



COLLINS AMATEUR RADIO CLUB

Richardson, Texas

SIGNALS

MONTHLY NEWSLETTER

Volume 44 Issue 11

Web Site <http://www.n5cxx.us>

August 2023

CARC

Membership Meeting

Tuesday 22 August 2023 5:30 PM

The Meeting will be at
Woodcreek Church Richardson TX
(and via Zoom)

"Getting Started With Fox-hunting" by Chip Coker, KD4C

MEETING NOTICE

The August meeting will be held on Tuesday, August 22, 2023, at 5:30pm at Woodcreek Church, 3400 E. Renner Rd, Richardson. Doors will open at 5pm, and Zoom streaming begins around 5:15 pm. Zoom login info is sent to Club members and is available via a link below the meeting announcement on the Club website at n5cxx.us

Following a brief business meeting, Chip Coker, KD4C, President of the Richardson Wireless Klub, will present a program on "Getting Started with Fox Hunting". Fox hunting is a fun and practical activity for hams. Chip will go over the basics of fox hunting, why it's important to have fox hunting skills, how and why the Richardson Wireless Klub has structured its 4+ year fox hunt program, and what you need to get started!



Chip was licensed in 1977 at age 14 and passed his Amateur Extra in 1979. He has a EE degree from The University of Tennessee and a Masters in Engineering and MBA from SMU. He worked for Lockheed Martin on the comm system for the F-22 Raptor and other development projects, and spent seven years working for Capgemini (a large consulting firm) before starting his own IT consulting company.

He's done about everything in ham radio except make a satellite QSO (and that will happen). Chip loves 10 Meters, likes to play with antennas, building radio-related computer projects, and hopes you've tolerated him being RWK President for the last couple of years.

CARC Station Restoration

Club members can be very proud of all who fought hard to keep our COLLINS Company sponsored radio club N5CXX station and also worked many long hours to bring it back to operating status. Despite some missing, damaged and broken items, it is returning to a functioning radio station that active employees and retired members can enjoy. We are excited and proud of it. Perhaps we can indeed continue with ART COLLINS legacy at COLLINS AEROSPACE, CARC Richardson.



Latest N5CXX/W5ROK LOTW figures:

Call Sign	# QSOs	# QSLs	Oldest	Newest
W5ROK	13,173	3,158	1991-11-23 05:14:00	2019-06-09 03:22:00
N5CXX	3,609	1,687	2019-09-30 15:30:00	2023-08-05 15:41:45

N5CXX QRZ figures: Three thousand five hundred and ninety-one QSO's. One thousand seven hundred and forty-six confirmations. Forty-four countries confirmed.

Just key the transmitter and announce: "This is N5CXX, the Collins Aerospace station in Richardson, TX" and the pileup begins.

CARC has been receiving both W5ROK and N5CXX QSL card requests. We desperately need N5CXX QSL cards. It is suggested that these N5CXX cards should display both Collins legacy and current modern CARC operations.

Please enjoy operating at N5CXX. CARC station activity is needed now.

Stay tuned for exciting news concerning restoration and improvement of our CARC N5CXX repeater.

CARC OFFICERS			
PRESIDENT		VICE-PRESIDENT	
Bill Swan	K5MWC	Bill Fell	KK5PB
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MEMBERSHIP		N5CXX CLUB STATION	
Bill Fell	KK5PB	Phone Number/Mail Station	
972-424-0496		Unavailable until further notice	
vp@n5cxx.us			

be provided by testing group. You can reserve a seat by calling Kerry Weeks at 214.478.3230 or email at weeks.kerry@gmail.com in advance of the test.

Plano testing is on the third Saturday of each month, 1300 hrs at Williams High School, 1717 17th St. East Plano. Check Repeater 147.180+ for announcements.

Richardson The Richardson Wireless Klub (RWK) VE team hold license testing on the third Thursday of each month at St. Barnabas Presbyterian Church, 1220 West Beltline Rd. Testing begins at 1900 hrs in room 12. Enter through the Northern most door on the east side of the church building. For further information contact Don Klick KG5CK. 972.464.2889 or E-mail rwkhamtest@gmail.com.

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VE SESSIONS

Dallas tests are held on the fourth Saturday of each month at 1000 hrs. 13350 Floyd Rd. (Old Credit Union) Contact Bob West, WA8YCD 972.917.6362

Irving tests are held on the third Saturday of each month at 0900. Fifth and Main St. Contact Bill Revis, KF5BL 252-8015

McKinney VE test sessions are held at the Heard Museum the first Sunday of the month. The address is 1 Nature Place, McKinney TX. The time of the testing is 1430, ending no later than 1645. **Note: no tests given on holiday weekends.**

Garland testing is held on the fourth Thursday of each month, excluding November, and begins at 1930 sharp. Location is Freeman Heights Baptist. Church, 1120 N Garland Ave, Garland (between W Walnut and Buckingham Rd). Enter via the north driveway. A HUGE parking lot is located behind the church. Both the parking lot and the Fellowship Hall are located on the east side of the church building, with big signs by the entrance door. Contact Janet Crenshaw, WB9ZPH at 972.302.9992.

Garland TX: The Northeast Metro ARRL License Testing Group holds testing sessions on the first Monday each month (except holidays) at the Garland Amateur Radio clubhouse in downtown Garland TX, 1027B Austin St., Garland TX 75040. Time 6-8pm. All who want to test for an amateur radio license are welcome. You will need photo ID, FRN from FCC and \$15.00 correct cash. All forms, etc., will



de The Prez

Our August meeting is coming up on the 22nd, and it features a presentation by Chip Coker, KD4C, entitled "Getting Started With Fox Hunting." Fox Hunting is a very popular activity that features some very innovative ways that the fox hides and some very innovative ways that the hunters use to find the fox. While this activity is a lot of fun it also helps us hone some skills that can be of value in times of emergency operations. Hope to see you at Woodcreek Church at 1730.

The Challenge Coins are on order. Elsewhere in this newsletter there is an article by Jim Brown, AF5MA, along with an image of the coins that brings the membership up to date on this project that was authorized by your board of directors and officers. Those that attended the Ice Cream Social had the chance to see the proof versions and to let us know which they preferred, either the soft or hard enamel versions. The majority liked the soft enamel one. We have placed an order for a production run of 100 soft enamel coins. If they arrive on schedule, they will be available for purchase at our September meeting for a \$5 purchase price. For members wishing to purchase a coin but have it

delivered by mail, an additional charge for shipping and handling would be added.

The first planning meeting of the Big Project Special Interest Group (SIG) that is chaired by Frank Krizan, KR1ZAN, was held on the 18th of July. The second meeting is planned for the 15th of this month and will focus on an overall strategy for this multiyear project. This SIG team is thinking about some great initiatives. Frank will keep us all up to date on how this multiyear program is going. Input from our members will also be important so watch out for the opportunity to contribute to this project.

Your leadership team in our continued work to provide good management and direction for the CARC has taken on three of what have been called Items to Resolve. Those items include providing a searchable database that will aid the leadership team in understanding what decisions and actions have occurred in the past to assist in making decisions for the future. Two other items include updating and establishing a good financial planning and record keeping system and a look at revising and updating our web site.

The recent terrible wildfires that destroyed most of Lahaina, Hawaii is a stark reminder of how important communications are in all of the phases of emergency management. One of the first things to fail was the ability to communicate. Cell towers, basic infra-structure items like power, etc., quickly failed. What that means to the CARC is a challenge to be prepared to use the resources we have like the Go Kits and our club station to support response and management of mitigation and response to disasters that could occur here.

You will see this in every President's article that I write as I sincerely want to serve you, our members.

As I close this newsletter entry, I commit to you that I will work to continue the work of the CARC. A work focused on providing fellowship and value. Let me know if you have suggestions or comments on how we can work together to make the CARC shine and to grow.

73, Bill, K5MWC

Secretary's Report

There is no Secretary's Report for the July meeting since it was the annual Ice Cream Social.

Vice-President's Report

VP Report – I am still researching our asset acquisition and disposition history since the 2006 inventory in order to update the listing of CARC's equipment assets. Also, I am preparing a budget for CARC through this yearend. And finally, I am preparing a budget for FY2024 for the board's consideration. If anyone would like to help in any of these tasks, please contact me.

Membership Committee – Two new members were added to CARC during our Ice Cream Social in July. Let's welcome W. T. "Bill" Owens, AD5EW and Brandon Bearden. KG5EZS!

Current Active Membership = 53

Full Members = 38 (includes life and retiree members)

Associate Members = 15

Members moved to Inactive Status = 0

Continuing membership is important to the CARC. Through the skills and experiences of all our members, our club provides fellowship, education, and service opportunities. If you have questions about your membership status or other membership-related questions, please contact me. Thank you to all of our members for your support and contributions to the CARC.

CARC Board Meeting Minutes

Date: 8 August 2023

Bill Swan, K5MWC, called the Collins Amateur Radio Club of Richardson, Texas Board of Directors meeting to order at 1903 CDT.

Board Members Present:

President: Bill Swan, K5MWC

Vice-President/ Membership Director: Bill Fell, KK5PB

Secretary: Jim Stafford, W5DTG

Treasurer: Kerry Weeks, K5WKS

Immediate Past President/Director at Large: Frank Krizan, KR1ZAN

Visitors Present:

Jim Brown, AF5MA

Jim Skinner, WB0UNI

Mike Montgomery, WD5TX

Dave Russell W2DMR

1. Welcome
2. Motion to approve the Consent Agenda

Item A: Minutes of the 11 July 2023 Board Meeting, previously distributed

Item B: Minutes of the 21 July 2023 Board Workshop 2023, previously distributed

Item C. Agenda for 8 August 2023 Board Meeting, previously distributed

Item D: 13 Visitor Agreements, 3 Escort Agreements and 8 picture badges delivered to Mike Talley

Item E: Approval to reimburse Frank Krizan \$79.16 for ice cream and plastic products for the 25 July 2023 CARC Ice Cream Social. Receipts and check request have been submitted to the Treasurer.

Item F: Kerry Weeks ordered bank checks for the CARC club. The cost is \$40. Kerry will submit paid invoice when he receives the checks.

Motion made by Bill Fell, seconded by Frank Krizan. Motion passed unanimously.

3. HF Station Restoration Status

- a. Work continues, completion pending resolution of funding request forwarded by the restoration committee
- b. Jim Skinner suggested that the third rotator, not on the tower, be repaired so when Jon Moon climbs the tower for evaluation, the repaired rotator can be installed at the same time.
- c. Jim Skinner advised the company has approved climbing the tower, but the committee must advise the company the date and time.
- d. Jim Skinner suggested borrowing a climbing harness instead of buying one because it will not be used frequently.
- e. Bill Swan and Jim Skinner will coordinate a time for the restoration committee and the Board to meet in person to discuss funding.

4. Challenge Coin Status and Next Action

- a. Proof coins were received and passed out for inspection at the Ice Cream Social
- b. Jim Brown reviewed the production procedure. The cost for 100 soft enamel coins will be \$394.10. It will take 33-35 days for the coins to be received after order.
- c. Action: Motion by Kerry Weeks and seconded by Bill Fell to approve Jim Brown ordering 100 soft enamel coins and charge \$5.00 per coin for sale to members. The CARC will not pay any shipping expense to members. Jim Brown will pay for order and be reimbursed after he receives the coins. Passed unanimously.

5. Items to Resolve

- a. President's Review of Items to Resolve with objectives
- b. General Discussion on each item
- c. Action Plan development with timeline
 - i. Searchable Filing System - Stafford

- ii. Financial Reporting and Record Keeping – Weeks
- iii. Website update and revision - Krizan

6. Budget/Project Planning Process

- i. Special Planning Committee – Has been set up and reports to the Vice President to develop a spending plan for the remainder of 2023 and 2024. Actions:
 - I. A list of potential projects has been developed
 - II. Annotation of the potential projects listing to designate 2023, 2024, or beyond 2024 year of performance
 - III. Request that the sponsor of each potential project provide statement of justification, value to club and estimated cost
 - IV. A plan for expenses for the remainder of 2023 and a 2024 budget will be prepared and presented to the membership for consideration.
 - 1. 2023 Expense plan – Goal: August Membership meeting but NLT September Membership meeting
 - 2. 2024 Budget – Presented at the November annual meeting
- ii. The Radio Room Restoration project was previously approved by the membership and work to complete is underway. The final budget to complete this project is pending discussion with the team to arrive at a final cost that meets the objective of the project, i.e., Restore the club station to the status it was at the time the company originally closed the room.

7. Officer Transition Guide

Jim Brown requests input from the Board to complete and approve the document as soon as possible. This will be discussed in the September Board meeting.

8. Other

- a. Planning for Christmas Dinner- Move to September Board Meeting
- b. Zoom Login- Moved to September Board Meeting

9. Program Reminder – 22 August 2023 “Getting Started with Fox Hunting” presented by Chip Coker, KD4C at Woodcreek Church, 1730 CDT.

10. Board Meeting adjourned at 2034 CDT.

Minutes recorded by Jim Stafford, W5DTG, CARC Secretary

Looking for Club Members with WordPress Experience

Our Club's Webmaster, Mike Hollingsworth, W5QH, and I are beginning a project to revamp the Club website - n5cxx.us. Plans are to create a new website using WordPress.

If you have experience implementing websites using WordPress, we'd like to hear from you. To make it simple, just email me at frank@krizan.org. Then, Mike or I will get back in touch with you.

73, Frank Krizan KR1ZAN

CARC Challenge Coin

Challenge coins have long been a tradition in the military to indicate the holder's affiliation with and commitment to a specific unit or group. Over time, this tradition has moved into the civilian world, where public service organizations and even commercial enterprises have created identifying coins for distribution among members and associates.

The CARC Board of Directors has approved the issuance of a distinctive challenge coin to signify association with the Collins Amateur Radio Club and support of its traditions.

The coin shown below is the result of the collaborative efforts of the CARC Board to create a design that reflects both the historic origins of the Club and its guiding principles. The CARC call sign appears prominently on the back.

A quantity of these coins is currently on order from the vendor, and delivery is expected prior to the 26 September CARC general meeting. If they arrive on schedule, coins will be available for purchase at the meeting by members for \$5 each. A quantity will also be held in reserve for presentation to guest speakers and others as honoraria.



CARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT and Jim Skinner WB0UNI participate in the Richardson emergency siren testing. The August 2023 test was conducted on 2 August. All sirens were reported fully operational except one. The sirens are monitored by amateur radio operators and reports made using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz. Siren testing occasionally uses the University of Texas at Dallas (UTD) repeater at 145.430

MHz, as backup. The following CARC members participated in the August City of Garland Siren Test: Bob Jones, W5BJ and Jim Stafford, W5DTG. The Garland test observations report on a Net conducted on the GARC 146.66 repeater.

Crime Watch Patrol Jim Skinner WB0UNI participates in Richardson Duck Creek Crime Watch Patrol (CWP). CWP members, after successful completion of Richardson Police Department training, patrol their neighborhoods and report all suspicious activities to the police department.

Zoom Connection

After almost 3 years, we've concluded that the need for custom Zoom login credentials for each and every meeting of the Collins ARC is unnecessary. So beginning this month, we are now using a single login ID and passcode for all Board and membership meetings.

The Zoom login credentials will be emailed, as before, on the weekend prior to each Board and general meeting, but you'll note that it stays the same. We do not recommend that you save the credentials; however, if we experience an intruder, we may have to quickly change the sign-in codes.

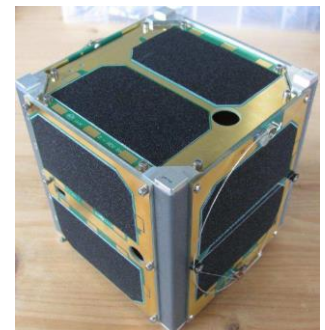
If you misplace the Zoom login email, you'll be able to find it by following the link located just under the Monthly Meeting Announcement on the main page of the Club's website: n5cxx.us

We do ask that you not connect to the Zoom session at times other than designated meeting days and times. As we expand the use of Special Interest Groups and Specialty Teams within the Club, unique logins may be created for special meetings. If you've logged in under the generic credentials, the special group meetings may not be able to use our Zoom account.

Thank you ... the CARC Board of Directors

CubeSat: Celebrating 20 Years of Transforming Space Access

Twenty years ago, an invention emerged from the labs of Cal Poly San Luis Obispo that would change the face of space exploration forever. The CubeSat, a tiny satellite with the dimensions of a square tissue box, revolutionized access to space, making it more affordable and achievable for researchers and students alike.



The brainchild of professors Jordi Puig-Suari and Bob Twiggs, the CubeSat was born out of the need to solve a crucial problem. While universities aimed to train students through hands-on experience, getting their satellites into space was a daunting challenge due to the limited access to rockets and the high costs associated with launches.

The innovative solution was simple yet effective, the CubeSat. They designed a standardized, risk-containment mechanism where all the risk of potential failure would be confined within the small box. This not only addressed the rocket providers' concerns about carrying student-built satellites but also reduced the cost and time required to send satellites into orbit.

The CubeSat's impact was profound and far-reaching. Almost every rocket launched into space today carries CubeSats on board. The small satellite became an open standard, meaning anyone could use it without any charges, promoting uniformity and standardization across the industry.

Unlike traditional satellites that could take years and cost hundreds of millions of dollars to build, CubeSats presented a cost-effective alternative. Building a CubeSat was a fraction of the expense, and the standard's versatility allowed various scientific missions, ranging from Earth observation and mapping to space exploration. The CubeSat opened the doors to space for many countries that launched their first-ever satellites, including Colombia, Switzerland, Hungary, Vietnam, and more.

Private companies also capitalized on the CubeSat revolution, stepping in as intermediaries between satellite creators and rocket providers. Companies like Maverick Space Systems acted as "Uber for satellites," arranging rides for satellites of various sizes, including CubeSats, on rockets for commercial and government clients.

The CubeSat's impact also extended to educational institutions. Cal Poly's CubeSat Lab provided students with hands-on experience, allowing them to design, build, and even launch CubeSats. The educational aspect of CubeSats became so popular that high school students at Grace Brethren High School in Simi Valley also had a class on spacecraft engineering, learning about CubeSats and building AMSAT CubeSat Simulators (CubeSatSim).

The CubeSatSim Project, led by Dr. Alan Johnston, KU2Y, AMSAT Vice President Educational Relations, is an initiative sponsored by AMSAT. It involves the development of a low-cost satellite emulator called CubeSatSim, designed with solar panels, rechargeable batteries, and UHF radio telemetry transmission capabilities. The CubeSatSim features a 3D printed frame and can be expanded with additional sensors and modules. The project aims to provide an accessible platform for educational purposes. Detailed doc-

umentation and build instructions are available on the project's Wiki at <https://github.com/alanbjohnston/CubeSatSim>.

As the CubeSat celebrates its 20th anniversary, it stands as a testament to the power of innovation and the impact of an open standard in transforming an entire industry. What began as a solution to a niche problem has now become an integral part of space exploration, enabling researchers, students, and commercial ventures to access space like never before. The CubeSat's legacy is imprinted in space, as these tiny satellites continue to leave their mark on missions, both in orbit and beyond.

This article courtesy AMSAT News Service, ANS Bulletin 211 dated 29 July 2023

[ANS thanks Michelle Loxton, writing for KCLU, and Dr. Alan Johnston, KU2Y, AMSAT Vice President Educational Relations for the above information]

SPACE ODDITIES

SpaceX launched the world's heaviest commercial communications satellite atop a Falcon Heavy rocket on Friday, August 4th. The triple-core rocket lifted off from Kennedy Space Center's pad 39A with the Jupiter 3/EchoStar 24 satellite at 11:04 p.m. EDT. The booster carried EchoStar's Jupiter-3 (EchoStar-24) communications satellite, which weighs in at over 9,000 kg (198,416 lb.). It is the largest communication satellite ever launched to geostationary orbit. Jupiter-3, which was built by Maxar Technologies, will support Internet connectivity across North and South America, in-flight Wi-Fi, community Wi-Fi services, maritime connections, enterprise networks, and backhaul for mobile network operators. [ANS thanks parabolicarc.com for the above information.]

- **Voyager 2 has reestablished communication with Earth and is operating normally.** NASA's long-running Voyager 2 mission, which launched from Earth in 1977 and is currently about 12.4 billion miles from Earth, lost contact with our planet after a set of commands accidentally moved Voyager 2's antenna two degrees away from Earth on July 28. A "heartbeat" signal was picked up on Tuesday, August 1, according to NASA's Jet Propulsion Laboratory (JPL), letting mission controllers know the probe was still healthy despite being unable to communicate fully with it.
- Voyager 2 is programmed to automatically reset its orientation a few times a year in case of troubles like this, but the next window would have been in October. On Friday, August 4, JPL announced in a mission update that NASA's Deep Space Network facility in Canberra, Australia was able to send a command into interstellar space that reoriented the spacecraft and

pointed its antenna back towards Earth. Mission controllers had to wait 37 hours to learn if the command was successful. And it was. "The spacecraft began returning science and telemetry data, indicating it is operating normally and that it remains on its expected trajectory," JPL said in the statement. [ANS thanks [space.com](https://www.space.com) for the above information.]

[This info courtesy the AMSAT News Service, ANS Bulletin 218 dated 6 Aug 2023.]

FT8 Dominates VHF Contests

Posted on [30 July 2023](#)

by [Bob KONR](#)

The FT8 mode was first released as part of the [WSJT-X software](#) in 2017. This new digital mode was adopted relatively quickly and is now a major force in amateur radio. You've probably heard the praises and complaints about it. On the plus side, it enables radio contacts under very poor conditions while detractors say that it is not real ham radio because the computer is making the contact. FT8 is an excellent example of a disruptive technology, impacting daily ham radio operations. This summer, I had two operating experiences (VHF contests) that really drove this point home.



My temporary station setup on the porch for the VHF contest.

ARRL June Contest

In the ARRL June Contest, we had very good sporadic-e propagation on 6 meters (and even 2 meters). I used my IC-7610 for 6 meters and usually had one receiver listening on the SSB calling frequency and the other sitting on the FT8 frequency. My strategy was to operate FT8 while keeping an ear on the SSB portion of the band. If signals were present on SSB, I switched over to that mode. The idea is

that the run rate on SSB is inherently faster (and more fun), so it is my preferred way to make contacts.

There was definitely activity on the SSB portion of the band, but it came and went throughout the contest. There were times that I was able to run on a frequency, calling CQ and having a steady stream of stations to work. Other times, I had to search and pounce, tuning around the band to find a new station to work. The FT8 story was different: most of the time there was consistent activity and new stations to work, but at a slower rate.

The FT8 operators tended to stay on FT8, even when the signals were strong. If they wanted to maximize their score, they probably should have switched over to SSB to make contacts at a faster rate. But they didn't and that is their choice. (One thing I've come to accept is that I don't control the choices that other radio hams make in terms of operating mode and band.) On 6 meters, I made 428 contacts with 80% of them on FT8. Radio operator decisions affect the types of QSOs made and if I focused only on SSB, I would surely have had more SSB contacts (but how many?)

CQ WW VHF Contest

In July, the CQ Worldwide VHF Contest was even more striking. While I was hoping for a repeat of the band conditions from June, the CQ WW conditions were not very good. However, I did manage to make QSOs using FT8 on 6 meters. The run rate was low and I often struggled to complete the exchange before the band shifted. Again, I listened on 6m SSB and picked up contacts there whenever possible. My QSO total for 6m was 164, with 90% of them via FT8.

After the contest, I heard from contesters that used only analog modes (SSB and CW) who reported that the contest was a complete bust. Even with hours of operating time, some folks only made 10 or 20 QSOs. This clearly tees up the choice: if you don't want to work digital, you can severely limit your number of contacts. On the other hand, if you use FT8, you can make contacts under weak conditions, but at a slower rate with a computer in the loop.

Like many contesters, I would much rather have a nice run of QSOs on SSB filling up my log. It is just way more fun than sitting there watching the computer screen report the slow progress of FT8. But in the end, we all have the same choice when conditions are poor: actually making contacts using FT8 or sitting there hoping that band conditions improve enough to support SSB.

2 Meter Band

I did make some FT8 contacts on 2 meters, but found only a small number of operators using that mode. I expect that FT8 activity will increase on that band as people figure out they can squeeze out a few more contacts & grids using that mode.

73 *Bob KONR*

[Our thanks to Bob, K0NR, for permission to use his article in our newsletter. The original, and more, is located at: <https://www.k0nr.com/wordpress/2023/07/ft8-vhf-con-tests/>]

WRTC will be in the UK in 2026!

With the successful, (despite many challenges to be met) WRTC2022 concluding in Italy the next World Radio Teamsport Championship The Olympics of Ham Radio will take place in 2026 in the South east of England.

Every 4 years, much like the Olympic Games, the World Radio Sport Team Championship, known as WRTC, relocates itself to a new host nation. The United Kingdom is delighted to have been awarded the hosting rights for the 10th WRTC taking place in 2026.



July

WRTC is a radio contest event, designed to provide a platform for high-achieving ham radio contesters to compete on a level playing field in the same geographic region using identical antennas, output power and other operating conditions. Each team will have had to qualify over a significant period of time by participating and scoring extremely well in a collection of HF radio contests from October 2023 to March 2025.

In July 2026, 50 qualifying teams, comprising of 100 operators will come to the UK from all over the world and will represent their home countries, much like the style seen in the Olympic Games. Each team of two will be assigned a Referee, for which there will be an application process. The team draw their operating site, their referee and callsign and then they all go off and operate the 24-hour IARU 2026 Contest. There will be live scoreboards available which will add to the excitement of this competition.

More details at the website: <https://www.wrtc2026.org/>

73 Ed DD5LP/G8GLM (WRTC 2018 Media Team member).

Excerpt from Jack, W5TFB's Book

To Be Continued in a future edition of **SIGNALS**.

Dubya...Dubya...Dubya

Web sites for Hams ...

We all have our favorite web sites for various amateur radio topics and resources. To help in the sharing of that info, we're starting a monthly collection of useful web sites on a different topic each month. This



list isn't all inclusive ... and, we're sure you have others that could benefit your fellow members.

So, we'd like to ask that you send along your URLs (web site addresses) along with a short description of what's important on the web site to kr1zan@arrl.net. We'll publish your added links in the following month's SIGNALS.

Also, if you have a favorite web site that's not associated with this month's topic, send it along with a brief description to kr1zan@arrl.net and we'll include it in the ETC section of next month's Dubya-Dubya-Dubya.

This month, lets do everything "Collins" ...

Collins Aerospace <https://www.collinsaerospace.com>
Collins Amateur Radio Club - Richardson
<http://www.n5cxx.us>

Collins Amateur Radio Club - Cedar Rapids - W0CXX
<https://www.w0cxx.us>

Collins ARC - Melbourne, FL - W4CRC <http://w4crc.us>

Collins Amateur Radio Club - Southern California Chapter, W6CXX - Mission Viejo, CA
<https://www.qrz.com/db/W6CXX>

Collins Aerospace Radio Group, W7CXX - Washington, UT <https://www.qrz.com/db/W7CXX>

Raytheon Missiles & Defense, Tucson, AZ. Catalina Radio Club - W7SA <https://www.w7sa.org>

Rockwell Collins France Amateur Radio Club - F6KNZ
 Ceased operation in 2014

Collins Aerospace Museum <https://collinsaerospace-museum.org>

Collins Collectors Association <https://www.collinsradio.org>

Collins Retirees Association <https://rcretirees.com>



And, this month, we are pleased to have additional web site inputs from two of our members:

From John Galvin, N5TIM:

Fairly New APRS Group and Function

WHAT: #APRSTHURSDAY net

WHEN: Every Thursday 00:00 - 23:59 UTC

WHERE: APRS

HOW: Destination Station = ANSRVR

HOW: Message body = CQ [space] HOTG [space] your text check-in message of choice.

WHY: Fun, test equipment, refine a skill, make 1200 baud cool again. <https://www.facebook.com/groups/989199962458033>/<https://aprsph.net/aprstuesday/>

Also, check out this new website created by N2RWE to help with APRSTHURSDAY check-in and confirmation activity (thank you N2RWE). https://aprs.n2rwe.com/views/aprs_thursday.php?submenu=about

For information on the Worked All States award, see the FB Group: <https://www.facebook.com/groups/989199962458033/permalink/1045800603464635/>

From Steve Phillips, K6JT:

My website <http://www.k6jt.com/> has a lot of information about the Texas CW net, Region 5 traffic net, how to handle radiograms, and other items in my bi-monthly newsletters that are on there from the last 18 years starting in 2005. -

From John Galvin, N5TIM:

Another APRS application. This one tracks high altitude balloons. <https://amateur.sondehub.org/#!/mt=Mapnik&mz=3&qm=12h&mc=58.81374,-94.48242&f=K1FQY-7>

This site displays telemetry from Amateur Radio high-altitude balloon launches, using the [SondeHub-Amateur](#) database.

Upcoming Events

Daily	DFW Early Traffic Net (NTS) at 6:30pm 146.88 – PL 110.9Hz
Daily	DFW Late Traffic Net (NTS) at 10:30pm 146.72 – PL 110.9Hz
Daily	Texas CW Traffic Net at 7:00pm on 3541 KHz and at 10pm on 3541 KHz www.k6jt.com
Tuesdays	Collins ARC Drive Home Net. 442.8 (+5) MHz, PL=110.9 Hz (K5BSA repeater), 5:30-6:00pm (no net 4 th Tuesday.)
1st Wednesday	Richardson Emergency Siren Test. At noon using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz.
2nd Wednesday	ARES North Texas HF Net Every month—3860 KHz at 8:30 pm—9:30pm
AUGUST	
19-20	10 GHz & Up – Round 1. North American amateurs work as many amateur stations in as many different locations as possible in North America on bands from 10-GHz through Light. Amateurs are encouraged to operate from more than one location during this event. Operations may take place for 24 hours beginning at 6:00 AM local Saturday though 12:00 midnight local Sunday. Details at http://www.arrl.org/10-ghz-up .
SEPTEMBER	
9-11	September VHF. Objective: amateurs in the US and Canada to work as many amateur stations in as many different 2 degrees x 1 degree grid squares as possible using authorized frequencies above 50 MHz. Stations outside the US & Canada may only work stations in the US (and its possessions) and Canada. Begins 1800 UTC Saturday and ends 0259 UTC Monday. Details at http://www.arrl.org/september-vhf
16-17	10 GHz & Up – Round 2. The objective is for North American amateurs work as many amateur stations in as many different locations as possible in North America on bands from 10-GHz through Light. Amateurs are encouraged to operate from more than one location during this event. Details at http://www.arrl.org/10-ghz-up
OCTOBER	
7-8	Collegiate QSO Party is an event focused on amateur radio clubs at colleges and universities. The event provides an opportunity for clubs to demonstrate amateur radio to new members, engage with alumni, and promote activity throughout college and university communities. The contest starts 1 October 0000 UTC and ends 2359 2 October Details at https://collegiate-qsoparty.com/ .

Need another Badge or Coffee Mug?



Order from The Sign Man of Baton Rouge at:
<https://www.thesignman.com/clubs/collinsarccart.html>

The Amateur's Code

by Paul M. Segal, W9EEA (1928)

The Radio Amateur is:

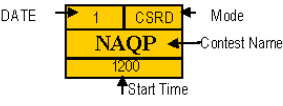
- CONSIDERATE** - never knowingly operating in such a way as to lessen the pleasure of others.
- LOYAL** - offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.
- PROGRESSIVE** - with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.
- FRIENDLY** - with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
- BALANCED** - Radio is an avocation, never interfering with duties owed to family, job, school or community.
- PATRIOTIC** - with station and skill always ready for service to country and community

**Join Us On Tuesdays
for the Collins ARC
Drive Home Net
5:30pm, 442.8 MHz
+5MHz, PL=110.9Hz
(No Nets on Meeting Nights)
Logs now available on n5cxx.us website**

CDXA Periodic Table of Contests - 2023

January	February	March	April	May	June	July	August	September	October	November	December
7 R	4 CSRD	4 S	1 CSRD	6 CSRD	3 CSRD	1 CS	5 C	2 C	7 CS	4 C	2 CS
RTTY Roundup 1800	VT QSO Party 0000	ARRL DX - SSB 0000	LA QSO Party 1400	7th Area QSO Party 1300	KY QSO Party 1300	RAC Canada Day 0000	NAQP - CW 1800	CWops Open 0000	CA QSO Party 1800	Sweepstakes CW 2100	ARRL - 160M 2200
14 C	4 CSRD	11 CSRD	TBD CSRD	6 CS	3 D	8 CS	12 C	2 CSR	14 R	11 R	3 D
NAQP - CW 1800	MN QSO Party 1400	OK QSO Party 1800	MS QSO Party TBD	IN QSO Party 1800	ARRL - INT. Digi 1800	IARU 1200	WAE DX - CW 0000	CO QSO Party 1300	Makrothen - RTTY 0000	WAE DX - RTTY 0000	FT Roundup 1800
21 S	4 CSRD	11 C	1 CSRD	6 CSRD	10 CSRD	16 CSRD	12 CSR	3 CSR	14 CSRD	18 S	10 CS
NAQP - SSB 1800	BC QSO Party 1800	Stew Perry TBC 1500	MO QSO Party 1400	DE QSO Party 1700	ARRL - VHF 1800	CQWW - VHF 1800	MDC QSO Party 1400	TN QSO Party 1800	NV QSO Party 0300	Sweepstakes SSB 2100	ARRL - 10M 0000
21 CSRD	5 C	11 CSRD	4 S	6 CSRD	17 C	15 R	19 S	9 S	14 CSR	25 C	17 CS
ARRL - VHF 1900	NA Sprint - CW 0	ID QSO Party 1900	NA Sprint - SSB 0000	New England QSO Party 2000	Stew Perry TBC 1500	NAQP - RTTY 1800	NAQP - SSB 1800	WAE DX - SSB 0000	AZ QSO Party 1500	CQWW - CW 0000	RAC Winter 0000
27 C	11 R	12 R	8 CSRD	20 CSR	17 CSRD	29 CS	26 CSRD	9 CSRD	14 CSRD		23 C
CQ - 160M CW 2200	CQWW WPX - RTTY 0000	NA Sprint - RTTY 0	NM QSO Party 1400	AR QSO Party 1400	WV QSO Party 1600	RSGB IOTA 1200	HI QSO Party 0400	ARRL - VHF 1800	PA QSO Party 1800	All K1USN, ICWC & CWA	Stew Perry TBC 1900
28 R	18 C	12 CSRD	8 CS	27 C			26 D	TBD CP	14 CSRD		
BARTG RTTY 1200	ARRL DX - CW 0000	WI QSO Party 1800	GA QSO Party 1800	CQWW WPX - CW 0000	All K1USN, ICWC & CWA	All K1USN, ICWC & CWA	WW Digi DX 1200	AL QSO Party 1800	SD QSO Party 1800		All K1USN, ICWC & CWA
	24 S	18 R	TBD CSRD				26 CSRD	10 C	21 CSRD		
All K1USN, ICWC & CWA	CQ - 160M SSB 2200	BARTG RTTY 0200	ND QSO Party TBD	All K1USN, ICWC & CWA			KS QSO Party 1400	NA Sprint - CW 0000	NY QSO Party 1400		
	25 CSRD	25 S	15 R				27 CS	TBD CSRD	21 CS		
	SC QSO Party 1500	CQWW WPX - SSB 0000	CQMM DX 0900				OH QSO Party 1600	IA QSO Party 1400	Worked All Germany 1500		
	25 R		15 CS					16 CSRD	21 C		
	NAQP - RTTY 1800	All K1USN, ICWC & CWA	MI QSO Party 1600				All K1USN, ICWC & CWA	NH QSO Party 1600	Stew Perry TBC 1500		
	26 CSRD		15 CS					16 CSRD	22 CSRD		
	NC QSO Party 1500		ON QSO Party 1800					TX QSO Party 1400	IL QSO Party 1700		
			29 CS					16 CS	28 S		
	All K1USN, ICWC & CWA		FL QSO Party 1800					16 CSRD			
								17 R			
								NA Sprint - RTTY 0000			
								23 R			
								CQWW - RTTY 0000			
								23 CS			
								ME QSO 1200			
								All K1USN,			

LEGEND
 GOLD = Major Contest = 10 points
 Blue = QSO Party = 7 points
 Pink = DX Contest = 5 points
 C = CW S = SSB
 R = RTTY D = Digital





Richardson, Texas
www.N5CXX.us

**3200 East Renner Rd
 Mail Station 461-290
 Richardson, TX 75083-0766**

TO:



Richardson, Texas
www.N5CXX.us

CLUB STATION
 (972) 705-1349

N5CXX REPEATER
 441.875 MHz +5 MHz Input
 131.8 Hz PL - RX and TX

N5CXX-1 PACKET BBS COL Node
 145.05 MHz

N5CXX-N1, NRCXX-N2 & N5CXX-N3 HSMN-MESHNET Nodes 2.4 GHz

Membership Meeting
 Tuesday 25 July 2023 5:30 PM
 THE MEETING WILL BE AT
Woodcreek Church Richardson TX

NEXT SIGNALS INPUTS DEADLINE:
→→→ 15 September 2023 ←←←