



Waved Newsletter

Inland Empire **VHF** Radio Amateurs, Inc.

Club Officers:

President:

Dave Carleton, K7DSR

Vice President:

Jerry Bosch, KG7RRG

Secretary:

Rick Nungester, WA6NDR

Treasurer:

Jake McCarty, N7GEG

Director (2019):

Karl Shoemaker, AK2O

Director (2020):

Harold Hepner, AD7QJ

Director (2021):

Steve Watilo, K6SWW

Trustee:

Harold Hepner, AD7QJ

Technician:

Karl Shoemaker, AK2O

Webmaster:

Harold Hepner, AD7QJ

Net Manager:

Bob Peterson, KE7RAP

An **ARRL** affiliated club

Monthly Club Meetings

are held the 2nd Thursday of the month at 6:30 p.m. at Spokane Community College, the Lair, Building 6, Room 004, which is downstairs, An elevator is available.

Club Net, Wednesday

at 7:30 p.m., on the 146.880 MHz repeater, minus, .6 offset, 123.0 Hz tone. Please join us.

Spokane Hamfest 2019 Soared



Photo by Rick Nungester

Before Spokane Hamfest 2019, President Dave Carleton, K7DSR, said, "Hamfest should be a lot of fun this year." And indeed it was so for the 440 who purchased admission tickets.

Thanks go out to all the folks who helped in planning and carrying the event: President Dave Carleton K7DSR, Vice President Jerry Bosch KG7RRG, Treasurer Jake McCarty N7GEG, Jack Tiley AD7FO, Director Harold Hepner AD7QJ, Jim N7WRR and Betsy N7WRQ Ashleman of KBARA, Tom Storer KI6DER of Tristate, Randall Ramsey KI7BSW of PHARC and Randy Wilkinson W4LKS of Washington Digital Radio Enthusiasts who oversaw the fox hunts.

Thanks also go out to Bradford Zimmerman KJ7BGK and Damian Impett WA7DGI for manning the VHF Club table including signing up new members and renewing current members.

Also thanks to all the speakers who covered topics from satellite communications to antenna analyzers.



Spokane County ARES-RACES-ACS EC Asa Jay Laughton W7TSC talks with Neil Powell K2AMF and Dave Carleton K7DSR

**Next VHF Club Meeting
November 14 at SCC -- Del Morissette
to talk about AREDN**

**All Club, No-host Luncheon --
December 21**

AREDN - Amateur Radio Emergency Data Network

At an initial ARES-RACES meeting regarding AREDN, Del Morissette WA7AQH characterized AREDN as a high speed ham radio RF-based emergency data network. The system can also aid in service-oriented communications.

For a long time, amateur radio operators and their served agencies have used voice transmissions during emergencies or at events. In this process, ARRL Radiograms or paper ICS forms would be filled out and then sent by the radio operator by voice to another operator who would in turn write it on a form at the receiving end of the transmission. Then the form would be delivered to the intended recipient who would read it and sign it. After that, the process would be reversed to acknowledge receipt of the message. This practice has handled and continues to handle many communication needs during emergencies and events.

But today digital messaging has exploded through such digital technologies as packet, HF Pactor,

and Fldigi among others. So digital messaging voice capabilities both within ham radio and the emergency management community have grown exponentially. In emergency communications, along with the requirements for written communication, has come the need for everything to be documented. But today, off-the-shelf low cost, high speed RF data equipment that will operate effectively in the ham bands is readily available and can help with these issues. The AREDN network can transmit data at nearly the same speed as the Internet.

AREDN, like Winlink, has a stable founding team who put the AREDN firmware together and so the networking system offers a good support model. AREDN repurposes hardware from the LAN domain through its firmware to create an RF mesh network that operates in the ham bands on Part 97 frequencies.

The focus of AREDN is emergency communication serving local and regional emergency commu-

nication needs. The system makes it easy for ham operators to set up a mesh node. The mesh network configures automatically so you do not need to be an expert. AREDN uses low-cost, dependable commercial equipment. The project supports those setting up EmComm networks. The project continually refines the software to make the network easier to put in place and also continues to make it more dependable and easier to maintain.

AREDN mesh networks open the door for radio operators to the use of such typical Internet-type applications as email, chat, phone service, and video conferencing among others. Working from their computers linked to the radio/antenna or radio linked to antenna, operators mesh with other nodes in the network.

To learn more about AREDN, join us for Del Morissette's presentation about the network at the VHF Club's November 14 meeting.

VHF Club Recent Meetings

In July we held our VHF Club picnic and barbecue at Mission Park in Spokane Valley. We took a summer recess in August and in September Dave Carleton and Dan Croskrey talked about equipping for solar and the need to figure out how much energy your equipment uses to appropriately gauge your battery and solar panel backup.

ARES-RACES

As an ARRL affiliated club, the VHF Club has an interest in the ARRL initiated Amateur Radio Emergency Service (ARES) which can be

called on by various government and non-government agencies to provide communication support during natural and man-made disasters. The local ARES group in Spokane is often called to assist in local events such as Bloomsday, various fun runs and the Spokane Lilac Torchlight Parade.

This Spokane County emergency communications group, meets the third Thursday of the month at 7 p.m. at the Department of Emergency Management (DEM) Building on the north side of the Spokane County campus at 1121 W. Gardner Ave., Spokane, WA 99260 unless otherwise directed. For more information

or to learn more about the extended training opportunities offered on the second Saturday of each month and other exercises throughout the year to develop and practice emergency communications skills. see <https://www.spokares.org>.

VHF Club Regularly Meets

The VHF Club meets monthly except in July, August and December on the **second Thursday** of each month at **6:30 PM** – in Room 004 in the basement of the SCC student lounge, the Lair (Building 6) on the Spokane Community College campus. The club holds a BBQ in July.

Calendar 2019 - 2020

November

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

January

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Activities

November 14, January 9 — VHF Club Meeting at 6:30 p.m. and there may be a **board meeting** at 5:30 p.m. at SCC, LAIR, Room 004 in the basement. Check the announcements.

December 6 and 7 — Skywarn Recognition Day will begin setting up in Airway Heights shortly after noon on Friday, operate afternoon through evening, and continue from early Saturday a.m. to 2 p.m. Then the operation will be broken down. Contact Robert Wiese at total-ham_5@msn.com so he can add you to the list of attendees. Dress appropriately for the weather.

December 12 — There will be **no VHF Club Meeting in December.**

November 21, January 16 — ARES - ACS General Training Meetings from 7 p.m. to 9 p.m. at the DEM Building, 1121 W. Gardner Ave., Spokane, WA 99260. There will be **no** general meeting in December.

November 9, January 11 — ARES - ACS 2nd Saturdays from 9 a.m. to noon at the DEM Building, 1121 W.

Gardner Ave., Spokane, WA 99260. The Nov. 9 session will cover Winlink and TNC issues. After the 2nd Saturday Workshop, Mel and Del are doing a "New to HF" workshop next Saturday afternoon, Nov. 9.

December 21 — KBARA/VHF Club Holiday No-host Luncheon at 1 p.m.; Longhorn Barbecue Restaurant, 2315 N. Argonne Rd. (corner of Argonne & Montgomery) in the Spokane Valley.

January 25 and 26 — Winter Field Day watch for information about this event from ARES.

IEVHF/ARES-RACES Sponsored Classes, Tests

✓ **A Technician class** and **testing** session will be held by Jack Tiley, AD7FO, an ARRL TC, TS, and VE instructor, as follows:

Date:

- November 16th;

Place: The class will be held at the DEM Building, 1121 W. Gardner Ave., Spokane WA 99260.

Time: 8:00 a.m. to 5:00 p.m. The door may be locked during the class, so please be there by 8:00 a.m. There will be a 45 minute lunch break.

Testing: Testing will start at

the end of the class (approximately 3:00 p.m.)

Cost: No cost for the class, but there is a cost of \$15 if you wish to take the exam.

Registration: Registration is required! For registration info, send an e-mail to ad7fo@arrrl.net with your name, e-mail address and phone number.

For more information about Jack's classes, visit his website at ad7fo.com.

✓ **Technician and general classes** and **testing** sessions will be held by Jack Tiley, AD7FO, in the new year: a technician class in January or February and a general class in March or April. If there is enough interest, Jack also will hold an extra class in the spring.

Upcoming Amateur Radio

• **Testing**

Please contact Mary, AA7RT, at (509) 991-2192 or e-mail her at AA7RT@me.com for test information.

Also, e-mail Glen, CVE W5YI-VEC, K1RR, at glen@k1rr.com or call at 509.216.0666 for information about testing which is held the 3rd Wednesday of every month at 6 p.m. at Spokane Fire Station No. 4 at 1515 W. First Ave., Spokane.



VHF Club Repeaters

The VHF Club owns and operates a number of Amateur Radio Repeaters and Digital Packet Radio systems within the Inland Empire and Spokane area. Its call sign is **WR7VHF**. The Club operates the following:

- the **147.34** repeater in downtown Spokane,
- **146.88** in Spokane,
- the **444.900** repeater in the Spokane Valley,
- the **145.09** packet/Winlink digipeater on Mt. Spokane,
- 145.010 packet node South at Krell Hill,

All PL tones for the Club's repeaters are the 123.0 Hz tone, including the Chewelah repeater.

VHF Club Net

The **Club Net** is on Wednesdays at 7:30 PM, on the 146.880 repeater, tone of 123.0.

VHF Club Membership

Membership applications and payment of dues are available online at the club web site, www.vhfclub.org. The cost to join is \$15 per year for an individual or \$20 per year for a family at the same address. Contact Jake at treasurer@vhfclub.org if you need to know your current dues status or if you have any questions about membership. You can submit your payment online or give it to Treasurer Jake McCarty at a club meeting.



Inland Empire VHF Radio Amateurs, Inc.
2910 E 57th Ave., PMB 255
Spokane, WA 99223

Upbeats & Updates

Board meetings are open to all club members. On months they are held, board meetings begin at 5:30 p.m. at the same location as the general meeting. Check general meeting reminders for information about when board meetings are being held. Highlights of our recent board and club activity follow.

At the September board meeting, Treasurer Jake McCarty, N7GEG, reported that as of August we have in our main checking account \$ 3,275. 03. In CDs, the club has \$5,757.60 with a fully matured CD of \$3,906.07. Thirteen-month CDs are available at a rate of 2.1 percent. Dave and Jake will talk about any possible upcoming large expenses and consider moving club money into these CDs.

Secretary Rick Nungester, WA6NDR, gave a membership update. He explained how the roster and Google Group spreadsheets help Rick and Jake keep track of membership. Rick asked for the board to be direct in addressing emails and to reply in a timely way or to let him know if more time is needed in answering emails. He also suggested establishing a master copy of files like the Spokane Hamfest flyer and the addition of revision dates and notes in the document to clarify changes and additions. The flyer gets distributed to multiple clubs and websites. We discussed having a specific site for posting future flyers that all the others could access. Dave said he would contact the people involved and see if we can put the flyer on that main file server and have others link to it.

Director, Trustee and Webmaster Harold Hepner, AD7QJ, talked about email forwarded to ARRL and then back to the VHF Club on the website. Each person needs to be changed individually.

Director and Club Technician

Karl Shoemaker, AK20, said that the north and south stacks were operating well. Dave and Karl had a discussion about the .88 and .34 repeater support. Jeremiah is helping.

Vice President Jerry Bosch, KG7RRG, said he needs a list of speaker topics for the meetings. Rick sent a list of topics he volunteered for after the meeting.

President Dave Carleton, K7D-SR, talked about receiving a \$300 donation for ARES to our bank account since the other group has no bank account.

Dave asked if we had ever had the .88 and 440 repeaters linked -- and we have not. A discussion followed about what it might take to do this. Karl will put together a list of what we might need.

Dave and Harold received read-only access to the online Google Sheet club roster. Harold also updated the tester listing at the club website.

Jonas Hiner, K7RTA, director, had asked to step down from his position for health reasons. It was moved and seconded to appoint Steve Watilo, K6SWW, as his replacement.

At our general meeting in October, people expressed interest in the following topics for presentations:

- 1) DC Power – emergency power
- 2) Getting Started in HF
- 3) Winlink
- 4) How to get started in FT8 and digital modes
- 5) APRS, WIRES X
- 6) Making your own connector ends – PL259, Anderson Power Poles
- 7) Antenna design software, how to model an antenna, EZNEC
- 8) DMR, digital mobile radio
- 9) Solar activity and propagation
- 10) Raspberry Pi
- 11) Arduino, a router
- 12) SDR, software defined radio
- 13) Station grounding, bonding, lightning protection
- 14) Earth-moon-earth (EME) propagation
- 15) Satellite communications