built by one of the team's dad. They looked fantastic – but sounded awful. With nobody bothering to do things like actually measure the size of the vented ports, all these heavy things did was move air. Problem was - you couldn't hear it moving!

The visits to Smithys continued unabated. This yielded gems like the Jands J1000S (Yes that's right, there was such a beast – basically a J1000CS without the meters on the front). This ultimate amp was truly a wife(!). Couldn't live with it, couldn't live without it. It had an occasional habit of blowing all its transistors – MJ1500 series. It only ever happened when the thing was idling, never when it was smokin hot and workin' hard. It never went anywhere without a standby. And by the time we scrapped it, we had surely spent more fixing it than a new one would have cost!

Sleeping with the Mixer

One of our most famous Smithys purchases was undoubtedly the unique Jands 26/4/2 Mixer. This absolute monster (reportedly the same one used at one of the Sunbury concerts in the early '70s and also used by Cold Chisel for a number of years) bought us into the big league with the rock and roll ratheads.

No less than a four man lift!

The unit was in poor (i.e. non working) condition when we got it. We lumbered all the way home down the highway with it leaning 3 feet out the back tailgate of the Sigma station wagon. The initial reason why it was "no go" was the power supply. With a new one built, the unit sprang into life. We liked it so much we decided to give it a full rebuild. A wise choice really, because from that point on it basically survived for another 14 years in good service. You know how sometimes Boomerangs come back? This thing was a boomerang. Borrowed, sold and handed over more times than I care to remember.



Jands 2642 Mixer Built Circa 1973 and rebuilt many times since. Reportedly used at the early Sunbury festivals and apparently travelled on the road with the Chisels for a time. Amazingly quiet, Enormous headroom and stupidly low output impedance.. you could plug the speakers directly into the back if you wanted to!



Jands 2642. Every channel with it's own separate ANALOG VU!



Jands 26/4/2 – Genuine Serial No. 1076.
Anyone else remember this one?

It actually did get used in a number of our larger gigs, and was a marvelous desk to drive. After working with the Cutec for so long - it was heaven for those big jobs! Virtually unlimited signal routing. Super quiet. Enormous headroom, and EQ on each channel which I still believe is the sweetest sounding I have ever heard on a live mixing panel to date. The Jands 26/4/2 was to play a central role in many stories through the '90s. To find out about those, you'll have to stay tuned for "An Old Fart Tells" Part two.

The most prized possessions purchased from the late '80s "Smithys" era was undoubtedly a pair of Australian Monitor F500s. These were a 1988 design composite PA box with two 15" drivers, a 1" throat coaxial horn and a very complex passive crossover inside chock a block full of capacitors and coils.

While they did kind of work, it was clear they had been abused in their past life. The boxes and drivers were quickly renovated and reconed. The F500's live on today in "the System" in 2014 in occasional service. You simply can't buy a better double 15' box the same size for the same grunt. The 1" throat coaxial horn is a winner (especially outdoors.. no more crossover distortion!) and sounds far better than most 2" throats I've heard in use anywhere.



Decizion in the early '90s. On the left, an F500 belts it out on FOH. Below it is the "Mark 1" amplifier rack which contained one of the Twin 300's, the J1000S, A patch bay and a lead packer in the top. Made of chipboard, total weight was about 180kg!

"Its Cool in the Furnace"

This little musical was an early "TechMin" affair. It was produced by Marie an Winston Gauder, a local Bible League couple. It featuring a motley collection of kids called no other than the "Fair Dinkum Singers" as talent.

The original idea was to raise money to send bibles overseas. I don't think this production (despite the massive fun had by all) ever really resulted in flinging any bibles further than over the lounge room couch!

After a debut at Kingswood High in 1987, the Gauders took the show "on the road". All our suitable gear was thus packed up in our covered trailer and a well laden Sigma SE Station Wagon.

Next stop : Blacktown Baptist Church. Now in those days, this church on sunny Bungarribee Road was brand new. Problem is, I think the builders had hired one of the parishoners to do the electrical work. Obviously he thought that he might have a go at creating an intelligent building – 1984 style.

Before we get inside. The entire building was powered by one very low slung 3 phase aerial cable. It snaked its way from a temporary builders' board at the front of the property which had been there for at least four years.

Now inside. The building was crazy. Every single light and a good deal of the power points in the entire church were all individually wired back to a rather large cupboard in the bio box.

In the cupboard, rows and rows of relays—each one controlling a load somewhere in the Church. In turn, these relays were controlled by several boards full of chips and a bunch of ribbon cables.

On the next shelf? One very distressed looking Commodore 64 Computer! OK—an example. I want to go to the bathroom. I go in and turn on the light switch. The switch closes circuit on a telephone pair which runs all the way back to the C64, asking it to turn the dunny light on. A few seconds later the enormous 128k floppy drive would hum. If you were lucky, a relay would then click and you would be able to aim properly. Sick eh! And this was a CHURCH, in the centre of BLACKTOWN—not some crazy guy's garage out the back of Quakers Hill somewhere.

Sufficed to say that obtaining power and doing a show in this building was not easy. First—we had to use brooms to lift the main power cable over the trailer as it entered the carpark. Then, we had to find some sort of 240v power that was separated from the Commodore 64 madness. The only ones we could find were the ones in the Kitchen – so quite a few leads were run that night.

I am assured that the place has been rewired now. In a more conventional style, I hope!

With Blacktown down, next stop was a little suburb called Kanahooka (near Woolongong). This was perhaps the best show we did. It had a good sized stage and great performances from all. However I am sure there were more people on stage than there were in the audience.

The “furnace” (of course the absolute star of the show) consisted of the ubiquitous row of Orange Barley light cans with red, yellow and orange cellophane added. To this day I have never seen such a convincing furnace on stage than I did that night.

The following morning before the next show in nearby Woolongong, we were bored. The team decided to do a little “cruizin”. With a 300w inverter in the car and leads snaking back to the battery under the hood, the “system” was duly set up in the back of the Siggys. The Bose 901's were plonked on the top and roped.

Thereafter we decided to test out Dapto for political allegiances. We selected a number of suitable Midnight Oil tracks to use. Of course this was at least 6 years before the first “Doof Doof” mobiles took to the streets!

The final show took place the following year in early 1988. It took us all the way to a high school hall in Newcastle. *Absolutely nobody turned up.* I swear at curtain time the hall (a large one) was bone empty, apart from a very embarrassed promoter. The show went on anyway and we had a ball at the promoter's expense.

Why isn't anyone doing this crazy stuff nowadays??



“Techmin” days photo from “Cool in the Furnace” 1987. All the standards are present.. including ubiquitous communal 1.25 litre Coke, Midnight Oil T shirts and the Cutec mixer.



“Its Cool in the Furnace”, Kanahooka 1987. The “Furnace” consisted of a bar of chased 115v tubular bulbs wrapped in cellophane, and the old “Orange Barley” can light bars behind. It cooked!

1998 - Lighting finally gets a makeover

After doing hundreds of jobs with the Orange Barley cans and Parafloods, the late '80s heralded a new era for do it yourself stage lighting.

After quitting Uni, I went in to Electrical Contracting as an apprentice where I truly belonged. One distinct advantage? A new source of freebies to pinch from work! Every day either on site or at the workshop, my venerable Datto would be backed up and filled with all sorts of goodies from old power points and switchgear and cable. One day the haul included fourteen large, old mercury vapour downlights that had been removed from a nearby shopping centre. My new "Cans". They were *perfect* for a *classic Garth Maxwell conversion*.

Back in 1980, one of Garth's favourite toys was a little known Phillips made lamp called an "Argaphoto BM". This was a 500 watt mirror backed flood lamp originally designed for photographic use. It had a claimed life of only 100 hours. It also had a Standard Edison screw fitting—unusual for this size lamp.

Garth had dozens of these Argaphoto lamps in his rig. It was quite obvious that the manufacturer had grossly underestimated the life, as Garth had many in service that had seen 1000 hours or more.

The likely reason? *Operation on dimmers*. The ABM lamp has an excellent colour temperature - very close to 3600k. It was ideal for stage work.

After searching for many years, I finally found a source of these lamps at a price I could afford, along with an equivalent source of an even cheaper 300w version. The native fitting in the "new flood cans" was a porcelain ES – and the ABM lamp fitted perfectly.

Add some metalwork to create vents top and bottom, a frame holder, high temp cable and a spigot. The result (simply known as the "Flood can") produces an excellent wide, dispersed light with very fast warm up time. *It produced twice the light of any other 500w fitting on the market at the time*. The flood cans are perfect for times when you need to flood small stages and spaces but still need at least some directional control and a gel frame on the front. At least eight of these fittings remain in occasional service with us today in 2015. There simply is no other commercial equivalent available—at any price.

Around 1987 was also the time I purchased my supacheap \$149 Arc welder from Safeways.

Here's another little tool that still kicks around our workshop and get's occasional use 20 years later! At first it was put to work building a pair of 18 foot high (you read right – 18') push up stands. (See page 14 for photo).

The design for these just kind of grew as they were built. The result was an excellent, sturdy and relatively light design that packs up into a very tight package. Placing two of them on a car roof rack is easy.

For someone who knows what Winchups are like to carry – these things were heaven! Added with some suitable "T" Bars, my new 12 can rig was in the air and flying. Just to add some extra biff, a trip to Smithys yielded an additional four PAR64's. These usually lived with some nice deep blue gels on them. These stands are still in regular use today in 2014 and one of our most popular hires! I'll admit.. it really does take a special kind of man to "push" and secure these things up 3m with the weight of 8 x cans and cabling at the top.

But hey.. isn't that what a Roadie is? This is *Rock & Roll*, after all!



Famous "Techmin" 500w Flood Can – 8 units still in occasional use in 2014. These units were converted from old Mercury Vapour downlight enclosures from a shopping centre ceiling, by adding frame holders, vents and spigot. The Phillips 500w "Argaphoto" mirrorback lamp completes the conversion.



At Last – A “real” Dimmer rack!

With all these bright new lights coming on line, something really had to be done to the control situation. The old “Minidim” was really struggling with this new “ultra high power” rig. It’s 1200w channels weren’t suitable to run pairs of Par64’s at all—and could only run one pair of flood cans.

FINALLY, I was ready to attempt the unthinkable. To completely *design (from scratch) and home build a fully functional 12 channel analog dimmer rack and control board.*

I started by using circuit principles from the old EA “Musicolor 4”. After an enormous amount of library research, the circuit design was evolved, bread boarded and tested over 12 months. Trips to electronics stores around Sydney became the norm. The meager finances available were enough to purchase just a small amount of parts each week.

My absolutely “no compromise” design called for a 3 phase unit with 12 x 2.4kW channels—equivalent to the commercially available “Minipak” units which sold at around the \$2k mark in 1988 dollars.

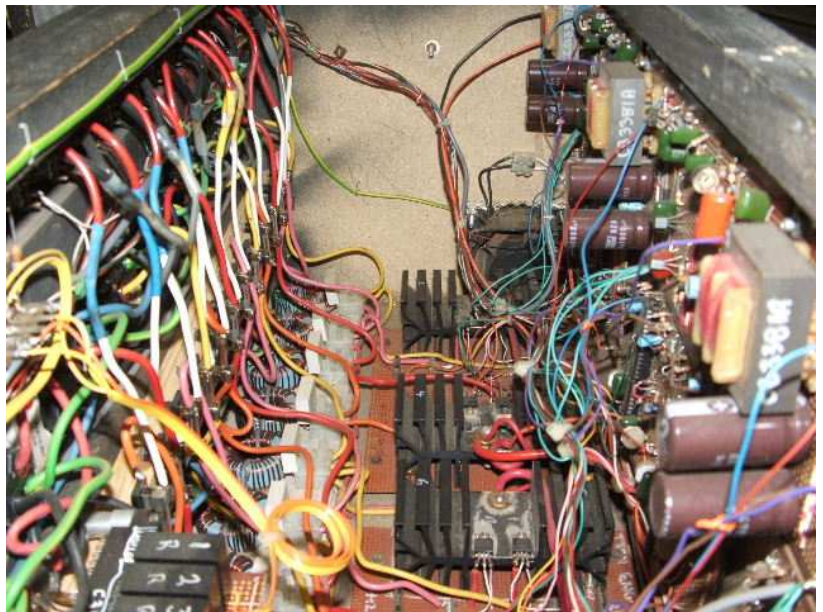
In addition, there would be an extra three switching channels and a 5kW house light channel.

This was all duly built into a massive chipboard cabinet. One face was literally stuffed with double power points for each channel. There were many other features which (for the time) were revolutionary. Such as test and indicate switches for each channel.



Power was fed in via 3 x 25A single phase leads. This is because at the time, the prevalence of jobs where 3 phase was not available still meant this flexibility was needed. A suitable 3 phase distro panel was built for the larger jobs where 3 phase was on tap. In effect my version of Garth’s miniset set up featured on Page 3, eight years earlier.

The control desk was a complete 2 preset 12 channel analog unit. It had an onboard patch bay and an inbuilt “Musicolor 4” which could be instantly switched across any of the three groups of four channels. This provided either chase or “musicolor” effects easily, as well as being able to input individual audio lines for each channel (for example putting the kick drum through a channel and having it flash a light right in front of the drumkit).



General view inside the “Big rack”. All construction on “Veroboard”. The power supplies and ramp generators are on the right, the main triac boards and dimmers at the bottom. To the left are the outputs, fusing and interference chokes and caps.

This entirely home built board later proved fantastic for standard rock gigs. It seemed just about anyone could understand how it worked and get excellent results happening before the end of the first verse. They could keep it going through the whole show regardless of the state of intoxication.

Another great addition to this panel was a handheld 12 button “calculator panel” scrapped from an NCR bank teller’s desk. This small unit could comfortably be held in two hands and was like the ultimate in portable flash button accessories.



Eight fingers on 12 buttons. In the hands of an operator who knew how to keep a beat, the results were incredible.

Imagine.. Stage lights that actually changed in time with the music! A concept completely divorced from the pre programmed DMX digital world of stage lighting today.

It seems that even today in 2014, rock lighting control has become almost “completely divorced” from the music. Controlled from anywhere except where that control really belongs – *with the band!*

For this reason this panel is still my preferred “hard rock” control desk even today . Occasionally the unit (complete with the analog rack that doubles as a barbie table) still sees the stars at night for some of my “retro” rock jobs.

General view of control board, 101% home design and build. To the left the famous M4 chase / sound to light and switching controls. Above - analog patchbay. This was especially useful and allows the spread of channels on the board to be “separated” from the need to spread loads over limited single phase supplies.

This dimmer rack and control desk is still 100% fully operational 25 years later. It has only needed minor maintenance despite it’s age and road worn life.

Unfortunately, it proved not so suitable for theatre work.

The stability of the home designed electronics leaves a bit to be desired. Occasionally channels can “erupt” in a flashing frenzy during what was supposed to be a quiet scene.

As a result, the much more stable “Minidim” continued to work these kinds of “fine arts” jobs which the big rack was unsuitable for. The big rack became the mainstay of musical work.

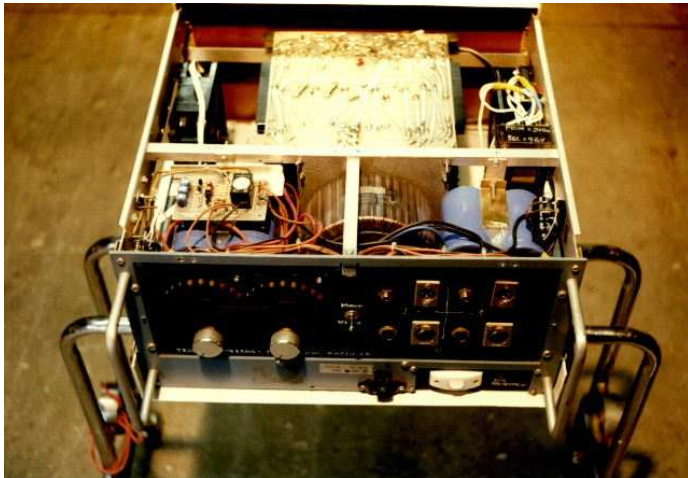
The photos speak for themselves of the achievement of this “home build” which has seen many, many venues about Sydney in the ‘80s and ‘90s.



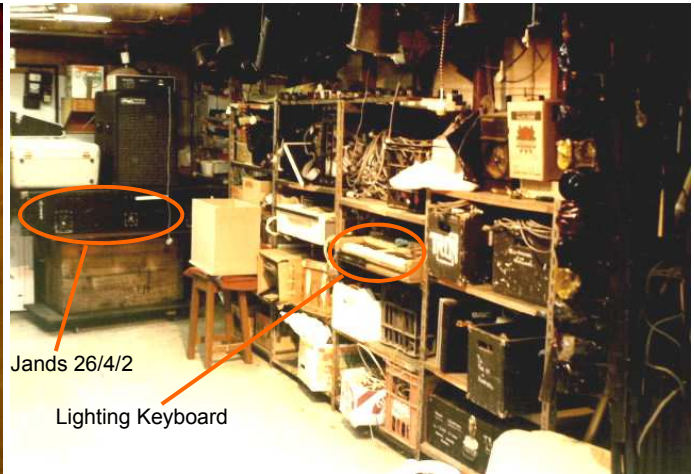
Inside the 1987 vintage analog Control Board. This unit has reliably seen service over 100’s of gigs and has never failed on a job. The butchered Playmaster “Musicolor 4” Board (the only board in the unit not totally home designed) is at the bottom front. This is still my desk of choice for “retro” rock gigs and (especially) “Battle of the bands” shows—where just about anyone can have a great show going before the first Chorus of the first song.



NCR "Flash Button" Board. This simple but devastatingly effective unit, in the hands of just about any guy with rhythm into an expert at rock lighting – and with lights that are actually in time with the music. Much more comfortable than a panel full of flash buttons and faders.



Home built twin 300 amp built circa 1988. The case was adapted from a scrapped oscilloscope. This unit remains operational today but only occasionally used.



Jands 26/4/2

Lighting Keyboard

Gear Pile circa 1989. Newly built Flood Cans. In the middle of the photo is the only surviving image of the "Lighting piano" which attached to the minimid unit. The "Orange Barley" cans can be seen to the right hanging vertically.

"Jerichos Nightclub"

The dreams of may a church youth leadership. "Why can't we have a night club but without the booze?" Some succeeded. Others? Well.. Let's just call them experiments.

"Jericho's" was a failed attempt at a Christian Nightclub. It appeared on the scene in Mt Druitt in 1990. At every step of the way, this "no budget" attempt was *doomed to fail*. However it wasn't for lack of quality homegrown production!

A complete patch bay and house lighting rig was installed up the front of the very ordinary looking multi purpose church hall. The 3 phase baptismal heater circuit was redirected to a suitable 3 phase outlet backstage in "dimmer land" where the big rack would take pride of place.

But by far the most striking addition was the totally *home grown neon sign* at the back of the hall!

It was made up from segments ripped off from the front of an old neon sign in a shopping centre a year earlier which originally read "JeansWest". Alas the all too precious "J" (to be used in "Jerichos") broke on the night of the install. Not to be outdone, an open ended curve (along with a number of deep blue straights, themselves being ripped off from a night club in Dee Why) were added instead to replace the "J".

Humming 15kV transformers. 15kV cabling all over the rear wall. It just added to the sense of danger and excitement. The stage was even more a work of Australian backyard art. Literally from junk wood found around the church site, it took 2 guys, 2 drills and about 500 long screws to assemble. And disassemble again before the following morning's church service!



"Penrith Jazz Fest", circa 1988. Site now occupied by "Krispy Kreme Donuts". Sunday morning outdoor show...

Penrith Jazzfest 1988

Around the late '80s, Jazz was king in many circles. Vince Kellett, a Penrith based promoter, decided to see if he could have some success with the format "out west".

The outdoor gig had the ubiquitous semi trailer stage in (what was then) a big wide open field next to "Panthers".

But.. for some unknown reason the time they chose for is particular event was.. Sunday morning!

Of course.. Any punters who were not still fully intoxicated from the night before, were usually lining up outside Church.

I swear there was *not ONE punter present for this show*. The only attendees were the bands, their families and us crew.

The photos speak for themselves. But.. hey can anyone out there say that they have not done at least ONE show like this in their lives?..

Next : The '90s!



Penrith Jazzfest FOH position Circa 1988. Note the massive throngs of punters present for their Sunday Morning musical treat (!). Basically zero. Those that were present were generally relatives of the bands!

'80s Picture Parade

Here's a collection of old photos we could have included in the body text but chose not to. But they're still great photos.. So why not include them here?



Above : General stage shot of ACMS 1982. The box truss FOH was still raised by two overloaded 18' winchups. The truss would then be roped off to the roof rafters above by removing the houselights. Who'se that smiley face bottom left (a younger Sylvia Matthews).



ACMS (Cooma) rig at Monaro High School circa 1982. The original Stand battens belong to the school's system and weren't used in the rig. The collection of Patt 123's and Patt23's were though. At the back of the hall.. Two scaffs for follow spots. Note the houselights removed to allow cables to be run through the roof. (Below) the luxury of a school hall with an accessible ceiling space. The heavens in heaven!



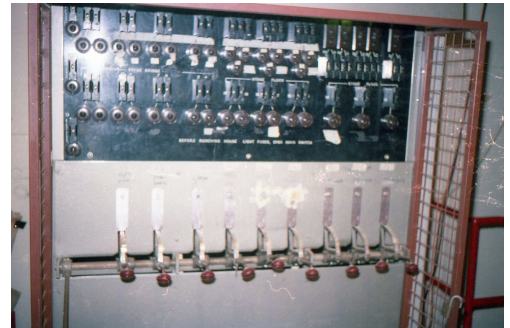
Above : Aussie made "Flight 24" control desk at ACMS 1982. After only 2 years, flash buttons were finally de rigueur. The 10Ch Stand desk next to it was used for house & specials. Finally Garth's Variacs could be left in his garage in Sydney.

Below : Audio at ACMS 1982 had graduated to a Soundcraft 20/8/2. A very young Chris Dodds would later take the controls.



Right : The original 9 channel resistance dimmer machine at Monaro HS hall in 1982. A "cut in" on the main switch of this board would yield about 60A per phase for the ACMS rig.

These panels are now extremely rare however PA Matthews Audio have recently acquired a complete unit from South Strathfield HS for restoration to original condition.



Below : Dimmer World at ACMS 1982. In just two years the Miniset count had increased from two to four, together with the 6 channel "flight" dimmer pack (centre, standing on it's side) took the rig to a monstrous total of 46 analog channels. Even then it was still common to fan all the supply tails on each rack from separate 3 phase boards.

