



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, N6WK

Trustee:

Harold Hepner, AD7QJ

Technician:

Karl Shoemaker, AK2O

Webmaster:

Harold Hepner, AD7QJ

Net Manager:

Bob Peterson, KE7RAP

An **ARRL** affiliated club

Monthly Club Meet-

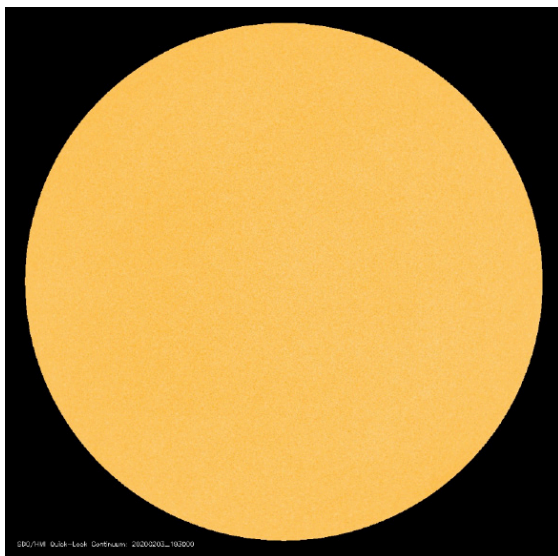
ings are held the **2nd Thursday** of the month at 6:30 p.m. at Spokane Community College, the Lair, Building 6, Room 004, which is downstairs. An elevator is available.

The Club regularly meets monthly except in July, August and December. In July, the Club holds a BBQ.

Club Net, Wednesday

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

Extremely Low Sunspot Count on the Horizon as We Enter Cycle 25



NASA says that extremely low sunspot counts along with an intense Polar Vortex point to the beginning of a global cool down. As we enter into Solar Cycle 25, the solar activity this year will constitute the lowest in over 200 years. This lull in the sun's 11-year maximum and minimum cycle will also affect the our climate... And it will affect amateur radio propagation.

The sun's interior flow of electrons and ions create sunspots that are enormous, usually about ten times the size of the earth itself. Further, their magnetic fields are ten thousand times stronger than our own planet's magnetic field.

Valentina Zharkova, who is an astrophysicist at Northumbria University in the UK, says that her mathematical models indicate that we will undergo diminishing magnetic waves beginning in 2021 for the next 33 years.

Galileo first began to observe sunspots in the 1600s. Soon after, de-

creased solar activity was recorded during the Maunder Minimum, which occurred from 1645 to 1715. During this cold period, referred to as the "Little Ice Age", there were seven percent fewer sunspots and the earth cooled resulting in crop failures, famine, disease, and increased mortality for children. The Thames River in England froze and ice fairs were held on solid surface. But back to radio transmission.

Winlink may have help for HF propagation during this extended period of lower solar activity. You can access a video about this for RMS Express version 1.2.36.0 in two ways: first at winlink.org, accessing the "Book of Knowledge Menu" and "How to Recipes" to get to "HF Propagation Forecasts in Winlink Express - Video How-to"; or second, at <https://youtu.be/8eXOdXArRc4>.

In this video, Rick Frost, K4REF, says that while in Winmor, go to *Channel Selection* to pick out a station you can use for connections. Rick chose a Florida Station that he uses a lot, NOIA. The conditions at the time he recorded show the station at a quality path of 44. But what about for the rest of the day? What bands and frequencies would be the best to connect on? In the past, Rick used to go to Airmail to view the propagation window there. It uses the same government source information as RMS

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**No VHF Club Meeting
February 13 at SCC**

Mike and Key

The Mike & Key Electronics Show & Swap Meet is one of the largest annual amateur radio events in the Pacific Northwest. It is held on the Washington State Fairgrounds during the first part



of March -- this year on Saturday, March 7. Ticket Sales open at 8:00 a.m.; doors open at 9:00 a.m.

Up to 3,000 hams and non-hams alike are drawn to a modern 40,000 square foot facility located on two floors of the Exhibition Hall with room for over 300 tables selling radios, computers, and gen-

eral electronics equipment. Lots of radio and computer related items are available for sale and/or trade.

The swap meet is held at the Pavilion Exhibition Hall, Washington State Fairgrounds, 9th Avenue, S.E. and Meridian Street S., Puyallup, WA 98372.

Admission is \$10. Children under age 16 are free with an adult. Overnight SC/RV camping is available.

Yakima Hamfest

The Yakima Amateur Radio Hamfest will be held in the Selah Civic Center at 216 South First Street, Selah, Washington 98942 on Saturday, April 18 from 9:00 a.m. to 3:00 p.m. Admission is \$8 and children 12 and under accompanied by an adult are free. There will be raffle ticket prizes, door prizes, testing, and a bunny hunt. For more information, see <http://yakimaamateurradioclub.com/hamfest.pdf>.

SEA-PAC 2020

"The Northwest's Largest Ham Convention" and the ARRL Northwestern Division Convention will be held at the Seaside Convention Center (415 First Avenue, Seaside, OR 97138) from June 5-7, 2020.

The 2020 theme is "Embrace the Solar Minimum Challenge".

On-line and mail-in registration opens on 15 February 2020 at seapac.org. **Make your lodging reservations early as hotels fill up quickly.** Hotels with special SEA-PAC rates include the following:

- *Inn at Seaside*, 441 Second Ave., Seaside OR 97138, (503) 738-9581, www.innatseaside.com.
- *River Inn at Seaside*, 531 Avenue A, Seaside, OR 97138, (503) 717-5744, info@riverinnseaside.com and www.riverinnatseaside.com.
- *Ebb-Tide Oceanfront Inn*, 300 North Prom, Seaside, OR 97138, (503)738-8371 and (800)468-6232, www.ebbtideseasidehotel.com.

VHF Club Recent Meetings

In October the VHF Club discussed topics for the coming year. In November, Del Morissette WA7AQH talked about the Amateur Radio Emergency Data Network (AREDN). There was no meeting in December but hams were invited to KBARA's no-host holiday luncheon. In January, Jack Tiley addressed the Club about RF Connectors.

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>.

Call for Newsletter Submissions

We are always looking for articles to publish in the newsletter. Topics should apply to amateur radio, or other closely-related topics. Submissions may be edited for grammar, content, or length. If a submission doesn't make it in the current newsletter, it may be used in the next one. Send submissions to Lynn Lambert via lynnupnorth@msn.com.

Calendar 2020

February

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

March

| S | M | T | W | Th | F | S |
|----|----------|----|----------|-----|----------|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | Mike/Key | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | Mike/Key | | | VHF | | 2 nd Sat |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | | | ARES-ACS | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

April

| S | M | T | W | Th | F | S |
|----|----|----|----------|-----|----|---------------------|
| | | | 1 | 2 | 3 | 4 |
| | | | | | | Tech |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | | VHF | | 2 nd Sat |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | | | ARES-ACS | | | Yakima |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | | | | | | General |
| 26 | 27 | 28 | 29 | 30 | | |

Activities

- No VHF Club meeting in February.
- March 12 and April 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 for board and topics.
- February 8, March 14 and April 11 — ARES - ACS 2nd Saturdays from 9 a.m. to noon at the DEM Building, 1121 W. Gardner Ave., Spokane, WA 99260.
- March 6, 7, 8 — Mike and Key Hamfest in Puyallup (see details on page 2).
- April 18 — Yakima Hamfest in Selah, WA (see details on page 2).
- June 5, 6, 7 — SeaPac in Seaside, Oregon (see details on page 2).

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:** Saturday, April 4th;
 - Place:** The class will be held at the Holy Trinity Lutheran

Church, 2511 South Pines Road, Spokane Vaeey, WA 99206 a the corner of 26th and Pines. Enter from the parking lot on 26th.

Time: 8:00 a.m. to 5:00 p.m. There will be a 45 minute lunch break. Testing will begin at approximately 3:00 p.m. *The instructor(s) will be in the room during the lunch break to answer questions.*

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@arrl.net with your name, e-mail address and phone number.

✓ A General Class and testing session will also be held by Jack Tiley, AD7FO:

Date: Saturday, April 25th;
Place: Holy Trinity Lutheran Church 2511 S. Pines Road, Enter from the door facing the parking lot on 26th.

Time: 8:00 am to approximately 3:00 pm. Testing will be available immediately following

the class at 3:00 pm. There will be a one-hour lunch hour lunch break around noon.

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@arrl.net with your name, e-mail address and phone number.

If there is enough interest, Jack also will hold an extra class in the spring. **For more information about Jack's classes, visit his website at ad7fo.com**

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.

In January, Treasurer Jake McCarty, N7GEG, reported that at the end of the year our checking account had \$3,908.45. Some dues came in in November. In December we had a \$100 cost for the Mt. Spokane site, \$500 in seed money for Spokane Hamfest 2020 and \$10 for Secretary of State renewal. In addition, there are two CDs totalling \$5,787.27. Total Club funds then amount to \$9,695.72.

Director Trustee and Webmaster Harold Hepner, AD7QJ, reported that our website host switched names a couple of years ago and we have updated the website to reflect that.

President Dave Carleton, K7D-SR, will be giving Jeff Banke NV2S the hardware for the Yaesu system so that he can stand it up at his house. We may need to purchase some coax and an inexpensive laptop or PC that he can use for the software to drive the System Fusion equipment. Dan Croskrey will assist in getting everything up and running.

We have had multiple people say that they are interested in purchasing our 900 machine (the one that sits up at the winery). The IRLP node is no longer connected to it, so the unit has been slow. We would like to see what Karl thinks the value of the repeater is. The antenna is on top of a 100 foot tower. Ptera also has equipment up on the tower but the VHF club equipment is inside of the building. Dave will work on getting background information to determine if anyone is using it.

AREDN Update: The plan a couple of months ago was to get

additional information along with an advisory vote. The equipment would go up as VHF club equipment (not as a donation to ARES), which would be tied to the AREDN system. However, the two sites we were thinking about will not work since there is too much interference. It is 5GHz and 2.4GHz in those bands.

There was a motion to formalize the process of obtaining an advisory vote from the membership and we need to note that the vote would be binding for actions the board will take.

o On the motion to spend \$400 for AREDN equipment, the vote was as follows:

- Nays: Rick, Harold
 - Yays: Remainder of board members present (Dave, Jake, Jerry).
- Bob Peterson KE7RAP reported that the nets are going well.

Jerry Bosch, KG7RRG, said that we need to find people who can lead the classes addressing the topics that interest people.

Continued from page 1

Express does now to show the best connection bands over the next 24 hours for each particular station (see the RMS Express window below). So new to RMS Express is that when

| Hour (Z) | 3587.200 | 3590.000 | 7063.900 | 10133.900 | 14074.900 | 14098.700 | 18106.200 |
|----------|----------|----------|----------|-----------|-----------|-----------|-----------|
| 00 | 45 | 45 | 49 | 50 | 40 | 40 | 0 |
| 01 | 44 | 0 | 49 | 44 | 28 | 28 | 0 |
| 02 | 45 | 0 | 48 | 37 | 8 | 8 | 0 |
| 03 | 45 | 0 | 44 | 25 | 0 | 0 | 0 |
| 04 | 45 | 0 | 42 | 19 | 0 | 0 | 0 |
| 05 | 46 | 0 | 41 | 14 | 0 | 0 | 0 |
| 06 | 46 | 0 | 42 | 15 | 0 | 0 | 0 |
| 07 | 45 | 0 | 44 | 21 | 0 | 0 | 0 |
| 08 | 45 | 0 | 44 | 20 | 0 | 0 | 0 |
| 09 | 45 | 0 | 42 | 20 | 0 | 0 | 0 |
| 10 | 45 | 0 | 38 | 5 | 0 | 0 | 0 |
| 11 | 0 | 0 | 38 | 6 | 0 | 0 | 0 |
| 12 | 0 | 0 | 48 | 7 | 0 | 0 | 0 |
| 13 | 0 | 0 | 46 | 48 | 5 | 5 | 0 |
| 14 | 0 | 0 | 44 | 47 | 38 | 38 | 0 |
| 15 | 0 | 0 | 40 | 46 | 45 | 45 | 19 |
| 16 | 0 | 0 | 36 | 44 | 48 | 49 | 25 |
| 17 | 0 | 0 | 33 | 43 | 43 | 43 | 24 |
| 18 | 0 | 0 | 33 | 43 | 42 | 42 | 23 |
| 19 | 0 | 0 | 35 | 44 | 42 | 42 | 22 |
| 20 | 0 | 0 | 38 | 45 | 43 | 43 | 23 |
| 21 | 0 | 0 | 44 | 47 | 44 | 44 | 22 |

you go into *Channel*, at the top menu there is a new tab -- *Forecast*. When you click on *Forecast*, it brings up the forecast for the next 24-hour period and shows all the bands that particular station has as well as the best guess for its connections during the day with percentages from probable green to unlikely red.