

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

Later in this bulletin, we have a summary of on-air activities from both Sydney, and across New South Wales. We would welcome any updates from club and groups; simply email news@arnsw.org.au – we don't need full items, just the details of the activity and contacts. Don't forget, we always welcome reports on the outcome of recent activities, as well.

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

A reminder that next Sunday sees the end of Daylight-Saving time. Since VK2WI News maintains the same local times of 10am and 7:30pm, HF propagation conditions may differ. If you have reception difficulties on radio, you can also listen to the bulletins streamed live from our website, arnsw.org.au/audio.

Tonight, we 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.

A note for members of Amateur Radio NSW – a reminder that the date of the 2024 AGM has been moved back 2 weeks, to Saturday the 27th of April.

HF Antenna Day – part two...

Continuing with our presentation program for 2024, members of Amateur Radio NSW are invited to the second part of our HF antenna presentation. Its starts at 10am on Sunday the 28th of April 2024, here at VK2WI Dural.

This event will feature presentations of interest for all levels of expertise, and a further range of specialist presenters. It's an opportunity to;

Gain insights into portable operation;
Learn techniques and strategies to enhance your home station;
And connect with specialists, eager to assist and guide others.

The event is catered, and RSVP are essential for seating and catering purposes – we are not able to admit 'walk-ins' on the day.

Places are limited, so reserve your spot now by emailing events@arnsw.org.au, including your name, callsign and contact information.

*Advised by AI VK2OK
Event Co-ordinator for ARNSW.*

Weekly Solar and Geophysical Report

For the period of the 22nd to the 28th of March.

First, the summary of activity;

Dates across the columns are	22 nd	23 rd	24 th	25 th	26 th	27 th	28 th
10cm Flux	198	209	195	190	178	175	173
Fredericksburg A-Index	10	25	43	17	11	7	6
Australian A-Index	10	20	36	23	7	6	6 estimated
T index	116	129	96	94	116	126	137

Solar activity reached R1 on the 22nd with one M-class flare; R3 on the 23rd with an X1.1 flare at 0134UTC, and 9 M-class flares through the UTC day; R1 on the 24th with 10 M-class flares; R1 on the 25th with one M-class flare, the 26th with five and the 27th with 2 M-class flares; and R3 again on the 28th, with one X class and four M-class flares.

Geomagnetic activity reached G2 level on the 24th and G1 on the 25th, with other days remaining below warning threshold. A weak geomagnetic impulses of 10 nanoTesla was observed at 1112UTC on the 22nd, and a moderate impulse of 71 nanoTesla was observed at 1436UTC on the 24th.

F2 critical frequencies in Southern Australia were mostly near predicted monthly values. The 24th was depressed 30% during local day; the 25th depressed 25% during day and 20% during local night. Conditions recovered to near predicted, and the 28th was enhanced 15% throughout.

The forecast, issued on the 29th of March, through until the 4th of April;

Solar activity is expected to be at R2 levels with a chance of R3 earlier in the week. Activity is expected to decline to R1 to R0 once active region AR3615 has rotated off the solar disk.

Geomagnetic activity is expected to remain low for most of the week. Maximum usable frequencies are likely to be near predicted monthly values, up to 15% enhanced. Shortwave fadeouts are probable early in the week.

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 February, we had a;

Minimum of 136, Average of 172, and a Maximum of 208
With peak dates from the 6th to the 16th, and the 23rd to the 26th

At the end of March, we are expecting a;

Minimum of 127, Average of 156, and a Maximum of 209
With peak dates from the 19th to the 31st

And looking ahead to April, we are expecting a;

Minimum of 150, Average of 182, and a Maximum of 210
With peak dates from the 6th to the 9th, and the 22nd to the 27th.

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>]

[Play File: 15-E-ID2.wav]

Technical Feature

Tonight, we present the final part of this series introducing DMR and its use in Amateur Radio. Matt VK2FLY sums it all up;

[Play File: 16-TF-DMR8.wav]

Duration: 3m37s

In: As we close ...

Out:....For ARNSW RadNet.

[Transcript]

As we close this series on DMR for amateur radio in Australia, let's take a moment to reflect on the ground we've covered and the knowledge we've shared. From the basics of DMR through codecs, range, power, talk groups, to the intricacies of DMR networks and the essential code plug, our journey has been both comprehensive and insightful.

DMR stands out in the digital landscape for its efficient use of bandwidth, offering clear voice communication and the capability to carry two communications simultaneously over a single frequency, thanks to TDMA. We've delved into the science behind Codecs, the digital alchemy that converts our voice into data packets, enabling crisp, clear communication across the airwaves. Understanding codecs was crucial, as it shed light on why DMR can sometimes sound robotic, and why it excels in voice, but not often in other types of communication, like music, for example. Exploring the range and power of DMR, we debunked the myths, and confirmed that while DMR's range is indeed influenced by physics, its operational range is more than adequate for use at amateur radio... with the added benefit of requiring less power.

Talk groups further demonstrate DMR's versatility, allowing for both broad and targeted communication, enabling users to connect with groups or individuals across the globe or around the corner. A journey through DMR's diverse network reveals a vast ecosystem of interconnected repeaters and hotspots. From BrandMeister's extensive network to the pioneering DMR-MARC, highlighting the flexibility and global reach of DMR. Each network serves a different purpose catering to the different aspects of the amateur radio experience, from casual chats to technical experimentation. Understanding how to navigate the VKDMR network and AR& SW RadNet was pivotal, providing practical advice on accessing and utilizing these resources DMR experience.

Whether it was mastering talk groups, optimizing time slots, and more. Or simply making the first call. These insights aim to demystify the process and encourage active participation. Finally, the concept of the code plug, while initially perplexing to some was demystified. Essential for configuring your radio to your unique needs and preferences. The code plug is your key to unlocking the full potential of DMR. With patience and a bit of trial and error, anyone can create a personalized setup that enhances their amateur radio experience. In wrapping up this series, it's clear that DMR is not just a mode of communication. It's a gateway to a vibrant global community of amateur radio enthusiasts.

The knowledge shared here is but a foundation, one upon which you can build your own journey of discovery and connection. As technology evolves, so too will the world of DMR, offering new opportunities to learn, to experiment, and to connect. This series may have concluded, but your adventure into the world of DMR is just beginning. Embrace the challenges, revel in the successes, and remember the amateur radio community thrives on collaboration and shared knowledge. So, get out there and keep the airwaves alive. If you would like to review this series again, the transcript can be found on the ARNSW RadNet microsite at ARNSW.net. There you'll find transcripts of the series, as well as audio links on YouTube.

Until next time. This has been Matt VK2FLY for ARNSW RadNet.

Foundations of Amateur Radio

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

[Play File: 17-FOAR095.wav]

Duration: 2m43s

In: To sign or...

Out: ...I'm Onno VK6FLAB

For more information about this series, including audio, transcripts and other useful amateur radio resources, Onno's website is; vk6flab.com; and you can contact Onno by email, to cq@vk6flab.com.

[WICEN News]

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

[Play File: 18-E-WNS0331.wav]

Duration: 2m06s

In: WICEN has meetups...

Out: ... at wicen.org.au

[Transcript]

WICEN has meetups here at Dural on the first Sunday of every month; the next one is on next Sunday from 9am. VRA Rescue NSW recently announced the establishment of a new "State Rescue Group - Metro Squad". So, VRA's Wayne Dreghorn will present an information session about the new squad and the implications for WICEN. All members are encouraged to attend.

WICEN is supporting Dementia Australia's "Memory Walk and Jog" events throughout 2024. The next Memory Walk in New South Wales is at Speers Point on the Central Coast on 12 May.

The Memory Walks are great "starter" events for new (or rusty) WICEN members, as they take only a couple of hours. WICEN also provides the radios for these events, so you don't even need to bring your own gear. Why not give one a go? You'll find a link to the events list in the text edition of this news.

To participate in any WICEN event, or just find out more about how you can use your Amateur Radio skills to benefit the community, you can email wicen.ops@vrarescue.org.

WICEN nets take place every Sunday evening, using FM voice, DMR, P25, or HF voice, depending on the week. All WICEN members and other Amateurs are welcome to call 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 WICEN's Kurrajong VHF DMR repeater, followed at 6.45pm by a net on WICEN's VRA P25 repeater.

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

WICEN is also on Facebook, and on X; there, you can find photos and information about recent and upcoming WICEN activities. Links are in the text edition of this news.

For information about other WICEN groups around Australia, visit the web at wicen.org.au.

[Memory Walk and Jog Events: <https://www.memorywalk.com.au/find-an-event>]

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

["National" WICEN on Facebook: <https://www.facebook.com/groups/124735400158>]

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

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

[Play File: 19-E-ID3.wav]

Club News

We start this week with news from the Oxley Region Amateur Radio Club.

The Club's April general meeting will be at 2pm on Saturday the 6th of April, at the SES building in Port Macquarie. The April Coffee Morning is at 10am on Thursday the 11th of April, at Brooklyn's Burger Bar, Thrumster.

It is now time to plan to attend the Club's 48th Annual Field Day. It is at the Wauchope Showground Hall on Saturday and Sunday the 8th and 9th of June, during the Kings Birthday Long Weekend. The Field Day Dinner will be at Port Macquarie Golf Club on Saturday night. Don't forget to book accommodation early, as the area is a very popular holiday destination during the Long Weekend. You can camp at the Wauchope Showground in your tent, caravan, or motor home; details are on the Wauchope Showground website.

The next Foundation Licence training and assessment weekend will be held as soon as sufficient candidates have registered. Candidates for the Foundation Licence and for assessments for all grades of licence can register their interest via the contact form on the ORARC website.

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.

For more information about the Oxley Region Amateur Radio Club, visit the website at orarc.org. The site contains a wealth of Amateur Radio items in addition to club information. The January 2024 issue of the club's bimonthly newsletter "Oxtales" is now online, and past issues are on the website as well. The March addition has been delayed, but will be published in early April. The club is also on Facebook; just search for Oxley Region Amateur Radio Club.

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

Central Coast Amateur Radio Club

The Kariong club rooms are open on Saturdays from 10:30am. As always, members and visitors are most welcome.

At the club rooms on Saturday April 6, the club will hold its monthly business meeting at 1pm, preceded by a barbecue at midday. Details will be emailed to members during the week.

At the VK2RAG Somersby repeater site, the 6-metre repeater, D-Star, Rad-Net DMR and 2m EchoLink, 70cm and 23cm, are all fully functional. The WICEN UHF MMDVM is still having problems.

The Somersby WebSDR is online at websdr.ccarc.org.au; its configured to listen on 6 metres, 2 metres, 70 centimetres and 23cm.

The Club's Weekly net is on Thursday Nights at 8pm. It's on the VK2RAG 2 metre repeater – 146.725MHz with a 91.5Hz sub-audible tone, and on the CCARCNSW and HAM EchoLink conferences. It is also live video-streamed on the club's Facebook page.

You can find out more about the CCARC, including information on upcoming social events and all the details we can't tell you about here; on the web at ccarc.org.au – by phone, 02 43402500 – or social media, search Central Coast Amateur Radio Club; remember to "like" to follow for updates.

73 Alan VK2MG

Publicity Officer, Central Coast Amateur Radio Club.

Blue Mountains Amateur Radio Club

The next meeting of the Club's is on Friday the 5th of April at the clubrooms, 4 Moore Street Glenbrook, in the Blue Mountains – doors open from 7pm.

April's guest speaker will be Russell Bryant; an all-round radio scanner aficionado, who will give us the benefit of his broad experience in the field from simple systems to the modern complex devices seen today.

The clubrooms are also open twice a month from about 10am, on the morning of the first and third Saturdays – unless otherwise noted on the Club's Facebook page.

Visitors and prospective new members are always welcome.

The Clubs has several weekly nets – we have details in “Activities on the air” later in this bulletin – and a new net time, Sunday nights at 8pm. On the 1st and 3rd Sunday of the month, the net is on the Club's 6 metre repeater, and on the 70cm repeater on the second and fourth Sunday.

The next Foundation Class will be on Saturday the 13th of April. Upgrade classes continue on Wednesday nights, both on Zoom and in-person at the Glenbrook clubrooms.

With a 98% pass rate, the Club's courses and exam days do fill-up quickly; please contact Club secretary, Irene VK2VAN via email to; secretary@bmarc.org for class dates, to register, or for more information.

More information about the club can be found on the website, at www.bmarc.org.

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

St George Amateur Radio Society

The next gathering of the Society is this coming Wednesday the 3rd of April.

The Society's gatherings are now at Mortdale RSL club. The Club is in Macquarie Place, a 5-minute walk from Mortdale railway station. The club has excellent dining facilities and members are encouraged to arrive early for a bite to eat before the gathering.

At the gathering as well as the business stuff, there will be a presentation by Peter VK2EMU on "3D printing and laser cutting for Amateur Radio".

While 3D printing is not new, in the last few years the prices of machines has dropped, so they are now affordable for casual hobbyists. Many items useful to radio experimenting can either be printed or laser cut. Examples of various items will be displayed and open-source software for designing 3D prints and laser cuts will be demonstrated. Attendees with items that they have 3D printed or laser cut are invited to bring them along.

If you or somebody you know is interested in becoming licenced – or upgrading their licence – the St. George Amateur radio Society's next foundation course and examinations weekend is in late April. Details are on the website.

Details about the Society's repeaters, courses, along with the Society's other activities, are on the website, www.sgars.org.

All are invited to the next gathering of the Society, now at Mortdale RSL club, 7:30pm on Wednesday the 3rd of April.

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

[ID4 and Activities on the air]

[Play File: 20-E-ID4-AOTA2.wav]

Duration: 5m33s

In: [IDENT 4]

Out: ...the office phone, 02 9444 0123.

[Transcript]

I'm Mathew VK2YAP.... And I'm Stuart VK2BMX.

It's time for your quick trip around the bands for this week, with; 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.

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, on 146.975MHz.

The **Blue Mountains ARC** D MR Net at 7:30pm on Brandmeister 50520, hosted by Ben VK2AFK.

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: starts at 8pm on Talkgroup 505.

Blue Mountains ARC net from 8pm, 3543kHz.

St George ARS digital net, 8pm on 146.8MHz

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

[...continues]

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 146.975MHz and EchoLink node 1474.

HADARC 8pm on 3608.5kHz

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

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

Armidale District ARC net 8:30pm on 3633kHz.

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 8:00am, usually on Talkgroup 3802.

Oxley Region ARC from 9am, VK2RPM.

WICEN NSW nets; 6pm on Chatswood 2m or Kurrajong 70cm repeater, 6:30pm on DMR or HF, and 6:45pm on P25. Check website for details.

*Don't forget to get your activities on the air here... send us through the details of your activity!
Email the details, to news@arnsw.org.au... or leave a message on the office phone, 02 9444 0123.*
