



# Short Skip

Volume 68 Issue 4

April 2019

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 Webmaster, John, W9WY

## REPEATERS

Freq	Location
147.000	Merrillville
147.240	St. John
442.075	Merrillville

All Lake County ARC Repeaters are open to all amateurs. All repeaters must have a PL of 131.8 set in order to access.

## FROM THE PARADE STAND

by Tim, N9CA, LCARC President



Our Next Club Meeting: Friday April 12th. The Board meets at 6:30pm, the general member meeting at 7:30pm.

A BIG THANK YOU to John Gianotti W9WY who presented "The Abandoned Hara Arena" and "How-To install a DMR Code Plug" last month.

The April program will be "The Russian Woodpecker". The "Woodpecker" (an Over The Horizon Radar system) has returned to HF, often on our 40 meter band. (China has one now too!). Bill Leaming N4GIX will be our presenter. OTH technology is remarkable.

Apple has released a new app for digital QST (version 5.1) for digital readers that use iOS devices. A long-standing problem involved the inability of some Apple iOS app users to download digital QST issues to their devices. When they attempted to do so, the app crashed. The new app is now available on the Apple iTunes store.

Android and Kindle users and those who view digital QST on desktop or laptop computers will not be affected by this change. Android

and Kindle users do not need to update their apps.

The 3Y0I DXpedition to Bouvet Island (Bouvetøya) is off, at least for now. The skipper of the MV Atlantic Tuna determined it was not safe to continue its voyage to the remote Antarctic island after the vessel suffered some damage from severe storm conditions.

"The ship was hit by waves of more than 36 feet and winds exceeding 100 MPH. "The fierce oceanic forces swept past the upper deck, taking one of the radars, including VSAT, VHF, and HF marine antennas, off the mast and throwing them all overboard," Strzyzewski recounted. He stressed that all members of the DXpedition team are "fine, feeling OK, and safe."

The DXpedition had expected to arrive on the island on March 26 and be on the air by month's end. A March 27 news release said. "But the 3Y0I Expedition is not cancelled -- we don't give up that easily."

Starting on April 1, Amateur Radio on the International Space Station (ARISS) will accept applications from US schools, museums, science centers, and community youth organizations (working individually or together) interested in hosting contacts with orbiting crew members on the International Space Station (ISS). Contacts will be scheduled between January 1 and June 30, 2020.

The deadline to submit proposals is May 15. For details how to submit an application

visit ARISS website. Proposal how-to webinars will be available April 11th, 16th, 17th at 6:00pm CST.

The FCC has invited public comments on ARRL's 2018 Petition for Rule Making, now designated as RM-11828, which asks the FCC to expand HF privileges for Technician licensees to include limited phone privileges on 75, 40, and 15 meters, plus RTTY and digital mode privileges on 80, 40, 15, and 10 meters. Interested parties have 30 days to comment. Technician license holders make up over 50% of current Amateur Radio licensees.

In Response to Global Warming. A new book, Energy Choices for the Radio Amateur by Bob Bruninga, WB4APR, who developed the Automatic Packet Reporting System (APRS), explores ongoing changes in the world of power and energy and takes a careful look at the choices we can make; the pros and cons of utility versus home solar power, oil and gas heat versus an electric heat pump, and a gas car vs electric vs hybrid. Visit ARRL.org

A new ARRL podcast aimed at newcomers to Amateur Radio was launched on Thursday, March 7. Called, "So Now What?," The podcast will alternate new-episode weeks with the "ARRL The Doctor is In" podcast. "So Now What?" will focus on answering questions and providing support and encouragement for new licensees to get the most out of the hobby.

*Continued on page2*

# MEETING MINUTES

March 8, 2019— Russ, KB9HO

The meeting was called to order at 7:32PM

Introductions were made with 19 people attending the meeting.

The minutes of the last meeting were read and accepted as read.

The password for the club web page is 2900W93rd.

The treasury's report was read. Federal and State taxes have been filed. The insurance has been paid. A donation to the ARRL for the Herb Briar award of 100.00 to be made.

**Repeaters** We had someone asked for Tim to check into repeater problems. Tim has not found any problems with the repeaters.

The Net check-ins are going OK with 16 check-ins. The nets have been going great with around 10 to 20 check-ins with every net. The is at 7:00PM every Wednesday.

The Technician classes have been started with 4 attendees. Will have the VE test in April for those in the class and for walk-ins to get their license or to upgrade.

W5KUB has a live streaming every Tuesday.

We still need presenters to give programs at the club meeting.

Band conditions have been good with a lot activity on FT8.

This month's program is a video about the now closed Hara Arena in Dayton Ohio. John, W9WY also gave a short demo on programming the Tytera MD380 for analog frequencies.

Next months program will be about the Russian Woodpecker.

The Program for May will be on Sky warn.

Meeting adjourned at 8:52PM.

## PARADE STAND

*Continued from page 1*

The "So What Now" podcasts will explore questions that newer hams may have and the issues that keep newcomers from remaining active.

As with "ARRL The Doctor is In", listeners will be able to find "So Now What?" on Apple iTunes, Blubrry, or Stitcher (free registration, or browse the site as a guest) and through the free Stitcher app for iOS, Kindle, or Android devices...or wherever you get your podcasts. Episodes will also be archived on the ARRL website.

73, "Buzz"

## NEED HELP? CALL ON THESE ELMERS

Tim N9CA

Bill N4GIX

Bill Young N9QLS

Russ KB9HO

Andy W9FXT.

Also it was mentioned Mark K9MQ is an ARRL Tech Specialist and can be called on.

The club has been informed that Bowman Electronics in Valparaiso will do tower climbing and antenna repair. Give them a call at: (219) 462-7933 or stop and see them at: 504 Marquette St, Valparaiso, IN 46383

## CAROLE PERRY, WB2MGP, IS FIRST RECIPIENT OF AWARD NAMED IN HER HONOR

ARRL News



ARRL congratulates Amateur Radio educator Carole Perry, WB2MGP, for being the first recipient of the newly established Carole Perry Educator of the Year Award, presented on February 9 by Orlando HamCation®. The award, to be

given annually in Perry's name, recognizes outstanding dedication in educating and advancing today's youth about Amateur Radio.

A fellow and director of the Radio Club of America (RCA), Perry is a past Dayton Hamvention® Amateur of the Year and a recipient of the ARRL Instructor of the Year Award. She sits on the RCA Scholarship Committee and chairs the RCA Youth Activities Committee, which she established in 2007.

Perry has moderated the Hamvention® Youth Forum for 31 years. The 2019 Orlando HamCation was the ARRL Southeastern Division Convention.

## APRIL PROGRAM



April program will be about the Russian Woodpecker. During the 1970's and 1980's, anyone who owned a shortwave or ham radio would have been very familiar with a sharp, repetitive "rat tat tat" noise.

This interference permeated the airwaves and disrupted over air communications and television signals all over the world. This characteristic tapping sound gave the device(s) its now-famous nickname "The Russian Woodpecker" aka the Duga Radar system.



Scan this code to go  
directly to our web page  
[w9lj.org](http://w9lj.org)

# Random Acts of Kindness

by Urb W1UL

About 15 years ago, during a trip to Florida on an oppressively hot August day, I was dispatched to the local super market to get an ingredient for dinner. As I approached the entrance an older gentleman was heading toward his car. He was using his shopping cart more like a walker than a transporter of grocery items.

I noticed his car had a Purple Heart license plates I walked over to him and said, "Thank your for your sacrifice and service." He literally started to cry, commenting that he had the plates for about 10 years and I was the first one ever to comment on them. In the ensuing conversation he disclosed he was wounded during the invasion of Guadalcanal and was also awarded the Bronze Star.

Starting on that eventful day I approached every veteran I could identify by sticking out my hand and saying, "Thanks for your service." In the ensuing years everyone recipient would say, "thank you," and frequently a nice conversation would follow.

When Viet Nam vets returned home they were treated

with disdain. They didn't dare wear their uniforms in public because people would curse at them and frequently they were spit upon.

I am of the opinion that irrespective of our personal opinions of the military and wars we owe a debt of thanks to those who severed, especially those who put their lives on the line. If I can identify a Viet Nam veteran I shake their hand and say, "Welcome home and thank you for your service."

What is a Random Act of Kindness?

A random act of kindness is simply a deed we do to give pleasure to someone else with no expectation of anything in return. Thanking a vet is just one example, however, the kindness universe is infinite.

We humans tend to complain frequently and give accolades rarely. Have you ever complained to the manager of a restaurant that the meat was overcooked and the server was impolite? Thinking positively rather than negatively the comment could be, both your food and service was great.

The pervasiveness of a lack

of positive feedback was driven home during my master's graduation at Monmouth University. The then New Jersey Governor Thomas Kean was the keynote speaker. He started his presentation with the question, "How many of you know this is the year of the teacher?" Many people, especially students, raised their hand. He then asked, "For everyone, not just graduates, how many of you have had a teacher who made a meaningful impact or change in your life?" Almost everyone raised their hand. Next question from Governor Kean was, "How many of you ever took the time to thank teachers who had a meaningful impact on your life?" Almost no one raised their hand.

There is an important point here, just because someone is doing an outstanding job doesn't mean they wouldn't appreciate a pat on the back.

What Does This Have to do with Ham Radio?

Nothing and everything. Courtesy doesn't have starting and ending boundaries. Have you ever thanked anyone who helped you with a difficult

point when you were preparing for you license? How about a speaker of at a meeting? Almost everyone applauds the speaker but there is nothing like going up to the speaker and saying, "Great presentation, I learned a lot." How about thanking the outgoing officers of your club, the publisher of your club's newsletter or the person who makes the snacks at meetings?

My father's mantra was, "The measure of a person is how they interact with someone who can do nothing for them in return. I think he was talking about random acts of kindness.

One last thought. Place a phone call to a couple of your ham radio friends and simply tell them, "Since I've met you I am enjoying ham radio much more which carries over to the quality of my life."

Thanking or complementing someone will make you happy and possibly make the recipient's day. It's a win-win deal.

Urb LeJeune, W1UL, is the creator of Ham-Cram, a ham radio test preparation website. He writes from New Jersey, USA. Contact him at [urb@w1ul.com](mailto:urb@w1ul.com)

## What is a Country?

Bob KONR

Many radio hams exchange QSL cards to provide written confirmation of a radio contact. Some radio amateurs just like to collect the cards while others are working to achieve various operating awards. (One alternative to paper QSLs is to use an electronic verification system such as the ARRL Logbook of the World.) For US hams, a fun practice is to keep track of the states that you've contacted and

eventually earn the Worked All States Award. Another popular activity is keeping track of how many countries you've worked and then obtain the DX Century Club (DXCC) Award.

Recently I came across an online discussion of what qualifies as a separate country in the amateur radio world. The confusion point was that Alaska was showing up in logging software as a "country". It turns out

it counts as both a state and a country. The generally accepted countries list is established by the DXCC award. Actually, the correct term is entities, not countries, but in normal conversation people seem to use countries. The DXCC award is earned by confirming a minimum of 100 countries, I mean entities.

Back to the issue of Alaska — it clearly is one of the 50 United

States, so you'll need to work it to achieve Worked All States (WAS). It is geographically separated from the lower 48 states, so it is also considered a separate country. The same is true for Hawaii — counts as a state and a country.

To find out what counts as a country, you need to check the DXCC Country List.

**FOR SALE:** Got some radio gear for sale? Looking for some radio gear to purchase? Check out the new FOR SALE page on the club's website — <https://lcarc.weebly.com/> -sale. Scroll down to see the most current items or click on the ARCHIVE section to see items for sale in previous months. If you have something that has been sold, be sure to contact John, W9WY for information to have your listing removed. There is no charge for club members to list their items. This is a service for members.

# SOME STORMY SEAS FOR COMPETITIVE SAILORS USING HF AMATEUR RADIO

from Mar 4, 2019 ARRL Letter

The sorts of rules regulating the degree of outside assistance allowed in ham radio contesting also apply in other endeavors. An Estonian skipper was recently penalized in the Golden Globe Race (**GGR**) after seeking “weather routing” — the best route according to wind and weather conditions — via ham radio. The apparent third-place skipper Uku Randmaa, ES1U-KU, **escaped disqualification** from the round-the-world race, however, getting a 72-hour penalty instead. As of March 4, he had 630 miles to go. He’ll serve most of his time penalty after he finishes the race.

A recording of the conversation was provided to race headquarters on February 19. In it, Randmaa asks, “I’m heading 90°. Can I be sure that I can

take the wind, if I’m sailing east?” The other station, VP8LP, advises him to move northwest and later tells Randmaa, “The more north you go, the quicker you get out of the wind hole.”

Race rules say, “Entrants are free to speak to media, family, friends, and sponsors by radio at any time during the event, but must not be given any form of weather routing. Competitors may communicate freely (by radio or by hailing) with other competitors, or other mariners on vessels at sea, requesting or giving any verbal information/advice whatsoever, even if this is considered weather routing.”

The approximately 30,000-mile GGR solo circumnavigation starts and ends in Les Sables-d’Olonne, France. It has four rendezvous gates along the way.

“This is a retro race with skipper restricted to using a sextant, paper charts, and wind-up chronometers, just as Sir Robin Knox-Johnston used in the first Sunday Times Golden Globe Race 50 years ago,” Race Chairman Don McIntyre explained to My Sailing magazine. Skippers can only communicate by marine and/or amateur SSB HF radios and on an Amateur Radio net.

Meanwhile, according to a **January report**, some GGR sailors have been operating on Amateur Radio frequencies using phony call signs and have been asked to stop operating. One of them, second-place skipper Mark Slats — who was reported to have been using PI3MS — said on January 15 he was considering getting

out of competitive sailing, citing safety concerns, after being banned from the ham radio net for being unlicensed. The GGR 2018 – 2019 winner, Jean Luc Van Den Heede, who finished on January 29, had been using J6LJV, and that call sign appears under his name on QRZ.com, although authorities in St. Lucia are reported to have said they have no record of his license.

A January 15 announcement on the Golden Globe Race Facebook page said, “GGR requires all entrants to have a licensed marine HF SSB radio... and the entrant to have a Marine Radio Operator’s license only. GGR does monitor all strong weather with winds over 40 knots, and, if appropriate, provides both forecasting and routing information to assist the entrant to sail safely.”

**FOR SALE**



For sale. 100.00 each for radios 75.00 Mc-60A.

Contact Jeff, KC9TEW [jskohn@comcast.net](mailto:jskohn@comcast.net)

## UNIDEN BDC536HP SCANNER.

Marv’s WV9O, sister Jackie would like to sell this scanner from Marv’s estate. She is asking \$500.00. Contact Mark, K9MQ for more information. Check it out on the web at: <https://lcarc.weebly.com/for-sale>

## CONGRATULATIONS ON UPGRADE!

Congratulations to the following club members who recently upgraded:

- Dennis Cole, KD9KVE has upgraded to General.
- Natalie Morris-Cole, K9NAT has upgraded to Extra

## WEBSITE OF INTEREST

Click on the links to go to the website

Lots of hams have been making the switch to PowerPole connectors. I have been using them for years with great results. Find out the CORRECT way to terminate them at this web site:

<http://tinyurl.com/#>

How did Cell Phones Begin

<https://www.youtube.com/watch?v=rMQa9AgDmCU>

Mr Carlson’s Lab

<https://tinyurl.com/y2gk2ddv>

HRD Logbook Setup Tutorial

[https://www.youtube.com/watch?v=tSC\\_nKjxl6E](https://www.youtube.com/watch?v=tSC_nKjxl6E)

Lots of publications about commercial radio and TV

<https://www.americanradiohistory.com/>

Thanks to Ben, KC9UNS for keeping these links updated:  
LIST of 2019 Hamfests:

<http://tinyurl.com/chihamfests>

Chicago Land NETS

<http://tinyurl.com/chicago-ham-nets>

# INDIANA QSO PARTY - MAY 4!!

from ARRL Members Website



The Indiana QSO Party is Saturday May 4th, starts at 11AM and ends at 11PM EDT (1500 UTC May 4th to 0300 UTC May 5th).

The objective for Indiana stations is to work all 92 Indiana counties and work as many stations as possible in Indiana and worldwide.

Station operating outside of Indiana the goal is to work all 92 Indiana counties and as many Indiana stations as possible.

INQP allows a number of operating categories including: QRP, low and high power single operator, all-out club efforts, multi-operator high power and multi-multi (multi operator and multi transmitters) operation.

Also included are mobile units and rovers moving from county to county and portable setups similar to Field Day. Plaques are awarded for best in Indiana, out of state efforts, and best individual county efforts!

Indiana Club Competition INQP rules include a category for Club Competition that allows an Indiana Amateur Radio Club to have their members that submit contact-logs for an aggregate club score. Members need to list the club on their entry. Plaque for the club with highest aggregate score and awards certificates for second and third place.

The Indiana exchange is RS(T) plus the county and for all others USA stations it is RS(T) plus state, for Canada

RS(T) plus province or territory and all others it is RS(T) plus DX. See INQP site for Indiana county abbreviations. All start with IN and then the county.

<http://www.hdxcc.org/inqp/counties.html>

Logs should be submitted in a digital format, the Cabrillo logging format is preferred. Handwritten logs are accepted but have to be entered manually, so an electronic log is preferred. Logs must be received by June 1st.

The INQP overlaps with a few other QSO parties and contests: the 7QP, NEQP, and the Italian ARI Contest. So, during the INQP many other stations seek contacts from Indiana to fill their logs. The more Indiana stations on the air that day, the more action for everyone!

**INQP ACTIVITY MAP** - Once you have made a plan, please e-mail Mel KJ9C [kj9c@arrl.net](mailto:kj9c@arrl.net), with the information on what counties and call signs you will activate during the INQP. The HDXCC will list your call and county on the activity map so others will look for you.

<http://www.hdxcc.org/inqp/activity.php>

**LOGGING SOFTWARE** WriteLog, NA, N1MM, N3FJP and LOGic 8 support the INQP.

**CHECK DETAILS:** <http://www.hdxcc.org/inqp/software.html> There is

an example for using an XL spreadsheet for an entry.

The **HDXCC WEB** site includes the rules, entry categories, county abbreviations and maps, logging software links and operating information for the INQP. <http://www.hdxcc.org/inqp/index.html>

40 meters has the most activity followed by 80 and 20 meters.

# FCC TO REINSTATE MORSE CODE TEST!

April 1, 2014 By Dan KB6NU

This just in...  
Washington, D.C. - April 1, 2019

Today, the Federal Communications Commission (Commission or FCC) approved Report and Order 14-987af which reinstates the Morse Code test for General Class and Amateur Extra Class licensees. "It was a big mistake eliminating the Morse Code test," admits Dotty Dasher, the FCC's director of examinations. "We now realize that being able to send and receive Morse Code is an essential skill for radio amateurs. As they say, it really does get through when other modes can't."

Not only will new applicants have to take the test, but General Class licensees who have never passed a code test will have one year to pass a 5-wpm code test. Similarly, Amateur Extra class licensees that never passed a code test will have one year to pass a 13-wpm test. Those amateurs that fail to pass the test will face revocation of their operating privileges. Materials for administering the examinations will be distributed to Volunteer Examiner Coordinators by the end of April, so that they can begin the testing on May 1, 2014.

"This isn't going to be one of those silly multiple-choice type

tests," noted Dasher. "We're going to be sending five-character random code groups, just like we did in the old days. And, applicants will have to prove that they can send, too, using a poorly adjusted straight key."

Technician Class licensees will not be required to take a Morse Code test, nor will a test be required for new applicants. "We discussed it," said Dasher, "but decided that since most Techs can't even figure out how to program their HTs, requiring them to learn Morse Code seemed like cruel and unusual punishment."

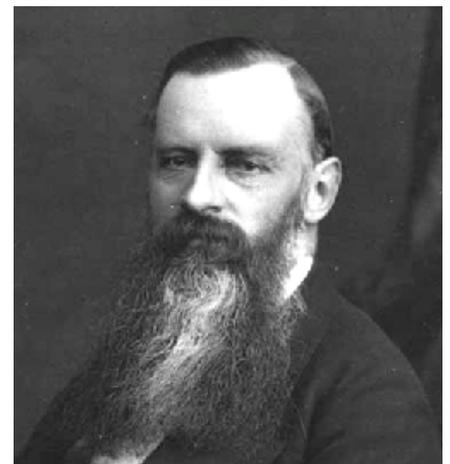
When asked what other actions we might see from the FCC, Dasher hinted that in the future applicants taking the written exam may be required to draw circuit diagrams, such as Colpitts oscillators and diode ring mixers, once again. "We're beginning to think that if an applicant passes an amateur radio license exam it should mean that he or she actually knows something," she said.

For further information, contact James X. Shorts, Assistant Liaison to the Deputy Chief of Public Relations for the FCC at (202) 555-1212 or [jim.shorts@fcc.gov](mailto:jim.shorts@fcc.gov). For more news and information about the FCC, please visit [www.fcc.gov](http://www.fcc.gov).

## SK Announcement

Arthur Kennelly  
Honorary ZZ Top  
Band Member

Entered Mortal Coil:  
17 December 1861  
Assumed Room  
Temperature:  
18 June 1939



## IMPORTANT NEWS UPDATE RE 3Y0I BOUVET ISLAND

forwarded by John W3ML

### IMPORTANT NEWS UPDATE

- From now on, the only website providing direct information about our mission is here. Wayne NØUN, responsible for managing our rebeldxgroup website had to step back due to personal reasons. He has recently been deliberately attacked by a number of American hams using words "scammer" and other offensive terms and we do all agree he didn't deserve such behavior. Due to the above, we will not update that website anymore. The updates on 3YØI will also be available at our Facebook and Twitter.

To all those individuals calling names and calling our project a "scam" - we kindly remind a couple of facts.

Our expedition is covered by private funds and it's been a very independent, personal project. Unlike other major DXpedition, for instance 3YØZ, we did not receive any foundation sponsorship and WE WILL not ask nor accept ANY. The only third party money we received up to date (less 5% of our total budget, the entire rest is covered by private funds) come from 100% VOLUNTARY donations of individual supporters - we are very grateful for their trust in our enterprise! Unlike those organizers, we will not accept any unclear rules of funding DXpeditions by foundations' board members who are participants of the same DXpeditions applying for grants! As for us, the lack of transparency, twisted rules and sponsoring themselves with other foundations'

and individual sponsors' funds is simply unacceptable.

Yes, we are in Cape Town for over 4 months now, and according to our plan, this has been good decision making. Unlike 3YØZ leaders, asking for almost \$1M donations for over 2 years of preparations, but at the same time not being able to inspect their vessel in full in prior of departure (which outcome we all know), we are able to examine each and every bolt and screw at our ship and we personally helped to fix past technical problems and we got involved in preparations to obtain full SAMSA's strict and difficult to pass certification by end of February. Note: nobody rebuked their 2 years of preparations and asking for more and more money that as final result - landed into a bin. We are being criticized for staying and working in Cape Town for our own money, although we do that on purpose: we want to take a closer look at the preparations in person - to make things more than twice sure we don't miss something.

These bitter words of ours may hurt, but we feel like being deliberately criticized and attacked on purpose - just because we've been brave enough to be solitude standing, independent, willing to activate top DXCC #2 and being able to do that. Unfortunately, it's so clear that there are other competitive DXpeditions' participants among those individuals who attack us and our friends. They are generally speaking - the

ones who didn't succeed recently, and now trying to torpedo our plans, using some tricks and methods not only among hams, but also here in South Africa. Actually, we consider that once back to Cape Town from Bouvet, we will write a long story about all backstage events and will address them to those rude troublemakers.

As bringing to a close, we fully guarantee we will NOT read all comments like those anymore and they will all be totally ignored by the 3YØI Team. They bring absolutely no input to our plans and their authors may keep their thoughts for themselves - we don't need you! Moreover, we will continue our independent plans and projects. We devote our private time, resources, knowledge, family time and money in something that is not their invention and they have absolutely no rights to impact our plans. They may feel free to get started with their own, separate DX projects - nobody, including us, will stop them to. Good luck!

As a bottom line: if you belong to that group of individuals not wishing us best of luck - please do not call us while 3YØI will be on the air. We don't need you nor your support. Your QSL card neither. We will enjoy the trip - regardless of its final outcome - much more than you, and we'll have nothing to regret. Activating Bouvet Island our goal and sacrifice, not yours.

<https://bouvetoya.org/a-couple-of-bitter-words/>

## SMITHSONIAN INSTITUTION'S NN3SI RETURNING TO THE AIR

The historic NN3SI call sign is being reactivated under the aegis of the Smithsonian Institution Amateur Radio Group. "We do not have a physical station location, and we are not open for guest operation as in the past, but this this is the start to Amateur Radio slowly coming back at the Smithsonian," the group's president, John Weise, N4NPG, told ARRL. "We expect to begin operating holiday style starting in April."

NN3SI will operate mobile and portable from several District of Columbia, Virginia, and Maryland locations on most bands and modes. NN3SI hopes to be on the air for most contests this year including Rookie Roundup, the ARRL June VHF Contest, and ARRL Field Day, Weise added. As he recounts, NN3SI was initially a temporary "special" call sign granted to the Smithsonian during the US bicentennial in 1976, and the station remained active until 2008 when building renovations left NN3SI without a permanent location. "The call sign lapsed, but was renewed this year," Weise said, "and the new Smithsonian Institution Amateur Radio Group has been organized as a club for Smithsonian staff members, and to provide important emergency management and STEM educational resources to the Smithsonian Institution." — Thanks to John Weise, N4NPG

## THE \$50 HAM

by: Dan Maloney

This series is aimed at dispelling the myth that one needs buckets of money to be a ham, and that jawboning is the only

thing one does on the air. Each installment will feature a project that will move you further along your ham journey that

can be completed for no more than \$50 or so. Wherever possible, I'll be building the project or testing the activity myself so

I can pursue my own goal of actually using my license for a change.

<https://tinyurl.com/yyrtk3bm>