



The Repeater

Next Club Meeting

Thursday Mar 5, 2020,
7:00 PM

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

Program: 1) 1917 Station
2) DX tools

Volume 2020, Issue 3

March 2020

Vacant	-	-	-	President
Scott Cummings	NA7OM		kd7ehb@yahoo.com	Vice President
Mike Bach	WB6FFC	(541) 830-3346	eaglepoint.or@juno.com	Treasurer
John Armstrong	KF7UMK	(541) 899-1917	john@kf7umk.com	Secretary
Tom McDermott	N5EG	(541) 734-4675	n5eg@tapr.org	Newsletter & Membership
Club Web Page:			http://k7mfr.org	

Club Notes

At the February RVARC meeting a call was put out for program topics and mini programs. I'm happy to say that there were multiple responses, we've added two mini programs to the agenda for the year so far (March and May). See the programs page for details.

We also received proposals for two full length programs, and will slot those in as the year unfolds. In January the board was able to assemble a complete slate of full programs for this year, but something always happens and some of those won't 'make', so having a few spares ready is good.

Mike was able to contact the CARE club and they have sent us a check to reimburse us

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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

2020-02-05 RVARC Meeting Minutes

7:00pm VP, Scott, NA7OM, called the meeting to order. There were about 26 attendees including two visitors:

- Jon Vote, N7OLL
- Tom Reed, AK6TR

Welcome!

Don Bennett, KG7BP, reported that the last license test produced three new Tech's, three new General's, and one new Extra. Treasurer Mike Bach, WB6FFC, reported bank balance of \$4808.03 plus \$85 petty cash. Tom, N5EG, said that around 21 members have renewed so far for the year 2020 (out of about 78 members at the end of last year).

Scott announced that the club got 2nd place in the Calif QSO CA County Expedition, multi-multi category, with the help of Allan, K7GT, on the key.

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Club Notes

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for funds related to dual-membership and Field Day 2019 costs. Thanks to Mike for tracking this down!

At the recent ARRL board meeting, CEO Howard Michel, WB2ITX was not re-elected. The minutes from the meeting do not discuss why that happened. Our Northwestern Division director sent an email that I interpreted as saying that the ARRL board felt a new CEO was needed that was more 'hands-on' and less 'big-picture' in nature. Retired former CFO Barry Shelly, N1VXY will temporarily fill in until a new permanent president is recruited. Due to Barry's extensive history with ARRL the board apparently felt he would quickly be able to take control.

Scott sent a link to this:

ARRL Board grants professional media award.

From the ARRL Board Meeting, January 17 – 18, the ARRL Board of Directors bestowed the 2019 Bill Leonard, W2SKE, Professional Media Award for Audio Reporting to Roman Battaglia and the associated producer and staff of Jefferson Public Radio in Oregon. Bataglia produced a feature story on amateur radio emergency services in and around the Jefferson Public Radio listening area.

Secretary's Report

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Mike said the CARE club still hadn't reimbursed RVARC for the 2019 Field Day expenses and the dual memberships. Someone will contact the CARE club about that.

The ARRL DX CW contest is coming up Feb. 15-16, 2020. Some other ARRL contest listings can be found at contests.arrl.org/calendar.php

Mary, W6ROX, has some VHS tapes of various Dxpeditions available for borrowing.

7:21pm Break for visiting and snacks.

7:53pm Presentation on the very portable, inexpensive, NanoVNA. Scott, NA7OM, and Mike, WB6FFC demonstrated the NanoVNA-F model (2.5" screen) and compared the performance in the 50-500 Mhz range to Mike's HP8714ET VNA. (There is also a NanoVNA model with a larger 4" screen available.). Tom, N5EG, designed the TAPR VNA in ~2003, so he is a good source of VNA expertise.

Scott showed us a 9 minute video, "NanoVNA for HAM Radio - Introduction" , youtube.com/watch?v=8kx9SWbEcXI , to give us the basics on this very portable VNA. There is the ability to operate (and capture data) over a USB connection using PC software like NanoVNASaver, or nanovnasharp. These were demonstrated and we got to see the calibration, and smith-chart and VSWR display capabilities.

Much additional info on existing and future versions of the NanoVNA hardware and software is available at groups.io/g/nanovna-users. We also got some help with understanding Smith charts as a way of displaying vector network analyzer frequency-sweep outputs.

8:58pm Meeting adjourned

This Month's Program

1. 1917 Ham Station

- **Program:** Mini program: Overview of an amateur radio station, circa 1917 in Lud Sibley's possession. It's, of course, a spark rig. The owner was a recipient of the Navy order requiring amateurs to take down their antennas and lock up their gear when we entered WW I. (The inheritors of the material had the letter but didn't pass it along.) The gear is a small spark coil, fixed ceramic-based spark gap, big "oscillation transformer," capacitor made up from 8 x 10 photo plates, slide tuning coil, and vintage headphones.
- **Biography:** Lud Sibley, KB2EVN is a long time club member, historian, and president of the Vacuum Tube collectors association..

2. My Favorite DX tools.

- **Program:** A collection of DXtools—clusters, propagation analysis, and other tools related to finding and working that elusive and rare DX station.
- **Biography:** Scott Cummings, NA7OM is the club vice president, DXer, and contest-er.

Planned Programs (very likely to change):

- April—Detailed dive into N1MM+ logger. — Presenter TBA.
- May
 - Mini-program Dakota Otto—how to fill-out & use a radiogram.
 - 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.

ATSC 3.0

Just when you thought it was safe to invest in that new 4k HDTV set comes word that a new incompatible standard for broadcast television is being deployed right now.

The current standard, ATSC 1.0 has been around for a bit over a decade, and supports 2k (up to 1920 x 1080i) resolution. However 4K TV sets have come down in price, and are now fairly common. ATSC 1.0 does not have a way to send (3840 x 2160p) images, so the new standard is needed.

The ATSC 1.0 standard is a digital format based on 8-VSB. Much of the rest of the world chose Coded Orthogonal FDM modulation method (COFDM) instead. 8VSB has the advantage in that it is more power efficient than COFDM, and thus able to cover greater distances from the broadcast tower at a given power output. However COFDM is much more resistant to multipath interference than 8VSB.

The ATSC 3.0 standard is based on COFDM, and increases the data rate in order to support the higher speeds needed by 4K video. ATSC 3.0 is being rolled out in 40 top markets this year, so transmission equipment is ready.

The drawback is that ATSC 3.0 is not compatible with ATSC 1.0, so legacy television sets (meaning that new 4K TV set you bought a year or two ago is now obsolete). I would anticipate that new sets will have the ability to automatically select between 1.0 and 3.0 on a channel-by-channel basis. Otherwise a new set wouldn't be able to view existing channels.

For older sets it is possible that some type of set-top converter box may become available that is able to decode ATSC 3.0 signals.

Today many TV stations do not in fact transmit full resolution 2k images, but instead subdivide the available data rate among multiple lower-format sub channels. Because ATSC

3.0 provides higher data rates theoretically stations would do the same thing, the higher bandwidth being used to provide even more low resolution subchannels than can be accommodated by ATSC 1.0.

Due to the higher signal levels needed for ATSC 3.0, there may be a reduction in range, possibly increased transmitter power, or other changes needed. The risk of course is that some folks currently successfully receiving HDTV might lose coverage with the new standard. It will be interesting to see how this issue gets addressed.

On the flip side, those having problems due to multipath might have some of those issues resolved.

On November 16, 2017 the FCC released rules for ATSC 3.0 adoption on a voluntary basis. The FCC did not adopt a tuner-mandate for the new standard (the tuner-mandate was adopted during the analog to digital transition about a decade ago). The FCC did however adopt a rule that requires those stations transmitting ATSC 3.0 signals to simulcast (two different TV channels) both 1.0 and 3.0 formats.

Tests in the top 40 markets during 2020 should hopefully answer some of the questions about coverage, performance, and compatibility.

Because the adoption is voluntary, stations in smaller markets might not be able to justify costs associated with new equipment and simulcasting, at least in the near term.

Whether folks really want 4K video (as compared to 2K) and are willing to pay for the privilege remains to be seen.

March 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 • CP ERC Net	2 • CARE Net	3 • 2M SSB Net	4 • 2M SSB Net	5 • RVARC Club Meeting • ARES Net	6	7
8 • CP ERC Net	9 • CARE Net	10 • CARE Meeting • 2M SSB Net	11 • 2M SSB Net	12 • Rogue Hack Lab • ARES Net	13	14
15 • CP ERC Net	16 • CARE Net	17 • 2M SSB Net	18 • JC-ARES Meeting • 2M SSB Net	19 • ARES Net	20	21
22 • CP ERC Net	23 • CARE Net	24 • 2M SSB Net	25 • 2M SSB Net	26 • ARES Net	27	28
29 • CP ERC Net	30 • CARE Net	31 • 2M SSB Net				

Events

Meetings

- **RVARC** Thursday, March 5th — 7:00 PM, Medford Police Department Community Room.
- **Rogue Hack Lab** Thursday March 12th — 6:30 PM, Medford Library.
- **CARE** Tuesday, March 10th — 6:30 PM, New Far East Restaurant, Medford.
- **JC-ARES** Wednesday, March 18th — 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 Drake L4B Amplifier with power supply.

(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

Dates 2020: **Jan 25** **Apr 25** **Jul 25** **Oct 31**

Contact: Don Bennett, Email: kq7bp@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

Dates 2020: **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.

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