



# RCA Amateur Radio Club

## Indianapolis, IN



ARRL Affiliated Club  
[www.w9rca.org](http://www.w9rca.org)

APRIL 2024

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE TUESDAY, APRIL 9th  
6:30 PM AT NORTH SIDE EVENTS, FORMERLY THE KNIGHTS OF COLUMBUS,  
2100 EAST 71<sup>st</sup>, INDIANAPOLIS, IN

### RCA ARC NEWS

**MARCH MEETING SUMMARY** – Thanks to all who attended the March meeting. Treasurer Greg, K0GAH, gave the treasure's report pointing out we still haven't paid the Indiana Repeater Council although we still intend to do so. Jim, AF9A, reported we continue to have a problem with IP switch used to control the AC power to the repeater. Jim, K9RU, announced our Club will again take care of the 6m station on Field Day. Jim wants to schedule 6m operators in advance this year. GOTA FD operators are also needed. Since the GOTA contacts count more than other contacts, they always to get as many GOTA station operators as possible. Operators wishing to operate the HF SSB and CW station(s) should contact Brian Smith, W9IND, and get on his emailing list. FD planning meetings are conducted on Zoom, the next one being April 4 at 7pm. At the Dayton Hamvention this year, we'll follow the same plan is in recent years. Get together at noon Friday (and Saturday if you're there) in the bleachers for lunch. Simplex frequency is 144.43. Dinner for Friday after the show again at Nick's. Jim, K9RU, reported that the Indy Radio Club meeting in April will honor Bob, W9KVK, who will be celebrating his 100<sup>th</sup> birthday! Dick, W9ZB, reported he did well in the Sept. VHF contest, winning VHF contests, for Indiana, 17 times in the three band category. Good work, Dick!

### AMATEUR RADIO LICENSE TEST SESSION

**Date:** Saturday, April 13, 2024  
**Time:** Starting at Noon **by appointment only.**  
**Location:** Salvation Army EDS Training Facility, 4020 Georgetown Rd  
Indianapolis, IN 46254-2407  
**Contact:** Jim Rinehart (317) 721-1458  
**Email:** [testing@indyradioclub.org](mailto:testing@indyradioclub.org)  
**Required:** FCC FRN and a completed NVEC 605 license application form.

**Laurel VEC test sessions:** <https://www.laurelvec.com/?pg=exams>

### HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Salvation Army Open Net, Thurs. 7PM, W9RCA repeater, 146.88 MHz, tone 88.5 Hz

Apr 13, Columbus Hamfest, Columbus North High School Cafeteria, 1400  
25th St, Columbus, Public Contact: Mike Idelwine WE9MI, Phone:  
812-521-6206, Email: [idelwine@comcast.net](mailto:idelwine@comcast.net)

May 17-19 Dayton Hamvention <https://hamvention.org/>  
Dayton Hamvention Tickets: <https://hamvention.org/purchase-tickets/>

**WA7BNM** expanded contest calendar, <https://www.contestcalendar.com/>

Visit the **ARRL Special Event Stations database** at [www.arrl.org/special-event-station](http://www.arrl.org/special-event-station) to find other on-the-air events and commemorations.

**Hamfest or Convention:** [www.arrl.org/hamfests](http://www.arrl.org/hamfests)

**Find a license exam in your area:** [www.arrl.org/exam](http://www.arrl.org/exam)

**ARRL Home:** [www.arrl.org](http://www.arrl.org)

## BOB BEGEMAN, W9KVK, TO BE HONORED AS A CENTENNIAL HAM AT THE APRIL INDIANAPOLIS RADIO CLUB MEETING

Bob, W9KVK, will be 100 in August of this year and has been a Ham since 1950 and a member of the ARRL for 64 years. Bob attended Vincennes University 1942-1943 earning an Associate Degree and was drafted into the Navy Electronic Technical Program, Electrical Engineering in 1944 .

Bob served in the Navy during WWII and was scheduled to participate in the invasion of Japan that was scheduled for November, 1945, but the A-bomb ended the war in August. Instead he landed as part of the occupying forces.

He attended Purdue and earned his Bachelor and Master Degrees 1946 – 1949.

Bob worked at Electronics Research Inc. doing , electronic and antenna design from 1949 to 1951. He was employed at Naval Avionics from 1951 until Jun, 1982 working on Radar, Sonar and Displays. Bob participated flight tests of radar at China Lake and sea trails sonar in submarines. He joined RCA July, 1982 working on Teletext and tuner design. Bob retired in 1987. He is a Life Senior Member if IEEE.

Bob has been a active RCA ARC member ever since he joined the company. He upgraded to extra at one of the club test sessions and became a member of our VE team. He is on the ARRL VE Honor Roll with 295 test sessions and has been active with several of the VE groups in Indianapolis and Greenfield.

Bob is a technical ham, and has always building antennas and and radios. Ham radio has worked well with being an engineer allowing to experiment with stuff he was working on.

At 100, Bob is still sharp and a great person to talk about theory and circuit design. – Jim K9RU

## FCC TO REQUIRE 2-FACTOR AUTHENTICATION FOR CORES USERS

The Federal Communications Commission (FCC) has announced an upcoming change to the [Commission Registration System \(CORES\)](#) that licensees use to pay any application or regulatory fees, manage or reset a password on an existing FRN, or request a new FRN. Beginning Friday, March 29, 2024, multi factor authentication will be implemented. Users will be prompted to request a six-digit secondary verification code, which will be sent to the email address(es) associated with each username. The user will then need to enter the code into CORES before they can continue.

In a [public notice](#), the FCC said this change will make the system more secure. "This additional layer of security will further safeguard against unauthorized access, thereby enhancing the overall integrity of information contained within the CORES system and improving the security of user data," it read. The FCC recommends that users confirm they have access to their username account email and to add a secondary email address, if need be.

Resources are available for those who need assistance with the system. For inquiries or assistance regarding the implementation of multifactor authentication on CORES, submit a help request at <https://www.fcc.gov/wtbhelp>, or call the FCC at 877-480-3201 (Monday through Friday, 8 AM to 6 PM ET).

The enhanced security notice is listed on the CORES website:

<https://apps.fcc.gov/cores/userLogin.do>

and ULS websites: <https://www.fcc.gov/wireless/universal-licensing-system> .

## 500 FESTIVAL MINI MARATHON MAY 4<sup>TH</sup> AMATEUR RADIO SUPPORT UPDATE

We have about 40 volunteers so far which *almost* covers each expected position but without redundancy. We prefer closer to 70. I am starting to make rounds on various nets and will send out additional emails trying to drum up a few more hams.

*Now the important stuff* - sign up with the 500 Festival to get your t-shirt and other perks.

If you haven't already done so browse to <https://500festival.volunteerlocal.com/volunteer/?id=75632> and sign up. After you enter all of your details you will be sent to a second page asking you to choose what you want to do. There will be a blank for an access code.

Enter ARES in the access code field.

If you have any questions feel free to contact me at [w9sox@qsl.net](mailto:w9sox@qsl.net) or reply to this email.

Thanks and 73, Matthew Bechdol, W9SOX

## THE ARRL CENTRAL DIVISION CONVENTION WILL BE HELD IN CONJUNCTION WITH THE ELKHART EAST HAMFEST (IN ELKHART, INDIANA) ON SATURDAY AUGUST 3.

This is a new venue for the Central Division Convention. Visit <https://elkharteasthamfest.com/convention.html> for a brief overview of the event. VE testing, forums, a flea market and W1AW/9 are some of the planned activities that will take place.

The Hamfest is right along Interstate I-80/I-90 (a.k.a. the Indiana Toll Road) about 15 miles east of South Bend (a 30 minute drive). There are lodging facilities, restaurants and non-ham attractions available in the area (for example, the RV Hall of Fame & Museum and, of course, the University of Notre Dame).

Brent N9BA (Central Division Vice Director), Bob AK9R (current Indiana Section Manager) and I plan to be there manning the ARRL tables. Thom W9RY (Illinois Section Manager) has also showed an interest in attending (it's quite a drive for him). ARRL Central Division Director: Carl Luetzelschwab, K9LA [k9la@arrl.org](mailto:k9la@arrl.org)

## AMATEUR RADIO IMPORTANCE HIGHLIGHTED AT NATIONAL HURRICANE CONFERENCE

The [National Hurricane Conference](#) was held March 25 - 28, 2024, in Orlando, Florida. Amateur radio was well represented at the event. A series of workshops were held that focused on amateur radio's involvement in hurricane tracking, coverage, and recovery.

Among the presenters was the Assistant Amateur Radio Coordinator of [WX4NHC at the National Hurricane Center](#) (NHC) Julio Ripoll, WD4R.

Ripoll gave a history of amateur radio's involvement in NHC, including the use of tube radios in the 1980s and the Yaesu FTDX-1200 used today. WX4NHC is also equipped with

VHF/UHF radios to access the Florida Statewide Amateur Radio Network (SARnet), as well as digital equipment to communicate with the [VoIP Hurricane Net](#), IRLP, and Winlink to receive emails via amateur radio.

"We were the only means of communication between the National Hurricane Center and the National Weather Service Field Office in Slidell, Louisiana, during Hurricane Katrina," Ripoll said. He went on to highlight other instances of reports given by ham radio that provided mission-critical information that had a major impact on the way NHC handled a storm.

ARRL Director of Emergency Management Josh Johnston, KE5MHV, gave a presentation to the crowd of hurricane experts, meteorologists, and emergency managers about the Amateur Radio Emergency Service® (ARES®).

He spoke of ARRL's role on the board of SAFECOM, a program managed by the Cybersecurity and Infrastructure Security Agency (CISA) that sets the standards of interoperability procedures. Being a part of the group solidifies the Amateur Radio Service as a robust resource before and during times of crisis.

Johnston shared that in 2023, ARES volunteers contributed at least \$21.8 million in volunteer hours to their local communities. "Is amateur radio still relevant? Absolutely! Are we still involved in the places that are doing things the right way? Amateur radio absolutely is," he said.

Johnston highlighted [the relationship between ARRL and the Federal Emergency Management Agency \(FEMA\)](#), as well as ARRL's position as a net control station within the [SHARed RESources High Frequency Radio Program \(SHARES\)](#) managed by CISA.

Among other presenters was ARRL's [The ARES Letter](#) Editor Rick Palm, K1CE.

He shared a harrowing tale of his family riding out a direct hit from Hurricane Idalia in August 2023. The damage and impact he felt gave him a new perspective on emergency communications, as he went from a volunteer communicator to a storm victim. Read more about his experience in the "Public Service" column in the January 2024 issue of QST.

Watch a [video of the amateur radio workshops](#) at the 2024 National Hurricane Conference on YouTube, courtesy of Jim Palmer, KB1KQW.

## WORLD AMATEUR RADIO DAY IS APRIL 18, 2024

[World Amateur Radio Day](#) (WARD) is celebrated each year on April 18.

The theme for 2024 is, "A Century of Connections: Celebrating 100 Years of Amateur Radio Innovation, Community, and Advocacy." The global event covers all of the [International Amateur Radio Union](#) (IARU) regions and spans 2 days: Thursday, April 18, 2024, 0000 UTC to Friday, April 19, 2024, 0000 UTC.

On April 18, 1925, the IARU was formed in Paris and will celebrate its centenary in 2025. American Radio Relay League (ARRL) Co-Founder Hiram Percy Maxim was the organization's first president.

All radio amateurs are invited to take to the airwaves to enjoy the global friendship with other amateurs and to show their skills and capabilities to the public. WARD is not a contest but rather an opportunity to talk about the value of amateur radio to the public and fellow amateur colleagues. It is also a great opportunity to talk about local radio clubs and amateur radio in local media as a lead-up to [ARRL Field Day](#), which is held each year during the fourth full weekend in June. You can also promote your personal WARD activities on social media platforms like X and Facebook by using the hashtag #WorldAmateurRadioDay.

For more ideas and information, visit [World Amateur Radio Day \(arrl.org\)](#).

## GET READY FOR THE 2024 ARRL NATIONAL CONVENTION AND YOUTH RALLY

A full slate of programming has been committed for the 2024 ARRL National Convention, which will be hosted by Dayton Hamvention®, May 17 - 19, in Xenia, Ohio. Hamvention is the largest annual gathering of radio amateurs in the world. Coupled with the National Convention, this year promises to be a Hamvention not to miss. Building on a yearlong theme to "Be Radio Active," ARRL has planned exhibits, forums, panels, and activities that promise to engage and inspire attendees in a wide range of amateur radio interests.

Hamvention has committed one of its four forum rooms to a track of ARRL National Convention presentations with topics that span public service, technology, on-air activities, instruction, and youth outreach.

- In the Amateur Radio Emergency Service® (ARES®) forum, ARRL Director of Emergency Management Josh Johnston, KE5MHV, will discuss the role of SAFECOM in supporting the public safety community to improve the emergency communications ecosystem, as well as the importance of building mutually beneficial relationships with local emergency management officials.
- ARRL National Instructor Gordon West, WB6NOA, will lead an Instructor Academy, showing off many new training tools to help lead lively ham radio license classes.
- ARRL Education and Learning Manager Steve Goodgame, K5ATA, will cover Youth Outreach through Amateur Radio STEM Education, covering ways to inspire students to pursue higher education and careers in technological fields.
- Enhancing Transmitter Performance will examine the ARRL Clean Signal Initiative, and presenters include ARRL Second Vice President Mike Ritz, W7VO; Rob Sherwood, NC0B, of Sherwood Engineering Inc., and ARRL Laboratory Manager George Spatta, W1GKS.
- Kyle Krieg, AA0Z, will present, How to Control Your Ham Shack with A Node-RED Dashboard, offering a tutorial for this easy-to-learn flow-based programming language that ham radio operators can use to build simple web-based dashboards that provide command, control, and automation in their ham shack.
- ARRL First Vice President Kristen McIntyre, K6WX, will examine the theory of ground, discussing dc grounds, RF grounds, and even talking about gravity, in her presentation, Ground is a Myth!
- ARRL CEO David A. Minster, NA2AA, will delve into the world of Gaming the Amateur Radio Modes, offering tips and tricks covering station design, operating, instruction, and mastering the art of amateur radio modes, including FT8.
- Five Steps to a Successful POTA (Parks on the Air®) Activation will be presented by Michael Martens, KB9VBR, of KB9VBR Antennas on YouTube.
- ARRL Regulatory Information Manager Bart Jahnke, W9JJ, will moderate a panel on Good Operators and Interference that includes Lark Hadley, KA4A, Director, Region Three, FCC Enforcement Bureau; ARRL Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH, and ARRL Laboratory Manager George Spatta, W1GKS.
- ARRL Field Services Manager Mike Walters, W8ZY, will present, Tips for Successful Radio Clubs.
- ARRL Radiosport Manager Bart Jahnke, W9JJ, and Contest Program Manager Paul Bourque, N1SFE, will provide an ARRL Contest Program Update.
- Explore the full scope of operating privileges and ham radio activities that can be done with a Technician - class license, in the forum Beyond Repeaters: See How Far Your Tech License Will Take You, presented by ARRL Laboratory Digital RF Engineer John McAuliffe, KD2ZWN.

Additionally, an ARRL Membership Forum will be held on Saturday, May 18, covering several key areas of membership interest. The forum will be moderated by ARRL Great Lakes Division Director Scott Yonally, N8SY, and panelists include ARRL President Rick Roderick, K5UR; First Vice President Kristen McIntyre, K6WX, and CEO David A. Minster, NA2AA.

On Saturday, May 18, a 2024 ARRL Youth Rally will be a special feature of the National Convention at Hamvention. The Youth Rally is intended for students who are 11 to 21 years of age. While Hamvention offers free tickets for youth aged 12 through 18, advance registration for the Youth Rally is recommended. A preliminary Youth Rally agenda and registration instructions are on the ARRL website, at [www.arrl.org/expo](http://www.arrl.org/expo). The Youth Rally registration fee is \$20 and includes a tee shirt (to wear on Saturday), badge, lanyard, and reusable tote bag.

Youth Rally participants will enjoy a full day of activities, discovery, sharing, and fun. Rally day begins at 9:15 AM on Saturday with the annual Dayton Youth Forum -- open to all Hamvention attendees -- moderated by well-known amateur radio educator Carole Perry, WB2MGP. The forum includes presentations from young hams covering a variety of amateur radio activities, topics, and technology. After lunch (on your own) Youth Rally registrants will gather in Forum Room 3 to get know each other and to explore a variety of amateur radio interests and activities. Learn about satellite communications, participate in a short sprint contest, contact a parachute mobile station, and participate in other fun! Bring a 2-meter handheld radio if you have one.

The Youth Rally will wrap up on Saturday with a presentation from the ARRL Collegiate Amateur Radio Program (CARP).

Learn more about the 2024 ARRL National Convention at [www.arrl.org/expo](http://www.arrl.org/expo), where you can find the full listing of ARRL-sponsored forums, exhibits, and activities.

Hamvention is held in Xenia, Ohio, on the sprawling grounds of the Greene County Fairgrounds and Expo Center. Visit the event's website at [www.hamvention.org](http://www.hamvention.org), where you can also purchase tickets, find the complete list of Hamvention forums, and learn more about the event.

## 2024 ARRL FIELD DAY THEME: BE RADIO ACTIVE

The theme for 2024 ARRL Field Day is "Be Radio Active." The event will run on June 22 - 23, and it will be one-part contest, one-part emergency communications exercise, and one-part open house -- and a great time. The theme encourages radio amateurs to take advantage of the peak of Solar Cycle 25, which we are nearing. Activity this year is likely to be extremely high thanks to favorable solar conditions. The upper HF bands, such as 15 and 10 meters, should benefit most from the Cycle's peak.

There are resources available already for clubs and individuals to make their Field Day plans. ARRL will publish more information and tools so that hams can make the most of the event as it draws near. Amateurs interested in learning more are invited to join the [Field Day Facebook](#) group to connect with others who are planning for the big weekend. Find links to all of the resources on the ARRL Field Day web page at [www.arrl.org/field-day](http://www.arrl.org/field-day).

## DAYTON HAMVENTION® 2024 AWARD WINNERS ANNOUNCED

The recipients of the 2024 Hamvention Awards were announced on March 8, 2024

### **Special Achievement Award: Anthony Luscre, K8ZT**

Luscre is from near Akron, Ohio, and he was first licensed in 1981. He has been a low-power operator, contester, and teacher throughout his amateur radio career. He received his Amateur Extra-class license in 2000. Luscre is active on HF and VHF/UHF, and he operates on CW, phone, and digital modes. His low-power contacts now top 115,000. Between licensing classes, club programs, webinars, hamfests, conferences, youth and school radio demonstrations, and other in-person and online talks, Luscre has presented more than 500 sessions since the beginning of the COVID-19 pandemic. He has presented multiple times for Contest University, the QSO Today Virtual Ham Expo, and Dayton Hamvention®. He holds a weekly class, "The Joy of Operating," for the Long Island CW Club. Anthony serves as the ARRL Ohio Section Youth Coordinator and he is an officer in the [Cuyahoga Falls Amateur Radio Club](#).



### **Technical Achievement Award: Ward Silver, N0AX**

For the past 15 years, Silver has been the Lead Editor of The ARRL Handbook and The ARRL Antenna Book, and he was a primary author of all three ARRL license manuals and study guides from 2004 until his retirement in 2023. As an electrical engineer, he designed microprocessor-based products and medical devices for 20 years before beginning a second career as a teacher and writer. Licensed since 1972, he is a co-founder of the World Radiosport Team Championships and was inducted into the CQ Contest Hall of Fame in 2015, with numerous top scores and records. He is President of the [Yasme Foundation](#), and he is also a board member of the Ham Radio Science Citizen Investigation ([HamSCI](#)) collaborative research group. Silver's primary interests in amateur radio include radiosport, antenna design, and supporting his local emergency response team.

### **Club of the Year Award: The Young Ladies' Radio League (YLRL)**

The [Young Ladies' Radio League, Inc.](#) (YLRL), is proud to be celebrating its 85th anniversary this year. With members from all over the world, the organization has been involved in everything from contests, to emergency events, to helping new hams get licensed and on the air, as well as everything in between. Established in 1939, YLRL has been found at hamfests and conventions all over the world. The club is proud to have had a booth at Hamvention® every year since the 1950s and a YL Forum since the 1960s. "Women helping women in amateur radio" is a mission statement for this organization, but there are also contest and award opportunities for the OMs who support their YLs. YLRL has the motto "QRV -- I am ready," as they are always ready to assist in the radio community.

### **Amateur of The Year Award: Edward Engleman, KG8CX**

Engleman, KG8CX, is from Menominee, Michigan. He is the co-founder of the [Young Amateurs Communications Ham Team](#) (YACHT). He was first licensed in 1991 and received his Amateur Extra-class license in 2000. He has been a member of ARRL since 1991. Engleman serves his home club, the Marinette & Menominee Amateur Radio Club, as a volunteer examiner. Engleman's 33-year background as an elementary educator and principal was instrumental in developing the talents he now uses in his work with young amateurs.

ARRL The National Association for Amateur Radio® and Hamvention® have announced that Hamvention will host the 2024 ARRL National Convention on May 17, 18, and 19 at the Greene County Fairgrounds in Xenia, Ohio. ARRL has an exciting lineup of forums and presentations for the ARRL National Convention. For information about the 2024 ARRL National Convention, go to [www.arrl.org/expo](http://www.arrl.org/expo). For tickets to Hamvention and further information, head to [www.hamvention.org](http://www.hamvention.org).

You can read more about the 2024 Hamvention award winners and the 2024 ARRL National Convention at [ARRL.org](http://ARRL.org).

## ONLINE THIS MONTH

**Youtube: What is the bandwidth of your CW signal?** <https://www.youtube.com/watch?v=KEgrTwjWLF0>

**The WSJT-X development team has announced that Release Candidate WSJT-X 2.7.0-rc4 is ready for download by beta testers.** includes new features (especially for companion program QMAP) as well as bug fixes. A full list of enhancements can be found in the release notes at [https://wsjt.sourceforge.io/wsjitx-doc/Release\\_Notes\\_2.7.0-rc4.txt](https://wsjt.sourceforge.io/wsjitx-doc/Release_Notes_2.7.0-rc4.txt).

Release Candidates are intended for beta testers. If you download and use WSJT-X 2.7.0-rc4, please remember to provide the developers with feedback on the new features in version 2.7, and on anything that does not seem to work properly. Direct links to installation packages for Windows, Linux, and macOS can be found on the WSJT-X website at <https://wsjt.sourceforge.io/wsjitx.html>.

**Free On-Line Amateur Radio Operating Classes – NOTE:** These are not licensing classes, but operating classes. They will not teach you how to pass the license exams. But they would still be great for unlicensed hams to attend since you'll want this info the day after you pass your exam!

A free, weekly, 3-hour Amateur Radio Operating Class on Zoom will begin on Thursday April 4 and run through June 20 at 6:30 p.m. Eastern / 5:30 p.m. Central time. The presenters will be various experienced folks in the various subjects.

A detailed syllabus will be published before the classes begin. Attend them all, or any that you like, but you must register for the classes. To receive registration information, contact Rol Anders, K3RA, at [roland.anders@comcast.net](mailto:roland.anders@comcast.net).

Subjects will include:

- All About Operating—A general Introduction
- Amateur Radio Organizations—Local to International
- Ham Radio Awards
- DXing-History and Tips from the Experts
- QSLing-How to get that needed card for DXCC or WAS
- VHF/UHF Weak Signal Work and “Roving”
- Image Operating—Slow Scan and Fast Scan TV
- Remote Station control over internet
- Learning CW in the no-code era
- Digital Modes—From RTTY to FT8 and beyond
- Contesting—How to get started, tips for the beginner and intermediate contesters
- Logging Software—What’s available, how to use
- Propagation—A general intro to HF Propagation
- Amateur Satellites—How to get started
- Portable (backpacking) operation—Tips from an expert
- Setting Up a Modern (or not so modern) HF Station
- Lightning Protection and Grounding
- Traffic Handling
- Public Service, Emergency Communications
- Thanks N9KT

## TECHNICAL

**I/Q Signals?** Not familiar with I and Q (in phase and quadrature) signals? They are the basis for digital signal processing in software defined radios. Lots of information in the links below. Also, how you can visualize them using **GNU Radio**. Not familiar with GNU Radio? **GNU Radio** is a free & open-source software development toolkit that provides signal processing blocks to implement software radios. It can be used with external radio frequency hardware to create software-defined radios, or without hardware in a simulation-like environment. It definitely has a 'learning curve,' but simple things are easy to do! [Wikipedia](#)

<https://www.allaboutcircuits.com/textbook/radio-frequency-analysis-design/radio-frequency-demodulation/understanding-i-q-signals-and-quadrature-modulation/#:~:text=I/Q signaling refers to,that involves I/Q signals.>

#170 [https://www.youtube.com/watch?v=h\\_7d-m1ehoY&t=0s](https://www.youtube.com/watch?v=h_7d-m1ehoY&t=0s)

#171 <https://www.youtube.com/watch?v=5GGD99Qi1PA>

[https://www.qsl.net/w2aew/youtube/IQ\\_modulator\\_basics.pdf](https://www.qsl.net/w2aew/youtube/IQ_modulator_basics.pdf)

### **GNU Radio**

<https://www.youtube.com/watch?v=BIPXoBCDJv4>



## GNU Radio SDR

[https://www.youtube.com/watch?v=tj\\_9p\\_rXULM&list=PLywxmTaHNUNyKmgF70q8q3QHylw\\_LFbrX](https://www.youtube.com/watch?v=tj_9p_rXULM&list=PLywxmTaHNUNyKmgF70q8q3QHylw_LFbrX)

## GNU Radio Companion

[https://www.youtube.com/watch?v=ufxBX\\_uNCa0](https://www.youtube.com/watch?v=ufxBX_uNCa0)

## SHORTS

**IN PERSON TECHNICIAN CLASSES COMING UP** – If you or someone you know is interested in getting licensed, there will be a two-day in-person class on April 13 and April 27, with testing after the class on the 27th. This class will be hosted by the LDS Church ERC group. The class will be held at 201 Eastview Drive, Franklin, IN 46131. Contact Bruce Enz, W9ENZ, at [bruceenz@gmail.com](mailto:bruceenz@gmail.com) to register and for more information.

**Putnam County Community Emergency Response Team (CERT)** will host a Technician class May 4th and 18th, at the Putnam County EOC, 1600 W CR 225S, Greencastle. Class will be from 900a-300p on May 4, and May 18 900a-100p, with testing at 200p. Those who would like to upgrade to General or Extra may show up for testing on May 18. For information or to register, e-mail Jeff Wonser at [JWonser@gmail.com](mailto:JWonser@gmail.com), or call him at 317-955-5645.

**The ARRL EmComm courses will be changing effective April 1. The existing EC-001 and EC-016 will be closed at that time.** Anyone enrolled in either of those courses will need to complete them by April 1 to receive credit for them. Two new courses will be launched in the ARRL Learning Center (<https://learn.arrl.org/>) on April 1: Basic EmComm and Intermediate EmComm. Advanced EmComm and ARES Leadership courses are in development and should be complete by early summer.

**Members of the Henry County Amateur Radio Club will celebrate Wilbur Wright's 157th birthday by activating Special Event Station W9W on April 16.** They plan to get on the air from Wright's birthplace in Millville, Henry County, Indiana.

**If you're a Parks on the Air activator or hunter, there are two events occurring the first week of April that might be of interest.** [Georgia State Parks on the Air](#) begins at 1200 UTC on Saturday, April 6, and concludes at 2359 UTC on Sunday, April 7. Also, [Florida State Parks on the Air](#) begins at 1400 UTC on Saturday, April 6, and concludes at 2200 UTC on Sunday, April 7. For more information, visit the individual sponsors' websites.

**Reminder: Solar Eclipse April 8** Amateur radio will play many roles in the upcoming solar eclipse that will cross much of North America. Radio amateurs are welcome to participate in ionospheric research that is being conducted. Find information about the [Solar Eclipse QSO Party on the HamSCI web site](#).

Many emergency communications groups, including those affiliated with the [Amateur Radio Emergency Service® \(ARES®\)](#) in the areas near totality are planning to be active surrounding the event. Hams will provide communications to served agencies, such as local governments, relief organizations, and other groups that could benefit from resilient communications during a time when millions are expected to travel.

**HamSCI Solar Eclipse QSO Party** The Solar Eclipse QSO Party (SEQP), one of the events to be held during the HamSCI Festivals of Eclipse Ionospheric Science, will be held from 1400 to 2359 UTC on April 8, 2024. Participants are encouraged to operate before, during and after the eclipse passes over the continental U.S. The SEQP is unique among ham radio competitions as it awards points for two-way

QSOs (ham-to-ham contacts via radio) and bonus points for reception reports from CW skimmers, [Reverse Beacon Network](#), [PSKReporter](#) and the like.

The exchange is an accurate signal report and your four-digit grid square. Complete rules are available at <https://hamsci.org/seqp-rules>.

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***THANKS FOR READING***

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THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER.

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