



Legacy Amateur Radio Club

RCA AMATEUR RADIO CLUB



AFFILIATED CLUB

INDIANAPOLIS, INDIANA

DECEMBER 2018

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, DECEMBER 11th, 6:30 PM AT
[SQUEALERS](#), 5899 E. 86th STREET, INDIANAPOLIS, IN

Merry Christmas and Happy Holidays

RCA ARC NEWS

2018 WAS A GOOD YEAR FOR OUR CLUB. Field Day was a success working with other Indianapolis area clubs. We returned to the Victor Conservation where we had operated in the early 70s. The Indy Hamfest was productive for the Club. KF9UH, AF9A and K9RU kept the 88 repeater operational for another year.

SUMMARY OF THE NOVEMBER MEETING – Thanks to all who attended the November meeting. Field Day... After this year's 3rd place finish, out of 304 entries nationally in the 3A classification, the FD committee has committed to try for first place in 2019. The clubs participating in this year's combined effort included RCA ARC, IRC, IMS ARC, HDXCC, and IvyTech ARC. A great job was done by FD coordinator Brian Smith, W9IND. The repeater had a couple of hiccups this month, probably caused by a UPS battery which needs to be replaced. The consolidation of the repeater hardware into one rack still remains to be done. It needs to be scheduled. K9RU reminded us we need to be accumulating stuff to sell at next year's Indy Hamfest. Also, it's not too early to be thinking about volunteering for next year's Mini Marathon in May.

AMATEUR RADIO LICENSE TEST SESSION –

Time: Saturday, December 8, 2018, 12:00 pm (Walk-ins allowed)

Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd
Indianapolis, IN 46254-2407

Contact: Jim Rinehart, k9ru@arri.net, 317 721-1458

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Dec 8-9 ARRL 10M Contest <http://www.arri.org/10-meter>
Jan 1 ARRL Straight Key Night <http://www.arri.org/straight-key-night>
Jan 5-6 ARRL RTTY Roundup <http://www.arri.org/rty-roundup>

For More Contests Information: <http://www.contestcalendar.com/>

Opportunities for public service: <http://indyhams.org/event>

NEW WSJT-X 2.0-RC5 BETA VERSION NOW AVAILABLE

A fifth “candidate release” — or beta version — of *WSJT-X* 2.0 now is available for download and use by beta testers. *WSJT-X* Developer Joe Taylor, K1JT, says *WSJT-X* 2.0-rc5 is stable, works well, and fixes known problems in RC4, the most-recent beta version released in mid-November.

“It is likely that the General Availability (GA) release of *WSJT-X* 2.0, scheduled for Dec. 10, will be nearly identical to RC5,” Taylor said on November 26.

Taylor also noted that the [ARRL RTTY Roundup](#) January 5 – 6 will, for the first time, permit the use of FT8 as well as traditional RTTY.

Changes in RC5 relative to RC4 include correcting the “worked before” logic for color highlighting, removing the 5-minute mouse timer, displaying and logging in UTC for contests, improving the layout of Working Frequencies and Station Information tables, and allowing deletes and editing in Fox and Contest log windows.

“You may need to invoke Settings | General | Colors | Reset Highlighting on your first program start with this version,” Taylor said. Comments and suggestions have been streaming into the *WSJT* Development Team via the *WSJT-X* Development reflector. The [Quick-Start Guide to *WSJT-X* 2.0](#) has again been updated to reflect the changes.

The Development Group recommends using RC5 in the conventional FT8 sub-bands at audio transmit frequencies of 2,000 Hz and higher. The latest beta versions are not backward compatible. Users of version 1.9.1 and earlier will be unable to decode RC4 and later transmissions, and vice-versa, Taylor pointed out.

“As more users upgrade their software to *WSJT-X* 2.0 — and particularly after the General Availability release on December 10 — the new protocol should start to dominate the conventional FT8 sub-bands,” Taylor said. “**As soon as possible after December 10, everyone should upgrade to *WSJT-X* 2.0.**” He urged those on the email reflector to spread the word that upgrading to version 2.0 after December 10 is very important. “There will be no looking back!” he said. [Download links](#) for RC5 on Windows, Linux, and macOS are found on the *WSJT-X* web page.

Users finding any unexpected behavior with *WSJT-X* 2.0-rc5 should subscribe and send a detailed report to the [WSJT-Development reflector](#). --ARRL Letter

AMSAT'S FOX-1CLIFF AMATEUR RADIO CUBESAT LAUNCHED SUCCESSFULLY

SpaceX has announced that the SSO-A: SmallSat Express mission carrying AMSAT’s Fox-1Cliff CubeSat has been deployed into orbit. A SpaceX Falcon 9 vehicle carried Fox-1Cliff and several other satellites into space Monday (12/03/2018) afternoon Eastern Time from Vandenberg Air Force Base in California, following a 1-day launch delay.

“Successful deployment of four microsats and the upper and lower free flyer with additional payloads for Spaceflight SSO-A: SmallSat Express confirmed. Follow [@SpaceflightInc](#) for further mission updates,” SpaceX tweeted this afternoon following the launch. ([See](#) the launch on YouTube.)

In addition to Fox-1Cliff, the SSO-A mission carried several other Amateur Radio satellites, including FUNcube on ESEO, JY1-SAT, K2SAT, and ExseedSat.

Fox-1Cliff carries the Fox-1 U/V FM repeater, AMSAT's L-Band Downshifter, the flight spare of the AO-85 Vanderbilt University Low Energy Proton (LEP) radiation experiment, and the standard Fox-1 Penn State University-Erie MEMS gyroscope experiment. Virginia Tech provided a video graphics array camera that's similar to the one on AO-92 but which will provide images at a higher 640 × 480 resolution.

The Fox-1Cliff downlink for FM voice and data-under-voice (DUV) is 145.920 MHz. Uplinks are 435.300 and 1267.300 MHz.

Fox-1Cliff is named in honor of long-time AMSAT member, contributor, and benefactor Cliff Buttschardt, K7RR (SK), who died in 2006. His contributions to AMSAT and other Amateur Satellite programs — including his service as an adviser during the initial development of the CubeSat specification at California Polytechnic State University — earned him the Lifetime Achievement Award from Project OSCAR in 2006.

In November as the launch was pending, AMSAT asked Amateur Radio satellite enthusiasts to listen for Fox-1Cliff's telemetry for the initial 72 – 96 hours as on-orbit checkout gets under way. The first station to successfully receive and submit telemetry to the AMSAT server will receive a special 3D printed QSL card acknowledging their contribution. Many amateurs have reported on Facebook of receiving strong signals during the first day in orbit.

"If you are capturing telemetry with *FoxTelem*, please be sure that "Upload to Server" is checked in your settings and your Ground Station Params are filled in as well," AMSAT has said. In the initial Safe Mode or Beacon Mode after startup, the transmitter is limited to 10 seconds on time followed by a 2-minute off cycle. "You will hear Veronica announcing 'Fox-1Cliff Safe Mode,' while in Beacon Mode," AMSAT said.

AMSAT has said that the on-orbit check-out procedure will be similar to Fox-1D and could be completed in as few as 7 days.

"It is very important, not to mention just plain good Amateur operating practice, to refrain from using the transponder uplink, so we can do the on orbit tests, including when we turn on transponder mode for testing," AMSAT said. "AMSAT will make it broadly known when the tests are complete and the transponder is available for all to use." — *Thanks to SpaceX and AMSAT Vice President-Engineering Jerry Buxton, N0JY*

JY1SAT is a one unit CubeSat, dedicated to the memory of His Majesty the late King Hussein, the first founder of the HAM Radio in Jordan and holder of call sign JY1. This will be Jordan's first satellite.

JY1SAT contains the AMSAT-UK FUNcube-6 communications transponder with expanded capabilities to be able to transmit stored images reflecting the Jordanian culture and its historical heritage, along with a voice message recorded by the Crown Prince to be transmitted in space to receivers around the world.

Frequencies for the JY1SAT FUNcube-6 transponder include:

Uplink: 435.100 – 435.120 MHz CW, LSB

Downlink: 145.855 – 145.875 MHz CW, USB

Telemetry: 145.840 MHz (FUNcube BPSK format, new Dashboard software will be made available)

JYISAT will transmit pre-stored images of the Kingdom which have been selected by a national competition. These images will be downlinked using a SSDV digital format.

Exseedsat-1

Uplink: 435.340 MHz FM voice with 67 Hz CTCSS tone and APRS digipeater
Downlink: 145.900 MHz FM voice, APRS digipeater, telemetry

ESEO (FUNcube 4)

Uplink: 1263.500 MHz FM voice with 67Hz CTCSS tone
Downlink: 145.895 MHz FM voice and telemetry

See also the AMSAT-UK summary of mission descriptions and frequencies at: <https://amsat-uk.org/2018/11/14/ssoa-amateur-radio-satellites/>

AMSAT CONGRATULATES QATAR AMATEUR RADIO SOCIETY, AMSAT-DL FOR SUCCESSFUL ES'HAIL-2 LAUNCH

AMSAT-NA has congratulated AMSAT-DL (Germany) and the Qatar Amateur Radio Society (QARS) for their roles in the [successful launch](#) on November 15 of the Es'hail-2 satellite, which carried AMSAT-DL's Phase 4-A transponder aloft. Es'hail-2 will be the first geostationary satellite to sport an Amateur Radio transponder. Launched from Cape Canaveral on a SpaceX Falcon 9 vehicle, Es'hail will be capable of linking radio amateurs from Brazil to Thailand, although it's unlikely to be accessible from North America with typical Amateur Radio satellite gear.

"I applaud the Qatar Amateur Radio Society (QARS) and AMSAT-DL's achievement, the result of 6 years of work," AMSAT President Joe Spier, K6WAO, said. "To be a first at something in space is indeed a rare, rare honor. It is this type of honor that AMSATs around the world work on every day."

AMSAT-DL will [commission](#) the Amateur Radio transponder ground station in Doha, with the Es'hailSat control team. AMSAT-DL will announce when the transponders are available for use. Read [more](#). -- *Thanks to* AMSAT News Service; Southgate Amateur Radio News

FCC APPROVES USE OF GALILEO GLOBAL NAVIGATION SATELLITE SYSTEM IN THE US

The FCC [has granted](#), in part, the European Commission's request for a waiver of Commission rules so that non-federal devices in the US may access specific signals transmitted from the Global Navigation Satellite System (GNSS) known as Galileo. The action means that consumers and industry in the US may access certain satellite signals from the Galileo system to augment the US Global Positioning System (GPS). The *Order* said that the Galileo GNSS is uniquely situated with respect to the US GPS, because the two systems are interoperable and RF compatible.

Specifically, the *Order* permits access to two of the Galileo system's satellite signals -- the E1 signal transmitted in the 1,559 - 1,591 MHz portion of the 1,559 - 1,610 MHz Radionavigation-Satellite Service (RNSS) band, and the E5 signal transmitted in the 1,164 - 1,219 MHz portion

of the 1,164 - 1,215 MHz and 1,215 - 1,240 MHz RNSS bands. These are the same RNSS bands in which the US GPS satellite signals operate.

The *Order* does not grant access to the Galileo E6 signal, which is transmitted over the 1,260 - 1,300 MHz frequency band, because this band is not allocated for RNSS in the US or used by the US GPS to provide position/navigation/timing (PNT) services. The FCC pointed out that granting access to the Galileo E6 signal could constrain US spectrum management in the future in spectrum above 1,300 MHz, where potential allocation changes are under consideration.

The omission of the E6 signal also means that radio amateurs would not have to protect Galileo receivers from interference on 23 centimeters, which has been a significant issue in Europe.
--ARRL Lettr

DECEMBER IS YOUNGSTERS ON THE AIR (YOTA) MONTH

December is [YOTA Month](#). Listen for stations on the air with YOTA as the call sign suffix.

"The idea for this is to show the Amateur Radio hobby to young people and to encourage youngsters to be active on the amateur bands," said Tomi Varro, HA9T. "This is a great moment to show Amateur Radio to the world and to invite newcomers."

YOTA is primarily an International Amateur Radio Union ([IARU](#)) Region 1 (Europe and Africa) activity, but youngsters from the US in Region 2 (the Americas) have attended YOTA summer camps, which are held in a different country each year. Varro said both licensed and unlicensed youth will be making contacts.

"Be helpful on the bands -- maybe these young operators are just making their first-ever contacts," he advised. YOTA stations are, in general, operated by individuals 25 or younger. The operating event takes place for the entire month of December UTC.

As part of YOTA month, Bob Johnson, W9XY, and Ken Claerbout, K4ZW, will travel to Ethiopia to team up with the club at the Addis Ababa University, Institute of Technology and club station ET3AA. Z39YOTA will be on the air from Macedonia from the Zheleznichar club.

The Ham Radio World Club's WK1DS/YOTA will be on the air from the US. [Logs](#) and a chart of all participating stations are on the YOTA website. For more updates, visit YOTA's [Facebook page](#). --ARRL Letter

JOTA REPORTS 36% GROWTH IN SCOUT PARTICIPATION

ARRL say Scouting's Jamboree on the Air (JOTA) 2018 reports that total USA Scout participation in the annual fall event jumped by 36% from 2017.

Each year more than 1 million Scouts and Guides get together over the airwaves for JOTA, which takes place on the third weekend of October. Since the first JOTA in 1958, millions of Scouts have become acquainted via Amateur Radio, and contacts sometimes result in relationships that extend for many years.

This year, 10,703 Scouts took part in the event, compared with 7,872 last year. Participating Amateur Radio operators topped 1,000 for the first time since 2016. At 610, the number of registered JOTA locations was way up, as was the number of JOTA stations registered, with 314. Participating JOTA stations reported contacts with stations in 99 countries, also up over 2017.

JOTA Coordinator Jim Wilson, K5ND, said he was pleased with this year's numbers and hopes that 2019's event will show a continued increase, despite a lack of sunspots.

World JOTA-JOTI numbers are not expected until early 2019, as each country reports its results by mid-December followed by number crunching and compiling of the report, Wilson explained.

Read the full ARRL story at <http://www.arrl.org/news/jota-reports-36-growth-in-scout-participation>

3Y0I TO INVITE ADDITIONAL OPERATORS -- SOME FRESH NEWS FROM CAPE TOWN, SOUTH AFRICA.

The **3Y0I** Team is about to deal with another extensive training next week + gathering some additional equipment we'll need at Bouvet Island. Also, new possibilities emerge: we can take 2 additional operators (CW + SSB) with us. If you're flexible operating - and weather- experienced individual, and willing to join 1-month long adventure of your life time, drop a msg asap at: k38dom@gmail.com. Be quick!"

Also, there has been several QSNs reported on the DXclusters by E51DOM/MM (mostly on FT8). This is reportedly Dom, 3Z9DX, "probably" operating from the ship that they will use to take them to Bouvet. Dom has stated that he will use this callsign during his sailing trips to several different locations in the World and "probably" on his way to Bouvet.

Departure dates are still not known. It is still a mystery... Remember, they plan to stay on the island for at least 2 weeks, if the weather cooperates.

The 3Y0I DXpedition's band plan frequencies (160-6m) and modes (CW/SSB/FT8) can be found at:<https://www.rebeldxgroup.com> <https://bouvetoya.org/3yoi-bandplan>

CALIFORNIA RADIO AMATEUR RECEIVES NOTICE OF UNLICENSED OPERATION FROM FCC

The FCC Enforcement Bureau on November 7 issued a *Notice of Unlicensed Operation (NoUO)* to Technician licensee Daryl Thomas, KE6MWS, of Carmichael, California, for allegedly operating an unlicensed FM radio station.

On October 10, 2018, an Enforcement Bureau agent from the FCC's San Francisco Office responded to a complaint of an unlicensed FM station operating on 95.7 MHz in Carmichael. The agent confirmed by direction-finding techniques that a signal on 95.7 MHz was emanating from a residence, and Thomas subsequently admitted that he was the operator of this station, the FCC said in the *NoUO*. The agent measured the field strength of the signal and found that it exceeded the maximum permitted level of 250 μ V per meter at 3 meters, established under Part 15.

The *Notice* cautioned Thomas that operation of radio transmitting equipment without a valid radio station authorization, or in violation of the Commission's RF radiation limits, constitutes a violation of the federal laws cited above and could subject the operator to severe penalties, including, but not limited to, substantial monetary fines, *in rem* seizure of the offending radio equipment, and criminal sanctions including imprisonment. "Unlicensed operation of this radio

station must be discontinued immediately and must not resume," the *Notice* warned. –ARRL

FCC TELLS LED SIGN MARKETERS TO ABIDE BY STATUTES AND RULES

The FCC Enforcement Bureau has called on on marketers of light-emitting diode (LED) signs to ensure that these lights comply with FCC rules. Since March of this year, the agency has entered into 21 settlement agreements with companies that marketed noncompliant LED signs in violation of the Communications Act and FCC rules. The settlements yielded approximately \$850,000 in penalties, and commitments to ensure compliance with the law going forward. Adherence to the FCC's equipment authorization and marketing rules is critical because radio frequency emissions from the signs may cause harmful interference to licensed communications, such as wireless services, the FCC said.

"In light of these recent settlements, we remind LED sign marketers of their obligations under the law," said Enforcement Bureau Chief Rosemary Harold. "The FCC takes seriously its responsibility in ensuring that energy-emitting devices like LED lights do not interfere with authorized transmissions."

LED lights are often used in digital billboards and other commercial and industrial applications, including billboards and large video displays in sports arenas. Given the electrical design of these lights, they may emit RF energy. Prior to being marketed in the US, LED sign models must be tested and comply with FCC technical standards and must include the proper labeling, identification, and user information disclosures. The FCC Office of Engineering and Technology (OET) oversees the equipment authorization process for RF devices, including LED signs.

The Enforcement Bureau investigated hundreds of indoor and outdoor LED sign models and discovered repeated FCC rule violations concerning the failure to market the models with the required equipment authorizations, labeling, and user information disclosures. To settle its respective investigation, each company verified that the models at issue were brought into compliance with FCC rules, agreed to pay a monetary penalty, and committed to abide by a compliance plan to improve internal procedures to avoid future violations.

The Bureau has settled 21 investigations to date, with penalties as high as \$115,000. [Each settlement](#) is available on the FCC Enforcement Bureau home page.

CANADIAN NATIONAL PARKS ON THE AIR EVENT SET TO START ON JANUARY 1

The Canadian National Parks on the Air event (CNPOTA) will get under way on January 1, 2019, and continue until year's end. A volunteer group of a half-dozen hams in Nova Scotia, working with a zero budget, came up with the notion of attempting to replicate the success of the National Parks on the Air (NPOTA) event in 2016, first created to mark the centennial of the National Park Service.

Radio Amateurs of Canada (RAC) has announced its support for CNPOTA, in cooperation with Parks Canada. All radio amateurs are invited to activate any of Park Canada's 48 national parks and 171 national historic sites, while "chasers" attempt to land a contact.

Activity for activators and chasers will be tracked on a dedicated website and a real-time leader board, and operators may compete for online awards and certificates. For updates on the program's progress, [visit](#) the CNPOTA website.

2018 ARRL HIRAM PERCY MAXIM MEMORIAL AWARD PRESENTED IN FESTIVE STYLE

The winner of the 2018 ARRL Hiram Percy Maxim Memorial Award, Ruth Willet, KM4LAO, received the award plaque and allotted \$1,500 on November 3 in a festive award ceremony during the Stone Mountain Hamfest in Lawrenceville, Georgia. Hosted by Alford Memorial Radio Club, the Stone Mountain Hamfest was also the 2018 ARRL Georgia Section Convention. ARRL Southeastern Division Director Greg Sarratt, W4OZK, congratulated Willet and presented the award before an enthusiastic crowd.

"The Hiram Percy Maxim Memorial Award is one of the top awards that ARRL awards annually," Sarratt said. "When I saw Ruth's nomination package come in, it was a no-brainer for me to support Ruth to win the award this year. I am very proud of this award and honored to be here to present it to Ruth."

Georgia Section leadership team members were in attendance, including Section Manager David Benoist, AG4ZR.

Willet, an Amateur Extra-class licensee, is a junior at Kettering University, where she is dual-majoring in engineering physics and mechanical engineering. She is an active member of ARRL, the Gwinnett Amateur Radio Society, the North Fulton Amateur Radio League, and the Amateur Radio Club of Columbia County in Georgia, the Genesee Country Amateur Radio Club in Michigan, the Young Ladies Radio League, the Straight Key Century Club, CWOps, and AMSAT. She is also president of the Kettering University Amateur Radio Club (K8HPS).

"This award means so much because of the people that have made my Amateur Radio adventures so meaningful, many of whom nominated me for this honor," Willet said. "I hope that this award will give me a platform to continue encouraging more people to get licensed and involved in this amazing hobby."

Her mother, Sharon Willet, KM4TVU, baked and decorated cakes for the award reception.

The Hiram Percy Maxim Memorial Award is given annually by the ARRL Board of Directors to a radio amateur under the age of 21 whose accomplishments and contributions to both Amateur Radio and the local community are of an exemplary nature. --ARRL

SHORTS

FT8 users: The *WSJT-X* development team is urging you to update the version of your software to a version of *WSJT-X* v2.0 by December 10. Joe Taylor, K1JT, writes: "As soon as possible after December 10, and certainly by January 1, 2019, everyone should be using *WSJT-X* 2.0 or a compatible v2.0 version of derivative programs such as *JTDX* or *MSHV*. As of today, PSKReporter statistics show roughly 3,000 users of *WSJT-X* versions older than v1.9.1, 9500 users of v1.9.1, and 3,000 users of v2.0-rc#. **Please, everyone, help us to spread the word that upgrading to v2.0 after December 10 is very important.** There will be no looking back!" *WSJT-X* v2.0 RC5 is available now on the [WSJT-X web page](#). Temporary V2.0 frequencies: 3.590, 7.080, 14.130, 21.130 & 28.160.

Scott, N3FJP, has upgraded his ARRL RTTY Roundup Contest Logging software to [version 3.5](#). New in this version is the "ability to separate RTTY from other digital modes in the Cabrillo submittal file."

Home Brewers! Free parts! – If you're building something or repairing something you might check this web site: <http://w7zoi.net/ke6f.html> Just received a "strip" of BF998 MOSFETs. Good deal! --AF9A

Robust Member Voting Results in ARRL Division Leadership Change – In the Central Division, incumbent Kermit Carlson, W9XA, edged out challenger Valerie Hotzfeld, NV9L, 1,898 to 1,755 votes. Carlson, of Batavia, Illinois, has been Central Division Director since 2016. Incumbent Vice Director Carl Luetzelschwab, K9LA, faced no opposition for re-election.

National Radio Centre run by the RSGB at Bleckley Park, UK – Great video with a walk through of the RSGB National Radio Centre.. <https://www.youtube.com/watch?v=VvjNAIxyOOQ>

THANKS FOR READING. HAVE A SAFE AND HAPPY HOLIDAY SEASON!

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