

## **In the news from Amateur Radio New South Wales for this week;**

VK2WI News would like to hear from clubs and groups planning Amateur Radio activities; just email the details and contact information, to [news@arnsw.org.au](mailto:news@arnsw.org.au). We also welcome reports on recent activities.

General enquires can be directed to the ARNSW office via email, to [office@arnsw.org.au](mailto:office@arnsw.org.au), or by leaving a phone message on 02 9444 0123.

Tonight, we also welcome listeners on the EchoLink "HAM" conference, and the Australian & New Zealand EchoLink Network. Callbacks will also be taken after tonight's bulletin; our thanks to John VK3HJQ, and the Australian & New Zealand EchoLink Network team, for making this relay available.

## July Buildathon

Last Sunday the 11<sup>th</sup> of June was a 'Balun Buildathon' here ARNSW Dural; the first in the newly renovated Centenary Building.

Starting at 10am with nearly twenty participants, Compton VK2HRX presented an overview of the dipole antenna, comparing it to other types of antennas for both permanent and field use. A presentation about the use of a dipole in the "inverted V" configuration explained that an effective configuration for many applications is with the centre around five metres above the ground, an angle of around 60° and the ends one metre above the ground. Mark VK2XOF also provided further technical background. Between them was presented a very comprehensive and educational information session, about the practice of what really works and why.

Then onto the building, with most participants bringing their own tools, and ARNSW providing soldering stations, additional tools and equipment to test the antenna. Attendees built both 1:1 and 4:1 balun kits on the day, with pre-ordered Kevlar antenna wire supplied to complete the antennas.

Some took advantage of the grounds to test their newly completed antenna and balun, with the last participant leaving late in the afternoon. All agreed it was an educational and productive day with universal positive feedback.

# Weekly Solar and Geophysical Report

For the period of the 9<sup>th</sup> to the 15<sup>th</sup> of June.

First, the summary of activity;

Dates across the columns are	9 <sup>th</sup>	10 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>	13 <sup>th</sup>	14 <sup>th</sup>	15 <sup>th</sup>
10cm Flux	164	161	154	146	146	144	153
Fredericksburg A-Index	6	4	10	8	8	5	17
Australian A-Index	1	1	4	2	2	1	14 estimated
T index	83	93	92	94	94	88	92

Solar activity reached R1 level on the 9<sup>th</sup>, with an M2.5 flare at 1711UTC.

Geomagnetic activity was at low to moderate levels, remaining below warning threshold; however, later on the 15<sup>th</sup>, an increase of Geomagnetic activity was observed as the Earth entered a coronal hole wind stream. While this had minor impact in the Australian region, planetary geomagnetic conditions reached G2 later in the day.

F2 critical frequencies in Southern Australia remained mostly near predicted monthly values, with enhancement of 20% observed during local night and after dawn on the 13<sup>th</sup>, and enhancement of 15% during local night on the 14<sup>th</sup>.

The forecast, issued on the 16<sup>th</sup> of June, through until the 22<sup>nd</sup>;

Solar activity is expected to be at R0 to R1 levels, with a chance of R2. Geomagnetic conditions may reach G1 on the 16<sup>th</sup>, with low to moderate activity afterwards.

Maximum usable frequencies in the Southern Australian are expected to be briefly depressed after local dawn on the 16<sup>th</sup> and 17<sup>th</sup>; near predicted monthly values otherwise.

*Data courtesy of the Australian Space Weather Forecasting Centre.*

## Solar Flux Index update

Here are the updated Solar Flux Index (SFI) figures for this week.

Having finished May, we had a;

Minimum of 134, Average of 156, and a Maximum of 180  
With peak dates from the 3<sup>rd</sup> to the 12<sup>th</sup>, and the 20<sup>th</sup> to the 25<sup>th</sup>.

So far for June, we are expecting a;

Minimum of 144, Average of 161, and a Maximum of 172  
With peak dates from the 2<sup>nd</sup> to the 10<sup>th</sup>, and the 23<sup>rd</sup> to the 29<sup>th</sup>.

And looking ahead to July, we are expecting a;

Minimum of 150, Average of 161, and a Maximum of 170  
With peak dates from the 6<sup>th</sup> to the 9<sup>th</sup>; and the 20<sup>th</sup> to the 26<sup>th</sup>.

*Update with thanks to Noel, VK2FUL.*

[using daily data updates from :  
<http://www.swpc.noaa.gov/products/usaf-45-day-ap-and-f107cm-flux-forecast>]

## Foundations of Amateur Radio

This series, written and produced by Onno VK6FLAB, continues a weekly examination, of the building blocks of Amateur Radio.

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### **[Play File: 15-FOAR043.wav]**

*Duration: 3m19s*

*In: "There is a curious phenomenon..."*

*Out: "I'm Onno VK6FLAB"*

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For more information about this series, including audio, transcripts and other useful amateur radio resources, Onno's website is; [vk6flab.com](http://vk6flab.com); you can follow him on Twitter, @VK6FLAB; and you can contact Onno by email, to [cq@vk6flab.com](mailto:cq@vk6flab.com).

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### **[Play File: 16-E-ID2.wav]**

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## [WICEN News]

And now with this week's WICEN News, here's Richard VK2SKY;

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### [Play File: 17-E-WNS0618.wav]

*Duration: 2m09s*

*In: " WICEN NSW ..."*

*Out: "... at wicen.org.au."*

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#### [Transcript]

*WICEN NSW continued its support for Dementia Australia, lending repeaters and handheld radios to WICEN groups interstate, for the Memory Walk events in Perth last weekend and in Darwin this weekend.*

*Also this weekend, WICEN was in the scenic Blue Mountains providing communications for the Glow Worm Tunnel Marathon at Glen Davis, Newnes, and the Wolgan Valley.*

*On 15-16 July, NSW State Emergency Services have their Bush Search and Rescue "NavShield" event, at a location several hours drive from Sydney. Six WICEN operators will be there for this bush navigation event.*

*WICEN has meetups here at Dural, on the first Sunday of every month. The next one is on the 2nd July, when the topic will be setting up linked DMR repeaters and commsets.*

*To participate in any WICEN event, or just find out more about WICEN, you can email [wicen.ops@vrarescue.org](mailto:wicen.ops@vrarescue.org).*

*WICEN nets take place every Sunday evening at 6pm and 6.30pm, using FM voice, DMR, or HF voice, depending on the week. All WICEN members and other Amateurs are welcome to join in.*

*Next Sunday, the 6pm net will be on the Chatswood 2m FM repeater, 147.150MHz, with net controller VK2WIC; the 6.30pm net will be on the WICEN VHF DMR network.*

*WICEN NSW is a support squad of VRA Rescue NSW, specialising in tactical radio communications. In between activations, WICEN supports local community events: these provide practical training for members, and help raise the public profile of Amateur Radio.*

*To find out more, check out the WICEN NSW web site, at [nsw.wicen.org.au](http://nsw.wicen.org.au), that's*

*N - S - W DOT W - I - C - E - N DOT O - R - G DOT A - U*

*WICEN is also on Facebook, and on Twitter @wicennsw [at WICEN N S W]; there, you can find photos and information about recent and upcoming WICEN activities.*

*For information about other WICEN groups around Australia, visit the web at [wicen.org.au](http://wicen.org.au).*

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[WICEN NSW web site: <https://nsw.wicen.org.au/> ]

[WICEN NSW facebook at <https://www.facebook.com/WICENNSW> ]

[WICEN NSW twitter at <https://twitter.com/wicennsw> ]

## Club News

We start this week from the Oxley Region Amateur Radio Club; and their annual field day was on last weekend, the 10<sup>th</sup> and 11<sup>th</sup> of June.

With the weekend putting on perfect weather at Wauchope Showground, there was record turnover in the flea market with tables overflowing, supplemented by several tables of give-away useful equipment and magazines; so, everyone went home with bargains. Traders were also kept busy, but the busiest stand was the DMR clinic. Lots of updated code plugs which included the about to be installed VK2RPM Middle Brother RadNet DMR repeater, were loaded. This repeater was on display and operating in the hall. As well as creating a lot of interest, it provided the ultimate hot spot. The kitchen worked overtime keeping everyone well fed.

In the foxhunts, champion was Gerard VK2IO with Chris VK2YMW the runner up. Bruce VK2EM won the homebrew trophy with his 17-metre spiral loop antenna. The ever-popular Field Day dinner was held in the comfortable function room at the Port Macquarie Golf Club on the Saturday night. The hall and the function room are already booked for next year's Field Day.

The Club's Friday Night Get Together was last Friday night the 16<sup>th</sup> of June in the SES Building in Port Macquarie. The Club's Balun and Antenna Buildathon was brought forward from this weekend, as those collecting their kits were keen to build them straight away.

There are two club nets each week; the mid-week net from 7:30pm on Thursday nights, and the weekend net at 9am Sunday mornings. Both are on the VK2RPM 2 metre repeater, 146.7MHz with a 91.5Hz sub-audible tone for access, and on EchoLink as VK2RPM-R. Members and visitors are encouraged to participate in the club on air nets as often as possible.

To find out more about the Oxley Region Amateur Radio Club, visit the website at [orarc.org](http://orarc.org). The May 2023 issue of the club's bimonthly newsletter "Oxtales" is now online, and past issues are on the website as well; and on Facebook, just search for Oxley Region Amateur Radio Club.

*From Henry VK2ZHE  
For the Oxley Region Amateur Radio Club.*

## **Westlakes Amateur Radio Club**

The next car boot sale is on Saturday the 15<sup>th</sup> of July. Its at the Club grounds, 6a York Street Teralba, starting at 8am.

You can set up a stall at no charge; but bring your own table. There will also be a BBQ and hot and cold drinks available.

All are welcome.

Westlakes has several on air nets each week, details are a little later on in this bulletin.

*Advised by Barrie VK2QG  
For the Westlakes Amateur Radio Club*



## Blue Mountains Amateur Radio Club

A reminder about the Club's monthly meetings on the first Friday of the month. Meetings are at the Club Rooms, 4 Moore Street Glenbrook, in the Blue Mountains – doors open from 7pm for a 7:30pm start.

Visitors and prospective new members are most welcome.

There are several weekly nets – we have details in “Activities on the air” later in this bulletin – and the Club is trialling a DMR Net on Monday nights on Brandmeister channel 50520.

The Club has Foundation Classes bi-monthly, and Upgrade classes on Wednesday evenings, both online and at the Glenbrook clubrooms. Exams for other licence grades are also available on Foundation weekends.

Courses and exam days do fill-up quickly, so please contact the Club Secretary, Irene VK2VAN, via email [secretary@bmarc.org](mailto:secretary@bmarc.org) to register, or for more information.

More information about the club can be found on the website, at [www.bmarc.org](http://www.bmarc.org).

*Advised by Steven VK2TSG  
President, Blue Mountains Amateur Radio Club.*

## [ID 3 and CCARC News]

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### [Play File: 18-E-ID3-CCN0618.wav]

*Duration: 2m52s*

*In: [IDENT 3]*

*Out: "...Central Coast Amateur Radio Club."*

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*[Transcript]*

*In news from the Central Coast Amateur Radio Club...*

*Yesterday the club held an "HF in the Park" day inside Mount Penang Gardens with the club callsign, VK2AFY. Perfect weather for a portable day out. There are some photos on Social Media.*

*Today we have a number of folk sitting exams for various grades of license and we wish them all the very best.*

*Next Saturday, June 24, we will be holding the regular Show and Tell with the theme "I made this, could you?". Bring along something that you've made, or come along and see what others are doing. Other items are also welcome; as we have enjoyed some very unusual things brought in by members at earlier events.*

*As usual, you are welcome to bring along some photos for display on our data projector. The club rooms will be open at 10:30am with the event kicking off at 11. Visitors are most welcome.*

*There are rumours of something brewing in the Central Coast area. It's not clear exactly what, but it might be a good idea to write down the 5th of May, 2024 in our diaries and keep an ear out for updates.*

*At the VK2RAG Somersby repeater site, the D-Star, Rad-Net DMR and 2m Echolink services are fully functional.*

*The club Web SDR at Somersby. Websdr.ccarc.org.au is configured to listen on 6 metres, 2 metres, 70 centimetres and 23 centimetres.*

*The Morning Tea Net is run on weekdays at 10:00am and the Weekly net on Thursday at 8:00pm.*

*Both nets are run on the VK2RAG repeater – 146.725MHz with a 91.5Hz sub-audible tone, and on the CCARCNSW and HAM Echolink conferences.*

*The Thursday evening net is also live video-streamed on the club's facebook page.*

*You can find out more about the CCARC, our upcoming social events and other details that we can't tell you about here on the web at [ccarc.org.au](http://ccarc.org.au), by phone on 02 4340 2500, or on social media by searching for "Central Coast Amateur Radio Club". Remember to give the club a "like" to follow for any updates.*

*73, from Alan VK2MG  
Publicity Officer, Central Coast Amateur Radio Club.*

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## Sydney ATV Group

John VK2ATU has informed us that, for the first time, two members of the Group have successfully completed a two-way narrow band digital TV contact across Sydney over a severely obstructed 18km path on 70cm using DVB-S.

Gary VK2CRJ transmitted a High-Definition TV signal in 450kHz bandwidth, using a Lime Mini SDR and Raspberry Pi 3. Transmit power was 17W into a 12-element beam.

John, VK2ATU, using a U.K. made DTX-1 set to its lowest setting of 1MHz bandwidth running 30W standard definition into a 9db panel antenna.

For comparison, standard broadcast TV using DVB-T modulation, requires 7 MHz bandwidth. At amateur power levels, transmission ideally needs line of site for reception; being able to use reduced bandwidth to successfully make contacts over less favourable signal paths, suggests further possibilities for experimentation.

In these test, resolution was very good but fast movement did cause pixelation. John is now working on getting his Lime Mini SDR going to transmit H265 in high definition. Anyone interested in getting into narrow band digital amateur TV in Sydney can contact John via his email address listed on the QRZ website.

## St George Amateur Radio Society

Obtaining an amateur radio licence is easy with the Foundation entry-level accreditation. You don't need any prior technical qualifications, there is no morse code to learn, and there are no age limits.

The St George Amateur Radio Society conducts radio licence training courses and assessments, within the St George and Sutherland Shire. The next training and assessment weekend is scheduled for the 15<sup>th</sup> and 16<sup>th</sup> of July, at the Society's training venue in Sutherland.

Courses and assessments run in compliance with current public health restrictions and COVIDsafe guidelines.

A Foundation licence course takes a single weekend; including a review of the Foundation Licence Manual, practical training, followed by assessment in theory, regulations and practical. Candidates will need to have read and be familiar with the contents of Foundation Licence Manual, prior to attending the weekend course.

Standard and Advanced licence assessments are held on Sunday. Candidates will need to have undertaken self-study in theory and regulations prior to attending the assessment session.

Advance booking is necessary to meet the current lead time requirements of the government selected outsourced examination provider, AMC. Bookings close at COB Friday 30th June 2023. Late bookings cannot be accepted, as examination materials are provided specifically for each candidate.

For any further information please contact the education team via email; [education@sgars.org](mailto:education@sgars.org).

And finally, another reminder about the VK2RDX 2 metre repeater; from early July, a 91.5Hz tone will be required to access the repeater.

Details about all of the Society's repeaters, along with the Society's other activities, are on the website, [www.sgars.org](http://www.sgars.org).

*73 de Peter VK2EMU  
Publicity Officer, St George Amateur Radio Society.*

## Waverley Amateur Radio Society

The next meeting is at 7:30pm this Wednesday the 21<sup>st</sup> of June, in the ANZAC room of Rose Bay RSL Club, Vickery Avenue, Rose Bay.

The meeting will start with the AGM, which will be followed by a general discussion on what subjects members would like to see in upcoming months, both for meeting nights and project days. Come along and help plan our program.

Many members enjoy dinner in the club's bistro prior to the meeting from about 6pm and all are welcome; especially any visitors from other clubs or out of town.

Regular Monday evening nets are at 8pm on VK2RBV, 438.1125 MHz with a -5.4 MHz offset and 91.5Hz tone for access.

Wednesday lunchtime get togethers, continue in the RSL bistro; these now adjourn after lunch to the ANZAC room for some practical activities.

The first Saturday of the month is "project day", also in the ANZAC room at the RSL. The next one is coming up on the 1<sup>st</sup> of July. At this stage the actual subject is unknown but will be discussed at the monthly meeting on Wednesday.

Other activities are continuing either in person and on Zoom. See the society's website for details.

You can keep up to date with the Waverley Amateur Radio Society on the web, at [vk2bv.org](http://vk2bv.org). On the site you can also find out more about kits available, update your membership details, and use the contact form to get in touch for more information.

*73 from Eric VK2VE  
Broadcast Publicity Officer*

## Hornsby and Districts Amateur Radio Club

Last weeks “Bring a Valve” evening was a great success. One valve was so big the table creaked – it was a 4CX10,000.. yes, just a little 10-kilowatt valve. The 6146’s seemed rather compact in comparison. Of course, the 30,000-volt glass vacuum capacitor was technically not a valve, but impressed anyway. All in all, it was a great evening of trading project ideas and catching up with fellow amateurs.

At the June monthly meeting on the 27<sup>th</sup>, the show and tell topic is... was there something you bought - online or elsewhere – where the item did not live up to the hype or work as expected? Bring it along for a 5-minute show and tell. It doesn’t matter what it is, as it doesn’t have to be strictly amateur radio related. If it is too big or heavy, then simply bring a picture or two along, on a USB stick, to be projected on the screen.

Members and visitors are welcome to join the discussion on the 27<sup>th</sup> June, at the Mount Colah Community Centre.

73 for now and let’s keep radio-active,

*Matt VK2BAI*

*For the Hornsby and Districts Amateur Radio Club.*

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**[Play File: 19-E-ID4.wav]**

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## Activities on the air

### *Daily;*

**Manly-Warringah** “early bird” net, 6:30am on or near 3690kHz LSB; if that’s too early, the “morning” net is from 8am on or near 7189kHz.

The **CCARC Morning Tea net** *weekdays* from 10am; VK2RAG, 146.725MHz with 91.5Hz tone, also on EchoLink.

**Amateur Radio Central West Group** lunchtime net; 1pm on VK2RCW.

### *Mondays;*

**Westlakes ARC** net 9:30am on 40 metres, 7115kHz, VK2ATZ Portable.

**Great Lakes Radio Club** net 7pm on VK2RGL; 147.1MHz with 91.5Hz tone, EchoLink VK2RGL-R.

**Hunter Radio Group** VK2AWX News 7:30pm, 146.9Mhz and 438.025MHz.

**Amateur Radio Central West Group** net at 8pm on VK2RCW.

**Lightning Net** 8pm on 1860kHz, net control Steve VK2STG.

**HADARC** net 8pm on VK2RNS, 147.25MHz

**Waverley ARS** net 8pm on VK2RBV, 438.1125MHz with 91.5Hz tone.  
Activities online and on air; see website.

### *Tuesdays;*

**National VKDMR Net:** from 7:30pm on Talkgroup 505.

**Blue Mountains ARC** net from 8pm, 3543kHz.

**Illawarra ARS** 80m net at 8:30pm, 3666kHz.

### *Wednesdays;*

**Westlakes ARC** net 9:30am on 7115kHz. 2 Metre nets throughout the week, see website for details.

**Hunter Radio Group** net 7:30pm on 146.9MHz.

**HADARC** 8pm on 3608.5kHz

**Blue Mountains ARC** 8pm on VK2RBM, 147.05MHz, 123Hz tone.

**Amateur Radio Central West Group** from 8pm on 3653kHz.

***Thursdays;***

**Illawarra ARS** net 12pm; VK2RMP 146.850 and VK2RUW on 146.675.

**Fishers Ghost ARC** net 7:30pm on VK2RFG, 438.65MHz with -7MHz offset and 91.5Hz tone; also, on EchoLink.

**Oxley Region ARC** 7:30pm on VK2RPM 146.7Mhz with 91.5Hz tone.

**St George ARS** 8pm, VK2RLE 146.8MHz.

The **CCARC weekly net** from 8pm on VK2RAG, 146.725MHz with 91.5Hz tone, and EchoLink.

***Fridays;***

**Morning tea with HADARC** 9am on 7106kHz.

**Westlakes** 9:30am on 7115kHz.

**Amateur Radio Central West Group** at 8pm, VK2RCW.

***Saturdays;***

**Westlakes** Stone the Crows net; 6am on 3588kHz.

**Illawarra ARS** net 9:30am on VK2RMP and VK2RUW.

**Snowy Mountains ARC** net 7:30pm on Southeast network; VK2RFS 146.75MHz, VK2RSE 147.375, VK3RDH 146.625, and EchoLink.

***Sundays;***

**Westlakes** DMR Net from 8:30am, usually on Talkgroup 3802; listen to Talkgroup 505 at 8:28am.

**Oxley Region ARC** from 9am, VK2RPM.

**WICEN NSW** nets; 6pm on Chatswood 2m or Kurrajong 70cm repeater; and 6:30pm on DMR or HF. Check website for details.