

The SkyWave Vilas County Amateur Radio Club



SAE SNOWMOBILE CHALLENGE SUPPORT

Eagle River Wisconsin was once again chosen for the Society of Automotive Engineers (SAE) Clean Snowmobile Challenge. This years the event was held on February 27th through March 2, 2025.

The VCARC Eagle River repeater was used for radio communications during the SAE event.

VCARC would like to thank the following members for their participation. Those members include Kyle AB9AX, Scott W9JU, Tony KC9SZW, Jay KD9ZVK, Ray Mark KB9CBL and Bob KC9RF.

Special thanks to Peter Jensen N9KWU for organizing this year's Clean Snowmobile Challenge ham radio support!

VCARC MONDAY NIGHT 2 METER NET

The VCARC 2 Meter Net meets every Monday night starting at 7:30 PM local time. Net Control is via the W9VRC Eagle River repeater on 145.150/ PL 114.8.

VCARC MARCH MEETING

The next VCARC meeting will be held on Wednesday March 12 starting at 6:00 pm at God's Gathering Place at 1695 Hwy. 45N Eagle River, WI.

The Tech Talk this month will be a Member Roundtable discussing recent projects and operating. Please join us for this informative meeting.

VCARC FEBRUARY MEETING HIGHLIGHTS

February 12, 2025, 6:00 PM – Meeting called to order by Kyle AB9AX, all rose for the Pledge of Allegiance.

Treasurers Report

Beginning Balance January	\$5945.41
Expenses:	0.00
Membership Dues	260.00
Donations	160.00
Ending Balance for January	\$6365.41

The January Treasurers Report and Meeting Minutes were moved, seconded, and accepted by all.



Old Business

The cost for the Land of Lakes repeater battery and power gate standby power system will be approximately \$400. The installation will take place when the weather gets warmer.

Winter Field Day participants included VCARC Members Ray KB9CBL, Jeff N9NIC, Dennis KC9SKA, K.C. KG9JP, and Marie KD9VUB.

New Business

The VCARC received an anonymous donation check for \$1000.00. RayBob will be verifying the donation.

VCARC is looking for volunteers for the Society of Automotive Engineers (SAE) Clean Snowmobile Challenge.

The Wisconsin QSO Party will be held on March 9, 2025. Members are encouraged to participate.

Announcements

VCARC 2025 Membership Renewals are now due. The cost is \$20 per Individual Membership and \$25 for a Family Membership. Renewals can be sent to the VCARC P.O. Box 1141, Eagle River 54521 or submitted at the meeting.

Tech Talk

A variety of technical subjects were discussed by the membership.

The motion to adjourn was made at 6:50 PM

March 2025

ARRL NEWS

ARRL's "On the Air Live" Continues to Grow

ARRL is equipping the next generation of radio amateurs with the knowledge to get active on the air. "On the Air Live" is a monthly interactive webinar series that does deep-dives into topics aimed at the new and intermediate ham. It complements material found in On the Air magazine. February's event had nearly 130 people in attendance.

The events are hosted by ARRL Education Specialist Wayne Greene, KB4SDF. "OTA Live" has seen rapid growth and good engagement in the two months it has been going. "The most recent 'On the Air Live' covered programming a handheld radio, and we got a lot of good questions," said Greene. "Being an interactive webinar, we have the opportunity to spend time discussing things on which members need more information."

"On the Air Live" is accessed through the ARRL Learning Center at learn.arrl.org. It is a benefit of ARRL membership, and members must be logged into the web site to access it for live or archived sessions.

The next "On the Air Live" is Tuesday, March 25, 2025, at 8:00 PM Eastern. It will focus on advanced functions of handheld radios, including getting them on digital modes. "We're going to take the handheld radio and expand its capability by attaching it to a soundcard," said Greene. Those who attend will learn how to use APRS and VARA (including Winlink).

"We had a great time with members on the last one, and I hope more people will join us in March," said Greene.

Get On the Air for the ARRL International DX Contest

We're seeing peak conditions from Solar Cycle 25 just in time for the ARRL International DX SSB Contest. It gets underway this weekend at 0000 UTC on Saturday, March 1, and concludes at 2359 UTC on Sunday, March 2.

ARRL Contest Program Manager Paul Bourque, N1SFE, is gearing up to operate as part of a multi-operator, single-transmitter station for the event. He is eager to get started.

"This is a great contest to work some new DX and to add to your DXCC totals, as DX stations will be pointing their antennas towards the US and Canada this weekend," he said.

The contest is an exercise in endurance, but also a great primer on DX propagation.

Earlier in the month, the CW portion of the contest garnered at least 4,830 log submissions.

The nature of the contest means the entire world is trying to work North America. "Even modest stations can experience the thrill of working some new countries," said Bourque. "Just get on the air!"

If a full weekend of contesting sounds too overwhelming, ARRL encourages radio amateurs to set a small goal – 100 contacts to start. Get into the groove of it and start stretching the goal. You will wind up at 100 multipliers instead. Since each of those multipliers is a DX entity, those 100, if confirmed with a QSL, could equip the operator with the necessary contacts to apply for an ARRL DXCC® Award.

With band conditions expected to be good, and activity expected to reflect that excitement, Bourque hopes to receive even more log submissions. "The more, the merrier. We really hope hams will take advantage of this prime operating opportunity."

ARRL CONTESTS AND SPECIAL EVENTS

The following are upcoming ARRL Contests and Special Events.

International DX- Phone

Contest Objective: To encourage W/VE stations to expand knowledge of DX propagation on the HF and MF bands, improve operating skills, and improve station capability by creating a competition in which DX stations may only contact W/VE stations. This contest period is for Phone-only. Use only the 160, 80, 40, 20, 15, and 10 meter bands.

W/VE amateurs: Work as many DX stations in as many DXCC entities as possible.

Phone: First full weekend in March (March 1-2, 2025).

Contest Period: Begins 0000 UTC Saturday and runs through 2359 UTC Sunday.

Wisconsin QSO Party 2025

Contest Objective: Stations anywhere contact Wisconsin stations for points. Wisconsin stations contact stations anywhere for points.

Contest Period: Begins 1800 UTC Sunday March 9 and runs through 0100 UTC Monday March 10, 2025.

TECH TALK

The Ever-Evolving Energy Storage (Part 2)

The following is a continuation of an excellent technical presentation on LiFePO4 battery technology by Mike K9BBN during the January VCARC meeting.

Page 2 is for Configuring Capacity's

- Battery Capacity. (314 Amp Hours for these cells)
- Cycle Capacity: 314 Amp Hours if you want to fully use the total capacity of your battery. This can be less if you want to extend your battery life.
- Full Cell Voltage: 3.65vdc is the standard for a charge voltage.
- Cell Minium Voltage: 2.50vdc is the standard for a discharge voltage.



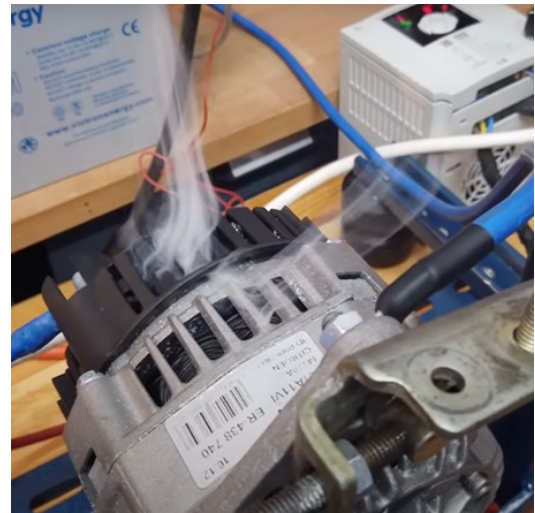
Careful...Car Alternators Charging Lithium Batteries

Due to LiFePO4's lower resistance than a lead acid battery, the LiFePO4 draws high current even at low engine idle speeds and can exceed the maximum rated amperage of the Alternator causing it to overheat.

Also, when a LiFePO4 battery is fully charged, it turns off and disconnects which can damage the alternator's internal circuitry.

If you use a "regulated," current limiting or DC to DC converter, you should have no issues. A DC-DC converter in a LiFePO4 battery system functions by taking the raw DC voltage from the battery source which can fluctuate depending on usage. It converts it into a stable, regulated voltage source suitable for powering connected devices.

The Balmar Company makes an alternator that regulates the current by using temperature sensors within the housing. The device can be expensive.



Smoke being let out of an alternator

Battery Finder is a daily updated spreadsheet of the current costs, volts, capacity, price and link on Amazon see a "snapshot" below.

Brand	Voltage	Capacity	Price	Amazon Link
YoungTree	12.0V	100Ah	\$124.99	YoungTree 12V 100Ah LiFePO4 Lithium Battery with Low Temperature Protection, Deep Cycle Group 24 LIF
SUDOO	12.0V	100Ah	\$125.99	12.8V 100Ah LiFePO4 Battery, 100A BMS Rechargeable Lithium Battery with Up to 4000-15000 Cycles, 1.2
POTEX	12.0V	100Ah	\$128.88	POTEX 12V 100Ah Bluetooth LiFePO4 Lithium Battery/Built-in Smart BMS/Deep Cycle Battery Perfect for
Qinghuan	12.0V	100Ah	\$128.88	12V 100Ah Mini LiFePO4 Battery, 1.28kWh Rechargeable Lithium Iron Phosphate Battery for Camping, RV
Jakobus	12.0V	100Ah	\$129.00	Jakobus Premium 12V 100Ah Lithium LiFePO4 Battery 10 Year Lifespan, 8000-15000 Deep Cycles, Fast CH
YoungTree	12.0V	100Ah	\$129.99	YoungTree 12V 100Ah LiFePO4 Battery, Low Temperature Rechargeable Deep Cycle Lithium Battery with 10
JTA	12.0V	100Ah	\$129.99	JTA 12V 100Ah Lithium Battery 20000 Deep Cycle Battery 12.8V 100Ah Repeak battery 12800Wh Energy St

For additional information on LiFePO4 battery technology see the links below:

<https://batteryfinder.net/index.php?12v=1&ah=1>

<https://jag35.com>

<https://www.18650batterystore.com>

<https://www.sunfunkits.com>

<https://www.siekonenergy.com>

Thanks again Mike K9BBN for an excellent presentation and hands-on assembly experience of a LiFePO4 battery pack.

Editor's Note: Batteries are the most common way of powering equipment not connected to the electric grid--making this topic of vital interest to every ham. The care and connection of batteries are popular topics, not just among hams, but everyone.

Vilas County Amateur Radio Club

An ARRL Affiliated Organization

VCARC OFFICERS and COMMITTEES

President	Kyle Ruesch, AB9AX
Vice President	Bob Barnum, KC9RF
Secretary	Marie Beckholt, KD9VUB
Treasurer	RayBob Heuer, KD9DDE
Board Member	Kirby Giampa W8DCD
Newsletter	Bob Barnum, KC9RF, Ray Protich WB9OCO



CONTACT INFORMATION

Mailing Address:
W9VRC
Vilas County Amateur Radio Club
P.O. Box 1141
Eagle River, WI 54521

Website: <https://vcarc.net/>

MONTHLY MEETINGS

VCARC Meetings are held the 2nd Wednesday of each month. The meetings can be attended in person or via Zoom. The Zoom meeting information is:

Log in to Zoom at www.zoom.us

Join the meeting with meeting # 881 9483 6234.

Password is 328355

Quick Link <https://us02web.zoom.us/j/88194836234>

MONDAY NIGHT 2 METER NET INFORMATION

The VCARC operates a weekly Net every Monday night starting at 7:30 PM local time. Net Control is via the VCARC Eagle River repeater on 145.150/ PL 114.8.

VCARC REPEATER INFORMATION

VCARC operates amateur radio repeaters in Eagle River and Land O' Lakes Wisconsin.

Eagle River Repeater
145.150 PL 114.8
Echolink Node 691369

Land O' Lakes Repeater
145.390 PL 114.8
Wires-X Room 80110 Linked to Yooper net Room
65384

THE SKYWAVE NEWSLETTER

The SkyWave is the Official publication of the Vilas County Amateur Radio Club. If you wish contribute articles or other newsworthy items regarding Amateur Radio for publication, please contact Bob KC9RF at rwb1636@gmail.com or Ray WB9OCO at WB9OCO@gmail.com.