

# Sidebands

The Newsletter of the EAST GREENBUSH AMATEUR RADIO ASSOCIATION



January 2020

www.egara.club

President - Tom Scorsone, KC2FCP  
Secretary - Steve VanSickle, WB2HPR  
Board Members: David Jaegar, Jr., K2DEJ

Vice-President - Nick Field, KD2JCR  
Treasurer, Webmaster & Newsletter Editor - Bryan Jackson, W2RBJ  
- Russ Greenman, WB2LXC - Dave Gillette, KC2RPU

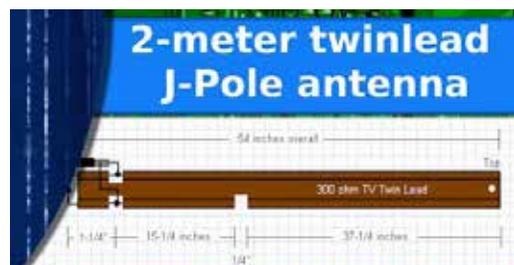
## Annual Antenna Building Party Set for January Meeting

If it's January, it must be time to build antennas at the monthly meeting of EGARA. And this year's meeting will feature construction of a portable J-Pole antenna using twin lead. Best of all, the club will provide all of the necessary parts at no charge to members who want to build one during the monthly meeting on January 8th!

In an emergency situation, it is often necessary to squeeze every bit of performance possible out of a 2 meter HT. One way to do that is to replace that little rubber duck antenna with the ever-popular Twinlead J-Pole. This simple antenna lends itself well to emergency use -- or as a portable antenna for hotel room operations while traveling.

There are several features which make the ubiquitous Twinlead J-Pole antenna a good addition to your emergency grab-n-go kit. When rolled up, it is an extremely compact, pocket-sized antenna. In use, it makes for a very effective antenna and provides about 3db of gain with a low take-off angle. In fact, when used on your HT, it will dramatically out-perform your rubber ducky.

And finally, it can be built in no time flat for a few dollars of readily available materials. Technically-speaking, the J-Pole is an end-fed, halfwave antenna with a quarterwave matching section to allow feeding with 50-ohm coax. Being a half-wave antenna, it is not dependent on a ground or radials for proper performance. That's also a plus for portable operation



## Winter Field Day Set for January 25-26

### In This Issue

- Page 1 - Antenna Build / Winter Field Day
- Page 2 - Holiday Photo Gallery
- Page 3 - RF Exposure Rules Changing
- Page 4 - Column: Keep It Simple
- Page 5 - On the Beam News & Notes
- Page 6 - Meeting Minutes / Oldest Ham
- Page 7 - Time to Upgrade / W1AW celebration
- Page 8 - History of Ham Radio
- Page 11 - Improve DX... Kill the Noise!
- Page 12 - Calendar / Buy, Swap, Sell / Pro Tip

Looking for a winter group training activity? Try Winter Field Day, a non-ARRL event sponsored by the Winter Field Day Association. It's 24 hours of operating under emergency conditions, but completely different conditions from the traditional June Field Day. Categories include Home, Indoor (away from an established station) and Outdoor (yes, Outdoor -- and RV's don't count). Exchange is call sign, class and section. (i.e. K2ALB, 2I, ENY) Last full weekend of January -- Jan 25-26, 2020. Rules are at: <https://www.winterfieldday.com/>

### In other News...

Mark Copeletti WM2C has accepted a Field Organization appointment as ARES District Emergency Coordinator (DEC) for the five county Southern District. Mark is well qualified for the post due to accomplishments such as his extensive ICS training, his long association with Army MARS, his service in the State Guard and ARES/RACES in Orange County.

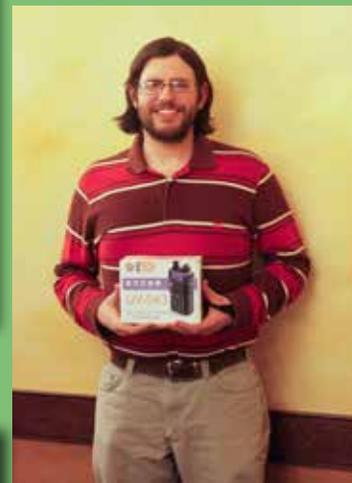
**Next Membership Meeting - - January 8, 2020 - Antenna Building Party!**

# EGARA Holiday Party Photo Gallery

**Tommy wins a turkey.  
(He's the turkey who's waving)**



**Dave plays the "Poor Man's"  
Santa Claus**



**Dave wins a  
Tri-Bander...  
his 12th Baofeng**

**Nora has three Vodkas and  
finds Tommy "more tolerable"**



**Ridge points  
out the exit  
door he plans  
to use when  
the check  
comes**



**Russ and  
Peggy smile  
after tipping  
off the  
waitress that  
Ridge plans  
to duck out  
when the  
check comes**



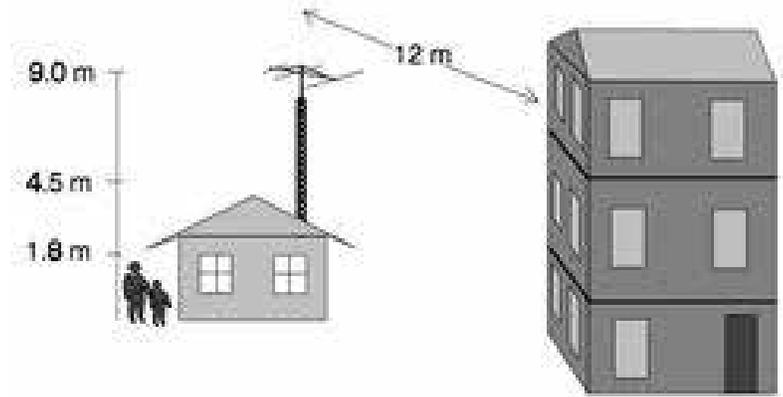
**Steve tries Nora's idea to see if Vodka  
really makes Tommy "more tolerable"**

## FCC Amending Amateur Radio RF Exposure Safety Rules

The FCC is amending its Part 97 Amateur Service rules relating to RF exposure safety. In a lengthy document in ET Docket 19-226 released on December 4 and addressing a broad range of RF safety issues, the FCC said current amateur radio RF exposure safety limits will remain unchanged, but that the amateur-specific exemption from having to conduct an RF exposure evaluation will be replaced by the FCC's general exemption criteria. Radio amateurs have always had to comply with RF exposure limits, but certain stations have been exempt from having to conduct evaluations based only upon power and frequency. The Commission indicated that, by and large, if an RF source was "categorically excluded" from routine evaluation under the old rules, it will most likely still be exempt under the new rules, which are expected to take effect in the next couple of months.

"For applicants and licensees in the Amateur Radio Service, we substitute our general exemption criteria for the specific exemption from routine evaluation based on power alone in Section 97.13(c)(1) and specify the use of occupational/controlled limits for amateurs where appropriate," the FCC said.

"The sky is not falling here," ARRL Lab Manager Ed Hare, W1RFI, commented. "The major aspects of the rules will not impose major new burdens on the Amateur Radio Service. As in all regulatory matters, though, the devil may be in the details, so the ARRL technical staff, legal staff, and the experts on the ARRL RF Safety Committee are carefully evaluating this FCC document."



An FCC OET Bulletin 65 illustration of how to determine exposure distances.

Under the revised Section 97.13(c)(1), "In lieu of evaluation with the general population/uncontrolled exposure limits, amateur licensees may evaluate their operation with respect to members of his or her immediate household using the occupational/controlled exposure limits in Section 1.1310, provided appropriate training and information has been accessed by the amateur licensee and members of his/her household," the amended rule says.

"RF exposure of other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits. Appropriate methodologies and guidance for evaluating Amateur Radio Service operation is described in the Office of Engineering and Technology (OET) Bulletin 65, Supplement B," the revised rule concludes.

The FCC said it was not persuaded by ARRL's argument in its comments that the routine evaluation exemption for amateur radio stations operating below a certain power threshold should be maintained. "Amateur radio licensees operate a variety of installations of different size, power, and frequency, which can be located in close proximity to people, giving rise to various RF exposure concerns," the FCC noted.

In a meeting with FCC OET Chief Julius Knapp and senior staff in early November, ARRL asked the FCC to make available on the internet a calculator to facilitate making the correct calculations the rules require. ARRL said that would be preferable to unofficial third-party calculators, the results from which might not be accorded the same degree of deference in local disputes. Several software programs were suggested as models.

The FCC did not single out amateur radio in drafting its latest RF exposure rules. The rules affect multiple services, and exemptions for many other services were also deleted as part of a broader policy driven by a proliferation of RF devices, some resulting in situations where gain antennas are sited much closer to people than was expected in 1996 when the rules were last revised.

## Everything Should Be Made As Simple As Possible, But Not Simpler

By Dan Romanchik, KB6NU

"Everything should be made as simple as possible, but not simpler" is a quote attributed to Albert Einstein (<https://quotationcelebration.wordpress.com/2017/01/07/everything-should-be-made-as-simple-as-possible-but-not-simpler-albert-einstein/comment-page-1/>). Here's one way to apply this principle in amateur radio, specifically to code practice oscillators.

A week ago, my friend, Paul emailed me:

*"I am planning on teaching a two-hour introduction to Morse code to 14 girls ages 8 to 9 [[Paul's granddaughter is a Girl Scout.]]. I plan on having the girls build a code practice device. I need your help in selecting a low cost buzzer and battery holder. Please take a look around and see would you can find. I would like to limit the power to one or two AA batteries."*

I replied that I'd be happy to help him with the demonstration, and offered the following advice:

"A while back, I built the QRPGuys' K7QO Code Practice Oscillator (<https://qrpguys.com/k7qo-code-practice-oscillator>). It uses a CR2032 coin battery.

"Unfortunately, they don't sell it anymore, but the assembly manual is still online ([https://qrpguys.com/wp-content/uploads/2017/03/cpo\\_assy\\_012616.pdf](https://qrpguys.com/wp-content/uploads/2017/03/cpo_assy_012616.pdf)). The assembly manual doesn't call out specific parts, but here are some Amazon SKUs:

- B00J4BK0NS, Black 3V Electromagnetic Type Piezo Buzzer, 20 pcs/\$6.58
- B06XF3K4NP, Coin Cell Button Battery Holder, 30 pcs/\$9
- B008SNZUYC, 3 Pin PCB Mount Female 3.5mm Stereo Jack, 10 pcs/\$5.40
- B071RMD6FD, 1/8" 3.5mm Stereo Male Connector, 10 pcs/\$7

*"Batteries are available at the dollar store for about 30 cents each. So, you could do the whole thing for less than \$5 for sure, even with a printed circuit board, which I would suggest that we do. Heck, if you ask nicely, the QRPGuys might even give us the artwork, or even better, have some boards still in stock. Even if they have neither, you should be able to get the boards in plenty of time."*

Later that day, Paul replied:

Thanks, Dan, for the information and making yourself available to help. I am just going to use a buzzer, key, and battery. The buzzer has a frequency of 400 Hz.

- <https://www.xump.com/science/Buzzer-Leads15V.cfm>
- <https://www.xump.com/science/ContactKeySwitch.cfm>
- <https://www.xump.com/science/Single-AA-Battery-Holder.cfm>

And this morning, he sent me this photo, noting, "FYI. Also sounds great."

I think that this is as good an example of "Everything should be made as simple as possible, but not simpler" as there can be. I've volunteered to help Paul with his class. That will be fun, too.

=====

About the author: 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 things as simple as possible, but not simpler, he likes to build stuff and operate CW on the HF bands.



## On the Beam

### News & Notes

### Massachusetts Adopts Rule for Mobile Operation

Neighboring Massachusetts has settled on a one-hand-on-the-wheel rule for mobiles. The Bay State's two ARRL Section Managers report they have received confirmation that the Commonwealth's distracted driving law does not apply to two-way mobile radio operation. The new law "permits use of a federally licensed two-way radio, provided that one hand remains on the steering wheel at all times," except provided in sections 8M, 12A, and 13B of the law.



### Kids Day is Saturday, January 4

The first Saturday in January is Kids Day — the time to get youngsters on the air to share in the joy and fun that Amateur Radio can provide. Kids Day gets under way on Saturday, January 4, at 1800 UTC and concludes at 2359 UTC.

Sponsored by the Boring (Oregon) Amateur Radio Club, this event has a simple exchange, suitable for younger operators: First name, age, location, and favorite color. After that, the contact can be as long or as short as each participant prefers. Kids Day is the perfect opportunity to open your shack door and invite kids over to see what Amateur Radio has to offer.



Suggested Frequencies are:

- 10 Meters: 28.350 to 28.400 MHz
- 12 Meters: 24.960 to 24.980 MHz
- 15 Meters: 21.360 to 21.400 MHz
- 17 Meters: 18.140 to 18.145 MHz
- 20 Meters: 14.270 to 14.300 MHz
- 40 Meters: 7.270 to 7.290 MHz
- 80 Meters: 3.740 to 3.940 MHz

### 2020 Dayton Hamvention Theme will be "Amateur Radio, The Future"

The theme for the 2020 Dayton Hamvention® will be "Amateur Radio, The Future."

"As amateur radio operators, we enjoy many modes of operating," said Hamvention General Chair Jack Gerbs. "We also enjoy challenges such as satellite communications, moonbounce, meteor scatter, and more. What truly excites me about our hobby is the diversity of these modes and the fact that, as we move to the future, we still enjoy the technologies of the past."

"The theme acknowledges the role that amateur radio has always played and will continue to play in future communication developments," Hamvention said, acknowledging the contributions of the many hams who actively work on new ideas, equipment designs, and software to improve electronic communication.

Hamvention 2020 takes place May 15 – 17 at the Greene County Fairgrounds and Expo Center in Xenia, Ohio.

## EGARA December Meeting Minutes

- The regular membership meeting was replaced by the club's annual holiday party. There were 15 members and guests present. The party was held at Moscatiello's Restaurant in Troy;
- A raffle was held and various prizes were awarded, including a tri-band HT radio, two turkeys, gift certificates and a tool set;
- There were no reports made by the officers;
- It was announced that the January meeting will feature an antenna building workshop, with the club supplying materials for constructing a portable J-Pole antenna for VHF/UHF work;
- The dinner adjourned at approximately 9 pm.

-- de Bryan Jackson on behalf of Steve VanSickle, Secretary

**YOUR  
MEMBERSHIP  
MATTERS**

**It's a New Year and Your  
Club Depends on Your Dues**

**Make it Easy -- Pay Your  
2020 Dues Online!**

**Just go to:  
<https://www.egara.club/pay-dues>**

**It's Fast, Simple & Secure!**

### *Oldest Known US Ham, 108, Receives ARRL Centurion Award*

The oldest known US radio amateur, Cliff Kayhart, W4KKP, received his ARRL Centurion Award plaque in November. The award recognizes hams who have achieved centenarian status. Kayhart, who lives in White Rock, South Carolina, is 108. The ARRL Board of Directors conferred the award on Kayhart at its July 2019 meeting.

At the November meeting of the Dutch Fork Amateur Radio Group in Little Mountain, South Carolina, ARRL Roanoke Division Director Bud Hippisley, W2RU, headed an ARRL delegation that presented the Centurion Award plaque to Kayhart, who was first licensed as W2LFE in 1937.

Kayhart served on Iwo Jima during World War II, shortly after the US victory there, setting up long-range radio communication from the island to Tokyo to arrange for the eventual surrender by Japan. Today, he remains active, checking into several nets from his assisted living facility. Centurion Award recipients have their annual ARRL membership fees waived while continuing to receive QST and other ARRL member benefits.



**(L - R) Roanoke Division Director Bud Hippisley, W2RU; Cliff Kayhart, W4KKP; Roanoke Division Vice Director Bill Morine, N2COP, and South Carolina Section Manager Marc Tarplee, N4UFP.**

## VE Session Set for January 4th A Great Opportunity to Upgrade!

EGARA will hold its Winter VE testing session on Saturday, January 4th at the East Greenbush Library. Doors open at 10 am and close promptly at 10:30 am when testing begins.

This is an excellent opportunity for club members and fellow hams to upgrade their current license if they hold a Technician or General class ticket. Moving up offers a wealth of new operating privileges and prestige.

Or if you know an aspiring ham who's ready to get licensed and begin enjoying Amateur Radio, let them know about the testing session as well.

Although walk-ins are always welcome, reservations are appreciated. To reserve your spot contact Tom Scorsone by email at [kc2fcp@nycap.rr.com](mailto:kc2fcp@nycap.rr.com) or call him at (518) 272-1494

## Volunteers Celebrate 98th Anniversary of ARRL Transatlantic Tests at W1AW



A group of radio amateurs gathered on December 11 at W1AW to mark the 98th anniversary of the successful ARRL Transatlantic Tests. On December 11, 1921, 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. Reporting on the accomplishment, ARRL Secretary Kenneth B. Warner, 1EH, declared "Excelsior!" Clark Burgard, N1BCG -- who lives in Greenwich and styles his call sign as "n1BCG" to honor the original 1BCG -- was among those on hand at the Maxim Memorial Station.

Those pitching in to take part in the day-long anniversary celebration included (L-R) Michael Pfaeffle, K3FEF; Lisa Kress; Brian Kress,

KB3WFV; Bob Allison, WB1GCM; Blaine Morin, N1GTU, and Clark Burgard, N1BCG. Not shown are Chris Codella, W2PA; Glenn Cooper, W2BK, and Greg Fiozzo, KD2HRD.

"We completed a successful special event yesterday at W1AW commemorating the 98th anniversary of the Transatlantic Tests," Burgard recounted. "This was particularly important historically to amateur radio as it was originally organized by ARRL in 1921 to determine if low-power amateur radio stations using shortwave frequencies could actually be heard in Europe. Until then, it was thought impossible."

Burgard pointed out that the 1921 event changed radio history, was covered in three issues of QST, and opened the door to the first two-way transatlantic tests a couple of years later. 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 -- literally the birth of DX.

## The History of Ham Radio: Naval Maneuvers

Chris Codella, W2PA, author, John Pelham, W1JA, editor, Phil Johnson, W2SQ, editor

(Editor's note: By special arrangement with the authors, Sidebands is pleased to present this multi-part series on the history of ham radio. Subsequent chapters will be published in future monthly editions of the newsletter)

Despite the political and regulatory-control disputes between amateurs and the Secretary, the Navy well understood how much it had benefited from all the trained amateurs ready to volunteer for service during the war and the likelihood of needing them again someday. In August the Navy announced it would begin broadcasting test messages containing weather information and text for code-copying practice at 15 and 25 words per minute every night on 476 meters from NAJ, the Great Lakes station, "in order to maintain the interest of the radio amateurs and keep them in operating practice."



**R. H. G. Mathews in uniform during the war**

The messages would be broadcast using a simple encoding, with the code ID number being sent first. Presumably this was for practice in decoding messages but probably also to promote accurate copying without the benefit of context and word prediction. The Navy also asked the League for suggestions on how this might work better—a good sign of intended cooperation coming from a former antagonist in congress.

R. H. G. Mathews, who had served in the Navy during the war and was now ARRL vice president, cited the historically tense relationship in his reply: "The average amateur has always been a little afraid of the Navy, partly because he was not as well acquainted with it as he might have been and partly because it was not as well acquainted with him and his uses as it could have been." But its inaction speaking louder than its words, the Navy had as yet done nothing to reopen amateur operation.

In the August editorials, "The Lid" referred not to a poor operator but the one clamped down by the government on amateurs' operations. After getting hopes up for a planned August 1 lifting (and ARRL having drafted an editorial to that effect), the Navy declared the lid would not come off after all, until the president had officially declared a state of peace. Of course, such a declaration would also mean the Navy would no longer be entitled to control the amateurs anyway. "In other words, the Navy can let us start any time now but refuses to until they can no longer prevent it," wrote Warner, and he speculated that amateurs may have to wait even longer for the Senate to ratify the president's declaration.

Meanwhile, the Department of Commerce outlined its policy for amateur radio after resumption of operation: (1) All licenses have expired and everyone will have to be retested, this time at an increased code speed of 10 words per minute (instead of 5). (2) A separate application for a station license must follow the construction of a station. However, expecting of a flood of new applications, the Department would allow operation to begin upon simply submitting a station license application. (3) Call letters would be issued from scratch; old ones no longer existed and it would not be possible to get them back. But then, in contradiction, they stated that if someone wanted his old call he could apply for it and, if it remained unissued, could wait until that call came up in sequence! It wasn't quite clear who would do the waiting. (4) The Department would not be issuing very many Special licenses, which would be more restricted than before the war because of the anticipated increase of marine and air traffic.

"Our heart is heavy, friends, over this delay in getting back on the brass, but we know it will be only a short while yet, and then—The Days of Real Sport!" wrote Warner.

(continued on page 9)

## The History of Ham Radio: Naval Maneuvers ...

A draft of a new radio bill emerged in Congress on 28 August, proposing to repeal the 1912 law. This time it provided for various classes of service including amateurs, but placed regulation under the authority of a “technical radio committee,” which would have a member from each “department of government,” instead of laying out such regulations explicitly in the bill itself. This would place governance of amateur activity in the hands of a committee without public hearings or other recourse should they decide to regulate amateurs out of existence. Although the bill recognized amateur radio explicitly, it was still clearly unacceptable.

As fall arrived, fully ten months after the armistice, mounting impatience led ARRL to investigate the lack of action in Washington. They discovered there was more to the issue than simply waiting for official peace to break out. Yet another proposed bill appeared, this one authorizing the Navy to use its stations for commercial purposes. At the same time, Navy Secretary Daniels wrote to both houses of congress asking them to further consider establishing a commission to study the “radio problems,” authorize the president to define wavelength bands for “different classes of work,” give the Navy monopoly over ship-to-shore and intercontinental radio, authorize the Navy to use its stations commercially and assist companies in developing radio.

In response, the Senate Committee on Naval Affairs asked the Navy to draft legislation for its consideration, while in the House, the Committee on Merchant Marine and Fisheries was also taking up the matter. The ARRL expressed alarm that there was no mention of amateur radio at all in this exchange, distrusting the Navy because of its previous attempts to eliminate amateur radio. And since the reopening was being delayed personally by the Secretary of the Navy with no stated reason given, the League suspected that they wanted to push through a bill before losing control under the current law.

This time, however, the Navy expressed sympathy for the amateurs and a desire to eliminate the distrust. While the League viewed the lack of any mention of amateur radio as nonthreatening per se, it took the position that such an omission would leave amateurs in legislative limbo and made it clear that any new bill must explicitly define amateur radio’s status. The Office of Naval Communications reacted by inviting the League to express its views of how amateur radio ought to be “recognized in the new law.” The Board of Direction would formulate a response and arrange for League representation at the congressional hearings.

There was still no lifting of the transmitting ban in sight. Assistant Secretary of the Navy, Franklin Delano Roosevelt, assured the League that he would personally “radio Mr. Daniels” about it—not telephone, telegraph or write him, mind you—and amateurs might hope to know their status soon. Warner commented that “The whole proposition is so basically unjust, so uncalled for, that we do not believe it will long obtain. This seems to be an entirely different matter from the question of a Navy monopoly on commercial radio, and we see no reason why we should be compelled to await the ratification of the treaty—an act that from present appearances might be judged to be several months off.” Members were urged to appeal to their representatives.

Across the border in Canada the ban had already been lifted on 1 May and lots of activity was starting up there. Canadian hams were regulated in wavelength according to their proximity to a government station (50 meters if within 5 miles, 100 meters within 25 miles, 150 meters within 75 miles) and a half kilowatt maximum primary (transformer input) power. Before the war, Canadian three-letter call signs starting with X were issued, but now they would begin with numbers as they were in the US. A correspondent reported in QST that when war had broken out and the ban went into effect, the police in Canada took the additional step of confiscating essential parts of amateur stations. Hams had reacted by actively trying to hand over comparatively worthless substitutions—such as an old loading coil—to avoid confiscation, believing they would otherwise never again see their parts.

“Daniels Only Knows” was the answer to why hams in the US were not yet “opened up” and back on the air, according to an October editorial. It was another jab at the Secretary of the Navy who was the only person standing between amateurs and their transmitters. The ARRL managed to get a resolution introduced in congress requesting the secretary to provide reasons why the ban had not been lifted. (continued on page 10)

## Naval Maneuvers...

In The Operating Department, Smith took his own shot at Daniels, calling the continued, reasonless ban “autocratic,” and “un-American.” And in Strays, a one-line entry poked, “Ain’t nature wonderful? Just look at Seck Daniels.”

Even The Old Man got a word in. “Not so Rotten” was his compliment for the author of an article about nonsynchronous spark gaps in the September issue. T.O.M. bade him to “live long and prosper,” nearly 50 years before Spock would trademark the phrase. He extolled the virtues of his own rotary gap, “Old Betsy,” never having seen a better set, but now thought this one might have her beat. He ended with his own jab at the Navy for being late in lifting the ban. “Don’t our folks know the war is over?” he asked, suggesting “Somebody send a postal to the Navy and let them know it was all over months ago. I am an American and I want my liberty the same as the Canadians have theirs.”

H. C. Gawler, the New England Radio Inspector, wrote to answer a question he’d received from “droves of Amateurs”—specifically, “What’s the future of amateur radio?” He first expressed belief that amateurs would be largely self-regulating. Amateurs who had left for the war as boys were returning as men, expecting to be operating a more sophisticated set of gear with a more sophisticated way of thinking about radio and operating. He used “wooden” to describe the old childish ways and “bakelite” for the modern: “Are these men, having done their bit with bakelite sets going back to the wooden sets of their childhood in the radio game? No, they are not! They are going to have bakelite amateur radio activity. Wooden operators, wooden apparatus, and anything else wooden in the game, will either be taboo, or else be made to look like the real thing, and the kids of yesterday will accomplish these results by their influence much better than the laws would.”

While it would be surprising today, it was not unusual to find a government official, in this case Gawler, writing a letter to QST to address amateurs while also joining as a member. He well remembered the response of volunteers when the war first began, and believed that only by effective organization could amateurs be of service. The government was also wiser now as a result of this and amateurs therefore should not worry about what it would do in the years ahead. His advice was to organize and improve. The government could not afford to do without the amateurs.



*Best wishes for the coming year to all of our friends and customers.*

*Thank you for your business and support.*

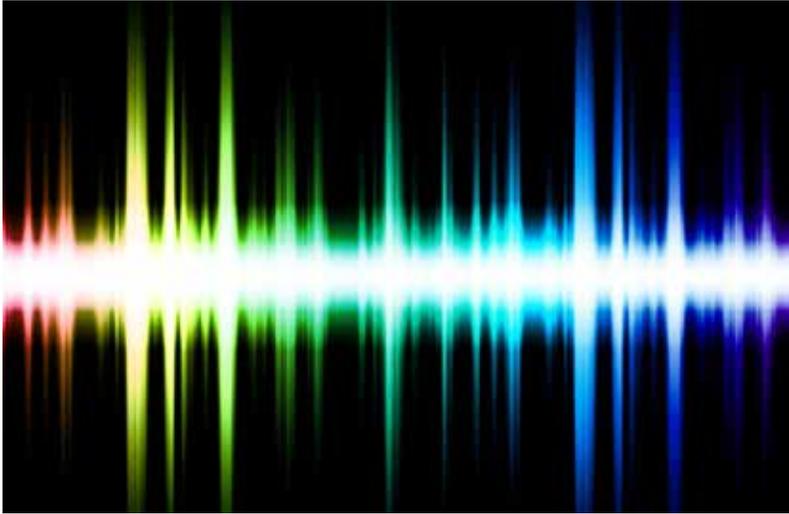
*We look forward to serving all of your Amateur Radio needs during the New Year!*



610 Pompton Avenue - Cedar Grove, NJ 07009  
TEL: 973-571-1930 / e-mail: k2kji@aol.com

## After Dark, Opportunities Abound... if You Kill the Noise

by Steve VanSickle, WB2HPR



With the winter season upon us, there are many opportunities to operate on 160, 80, and 40 meters after dark!

Unfortunately, propagation is tough due to our low sunspot numbers and other extraterrestrial factors. RF noise, or static (QRN) is very troublesome. Often times, noise that we hear is man-made due to other consumer devices. These are usually relatively easy to address, and there are numerous resources in the ARRL Handbook and on-line tutorials dealing with this pesky noise.

One major contributor to RF noise pollution can be traced to defective street lights, often right outside our QTHs. These can be pinpointed visually while monitoring the AM broadcast band with a portable receiver.

If you observe such conditions, I urge you to report to your utility operators (i.e.: National Grid, NYSEG, or other electric supplier). The National Grid website has a on-line reporting system which you can use to report defective street lights. It's, fast, simple, and free. So far, I have tracked down over 20 different lights that were either making a lot of racket or were not working at all.

Getting these defective street lights repaired has made a noticeable improvement in my receive noise. I suspect you will experience the same results.

Also, if you use directional antennas, they can be reoriented to reduce RFI effects. Finally, RF noise canceling equipment is available from several sources and with proper use, will likely reduce the level of background noise on your receiver. BUT – stopping the noise at its source is still your best bet.

Additional information regarding RFI may be obtained from the FCC and the ARRL websites.

### A Helpful Resource: Sounds of RFI

It is not always easy to identify where QRN is coming from and it's even harder to describe it to someone else if you're looking for their help. Now you can identify QRN by comparing it to audio samples of noise from known sources...a kind of "audio fingerprinting" by using sound files available on the ARRL website at: <http://www.arrl.org/sounds-of-rfi>

If you have an audio player configured on your computer, you can download the file instead of playing it online. You should be able to save the audio file by right-clicking on the link, then click on Save Target As, and specify where you'd like to save the file.

You can also click on the View Waveform button to see what the noise might look like if you could view it on an oscilloscope. The waveform views are 0.1 seconds wide, which is sufficient magnification to see what's going on. For example, noises that are based on 60 Hz line voltage will have 6 pulses in a 0.1 second window ( $60 \text{ Hz} / 10 = 6$ ), or six repetitions of a recognizable pattern in the case of the Sony TV waveform.

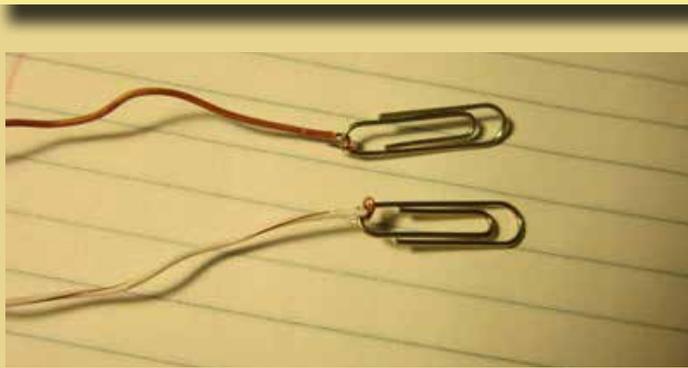
## CALENDAR

**January 4, 2020 - 10 am** - VE Exam Session, East Greenbush Library, Meeting Rooms A & B.

**January 8, 2020 - 7 pm** - Monthly Club Meeting, Antenna Building Workshop, Portable J-Pole build

**February 12, 2020 - 7 pm** - Monthly club meeting, ARES update presentation by Dave Galletly, KM2O.

### Pro Tip: Paper Clip Connectors



If you need some quick and cheap connectors for a project try paper clips! They are really cheap and they slide together and come apart really easily.

To make these connectors, you can solder the wire to the clips, or you can also twist the wire onto it and then cover it with hot glue.

To connect the paper clips just slide them together on the open end, you now have a good connection.

If you need connectors that are insulated you can use paper clips that have a coating on them and scrape off the coating on the sections that would make contact.



### For Sale

- **Ameritron -811h 800w**, four new 811a tubes from MFJ, spares I took out are in great shape. Sells new for \$850.00. Asking \$650.00
- **Alinco dxsr-8t hf 160-10** with 11 meter mod, includes separation kit. Sells for \$460. Asking \$250.00
- **RG8U Coax** - 50+ feet - \$20.00
- **RPI-3B+** with dual hotspot board, lipo battery pack, real time clock board. Just add micro sd, antennas, and pi-star - \$75.00

Contact Dave @ [WA2WAP@Verizon.net](mailto:WA2WAP@Verizon.net)

- **IFR-1100S Service Monitor. With Spectrum Analyzer and Oscilloscope.** Tested and Calibrated last year. AM - FM, CTCSS Generator, In very good condition. \$900.00
- **Military Watt Meter AN/URM-120 B/U 2 to 1000 MHZ** Complete and with Carrying Case. In excellent condition. Never abused or used on the road. Great Shack / Bench Watt Meter. Picture available. \$100.00
- **Yaesu FT-2900 Programing Software by RT Systems** Cable included. used once. Registered and includes password. \$35.00

For above, contact John at: [Radiowizz@aol.com](mailto:Radiowizz@aol.com)

- **Arrow Model 52-S4** - 4-Element 6 Meter Yagi antenna in good condition. \$75.00

For above, contact Steve at: [svansick@nycap.rr.com](mailto:svansick@nycap.rr.com)

- **Kenwood TS-690** - 100 watt HF/6meter transceiver. With two mics and complete operating manual. Perfect working condition. \$450.00.

Contact Bryan at [W2RBJ@outlook.com](mailto:W2RBJ@outlook.com)

- **Johnson Valiant Transmitter AM & CW** - \$ 600.00
- **DX 60 Transmitter AM & CC With VFO** - \$ 125.00
- **DX 35 Transmitter AM & CW With VFO** - \$ 125.00
- **Eldico R124 Receiver** - \$300.00
- **MFJ Model 1995 Portable Antenna, 40 To 10 Meter** - \$75.00

For items above, contact Tom at: [KC2FCP@nycap.rr.com](mailto:KC2FCP@nycap.rr.com)

### The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (SK) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.