



Legacy Amateur Radio Club

RCA AMATEUR RADIO CLUB



AFFILIATED CLUB

INDIANAPOLIS, INDIANA

SEPTEMBER 2017

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, SEPTEMBER 12th, 6:30 PM AT [G.T. SOUTH'S](#),
5711 E. 71st STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE AUGUST MEETING – Thanks to all who attended the August meeting! We went over Greg's, K0GAH, plans for his tower installation and made some suggestions. Dave Jarvis had been at the State Fair for the Hoosier Heritage Day with the WW2IND group.

The Field Day wrap up meeting with representatives from the different clubs with plans for next year was discussed. One suggestion was to divide the responsibility into teams, CW, Phone and the GOTA station with each responsible for their antennas, rig, computers, generators, headphones & etc.

We did well at the Indy Hamfest selling most everything. For the last few years we have been lucky getting a lot of parts and stuff from estates, but we have sold all of it, so now we need to find some more stuff to sell next year. This could be a good opportunity get to rid of some of the stuff you don't need and donate it to the club.

We did talk about FT8 and the recent ARRL UHF contest, K9RU and W9ZB did take a stab at the contest but did not find much activity.

USS INDIANAPOLIS: THE LEGACY DOCUMENTARY FILM, (RUN-TIME: 98 MINUTES)

Presented by The Indianapolis Radio Club Friday, September 8, 2017, 7:30pm – 9:15pm.

With the coming of the fall season comes the September meeting of the Indianapolis Radio Club. This meeting will have a very special program, and a program with new relevance! Through a special arrangement, we will be presenting the documentary film "USS Indianapolis: The Legacy". This 98 minute film presents the story of the greatest sea disaster in U.S. Navy History, told for the first time by only the men who lived it.

In the most top secret Navy mission of World War II, the crew of the heavy cruiser USS Indianapolis delivers components of the atomic bomb to Tinian island. Four days later, two Japanese torpedoes sink the ship in the Challenger Deep, triggering an epic tale of survival. For five days, the 880 men who make it into the water battle searing sun, thirst, hundreds of sharks and ultimately each other. Just 317 survive - only to band together again in a fifty-year fight to clear their captain's name.

Set to a soaring original score, this incredible story unfolds with rare WWII footage, previously unpublished photographs, and new footage from one of the last WWII - era heavy cruisers still afloat. USS Indianapolis: The Legacy shows us that through courage and faith, ordinary men can survive the crucible of nature, and emerge extraordinary heroes.

You don't want to miss this opportunity to see this special film, especially in light of the recent discovery of the wreckage of the USS Indianapolis! The showing will take place at our September 8th meeting, starting at 7:30 pm, at the IVY Tech North Meridian Campus, 4th floor auditorium, at Meridian and Fall Creek. Follow this link for more information on the

film, including a preview trailer: <https://www.tugg.com/events/september-2017-indianapolis-radio-club-meeting>. Don't worry about getting tickets. You can if you want, but they are not required .

The meeting is in IVY Tech Building NMC, room 438. This is the fourth floor auditorium in the building at 50 W. Fall Creek Parkway, North Dr. Point your browser to http://www.ivytech.edu/shared/shared_hcompwg/maps/ivytech-NMC-campus13.pdf for a map. <http://www.indyradioclub.org/> --73, Ken, KJ9B

OPEN HOUSE SEPTEMBER 23rd AT THE W9VW "BARN" REMOTE STATION – There will be an open house at K9LZJ's Barn (W9VW) on September 23rd, 2PM to 5PM. Hank, K9LZJ, is also selling off a lot of his stuff as he has recently downsized. This will include VHF/UHF radios, 1.5KW amplifiers, IC-7000, Viberplex keyers, antennas, cable, and tools. Hank is selling much of his workshop off after 60 years as a ham.

The Barn is located north of Greenfield, on New Road, east of St Rd 9. You can't miss the 150 ft tower and antennas. <https://www.google.com/maps/@39.8154879,-85.7288359,209m/data=!3m1!1e3?hl=en>

<https://www.dxwatch.com/qrz/W9VW> -- Hank Wolfla K9LZJ

AUGUST AMATEUR RADIO LICENSE TEST SESSION

Time: Saturday, Sept. 9, 2017, 12:00 pm (Walk-ins allowed)

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

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

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

- Sept 9-10 ARRL September VHF Contest <http://www.arrl.org/september-vhf>
- Sept 15-16 W9DXCC Convention <http://www.w9dxcc.com/>
- Sept 16 Greenfield Hamfest, <http://www.w9atg.org>
- Sept 23 Bloomington Hamfest, <http://www.BloomingtonRadio.org>
- Oct 7 56th Hoosier Hills Hamfest, Mitchell, IN <http://www.w9qyq.org/hamfest>
- Nov 18 Fort Wayne Hamfest and Computer Expo, <http://www.fortwaynehamfest.com>
- Nov 25 TurkeyFest 2017, Brazil, IN <http://w9uuu.org/turkeyfest.html>
Opportunities for public service: <http://indyhams.org/events>

AMATEUR RADIO PREPARATIONS RAMP UP AS IRMA STRENGTHENS TO CATEGORY 5

Hurricane Irma, making its way through the Caribbean with the possibility of affecting South Florida by week's end, has, in the words of the National Hurricane Center ([NHC](#)), become "an extremely dangerous category 5 hurricane." The NHC urged that hurricane preparations be rushed to completion in areas now under hurricane warnings.

As of 1800 UTC, Hurricane Irma was some 180 miles east of Antigua and 185 miles east-southeast of Barbuda, with maximum sustained winds of 185 MPH. The storm is moving west at 14 MPH.

The Hurricane Watch Net ([HWN](#)) and the [VoIP Hurricane Net](#) will activate later today. "Yogi Berra once said, 'It's déjà vu all over again!'" quipped HWN Manager Bobby Graves, KB5HAV. "Just as Harvey rapidly intensified overnight, Irma did the same."

The HWN will activate at 1800 UTC (2 PM EDT) on its primary frequency of 14.325 MHz and

will remain in continuous operation until further notice, Graves said. Daytime operation will begin at 1100 UTC each day continuing for as long as propagation allows. Operation on 7.268 MHz will start at 2200 UTC and continue overnight. "If propagation dictates, we will operate both frequencies at the same time," Graves said. The HWN marks its 52nd anniversary this week.

He noted that HWN operation on 7.268 MHz will pause at 1130 UTC, and, if required, resume at approximately 1230 UTC, to allow the Waterway Net to conduct its daily net.

The [VoIP Hurricane Net](#) has announced plans to activate no later than 2200 UTC on Tuesday; WX4NHC at the NHC will activate at 2200 UTC on Tuesday. Both the HWN and the VoIP Hurricane Network relay hurricane "ground-truth" information to the NHC to assist forecasters. Any Amateur Radio operators in the affected area of Irma or with relays into the affected area of Irma are asked to provide surface and damage reports into the VoIP Hurricane Net for relay into WX4NHC, the Amateur Radio station at the National Hurricane Center.

Any SKYWARN Nets active as Irma moves into Puerto Rico and the US Virgin Islands that can pass reports to the VoIP Hurricane Net for relay into WX4NHC are asked to designate a net liaison or connect directly to the *WX_TALK* EchoLink conference node: 7203/IRLP 9219. Stations on All-Star can connect to the Echolink side of the system by dialing *033007203.

Read more: <http://www.arrl.org/hurricane-irma-2017>

AMATEUR RADIO VOLUNTEERS ASSISTING WHERE NEEDED IN HURRICANE HARVEY RESPONSE

Amateur Radio Emergency Service (ARES[®]) volunteers have been pitching in to support communication at some Red Cross shelters in south Texas in the ongoing aftermath of catastrophic and unprecedented flooding resulting from Hurricane Harvey, now a Tropical Depression. ARES members also have been serving as net control liaisons to the Harris County Office of Emergency Management (OEM). At mid-week, some 3 dozen volunteers were assisting at shelters. Another dozen were on tap to serve as OEM liaisons. ARRL Emergency Preparedness Manager Mike Corey, K11U, said the Red Cross is in need of Red Cross-trained shelter managers and volunteer management specialists.

A variety of emergency, health-and-welfare, traffic, and tactical nets in south Texas have been active on HF at various times of the day as well as on a wide array of VHF and UHF repeaters, which remain available as needed. The Salvation Team Emergency Radio Network (SATERN) has been convening on 14.265 MHz, while the Military Auxiliary Radio Service (MARS) has been using the 5.330.5 (USB) MHz interoperability channel on 60 meters.

ARES team members were advised that the impact to the region's communications infrastructure had been relatively minimal, considering the strength of the storm and the magnitude of the flooding. The storm did ravage cellular service in some Texas counties, however, especially Aransas (84%) and Refugio (73%) counties, the FCC reported. Overall, however, the FCC deemed the cellular system 95% functional.

The hardening of the telecommunications infrastructure to make it more immune to storm damage has diminished the need for Amateur Radio communication support and altered hams' traditional role there. The Amateur Radio telecommunications infrastructure in South Texas has remained analog, as "the lowest common denominator" of technology -- VHF/UHF FM, and HF -- and has the highest degree of interoperability. That's what we train to, that's what we teach, that's what we practice. --ARRL Letter

MARITIME MOBILE OPERATION ON LF MAY BE A FIRST FOR AMATEUR RADIO

What began as a "let's-see-if-we-can-do-this" effort resulted in successful Amateur Radio contacts on 475 kHz in early August by two Canadian operators aboard the sailing vessel *Hakuna Matata* off the coast of British Columbia. The accomplishment may be an

Amateur Radio first. Mark Mattila, VA7MM, and Toby Haynes, VE7CNF, equipped Mattila's 31-foot offshore-equipped Beneteau sloop with the gear necessary to make LF maritime mobile operation possible. The vessel already had a 46-foot mast with an insulated backstay antenna for marine and ham radio communication. Before the *Hakuna Matata* set sail, word went out among the local 630-meter community to be listening for CF7MM/mm on 475 kHz CW.

Haynes fabricated a 630-meter linear transverter for the project. Its bidirectional high-power mixer circuit that takes full RF output from an Icom IC-746PRO transceiver operating at an IF of 1.9 MHz and mixes with a local oscillator at 1.5 MHz down to 475 kHz. For receiving, signals pass in the other direction are upconverted to 1.9 MHz, with some minor signal attenuation.

Perhaps more critical were the antenna and RF grounding systems. The actual radiating element was a 38-foot long piece of #14 wire attached to the highest point on the mast. Grounding was accomplished by using the vessel's cast-steel keel and a couple of 30-foot wires near the gunwales. Tuning and matching were achieved using a loading coil and variometer, involving a total of 1,120 μH of inductance. Operation was coordinated using a South Coast 2-meter FM repeater, and the 630-meter operation was scheduled for late morning and early evening. The propagation mode was ground wave.

Contacts were made while the vessel was at anchor in Boho Bay, Silva Bay, and Winter Cove. Stations worked on CW included VE7SL on Mayne Island, VE7BDQ in Delta, VE7VV in Victoria, VE7CA in North Vancouver, and VA7JX in Campbell river. VE7SL and VE7VV also were worked on 630 meters on SSB. The "best DX" was a contact from Silva Bay with VA7JX spanning 142 kilometers (about 88 miles).

Mattila and Haynes said they were impressed by the signal reports received, given the transmitter's estimated 160 mW EIRP. "Received signals from participating stations varied from S-1 to S-9 +10 dB, and copy was easy for all contacts," they said.

The yet-to-be-implemented US Amateur Radio regulations governing operation on 630 meters do not permit mobile operation.

SOLAR ECLIPSE QSO PARTY A HIT, SCIENCE CONCLUSIONS AWAIT ADDITIONAL ANALYSIS

The 2017 Solar Eclipse QSO Party (SEQP) is history, and, while logs are still coming in, the preliminary participation numbers look good, according to Nathaniel Frissell, W2NAF, of [HamSCI](#).

"Although the final numbers are not yet in, preliminary reports show that over 670,000 spots were detected by the Reverse Beacon Network (RBN), and over 542,000 spots were reported to [PSKReporter](#) [PSK Automatic Propagation Reporter] during the SEQP," Frissell told ARRL on August 22. "These numbers will increase as data is processed."

Frissell said overall, the event went well, and he heard a lot of on-the-air activity during the 8 hours the SEQP was running.

"It will take some time to get a more scientific analysis of this, but we should have some results by the middle of this semester," said Frissell, who is an associate research professor at the New Jersey Institute of Technology. Frissell and others are investigating whether the sudden absence of sunlight during the eclipse -- and especially of solar ultra-violet and x-rays -- would briefly change the properties of the upper atmosphere.

Despite more than 60 years of research, "open questions remain regarding eclipse-induced ionospheric impacts," Frissell explained in a paper, "HamSCI and the 2017 Total Solar Eclipse," that he'll deliver this year at the ARRL-TAPR Digital Communications Conference (DCC).

He is encouraging anyone who took part in the SEQP to [submit a log](#) by September 30. Once their logs are submitted, SEQP participants will get a PDF Certificate of Participation. Frissell, who was in Gilbertsville, Kentucky, to observe the eclipse, said, "Totality was beautiful."

At Maxim Memorial Station W1AW, the focus was more on keeping on top of any emergency situations that could arise from the thousands of visitors converging along the narrow strip of totality. ARRL Emergency Preparedness Manager Mike Corey, K11U, and his assistant Ken Bailey, K1FUG, checked into and monitored the SATERN Net on 20 meters. They also monitored the interoperability channel 1 on 60 meters for coordination with federal partners. W1AW Station Manager Joe Carcia, NJ1Q, checked into WL2K nodes on 40 meters for any possible traffic. "Also, during this time, we went outside to look at the eclipse!" Carcia added.

Many Amateur Radio special event stations were also on the air along the path of totality on August 21.

Veteran Broadcast Listener (BCL) Bill Feidt, NG3K, in Maryland, conducted an informal propagation experiment on the AM broadcast band, listening on 1,070 kHz, which, he reported, "came alive with many signals" at about 1830 UTC. "It was pretty much a jumble," he told ARRL. "But just before 1900 UTC, I was able to identify WNCT in Greenville, North Carolina, which became quite strong and dominant for a few minutes." WNCT's 50 kW daytime signal is aimed away from Maryland.

Elsewhere, using the S-meter on his Panasonic RF-4900 receiver, 88-year-old John S. Erickson of Schenectady, New York, the father of ionospheric researcher Phil Erickson, W1PJE, recorded the signal strength of WWV time signals on 10 and 15 MHz every 10 minutes. His results show that nighttime conditions, where WWV got stronger on 10 MHz and weaker at 15 MHz, occurred before local eclipse passage on long paths. His data is being passed on to HamSCI for analysis.

"RF Seismograph" Sees Little Effect

Elsewhere, an initial analysis of solar eclipse [RF Seismograph](#) measurements by Alex Schwarz, VE7DXW, and his Modulation-Demodulation Software Radio (MDSR) group has suggested that the effect of the brief interruption in solar radiation within an approximately 70-mile-wide strip had minimal overall effect on radio propagation. The Scanning RF Seismograph is a real-time HF propagation monitoring tool.

"The Solar Eclipse RF Seismograph exclusively showed that propagation changes, but not to the extent that folktales report," Schwarz and the MDSR team said in a news release. "During the eclipse, we measured in three locations, and two did not show any changes in the way propagation behaves. On the third station, at an elevation of 900 meters, the 40-meter band came up, but that is not any different from regular 40-meter behavior."

The team believes that increased absorption on the low bands from high solar activity may have been a factor in the measurement's not yielding expected results. "The small band of darkness could not compensate for the thicker D Layer," the MDSR news release said.

Frissell told Schwarz that he'd be "very hesitant to make these conclusions so quickly and based on observations from a single point of reference."

"We know from past experiments that there are significant ionospheric changes resulting from the eclipse. Even from a citizen-science standpoint, many of these changes have been documented. We are hoping to see these effects on a larger scale." Read [more](#).

ARDF ENTHUSIASTS COMPETE IN USA NATIONAL CHAMPIONSHIPS

Fifteen US-eligible competitors took home first-place awards in the just-completed 17th US National Championships of Amateur Radio Direction Finding (ARDF) in Harrison, Ohio. The competition ran from August 3 through 6 on the 4,345-acre Miami Whitewater Forest and other nearby wooded sites, and it attracted more than 80 fans of the sport -- also known as foxtailing and radio-orienteeing.

This year's USA Championships were combined with the 9th ARDF Championships of International Amateur Radio Union Region 2 ([IARU R2](#)) -- the Americas.

The object is always to find as many of the required transmitters as possible in the shortest amount of time, and then navigate to the finish line. Competitors may use only their own direction-finding equipment, in addition to a compass and the provided map.

Classic 80- and 2-meter competitions with up to five hidden transmitters took place on separate days. Course lengths -- from start to each required transmitter and then to the finish -- ranged from 2.8 to 7.1 kilometers (1.7 to 4.4 miles), depending on age/gender category.

[Two additional events](#) took place, both on 80 meters. These included the sprint -- a shortened course with 10 transmitters and a faster transmitter cycle -- and foxoring, a combination of orienteering and foxhunting, in which participants receive maps marked with the approximate locations of a dozen very low-power transmitters to find. In all events competitors are divided into six age categories for men and five for women, with medals awarded to winners in each category. The 4 days of championship events were preceded by 3 days of informal training in other nearby parks.

According to IARU rules, US-eligible competitors must be either citizens or legal residents for at least one year.

Organizing and staging the championships were members of the OH-KY-IN Amateur Radio Society. Additional volunteers were members of Orienteering Cincinnati (OCIN), which also provided the event maps.

[Complete results](#) of all events in these Championships are available on the [Homing In website](#), where there is also much more information about the growing sport of ARDF.

Read [more](#). -- Thanks to [Joe Moell](#), K0OV, ARRL Amateur Radio Direction Finding Coordinator

ARISS CROSS-BAND REPEATER NOT AVAILABLE FOR GENERAL COMMUNICATION

The cross-band FM voice repeater aboard the International Space Station (ISS) has not officially been activated for general amateur use, although some stations have reported successful contacts. The system is being used in an effort to detect telemetry from three recently deployed CubeSats.

Russian ISS crew members last week released three satellites carrying Amateur Radio payloads -- TOMSK TPU-120 (RS04S), with FM voice announcements on 437.025 MHz; Tanusha-SWSU-1

(RS-6 with FM voice announcements and AX.25 9,600 bps packet on 437.050 MHz, and Tanusha-SWSU-2 (RS-7S) with FM voice announcements and on AX.25 9,600 bps packet on 437.050 MHz.

They set up the ISS repeater as a cross-band relay between 437.050 MHz and 145.800 MHz at the last minute, because they were concerned about getting telemetry from their satellites, which might be spinning more than expected. They are hoping that the nearby receiver on the ISS might be able to capture and retransmit telemetry not being received up on the ground.

ARISS has advised that using the voice repeater for general contacts can interfere with this mission. ARISS Ham Project Coordinator Kenneth Ransom, N5VHO, noted that the FM cross band repeater has been a capability of the onboard Kenwood D-700 transceiver since it was first flown to the ISS in 2004.

"It has been utilized very little during that time, due to concerns by the Russians that the unit might overheat," he said.

When the ARISS voice repeater is active and authorized for general amateur voice contacts, the uplink is 437.800 MHz, and the downlink is 145.800 MHz. -- *Thanks to ARISS and AMSAT News Service*

TYRO PETITION (AMATEUR RADIO ENTRY LEVEL LICENSE AND MORE) FILED WITH FCC

On August 14, 2017 a Petition for Rule Making was filed with the Commission. This would add an entry (Tyro) License to Amateur Radio, structure a sliver of 70cm for FM and digital repeaters and more.

The Tyro License is issued after passing a short on-line test proctored by a Ham mentor (Technician or higher). On-line is how one gets a GMRS license now. The Tyro License would just add a few more questions... and, get a commitment to tutor the new recruit toward becoming a polished Ham. This does not change the current VEC testing for higher class licenses.

Tyros (and all Amateur Licensees) can use 99, (2.5 kHz deviation, 12.5 kHz spaced) analog FM repeater/simplex channels on our 70 cm band. These 99 channels occupy only 2.25 MHz. (7.5%) of 70 cm... the bottom 1 MHz and the top 1.25 MHz of 430-440 MHz. Tyro Radios have restrictions... 20 Watts, restricted remote control. Tyros may use more advanced radios with adequate supervision.

These channels are numbered from 1-99. These channels are called the **TyroSubBand**. Interoperability is a major priority on this Sub-Band. Here, the Commission only sets the framework; Amateur Radio manages the detail within that framework. These are the only frequencies upon which the Tyro Class Licensee may transmit without supervision.

Channels 1-79 are duplex pairs used for repeaters... their inputs are 9 MHz lower in frequency than their outputs. This allows compact, less expensive more robust duplexers. Tyros may use repeaters but cannot be the licensee for a repeater.

Channels 1-64 are repeater pairs requiring coordination. They are strategic wide-area complex systems located at known fixed locations. They often cover major cities and major highways and seldom move. Interference among coordinated systems must be resolved by all the region's coordinating committees.

Channels 65-79 are repeater pairs not requiring coordination. These may be remote, temporary, or experimental systems. While they are somewhat less restricted, their most important distinction is that they are not protected by coordination.

Channels 80-99 are unpaired simplex only channels. They too, are uncoordinated.

Repeater output frequencies can also be used for simplex ("TalkAround"). TalkAround activity must not interfere with repeater traffic. Repeater input frequencies may not be used for simplex.

Repeaters on the TyroSubBand must be "open"... available to all licensed amateurs that honor the usage rules established by the repeater licensee together with their Committees.

A synopsis of the Petition is available at: www.HamptonTechnologies.com/TyroPetition.php. A copy of the actual petition is attached to this thread. --AD0WU

HARA ARENA -- HAMVENTION'S FORMER HOME -- AUCTIONED OFF BY IRS

The now-beleaguered building and grounds were closed a over a year ago by the owners, the Wampler Family, which, for years, had attempted unsuccessfully to put Hara on a profitable plane. The minimum bid is \$850,000; proceeds will satisfy a tax lien.

"Hara Arena is a six-building complex that contained an ice rink, ballroom, conference hall, concerts seating, sports events, shows of unlimited venues and restaurant," the auction announcement stated, noting that the two land parcels that make up the site in the Dayton suburb of Trotwood comprise slightly more than 25 acres.

Hara Arena served as the home of Hamvention from 1964 until 2016, before it was closed last summer. Soon after, Hamvention's sponsor, the Dayton Amateur Radio Association ([DARA](#)), announced that it would be relocating the country's most popular Amateur Radio gathering to the Greene County Fairgrounds and Expo Center in Xenia, where Hamvention 2017 took place in May. Last November, an online auctioneer took bids on a variety of items from the former Hamvention home, many of which went to nostalgia buffs or those having some sentimental connection with the facility.

Hara Arena had been facing long-standing financial problems that included unpaid property taxes and unresolved family issues. Promised renovations never materialized for the 2016 Hamvention, which attracted more than 25,000 visitors, worth millions of dollars to the Dayton-area economy.

The Wampler family had owned and operated Hara Arena since its humble origins in the 1950s, when Wampler Ballarena -- then a dance hall and more recently an exhibit hall familiar to Hamvention visitors -- was built in what had been a family-owned orchard. --ARRL

SHORTS

SOLAR FLUX TAKES ONE GIANT STEP - On Labor Day, the solar flux took a huge leap, from 120 to 183 from a day earlier. At 1300 UTC today, the solar flux was 144, and the sunspot number was 122. This bodes well for operation on the higher bands, with transequatorial propagation (TEP) a possibility on 12 and 10 meters as well as improved nighttime conditions on 20, 17, and 15 meters.

"The ionosphere will start cooling later this month; early October could be interesting!" Frank Donovan, W3LPL, has predicted. Alex Schwarz, VE7DXW, of RF Seismograph fame, suggested that 6-meter openings also could occur. "I hope everybody can enjoy the propagation," he said.

The NOAA Space Weather Prediction Center (SWPC) said today that a CME analysis was in progress. "Forecasters are in the process of analyzing a coronal mass ejection that could reach Earth within the next 2 days," NOAA said. The SWPC also has issued warnings for minor geomagnetic storming and a minor radio blackout. A moderate radio blackout occurred on September 4 at 2033 UTC.

Dominion Radio Astrophysical Observatory (DRAO) in Penticton, British Columbia, Canada released a statement on the jump in solar flux. — Thanks to The Daily DX, SWPC, Alex Schwarz, VE7DXWA

A NEW PRE-RELEASE VERSION OF [WSJT-X](#) IS AVAILABLE. Implementation of FT8 and it's auto-sequencing feature is not more capable and more polished. The decoder is faster and better: it now includes signal subtraction, multi-pass decoding, and the use of accumulated "a priori" information as a QSO progresses. Sensitivity extends downward as far as -24 dB in some circumstances. Overlapping signals 2 and 3 deep are frequently decoded at essentially the same frequency. On a crowded band we sometimes see more than 30 decodes in a single 15-second interval, over a 2 kHz window. The North American VHF Contesting Mode has been extended to include both FT8 and MSK144 modes.

The "RC2" release also includes many minor bug fixes and an extensively updated WSJT-X User Guide.

Depending on what code revision you upgrade from, it may be necessary to do a one-time reset of the default list of suggested operating frequencies. Go to *File->Settings->Frequencies*, right click on the table and select *Reset*.

CARL, K9LA, DISCUSSES THE IMPACT OF OUR PATHETIC SOLAR CONDITIONS, AND HOW DIGITAL MODES MAY BE ABLE TO PROVIDE SOME PROPAGATION

OPPORTUNITIES IN HIS RECENT PAPER ["What mode of operation enables JT and FT digital modes?"](#) (PDF)

AMSAT PHASE 4 GROUND STATION TEAM REPRESENTED AT DEF CON: Amateur Radio and [AMSAT](#) were prominently featured this year at the [DEF CON Hacking Conference](#) in Las Vegas. In addition to a license exam session were Amateur Radio demonstrations of software-defined radio, Phase 4 Ground, and GNU Radio flow graphs at WiFi Village. "The Amateur-Satellite service was of great interest," said Michelle Thompson, W5NYV, the Phase 4 Ground team leader. "At an estimated 30,000 attendees, outreach was highly successful. Participants were diverse, technical, curious, and came ready with the questions." Thompson said a lot of those on hand were radio amateurs or interested in getting a ham license. Amateur Radio was also part of the Wi-Fi Village "Capture the Flag" competition, she said. "Word on the street is that next year we [can] expect to see a lot more ham content in this exciting signal intelligence competition," Thompson said, adding that she's already looking forward to next year's conference. She noted that AMSAT Phase 4 Ground team will deliver a presentation at the [GNU Radio Conference](#) next month in San Diego, and at the [AMSAT Symposium](#) in October in Reno. -- *Thanks to AMSAT News Service via Michelle Thompson, W5NYV*

Jet lightning, a phenomenon involving discharge between a cloud and the upper atmosphere, was captured by cameras in Hawaii. Normally these rare events are seen by airline pilots, or [personnel aboard the International Space Station](#)

<https://www.youtube.com/watch?v=r50Un4LPTM4>

<https://www.youtube.com/watch?v=vSCwiQWzMa0>

[Spacecraft are tag-teaming to observe solar phenomena like coronal mass ejections \(CMEs\).](#) From October 2014 to March 2016, a single CME was tracked from the Sun to the outer reaches of our solar system by ten different NASA and ESA spacecraft. Dennis, N6KI

Top-Level Domain Name ".radio" Now Available --The top-level domain (TLD) name ".radio" is now available to the radio industry and Amateur Radio enthusiasts, and is reserved for individuals and companies with active interest in the radio sector. The .radio TLD can be used for web and e-mail addresses and will be managed by the European Broadcasting Union (EBU) with support from other world broadcasting unions. Visit the [.radio domains registration site](#) to request a .radio domain. For more information, visit <http://www.nic.radio> --ARRL

FCC's Updated Rules Governing Personal Radio Services Become Effective on September 28: The FCC recently adopted a comprehensive [reorganization of and update to](#) the rules governing the Personal Radio Services (PRS). These include a wide variety of wireless devices used by the general public for personal communication, including handheld Family Radio Service (FRS) transceivers, radio-controlled models, Personal Locator Beacons (PLBs), medical implant devices, and others. In addition to the updated rule changes, the FCC enhanced the General Mobile Radio Service (GMRS) to allow new digital applications, allot additional interstitial channels, and extend license terms from 5 to 10 years. It also allotted additional channels to the FRS and increased allowable power on certain FRS channels from 0.5 W to 2 W. It also updated the Citizens Radio Service (CB) rules to allow hands-free headsets, eliminate a restriction on DX communication, and remove other outdated requirements. "These changes and others outlined below will update PRS rules to be more in line with current public demands for the services and will make the rules easier to read and find information, while also removing outdated requirements and removing unnecessary rules," the FCC said. --ARRL

Mellish Reef [VK9MA](#) team said in its recent [VK9MA Expedition Insider](#) that it plans to focus on the lower bands during its November 2017 DXpedition. Mellish Reef is the 29th most-wanted DXCC entity. The nine-operator team will set sail on November 1 from Australia aboard the MV *Phoenix*, arriving on November 3. The DXpedition will depart Mellish Reef on November 16.

Data modes, and especially RTTY, will be one focus of the VK9MA DXpedition, and the team says it may give JT65/JT9 and the newly popular, but still beta, FT8 a try. During their 13-day stay on the reef, team members will run four complete stations around the clock. -- *Thanks to [The Daily DX](#)*

THANKS FOR READING!

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