

Founded 1979 Incorporation No A0006677S P.O. Box 692, Shepparton 3632



## Shepparton & District Amateur Radio Club and Electronics Club

February 2026 Newsletter

Next Meeting, Saturday March 7<sup>th</sup>, 2026.

Note; This meeting will be held at the Mooroopna  
Scout Hall.

### **SADARC COMMITTEE**

President – Graeme Martin, - VK3VSM

Vice-President: - Peter Rentsch – VK3AXI

Secretary: - Adam Cleary - VK3UU

Treasurer and Membership – Ian Saunders – VK3YYY

Webmasters - Graeme Martin - VK3VSM and Ray Gardiner – VK3YNV

Hamfest Co-ordinator: - Peter Rentsch - VK3AXI

Newsletter editor and Publicity - Peter Simpson – VK3ASK

Technical Committee: Geoff VK3ZNA, Ray VK3YNV, Denys VK3ZYZ, Josh Gardiner, also power to co-opt.

To contact any member of the committee above, email [committee@sadarc.org](mailto:committee@sadarc.org) and specify who you wish to communicate with and the subject.

If you have items for the newsletter, forward to: [newsletter@sadarc.org](mailto:newsletter@sadarc.org)

Communications Manager (External Events): Darren Glasson (VK3HEN) – subject to confirmation.

Meetings the first Saturday of the month from **10 am** for Arduino training, plus informal chats and technical talks. A BBQ follows (a gold coin donation). Main meeting 1 pm (except January when no meeting occurs) at Mooroopna Scout Hall, for March meeting.

Variations in these times, days and location are normally notified in the preceding newsletter.

**DISCLAIMER:** - No guarantee is given as to the accuracy of information in this newsletter. E.  
& O.E.

**WARNING:** - There is a danger of electrocution or injury when working on electrical/radio gear or working **at** heights doing antenna work. You do so at your own risk.

25/08/2022

## **VK3RGV repeaters and transmitter operating frequencies from Mt Wombat**

**53.725MHz (-1 MHz), In Service    146.65MHz (-600 kHz), In Service**  
**438.2MHz (-7 MHz -D-Star), In Service    438.650MHz (-7 MHz 91.5 Hz**  
**tone), In Service**  
**438.9MHz (-7 MHz - DMR), In Service    439.775MHz (-5 MHz), Now back**  
**in service, IRLP (node #6990)**  
**476.475 MHz (+750 kHz) CB Repeater WBT03 Channels 3- 33, In Service**  
**VK3RDS, 438.7625 MHz (-7 MHz DMR) Shepparton on test @ VK3YNV**  
**QTH**

The three following repeaters are not the clubs but are allied to the club in one way or another.

**Mt Major VK3RDU, 146.850 MHz,**  
**439.875MHz. Mt Bruno VK3RWC 147.325 MHz (-1.6 MHz 123Hz)**

**Access to most analogue repeaters is by sub-audible 123 Hz tone or noise/carrier mute (less sensitive). Your TX offset is shown in brackets**

Club informal on air get togethers, all welcome. Club call sign

VK3SOL:

Wednesday- 2mx repeater 146.65 MHz 8.00pm.

3.63 MHz SSB ± interference 8.30pm,

Sunday – 2 mx repeater 146.65 MHz 2 pm & 8 pm

The Vintage Radio Club – 2 mx repeater 11 am, Sunday.

A number of semi-private HF skeds take place either daily or weekly, locally or further afield.

Website – [www.sadarc.org](http://www.sadarc.org) or [www.sadarc.org.au](http://www.sadarc.org.au) Face book Page – Shepparton and District Amateur Radio Club Direct Link: <https://www.facebook.com/groups/481867453084459>

### **In this Issue**

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### **Next Meeting**

Our next meeting will be held at the Mooroopna Scout Hall, which is located in Echuca Road, next to the ambulance station and opposite the Macisaac Rd shops.

We will be following the usual format with doors opening around 10am for Arduino topics and general chat. BBQ at 12 and then our meeting at 1pm. Please come along, bring your ideas and suggestions, and help shape the future of our club.

### **Annual Membership Subscriptions**

**Please note that annual membership subscriptions are now due and should be paid by March 7.**

**I have included a membership/renewal form to be filled in and returned to the SADARC committee, as soon as possible. The form contains the club bank details and contact information for the committee.**

**The renewal cost is \$30. Per head, which can be transferred by EFT, or pay at the next meeting. If paying by EFT, be sure to include your name and callsign in the description.**

**Please forward the completed form to; [committee@sadarc.org](mailto:committee@sadarc.org)**

## **Diary Dates**

- March 7<sup>th</sup>, March 2026 club meeting, Mooroopna Scout Hall.
- April 4<sup>th</sup>, Regular club meeting, venue Mooroopna Scout Hall.
- April 5<sup>th</sup>, Bunnings Sausage Fundraiser
- Sunday September 13, SADARC Annual Hamfest.

## **Editors Comments**

Well, here we are after 6 years back to the good old Mooroopna Scout Hall. We are assured that the hall has improved, airconditioning to be installed and we will hopefully have a permanent home for a radio shack and somewhere to do projects.

Naturally the club is paying for this venue, but we do have ready access for more meetings, workshops, or just somewhere to gather and exchange ideas. So please embrace the new venue and hopefully the club can gather on more occasions and make the most of the facility.

Congratulations to Graeme and all the committee for being re-elected unopposed. Looks like everyone is happy with the committee and how we are performing.

Our president Graeme VK3VSM has spent a great deal of time and effort over the past Month, trying to generate new ways for the club to move forward. Like most members, he wants the club to grow, become more financially secure and most of all support the community, but he naturally needs the help of all members. So, if you have ideas on our future direction, please discuss with your committee in person, or contact someone via email.

In closing, I would once again like to congratulate Bill Dallas and the team for the ongoing operation and success of our 3 SDR services.

The links for our 3 SDR services are as follows.

<https://vk3ynv.sadarc.org/>

<https://redgum.sadarc.org/>

<https://listen.sadarc.org/>

They are a great service, so give them a try, they all work extremely well and can provide hours of listening fun.

See you all at the next meeting

Peter Simpson VK3ASK

## **Presidents Report**

Thank you to everyone for putting their faith in me for another year as President. I am truly honoured to accept the role of President of the Shepparton and District Amateur Radio Club for 2026. This club has a rich history of bringing together passionate individuals who share a love of radio communications and electronics.

I'd like to express my sincere gratitude to everyone who put their hand up to join the committee. Your willingness to step up and give your time and effort to the club is genuinely appreciated.

Despite a warm 38-degree day, it was fantastic to see such a strong turnout for our first meeting of the year. There was several new members joining us along with old members coming along,

It was great to see that all the heat certainly didn't dampen spirits, with plenty of members braving the conditions to catch up after the Christmas and New Year break.

There were many discussions, with members swapping stories about holiday travels, projects tackled over the break, radio activities they'd been experimenting with, and plans already forming for the year ahead. It was a great reminder of what makes this club special, not just the radios and electronics, but the friendships, shared knowledge, and genuine sense of community. A very positive and encouraging way to kick off the year.

The club is also sitting in a good position financially, which puts us in a strong place as we head into the year ahead. This allows us to continue supporting club activities, maintaining equipment, and exploring new opportunities that benefit our members. A reminder as well that we have the Bunnings BBQ

scheduled for the Easter weekend, an important fundraiser for the club and a great opportunity for members to get involved and support our ongoing activities.

There was a lively and constructive discussion during the meeting about the direction the club can take to attract new members, encourage members back to meetings, and raise our profile within the wider community. Ideas ranged from increasing our presence at local events, improving how we showcase what amateur radio has to offer especially in times of disaster, and finding ways to better engage people who may not yet realise just how broad and accessible the hobby can be. It certainly gave us a lot to think about. These conversations highlighted a shared enthusiasm for keeping the club active, relevant, and welcoming, and they set a positive tone for the year ahead.

Thank you all for your trust and support. I look forward to working with you to make this another great year for the club. Please feel free to reach out with any questions, ideas, or comments.

Graeme Martin

VK3VSM

President of Shepparton and District Amateur Radio Club

## **Minutes of February Meeting & AGM**

### **SADARC February 2026 Meeting February 7<sup>th</sup> 2026**

1. Meeting opened 13:00
2. Graeme opened the meeting and introduced Daryl 3WDE to the club
3. Apologies: 3ZDK,3FALN3TEX, 3KAL, 3DQS
4. The previous meeting minutes accepted as presented
5. Ian 3YYY presented the financial report. It was indicated that the term deposit was maturing. A discussion was had to roll this over and augment this with more from our transaction account. An additional amount will be invested for the term deposit.

6. Tech report. Ray 3YNV reported that the 2 bay binary array available ex Wagga Wagga for \$1200 was available.

The D-STAR repeater is currently out of action due to a HDD failure requiring a rebuild, on air TBA.

ALL STAR u= is currently running (located in Shepparton) and will be relocated to the final home at Mt Wombat in a few weeks. A discussion was had around hosting a Meshcore repeater at Wombat after a non approved unit was removed from the site. We can host an approved device ourselves.

Josh is working on access to 44.net for the issuance of our own permanent fixed IP address in the IPV4 global 44.x.x.x subnet.

A motion was put by Kevin 3KFM for the purchase of the 2 bay binary seconded by Geoff 3GSR carried unanimously

7. Inward correspondence:

New hall information. The Scout Hall has been approved however the promised air-conditioning has yet to be installed (by Shep Shire).

Graeme reported conversations around available grants from the council. The intention is to apply for those applicable.

8. Outward correspondence

Letter to Ellen Lew re thanks for providing photographs from Radio Australia Transmitting station circa 1962. These were photographed by her father Les VK3YLY SK.

9. SWL report. Stevo indicated not a lot to report over the summer period.

He has brought in a fine example of the AX-190 Realistic communication HAM band receiver from the 1970s. This unit is in excellent condition and is available for \$150.

10. General Business. A discussion around adding links to the website for the SDR hosted in region. Graeme and Ray to look into this.

It was noted by Peter that our presence on the Shepparton News “Billboard” has disappeared. We need to contact them to regenerate this presence.

11. Community engagement. A discussion was held around potential charitable ideas for our club to represent. This discussion extended to other technology engagements with the community such as a ‘repair’ day. Other suggestions include hosting external visitors such as Ambulance, First aid, JOTA/IOTA ++. This is to see where we may want to take the club in the future.
12. Hamfest date. Peter 3AXI indicated that we should fix the date in the WIA diary for our hamfest. The potential location might change however the importance of holding the date is required. Peter 3AXI proposed the second Sunday in September, Peter 3ASK seconded, carried unanimously.
13. Graeme closed the meeting at 2:06pm

## SADARC AGM 2026 February 7<sup>th</sup> 2026

1. SADARC Annual General Meeting opened 2:10pm
2. Graeme opened the AGM and stepped down. Ray 3YNV stepped up to declare all positions vacant.
3. Nominations were called for all positions.  
President- Graeme 3VSM was nominated by Peter 3ASK. No others were nominated for President, Graeme was re-elected unanimously  
Vice President – Peter 3AXI was nominated by Rob 3BLD. Peter re-elected unopposed and unanimous  
Secretary – Adam 3UU was nominated by Ray 3YNV. Adam elected unanimously  
Treasurer – Ian 3YYY was nominated by Adam 3UU and was re-elected unanimously.

Committee members:

Technical committee: Ray 3YNV, Kevin 3KFM, Josh, Geoff 3ZNA, Denys 3ZYZ

Newsletter and Publicity: Peter 3ASK

Hamfest Co-ordinator: Peter 3AXI

Community Engagement: Graeme 3VSM, Kevin 3KFM, Peter 3ASK

Web master positions: Graeme 3VSM, Ray 3YNV

SWL report: Stevo

4. Annual Financials presented by Ian 3YYY.

The club is currently quite stable financially with very successful fundraisers held during the year including the Hamfest and the Bunnings Days

This year we utilised a term deposit to optimise our savings.

5. AGM closed 3:05pm

## What is Meshcore?

**At our last meeting Ray VK3YNV mentioned that Meshcore equipment had been installed at Mount Wombat. Myself, and I am sure quite a few other members, did not know what Meshcore was all about. Ray did a great job of describing this technology and our President Graeme has come up with an article describing the system and has even included a map.**

### **Below his article.**

Meshcore is an open-source framework for building flexible, decentralized mesh networks. While it's conceptually similar to Meshtastic, Meshcore is designed as a **lower-level, more foundational system**, giving developers deeper control over how mesh communication works. rather than being a finished "consumer" product, Meshcore provides the building blocks needed to create **custom, robust mesh communication solutions** tailored to specific use cases.

## How It Works

Meshcore devices (nodes) communicate directly with each other, forming a true mesh network. Messages are forwarded from node to node (“hopped”) until they reach their destination. As more nodes join the network, overall coverage and resilience improve.

Meshcore uses **LoRa radio technology**, operating in the **ISM (Industrial, Scientific, and Medical) radio bands**. In Australia, this typically means the **915 MHz band**, which allows long-range, low-power operation without requiring individual spectrum licences.

LoRa uses **Chirp Spread Spectrum (CSS)** modulation. Instead of sending data as narrowband signals, information is encoded into frequency “chirps” that sweep across a wider bandwidth. This provides several key advantages:

- **High resistance to interference**
- **Improved reliability in noisy RF environments**
- **The ability to decode signals below the noise floor**

Because of this, Meshcore nodes can often successfully receive packets even when the signal is **not visible above background noise** on a spectrum display — a major reason LoRa performs well over long distances and difficult terrain.

A key design goal of Meshcore is **flexible packet routing and discovery**. Developers can define how nodes find each other, how routes are selected, and how messages propagate through the mesh — allowing significantly different behaviour, compared to other LoRa mesh systems.

## Important Note on Bandwidth and Latency

Like all LoRa-based systems, Meshcore is built for **low-bandwidth communication**. It is **not suitable for voice calls, video streaming, or high-speed data transfer**.

Because messages may traverse multiple hops, **latency can be noticeable**, particularly in larger or more complex meshes. This trade-off is intentional, prioritising range, reliability, and power efficiency over throughput.

## Core Components

### LoRa Radios

Low-power, long-range radios operating in the licence-free **ISM bands** (e.g. 915 MHz in Australia).

### Encryption

Messages are encrypted to provide privacy and security.

### Mobile App Framework

A foundation for developers to build mobile applications that connect to Meshcore devices via Bluetooth for configuration, messaging, and data display.

## Key Features

### Open Source

Freely available source code hosted on GitHub, encouraging community development and experimentation.

### Long Range

Capable of communication over several kilometers. Actual range is highly dependent on **line-of-sight (LoS)**. Terrain, buildings, vegetation, and antenna placement all have a significant impact.

### Low Power

Designed for efficient operation — devices can run for days or weeks on small batteries.

## Text Messaging

Supports reliable short-message communication across the mesh.

## Decentralized

No central server or infrastructure required, increasing resilience and eliminating single points of failure.

## Highly Customizable

Meshcore is a framework, not a locked ecosystem. Developers can:

- Define packet formats
- Implement custom routing algorithms
- Build application-specific protocols
- Add features such as GPS, telemetry, or sensor data as needed

## Telemetry and Sensor Data

One of Meshcore's strongest use cases is **telemetry and remote sensing**, where small amounts of data need to be transmitted reliably over long distances with very low power consumption.

Because Meshcore allows developers to define their own packet formats and application-layer protocols, it is well suited to **custom monitoring and control systems**, including:

### Water Level Monitoring

Rivers, tanks, dams, troughs, and flood-prone areas.

### Gate and Valve Status

Open/closed state of farm gates, irrigation valves, or access points.

### Weather Telemetry

Temperature, humidity, rainfall, barometric pressure, wind speed, and wind direction.

### Environmental Sensing

Soil moisture, air quality, smoke detection, or fire indicators.

### Infrastructure Monitoring

Power status, battery voltage, pump runtime, and equipment fault flags.

Telemetry packets are typically **very small**, making them ideal for LoRa and Chirp Spread Spectrum modulation. Data can be transmitted:

- Periodically
- Event-driven (e.g. a water-level threshold exceeded)
- On request

Because Meshcore is decentralized, telemetry nodes can:

- Forward data through intermediate nodes
- Continue operating even if some nodes go offline
- Cover large rural or remote areas without cellular coverage

Developers can also build **gateways** that bridge Meshcore telemetry into:

- Mobile apps
- Web dashboards
- Local servers
- Internet backhaul (when available)

### Typical Use Cases

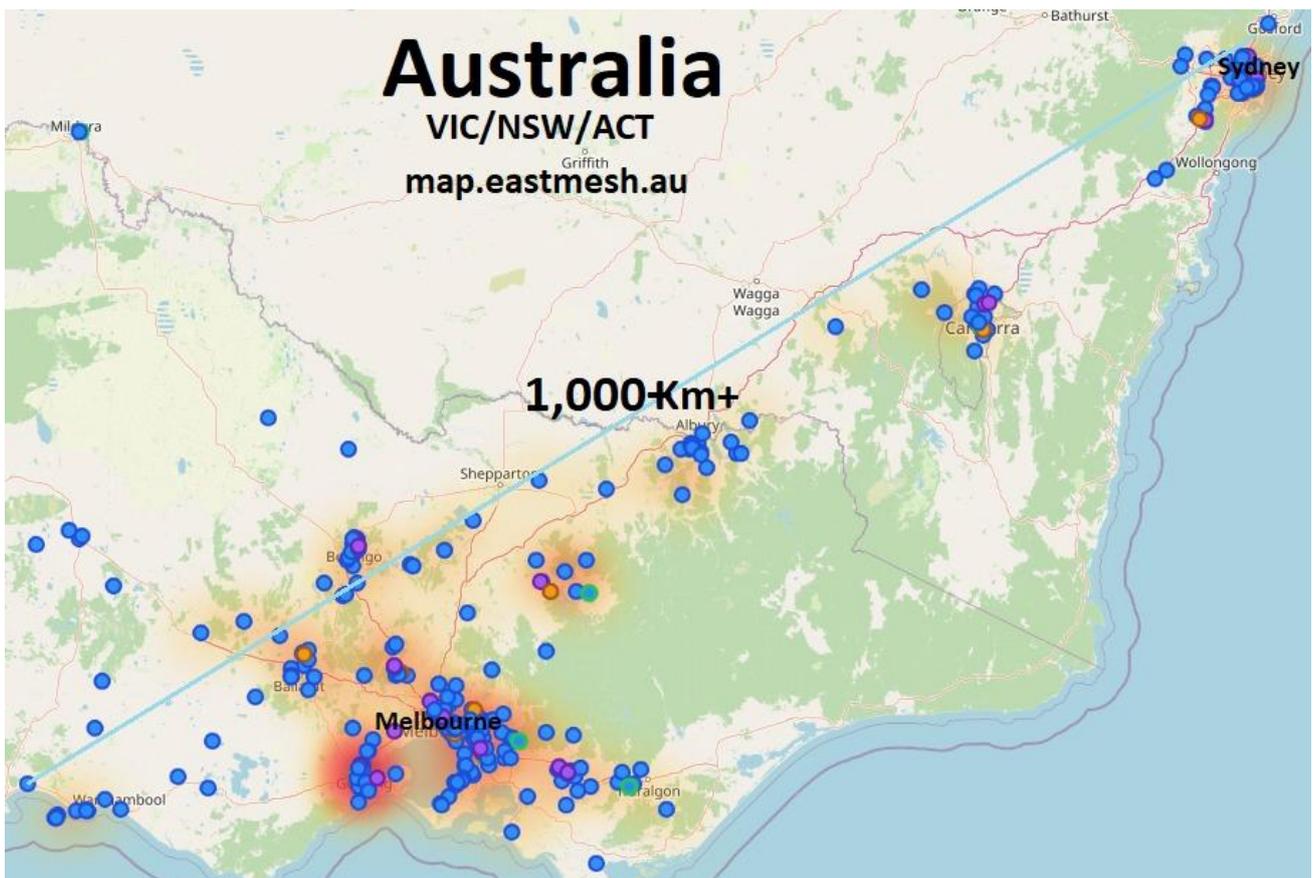
- Outdoor activities (hiking, camping, skiing)
- Emergency preparedness and disaster response
- Rural and remote communications
- Community-run mesh networks
- **Telemetry and monitoring systems**

- Water levels and flood alerts
- Farm gates and irrigation control
- Weather stations
- Environmental and infrastructure sensing
- IoT applications with low data-rate requirements

Graeme Martin

VK3VSM

President of Shepparton and District Amateur Radio Club



## Radio Australia Photo's from 1962

In mid-January, a lovely lady by the name of Ellen Lew, contacted the club to explain that her father had worked at Radio Australia in the 1960's and had some photo's from that era.

Below is a copy of the letter from Ellen and some of the photo's

My father, Les Youie OAM, worked at the PMG/Telecom Australia/Telstra all his life. In his earlier days, he was involved in a lot of telephone exchange installations and he often took photos of these jobs.

I have been holding onto a dozen black and white photos, not knowing what to do with them, then this morning, I discovered an article on your Facebook page entitled "Radio museum call" (I don't do social media so it was lucky I found it).

These photos are dated 19-4-1962. All are in excellent condition and several have inscriptions on the back detailing some aspect of "Radio Australia" e.g. main room, "American" section, frequency changing room Shepparton, control room, North-East Switching Gideon System 1<sup>st</sup> stage, New Switching System 'X-bar', etc.

I have a feeling that they may be of great interest to you, given your desire to preserve the history of the Radio Australia site and other national radio matters.

Interestingly, both my father and especially my brother Ralph were Amateur Radio enthusiasts back in the 1970s. From memory, I think their call signs were VK3DRY and VK3YRY.

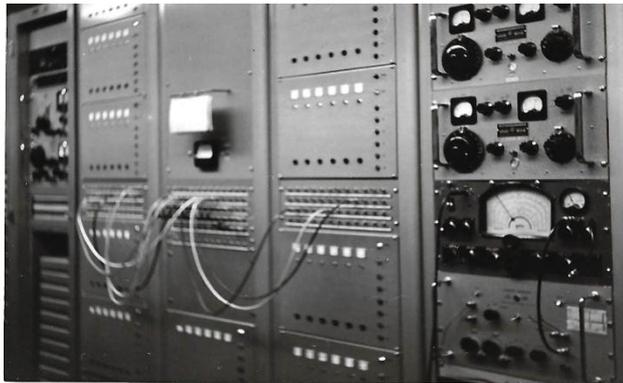
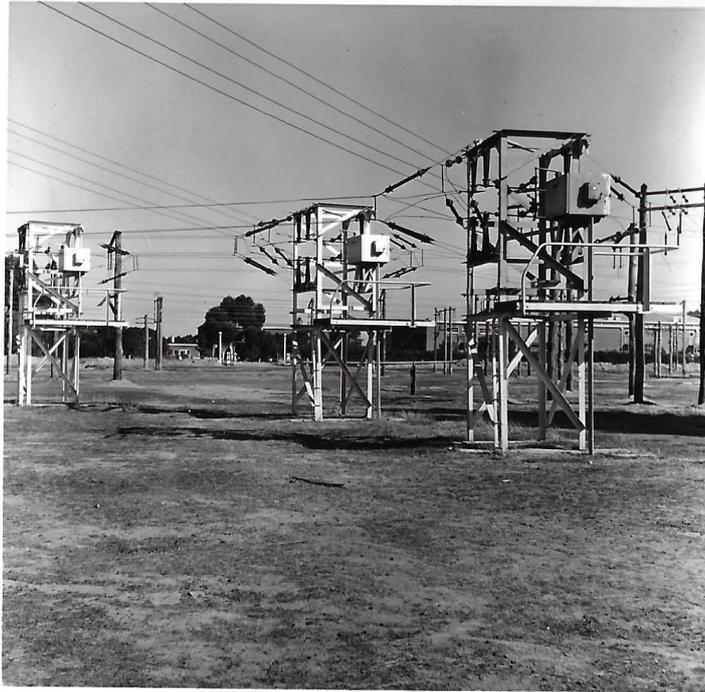
If you would like these photos, I would be happy to send them to you.

I await your reply.

Kind regards,

Ellen Lew

There are more photo's available, which our President Graeme is holding if you would like to view



## **CB radio equipment for Scout movement**

The SADARC committee received an email from Mark Perkins, from the Scout Radio and Electronics group. He is looking for 27mhz CB radio equipment, and also SWR meters.

Have a read of Marks email below and if you can help with gear, that would be great.

Hello

I am a Scouts Activity Leader with the Scout Radio and Electronic Service Unit.

<https://sresu.asn.au/>

I thought I would try contacting your club because I am related to Alan VK3FALN.

I am making 27 MHz radio kits to take to Scouts for them to experience setting up a HF radio system.

I have the Scouts construct a flag pole to support the dipole wire antenna and communicate over the radios they build.

I am trying to have the same transmitter and VSWR meter in each kit to make the instruction sheet the same. I currently have two complete kits.

I have attached a photo of the current HF radio kit and Radio.

Items I am looking for:

Uniden Pro 510e 27 MHz AM CB

Micronta 21-525B Field Strength/SWR Meter

If possible can you please pass this to your members to see if they have working items they would like to donate or sell at a cheap price.

Regards

Mark Perkins (VK3XMP)

Member of Scout Radio and Electronic Service Unit (Scout Radio Victoria)

Romsey VIC H 03 5429 3234 [vk3xmp@gmail.com](mailto:vk3xmp@gmail.com)

## **SDR web addresses.**

<https://vk3ynv.sadarc.org/>

<https://redgum.sadarc.org/>

<https://listen.sadarc.org/>