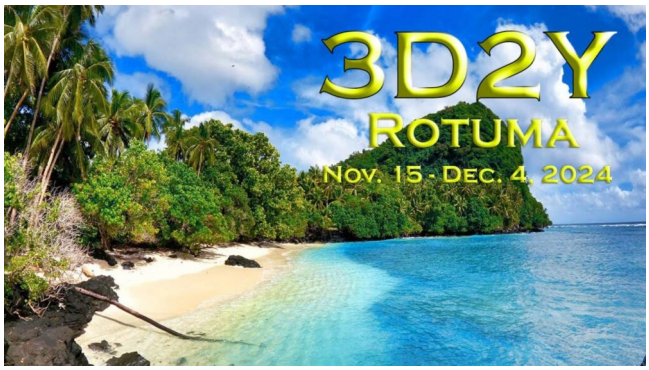
SQUELCH TALES

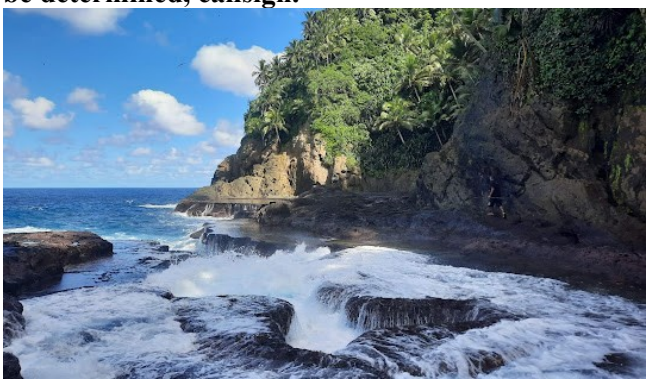
Newsletter from the Merrymeeting Amateur Radio Association

for October 2024



PIDXG Announcement

The Pacific Islands DXpedition Group (PIDXG) is pleased to announce that Gregg, W6IZT; Dean, W2FQ; Nathan, K4NHW; Jamie, MØSDV, Connor, KD9LSV and Lukas, LY7J will operate from Rotuma, Fiji as 3D2Y from November 15 to December 4, 2024. In addition, they will be taking part in the CQWW CW Contest using another, to be determined, callsign.



The 6 member team will operate locally with three 500w stations on 6m-160m. Additionally, the DXpedition will include two NexGenRiB remote systems.

One of the primary goals of this DXpedition is to "Enable DXpeditioning for the Next Generation of Amateur Radio Operators." Having young operators like 23-year old Jamie, 23-year old Connor, and 22-year old Lukas, participate on this DXpedition team goes a long way in fulfilling this mission. Moreover, the DXpedition organizers and Youth on the Air (YOTA) have entered into a unique partnership with this DXpedition by actually applying YOTA's goal of building skills, fostering lasting friendships and mentoring younger operators. To this end, the NexGenRiB remotes will be operated by a team of young amateur radio operators who will get to experience the excitement that comes with being part of this DXpedition and what goes into making this type of activity a success.

We are also fortunate to have 19-year old YOTA member Kees (pronounced Case), WØAAE, play an important role in the 3D2Y DXpedition. He has volunteered to coordinate and schedule the YOTA operation of the remote stations.

NOTE TO MARA MEMBERS

Submitted by Shauna Buckmore, K1ALZ

I wanted to follow up with Association members that were unable to make it to the September meeting and those that were in attendance but did not come up with any nominations before leaving. Our voting for Executive Board slots will take place at the October meeting. For those at the meeting that have already given their nominations, please disregard this posting unless you would like to make changes. We have 4 slots for our

Executive Board for those that are up at the end of this year.

- Robert Buckmore/W1TON/Current President
- Shauna Buckmore/K1ALZ/Director
- Mel Conners/KC1MPV/Director
- Don Wakeman/KA1WAL/Secretary

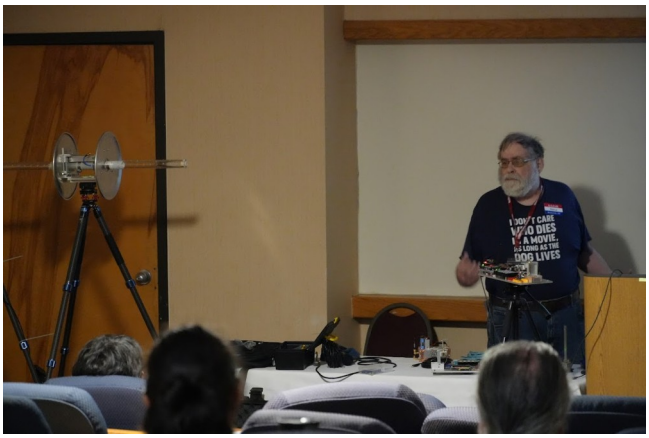
Out of the 4 listed above, Mel and Don have stated they are stepping down at the end of the year. Shauna and Robert both stated during the meeting that they have no issues being nominated again.

If there is anyone you would like to nominate, please let me know by Monday. We hope you have a great weekend. If you have any questions please reach out.

73,

Shauna/K1ALZ,

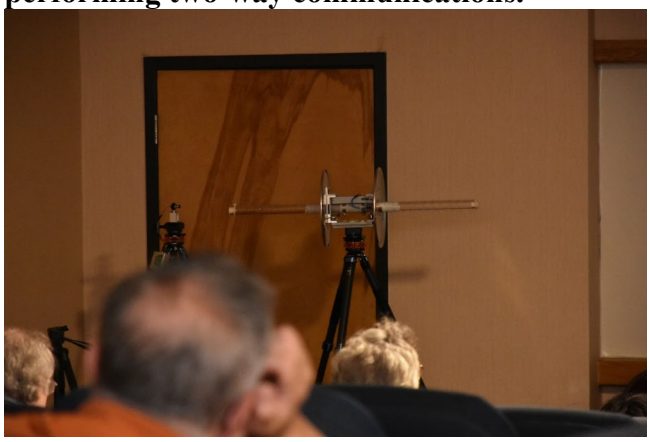
Doctor Steve does 2.4GHz talk at HamXposition



The MARA's own DR Steve Kercel, AA4AK did a three part seminar on his past year 2.4 GHz microwave project and it was well received at this years HamXposition.

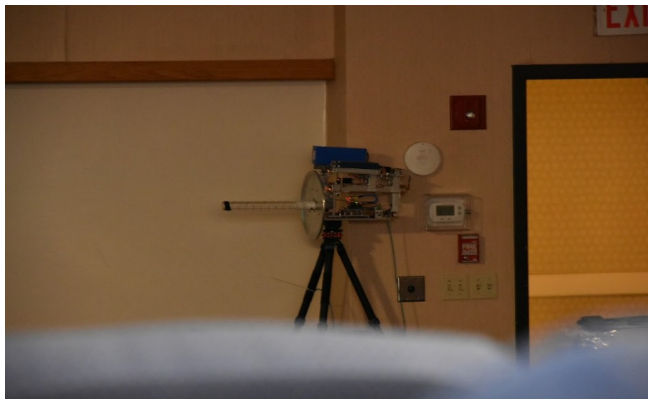
<u>The first part of his presentation was, The Quirks of Arduino-based 2.4 GHz Operating:</u>

Using an NRF24L01 transceiver with a microcontroller is an inexpensive way for hams to get on the 13cm band. The transceiver can be programmed for ham frequencies and operated under ham (instead of ISM) regulations. The catch is that it is fairly tricky to get the controller to communicate with the NRF module and to get two transceivers to communicate with each other without excessively many time-outs. This session explored the hardware and software issues and the practical solutions to them. It Included a live demonstration of two transceivers performing two-way communications.



<u>The second segment was titled, Helical Antennas and Circular Polarization</u>

A straightforward way (i.e., no drama with phasing lines) to send or receive circularly polarized signals is by using a simple helical antenna. At 2.4 GHz, it is easy to construct helical antennas with his table-top dimensions. This session looked at the design, construction, and measured performance of several homebrew 2.4 GHz helical antennas. It demonstrated the effects of using properly matched polarization modes, finding the effect of using opposite polarizations for the receiver and transmitter helices, and the effect of using a linearly polarized antenna on one end and a helix on the other end.



The third segment was a talk on Receiving Weak Signals at 2.4 GHz

This session considered the issue of reliably detecting 2.4 GHz signals over a dynamic range of 70 dB. Considerations include the minimum discernible signal, noise versus bandwidth, ambient noise, cascading low-noise amplifiers, logarithmic detection, using 16-bit analog-to-digital conversion with differential voltage measurement with an Arduino, preventing RF leakage from a 2.4 GHz generator, and the practicalities of using splitter-combiners. It included a live demonstration of recording of a time-series of voltages from a weak 2.4GHz signal. Steve said, "There was No guarantees of success on this one! The thing did work at home."
Maybe we can get Steve to do a show and tell on his 2.4 GHz experiments at an upcoming MARA monthly meeting.

Thanks goes to Larry banks, W1DYJ for providing the above photos.

QCWA Pine Tree Chapter Notes

Report from Bruce Randall, W1ZE (134 Sec./Tres.)

In September the Sunday afternoon "Pine Cone Net" (PCN) started up again for the 2024/25 season. First two sessions were a bit disappointing due the very poor band conditions on 75 meters. High band noise and poor propagation at 2:00 in the afternoon made communications difficult at best. We are in hopes that after the time change in November and the sun is lower in the sky, band conditions will Improve.

Chapter 134 received a thank you letter from QCWA headquarters thanking the chapter membership for their generous contribution to the Associations scholarship fund.

Free 100-foot Rhone tower, antenna & coax

Yes, free if you take it down. The tower is offered by Mark Potter, W1AUX in Newcastle. It was used for the 224.32 MHz W1AUX/R repeater and also a Marine channel system. If you are interested you can contact W1AUX or K1AUX at:

deb@attorney-potter.com.