Illawarra Amateur Radio Society

Propagator June 2026

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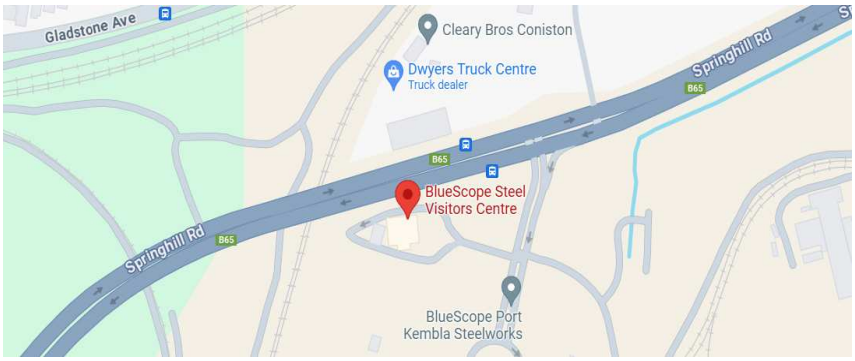
Upcoming Meeting on the 9th June 2026

The next meeting will be at the Blue Scope Steel visitors centre 7.30pm

Blue Scope Northgate entrance off Springhill Road (See website for detailed map)



VK2RUW (Knights Hill)
34.6231° S, 150.6942° E
QF55IJ

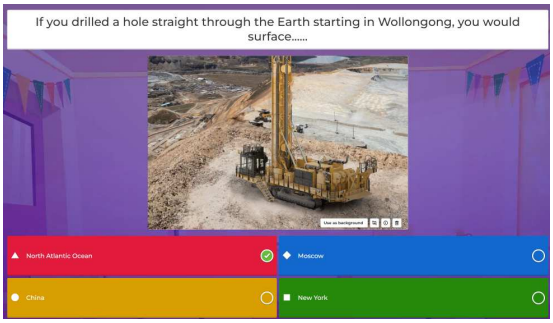
AMATEUR RADIO IN THE ILLAWARRA SINCE 1948

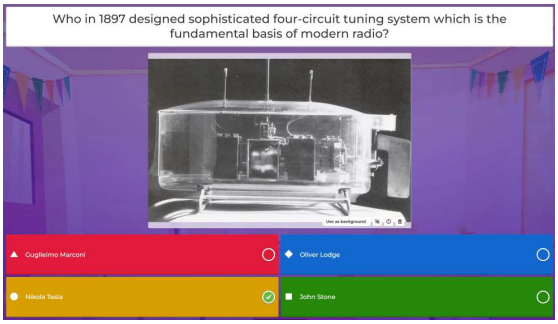
VK2RMP (Maddens Plains)
34°15'30.6"S 150°56'47.4"E
QF55LR

VK2AMW

Our last meeting 14th April 2026

A great evening was had by all with the IARS trivia night. Fastest finger first played a big part in separating the winners.





The score was pretty even and it was only the “quick or be dead” philosophy that separated the top scorers.

1St Place : Tony VK2TS

2nd Place : Simon VK2XQX

3rd Place : Ned VK2AGV

Prizes where a Roll of Solder and a Magnifying multitool for soldering tricky PCB parts.

Solder is quite expensive today so Tony was more than happy with his prize.

Simon finished off the meeting with some great amateur radio related videos on propagation, thanks Simon.

As always there where nice muffins, biscuits and your favourite brew was enjoyed by all. Keep an eye out for the next Trivia.

For $5 you can earn some good cash, and all monies go to your society, win-win.

As usual see Simon VK2KU, the fella with the coloured balls and big smile

The Snowball was passed on to next month with all paid up members moved across to next month

The Disposables Table

A great donation this month from IARS member Simon VK2XQX, who brought in some fans, odds and even a monocular telescope for the one eye bandit! Thank you Simon

NEXT Meeting…….

Prepare to have your minds blown, frequencies scrambled, and imaginations ignited!
Our resident wizard of words and master of mystery, the legendary **Ned VK2AGV**, is taking the stage. He is packing up his transmission gear to take us on a wild journey into the absolute unknown.
What is Ned transmitting from his secret vault of ideas? Nobody knows! We can only speculate on the signals he is tracking:

- **A sunken ghost ship** lost to the deep ocean?
- **A missing submarine** trapped in a silent world?
- **The true, forgotten pioneer** who actually discovered radio waves?
- **The secret inventor** of a functional time travel machine?
- **The dark, classified secrets** the amateur radio gods don't want you to know?

It is a total mystery. The frequency is classified until showtime. If you are hungry to learn something completely off the grid, you cannot miss this.
Lock in your coordinates, set your calendars, and calibrate your receivers, see you there !!!!

The IARS Flying Gang

The Flying Gang is a volunteer team to support IARS members who are unable to install or repair their antenna systems due to age, injury, or other limitations.

Many members are finding it increasingly difficult to stay active on the air—especially when antennas are damaged by storms or when new systems need to be installed.

If you need assistance, simply reach out to the team using the email addresses listed below. We'll coordinate with you to provide the help you need.

The flying gang team members, please REACH OUT to anyone of the team below.

Simon VK2XQX, Simon VK2KU, Keith VK2KQB, Adam VK2AEV, Phil VK2CPH, Tony VK2TS, Mal VK2DXM and …..

Please welcome our newest member of the Flying Gang, Bruce North VK2ZPN 😊

Or contact us using any one of the emails below.

iars.keithb@gmail.com ; iars.simonr@gmail.com ; simon.ferrie3@det.nsw.edu.au

Other contacts like phone numbers are on the club website at https://www.iars.org.au/?page_id=29

Licensing and upgrades?

The IARS **can help** with obtaining your Foundation, upgrading to Standard or Advanced from *the comfort of your own home,* and its FREE!!! *

We have approved **ACMA** accessors that can offer remote or face to face assessments for the **ACMA**

Please contact Keith VK2KQB at iars.keithb@gmail.com for further information on training and assessments.

Your society supports further learning, please find out more on how we can help you.

The IARS helping Amateur Radio grow in Australia

If you would like to find out more about amateur radio upgrades, here are some handy links to help.

https://www.acma.gov.au/qualifications-operate-amateur-radio
https://www.acma.gov.au/amateur-radio-resources
https://www.acma.gov.au/amateur-radio-accredited-assessors
https://www.acma.gov.au/amateur-radio-licences
https://www.acma.gov.au/technical-details-amateur-radio-licences
https://www.acma.gov.au/amateur-radio-operating-procedures
https://www.acma.gov.au/amateur-radio-call-signs
https://www.acma.gov.au/amateur-class-licence
https://www.acma.gov.au/amateur-radio-related-fees

IARS

NETS

1. Saturday Morning, the EAST COAST NET hosted by Steve VK2BGL at 9.30am

You are invited to join Steve every **Saturday at 9.30am** on our **146.850MHz** repeater (linked to 146.675MHz) or **VK2BGL-R** on Echo-link for a very enjoyable morning of general discussions from amateurs who log in from all over the world. This NET is linked to multiple repeater systems including VK2RFS south coast.
Join Steve and everyone for a very enjoyable 2 hours on Saturday morning.

The IARS would also like to thank Doug VK2XLJ and Angelo, VK2NWT who are is always willing to assist whilst Steve is away.

2. **NEW NET** Yes we have a NET IARS net on 2m , 144.150MHz USB on Monday Evenings from 8pm. Phil VK2CPH or (Chairman Phil 😊 as some like to call him) will be your host.

3. **IARS Tuesday evening weekly 80m NET on 3.666MHz at 8.30pm hosted by Mal VK2DXM using VK2AMW.**
Every Tuesday evening, (expect the second Tuesday of the month) for a great get together on 80m. Signal reports, news and general discussions are the agenda. Normally runs for around 60minutes.

4. **IARS Wednesday evening weekly 6m NET, 8pm Maddens plains 6m Repeater on 53.650Mhz with a – 1Mhz offset. 123Hz CTCS tone enabled due to interference**
Hosted by Chris VK2CDB and Simon VK2XQX, (While Geri VK2UTE is unavailable)
General discussions about building antennas for 6m, transceivers and what else comes to mind, this net is normally between 30 and 60minutes.

5. **IARS Thursday evening weekly 10m NET, 8PM on 28.466Mhz +/- for QRM/QRN Hosted by Tony VK2TS**
General discussions about building antennas for 10m, transceivers and what else comes to mind, this net is normally between 30 and 60minutes.

6. **IARS Friday evening weekly 70cm NET , 8PM on 438.675MHz ** with – 7MHz offset (No CTCSS required)**
Hosted by Rob VK2XIC
General discussions keeping the repeaters in work, ***"If we don't use it, we may lose it "***

IARS REPEATERS

VK2RUW (Knights Hill) VK2RMP (Maddens Plains)

146.675 MHZ >>>>> *linked* <<<<< 146.850 MHZ

Current Repeater STATUS

- **439.675 with a – 7MHz offset, C4FM Enabled. OK – On Air *****
- **147.275 with a + 600kHz offset NO CTCSS, C4FM enabled OK – On Air *****
- **146.850 with a – 600kHz offset (linked to 146.675) NO CTCSS OK– On Air****
- **146.675 with a – 600kHz offset (at Knights Hill, linked to 146.850) NO CTCSS OK– On Air**
- **53.650Mhz with a – 1Mhz offset (123Hz CTCSS tone enabled due to interference) OK– On Air *****
- **438.725Mhz with a -5mHZ offset DMR only, OK – On Air**
- **1296.850Mhz Experimental Beacon/Simplex repeater, Maddens Plains OK – On Air ***
- **Echo-link VK2MT-R via 146.850MHz also linked to 146.675MHz and VK2BGL-L OK**
- **APRS DIGI-PEATER on 145.175MHz OK– On Air**
- **PACKET 2M on 147.575Mhz Temporarily off air**

The IARS welcomes any feedback on our repeater systems.

Please send all your feedback to iars.keithb@gmail.com and it will be passed on to our repeater team.

If the repeaters are silent, why not just give out a call, who knows who may be on the other end of the tower.

Latest Repeater Report:

* Note, this will be changing to 1.293 800 GHz Simplex soon, however, plans are in place for it to become a Full Duplex repeater system soon.

** **146.850MHz repeater (which is 146.250MHz RX)** at Maddens Plains is operating off a temporary antenna until the main dipole is repaired/replaced. (Still on-going)
Please advise if you are having signal difficulties, include your location with a grid square.

*** After the huge windstorms we recently had the Tri-Band antenna number 3, which is 67meters up Maddens Plains tower is leaning at 45degrees with the underneath pointing to Wollongong, therefore all signals into Wollongong will be affected until this is rectified. (This will most likely be carried out at the same time as item ** previous

The ONLY Services still affected are RX 52.650MHz, RX 147.875MHz and TX 439.675MHz.

LOOKING FOR SOMETHING to SWAP, BUY, SELL, an OLD PART

Parts you may need for repairs or some radio gear you no longer need that could go to a new home……..?
Email iars.keithb@gmail.com

Electronic component and service suppliers

JLCPCB https://jlcpcb.com

element14 AN AVNET COMPANY https://au.element14.com

RS https://au.rs-online.com/web/

MOUSER ELECTRONICS https://au.mouser.com

DigiKey https://www.digikey.com.au

Minikits https://www.minikits.com.au

core ELECTRONICS https://core-electronics.com.au

Elite Communications & Electronics https://www.elitecommunications.com.au

Little Bird Electronics https://littlebirdelectronics.com.au

ATR Amateur Transreceiver Radio Supplies https://amateurradiosupplies.com.au

BNCom Australia. https://bncom.com.au

VK RADIO **YAESU Sales and repairs** https://www.vkradio.com.au

DXing https://dxing.com.au

TELCO ANTENNAS https://www.telcoantennas.com.au

ALTRONICS https://www.altronics.com.au

jaycar https://www.jaycar.com.au

TWR Technology ICOM agent carlo.twr@gmail.com

Radio Communications Equipment Supply, Service including radio and antenna installations, support local Wollongong business

If you know of a good supplier of electronic stuff or services 😊, please share it with us so we can all benefit.

Send information to iars.keithb@gmail.com and we will publish it in the next propagator

got an idea Tech corner

Share it with us, this could be suggestions, technical ideas, circuit diagrams, IARS community projects, pictures of your latest shack project, in fact

ANYTHING of interest

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The Efficiency Paradox

Why 400W Often Beats the 1000W Dream

In the Australian amateur radio community, there is a persistent "power envy" directed toward jurisdictions with a 1 to 1.5kW legal limit. Many VK operators believe that if they could only push 1000W instead of the ACMA-mandated 400W PEP, their DX troubles would vanish and they would be king of the mountain.

Many amateur radio operators reach for a high-power amplifier to "punch through" a weak signal report. We have been canvasing the **ACMA** for the 1kW dream only to find the end of the road, so what do we do?

Well perhaps we can use our smarts to improve our situation instead, after all, we are striving to improve our skills with this interesting and sometimes highly technical hobby.

For the advanced operator, the physics reveal a surprising truth: the jump from 400W to 1000W is far less significant than the jump from a mediocre antenna system to a high-efficiency one.

This article breaks down the mathematics of **System Gain** versus **Raw Power**.

The Logarithmic Reality: 400W vs. 1000W

To understand why the "missing" 600W is often a phantom gain, we must look at the decibel (dB) increase. The formula for power gain in dB is:

$$G_{dB} = 10 \times \log_{10}\left(\frac{P_{high}}{P_{low}}\right)$$

If we plug in 1000W versus the Australian 400W limit:

$$10 \times \log_{10}\left(\frac{1000}{400}\right) \approx 3.97 \text{ dB}$$

An increase of ~4 dB is technically less than one "S-unit" (standardized at 6 dB). In a real-world pileup, a 4 dB difference is rarely the "make or break" factor. If you cannot be heard at 400W, a 4 dB increase is unlikely to punch through a high noise floor at the distant end.

The Mathematics of Feedline Loss

Advanced operators know that power at the back of the radio is not power at the antenna. We calculate the power reaching the antenna (P_{ant}) using the feedline loss in dB (L)

$$P_{ant} = P_{TX} \times 10^{-\frac{L}{10}}$$

The "High Power" Trap:
Consider 30 metres of RG-213 on the 10m band (approx. 1.2 dB loss).

- At 400W: $P_{ant} = 400 \times 10^{-0.12} \approx \mathbf{303W}$ (97W lost as heat)
- If you had 1000W: $P_{ant} = 1000 \times 10^{-0.12} \approx \mathbf{758W}$ (242W lost as heat)

In the 1000W scenario, you are essentially running a space heater in your backyard. If you instead upgrade that feedline to 1/2" Hardline (approx. 0.3 dB loss) at the 400W limit

$$P_{ant} = 400 \times 10^{-0.03} \approx \mathbf{373W}$$

By focusing on transmission efficiency, you've recovered 70W of "lost" power without touching an amplifier.

Antenna Efficiency: The Radiation Resistance Ratio

Efficiency is the true measure of an antenna's performance. It is the ratio of power radiated to the power delivered to the antenna:

$$\eta = \frac{R_r}{R_r + R_{loss}}$$

Where R_r is the radiation resistance and R_{loss} is the sum of ohmic losses, ground losses, and trap losses.

The Problem with Shortened Antennas: A highly shortened 40m mobile whip might have an R_r of 2 Ohms but an R_{loss} of 20 Ohms.

$$\eta = \frac{2}{2+20} \approx 9\% \text{ efficiency}$$

Even at 1000W, you are only radiating 90 Watts

The Efficient 400W Approach: A full-sized resonant dipole has an R_r of 72 Ohms and very low R_{loss}
At 400W, you are radiating **388 Watts.**

Pros and Cons: The Brute Force vs. Precision Balance

Method	Pros	Cons
High Power (The 1kW Wish)	Slight edge in "punch" during heavy QRM; helps overcome poor local receiver sensitivity.	Massive increase in RFI; higher risk of arcing; requires heavy-duty 20A mains circuits; expensive.
High Efficiency (The 400W Reality)	Improves **Receive** (SNR) as well as Transmit; lower noise floor; longer equipment life; ACMA compliant.	Requires physical space for larger antennas; height/towers involve local council (DA) hurdles.

Safety, Arcing, and the "Voltage Peak"

High power isn't just about heat; it's about voltage. The peak voltage Vp at a high-impedance point (like the end of a half-wave antenna) is

$$V_p = \sqrt{2 \times P \times Z}$$

At 1000W into a 2500 Ohm end-fed point, Vp is approx. **2,236 Volts**. At 400W, it is approx. **1,414 Volts**.
The 1000W jump significantly increases the risk of **dielectric breakdown** in insulators and baluns. In the salty or humid environments common across Australia, this extra 800V is often the difference between a clean signal and a permanent carbon track (fire) across your insulator.

Final Verdict and Summary

The "missing" 4 dB between 400W and 1000W is easily found through **low-loss coax (0.5 dB)**, **improved ground bonding (1.0 dB)**, and **antenna height/gain (3.0+ dB)**. For the advanced operator, the 400W limit is not a restriction—it's a prompt for better engineering.
Voltage Safety: 1000W introduces nearly 800V more peak tension at antenna tips than 400W, drastically increasing the risk of fire and arcing in Australian humidity.

FUTURE

The landscape of amateur radio is moving away from "brute force" hardware and toward software-defined intelligence and high-efficiency digital modes. As an advanced operator, you'll see these technologies fundamentally changing how we use the 400W limit.

Recent releases from major manufacturers focus on connectivity and direct-sampling performance rather than just raw power.

ICOM: A high-profile update to the legendary 7300, adding a **built-in LAN port** for native remote control without an external PC, **HDMI output** for large-screen waterfalls, and a **USBC port** with dual virtual COM ports for seamless digital mode integration.

YAESU: This newer HF/50MHz SDR transceiver features an **Acoustic Enhanced Speaker System (AESS)** and a 250MHz HRDDS (High Resolution Direct Digital Synthesizer) circuit. It offers an impressive **113dB+ RMDR** (Reciprocal Mixing Dynamic Range), allowing you to hear weak signals right next to strong ones—a critical advantage over raw power

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If this still doesn't change your mind and you are a dedicated hard power user that needs to experiment with EME or other fields, you can always apply to the ACMA for a special licence…………….

https://www.acma.gov.au/licences/scientific-licence

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M17

And NO, its not the latest road to bypass Sydney completely (although wouldn't that be nice 😊)

It's ……. The Open Source Revolution in Digital Voice

For decades, digital voice (DV) in amateur radio has been locked behind proprietary doors. Whether it's D-STAR (Icom), System Fusion (Yaesu), or DMR (Motorola/Commercial), the "brain" of the system—the vocoder—has almost always been a closed-source chip.

Enter M17: a completely open-source digital radio protocol designed by hams, for hams. It represents a philosophical and technical shift toward true radio experimentation in the 21st century.

The Core Innovation: Codec2

The primary differentiator for M17 is the use of **Codec2**, developed by David Rowe (VK5DGR).

- **The Problem:** Traditional digital modes use the AMBE+2 vocoder, which is proprietary. You cannot legally write your own software to decode it without paying royalties or buying a specific chip.
- **The Solution:** Codec2 is an open-source speech codec designed specifically for high-quality voice at very low bitrates (3200 bps for M17). Because the source code is transparent, it can be audited, improved, and ported to any hardware by the community.

Technical Specifications: Better by Design

M17 isn't just about being "free"; it's built to outperform older standards:

- **Modulation:** 4FSK (4-level Frequency Shift Keying) at 4800 symbols per second.
- **Bandwidth:** 9.0 kHz (fits comfortably within a standard 12.5 kHz channel).
- **Error Correction:** Uses **Convolutional Coding** and Interleaving, which provides superior performance in "picket-fencing" or multipath environments compared to early digital modes.
- **Data Streaming:** M17 allows for simultaneous voice and high-speed data. You can send GPS coordinates, text files, or small images while you are talking.

Hardware: Bringing New Life to Old Rigs

One of the most exciting aspects of M17 is that you don't necessarily need a brand-new radio.

- **The Module17:** This is a small "hat" or board that connects to the 9600-baud data port of many older analogue FM radios (like the Kenwood TM-V71 or Yaesu FTM-series). It handles the digital encoding, essentially turning a 20-year-old analogue rig into a cutting-edge M17 digital station.
- **Native Handhelds:** The **OpenRTX** project provides open-source firmware for popular cheap handhelds (like the TYT MD-380), allowing them to be "flashed" to support M17 natively.
- **The M17 Voyager:** A dedicated, native M17 handheld project that is entirely open-hardware, from the PCB layout to the casing.

Why it Matters for Advanced Operators

For the advanced amateur, M17 offers a "playground" that DMR and D-STAR cannot:

- **Encryption-Free Privacy:** While encryption is generally prohibited in amateur radio, M17 uses a **scrambling** technique that is documented and open, ensuring signal robustness without violating license conditions.
- **Linking & Reflectors:** The M17 network is built on modern internet protocols. Creating your own "reflector" (the digital equivalent of a repeater) is as simple as running a small script on a Raspberry Pi.
- **Innovation:** If you want to change how the voice sounds or how the data is handled, you can change the code. You aren't waiting for a manufacturer to release a firmware update.

Pros and Cons at a Glance

Pros	Cons
Truly Open: No royalties, no proprietary chips, no secrets.	Early Adoption: Smaller user base compared to DMR or Fusion.
High Audio Quality: Codec2 sounds more natural at low bitrates than older AMBE.	Technical Barrier: Often requires "tinkering" or flashing firmware.
Hardware Flexibility: Can be added to existing analog gear.	Availability: Commercial "off the shelf" M17 radios are still emerging.

The Bottom Line: M17 is the first digital mode that truly aligns with the spirit of the amateur radio license: the freedom to experiment and understand exactly how your station works from the microphone to the antenna.

More information can be found here >>>>>>>>>>> https://m17project.org

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ALC

Automatic Level Control

What is ALC ?

ALC is feedback control system designed to maintain a constant output level regardless of variations in the input signal or external environment. In RF power amplifiers the Primary Goal is to prevent overdriving the final power (PA) stage.

Why It Matters:

- **Prevents "Splatter"**: Overdriving causes "flat-topping," which creates spectral regrowth (distortion) that interferes with adjacent frequencies.
- **Hardware Protection**: Protects sensitive solid-state transistors (SSPA) or vacuum tubes from excessive heat or voltage spikes.
- **Leveling Accuracy**: Compensates for power drift caused by temperature changes or frequency shifts.

How It Works (The Servo Loop)

RF ALC operates as a high-speed "automatic volume control" for the radio signal.

1. **Sensing**: A directional coupler or detector at the amplifier's output samples a small portion of the RF signal.
2. **Detection**: The sampled RF is converted into a **DC control voltage** (usually negative).
3. **Comparison**: This DC voltage is compared against a reference setpoint (the maximum safe power level).
4. **Correction**: If the output exceeds the limit, the negative voltage is fed back to an earlier driver stage or preamplifier, reducing its gain and "clamping" the signal down.

Common ALC Trigger Scenarios

Understanding when ALC kicks in is vital for proper radio operation.

- **High Mic Gain**: Talking too loudly or setting the mic gain too high triggers ALC to prevent distortion.
- **High SWR (Antenna Mismatch)**: If the antenna system reflects power back (High SWR), the ALC detects the imbalance and drastically reduces transmitter output to prevent damage.
- **External Amplifiers**: Many linear amplifiers send a feedback voltage back to the transceiver to ensure the radio doesn't supply more "drive" than the amplifier can handle.

Best Practices & Pitfalls

- **The Meter Rule**: For Single Sideband (SSB), the ALC meter should ideally swing between 30% and 50% of the scale; "pegged" meters indicate severe distortion.
- **Digital Modes (FT8, PSK31)**: In digital modes, **minimise ALC movement**. Excessive ALC action clips the sine wave, creating "ringing" and noise that makes your signal unreadable for others.
- **Attack & Decay**: ALC must have a fast "attack" time to catch sudden spikes and a slower "decay" to return the signal to normal smoothly.

Handy On Line Calculators

Send us your favourite handy calculator link so we can post it here!

Skin Depth Calculator https://www.omnicalculator.com/physics/skin-depth

Ladder line calculator www.smrcc.org.uk/tools/OpenWire.htm

Cavity Filter designer https://www.changpuak.ch/electronics/Coaxial_Tank_VHF_Filter_Designer.php

Cavity resonance calculator https://learnemc.com/ext/calculators/cavity_resonance/index.html

COAX LOSS Calculator https://kv5r.com/ham-radio/coax-loss-calculator/

Impedance ….. https://www.omnicalculator.com/physics/rlc-impedance

Wavelength …. https://www.omnicalculator.com/physics/wavelength

PI attenuator values …… https://www.omnicalculator.com/other/pi-attenuator

Xc …… https://www.omnicalculator.com/physics/capacitive-reactance

XL …… https://www.omnicalculator.com/physics/inductive-reactance

Cut Off ….. https://www.omnicalculator.com/physics/cutoff-frequency

VSWR …… https://www.omnicalculator.com/physics/vswr-voltage-standing-wave-ratio

LM317 Regulator resistor selector ….. https://www.omnicalculator.com/other/lm317

Resistor Colour code calculator….. https://www.digikey.com.au/en/resources/conversion-calculators/conversion-calculator-resistor-color-code

Resistor Heat rise ……. https://calculator.academy/resistor-heat-calculator/

Volt Drop Calculator AC and DC …….. https://www.rapidtables.com/calc/wire/voltage-drop-calculator.html

Helix antenna calculator ……. https://sgcderek.github.io/tools/helix-calc.html

Parabolic dish calculator ……. https://www.everythingrf.com/rf-calculators/parabolic-reflector-antenna-gain

We are looking for more handy on-line calculators, if you have one that isn't listed above, please share with us so that more amateur radio enthusiasts can benefit ☺

OR

If you have any links to handy hints or information, please send it to us!

How many of these can you still answer correctly?

Question 1. The time constant of a 500 microhenry inductor and a 50-ohm resistance is:

(a) 0.2 microsecond
(b) 5 microseconds
(c) 10 microseconds
(d) 125 microseconds

Question 2. The peak value of an alternating current can be calculated by:

(a) multiplying the rms value by 1.414
(b) multiplying the rms value by the instantaneous value
(c) multiplying the rms value by 0.707
(d) dividing the rms value by the instantaneous value

Question 3. The frequency of an electromagnetic wave if one complete cycle of emission is completed in 10 microseconds is:

(a) 100 kHz
(b) 200 kHz
(c) 225 kHz
(d) 300 kHz

Question 4. The transmission from a 100-watt output transmitter contains a harmonic at -60 dB. The power of the harmonic signal component is:

(a) 10 milliwatts
(b) 10 microwatts
(c) 0.1 watt
(d) 0.1 milliwatt

Question 5. When either L or C is increased, the resonant frequency of an "LC" circuit:

(a) increases
(b) decreases
(c) remains the same
(d) is determined by the shunt resistance

Question 6. In a series LC circuit at resonance the:

(a) current is minimum
(b) voltage across C is minimum
(c) impedance is maximum
(d) current is maximum

Answers next propagator ☺

Answers to the last propagator questions … Q1 = D ; Q2 = C; Q3 = C; Q4 = C; Q5 = C ; Q6 = A

How well did you do, will you still pass the Amateur Radio test?

THE PROPAGATOR

MONTHLY NEWSLETTER OF THE ILLAWARRA AMATEUR RADIO SOCIETY
PO BOX 1838 WOLLONGONG NSW 2500

VOLUME 83, NUMBER 5 JUNE 1983
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MEETINGS ARE HELD ON THE SECOND MONDAY OF EACH MONTH (EXCEPT JANUARY) AT 7.30 P.M. IN THE CONGREGATIONAL HALL, CORNER OF CROWN AND MARKET STREETS, WOLLONGONG. VISITORS ARE WELCOME TO ATTEND MEETINGS.

NOTICE OF MEETING:

Because of the forthcoming long weekend, the next meeting of the Illawarra Amateur Radio Society will be held on JUNE 6th 1983, the first Monday in the month, instead of the usual second Monday. It is hoped to show the WIA video tapes on 'Amateur Radio'.

LAST MONTH'S MEETING:

This was held on Monday 9th May 1983, and despite the lack of a reminder due to delay in delivery of the Propagator, there was a pleasing turn-out of some 60 members. Several visitors, among them Brian VK2AXI, former Propagator Editor, received the usual warm welcome. President Dave VK2DFL explained the reason for the late printing of the Propagator, and informed us that the possibility of getting it printed commercially would be discussed at the next Committe meeting.

Paul VK2ZQT will be in charge of the Bass Point site for the Jamboree on the Air (JOTA) weekend in October - please discuss details with Paul at the next meetings.

QSL cards - any not claimed have been sent back to the bureau.

Peter VK2XAN would like to reactivate discussion on WICEN - please see Peter or contact him on Channel 5.

Geoff VK2ZHU has WIA car badges for sale at $10 each.

First prize in the raffle was a Kambrook retractable mains lead, won by Ray VK2XCC. Second prize of a 5-way power point block was won by Dave VK2DFL. No significance should be placed on the fact that both winners were Committee members!

Guest speaker for the evening was Bill Martin VK2ERM of the WIA, his subject being 'The Intruder Watch' of which he is State Co-ordinator. His basic message was "Send in any reports on any intruders you may hear, and keep a record." Intruders are commercial, governmental, and military stations, not pirate stations or CBers who should be reported to the Radio Inspector. The Intruder Watch net is on Thursdays at 1030 Zulu on 3540 kHz.

As well as giving a very interesting talk, Bill played us a tape giving examples of signals in various modes - RTTY, CW, FAX, FSK, SSTV, AMTOR, and jamming - which should help sort out which are intruders and which are not. Elsewhere in this Propagator we publish the old and new designations of 'Radio Modes of Emission', and 'Allocation of the Frequency Spectrum', both of these supplied by Bill and for which we thank him.

RADIO MODES OF EMISSION.

(New designations came into force on January 1st., 1982.)

OLD DESIGNATION:	NEW DESIGNATION:	
AØ	NØN	Carrier only.
A1	A1A	CW (for aural reception)
	A1B	CW (for automatic reception)
A2	A2A	MCW (For aural reception)
	A2B	MCW (for automatic reception)
A3	A3E	Amplitude-modulated broadcasting
A3H	H3E	Single-sideband, full carrier TELEPHONY.
A3A	R3E	Single-sideband, reduced (or variable level) TELEPHONY.
A3J	J3E	Single-sideband, suppressed carrier, TELEPHONY
A3B	B8E	Independent sideband, two or more channels, TELEPHONY.
A4	A3C	Double-sideband, single channel, FACSIMILE. (FAX)
A4A	R3C	Single-sideband, reduced(or variable level) single channel, FACSIMILE (FAX)
A5C	C3F	Vestigial sideband, single channel, TELEVISION (VIDEO).
A7A	R7B	Amplitude-modulated, reduced carrier, voice-frequency TELEGRAPHY.
A9B	B9W	Multi-channel transmissions not already covered. eg. combination of telephony & telegraphy.
F6	F7B	Four frequency diplex TELEGRAPHY.
F1	F1B	RTTY- Also FSK Morse.
PØ	PØN	Pulsed carrier without any modulation intended to carry information . eg. Over-horizon radar (The 'Woodpecker').

Will share more oldies next month.

To read more information about this old propagator and others, use the link below

https://www.iars.org.au/wp-content/uploads/2020/09/1983-06-Jun.pdf

News & Upcoming contests

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VK Shires Contest

VK SHIRES 6th-7th June 2026

Contest Manager

Diane Main: VK4DI. Long time contester and DXer.

Contest Introduction

Held the Saturday and Sunday of the weekend prior to the second Monday of June every year.
Starts: 00.00 UTC (10am EST)Saturday Ends: 00:00 UTC Sunday (10am EST)
VK Stations work VK Shires and CQ Zones whereas international stations only work VK Shires

More Information …. https://www.wia.org.au/members/contests/wavks/

23cm Fun day on the 23rd of EVERY MONTH !!

If you are interested in 23cm or higher communications, the local IARS members are getting together with the MSCARC members on the 23rd of every month to have a fun day around the Illawarra area.

The SHF team are even looking at 13cm fun day on the 13th of every month, for more information please contact the SHF organiser Rob Heyer VK2XIC at **vk2xic@gmail.com**

Amateur radio news from around the world!

Use these handy links if you would like to see what is going on around the amateur radio world.

Radio Society of Great Britain https://rsgb.org/main

American Radio league https://www.arrl.org

Amateur Radio Germany https://www.darc.de/der-club/referate/ausland/english-version/

South African Radio League www.sarl.org.za

Italian Amateur Radio https://www.ari.it

Amateur radio France https://www.radioamateurs-france.fr

Amateur radio Russia https://srr.ru/sbory24_6/

Amateur Radio Japan https://www.jarl.org/English/

DX ATLAS DOWNLOAD https://dxatlas.com/Download.asp

https://daily.hamweekly.com

Communications Satellites

Status information and latest updates >>> https://www.amsat.org/two-way-satellites/

https://amsat-uk.org/satellites/frequencies-of-active-satellites/

https://ararm.org/status.html

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THE PICTON SHOW SOCIETY IS PROUD TO PRESENT

PICTON HAMFEST

31ST OF MAY 2026

AFTER THE AMAZING SUCCESS OF OUR 1ST PICTON HAMFEST, YOU'RE INVITED TO OUR 2ND PICTON HAMFEST ON SUNDAY THE 31ST OF MAY.

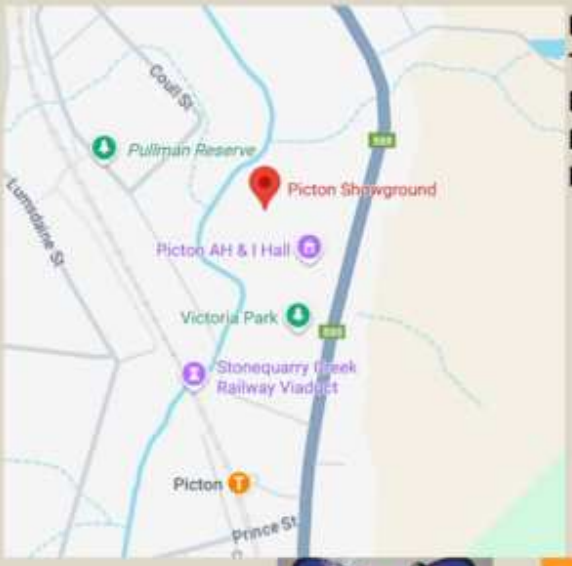
ENQUIRIES - HAMFEST@PICTONSHOWSOCIETY.COM.AU

ALARA , ACTION COMMUNICATIONS AND COMTEK RADIO WILL BE ON SITE

BARGAINS GALORE AND LIKE MINDED INDIVIDUALS. COME AND JOIN IN THE FUN!

FOOD AVAILABLE - FOOD VANS SUCH AS GOZLEME & CHURROS , COFFE / TEA AND BACON&EGG ROLLS ETC.

UNDERCOVER SEATING AREA NEAR FOOD VANS



DIRECTIONS
TAKE THE PICTON EXIT FROM THE HUME HWY AND PROCEED WEST TO PICTON.
ENTER THEPICTON SHOW GROUND AT 151 MENANGLE ST PICTON.

- **DOG FRIENDLY**
- **GENERAL MARKETS WILL BE ON AT THE SAME TIME SO BRING THE WHOLE FAMILY , KIDS ARE WELCOME!**
- **IF YOU WOULD LIKE TO SELL AT THE HAMFEST , PLEASE CALL STEVE ON 0421 109 694.**

A 6 X 6 METER SITE IS $20.
REGULAR ENTRY IS FREE

THE ILLAWARRA AMATEUR RADIO SOCIETY

PICTON DISTRICT A.H & I SOCIETY

AUSTRALIAN LADIES AMATEUR RADIO ASSOCIATION

Upcoming IARS meeting presentations …….

Please note the changes to the meeting schedule.

There isn't a general or committee meeting every month, but that doesn't mean we skip the fun! "
Even when there's no official meeting scheduled, we still get together every month except January.

(See the schedule below — presentation topics may change.)

Doors open at 6:30pm, giving you time to settle in, but presentations and general meetings kick off after 7:30pm. The Snowball draw happens every month, except January when there are no gatherings.
Members are very welcome to arrive from 6:30pm to enjoy a cuppa and catch up with friends in the foyer before things get underway.
We need to wrap up and be out by approximately 9:30pm, so please lend a hand on your way out by popping empty cups in the correct bin and straightening your chair or putting it back if you have moved it.

Please Note: IMPORTANT INFORMATION!
While you may feel inspired to channel your inner barista and make yourself an espresso using the coffee machine in the BlueScope foyer, we kindly ask that you refrain from doing so.
At our last meeting, an attempt to make a barista-style coffee unfortunately resulted in damage to the machine. The Visitors Centre team has since politely requested that we do not use the coffee machine.
Thank you for your understanding and cooperation.

- **June 2026** : No Committee meeting, doors still open 6.30pm, General meeting starts 7.30pm
  7.30pm, Ned VK2AGV, Secret presentation .. We know how good these are 😊
- **July 2026** : No committee or general meeting. Doors open 6.30pm.
  Roger VK2VRK, setting up and working with APRS
- **August 2026** : Doors open 6.30pm **AGM** starts at 7.30pm with new committee members elected.
- **September 2026** : No committee or general meeting. Doors open 6.30pm
  7.30pm, Show And Tell, bring along your project to share with us
- **October 2026** : No committee meeting, doors open 6.30pm. General meeting starts 7.30pm
  Presentation starts after general meeting. Topic TBA
- **November 2026** : Committee meeting at 6.30pm. No General meeting.
  IARS Annual Auction with Simon VK2XQX. Doors open at 6.30pm for sellers for looking to sell their gear. Equipment must be booked in before the auction starts at 7.30pm. Please NO latecomers.
- **December** : No committee or general meeting. Doors open 6.30pm 
  IARS year end Christmas function

Fun Corner

Please send in your funnies to iars.keithb@gmail.com

Thanks to all that sent in funnies.

The **IARS needs YOUR input and support,** any technical items, amateur radio news, any projects you would like to share, in fact any AR related goings on are welcomed.

Feedback is also very important for us as it helps maintain a good read, if you would like to see more of something, or would like to see a subject added. Please let us know iars.keithb@gmail.com

That's all for now, hopefully catch you all at the

Blue Scope visitors centre on the 9th June from 7.30pm,

73
Keith VK2KQB
IARS Secretary

IARS, Amateur Radio in the Illawarra since 1948