The Repeater

K7MFR Amateur Radio Club — Rogue Valley — Medford, Oregon — Since 1936

Volume 2020, Issue 2   **February 2020**

Club Notes

The club had a board meeting on Tuesday, January 7th to work out a couple corporate issues, and then to sketch out a list of programs and presenters for 2020.

The list is on the programs page in this issue, and will change (as travel, schedule, or other conflicts arise). One or two of the programs will undoubtedly not 'make' so the club is looking for additional presentation ideas and presenters. If you have an idea for a program, or would like to present, please contact the club newsletter editor, Tom, N5EG (contact info in the masthead above).

The club has room for mini-programs during each meeting (a 15 minute quick update, how-to discussion, or other). This is a great

The Repeater is the official newsletter of the Rogue Valley Amateur Radio Club, Inc. It is published 10 times a year—once per month excluding July and August.

Secretary's Report

2020-01-02 RVARC Meeting Minutes

7:00 pm Vice-president Scott Cummings, NA7OM, called the meeting to order and welcomed everyone. Attendance was about 20 persons.

Treasurer's report: Mike, WB6FFC, reported bank balance of $4768.19 in checking, along with $150 of petty cash mostly from new club dues payments.

Scott instructed the Secretary & Treasurer to sort out the IRS Form 990 situation, where the local IRS office seems to have misplaced the form submission.

Regarding the Cascade Amateur Radio Enthusiasts (CARE) collaboration, Darrell, N7CZX, needs contacting in connection with the Dual-Membership fees and the 2019 Field Day cost share.

Club Notes

opportunity to talk about a project you have made, or even just ideas you have for a future project. Club members can help with comments, suggestions, and references to related material. There is a wealth of technical talent in the club. Suggestions and pointers to other's work could save you time or improve your ideas.

Exam Schedules

We've received the 2020 schedule for Amateur Radio exams in both Medford and Grants Pass. Look to the last page of the newsletter for dates, times, and details. Also, the club webpage has exam information for multiple clubs in Northern California and Southern Oregon, as best we can scrape for the respective club websites. This information is generally much more detailed, and much of it is apparently unavailable on the ARRL Exam finder webpage.

2020-01-07 RVARC Board Meeting Minutes

Attendance: Scott Cummings, NA7OM, Tom McDermott, N5EG, Pat Cunningham, KD7MPA, Mike Bach, WB6FFC John Armstrong, KF7UMK, Allan Taylor, K7GT.

7:00 pm called to order

Discussion about the apparent non-receipt of the 2019 IRS Form 990-N, that treasurer Mike had hand-delivered to the Medford IRS office.

It was also mentioned that there seems to be a gap in receipt of some prior year's Form 990-N's. The board will need to investigate. Pat remarked that there appears to be a difference in our non-profit corporation type between the state and federal governments. The federal type is public benefit, consistent with our federal 501(c)3 status required by our Sept. 2000 governing Document, but the

Secretary's Report

Scott mentioned that there is a world-wide DX contest in March, and he plans to be working it from the Philippines.

There is a general plea for more participation in Governance and Presentations. All are encouraged to run for office, or give talks about their activities and interests.

7:21pm Break for coffee, snacks & visiting.

8pm Presentation: Using the GQRX Linux SDR display program on the Raspberry Pi 4.

John, KF7UMK, showed that it was possible to install and run the SDR software GQRX on a Raspberry Pi 4 computer. The Linux operating system on the rpi was the 2019-07-10 version of raspbian-buster, which was the most recent at the time. Once the rpi was configured for locale, timezone, etc and to boot to the desktop, installation of the SDR software and all dependencies was as simple as running one install command from a terminal window:

```
sudo apt-get install gqrx-sdr
```

Installation took up about 600Mb more space on the uSDcard, and included gnuradio libraries and various sdr hardware drivers.

Then to get an optimized data-processing configuration, run

```
volk_profile
```

from the terminal window.

Now GQRX can be found as a sub-item in the 'Internet' item-list of the main menu. It was tested with a cheap DVB-TV dongle from NooElect, and with a 2048kHz sample rate, the rpi cpu usage was around 75% on all 4 cores, with a memory usage of under 500Mbytes. The cpu temperature remained under 50C with a passive heatsink attached. The setup did not crash or complain during the demonstration.

Club Notes

State of Oregon type is mutual benefit. The practical implications of this may also need to be investigated, but for now, no tax-deduction letters will be offered for donations.

Regarding RVARC's collaboration with the CARE club, Darrell, N7CZX, needs to be contacted about dealing with their share of 2019 Field Day expenses and also accounting for the dual-membership fees between the clubs.

A point of information was that the RVARC fiscal year runs from Jun 1, through May 31, of the following year. This should be kept in mind regarding various form-filing deadlines.

Suggestions were offered for 2020 meeting program presentations, and the following list was proposed. Individual programs may need to be re-scheduled depending on circumstances.

1. February – nanoVNA by Mike and Scott Tom will also make a verbal request for programs during the February meeting– please tell us if you want to talk in the future, we can call you on the phone to discuss...
2. March – My favorite DX tools & DX clusters – Scott Cummings.
3. April – detailed N1MM+ - speaker or team needs to be recruited.
4. May - WSJT-X either Pat Cunningham or John Laybourne
5. June - SDR update. And Field Day planning.
6A. Swapmeet - date / time / place TBD. Mike may have a new parking lot available at Ave G & 11th street in White City (near Biomass).
6B. September - Smith Charts, S11/S21, etc. Tom McDermott
7. October - Antenna measuring workshop VHF/UHF / nanoVNA
    Bring your antennas.
8. November – club elections. Book review

Secretary's Report

Success! Hopefully. But, there certainly could be issues with the particular SDR hardware
you are using, for instance, the NooElect rtl2832U usb device needed to have a config file named rtlsdr.rules copied to the
/etc/udev/rules.d
folder so that type of USB dongle would be automatically recognized.

Overall, the system could be claimed to be workable. Perhaps we can try various other SDR hardware with this GQRX software, and share the results.

PS:
GQRX author Alexandru Csete has mentioned that he is writing a replacement for GQRX, so we may look to that for future progress. No date for release though. Any current serious issues with GQRX will likely not be fixed.

References:
- gqrx.dk
- groups.google.com/forum/#!forum/gqrx
- David Haworth, WA9ONY, www.youtube.com/watch?v=R5nvTrDvkdY
- www.rtl-sdr.com

8:50pm End Presentation

Mention was made that Winter Field Day is coming up, January 25&26 2020

8:55pm meeting adjourned

John, KF7UMK, Secretary

Club Notes

of N6BT array of light / antenna physics. Allan Taylor.

--- Other topics / backups ---

- Two meter SSB social event, bring latest 'toys'.
- ESP8266 – Pat Cunningham.
- Invite Jeff to present about restoring AM Broadcast transmitter.
- Scott – Contesting / operating / Dxpedition from Palau.
- Luke Bryan – repeater database / cell phone app. John Armstrong to contact and follow up.
- Skype ?
- TangerineSDR update?
- Satnogs?

Final discussion items:

E-mail to Bill Anderson declining tax letter. Refer him to JC-ARES?

Discussion of folks willing to run for president in 2021.

8:53pm Adjourned .

John, KF7UMK, Secretary.

This Month's Program

1. nanoVNA

Program: Scott cummings and Mike Bach will present on the new, very low cost (about $50) Vector Network Analyzer that recently became available. The unit will be demonstrated and compared to a (very expensive) precision VNA. The applicatons and use of the VNA, as well as how to purchase the unit will be discussed.

- **Biography**: Scott is the club Vice President and avid Dxer and contester. Mike Bach is club secretary, and has an enormous wealth of RF experience.

Planned Programs (very likely to change):

- March—My favorite DX tools & DX clusters—Presenter Scott Cummings
- April—Detailed dive into N1MM+ logger. — Presenter TBA.
- May—WSJTX update and use—Presenter Pat Cunningham or John Laybourne.
- June—SDR Update, plus Field Day plans.—Presenter TBA.
- August/September—club swapmeet. Details TBD.
- September—Smith Charts, S21, S11. How to use—Presenter Tom McDermott
- October—Antenna measuring workshop using nanoVNA. Bring your (hopefully VHF/UHF and above) antennas for measurement.—Presenter TBA.
- November—Book Review of N6BT's book on antennas. -- Presenter: Allan Taylor.
- December—club holiday party.

February 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2 • CP ERC Net	3 • CARE Net	4 • 2M SSB Net	5 • 2M SSB Net	6 • **RVARC Club Meeting** • ARES Net	7	8
9 • CP ERC Net	10 • CARE Net	11 • **CARE Meeting** • 2M SSB Net	12 • 2M SSB Net	13 • **Rogue Hack Lab** • ARES Net	14	15
16 • CP ERC Net	17 • CARE Net	18 • 2M SSB Net	19 • **JC-ARES Meeting** • 2M SSB Net	20 • ARES Net	21	22
23 • CP ERC Net	24 • CARE Net	25 • 2M SSB Net	26 • 2M SSB Net	27 • ARES Net	28	29

Events

Meetings

- **RVARC** Thursday, February 6th — 7:00 PM, Medford Police Department Community Room.
- **Rogue Hack Lab** Thursday February 13th — 6:30 PM, Medford Library.
- **CARE** Tuesday, February 11th — 6:30 PM, New Far East Restaurant, Medford.
- **JC-ARES** Wednesday, February 19th — 6:00 PM, Jackson County Search & Rescue, 620 Antelope Rd., White City

Nets

- **JC-ARES** Thursdays 7:30 PM - K7JAX Mt. Baldy Repeater 146.840 (-) [PL 123.0]
- **CARE** Mondays 7:00 PM—. KB7SKB Jacksonville Repeater 147.100 (-) [PL 136.5], open, directed net, visitors welcome
- **2 Meter SSB** Tuesdays 7:00PM and Wednesdays 10:00 AM—144.200 USB
- **Central Point Emergency Radio Communications** Sundays 8:30 PM—— KB7QMV Medford Repeater 145.410 (-) [PL none]. Move to simplex net on 147.585 MHz when finished. Directed net.
- **Siskiyou County ARC** Thursdays 7:00 PM—Net K6SIS Repeater 146.79 (-) [PL 100.0]

RVARC Membership

RVARC membership dues run from January 1 through December 31. Please bring cash or a check payable to RVARC to a club meeting, or mail (checks only) to:

RVARC Membership
c/o 1940 Stevens Rd.
Eagle Point OR 97524-6523

Regular Member: $20.00
Senior Member (62 and over): $15.00
Family Member: $20.00
Student Member: $10.00

For Sale / Wanted

WANTED:

I am looking for a working <u>Drake L4B Amplifier with power supply</u>.

(I have a set of Drake twins (T4XC / R4C) and want to complete the set.)

Thanks.

Mike Bach, WB6FFC
eaglepoint.or@juno.com
(541) 830-3346

2020 Amateur Radio Examinations

In the Rogue Valley, amateur radio exams are provided by the RVARC and the SOARC. New exam participants need to provide identification, while upgrading amateurs need to **provide a copy of their current license** as well as show identification. The exam fee for 2019 remains $15.00. All license candidates must provide a picture ID. Upgrading amateurs must also provide a photocopy of their current license to send in with their application. To search for other exam locations, see:

http://www.arrl.org/arrlvec/examsearch.phtml or our club webpage: http://w7dta.org

Medford—Phoenix, OR
Time: Saturdays, Registration 8:30 AM. Exam session at 9:00 AM. Walk-ins welcome.
Location: Fire District 5 HQ. 5811 South Pacific Highway, Phoenix, Oregon 97535
<u>**Dates 2020:**</u>   **Jan 25**   **Apr 25**   **Jul 25**   **Oct 31**
Contact: Don Bennett, Email: kg7bp@arrl.net Phone: (541) 973-3625

Grants Pass
Time: Fridays Registration 6:00 PM. Exam session at 6:30 PM. Walk-ins welcome.
Location: Fruitdale Grange. 1440 Parkdale Dr., Grants Pass OR 97527-5288
<u>**Dates 2020:**</u>   **Feb 21**   **May 15**   **Aug 21**   **Nov 20**
Contact: John Stubbe, K7VSU, email: jstubbe7@gmail.com Phone: (541) 218-2244

Roseburg, Bend, Redding, Brookings, Crescent City — Please see our club webpage, http://k7mfr.org for updates as we receive schedules for these cities.

Next Club Meeting
Thursday Feb 6, 2020, 7:00 PM

Medford Police Department Community Room
219 S. Ivy St., Medford, OR

Program: nanoVNA