The July 2025

NARA Newsletter

President's Message - Randy VE7FAA

The weather forecast looks very good for NARA's Canada Day celebrations and radio event on July 1. I hope to see you there. All are welcome and full details have already been sent to members by email and there is a brief reminder in this newsletter.

By the end of June two of NARA's summer events had already taken place, the bike race on June 15 and Field Day over the weekend of June 28–29. Full details of the bike race are contained in this issue of the *NARA Newsletter*, while our report on Field Day 2025 will be in the August newsletter.

The June 15 bike race went well. In an incident of an injured rider NARA volunteers coordinated with the first aid attendants on the course and the injured rider's family. The rider was taken to hospital but has now recovered.

Our next major event is the Bathtub race on July 27. NARA members are working with the Bathtub Society on providing communications using amateur radio resources. My thanks to those working on the plans and the 25 volunteers who have already signed up. This is a fun and somewhat complex event to organize. There is still time to sign up if you want to join in the NARA communications team. A package containing all the details for the Bathtub race will soon be sent to all those who have volunteered.

As a reminder, there are no general meetings during July and August but I hope to see as many members as possible this month at our Canada Day event and the Bathtub race. As always, a special thank you to all those who support these NARA summer events.

Island Events	Date	By
Canada Day Event/Contest	July 1	NARA
Nanaimo Bathtub Race	July 27	*RNBS*
NIARS Campout	August 16-24	*NIARS*
Victoria Swapmeet	September 13	*WARA*
Canada Winter Contest	December	NARA

NARA's Upcoming Summer Events

NARA's summer events include the following:

Canada Day - If you plan to attend NARA's Canada Day event, the essential information is:

- July 1 (Tuesday) from 10 am to 6 pm
- Location is 4911 Aho Road, Ladysmith
- Several HF stations and a 2m station will be on the air
- Lunch at 2 pm - hot dogs and fries from G0NDB and chili made by VE7JLO
- Canada Day cake (donations for the cake, please)
- Please bring your own chairs, cutlery, and favourite non-alcoholic drink/pop

Bathtub Race – July 27

So far, 25 NARA members have signed up to assist providing communications for this year's Bathtub race. NARA will remove both VA7ITS (444.725 on Mount Benson) and VE7DJA (145.430 at Lost Lake) from the Island Trunk System for the duration of the race. This will ensure good UHF and VHF coverage for the event. NARA will run a directed net for the duration of the race, which will include legally required check-ins every 30 minutes for all amateur radio operators taking part in the operation.

The race starts at 11 am. Volunteers should refer to their information package for information on what time they should be at their stations for set up radio

checks. Bathtub net control will once again be at the Coast Bastion hotel, and there will be at least six checkpoints along the racecourse.

In addition to amateur radio operators there will also be a radio operator at net control with an ROC-M (Restricted Operator Certificate – Maritime) who will be in contact with the bathtub safety boats. Each bathtub has its own safety vessel.

There is still time to volunteer if you would like to be a part of this NARA communications team. Contact bathtub@ve7na.ca if you wish to volunteer.

This year's Bathtub race map showing the NARA checkpoints.

Balloon Launch

On Thursday, June 5, at 10 am, the North Fraser Amateur Radio Club launched their latest pico balloon, which uses the callsign VE7NFR. This was their latest attempt to circumnavigate the Earth. In an attempt to achieve their goals, the group have:

- A new balloon design with improved seams (a 60-inch Cymylar instead of a 32-inch Orbs)
- Improved electronics, soldering skills and use of lighter interconnecting wires, all adding up to less weight (at 12.17 grams, the lightest payload yet)
- Extensive temperature and other pre-launch stress tests

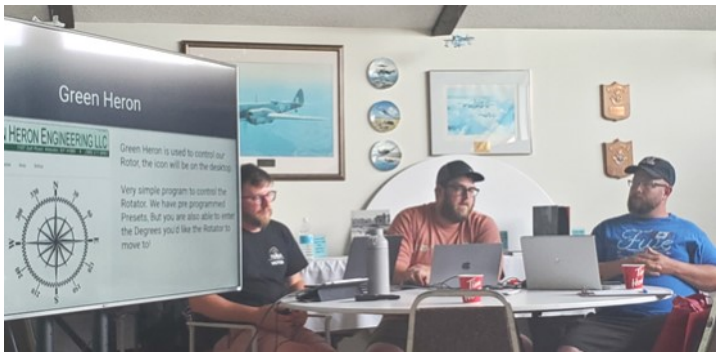
Other details include:

- Mission name: "Magellan"
- Power 27 mW
- Frequency is 14.097180 MHz +/- oscillator drift
- Channel is 536
- Gas is hydrogen
- Free lift is 6.5 grams
- Total lift is 18.67 grams
- Power source is: two powerfilm solar panels
- Tracker: Traquito daughter board soldered to a Pi-Pico.

The VE7NFR pico balloon launch on June 5.

VE7NA Club Station Update

At the June general meeting there was a presentation about NARA's VE7NA station, concentrating on how members can gain access to the station from their home computers. The talk was led by Mason VE7PMD, with Greg VE7GGH and Brandon VE7TZB. The talk included a practical demonstration of how to log into the station for remote operation. The group is now writing a guide for both the log-on process and how to operate the Flex radio. If you are interested in using the VE7NA station for remote operation, please contact Mason VE7PMD at ve7pmd@gmail.com. (Note that regulations still require Advanced certification for remote operation, though ISED (via RAC) is now reviewing this rule as requested by NARA. We will let you know if or when there is any movement on this issue.)



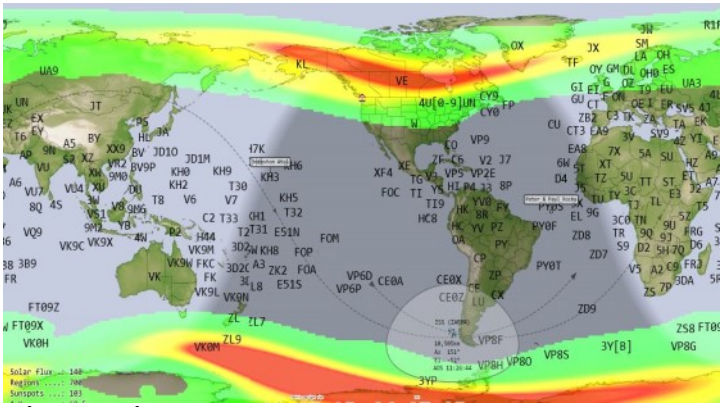
Brandon VE7TZB, Mason VE7PMD and Greg VE7GGH, at the June NARA general meeting, making the VE7NA presentation.

How is DX – David VA7DXX

There are not quite so many DXpeditions in July as there were in June, but look out for the following: Honduras (HR9), Mozambique (C94RRC), Grenada (J38DX and J93RRC), Iceland (TF) and Svalbard (JW0V).

Plus, of course, on July 26-27 is the Islands on the Air (IOTA) Contest. The IOTA designator for Vancouver Island is NA-036. There are not that many island stations active in this contest so if you get on the air, you could be popular. By the way, for your QSL card to be valid to give other amateurs an IOTA credit for Vancouver Island, you must have 'Vancouver Island' printed somewhere on your QSL card. Last year when I worked a new Scottish island the card had the name of the island handwritten on the card, but it did not count!

A powerful halo CME struck Earth on June 1. The impact sparked a severe geomagnetic storm with auroras photographed from Canada to the US Gulf coast. Below are a couple of pictures which show the effects of this CME.



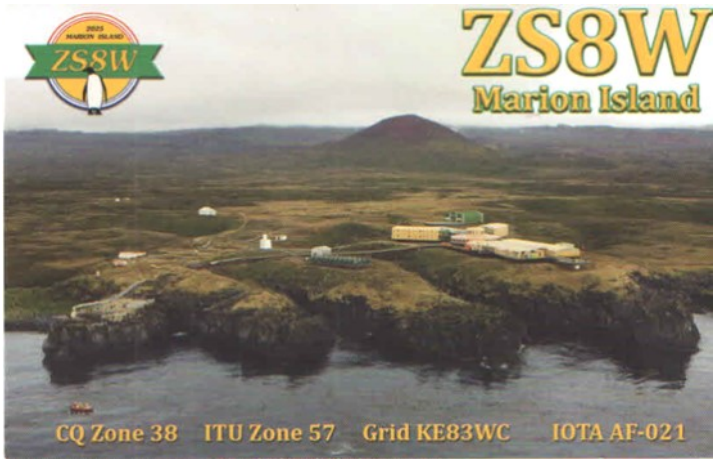
The auroral map at 10:30 pm on June 1.

The aurora, photographed by Dave VA7DN at 3 am on June 2, taken near Banff, Alberta.

NDEXA, the International DX Association, based in the United States, has made a $20,000 donation to the upcoming 2026 Bouvet Island DXpedition, which will use the callsign 3Y0K. This is the largest donation ever by INDEXA. Individuals can also donate to the planned Bouvet 2026 DXpedition via donate@3y0k.com.

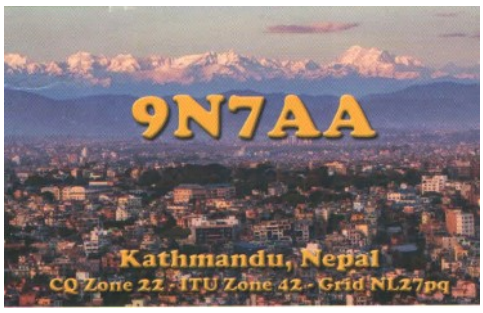
The DXCC entity of Jan Mayen Island, prefix JX, has not been on the air since 2022. Listen for JX/LB2OG, Peter, who will be there on a two-week work assignment. He says he will concentrate on the 40 and 20m bands. No dates are known yet. Jan Mayen Island is about 1,000 kilometres west of mainland Norway and some 550 kilometres north east of Iceland.

I was pleased to receive a QSL card from ZS8W confirming four new bands. Yaris YL2GM operated during April and May from rare Marion Island. I had previously only worked Marion Island on SSB in 2014.



Yaris operated from Marion Island for about 3 weeks.

I was also pleased to receive a QSL card from Robert 9N7AA from Kathmandu, Nepal. Robert is a country director and representative for the United Nations Food Programme and moves around a lot from country to country.



Rebert has now left Katmandu for another UN posting.

What is Meshtastic?

Most simply, Meshtastic is a digital-based low-power 'mesh' communications system allowing off-grid communications using low power LoRa transceivers. The system has excellent potential for emergency use.

There are a number of low-power devices available for Meshtastic communication. Several frequencies are being used but the band of interest to NARA members is 902-928 MHz. Radio amateurs share this band with ISM (Industrial, Scientific and Medical) unlicensed devices.

Darryl VE7DDU has been experimenting with several of these low-power devices which transmit around 915 MHz, inside our shared amateur band assignment. NARA members Mason VE7PMD and David VA7DXX were also quick to get going on the 915 MHz frequency. All three - Darryl, Mason, and David - have now set up low-power nodes at their homes and can send each other short text messages. David reports seeing over 40 amateurs in a week of monitoring, which includes eight amateurs in Washington State. Being a mesh system each node relays messages to find a path between any two stations.

While messages at present are essentially the same as cellular text messages, of special interest is the possibility of using this mesh system for tracking in association with APRS.

This is one of the low power devices which can be used as a node. This is the RAK 4630 module.

Not too many amateurs have equipment for the amateur band which runs from 902 to 928 MHz.

Because the band is shared with ISM users, points to consider about band width are these:

Licensed Radio Amateurs

- 902 – 927.25 MHz the power limit is 30 Watts ERP
- 927.5 – 928 MHz the power limit is 300 Watts ERP

ISM Users (Unlicensed use)

- 902 – 928 MHz the power limit is 1 Watt ERP

The ERP (Effective Radiated Power) is determined by the power output of your transmitter and the gain of your antenna in dBd (antenna gain over a dipole).

While these low-power devices used for ISM purposes do not require a licence, there are numerous amateurs using these devices to communicate using their callsigns as an identifier. Distances exceeding 100-plus kilometres have been achieved on the 915 MHz mesh system. Each node in the system will retransmit what it hears and being a 'mesh' system – as the name implies – the nodes will talk to each other and relay messages across the network.

While at present this mesh system appears to be confined to short text transmissions, there is the possibility of digital voice. The prospect of using this system in emergency situations is excellent because it requires so little power, is highly portable, and is easy to set up. Vertical polarization is being used which gives omnidirectional coverage.

There is a lot more to learn about these low-power devices and how to use them in the 902 – 928 MHz allocation. NARA member Darryl VE7DDU is leading the way with this intriguing project.

MAD (Days)

MAD stands for Microwave Activity Days and are for narrow band microwave activity on 10 GHz or above.

These MAD (Days) will take place on the first Sunday of each month. A chance for all 10 GHz narrow band enthusiasts (SSB and CW) to coordinate their activities. The MAD coordinator is Dino VE7NX. If you are planning microwave activity on a MAD (Day) please coordinate with VE7NX via the VE7SRV website.

MIVA Bike Race

Sunday, June 15, saw good weather for the MIVA bike race on the lower slopes of Mount Benson. Temperatures reached around 21C, not too hot and not too cold for either radio operators or riders. There were three classes of riders, Beginners, Intermediate and Expert. The Expert riders covered a 95-kilometre course, all on unpaved roads.

To those NARA members who did not volunteer for this event, you missed an interesting day. NARA members were joined by several other radio amateurs, making a total of 21 volunteers. NARA set up a directed net on the VA7ITS repeater (444.725) on Mount Benson, which was removed from the Island Trunk System for the duration of the event. In addition, most NARA members used APRS to provide their locations to net control. The new APRS digipeater on Mount Benson provided excellent APRS coverage.

Four NARA members, Devan VE7LSE, David VA7DXX, Greg VE7GGH, and Burnie VE7IAD also took 80m SSB equipment as backup communication. David used a short mobile base loaded six-foot whip mounted on his truck, Burnie a portable 16-foot base loaded vertical, and Devan and Greg using low 80m dipoles. The 80m band worked well around Mount Benson and all four stations could communicate well.

The main voice net on the VA7ITS repeater provided very good coverage around the course with most stations able to communicate using handheld radios. The organizer of the event was provided with a radio operator, a decision made by NARA planners right from the first race in 2022. This year the operator for the event organizer was Brandon VE7TZB, using the tactical callsign 'Organizer.' As in past years, having access to the event organizer paid dividends.

This year the ability to have immediate access to the event organizer paid off for safety reasons because one rider, in his 60s, was injured when he crashed at one of the sharp bends. NARA's prime role in this race was to report any incidents to net control.

The injured rider was reported to net control by radio one hour and eight minutes after the start of the race, at 10:38 hours. A private ambulance located at the

The morning briefing before the race, provided by the organizer, Jon (far left). This involved NARA, the race marshals, timing and the ambulance crews. Another briefing was given just before the start of the race to the riders.

Over 100 riders gathering at the start of the race.

race aid station, co-located with net control, was sent to attend the injured rider. Net control, Mason VE7PMD, decided to go with the ambulance to provide voice communication, handing net control to Dekaiah VA7DHR. When the ambulance team arrived at the injured rider it was determined that he had cracked some ribs and he was transported to the north side of the race course. David VA7DXX and Rosemary G0NDB at the start/finish race location had met up with the injured rider's son, and then directed him to meet up with his father at the north end of the course. David maintained contact with the son via cellular text to make sure that the rendezvous worked correctly. The rider and son met up successfully with Mason VE7PMD and the ambulance crew, and the rider's son then took the injured man to hospital. All the radio communication by the NARA volunteers worked well with the race organizer also making his way to the location of the downed rider.

NARA planners had decided in advance of the bike race that in part because members were operating in the back country, mainly without cellular communications, that regular 30-minute radio checks were essential for the safety of the radio volunteers. Such 30-minute checks are also mandated under radio regulations. When Mason passed net control to Dekaiah VA7DHR, the 30-minute checks continued as did the routine bike race traffic. Dekaiah did a really good job of maintaining the net and is thanked for his support.

At the very end of the race, just before the start/finish operators were about to depart, they received a visit from the injured rider's son who tapped on the window of VA7DXX/G0NDB's truck. He had previously texted a 'thank you very very much' to the radio volunteers and had returned to again express his thanks. With him, lo and behold, was his father the injured rider, discharged from hospital and covered in bandages but standing, laughing, and very grateful for the help provided by the radio volunteers. A fitting end to a long day of volunteering to provide race coordination and community safety communications.

As always, ways to improve future performance will be discussed. NARA thanks all those who contributed to a successful event including organizers Mason VE7PMD, David VA7DXX, and Devan VE7LSE; plus volunteers: Rosemary G0NDB, Brandon VE7TZB, Greg VE7GGH, Paul VE7PDQ, Randy VE7FAA & Linda, Dave VE7TWO, Marilyn VA7VAX, Jack VE7GDE, Kevin VE7KGV, Burnie VE7IAD, Gerry VE7BGP, Chris VE7TOP, Dekaiah VA7DHR, Derek VE7VPG, Tom VE7TOM, Janine VE7NEE, and Ron VE7RQX.

NARA's NVIS Propagation Tests

The report on this event has been held over until the August issue of the *NARA Newsletter.*

NARA Basic Exams in June

Seven candidates sat the Basic ISED exam on June 14. The exam was invigilated by David VA7DXX (ISED examiner) and Mike VA7WPM, both members of the NARA Training Group. Devan VE7LSE and Katherine VA7HN are the other two members of the NARA Training group, who teach one of the 10 training courses.

Three candidates from the NARA online course passed the exam, two with Honors. Also, NARA is delighted to report that one of the cadets who took the exam passed while another cadet scored in the mid sixties. The cadets will have another opportunity to take the Basic exam during July.

The Satellite Downlink
Bruce VE7PTN

I have been in Germany for most of June and also made a 12-day bus tour through Denmark, Finland, Norway and Sweden. As I have mentioned in previous newsletters, I brought along some FM satellite gear. My ultra-portable setup has worked quite well. So far I have 59 QSOs in my log. I will be in Germany for a few more days and hope to work a few more passes. As I was told to expect, the FM satellite passes can be very busy in Europe, making it challenging to be heard at times. It is especially fun to hear so many different accents, languages and country prefixes, compared to the passes I work from Canada. The operators here have been very friendly and welcoming. I will prepare a full report for the August newsletter.

Bruce VE7PTN, with assistance from his wife Andrea, working Peter 2M0SQL in Scotland from the North Cape in Norway, the most northern point in Europe at more than 71°N.

The volunteer group of NARA members producing this newsletter would like to thank all those that provided material for this month's issue.

The deadline for the August 2025 issue of the NARA Newsletter is noon on Monday July 28 with an intended publication date of July 31.

News items, comments or articles for publication should be mailed to:

news@ve7na.ca