



# Spark Gap

Vol. 35, Issue 11, November 2019 *MARC - Serving Central Indiana Communities for thirty-five years*

*On Our MARC:*

**Welcome to winter a month early!!**

Many thanks to the MARC member that took part in the annual Goblin Patrol on Halloween night. It was a cool rainy evening to be sitting there watching the bridges to keep our freeways safe from anyone tossing rocks or pumpkins off the bridges over I-65.

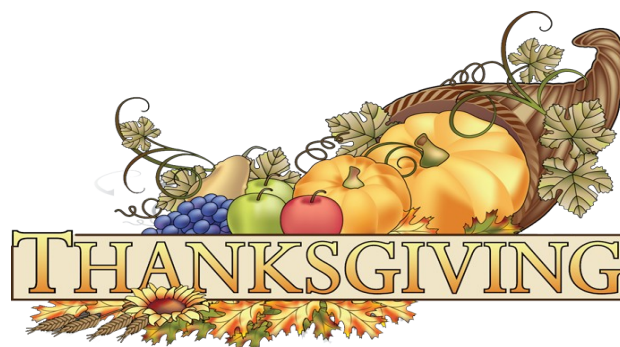
Please mark your calendar for December 21st. This is our annual holiday meeting. It will be a pitch in breakfast, we will have a short meeting and then on to the gift exchange. This year's gift exchange was voted to be nice gifts for 10 to 15 dollars.

Hope everyone has a Happy Thanksgiving. If you are going to brave shopping or traveling for the holiday, be safe!

Hope to see you Saturday. The coffee will be on.

*Jacki K16QOG*

*President*





Birthdays for the month of November:

- WS9H - Rhonda Curtis*
- W9TEJ - Ron Koons*
- WB9GCV - Jeff James*
- K9ICP - Bruce Tisdale*
- W9YD - John Wampner*
- WC9G - Tim Aldridge*

## W1AW to Commemorate 98th Anniversary of First Amateur Radio Signals to Span the Atlantic

December 11 marks the 98th anniversary of the success of ARRL's Transatlantic Tests in 1921, organized to see if low-power amateur radio stations could be heard across the Atlantic using shortwave frequencies (i.e., above 200 meters). On that day, a message transmitted by a group of Radio Club of America members at 1BCG in Greenwich, Connecticut, was copied by Paul Godley, 2ZE, in Scotland.



While the first two-way contact would not take place until 1923, the 1921 transatlantic success marked the beginning of what would become routine communication between US radio amateurs and those in other parts of the world -- the birth of DX.

To commemorate this amateur radio milestone, Maxim Memorial Station W1AW will be on the air through the day on December 11 with volunteer operators. The goal is to encourage contacts between radio amateurs in the US and Europe while showcasing the significance of the transmissions that pioneered global communication and laid the groundwork for technology widely used today.

The event will run from 1300 until 0000 UTC. Some details are still being worked out, but operation will focus on 40 and 20

meters (SSB).

Contact Clark Burgard, N1BCG, for more information.

..... ARRL Newsletter November 2019

## 911 Dispatchers Considered for Job Position Change

As Radio Amateurs in Johnson and surrounding counties we normally do not have direct contact with the services of 911. We are involved with other public service agencies in our counties that have a 911 center with numerous dispatchers taking call that come in. Some of these calls are emergencies with life or death situations. At the present time our county along with other county 911 centers consider this job position to be of a clerical nature. 911 has changed over the years and the dispatchers have many hours of training on how to deal with these dire situations.

A federal bill is being considered and the state's 911 board is looking to change how the job is categorized statewide too. Officials are pushing to categorize 911 dispatchers as first responders so they are entitled to the same pay, benefits and honor that comes with that designation.

U.S. Rep. Norma J. Torres (D-California) introduced the 911 Supporting Accurate Views of Emergency Services Act, which passed the U.S. House of Representatives as part of the National Defense Authorization Act for Fiscal Year 2020 earlier this year. The bill would reclassify the jobs of 911 dispatchers to first responders.

Torres was a dispatcher when she took a 911 call from a young girl who was being beaten by her uncle. Over the course of the phone call, Torres heard the girl plead with her uncle not to kill her and then heard shots ring out as the little girl was shot, according to clips of Torres on the House of Representatives floor.

Separate versions of the bill have passed both the House of Representatives and the U.S. Senate. Now, federal committees will compile the two separate bills into one. At that point, it will go to President Donald Trump for consideration, which could happen at any time, said Dan Henry, director of government affairs for the National Emergency Number Association.

Indiana's 911 board is working to educate local representatives, senators and communities with hopes of possibly getting a statewide initiative introduced that would also reclassify the job here, said Ed Reuter, executive director of the state's 911 board.

911 dispatchers are helping people in the midst of a crisis and frequently hear people being killed or dying by suicide, which can cause post traumatic stress disorder and other mental health issues, Reuter said.

Dispatchers deserve to be called first responders, he said.

"They are kind of the unsung heroes of public safety," Reuter said.

Texas was the first state to pass its own state law to reclassify the job, and training companies that certify 911 dispatchers are also pushing for the change. The reclassification could come with more benefits for dispatchers and costs to the state, which is why educating lawmakers about the importance of the job and what dispatchers encounter is important, Reuter said.

Part of the push to reclassify the job is so dispatchers can make more money. Brant used the national push during county budget hearings earlier this fall to argue for higher raises for local dispatchers.

Locally, 38 people work as full-time dispatchers in the Johnson County Communications Center. The average pay is between \$42,000 and \$45,000 annually.

Indiana law does not require dispatchers who work in the state to have certifications, but local dispatchers together complete 3,000 hours of training annually, with each dispatcher required to take 24 hours of continuing education training every year. New dispatchers go through months of training, Brant said.

Dispatch workers have similar post traumatic stress disorder rates as fire fighters, police officers and EMTs, and deserve the same kind of pay and protection as those workers, Brant said.

The idea that 911 dispatchers are clerical was appropriate when 911 became live in early 1968, Brant said.

The first 911 calls were to the secretary in the office of the police department. The secretary would then call an officer who would go to the scene. More serious calls were simply radioed in to police officers who would deal with the situation, Brant said.

Technology has morphed and changed to the point that dispatchers now have more responsibility. Advanced technology, such as video calls, could be coming that would make the job even more difficult, Brant said.

"The tasks they are being asked to do," he said. "It is becoming more and more important."

..... *based on an article in the Johnson County Daily Journal 10/28/2019*

# How to get “plugged in” to the amateur radio community

By Dan Romanchik, KB6NU

This morning, I found this email in my inbox:

Thank you for your website and great content. I passed the Tech and General tests on Saturday, and I will be taking the Extra exam in November. Your “No Nonsense” guides were very helpful.

I do have a question, though. How do I stay current on what’s happening in the ham world? For example the CQ WW SSB contest was this weekend. How do newbies know this kind of thing? How do we find local or regional hamfests and other events?

This is a great question. Like any special interest, it can seem daunting to get plugged in (pun intended) to the community. Here are a few of my suggestions:

**Join the ARRL** (<http://arrl.org/>). The American Radio Relay League (ARRL) is really the place to start for information related to amateur radio. *QST*, the ARRL’s monthly magazine, includes news about upcoming contests and ARRL-sanctioned hamfests. It also reviews new amateur radio products and provides a wealth of technical information.

In addition to *QST*, the ARRL publishes many email newsletters that members can subscribe to. For example, *Contest Update* is a biweekly newsletter that not only lists upcoming contests, but also includes tips on operating contests. The *ARES E-Letter* is a monthly public service and emergency communications newsletters. There are also email newsletters for ham radio instructors, those interested in DX, legislative matters, and satellite operation.

**Join your local club.** While the ARRL will help you keep abreast of amateur radio news and events nationally and internationally, if you want to know what going on in amateur radio in your area, you should join your local club. To find clubs near you, go to <http://www.arrl.org/find-a-club>.

**Visit the WA7BNM Contest Calendar** (<https://www.contestcalendar.com/>). This contest calendar has become my go-to resource for any and all contest information. This site provides detailed information about amateur radio contests throughout the world, including their scheduled dates/times, rules summaries, log submission information and links to the official rules as published by the contest sponsors. Its features include an 8-Day calendar, a 12-Month calendar, and separate calendars for state QSO parties, CW contests, and QRP contests. You can also get a weekly e-mail of contests taking place in an 8-day period (Monday through Monday), as well as a list of contests scheduled for the next week and a list of log submission information for recent contests.

**Ham radio blogs.** Blogs are also a good way to keep up with what’s going on in amateur radio. I like to think that I do a good job of covering what’s going on in amateur radio, but, of course, I can’t do it all. That being the case, you might also want read other blogs. Other amateur radio blogs that you might want to check out include:

- The K0NR Radio Site (<http://www.k0nr.com/wordpress/>)
- QRP–When you care to send the very least (<https://w2lj.blogspot.com/>)
- Everything Ham Radio (<https://www.everythinghamradio.com/>)

There are a bunch of other good ones out there. Find the ones you like and subscribe to them, so that you get a notification when new items are posted.

**Mailing lists.** Mailing lists are kind of old school, but if you have a special interest, chances are that there is a mailing list for it. For example, I own an Elecraft KX-3, so I subscribe to the Elecraft KX User Group mailing list (<https://groups.io/g/Elecraft-KX/>). Many amateur radio mailing lists are migrating to the Groups.io. To find a list, just click on the “Find or Create a Group” link at the top of the page. I just did a search for “amateur radio” and found 910 different amateur radio mailing lists.

**Podcasts and videocasts.** Podcasts are also another great way to stay up with amateur radio. I’m partial to the ICQPodcast (<http://icqpodcast.com/>) because I am on the panel once a month. The podcast not only includes a discussion of what’s new in amateur radio, but also a feature, which digs a little deeper into a particular topic. Other great podcasts are Ham Radio Workbench (<https://www.hamradioworkbench.com/>), and Linux in the Ham Shack (<https://lhspodcast.info/>). Internet video shows that are worth checking out are Ham Radio 2.0 (<https://www.livefromthehamshack.tv/>), Ham Radio Now (<https://www.hamradionow.tv/home>), and Ham Nation (<https://twit.tv/shows/ham-nation>).

This is by no means an exhaustive list. If you have an amateur radio information resource that you find particularly helpful, please let me know.

=====

Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the “No Nonsense” amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the ICQPodcast (icqpodcast.com). When he's not trying to keep up with ham radio, he likes to build stuff and operate CW on the HF bands.





# UP DATE ON THE I.C.E. REPEATERS

Here is an update to the rumors surrounding the demise of all the Indianapolis Carmel Experimenters-W9ICE repeaters. According to Bill-K9YDO and Dale-WB9YCZ most of their systems will go off the air by Christmas. Thanksgiving 2019 had been the target date to pull the plug on their 40 year investment to provide first class repeaters and digipeaters across Central Indiana.

The good news here is that other hams have stepped up to rescue several of the machines from going silent. The 442.65 machine will stay on the air but will not be part of the Skywarn network. The Freetown remote base used for Skywarn was dismantled. According to Dale, "I have people in Jennings county that are going to be relocating one of their repeaters at the Freetown site that will be linking back to Indy during Skywarn operations and do what the link did before it was removed. Also since we will continue to operate 146.97 .. this means that the APRS node and the 927.9875 repeater can stay on the air with the 900 systems being stand alone since all that equipment is in the same room, combined on 3 antennas."

Taken out of service is the 441.35 used for the 220 repeater system interconnect. The D-STAR systems will be taken out of service as soon as time can be found to remove them.

According Bill-K9YDO and Dale-WB9YCZ it was time to close this chapter of their involvement of Amateur Radio repeater systems. They cite, "The abundance of amateur repeaters in the central part of the state, with not a lot of them getting much use, save for drive times, or during weather events." And according to Dale, "The reality is that none of us are getting any younger and unfortunately others haven't stepped up to help in the operation of these systems, both physically and financially."

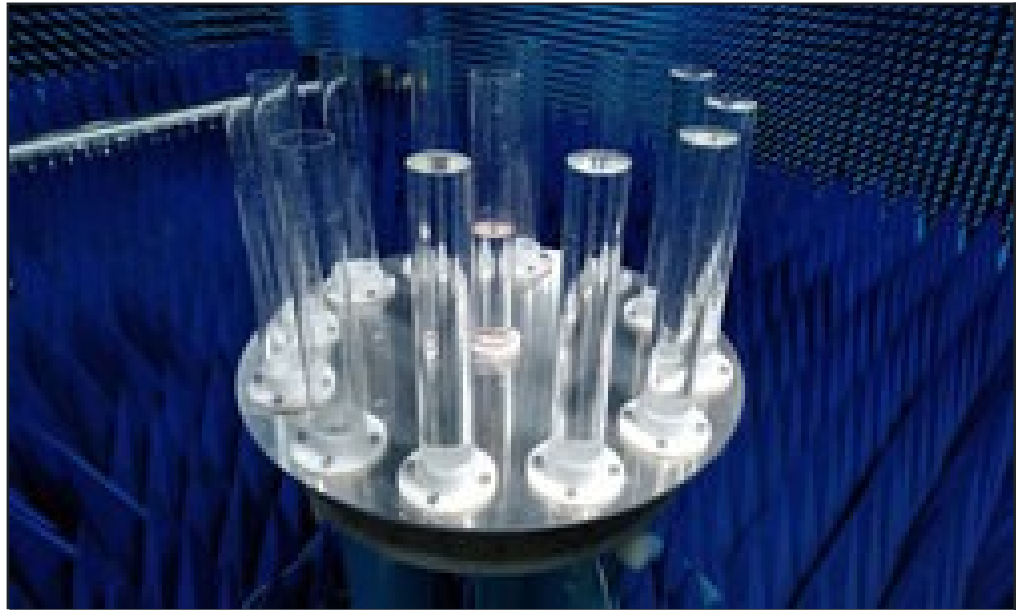
Written by Jack W8ISH with contributions from Ken KJ9B.

## **New Antenna Concept Uses Saltwater and Plastic Instead of Metal Conductor**

A new antenna that uses saltwater and plastic instead of metal could make it easier to build VHF and UHF networks, an *IEEE Spectrum* article asserts.

Michelle Hamson says, "Being able to focus the energy of a radio signal toward a given receiver means you can increase the range and efficiency of transmissions," in her article, "New Antenna Uses Saltwater and Plastic to Steer Radio Beams." According to the article, beam-steering or beamforming on a large scale is one of the key underlying mechanisms behind the rollout of 5G networks. The configuration of the saltwater antenna allows 360° beam-steering and works for frequencies between 334 and 488 MHz.

In a recent publication in *IEEE Antennas and Wireless Propagation Letters*, Lei Xing and her colleagues at the College of Electronic and Information Engineering at Nanjing University of Aeronautics and Astronautics in China have proposed a new saltwater-based antenna that achieves 12 directional beam-steering states, and one omnidirectional state.



"The proposed design consists of a circular ground plane, with 13 transparent acrylic tubes that can be filled with (or emptied of) salt water on demand. One tube is located in the center to act as a driven monopole. Surrounding it are 12 parasitic monopoles," the article explains. "The 12 remaining monopoles, when filled with water, work together to act as reflectors and give the broadcast signal direction."

"The attractive feature of using water monopoles is that both the water height and activating status can be dynamically tuned through microfluidic techniques, which has a higher degree of design flexibility than metal antennas," explains Xing.

One limitation of salt water-based antennas, she notes, is that that the permittivity of salt water -- i.e, how it interacts with electrical fields -- is sensitive to temperature variations.

..... *ARRL Newsletter November 2019*

Become An Arduino® Master FASTER!

With **DRDUINO™** A Learning & Rapid Prototyping Platform  
Arduino Uno Compatible



Exclusive ARRL Member Pricing  
Normally \$148 Only \$59



As featured in ARRL QST Product Review Oct 2019



## UP – COMING ACTIVITIES AND HAMFESTS

**11/16/2019** – 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**11/16 -17/2019** – Fort Wayne Hamfest – Allen County War Memorial Coliseum, Fort Wayne, IN

**11/30/2019** – Wabash Valley Turkey Fest – Brazil, IN

**12/21/2019** – 0800 MARC Monthly meeting and Annual Christmas Breakfast at the Johnson County REMC. Johnson County REMC 750 International Drive Franklin, IN 46131.

**01/18/2020** - 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**02/15/2020** -- 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**02/29/2020** – Laporte Hamfest – Laporte, IN

**06/20/2020** – East Central Indiana Hamfest – Randolph County Fairgrounds

If you would like to be part of Johnson County ARES please contact Bob LaGrange  
[N9SIU@YAHOO.COM](mailto:N9SIU@YAHOO.COM)

### Buy, Sell or Trade:

Ed Woods, WD9DVA, retired from amateur radio, he is 90. He has some equipment and wanted to see if there is anyone that may be interested. Ed has all of his amateur radio station for sale. If interested please contact Bob N9SIU at [n9siu@yahoo.com](mailto:n9siu@yahoo.com). Ed would like to have his radios and equipment go to a HAM that would use it and enjoy the hobby like he has.

#### FOR SALE

DISCONE TYPE TRANSMIT/SCANNER ANTENNA

SCANNER FREQUENCY RANGE 25-1300 MHZ

TRANSMISSION BANDS 26-27-46-49-72-144-220-440-900-1290 MHZ

MAX POWER 60 WATTS BELOW 30 KHZ 200 WATTS VHF/UHF

FULLY ASSEMBLED WITH 16 FT OF COAX AND CONNECTOR

LIKE NEW CONDITION

ASKING PRICE \$40

SEE SAM CARTER WA9VVG 317-432-2996 OR AT THE MARC MEETING



## MID-SATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the **THIRD SATURDAY** of each month at the Johnson County REMC 750 International Drive Franklin, IN 46131.

See our website, [www.midstatehams.org](http://www.midstatehams.org), for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a *HAM* to attend our meetings or a member of the club.

### W9MID Repeater:

146.835/  
146.235 MHz  
(151.4 Hz PL Tone)

### Club Officers:

President: Jacki Frederick – KI6QOG  
Vice President: Bruce Tisdale – K9ICP  
Secretary: Chris Read – W9OQ  
Treasurer: Chris Mazzarella – KC9VGQ  
Repeater Trustee - Chris Frederick – KQ9Y

### W9MID Repeater:

443.525/  
448.525 MHz  
(151.4 Hz PL Tone)

Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS  
146.835/146.235 MHz (151.4 Hz PL Tone)

The Official Newsletter of the Mid-State Amateur Radio Club

P.O. Box 836  
Franklin, Indiana  
46131

Spark Gap Editor: Robert LaGrange N9SIU

*Please send your articles to my email: [n9siu@yahoo.com](mailto:n9siu@yahoo.com) no later than the 2nd week of the month.*



*Special thanks to Johnson County REMC for the use of their community room for meetings and testing.*