Darling Downs Radio Club Inc.
Newsletter

Toowoomba February 2024

CLUB INFORMATION

Postal address: PO Box 3257
Toowoomba QLD 4350
Email address
secretary@ddrci.org.au
Web Site: www.ddrci.org.au

EXECUTIVE COMMITTEE:
President Dougal Johnston VK4EKA
Vice President:David Curry VK4SP
Secretary: Theo Moller VK4ESK
Treasurer: Wayne Richter VK4ARW

STEERING COMMITTEE:
Sam Pascoe VK4SAM;
Cameron Scarvell VK4CSS;
Robert Hosking VK4FRH;
Bruce Boardman VK4MQ.

REPEATER COMMITTEE
Chairman Bruce Boardman VK4MQ
Members: Paul Stevens VK4CPS;
Cameron Scarvell VK4CSS;
Rod Webb VK4ZJ

Station Manager Theo Moller VK4ESK
2 Metre Net Convenor
Kevin Crandell VK4VKX
80 Metre Net Convenor
Theo Moller VK4ESK

CLUB MEETINGS:
2nd Monday of the month.
Start 7pm.
First half hour business matters, then social meeting incl a lecture.

Meeting place:
Community Venues, Level 3 City Library
Victoria St. Toowoomba

CLUB NETS:
80m on 3.650MHz, Saturday7.30pm
2m on 146.750MHz Toowoomba Repeater. Sunday 10am

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Other Regular Nets in the Toowoomba area:
Monday: UHF Net on 438.025MHz 7.30pm
Tuesday: The new Horizons Net on 147.050 MHz 7.30pm
Thursday: Scrub Turkey Net on 147.050MHz 7.30pm.
Friday: VK4 Friendship Net on 3.587MHz at 7.00pm

A note from the President

Summary of DDRCi Management Meeting 8th January 2024
The minutes from December were accepted along with the correspondence. The total finances are above $6300.
Bruce reported that the new antenna for VHF VK4RDD is with the manufacturers. Bruce will co-ordinate with Andrew re installation at RDD.
The Danish Flower Farm are happy to have us back for the John Moyle Field Day March 2024.
The DDRCi is to participate in the VHF/UHF Field Day at Gus Beutel Lookout at Ravensbourne National Park. From 9 am for set up to start contesting at 11:00 am local time for 8 hours Saturday 13th january
Philip Webb VK4AWP has sold and is moving house, he may possibly talk late in year on refining and manufacturing silicon for electronic chip production.
Terry noted a 10 metre repeater is licenced for Bald Hill and Barnes Hill near Crows Nest 29.680 MHz present status unknown.
Next Management Meeting 7:00pm 12th February 2024.
After the Management Meeting Bob Murton VK4ZOW gave a very enthusiastic talk on using Chat GPT to the dozen present.

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Darling Downs Radio Club Inc
Meeting and Talk 2nd Monday only Management Committee Meeting
February 12th 2024 7:00 pm Community Rooms Level 3 Toowoomba Library, Victoria St If you have any matters to raise please bring them to the attention of the Management Committee or Steering Committee members For February a short video and some other bits and discussion over a cuppa

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REDFEST 2024

Saturday 6th April 2024.
Greetings from the Redcliffe & Districts Radio Club VK4RC.
We'll hold our Hamfest on:
Saturday the 6th April 2024 at 9:00am right here in South East Queensland!
Please mark the date in the calendar or on
your mobile phone.
Email: redfest@redclifferadioclub.org.au
You'll find us at St. Michael's College, Caboolture. On the Bruce Highway take Exit 152 and then Bribie Island Rd. Turn left at Old Toorbul Point Rd.
St Michael's College is well sign posted on the right.
On site parking.
BREAKFAST is served from 8:00am. REDFEST opens at 9:00am. $5 Admission.
Don't forget to grab some raffle tickets.

CLUB REPEATERS.
Both **VHF** and **UHF** repeaters are co-sited and have the same call identifier: **VK4RDD** 146.750 Mhz, negative offset, no access tone required; **VK4RDD** 439.275 Mhz, negative offset, 91.5 Hz, access tone required. ***VK4WID*** is the club's call sign for all nets on **HF, VHF and UHF,** as well as all contests. Please note that during contests which conflict with our regular net times, the contest has priority over the net in so far as the club call sign is concerned. The nets will then be conducted under the convener's call sign instead of **VK4WID**.

An Invitation to

You, your family and friends,
to attend the next social lunch of the
Darling Downs Radio Club (inc.)
VENUE: To be held at the Southern Hotel
839 Ruthven Street Toowoomba
WHEN: Saturday, 10th February 2024
We ask you to arrive around 11:30am for a 12:00pm start, to ensure your seat.

A few of our members enjoying the day.
WHY NOT JOIN US AND MAKE IT AN OUTSTANDING EVENT
SEE YOU THERE.
Please email your intention to attend to secretary@ddrci.org.au

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Class License START

On 19 February 2024, the Radiocommunications (Amateur Stations) Class Licence 2023 (amateur class licence) will commence. The amateur class licence will authorise the operation of amateur stations in Australia by persons who hold a recognised qualification at the foundation, standard or advanced level.
You are authorised to operate an amateur station under the amateur class licence as long as you comply with the conditions within it.
You do not need to apply to the ACMA or pay any fees to operate under the amateur class licence.
When the amateur class licence commences, you will no longer need a non-assigned amateur apparatus licence (your licence).
You are allowed to perform the same activities when operating under the amateur class licence.
If you do not take any action, your licence will continue to exist for the duration of its term. However, given that the amateur class licence will automatically apply, the ACMA will not renew your licence.
As under the previous system any person wishing to obtain an Amateur Radio License must still pass the exam and get a Call sign before getting on air.

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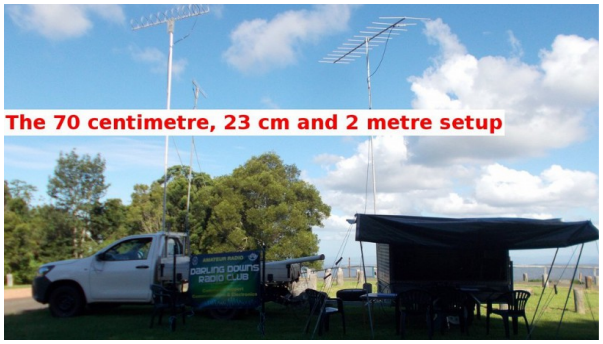
The big boss employed a temporary chauffeur from an employment agency while his regular one was on holiday. “What’s your name?” He asked. “Charles, Sir” was the answer.
“I always call my chauffeurs by their surnames”
“My full name is Charles Darling sir”
“Very well, Charles, drive on”

Report of the VHF/UHF Field Day January 2024

Gus Beutil lookout, Ravensbourne National Park.
Saturday 13. January 2024

All gear was set up by 10:40, one or two tourists had been along by then including a couple of police who
stopped for a short chat. We had a stop for a cuppa before the contacting started at 11:00 am.
The six metre band had some VK7 and ZL contacts although the conditions to there faded away in the afternoon.



A number of Brisbane area stations were worked on 2 metres, 70 cm and a few on 23 cm. Most were obviously home stations

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Why you feel extra hot when temperature and humidity is high.

A human's natural cooling mechanism is through sweat evaporating off the skin, a process feasible due to an energy transfer during the phase change of sweat from a liquid to a gas. But this cooling becomes far less efficient during high humidity as the sweat evaporates at a much slower rate since the air is already saturated with moisture.
It can therefore feel up to around seven degrees warmer during high humidity, expressed by the apparent temperature (AT) which is based on a mathematical model of an adult, walking outdoors, in the shade.
The AT is equivalent to the temperature that would bring the same amount of discomfort during normal humidity as that experienced under the current ambient temperature and humidity."

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Circumvention tools and VPNs have emerged to allow access to websites and platforms that have been blocked but circumvention tools work only as long data is on the lines.
Radio is the ultimate internet circumvention tool because it is not the internet and this brings us to Shortwave 2.0.
Shortwave 2.0 wont reach the audience of millions as in the heydays of shortwave decades ago. It will reach those who seek comprehensive, reliable, credible information.. This audience will be technically inclined: radio amateurs, hobbyist shortwave listeners, scholars, technology enthusiasts and government and military personnel with access to receivers. They will pass on the information they have received to the larger audience.

Education

If you would like to register for a Foundation License Course, or contest any of the exam levels available, please contact Steven Dudley who may be contacted: steve@vk4fi.net.au
Mob0403 910 087,
or you may also contact Philip Webb from the Border Ranges Club via email
philip01@scisat.com

Assistance

Assistance to those in need.
This radio club offers assistance to those in need of physical work involved in the
maintenance of their antennas etc. If you require assistance, please contact the club secretary via
email on secretary@drci.org.au and we will organise your assistance.

Garden City Award.

The DDRC also has an award worthy of adorning the walls of your shack. This is the Garden City Award. Please check the web page for details.

A bit of history that may occur again.

The Great Storm: Solar Tempest of 1859 Revealed
By Robert Roy Britt Senior Science Writer
27 October 2003

Recent strong solar storms that hit Earth were squalls compared to the torrent of electrons that rained down in the "perfect space storm" of 1859. And sooner or later, experts warn, the Sun will again conspire to send earthlings a truly destructive bout of space weather.

In early September in 1859, telegraph wires suddenly shorted out in the United States and Europe, igniting widespread fires. Colourful aurora, normally visible only in polar regions, were seen as far south as Rome and Hawaii.
The event 164 years ago was three times more powerful than the strongest space storm in modern memory, the one that cut power to an entire Canadian province in 1989.

An account of the 1859 event, from research led by Bruce Tsurutani of NASA's Jet Propulsion Laboratory, details the most powerful onslaught of solar energy in recorded history.

In 1859, four crucial events conspired at one moment.
"The plasma blob that was ejected from the Sun hit the Earth," he said. That's a relatively routine event. What preceded the strike was more unusual. "The blob came at exceptionally high speeds. It took only 17 hours and 40 minutes to go from the Sun to Earth." Solar storms typically take two to four days to traverse the 150 million kilometers.

"The magnetic fields in the blob, called a **Coronal Mass Ejection**, were exceptionally intense," Tsurutani said. "And the fourth, most important, ingredient was that the magnetic fields of the blob were opposite in direction from the Earth's fields."
Earth's magnetic field normally protects the surface of the planet from a continual flow of charged particles, called the solar wind, and even does a pretty good job defending against some storms but in 1859, the planet's defences were overwhelmed.

Society back then did not notice the storm the way it would today. The telegraph was 15 years old. There were no satellite TV feeds, no automated teller machines relying on orbiting relay stations, and no power grids.

Scientists can't yet accurately measure or predict what the strength or direction of Earth's magnetic field will be when a storm arrives. The storms themselves can be predicted. And there will eventually be another one like 1859.

Bernhard Fleck, the European Space Agency's project scientist for the Sun-watching SOHO spacecraft, says the next super space storm will be detectable, but that's only half the story.
"A monster event of the magnitude described [by Tsurutani] we would easily recognize as something extraordinary with SOHO and other solar instruments," Fleck said in an e-mail interview.

But, he added, "We certainly wouldn't know its full extent until arrival." During the 1859 flare-up, solar observers logged almost an entire minute during which the amount of sunlight doubled at the flare region.
"Such a strong white-light flare has never been seen since," says Paal Brekke, SOHO deputy project scientist. "So if this type of flare happened, yes we would know right away." But he adds that the orientation of Earth's magnetic field would not be known. Future space-based observatories could address this blind spot in space weather forecasting.
To get an idea of the strength of the 1859 storm, you have to wade into nT's for a moment.

A space storm's impact is measured in nano-Teslas (nT), Brekke explained. A moderate storm can be around -100 nT; extreme and damaging storms have been logged at around -300 nT. The 1989 coronal mass ejection that knocked out power to all of Quebec, Canada measured -589 nT, Brekke said.
The 1859 perfect storm was estimated to have been -1,760 nT.

People on the ground are generally safe even in the worst space weather. But technology could be in trouble when the next super storm hits. "In 1859, the technology was quite low in comparison to today's technology," Tsurutani said. "However the technology that we rely on today is much more vulnerable."

A strong storm does its damage in part by inducing currents on power and communication lines, leading to potential overloads. Obviously, there are a lot more wires on Earth today, "so one might expect much worse problems if it occurred today."

The charged particles can also zap satellites, as has occurred with handful of storms in recent years -- events with far fewer charged particles than in 1859.
A space storm also heats the upper level of Earth's atmosphere, causing it to expand. That's no good for satellites that can get caught up in air that didn't used to be there.
"This can lead to enhanced satellite drag and possible loss of these to the atmosphere," Tsurutani said.

Tsurutani and his colleagues -- Walter Gonzalez of the Brazilian National Space Institute and Gurbax Lakhina and Sobhana Alex of the India Institute of Geomagnetism -- reviewed known observations of the 1859 event's solar and aurora output, plus accounts from the ground. They also used recently rediscovered historic data on Earth's magnetic field from the Colaba Observatory in India.
The findings were published in a 2003 issue of the Journal of Geophysical Research.

Generative AI advances.

OpenAI, Cohere, Alphabet, Meta and Microsoft led the charge in 2023 for generative AI with the technology being used not just for business but for all aspects of society.
Like creating scripts and novels to a chatbot answering questions on a web portal, to becoming a virtual friend, therapist or even a partner.
Some even used it to find gifts for the holidays or aiding in electronics research. Adafruit even demonstrated how to use ChatGPT to write Arduino drivers for hundreds of libraries of devices and sensors.
In 2024, the software will scale to become a tool that nearly all vendors use in some way to help their businesses, according to market research firm Deloitte.
"Generative AI is poised for a breakthrough in 2024, as it begins to follow through on its promise of improving productivity, creativity and enhancing the way enterprises engage with their ecosystems," said Paul Silverglate, vice chair of Deloitte LLP. "Expect to see generative AI integrated into enterprise software, giving more knowledge-workers the tools, they need to work with greater efficiency and make better decisions."

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REAL ANTENNA SYSTEMS

In this article we will be talking about the losses that rob an antenna of its maximum performance.
The ideal antenna system will radiate 100% of your transmitter power on all bands without a tuner and in the direction you want to work. Such an antenna system does not exist.
Many new hams succumb to antenna advertisements making claims that are exaggerated. No antenna will have low SWR, work all bands without a tuner, and radiate efficiently at the same time.
A dummy load has a low SWR and will load up on all bands, but it will not radiate a signal.
A resonant coax-fed dipole antenna will have a low SWR and will radiate efficiently on the band for which it is resonant, but it will not work well on all bands.
For example, if the tuning range of your tuner has a sufficient range, you will be able to load up any antenna with it, but it will not necessarily radiate a signal efficiently.
It may have high tuner and feed-line losses. When you choose an antenna, you must decide how much loss you can accept.

DXers and hams that work weak signals at VHF frequencies try to eliminate as much loss as possible. If your contacts are going to be made under good band conditions and without much interference, you can get by with high losses. In that case, coax-fed antennas used on bands where they are not resonant will allow you to make contacts.
You can be greatly surprised by how little radiated power can be used to make contacts under ideal conditions.
If you want to make contacts regularly under changing band conditions, you will want to eliminate as much loss as possible and use antennas with gain. Lower loss will enable you to hear weaker signals.
Nothing will take the place of resonant half-wave dipoles, not because they radiate more efficiently, but because they don't require lossy tuners and don't have high coax losses. Remember that all antenna systems have compromises

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From Andrew Chapman the 10 metre repeater is on.
"Also the 10m repeater is on air VK4RHF 29.680 MHz (-100 KHz) and requires a 123 Hz tone"
Yes it is on air !

A Message from "Bundaberg Amateur Radio Club

I'm David VK4DN from the Bundaberg Amateur Radio Club.
We are hosting the WIA Convention and Expo/Hamfest here in Bundaberg on May 4/5 in 2024.
It is the biggest event in the calendar year for Amateur Radio in Australia!
Our members are thrilled to be hosting the event and we would like to extend a warm welcome to your club and members to attend the event.
The weekend includes the WIA AGM, several keynote presentations by guest speakers / a Commercial Expo and Hamfest / Field Day. A gala dinner and lots of other activities!

We have even managed to secure a contact with the ISS on Saturday evening with a local high school – (The kids will be able to talk with an astronaut on the space station!)

We are also seeking guest speakers for the event with several slots available if any member of your club would be interested in doing a talk about something they are passionate about (preferably related to Amateur Radio!)

It should be a very interesting weekend and an opportunity for amateurs from all over Australia to gather and network with other people interested in the hobby.

If you guys have any questions or comments, please don't hesitate to make contact with me!
Should any of your members like to book a table for the HamFest or give a talk, please ask them to make contact as well.

Kind regards,
David VK4DN
Secretary – Bundaberg Amateur Radio Club

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From ACMA

Club Station Operation Under Class Licence.

Date : 02 / 02 / 2024
Author : Peter Young VK3MV
Club station operation under class licence.

Recent discussions with ACMA confirms that the contact person will be the Club nominated person for the purposes of intercommunication with ACMA.

As ACMA will have an online portal, individuals and clubs can change the contact information directly online.

Use of callsigns, whether individual or Club, will be tested every five years if they are still required.

In terms of use of the callsign at the club, a **qualified person** can operate the station under the conditions of their qualification.

A person can operate the station under the conditions higher than that a person holds with a qualified supervisor in attendance.

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Don't forget the Club Nets:
80m on 3650kHz at 7.30 pm Saturdays
2m on 146.750MHz at 10.00am Sundays

Next meeting Monday 12. February 2024