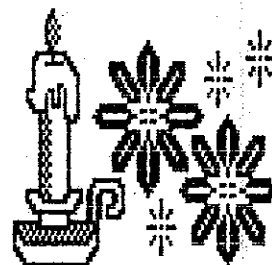
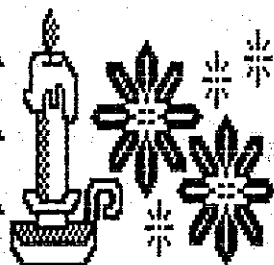


THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO. SOC. INC.
VOLUME - 86 , NUMBER : 11 DECEMBER 1987
REGISTERED BY AUSTRALIA POST PUBLICATION NUMBER : NBH - 1491

MEETINGS ARE HELD ON THE SECOND TUESDAY OF EACH MONTH,
(EXCEPT JANUARY) AT 7.30.PM. AT THE STATE EMERGENCY SERVICES
BUILDING , IN MONTAGUE STREET , NORTH WOLLONGONG .

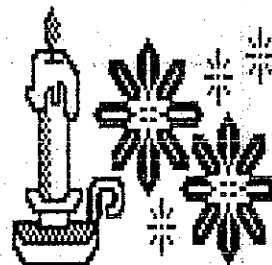
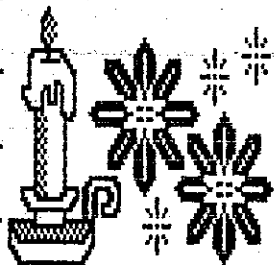
VISITORS ARE MOST WELCOME TO ATTEND THE MEETING'S .



MERRY
CHRISTMAS

&

A HAPPY
NEW YEAR



NOV. COMMITTEE MEETING

A well attended meeting was held on 17/11/87 and business included circulation of the last years financial report and discussion on a wide range of subjects.

Activities for December include an XYL night at the Monthly meeting, a Xmas picnic at Cordeau Dam on Sunday 13th December commencing about 11 am.

A new member approved was Paul.S.Hambly. An FT7 was viewed and discussed for purchase by the club. Jim VK2EJH advised the clubs insurance has been renewed.

A letter was received from Tim Mills the W.I.A. NTAC Co-ordinator re the introduction of telecom pager to Mt Gibraltar at Bowral and Mt Gray at Goulburn and the affect on amateur repeaters.

ON THE NET

1st November 1987.

VK2MT-ROB Co-ordinator,
VK2DFL-DAVE, VK2PHD/P-RAY
VK2JNC-NEIL, VK2PZY-DAVE,
VK2DZJ-PAUL, VK2EMV-MORRY

15th November 1987.

VK2PZY-DAVE, Co-ordinator
VK2EBI-KEVIN, VK2MT-ROB,
VK2AXI-BRIAN, VK2EMV-MORRY

22nd November 1987.

VK2XCC-RAY, Co-ordinator,
VK2PZY-DAVE, VK2EBI-KEVIN
VK2DFL-DAVE, VK2VFD-KEN,
VK2JNC-NEIL, VK2PJS-MERV.

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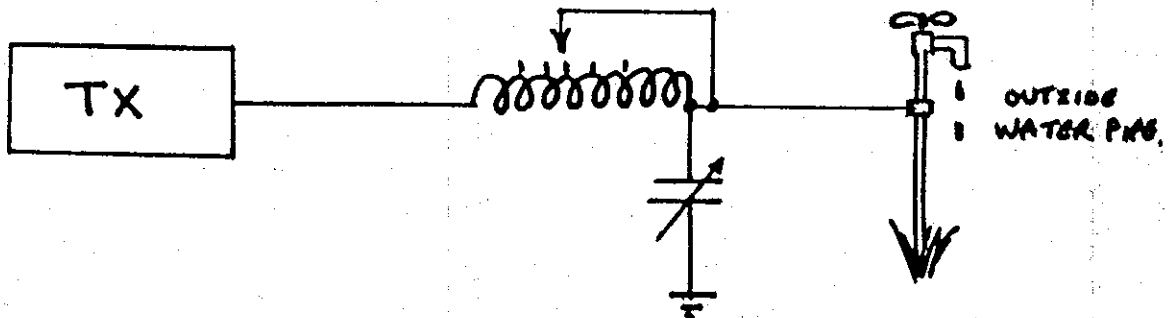
MON-FRI : 7.30 PM. - 9.30 PM.

SAT-SUN: 9.30 AM. - 9.00 PM.

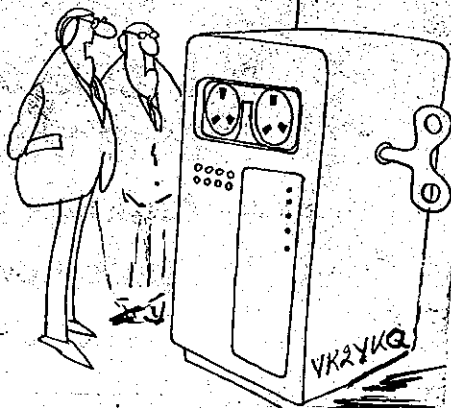
FOR WHAT IT IS WORTH!!!

HF.OPERATORS HAVE YOU TRIED THIS

Load up your mains water pipe system under the house. I did this a few months back with a short piece of hookup wire from my L Coupler to the back yard water tap, circuit is as below!



Reports on 80 metres, 40 metres, were extremely encouraging with reports from adelaide at 58-9 considering I live in the Eastern Suburbs of Melbourne. A bit of Fun. Duncan Baxter VK3LZ.



"If you're not interested in speed this one saves money."



"Mmmmm—what smells so good?"

A lawyer who was fond of the good things of life was seated next to a hot-gosselling temperance minister at an official dinner.

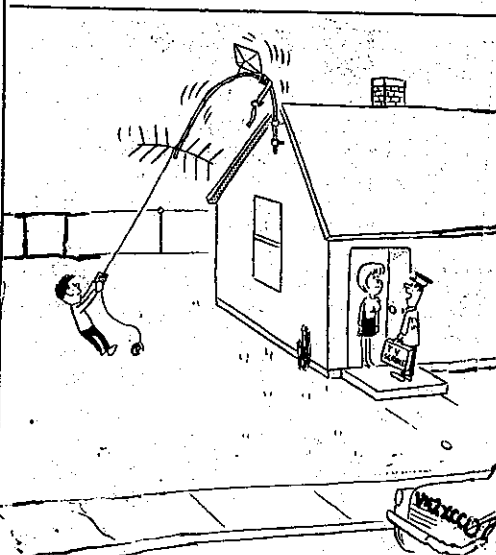
After the meal the waiter came up and asked what they would like to drink with their coffee.

"I'll have a large brandy, please," the lawyer replied.

"And for you, sir? A brandy also?" the waiter asked the bigoted man of the cloth.

"I'd rather commit adultery!" the minister hissed.

"Cancel my brandy!" said the lawyer. "I didn't realise there was a choice."



"I think I can clear up your TV from out here. Do you have a pair of scissors?"

CONFERENCE OF CLUBS.

At the conference of clubs held recently Jim VK2EJH reported that motions to support the extensions of privileges to Novice operators with 10 w.p.m. C.W. and to holders of K calls were both lost.

A change in the requirements for a quorum at Conferences of Clubs was introduced and Jim mentioned that the workings of the QSL Bureau were impressive.

NEWTEK-

ELECTRONICS

WE STOCK:

ALARMS - ANTENNAS
BOOKS - BOXES
COMPONENTS-COMPUTERS
HARDWARE - KITS - TOOLS
WIRE AND A LARGE RANGE
OF SEMICONDUCTORS FOR
THE PROFESSIONAL AND
HOBBYIST : 116 CORRIMAL
STREET. WOLLONGONG.
(JUST FROM HARP-HOTEL)
PHONE : 27 1620.

Lawrence Hargrave of Stanwell Park

By Col Wingate.

reprinted from Northern
News, Wednesday, 22 July
1987. by VK2EMV....ED....

"And keep away from that mad man playing with kites."

This was the parental advice given to children walking along the beach at Stanwell Park, in the 1890's.

Although Lawrence Hargrave is remembered solely as the inventor of the Box Kite, he was an extremely imaginative inventor and experimenter, interested in a wide variety of scientific problems.

Lawrence Hargrave's experiments with box kites at Stanwell Park made some of the most significant contributions to the invention of aeroplane. At the beach, on 12th November 1894, in one of his most famous experiments, he lifted himself in a 21 mph wind to a height of 16 feet from the ground by four box kites one above the other on a single rope, the total weight lifted was 208 lbs.

Lawrence Hargrave was born on 29th January 1850, at Greenwich, Kent, the third of five children (although the oldest child died when only an infant).

In 1856, Lawrence's father, John Fletcher Hargrave, and his brother Ralph, migrated to Australia. John's wife Ann and the other children remained in England and within three years of living in N.S.W., John was in Parliament, as member for Illawarra.

In 1865, John Hargrave became a Supreme Court Judge and in that same year his son Ralph travelled to England. He soon returned to Australia with younger brother Lawrence. John tried to interest Lawrence in law, but Lawrence had his heart in engineering and science. He also longed for adventure, and set off to explore the dense jungles of Northern Queensland and Papua New Guinea.

In February 1872, Lawrence and the crew of an ex-coal brig 'Maria' were shipwrecked near Bramble Reef, about 30 miles from Cardwell, Queensland. Most members of the shipwrecked crew were murdered by Aborigines, but Hargrave fortunately survived.

Despite this experience, Hargrave ventured to New Guinea in 1875, where he spent several years, exploring the dangerous jungles, inhabited by cannibals and headhunters, studying the natives and natural phenomena.

Hargrave's expedition had penetrated far more deeply into the wild unknown interior of New Guinea, than any white man had ever been before.

In 1877, after five or six years of enough adventure for two or three ordinary lifetimes, he abruptly ceased his life of exploring, gained employment

at the Sydney Observatory, married Margaret Preston Johnson, and settled down.

For several years they lived in Sydney, near the Observatory.

Meanwhile, Judge John Hargrave became a large Illawarra landholder and during his lifetime, divided his illawarra property among his children.

The Judge was disappointed with his son Lawrence, while his other children were working hard at improving the Hargrave estate, Lawrence was exploring the vast jungles of New Guinea.

However, he still distributed his land equally to his children. Indeed, Judge John Hargrave probably would have been surprised and disappointed to know that after his death, he would only be remembered because he was Lawrence's father.

It took Lawrence five years to register the deeds of the property provided by his father and his trustee was young barrister named Edmund Barton, who later became Australia's first Prime Minister.

Judge John Hargrave provided Lawrence with more land at Coalcliff, which became a colliery, and therefore enabled Lawrence to retire from the Sydney Observatory and devote his life to research and invention.

Lawrence devoted his time to researching human flight in heavier

LAWRENCE

HARGRAVE

CONTINUED

than air machines and was inspired by science fiction writer Jules Verne, whose literary inventions were never taken seriously by the average person.

Between 1883 and 1893, Hargrave made over sixty models of flying machines.

In 1889, he invented the rotary engine and several of the First World War planes followed the same principle of his invention.

Unexpected shifts in the wind had damaged some of his models, so he turned to kites. His first box kite was completed in February 1893 but many more inventions followed, including the propeller driven float plane with curved wings, in 1902.

He experimented with steam and petrol engines, turbine engines (one operated by steam, another by gunpowder) and jet engines using kerosene.

Just before his final invention was completed, the Wright Brothers made their historic flight, after which Hargrave wrote and congratulated the Wrights. The European pioneers of Aviation, such as Dumont, Farman and Voisin observed Hargrave's inventions with great interest and the first plane to fly publicly in Europe, Santos Dumont's in 1906 was based on Hargrave's box kite, simply with an

engine added to it.

In 1906, Hargrave reluctantly gave up his aviation work. His children were growing up and needed his fatherly guidance, and his wife appeared to be losing interest in his dedicated work.

His inventions and scientific research were not just restricted to aviation however, and he made a pair of waater skis and walked on the waters of Sydney Harbour, much to the

time he never received the public recognition, fame or fortune, he deserved. This was because of his unselfish attitude of sharing his work with others, who often took credit for some of his inventions.

Hargrave did not live to see the rapid developments in aviation brought about by the first World War. He died on 6th July 1915, just six weeks after his only son Geoffrey was killed at Gallipoli.



**I.A.R.S
CHRISTMAS
PARTY**
will be held
at the
**CORDEAUX
DAM**

on the
13th December 11am.

amazement of onlookers, who thought St. Peter had returned.

He made a model of a ship, propelled by waves, which actually sailed against the wind. He also claimed that a Spanish explorer, Lope De Vega, discovered Australia two centuries before Captain Cook and this theory supported by artist Norman Lindsay and Cardinal Moran.

In his own life

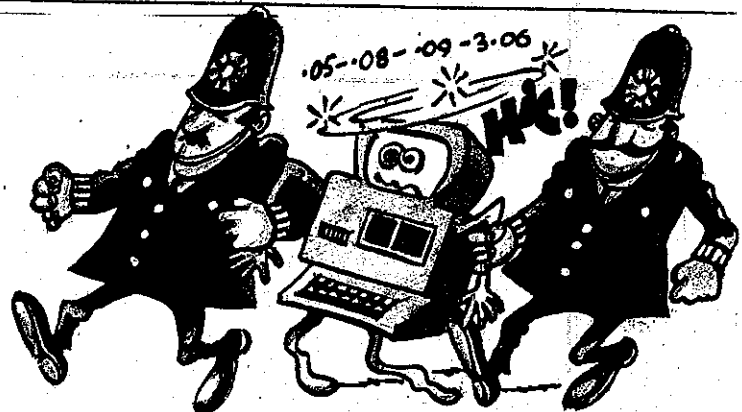
In 1965, a commemorative stamp was issued to mark the 50th

anniversary of his death and to day his face appears on our twenty dollar note.

Lawrence Hargrave did not invent the aeroplane, but he did as much to bring about the accomplishment of flight as any other individual.

THE END.

A BREATH-TEST
computer got drunk in
Smethwick, England.
Police got suspicious
when the computer
read-outs said tested
drivers had more
alcohol than blood in
their bodies.
Engineers found the
works had been
overcome by alcohol
fumes, and the
machine was given a
rest ... to dry out.



MOBILE AERIAL INSTALLATION

ANTENNA TEST ON A 1975 FORD ESCORT

If you want efficiency from your mobile installation you may consider the results of tests conducted some time ago and used as a guide for commercial advice -

Source is unknown.

Sporadic "E" season.

~~~~~\*\*\*\*\*~~~~~

Each summer centred on the longest day - sporadic

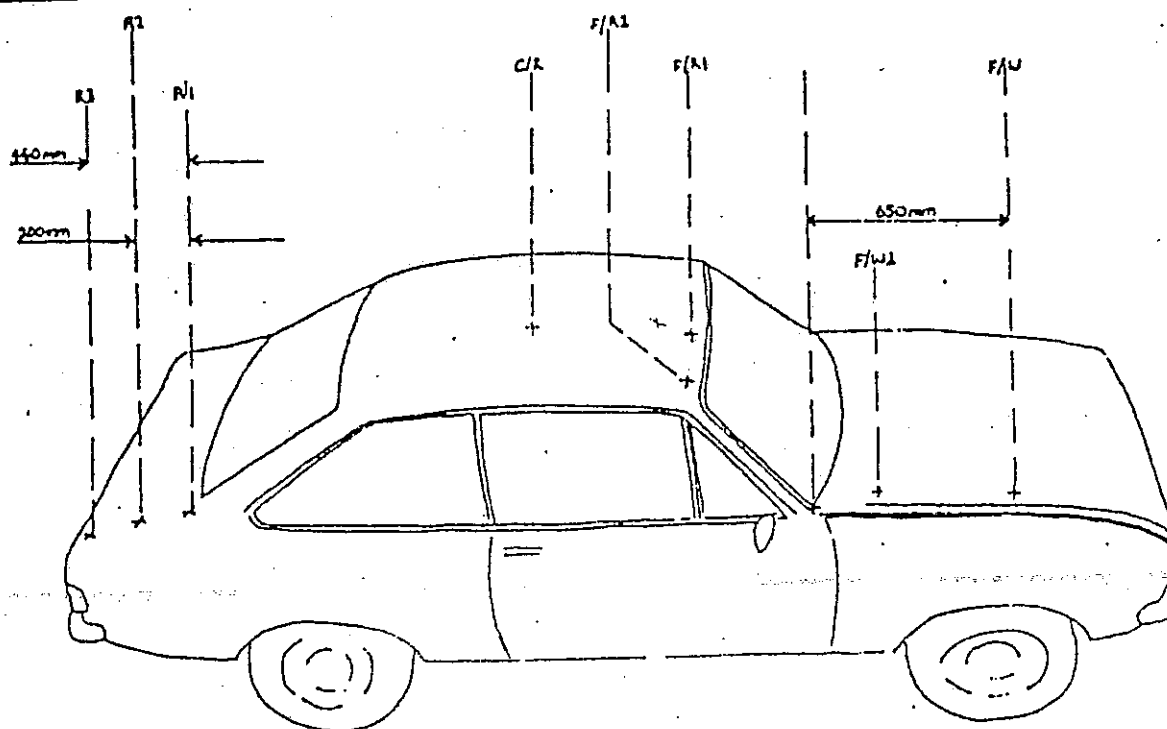
"E" propagation is the mode of propagation to watch on V.H.F. ie from approx end of Oct to the end Feb this form of propagation reaches its peak firstly on 28 Mhz then 50 Mhz and at the peak in December 144 Mhz.

The "E" layer exists at approx 80 - 100 Km above the earth and during this summer

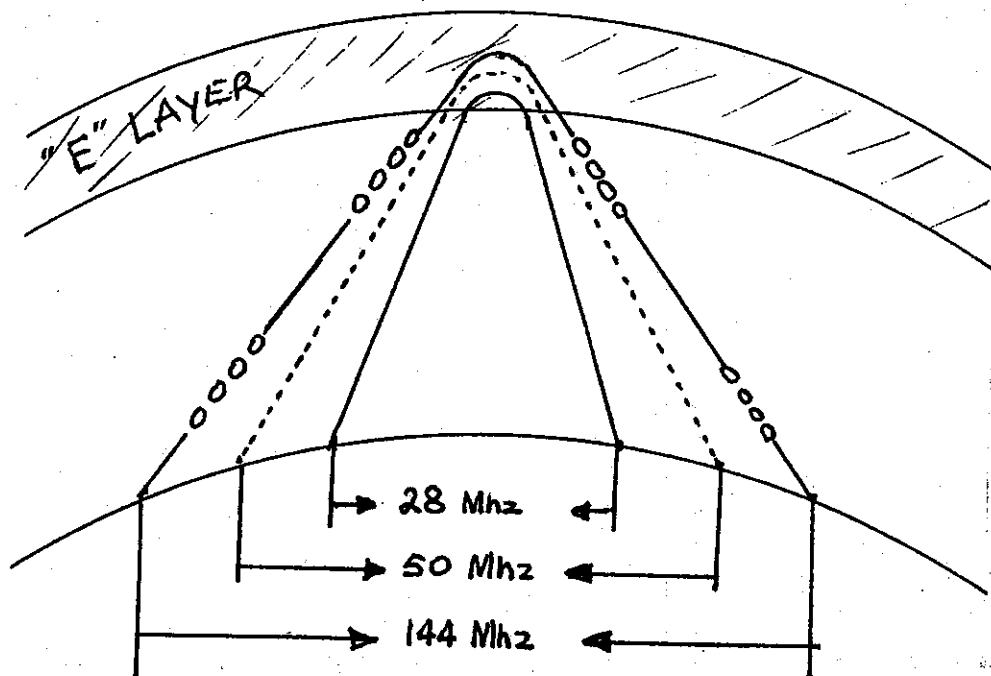
peak the refractive index of the layer is great enough to support propagation at the VHF bands.

The higher the frequency in use the greater the distance travelled since, the refractive index is an inverse function of frequency each day as the sun's rays bombard the

CONTINUED NEXT PAGE



| POSITION OF AERIAL |                                                 | SIGNAL |
|--------------------|-------------------------------------------------|--------|
| C/R                | CENTRE OF ROOF                                  | 100%   |
| F/R 1              | FRONT OF ROOF                                   | 24%    |
| F/R 2              | OFFSIDE FRONT OF ROOF ABOVE WINDSCREEN PILLAR   | 16%    |
| F/W 1              | FRONT WING 650mm FROM BASE OF WINDSCREEN        | 30%    |
| F/W 2              | FRONT WING BASE OF WINDSCREEN                   | 24%    |
| R 1                | REAR WING AT BASE OF REAR WINDOW PILLAR         | 18%    |
| R 2                | REAR WING 200mm FROM BASE OF REAR WINDOW PILLAR | 13%    |
| R 3                | REAR WING 450mm FROM BASE OF REAR WINDOW PILLAR | 10%    |



DISTANCE BETWEEN STATIONS

## ANTENNA CONTINUED

earth, particle clouds in the "E" layer are ionized and the reactive index changes.

This cycle is repeated every day but not every day is propagation possible due to many unknown variables.

Therefore each day the paths to watch are in the morning look to the east, then north and south finally to the west, this is only a guide and your own observation will confirm where and when to point your beam.

Success at using sporadic "E" propagation mainly means being there at the right time, signals vary wildly in strength from 30 db over S9 to nil in a few seconds to many hours of perfect stable S9 signal.

On 50 Mhz calling frequencies used are :- 52.050.Mhz SSB/CW and on 52.525.Mhz FM.

On 144 Mhz use 144.100 Mhz SSB/CW or simplex FM; a list of beacons is published in amateur radio, in the VHF-UHF notes from time to time.

On six metre you could expect to hear and work all VK, P29, ZL, odd Pacific island. On two metre you may hear or work ZL, VK7,5,4.

Many old timers used to comment on the possibility of an opening if you had a fine day, but take it from me it matters not if it is raining or overcast, the sun is still shining up above those clouds and sporadic "E" propagation can occur on any type of day during the season.

Even if you never

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Located close to railway crossing.

Phone: 299382 or 285932.

experience the thrill of a 2 metre or 6 metre sporadic "E" contact, be aware that this type of propagation exists.

John VK2BHO..

# OSCAR

# 10

Lyle VK2ALU reported that Oscar 10 may be available soon and full details could be obtained from the AMSAT broadcast on Sundays.

-----:-----

# STRANGE EVENT OF DICK JACKSON

Dick Jackson woke up with the sun shining on his face. For a few moments he forgot about everything and just lay there relaxing.

It was the sound of Jill, his wife, rattling the tea cups in the kitchen that brought him back to reality, and the reality was he was forty years old and unemployed.

He had worked hard at his job for most of his life, and then out of the blue a month ago had come the shock of being told he was being put off as the company had gone bankrupt.

There had been no "Golden Handshake", and for the last week Dick had been feeling the "pinch". It wasn't easy with a family of six to feed with the youngest still only three months old.

Dick laid in bed reflecting on why it was that when you were in financial difficulties everyone seemed to want money from you, from the rent man to the electric company.

This last reflection brought him back to earth with a jolt. The electric companies threatening letter was burning a hole in his jacket pocket, for today was the last day to pay this account that was well overdue, or else the electric would be disconnected.

With this in mind, and knowing that he couldn't let his family down, Dick climbed out of bed and after dressing collected every cent he could find from different places. On counting it all up he found that he just had

enough for the electric bill plus 8cents over.

After a meagre breakfast Dick told his wife Jill he was going in to town and asked if she would like to go along.

Jill saw the strained and gaunt look on her husband's face and realised the pressure he must be under. Trying to cheer him up she said her and the children would love a trip out.

Within half an hour they were all climbing into the family car and preparing for the 25 mile trip into town.

The narrow road twisted and turned for mile after mile, with Dick cursing now and again about the condition of the road and the large semi's that seemed intent on running him off the road.

He was approaching a sharp bend in the narrow road, and was distracted for a few moments by one of his children in the rear of the car. He turned round in his seat and shouted at them to behave themselves.

Turning back in his seat he realised he had

made a big blunder, for he was overshooting the bend. Even as he was starting to correct his mistake, the very large semi-trailer came roaring round the corner.

Dick's hands swung the steering wheel, his wife and children were screaming in fear. The car seem to keep on going in the wrong direction for an eternity.

Dick could not believe it. There he was with his family all intact, no sound of the dreaded crunching of metal against metal, and apparently not a mark on the car. In fact since the incident the car seemed to be going better and quieter.

Within minutes of his "near miss" Dick suddenly found himself driving along a beautiful wide highway with the scenery "out of this world".

Dick's troubles seemed very remote as he sat laughing and talking with his wife and family whilst driving along this new highway enjoying his trip.

The newspapers issued the story of the terrible accident involving a semi-trailer and a car at a bend on a country road. There were no survivors. The same day the electricity was disconnected at the Jackson family residence.



**I.A.R.S  
CHRISTMAS  
PARTY**  
will be held  
at the  
**CORDEAUX  
DAM**  
on the

**13th December 11am.**



# MESSAGE TO XYLS

Its that time of the year again when our XYL's get to see what we get up to when we say, "JUST GOING TO THE RADIO CLUB MEETING DEAR".

Yes fellas, its XYL NIGHT at the S.E.S. building this month, so DONT FORGET to tell your XYL and YL that she is invited, else be it on your own head all the trouble you will be in when she finds out.

To you ladies, the Illawarra Amateur Radio Club Inc; cordially invites you to their December meeting. If the Old Man doesn't want to go come anyway and enjoy the company of other XYL and YL,s, you will be made most welcome.

As we sincerley

invite you with one hand, we also ask you if you mind bringing a plate of GOODIES with the other hand. Us Hams are noted for our brains, good looks, (some of us) and best of all for our wheedlings and dealings.

So Ladies, we beg you to come to this special XYL night and if possible bring a plate please.

Thank you Ladies and we look forward to seeing you at the meeting.

—FOR—  
COURTESY TO  
AMATEURS AND  
VALUE  
IN  
OUR AREA  
NOT USUALLY  
SEEN ELSEWHERE

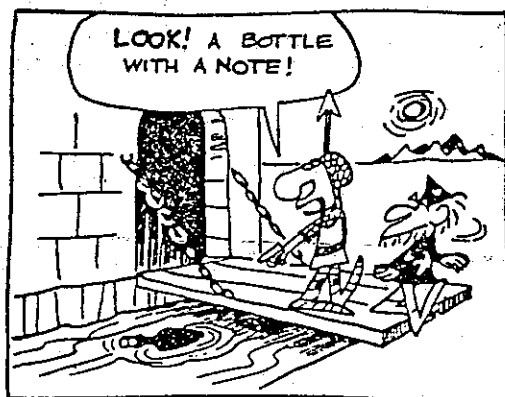
WE RECOMMEND!!!!

**CAVIONS**

11. MOLLOY STREET, BULLI.

PHONE: 042-84-6838

TO ALL OUR CLUB MEMBERS.



## COAST-WIDE COMMUNICATIONS

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HABGRAVE, DRV. THIRROUL

WE STOCK: CB RADIOS  
CB AERIALS - COAX CABLE  
MARINE RADIOS  
TV - AERIALS, ETC ETC.  
SALES AND SERVICE

OPPOSITE THE  
SHELL - GARAGE  
PHONE: 67 2134.

VK2KWN - WAYNE NEWPORT

**COPIER  
A GOOD**

## INVESTMENT

Dave VK2YKQ/VAV in his annual report stated the club is in good financial shape and that the purchase of the photo-copier had proved a good investment.

Mainly due to the success of the fund raising lotto schemes the copier is now paid for and thanks are due to Mike VK2DFK for making this purchase possible.

Details of the clubs financial report are available to members at any monthly meeting.

The club now has 96 financial members.

# NOVEMBER AUCTION NIGHT

A good attendance of 57 members and guests turned up for the November monthly meeting and auction night.

After a brief meeting at which Dave VK2YKQ/VAV gave a financial report for the year ended June 1987, and Lyle VK2ALU reported on the availability of Oscar 10 soon, the annual auction was held.

Tony VK2ENX was this years auctioneer and did a good job of keeping the auction moving and coaxing bids out of the big spenders (and others) present.

The auction generated a fun evening and reasonable profit for the club, mainly due to items donated by Graeme

VK2CAG and Rob VK2MT.

The meeting closed with the usual chin-wag and tea and coffee.

### W.I.A. Broadcast Service

The W.I.A. will transmit items of interest from members. Phil VK2TPH will forward any items on packet and may be contacted on 146.850. or 438.225.Mhz.

### F.R.L. No: 3 Winners

Week No: 18. D. Henderson  
Week No: 19. I.A.R.S.  
Week No: 20. C. Lacey  
Week No: 21. J. HAYES

WHICHEVER WAY YOU LOOK AT IT  
YOU CANT GO PAST

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FOR SERVICE CALL IN AND SEE  
**PETER CHIECO**

For Your :-

- \* Electronic tune up \* Wheel balancing
- \* Front end alignment \* Brakes
- \* And also Rego Checks.

146 PRINCES HIGHWAY, CORRIMAL

PHONE: 84 5650

# ACTIVITIES IN 1988

Throughout the next year, Australian Amateurs will be able to use the prefix "AX" as an alternative to the normal "VK" prefix. Furthermore, the Wireless Institute and some Club stations will also be using the special call group of "VI88" followed by a suffix of their state letters, and in the case of VK2 this will be "NSW". It is expected that those using the AX prefix will provide suitable QSL cards.

January 26th, 1988, is the celebration of the country's start of European settlement. To mark the day, the VK2 Division will be operating a special event station on all practical bands using the callsign VI88NSW. A special QSL card will be available for Bureau exchange or reply paid postage.

The VK2 Bureau is located at PO Box 73, Teralba, NSW, 2284.

At other times during the year, the special call VI88NSW will be used by the Division and various Clubs and Groups. A QSL card is available for Bureau exchange.

During November 1988 a special event station will be set up to celebrate the founding of Parramatta. A special QSL card and award will be available.

This is a brief summary of what the VK2 Division is doing next year, so what are you, the Amateur and Club member, doing?

## VK2 Awards

Several new awards will be introduced in 1988, sponsored by the VK2 Division. They are:

Bicentenary of Australia Award

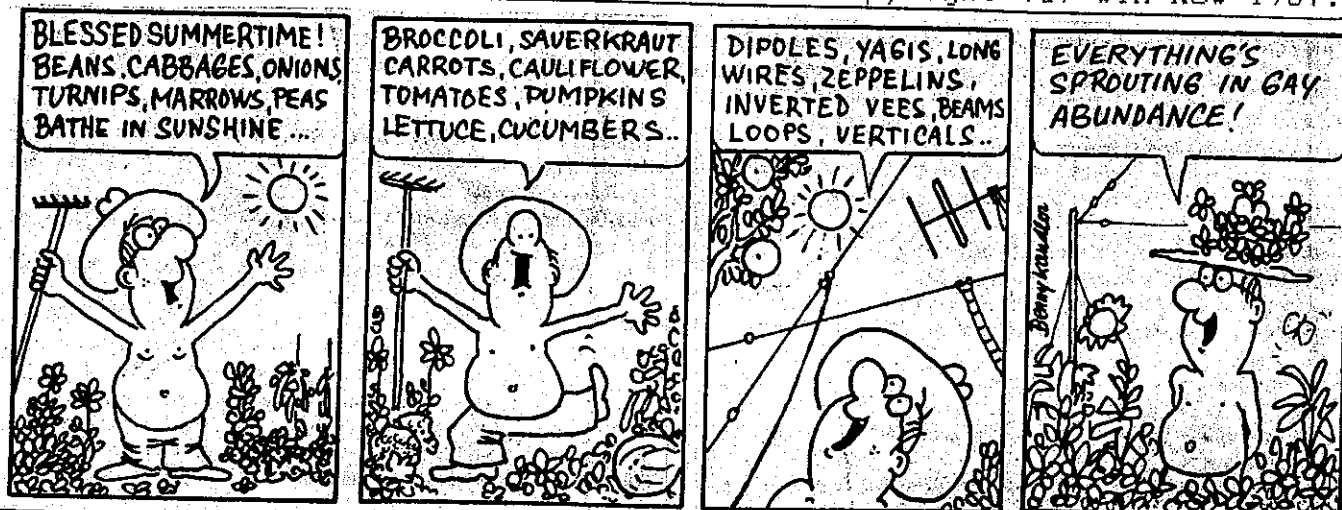
Worked VK2 Award

National Parks and Historic Places Award

Worked VK2 Shires Award

Further information will be in January "AR", and an information sheet will soon be available from the Parramatta office.

VK2WI Broadcast, 15th November 1987. Copyright (c) WIA NSW 1987.



Practical Wireless, July 1983

# THE ILLAWARRA AMATEUR RADIO SOCIETY. INC.

## P.O. BOX 1838. WOLLONGONG. 2500. N.S.W.

**MEETINGS:** Are held every 2nd Tuesday of the Month except January, at 7.30.p.m. in the S.E.S. Headquarters, Montague street, North Wollongong.

**REPEATERS:** VK2RAW - 146.850. - (VOICE) VHF Mt Murray.  
VK2RAW - 147.575. - (PACKET) VHF Mt Murray.  
VK2RIL - 147.275. - (VOICE & R.T.T.Y) VHF Sublime Point.  
VK2RUW - 438.225. - (VOICE) UHF Hill 60 Port Kembla.  
VK2RIL - 438.725. - (VOICE & R.T.T.Y) UHF Sublime Point.

**BROADCAST:** On Sunday evening prior to the club meeting, at 7.00.p.m. R.T.T.Y. Mode, and at 7.15.p.m. on voice. Transmitted on 147.275.VHF, and relay on 3.562.Mhz. Callbacks will be taken after the voice broadcast.

**W.I.A. RELAY:** On 146.850. at 11.00.am. and at 7.30.p.m. each Sunday.  
**CLUB - NETS:** On 3.562.Mhz. SSB on Sunday at 8.00.p.m. and a slow morse net on 28.440.Mhz on Thursday evenings at 8.00.p.m.

**NEWSLETTER:** "THE PROPAGATOR", published Monthly to reach FINANCIAL-MEMBERS in the week preceeding the club meeting. All articles, adds etc, to the editor must be in, or try, by the 3rd Tuesday each month.

**MEMBERSHIP:** The Secretary, I.A.R.S. Inc, P.O.Box.1838. Wollongong. 2500. Full membership is \$10 per annum; students & pensioners concessional members \$5 per annum.

**AWARDS:** The Award of the Illawarra Amateur Radio Society. Inc. is the LAWRENCE-HARGRAVE-AWARD. VK stations require 10 contacts with I.A.R.S. members. Overseas stations require 5 contacts with I.A.R.S. members. A contact with VK2AMW is sufficient for the award. Band-details, date, frequency, station worked and \$2 or 4 I.R.C.'s to THE AWARD-MANAGER, I.A.R.S. Inc, P.O.Box. 1838. WOLLONGONG. 2500. No QSL-CARD is required.

**STORE:** The club store operates at each club meeting. by COMMITTEE-MEMBERS.

### COMMITTEE:

**PRESIDENT:** VK2DYU- BILL CHADBURN. 45 Beltana Ave, Dapto.  
**VICE-PRESIDENT:** VK2OB - KEITH CURLE. 24. Beach Drv, Woonona.  
**SECRETARY:** VK2JTB- TOM BROWN. 10. O'Keefe Cr. ALBION - PARK.  
**TREASURER:** VK2VAV-YKQ-DAVE HENDERSON. 8. Gladstone st. Bellambi.

**GENERAL-COMMITTEE:** VK2MT - ROB McKNIGHT, VK2BIT - Peter Woods,  
VK2XCC/PHD - RAY BALL.

**REPEATER - CHAIRMAN:** VK2XGJ - JOHN SIMON.

**REPEATER - COMMITTEE:** VK2CAG - GRAEME DOWSE, VK2EXN - IAN CALLCOTT,  
VK2ENV - MORRY .v. d. VORSTENBOSCH. VK2DFK-MIKE KEECH, VK2MT-ROB McKNIGHT,

VK2BIT-PETER WOODS, VK2TPH-PHIL HOWCHIN, VK2XGJ-JOHN SIMON, VK2FCP-FRED BROWN.

**QSL-CARD'S OUT :** VK2EXN - IAN CALLCOTT.

**QSL-CARD'S IN :** VK2BIT - PETER WOODS.

**PUBLICITY - OFFICER:** VK2VAV/YKQ - DAVE HENDERSON

**BROADCAST - OFFICER:** VK2ENX - TONY MOWBRAY. VK2ALU LYLE PATISON.

**CARTOONIST :** VK2AXI - BRIAN WADE.

**PROPAGATOR-EDITORS :** VK2JT - JOCK TAYLOR, VK2ENV - MORRY.v.d.VORSTENBOSCH,  
VK2PZY - DAVE CAPON.

**PRINTERS :** VK2DFK - MIKE KEECH. AND POSTED BY VK2BIT - PETER WOODS.

**SOCIAL-DIRECTOR :** VK2XCC/PHD - RAY BALL. D.O.C.LIASION VK2OB - KEITH CURLE.

**CANTEEN-MANAGER :** VK2DYU - BILL CHADBURN.

**LIFE - MEMBERS :** VK2CAG-GRAEME DOWSE. VK2OB-KEITH CURLE.VK2ALU-LYLE PATISON

**SUNDAY - EVENING - CLUB-NET - ROSTER:**

|                             |                          |
|-----------------------------|--------------------------|
| FIRST SUNDAY OF THE MONTH : | VK2MT - ROB McKNIGHT.    |
| 2nd SUNDAY OF THE MONTH :   | VK2ENX - TONY MOWBRAY.   |
| 3rd SUNDAY OF THE MONTH :   | VK2PZY - DAVE CAPON.     |
| 4th SUNDAY OF THE MONTH :   | VK2PHD - RAY BALL.       |
| 5th SUNDAY OF THE MONTH :   | VK2EBI - KEVIN MURPHY.   |
| And on stand-by :           | VK2DUP - GRAEME PARSONS. |