



# The Repeater

## Next Club Meeting

Thursday February 3, 2022,  
7:00 PM

Via Zoom.  
Login sent via email or upon request.

Program: Power over Ethernet  
(PoE)

Volume 2022, Issue 2

February 2022

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President  
 Vice President  
 Treasurer  
 Secretary  
 Newsletter & Membership

## Club Notes

The February meeting will be a presentation on Power over Ethernet (PoE), how it works, and the different versions available.

PoE is seeing increasing usage beyond just powering VoIP telephones. For example, many wireless data radios use PoE to avoid the need for feedlines and their associated loss (especially important as microwave frequencies). The AREDN network radios generally use PoE to power the outside unit.

Some Ethernet switches have built-in PoE sourcing capability eliminating the need for external power injectors. Some smaller Ethernet switches can themselves be powered by PoE, making deployment of smaller switches especially convenient.

*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

2022-01-06 RVARC Meeting Minutes

7pm meeting over Zoom called to order. 15 attendees online

Treasurer's report: Bank balance is \$4638.29 after \$50 donation to the ARRL Spectrum Defense Fund, and 3 dues submissions.

Allen, K7GT, mentioned he started making some SSB phone contacts. Congrats, Allen, for stepping out of your comfort zone! Some good reminiscences on QSL cards ensued.

Scott, NA7OM, reported that, due to Federal COVID regulations, the Table Mountain Snow Park warming shelter will not be available for winter field day.

This year Winter Field Day is from 11am PST (1900UTC) Sat, Jan 29 thru 11am PST Sun, Jan 30 and Winter field day rules are

*(Continued on page 2)*

## Secretary's Report, Continued

*(Continued from page 1)*

available at: [https://www.winterfieldday.com/files/ug-d/1c7085\\_0ef813621655469ca73adfb5427d-cc35.pdf](https://www.winterfieldday.com/files/ug-d/1c7085_0ef813621655469ca73adfb5427d-cc35.pdf)

Special rules apply this year, due to covid, for club participation from several remote (or home) locations.

Scott, NA7OM, mentioned that the Del Norte club got tired of endless procedural discussions and finally gave that up.

Pat, KD7MPA, will be sending out a poll for 2022 presentation topics.

John, AC7S, mentioned there will be an ARRL RTTY Roundup this weekend (January 8-9, 2022). His new amp is working, and will be running at 200 watts on RTTY for this roundup.

Pat, KD7MPA, did a project processing the ULS database to provide a lookup service at his site: hamcall.dev

Tom, N5EG, reported delays in the receiver project due to lack of hardware to test, but he has been working on the newer local AR-EDN mesh, CPMESH, to provide a wiki, ARES info, a connectivity map, and other diagnostic info to the mesh users. For more CPMESH info, contact Arlen or Kirby at [w9pci@w9pci.com](mailto:w9pci@w9pci.com)

John, KI7ZOA, and Ryan, KD7RQ, had questions about the Anytone 578 DMR set-up.

Scott, NA7OM, and Mike, WB7FF discussed replacing AB577 antenna tube rollers with custom machined UHMW rollers made from raw stock obtained from Munnell&Sherrill.

A discussion of connector protection materials followed. Items that were mentioned included self-vulcanizing tape, high-vacuum

## Secretary's Report, Continued

grease, flooded heat-shrink tubing, and Glyptal 1201.

Luke, KJ7BKH, will give a DMR presentation at the QSO Today Virtual Ham Expo, March 12-13, 2022 (see [www.qsotodayhamexpo.com](http://www.qsotodayhamexpo.com) )

Meeting adjourned around 8:37pm

## RVARC Email List

RVARC maintains a private closed email reflector for members and friends.

An email sent to the reflector will be sent to everyone else subscribed to the list.

You can also browse past messages and create new messages from the web interface if that is more convenient.

Each month we send ZOOM coordinates for the meeting using that mail list.

Several folks have been sent invitations, but they have expired unused.

If you are not on the list, send an email to our club webmaster, Tom, N5EG (address on the front page) and he will have googlegroups send you an invitation.

## This Month's Program

### 1. Power over Ethernet (PoE)

#### Program:

Ethernet is capable of delivering increasing amounts of power over CAT5/6/7 cabling.

The original PoE standard provided a limited amount of power, typically for supplying Voice over IP telephone sets. This allowed a single Ethernet cable to provide both data and power to the telephone. These early phones used proprietary techniques to receive power. Other manufacturers (such as Ubiquity) produced Wireless data radios using a different proprietary power delivery method.

In 2003 IEEE 802.3 standardized a specific method to provide power over Ethernet to assure interoperability among compliant devices known as 802.3af. This for example allows Ethernet switch vendors to incorporate standard power sourcing directly into the switch eliminating the need for external power injectors if the devices are compliant.

Several recent enhancements to the IEEE 802.3 Ethernet specification, nicknamed PoE+ and PoE++, provide roughly double and quadruple the amount of power compared to the original PoE.

Most equipment suppliers have or are migrating their products over to the PoE standards.

802.3af	PoE	About 13 watts
802.3at	PoE+	About 30 watts
802.3bt	PoE++	About 60 watts

The presentation will discuss how PoE works, some safety mechanisms built in, and midspan and endspan power injection.

#### Biography:

Tom McDermott, N5EG is the RVARC club newsletter editor, and database administrator, as well as being the club trustee. He was a voting member of the IEEE 802.3 Ethernet working group from 2011 through 2017 working primarily on 25G, 50G, 100G, 200G, and 400G Ethernet. He also commented and voted on the PoE+ and PoE++ standards.

# February 2022

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

## Events

### Meetings

- **RVARC** via Zoom.
- **Rogue Hack Lab** via Zoom.
- **CARE** UNKNOWN status.
- **JC-ARES** UNKNOWN status.

### 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

## 2022 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 photo identification. **Applicants also need a Federal Registration Number (FRN) and email prior to taking the test.** The exam fee for 2022 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 2022:** **Suspended due to COVID-19**

**Contact:** Don Bennett, Email: [kq7bp@arrl.net](mailto:kq7bp@arrl.net) Phone: (541) 973-3625

### Grants Pass

**Time:** Fridays Registration 6:00 PM. Exam session at 6:30 PM. **NO WALK-INS** due to COVID. Please email a reservation request to John.

**Location:** Fruitdale Grange. 1440 Parkdale Dr., Grants Pass OR 97527-5288

**Dates 2022:** **Feb 18** **May 20** **Aug 19** **Nov 18**

**Contact:** John Stubbe, K7VSU, email: [jstubbe7@gmail.com](mailto: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**

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**Program: Power over Ethernet (PoE)**