



NERG NEWS

Incorporated 1985 in Victoria
Reg No A0006776V - <http://nerg.asn.au>

OCTOBER 2005

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OCTOBER NERG MEETINGS

This month not just one, two, or even three, but FOUR events! More details below, however here is a quick summary:

Thursday October 13th NERG meeting night with guest speakers **Peter VK3QI and his team** with a report on their latest DX trip to St. Peter Island, under the special event VISPN callsign, and how to use PC software to predict propagation. More on page 4...

Sunday October 16 is the **Official opening** of the NERGs new home and **Open afternoon** demonstrations of all things amateur radio. See page 4...

Tuesday October 25: The retirees **Morning Tea Group**, 10am at Dave's QTH (VK3JMB). Report on page 3...

Thursday October 27: This is a **special night with John Kolm**. John, VK3YJK, is as busy as so we've squeezed this night in between our regular meetings. Anyone that has heard John speak will know it's not an event to be missed! See page 2 for more...

See you at the meetings! Mark, VK3BYY

Meeting are to be held at 7:45pm at the Briar Hill Community Hall, 126 Mountain View Rd, Briar Hill, Melways 21 C3.

FORTHCOMING NERG MEETINGS

November 10: NERG meeting

December 8: End of Year BBQ

January: Time off for meeting organiser and news editor ☺

February 9th 2006: Stephen Warrillow's slide show from his Alpine ski trip, and also something on emergency medicine as practiced in a large hospital.

GRAND OPENING

1.00pm - 4.30pm Sunday October 16th

The North East Radio Group (the NERG) invite all people interested in Amateur Radio to come and visit the new NERG home at 126 Mountain View Road Briar Hill and see what the hobby has to interest them, along with a sausage sizzle.

An official opening of the NERG meeting place by Banyule Councillor Jenny Mulholland will be made at 2.00pm.

The aim behind this event is to publicise the hobby of Amateur Radio and the presence of the NERG within the local community, focusing from school age to those well into retirement. We are intending to have a "SHOW AND TELL" with displays from our group as well as others including WICEN, WANSARC, WIA, ARVic, W4W, and VKS737 to show the many facets of the amateur radio and related hobbies.

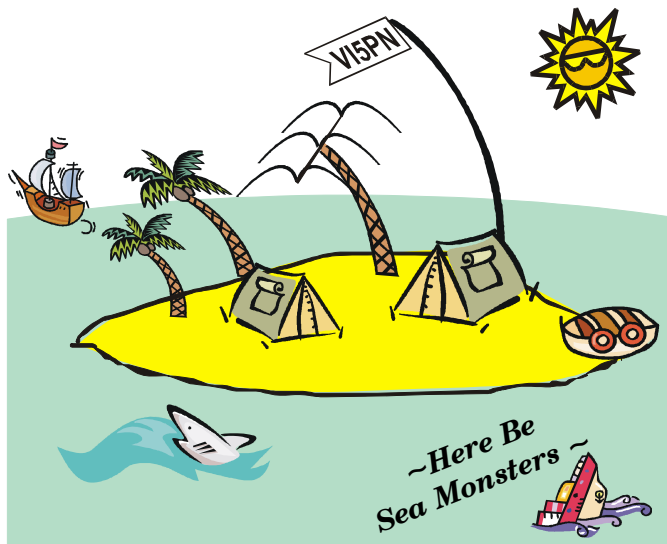
For more information please visit www.nerg.asn.au or phone NERG Secretary, John Weir, on 9431 0667

NEXT MEETINGS:

Briar Hill COMMUNITY HALL
126 Mountain View Road, Briar Hill

**7.45 pm, Thursday 13th
October 2005**

Activating St Peter Island,
and using
Propagation Tools for DX
Peter VK3QI & team



**7.45 pm, Thursday 27th
October**

John Kolm -
Exploring the Fisher Ridge cave
system beneath Kentucky



*We don't want to be the best in the world.....
We just want to be the best for our local community*



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www.margheritas.com.au

SPECIAL GUEST JOHN KOLM - 27TH OCT

John Kolm is our guest speaker for Thursday night the 27th of October. It will be a good night as he is an excellent and commanding speaker who gives a talk, not a lecture and will take his lead from our questions but has offered to talk and show pictures of some expeditioning he has been doing in the Fisher Ridge cave system underneath Kentucky.

John also has some great stories from his experiences in the military (including cryptography and intelligence), teamwork and leadership (including stories from NASA), and of course cartoons (political and otherwise).

By the way, John has published a book titled "Crocodile Charlie and the Holy Grail". In the book 'Crocodile' Charlie Kingmore embarks on a Quest. He has an urgent need to find the Secret of unified teams, productive people, and human happiness at work. It's that, or give up on his dreams for his own success. What to do? Follow Charlie's fictional journey based on many real life experiences from industry leaders.

It's a great read and worth every cent at around \$20 from all good bookstores.

Cheers, Don VK3KDT

John worked in the Australian defence community in the 1980s before taking a variety of senior leadership roles in industry in the early 1990s. He co-founded Team Results with Peter Ring in 1996, a highly successful team and leadership business operating around the world. John now operates team and leadership programs, mentors junior and senior managers, does public speaking, writes, and does cartooning. In 1990, John received a Rothmans National Grand Prix award for published artwork. When he had time, John VK3YKJ was a keen transmitter hunter with the VK3BLN team and previously wrote and cartooned for the "Radio and Communications" and RadioMag amateur radio publications.

THE GAINFULLY UNEMPLOYED GROUP

Once again Gerhard and Barbara put on a truly splendid function for the guys attending. The night soup was something out of the book and requests for the recipe have been made.

Those present were Ernie VK3FM, Dave VK3JMB, Greg, VK3VT, John VK3ZRV, Steve VK3JSE and Jim VK3KE. The discussion roamed widely solving many problems of the world including some radio issues, hi hi!

A great day was had by all and we are looking forward to meeting again at Dave's QTH in October and Greg 3VT's in November.

73 Jim, VK3KE

Listen out on the NERG chat channel on 146.575 MHz during the day for directions and DX updates.

DID YOU MISS IT?

Report on the September 8 2005 NERG Meeting

The night opened with a welcome to the night's guest speaker, Bob Tait, VK3UI and to guests (especially our wandering president Greg VK3VT, just back after month of hardship on the scenic roads around Australia.) Business and news was dispensed quickly by John VK3ZRV and Mark VK3BYY, as all were eager to hear Bob talk on electronics in today's cars and cars of the future. You could not have a better presenter on this subject than Bob as he has worked in the industry for many years, a member of MIAME and working for BOSCH as Supervisor in the Service Engineering Group of BOSCH. Bob's presentation, complete with an excellent visual display was one not to miss, it really captivated the attention of all present by showing in detail plus in a way us laymen could understand, many of the electronic intricacies in popular use in today's family car. Just when you felt comfortable and thought, yes, I can understand and relate to this electronic wizardry he introduced a whole new dimension on what is available for the next generation of cars and new concepts that are mid-way between drawing board and production line. I recorded over 18 new concepts all related to electronics and vehicle development, far too many to list here, so I shall only mention a few that arise at random.

- Electronic handbrake: Simple, just push a button to set on or release.
- Electro Hydraulic braking systems that "think", combining ABS ESP and other brake and stability control systems to provide one that enhances vehicle safety from many fronts.
- Total re-defining of many accepted systems to provide safer, more efficient driving and handling by introducing:
- Adaptive Cruise Control that adjusts your approach speed to that of the car in front of you;
- Adaptive Headlights that alter in brilliance, focal length and even direction according to the driver's requirements, but without the driver adjusting them;
- Electronically controlled petrol injectors (400Bar);
- Electronic "fly-by-wire" accelerators;
- Electronic engine management.

A whole host of other integrated electronic componentry designed to move the family car forward into the 21st century.

We thank Bob VK3UI for a wonderful presentation.

The night closed with all joining in, having Tea or Coffee complemented by a range of delicious Margheritas Pizzas.

73, Don, VK3KDT

THE AMAZING RAIN SENSOR



At first glance you may think that the Bosch Rain Sensor (pictured above) does little more than turn on a car's wipers when it rains. In fact it plays a much more important role in the safety systems of a modern vehicle.

Fitted to the inside of the windscreen, a light beam (1) shines into the window glass and reflections are continuously monitored by a light sensor (2). The more water there is on the surface of the window, the lower the reflection. The rain sensor controls the wiper frequency according to the quantity of rain detected. The sensor reacts quickly to splashes and spray from passing vehicles. The unit also detects the onset of darkness, both at nightfall and when the vehicle enters a tunnel, and will automatically switch on the headlight, and even automatically dip the lights when other cars approach.

Infra-Red sensors in the rain sensor can also help regulate the air conditioning system by measuring the heat in sunshine.



But that's not all! The rain sensor adjusts the Automatic Braking System (ABS) and Electronic Stability System (ESP) for wet road conditions, adding to the safety of the car overall. Air bags and anti-collision radars can also use rain sensor information to be more prepared in wet slippery conditions.

The picture above shows the locations of the many safety systems that rely on rain sensor information. These systems are already standard in many high-end luxury vehicles and are gradually making their way into mid-range vehicles.

Want to know more? See the Bosch web site at:

http://rb-k.bosch.de/en/start/s0_safety.html

VI5PN DX'PEDITION A GREAT SUCCESS

EMDRC amateurs Peter Forbes VK3QI, Keith Proctor VK3FT, Max Chadwick VK3WT and Jack Bramham VK3WWW, activated St Peter Island in the Nuyt's Archipelago, IOTA OC-220 from 7th to 12th of April this year. A total of 7220 contacts (3,900 CW, 3,300 SSB) and 104 countries were worked in 7 continents under the VI5PN call.

St.Peter Island (32S17, 133E35) is the largest island in the Nuyts Archipelago, located off the coast from Ceduna in South Australia. The island is 14 km in length, 4 km at it's widest, and rises on Mount Younghusband to an elevation of 44m. The complete group is managed by the Conservation Department - there is no permanent population on the island.

After a 20 hour 1,700km drive from Melbourne all the gear was transported by boat to the operating site on the north-west side of the island. The station was set up through a hot and sunny day with everything ready to go by 6pm on Thursday 7th April. Radio conditions were quite good over the ensuing 105 hours of operation, finishing at 6am local time on Tuesday 12 April.

The three operating positions were used. For SSB, an IC706 and an Emtron DX1 amplifier to a rotatable TH3MK3 beam mounted on a sand hill about 8 metres above sea level. For CW, a FT100D and a Metron MA1000 amplifier to a Hygain AV640, 40 to 6 metre vertical, actually mounted in the ocean. All power was obtained from a Honda EU20i.

A third setup, using an IC706 to a variety of wire dipoles on fibreglass support poles at 40 feet, was used mainly for VK contacts on 40, 80 and 160m.



Weather conditions were fine, but very hot, and windy conditions on the Saturday tested the tents and antennas with 50 knot winds blowing from the north straight onto the beach. Incidentally, Ceduna, only 16kms north recorded its hottest April day in history at 41 degrees C.

Along with the wind came fine sand but with four island operations of experiences under their belt, the group were able to proceed with minimal interruption.

The special VI5PN callsign was in honour of the 350th anniversary of the death of the Dutch explorer, Pieter Nuyts, who died in 1655.

The coast area was first visited by the Dutch in 1627 after being blown off course for Batavia. Captain Thyssen named the island group after his passenger Pieter Nuyts. In 1802 Captain Flinders visited the island and reported it for the first time as St.Peters Island. Flinders reported about giant grass hoppers living on the hot island and reported very dangerous snakes swimming in the bay. *(from various sources)*

CALL ALL MEMBERS - GRAND OPENING 16TH OCTOBER

We look forward to as many NERG members as possible coming along on the day. We can all join in and help out in various places; we do not all need to be radio experts. We need members to man the NERG tables at the hall entrance, to sign in visitors and to hand out literature as may be required.

More people are needed to assist with our refreshments. Tea, Coffee and Biscuits are to be free but a "VT" special sausage with dead horse and a bread blanket will sell at \$1.00 each, to recover cost. Of course they are free to all participating, so a "VT" alone is worth attending for. Helpers are needed to setup everything from 11:00pm on Sunday morning, ready for official starting time of 1:00pm. There will be a lot to do so all helpers on deck please.

If you can demonstrate or display something then please get in touch with NERG Secretary, John Weir, on 9431 0667.

p.s. Bring the family and as many friends as possible!

Don, VK3KDT

GREENSBOROUGH MANNA GUM FESTIVAL DECEMBER 4TH

Banyule Council is holding the inaugural Greensborough Manna Gum Festival on Sunday December 4th from 3.00pm to 8.30pm at the Poulter Reserve Greensborough, located on the river side of the Greensborough Railway Station.

We have put in an application to set up a small display on behalf of the NERG, it may become our main public image activity in the future but we won't know till we give it a try. This will be an easy and fun afternoon as we will be surrounded by what NERG's enjoy most after radio.... exotic food and drink stalls. Please advise Don if you can join in that day. It needn't be for the full day, either day or evening. Check out the Banyule City Council web site for more info.

As usual, any thoughts or offers will be most welcome.

For more information please visit the NERG web www.nerg.asn.au or phone NERG Secretary, John Weir, on 9431 0667
Cheers, Don VK3KDT

BALLOON #1 RECOVERED AND BALLOON #3 SET TO GO

The third in the series of Melbourne balloon launches by Phil Pawlowski will take place on or after 12th of November - Weather permitting!

Bryan VK3YNG and other amateurs are again helping with amateur radio beacons and possibly an APRS transmitter so that the balloon can be tracked more easily. Because of the unpredictable nature of the launch it's best to subscribe to the Melb-Fox newslist for the actual launch date.

The very first balloon, launched back in March, was finally found last month by a farmer near Alexandra, about 120km North East of Melbourne. This balloon did not have a beacon transmitter but relied on a mobile phone and onboard GPS for reporting its position to the recovery team. Unfortunately the phone stopped working not long after lift-off (possibly hearing too many base stations) and was lost from sight not long after.

The balloon payload, complete with film camera, was handed in to the Alexandra Police, who were able to charge up the mobile phone and contact the owner by calling the last number dialled! When Phil picked up the payload and processed the film he found some great aerial shots taken along the way. They can be seen at: members.optusnet.com.au/~philpawlowski/index.htm

From the Melb-Fox newsgroup.

JIM VK3KE BREAKS THE 300 DXCC GOAL

Congratulations go to NERG member Jim Baxter, VK3KE aka VK3DBQ, who last month reached the 300 country DX milestone. Since then he's moved right along to 301 by bagging KH9 on Kure Island a week ago.

Ernie VK3FM says there are currently 335 DX 'entities' available. There are about 50 or so deleted entities, so if you had been playing DX since year dot, you could have worked 385 or so entities by now. Some very few people are VERY near to that figure. But they are ALL over 85 years of age.

The ARRL offers a DXCC award on 6,10,12,15,17,20,30,40,80 and 160 metres, so to work them all on one mode (say SSB) you would need 3,350 valid QSO's, and then there is CW as well, and also digital (RTTY, PSK31 etc, which are all lumped together for DX purposes). So, say 10,050 valid QSO's to work all entities, all modes, all bands.

Believe it or not, some people are actually trying - several of the top guns would have worked 300 plus on all bands, both SSB and CW, 10 - 40m inclusive, be in the high 200's for 80m, and around 200 plus for 160m. A very few have actually worked 330 plus on 80m, and a lesser few !! 300+ on 160m.

It's truly mind boggling.

We can't compete with that lot - but to get 300 from a small suburban back yard does take a degree of excellence, long hours, reasonable equipment, and a certain amount of pig headedness to not give up when the going gets tough. And from VK3, that's almost always the case.

INTERNATIONAL ARDF STARS

Melbourne ARDF'ers Bruce VK3TJN, Mark VK3JMB, Brian VK3YNQ, and Adam VK3YDF, have returned with a bags full of medals from the ARDF World Championships held in Japan.

The Four VK3 ARDFers won three gold medals for the WIA team and personal medals in the 6th IARU Region 3 ARDF Championships involving nine nations and held in the Niigata Region of Japan.

6th IARU Region 3 ARDF Championships Representing the WIA there were:

M40 sections (males 40-49 years old) were Bryan Ackerly VK3YNG and Bruce Paterson VK3TJN.

Open events were Adam VK3YDF and Mark VK3JMD.

Team results for the 80m event saw the WIA awarded Gold in both the M40 and Open categories.

Individual results for 80m were:

M40: Bryan Ackerly VK3YNG and Bruce Paterson VK3TJN, Gold and Silver respectively

80m Open: Adam VK3YDF won Silver and Mark VK3JMD Bronze

For the tougher 2m event the WIA team won Gold in the Open section and Bronze for the M40.

Individual results for 2m were:

Open section Adam VK3YDF Silver and Mark VK3JMD placed 8th

M40 section Bruce VK3TJN 5th and Bryan VK3YNG 8th.

- Jack Braham VK3WWW, WIA ARDF
Coordinator, Amateur Radio Victoria 5/10/05

ISN'T BPL DEAD YET?

Unfortunately not - but the initial enthusiasm is waning in many commercial field tests with another large scale trial in the US closing down this month. BPL - broadband internet services delivered over powerlines - originally promised competitively priced services right to the power socket on your wall. Unfortunately they didn't mention the huge radio interference problems BPL systems can cause to radio users. Nor did they mention that a two way radio transmitter could freeze up BPL systems more than a kilometre away.

PPL Corp's trial involving 300 customers but couldn't make their BPL service profitable at \$40/month (which is expensive by US ADSL and cable standards). The company cited insufficient market size and hadn't counted on two major companies moving in to the area with cheaper optical fibre, coax cable, and microwave distribution services.

New technology is also affecting BPL's viability. One of BPL's claims is that you don't need expensive network or phone wires in your home to connect to the internet - just plug into the power sockets. This is true, however new wireless devices have eliminated the need for any wires at all! The recent explosion in WiFi connected computers and telephones means that communications wires in the home are becoming a thing of the past, and many battery powered devices don't even need to be tied to a power socket.

Closer to home the operators of the Hobart BPL trial have been appearing on local radio and TV promoting their cheap internet services, and claiming to be the first commercial roll-out in Australia - an interesting claim since ACMA has not completed their review on BPL and is still only allowing trials.

It's also interesting that the same company is rolling out a separate optical fibre direct-to-home trial for Internet and phone service to residential customers. Perhaps the company needs a two way bet. Let's hope the BPL option loses!

My best guess is that BPL's future will be reserved for existing apartment buildings and office towers that have poor cabling infrastructure. Suburban homes and offices are more likely to rely on improved ADSL and Cable modems for some time yet.

Fibre-to-the-customer may roll out in new housing estates but will be limited initially by its huge infrastructure investment, but has the potential for virtually unlimited bandwidth.

Short range WiFi and MDS (microwave) can play an important part in the "last-mile" or "curb-to-customer" connections. This distribution method is a little like the mobile phone system - customers connect to a base station via low cost short range radio, and the base stations connects to more expensive optical fibre or microwave networks long haul networks. The difference is that the base stations could be numerous small boxes mounted on every street corner lamppost.

Sparse areas of the outback are likely to use satellite based systems because anything involving cables in the ground is far too expensive, even with heavy government subsidies. Spread out rural areas may also end up with novel VHF/UHF radio based systems (currently being developed) that will span longer distances than ADSL or microwave, yet be cheaper than satellite systems, although it's unlikely such systems can ever provide the equivalent speeds of WiFi or optical fibre.

Mark vk3byy

NEW AMATEUR REGS LIKELY TO TAKE FORCE THIS MONTH

The amateur Licensing Conditions Determination (LCD), the regulations and assessment procedures that govern amateur radio in Australia, are about to undergo big changes. The new LCD is expected to be signed into law around 15th October. NERG News will bring you details once the legal ink has dried, but in the mean time you can find a lot of information under the 'Education' section of the WIA web (www.wia.org.au).

All amateurs are advised to obtain a copy of the LCD when it becomes available as there are many minor changes that may affect the way you operate.

The syllabus for the "foundation", "Standard" or "Advanced" licenses are already available from the WIA web site. Anyone thinking of a new license or wanting to upgrade from a novice/novice-limited to the Advanced level should check out this information.

Assessments for all levels include a single exam paper of 50 technical and regulations questions, and a practical assessment. Novices upgrading to Advanced will not need to be assessed on regulations - just the technical.

Unrestricted, Intermediate, and Limited licenses automatically become "Advanced" operators. Little has changed change in their conditions other than 400 Watts for all modes and you can all apply for the few 2 letter calls that are still out there.

All other Novice levels become "Standard" and gain full access to their existing bands plus 20m, 40m, and 6m. They can also use modes up to 8 kHz on HF, in keeping with Advanced level. However power level remains at 100W.

VIC. GOVERNMENT SEEKING YOUNG RADIO AMATEURS

The Victoria Government is looking for radio amateurs, aged 17 to 28 who could become Young Industry Ambassadors for the program that seeks to encourage more school leavers into the manufacturing sector.

They need to be able to talk enthusiastically to Year 9 and 10 students about their jobs and how they became interested by virtue of their hobby.

The YIA program is an initiative to address the significant skill shortages that are evident in manufacturing industry. The manufacturing sector program conducted this year was a success and is being repeated in 2006 with the aim of visiting 100 schools across Victoria.

The YIA program is truly a great opportunity that will benefit not only their career prospects but highlight the vocational potential for amateur radio.

The deadline for nominations is 30 November, 2005.

Inquiries to: Rachael Dalglish,
Office of Manufacturing & Service Industries phone 9651 9578
or rachael.dalglish@ird.vic.gov.au

- Amateur Radio Victoria 1/10/05.

ARDF EVENTS

For further information on ARDF events, including directions and arranging sniffer hire, please email:
[brucep \(at\) netpace.net.au](mailto:brucep(at)netpace.net.au)

Oct Sun 23 rd	Fox-or	80m	Latrobe University	Final: Series Cup
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From Vic ARDF Group newsgroup

LICENSE ASSESSORS COMPLETE WIA TRAINING

Last month 18 amateurs, including our NERG secretary John Weir, attended an assessor training weekend in Melbourne organised by the WIA. The program covered the procedures for evaluating individuals for the new classes of amateur license. These will come into force shortly.

Fred Swainston, a professional trainer, author, and keen amateur, has been running sessions all around Australia and were both lively and informative. Students of the course will soon be registered with the WIA as accredited assessors according to Australian Standards.

Robert Broomhead VK3KRB, WIA Director, says "Our heartfelt appreciation is extended to Fred Swainston and each of the course delegates for their time and commitment to this weekend of training. Attendees travelled both from within the state as well as interstate".

Under the new assessment scheme radio classes can be run by clubs and individuals, and exams can be run by "invigilators" as in the previous years, however Registered Assessors are able to mark exams and conduct the new practical assessment parts of the new foundation license.

NERGS IN THE NEWS

NERGs have been busy getting their faces in the papers lately!

Stephen VK3JNH/VK3SN wrote an article titled "Alpine Radio" which was published in the September edition of **Amateur Radio magazine** with full colour pictures on the front cover. Stephen, his brother Gerard VK3JPA and friend Matt VK3HFI appeared in more photos on the inside back cover, making a total of 6 pages!

You may have seen the guys from the Tuesday morning "Gainfully Unemployed" group smiling out at you, along with Banyule Councillor Jenny Mulholland, in the Oct 5th edition of the **Valley Weekly**, publicising our open day.

Several photos of Gerhard EWM, Greg VT and John ZRV appeared in **the Diamond Valley Leader** operating the famous valve gear in Gerhard's shack. If I'm not mistaken 'that' hard earned QSL card from VK3FM is in one photo!

All looked very photogenic and the articles are good publicity for our opening day and amateur radio in general.

But that's not all as they say! President Greg, VK3VT, had a few words to say as a guest on **Plenty Valley FM 88.6MHz** from in his favourite place - behind the microphone of a really big radio ☺

Well done guys!

NERG 100th CLUB TO AFFILIATE WITH WIA

The NERG is the 100th club in Australia to affiliate with the new WIA. Affiliation gives the NERG access to public liability insurance, a requirement for many activities help in public spaces these days. The NERG also gains access to many other WIA services and discounts on items such as the annual callbook (due out this month!).

In a quick survey the NERG found that approximately 50% of members are also members of WIA - well in excess of the WIA requirements for affiliation, and a much higher percentage than most other clubs.

The WIA plays a critical role in protecting our privileges at national and international levels, so it's good to see NERGs supporting these activities through their WIA membership.

A 'MINI' WHAT?

Miniwatt was a division of Philips Electrical Industries, back when many electronic components were actually made in Australia. At the time they made valves and most other components needed by the then growing TV manufacturing industry.

Gerhard VK3EWM found this interesting advert in a 1956 issue of Radio, TV & Hobbies (something else that is now extinct!) whilst cleaning up the NERG magazine collection. It's interesting to see how transistors have changed. The advertising slogan "their uses are almost unlimited" has certainly turned out to be true.

Philips is still a major semiconductor manufacturer and I wonder how many semiconductor companies can claim such a long history?



Miniwatt transistors

OC70
TYPES
OC71

NEW LIST PRICE

34/9

each

their uses are almost unlimited!

Here are just a few

- Low frequency amplifiers with one transistor.
- Microphone with built-in transistor.
- Telephone with built-in transistor.
- Gramophone amplifier with one transistor for headphones.
- Hearing aids.
- Intercom. systems.
- Home telephones.
- Radio control.
- Low frequency oscillator.
- Signal tracer.
- Radio receivers.

Send for data sheets without obligation.

Miniwatt DIVISION

PHILIPS ELECTRICAL INDUSTRIES PTY. LTD.
Sydney • Melbourne • Brisbane • Adelaide • Perth

In 1956 transistors were brand new - hence the price of 34 shillings and 9 pence each (then \$3.48, or in today's currency about \$50). Imagine if every transistor in your PC was an OC71 it would cost about \$100 Billion dollars (it would also be very, very slowly!). By today's standard the OC71 was huge in size (as shown), they were about 15 mm long and 5 mm diameter. Compare that to the black dot pictured next to it - it's a transistor in a SOT-23A package but could just as well be a complex integrated circuit containing a few thousand transistors. A mobile phone built with OC71's would conservatively be the size of a car - now that's what I call a Mobile!



Mark vk3byy

2005 AMATEUR RADIO EVENTS

- Oct 15-16 48th Annual Jamboree on the Air (JOTA)
- Oct 16 Official opening of the NERG home, 1:00pm-4:30pm, Briar Hill Community Hall.
- Nov 6 Ballarat Amateur Radio Groups Hamvention
- Nov 12-13 Spring VHF/UHF Field Day - on a hill near you!

40 YEARS AGO - THE GREAT AM / SSB DEBATE

The introduction of SSB back in 1966 was obviously a contentious issue. The following (abbreviated) letter published in Electronics Australia highlights some of the concerns in that era:

'I am in charge of two seismic surveys operating in the Simpson Desert about 300miles from Alice Springs. Primary communication is by radio, using four frequencies with SSB upper and lower sidebands, giving 8 channels. Fixed stations are located in Alice Springs and Brisbane.

For emergency and medical communications we are equipped with Royal Flying Doctor Service radios networking to Alice Springs using AM.

Under similar circumstances I have observed that reliability of communications is about the same for both modes of communications, excluding frequency of equipment failure.

The SSB transceiver, rated at 100 W PEP, weighs 170 lb, and measures 30" x 30" x 24", and requires about 500 watts at 240 VAC. Cost is about \$1,400, the aerial is critical, requiring a technician from town to readjust the set every time camp is moved. Also the set is very sensitive to dust and quits working at about 115 deg F. Being run from a generator means it always has interference.

By contrast the AM set weighs about 10 pounds, measures 3" x 9" x 6", takes 100Watts at 12V DC. Cost of the set is about \$370; the aerial can be 30 feet of wire draped over bushes. Anyone can load it by following the instructions in the lid. Of our three sets which have spent much of the last nine months under the seats of trucks on very rough "roads" we have had only one breakdown.

On the other hand it seems that the SSB sets are almost always broken, even in the office.

From the above I am forced to conclude that however desirable SSB is technically, for field conditions it is not yet practical. The only reason for using SSB is the restriction on direct communication using the RFDS network. There are rumours that the RFDS will be changing to SSB; if this is so, equipment will have to improve dramatically, particularly portable equipment, and decrease in price.' J. D.

THE AERIAL ANALYSER

Kits for the antenna analyser designed by Jim Tregellas, VK5JST, are available from the Elizabeth Amateur Radio Club at PO Box 8 Elizabeth SA 5112. See <http://users.senet.com.au/~kjce/AA.html>

Price for the kit of components including the engraved panel and postage within Australia is \$117 in Australian currency. The price includes postage. Kits are assembled by Wireless Institute of Australia VK5 Equipment Supplies Committee and the Elizabeth Amateur Radio Club.

For Picaxe microcontroller code, the PCB layout and LOTS more information on the Aerial Analyser, go to Jim Tregellas's webpage

This project was published in the May 2005 issue of the Australian magazine "Amateur Radio", and has been designed using parts which are very readily available (see the circuit and parts list). There is little point in supplying a kit of parts to amateurs who have been around a while - most will be in your junk box. However, the printed circuit board is another matter, and is available here also:

MK2 PRINTED CIRCUIT BOARD.\$A12.00 plus p&p

The NERG Inc. RegNo A0006776V <http://nerg.asn.au>

The North Eastern Radio Group, Inc. is an amateur radio club devoted to encouraging members and others to enjoy the hobby of amateur radio. It tries not to hang on ceremony and endless reporting but rather participate in the fun aspects of this fascinating hobby.

Membership Fees (due each August):

Full: \$30 Family: \$40 Concession: \$20

Send to: NERG Treasurer, PO box 270, Greensborough, Vic., 3088

Committee

President	Greg Williams	VK3VT	9432 0563
Secretary	John Weir	VK3ZRV	9431 0667
Treasurer	Marg Baxter	VK3VOJ	9467 1253
Committee	Betsy King	VK3HBK	
	David Aston	VK3THY	
	Peter Cosway	VK3DU	9379 3626
Repeaters	Mark Harrison	VK3BYY	9435 3043

Meetings

2nd Thursday of each month at 7.45 PM (excepting Dec. & Jan.)
Briar Hill Community Hall, 126 Mountain View Road, Briar Hill
(Near Sherbourne Road intersection) Melway map ref 21-C3

Classes

NERG occasionally runs classes and exams for Amateur licenses

Callsigns and Repeaters (25km North East of Melbourne)

Club call - VK3CNE <http://www.qsl.net/vk3cne>

6m rpt VK3RMH FM 52.550 MHz in 53.550 MHz out

70cm rpt VK3RMH FM 433.325 MHz in 438.325 MHz out

IRLP node 6350, EchoLink node 140587

6m beacon VK3RMH CW 10 Watts 50.295 MHz -Off air

10m bec'n VK3RMH CW 20Watts 28.2565 MHz

Packet Radio VK3CNE2m 144.700 MHz, 1200 bps

VK3CNE-1 for mail etc; VK3CNE-7 for the DX

Cluster.Occasionally home to the Scout Radio & Electronics Group

repeater:

2m VK3RSR FM 146.375 MHz in 146.975 MHz out

NETS

NERG NETS run on 146.575 MHz FM Simplex (8.30 – 9.30 pm Thursdays). Please join the discussions. NERGs often monitor this frequency and the 70cm VK3RMH repeater.

WEB Sites: <http://nerg.asn.au> and <http://www.qsl.net/vk3rmh>

NERG NEWS submissions and comments invited:

editor: Mark Harrison VK3BYY

ph: 9435-3043 hm

post: 266 Nell Street West, Watsonia, 3087

email: news@nerg.asn.au



NERG

North-East Radio Group VK3CNE

NERG Incorporated 1985
BOX 270 GREENSBOROUGH VIC 3088

STAMP

NEXT MEETING:

7:45 PM Thursday 13th October 2005

Activating St Peter Island & using Propagation Tools - Peter VK3QI & team

2005 CALENDAR (NERG ACTIVITIES IN BOLD TYPE)

- | | |
|-----------------|--|
| Oct 13 | NERG Meeting - Activating St Peter Island, and using propagation tools - Peter VK3QI & team |
| Oct 15-16 | Jamboree On The Air - Scouts and Guides communicating via amateur radio around the world. |
| Oct 16 | Official Opening of the new NERG home with public information displays and amateur radio demonstrations -
1:00pm-4:30pm Briar Hill Community Hall. |
| Oct 23 | ARDF event at Latrobe University run by Jack VK3WWW |
| Oct 25 | Tuesday Morning Tea Group - 10 am, Non-workers meet for social discussions, coffee, and
lunch at Dave's QTH, VK3JMB. |
| Oct 27 | NERG Special Guest Speaker Night - John Kolm - on exploring Fisher Ridge cave system underneath
Kentucky and other unrelated subjects! |
| Nov 10 | NERG Meeting - 7:45pm Briar Hill Community Hall |
| Nov 6 | Ballarat Amateur Radio Groups Hamvention |
| Nov 12-13 | Spring VHF/UHF Field Day - on a hill near you! |
| Dec 8 | NERG end of year BBQ |
| Jan 2006 | No NERG Meeting |