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Breaking News! EGARA Gets International Recognition! See Page 7

Santa Takes to the Air & Sleighs 'Em With Gifts

It was more of a wet Christmas than a White Christmas, but the rain and high winds didn't keep Santa from making his appointed rounds -- including a stop at the club's on-air holiday party the evening of December 23rd. Ten club members found themselves receiving gifts from Santa's bag as Mrs. Claus drew their names at random.

The Grand Prize winner was Don Mayotte, KB2CDX, who received a tri-band B-Tech HT radio and accessories. Meanwhile, the First Prize of a five volume ARRL Guidebook went to Steve Lohnes, KD2RJZ, and the second prize of an MFJ atomic clock was won by Elvin "Rusty" Reed, KD2UFC. A complete list of winners can be found on page two.

The Annual EGARA Christmas Party was held over the air using the club's 147.270 repeater this year, replacing the usual holiday dinner because of the Covid-19 pandemic. A total of 15 members checked-in and each took a turn providing an update on their activities and wishing all a Merry Christmas.

"It was certainly different than our past holiday parties, but we had a nice turnout on the repeater and everyone was clearly in the Christmas spirit," said Club President Bryan Jackson, W2RBJ. "I think hearing those familiar voices helped all of us enjoy the holiday a little bit more during these challenging times."

"With Covid vaccinations now arriving, hopefully the pandemic will be a thing of the past next year and we can return to both in-person meetings and our regular holiday dinner party," he added.

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A Look Ahead to 2021

Bryan Jackson, W2RBJ, EGARA President

A New Year is here and we're all looking forward to putting the challenges of 2020 behind us. Hopefully the biggest challenge -- Covid-19 -- will be gone and EGARA will be able to resume its in-person meetings. With a little luck, we'll also be able to hold our annual Hamfest, although the usual May date will have to be pushed back to later in the year. Time will tell.

However, we are still moving forward with other projects. Early in the New Year we expect to be granted 501c3 non-profit status from the IRS. That should allow us to proceed with installation of our proposed 220 repeater at the Channel 6 site atop the Helderbergs. Other plans include resumption of our public VE exam sessions. However, we'll continue to offer testing to club members who are seeking to upgrade their license.

Most of all, I appreciate the continued support of our club members during the past year. I look forward to serving you in the New Year. Best wishes for a happy and safe 2021.

Next Membership Meeting - January 13, 2021 - via 147.270 Repeater @ 7 pm

And... The 2020 Christmas Party Gift Winners Are...

Here are the winners chosen from Santa's big bag of treats!

Grand Prize: UV-5X3 Tri-Band HT Radio (144, 220, 440) with Accessories
Don Mayotte, KB2CDX



First Prize: 2020 ARRL Five Volume Guidebook
Steve Lohnes, KD2RJZ

Second Prize: MFJ Digital Atomic Clock
Elvin "Rusty" Reed, KD2UFC



Rusty picks up his MFJ Atomic Clock from Santa

Third Prize: Embroidered EGARA Apparel
Steve VanSickle, WB2HPR

Fourth Prize: EGARA Embroidered Hat
Bob Stanley, W2RBS

Fifth Through Tenth Prizes: Yaesu Fabric Baseball Cap



Al Plouff, KB2MVP
Joe Squillace, KC2HLC
Paul Dahoda, KD2JMM
Gina Pendolino, KC2QJC
Chris Linck, N2NEH
Pete Sochocki, NY2V



Keeping Mother Nature at Bay

By Steve Vansickle, WB2HPR

The most important (and often, the largest physical part) of a radio system is its antenna. The fanciest and highest tech radio gear will not be able to do its job without a proper antenna.

Besides being physically large, antenna systems can require a significant investment in time and money to design, construct, erect and maintain. When done properly, a well-engineered system can withstand the rigors of Mother Nature; rain, wind, heat and cold, ice loading and lightning are common factors which can alter antenna performance. Once erected, we cannot simply ignore these effects and expect that antenna systems will “take care” of themselves. During the service life of any antenna, out in the natural elements, it is necessary to routinely inspect the antennas themselves, including supporting masts, towers, ropes, halyards and catenary lines. Also, the feedline, insulators, and hardware need to be looked at.



The result of water incursion: Notice the oxidation of the shield on the Left - compared with bright shiny shield on the Right. Oxidation like this can cause significant noise on both transmit and receive. Samples are from a commercial installation, showing the result of improper weatherproofing.

One of the most common problems reported can be traced to water incursion in the various connectors, producing corrosion and electro galvanic leakage paths that will severely degrade performance of the antenna – and the entire radio system performance will be degraded. Some symptoms could be excessive noise, interference to consumer products, poor efficiency, obvious physical damage and even no communication capability whatsoever.

When water from condensation, or vapor is allowed to accumulate in connectors, it often migrates into the cable itself. The accumulated moisture can “wick” itself into the coaxial cable braid, as well as flow under wire insulation. When enough of this occurs, you will eventually experience some or ALL of those previously mentioned symptoms. Coax cable can become completely ruined by water.

Fortunately, preventing water incursion is readily achieved nowadays. There are several products which can be used to protect antenna connections, cable fittings, and the feedline (coax) itself. Also, with proper design, a well-engineered antenna system will use the MINIMUM number of connections, fittings and plugs in order to lessen the possibility of water vapor infiltration.

Also, in the case of external baluns and traps, it is desirable to provide “weep holes” in the insulated housings to prevent any accumulation of water droplets. For those instances where it is necessary to make a connection, I recommend the liberal use of a high quality PVC tape, such as Scotch Brand 33 tape. Properly applied with a 50 percent overlap of at least two layers, this will provide weather and UV protection to the plug, socket, or other connecting device. There are also other products available in the form of liquid tape, self-vulcanizing rubber tape, and other insulating compounds in a malleable putty form. I generally do not use these, as I have found the Scotch 33, or the thicker 88 tapes to be entirely adequate.



-continued on page 4-

Keeping Mother Nature at Bay...



This corroded plug was not properly waterproofed at the time of installation. Removed from commercial installation.

If it becomes necessary to use more than tape, I always apply the tape over the connection, then, and only then, followed by the liquid tape or putty. (One brand name is “Coax-Seal”) These coatings are diabolically difficult to remove if you have to disconnect a plug while troubleshooting – but an initial covering of tape will allow relatively easy access once applied.

The bottom line: the old saw: “an ounce of prevention...” holds true in this example. Proper design, construction and weather proofing will go a long way toward protecting the vital components of your station’s antennas. Of course, preventing water damage to the antenna components is only one facet of antenna maintenance. Proper installation will protect this large component of the radio system, and will increase the life of the antenna and improve its reliability.

*Next time: Selecting materials for antenna construction.
Until then – 73 – Have a Happy and Healthy New Year!*

Transatlantic Tests Mark 99th Anniversary

On December 11, 1921, radio history was made when a signal from amateur station 1BCG in Greenwich, Connecticut, was heard in Ardrossan, Scotland, marking the first successful transatlantic radio transmission using shortwave frequencies.



Between 1921 and 1924, radio amateurs experimented with transmitting across the Atlantic. Sponsored by ARRL, the Transatlantic Tests aimed to prove that shorter wavelength frequencies could propagate long distances using transmitters running less than 1 kW. The initial run of the Transatlantic Tests was a failure. For the second Transatlantic Tests, ARRL dispatched receiver designer Paul Godley, 2ZE, considered one of the best of operators the day, to Europe to listen for participating stations. His nine-tube receiver employed the latest superheterodyne technology.

In one of those historical coincidences, during his voyage to England, Godley met Harold Beverage, who convinced him to use a specially designed, highly sensitive, directional 1,300-foot antenna, still referred to as the Beverage antenna.

During a pre-event dinner arranged by his British hosts, Godley also met wireless pioneer Guglielmo Marconi.

Over the course of the test period, more than two dozen stations were heard between 230 and 235 meters, roughly 1.3 MHz in what is now the AM broadcast band. Some utilized spark-gap transmitters, others employed vacuum-tube CW transmitters. The one heard most consistently was the 1BCG CW transmitter operated by six members of the Radio Club Of America -- Ernest Amy, 2VK; Edwin Armstrong; George Burghard, 2SS; Minton Cronkhite, 1BCG; John Grinan, NJ2PZ, and Walker Inman, 2BGM. From 1BCG, they transmitted their message at 2152 UTC (then GMT) on December 11, 1921.

On the Beam

News & Notes

FCC to Require Email Address on All Applications

Amateur radio licensees and candidates will have to provide the FCC with an email address on applications, effective sometime in mid-2021. If no email address is included, the FCC may dismiss the application as defective.

The commission is fully transitioning to electronic correspondence and will no longer print or provide wireless licensees with hard-copy authorizations or registrations by mail. A Report and Order (R&O) on "Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services" was adopted on September 16th. The new rules will go into effect six months after publication in the Federal Register, which hasn't happened yet, but the FCC is already strongly encouraging applicants to provide an email address on all applications.

When an email address is provided, licensees will receive an official electronic copy of their licenses when the application is granted. The Report and Order can be found in PDF format online at: <https://www.fcc.gov/document/fcc-adopts-electronic-licensing-report-and-order>.



FCC Chairman Will Leave in January

Federal Communications Commission Chairman Ajit Pai will leave the FCC in January.

"It has been the honor of a lifetime to serve at the Federal Communications Commission, including as chairman of the FCC over the past four years," he said in a statement. Pai is a Republican who departs ahead of an expected new chair being appointed by President-elect Joe Biden.

Pai has been a cheerleader for radio in his tenure, often speaking about the importance of the medium in American life, and he has sought to help bolster AM broadcasters in particular through a series of "revitalization" measures. He also has pushed to streamline processes and reduce regulations.



Pai thanked the FCC's "talented staff" and said they "performed heroically, especially during the pandemic."

"It's also been an honor to work with my fellow commissioners to execute a strong and broad agenda. Together, we've delivered for the American people over the past four years: closing the digital divide; promoting innovation and competition, from 5G on the ground to broadband from space; protecting consumers; and advancing public safety. And this FCC has not shied away from making tough choices. As a result, our nation's communications networks are now faster, stronger, and more widely deployed than ever before."

Among the highlights he cited are "reforms we have instituted to make the agency more accountable to the American people. In particular, for the first time ever, we've made public drafts of the proposals and orders slated for a vote three weeks before the agency's monthly meetings, making this the most transparent FCC in history."

EGARA December Meeting Minutes

EGARA held two virtual meetings during December, the first serving as the club's regular monthly meeting and the second as the Roundtable meeting that was held the fourth Wednesday of the month and also served as an "on the air" Christmas Party. Items that were discussed during the regular monthly meeting included:

- The December meeting of the EGARA was called to order at 7:00 PM by President Bryan Jackson, W2RBJ. 13 members checked in via the 147.270 repeater.
- Meeting agenda consisted of 501(c) 3 status, 220 repeater install, EGARA hats, upcoming QST article, Masonic Lodge access, hamfest plans, HF ragchew, and virtual Christmas party. Also, items for the Buy/Sell/Trade section of the club newsletter SIDEBANDS are being sought.
- The 501(c) 3 filing status remains in limbo. The IRS is processing requests and we should be hearing more in the next 30 days. The 220 repeater install is delayed until the club's non-profit status is approved.
- There is still time to order your official EGARA cap. Email Bryan W2RBJ@outlook.com to order.
- An article about new ham kits, authored by Bryan, will appear in QST for February, 2021.
- Masons are still restricting meetings at the lodge; the next monthly EGARA meeting to be conducted via the 270 repeater on January 13th.
- Hamfest 2021 status is still unknown.
- Newsletter articles are sought as are items for the buy/sell/swap classified section.
- The 2020 Christmas party will consist of a special ragchew on the 270 repeater on December 23rd at 7 pm. Names will be drawn for door prizes: ARRL Handbook, Tri-band HT, Hats, an MFJ clock, and other items.
- Secretary report – no open items.
- Treasurer's report: Some dues were received via PayPal. No significant expenses.
- Gina Pendolino passed her General test – thank you to the VE's who conducted the testing session.
- Member happenings: Raspberry pi projects, neighbors helping neighbors, tower and antenna work, holiday wishes, church activities, cooking, staying well, RACES, shack updates/upgrades, APRS, repairing old radios.
- Meeting adjourned at 7:36 PM.
- --de Steve VanSickle WB2HPR / Secretary

EGARA Gets International Recognition for its “New Ham Kit”

On Monday, December 28th, ARRL posted an Instagram note on its social media site about EGARA’s “New Ham Kit”, which will be featured in the February issue of QST, as well as on the League’s website. The post brought immediate worldwide recognition to the club, with requests for the kit coming from as far away as Australia.

The kit was developed by the club to help new Hams get on the air after they pass their exams during EGARA VE sessions.

The QST article was written by Club President Bryan Jackson, W2RBJ, who submitted it to ARRL as a way of helping other clubs get new Hams up and running once they get their licenses.

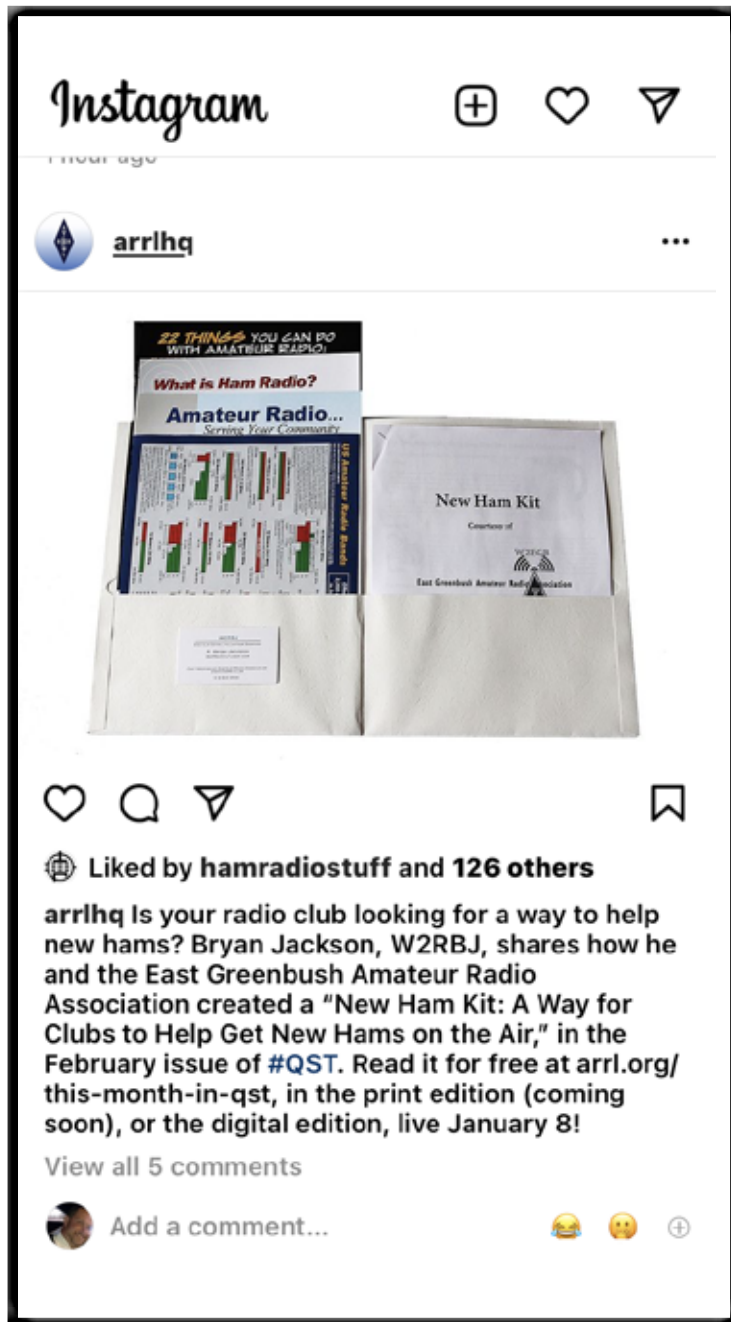
“It’s great that ARRL found our *New Ham Kit* interesting and of value to other clubs,” Jackson said.

“It also brought immediate worldwide attention to EGARA, with many requests for copies of the kit,” he added. “One ever arrived from Greg Walker, VK4GJW, of the Ipswich & District Radio Club in Australia. Many thanks to everyone who helped make this project such a success.”

The EGARA “*New Ham Kit*” contains a range of helpful information, including what equipment is required, understanding how repeaters work, operating tips, band privileges, and the additional privileges that license upgrades offer. It also recommends joining a local club like EGARA to tap into the knowledge and assistance of their experienced members.

The print edition of the story will appear in February’s QST, and will be sent to League members in late January. Meanwhile, the article will be available for free on the ARRL website starting January 8th at the following URL:

www.ARRL.org/this-month-in-QST



ARRL’s Instagram December 28th post letting its social media followers know about EGARA’s “*New Ham Kit*” The post picked up dozens of “likes” within a short time after being sent out by the League The Kit is now available for download from the home page of the club’s website at www.EGARA.club

The History of Ham Radio: The Chicago Plan

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)

Amateurs were making progress taming the QRM problem. Sometimes a solution did not involve a new invention, or even technology at all.

In a drama worthy of a Broadway play, Central Division Manager R. H. G. Mathews, 9ZN, described the bleak situation in Chicago before the war. Acute rivalry between local clubs had resulted in “gangs” in the north, south, and west sides of the city, “each having as a primary object the annihilation of the aerials of the others.” The situation had gone from bad to worse.



In fact, during the Washington's Birthday tests, someone tore down Mathews' own aerial just before the relay began. A replacement was hurriedly erected and then “two friends sat out under the mast with 38 caliber ‘cannons’ and chased away exactly eight individuals, each with his little side cutting pliers.” Clearly, urban QRM was not the only problem arising from lack of cooperation. Something had to be done.

Individual influential amateurs in each Chicago area met and worked together with ARRL city manager Schnell to discuss the situation and come up with a plan they could all endorse. They formed an Executive Radio Council that included officers from each constituent club, all of which were ARRL affiliates, to administer and regulate operations in the metropolitan area. New clubs were also formed in areas where no previous one existed. As a representative body, with personal relationships among the officers, the Council was able to get the endorsements of the various groups. Their intent was to be fair to everyone while at the same time not interfere with each individual group's activities. Cross-membership was encouraged, the dues were regulated to be all the same, and meeting dates were coordinated so as to avoid schedule conflicts. The average club size was about 100 members, and the most successful were the ones that concentrated on the social aspects of the hobby as well as the technical.

The council went to great lengths to foster an environment of cooperation and friendship—the only way to obtain a foundation on which the authority of the council could be based. It drew up a set of fifteen “traffic regulations” stipulating hours of operation, what kinds of operation could occur in each time period, operating procedures, and what defined local as opposed to long-distance work. It also defined the role of traffic officers and their duties.

Crucial to making this work was acknowledging that some hams were interested in long-distance experiments but not necessarily in handling message traffic. Thus, there were three classes of operators: local, long-distance traffic, and long-distance non-traffic. No station was permitted to work both long-distance periods on the same night. This single new realization went a long way toward eliminating the friction between the groups.

Each club handled enforcement under the coordination of the city manager. After investigating a violation, the club to which the offender belonged would be fined. If the offender was not a member of any club, the one in whose territory he resided would be fined.

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The History of Ham Radio...

It was then up to that club to collect payment from the individual amateur, if possible, or ensure that no further violations occurred. But it turned out that the system worked so well that very few fines were ever charged. The Council also organized a direction-finder squad whose job was to locate unlicensed stations or other unidentified offenders.

The Smith Cup

Proud of their accomplishment, Mathews boasted that “these methods combined with the loyal mutual cooperation of our big fraternal radio ‘club-families’ have converted Chicago from a radio-Bolshevist community to what I now believe it to be, the best big radio city in the United States...” The Chicago Plan, as it came to be known, was a model for cooperative operation.



The Smith Cup

The Smith Cup was a one-time award in the form of a loving cup, donated by Seymour Wemyss Smith of the Hartford Courant (and ARRL member), to be given to “the amateur performing the most outstanding feat in the interest of Citizen Radio” during the summer months as determined by a committee. R. S. Kruse 3ABI, agreed to chair the selection committee and enlisted other well-known amateurs including Vermilya, 1ZE; Goette, 2JU; E. H. Merritt, 4YA; J. M. Clayton, 5ZL; A. E. Bessey, 6ZK; Royal Mumford, 7ZJ; Rev. A. J. Manning, and 8ZG; and R. H. G. Mathews, 9ZN. What exactly could constitute a “most astounding feat” was unspecified but could include achievements in on-air operation, technology, organization, or publication. Regardless, the award was clearly aimed at summer, when operating was more difficult.

In spring 1922, the Smith cup was awarded to the Chicago Executive Radio Council, in recognition of The Chicago Plan. It is unclear whether Mathews, as a committee member, participated in the selection.

For the first time, Calls Heard contained reports from stations hearing calls from every district. And 9CA and 9GC reported hearing both coasts at the same time, another first in a decade that would produce many more.

It's a New Year and Paying Club Dues Has Never Been Easier!

Take a moment right now to support EGARA by sending along your annual dues for 2021.

Pay quickly and easily online at: <https://www.egara.club/pay-dues>

or mail your check to: EGARA, P.O. Box 25, East Greenbush, NY 12061.

\$15 / individual - \$25 / family

Multi-year rates also available. Check the website for details.

10 Tips for Ham Radio Masters

By H. Ward Silver

Your ham radio license is really a license to study. Take advantage of every learning opportunity, including learning from your mistakes. (You'll have plenty!) Each problem or goof is also a lesson.

Masters got to be masters by starting as raw recruits just like you and then making one improvement at a time, day in and day out. You may think that ham radio veterans surely have stores of secret knowledge that took years and years to acquire — knowledge that makes them the masters of all they survey. Certainly, the veterans have experience and expertise, but they also rely on simple principles that work in many situations. You can use these principles, too.



1) Listen to everything

Masters get more out of listening and monitoring than anyone else because they've learned the value of doing it. Every minute you spend listening is a minute learning and a minute closer to being a master, whether it's as a net control, a top contest operator, setting up a balloon tracker, or just giving out directions to the club meeting. Listen and learn how.

2) Learn how it works

Operating a radio and building an efficient, effective station are much easier if you know how the equipment works. Even if you're not terribly tech-savvy, take the time to get familiar with the basics of electronics and how your equipment functions. You will be much more effective if you learn the effects of controls and their adjustments. Learn how to make simple repairs to keep your station on the air.

3) Follow the protocol

Use the expected terms and give information in the form and order in which it is expected. When calling another station, follow "Gift Tag Order – To then From:." Start with that station's call sign to alert that operator, then give your call once or twice as necessary. Use the recommended phonetics that others in your group prefer. In a competition, exchange your information in the same order published by the sponsor.

4) Keep your axe sharp

When asked what he would do if he had eight hours to cut down a tree, Abe Lincoln replied that he would spend the first six hours sharpening his axe.

If you have battery-powered equipment, be sure that the batteries are charged and fresh. Make sure fuel for a generator is fresh. Lay out your "go kit" from time to time so that you are sure it's all there when you need it. Also, test your station's operation on all bands and modes. Keep your skills sharp so when they're needed on the air, you'll be ready.

5) Practice to make perfect

Even a sharp axe gets dull if it isn't used. Get on the air regularly, keeping in touch with conditions. An experienced operator knows what stations are active, from where, and when, as well as when important nets and on-the-air events take place. Even if you know the procedures by heart, check in to your local net each week. Take advantage of contests or special events to exercise your skills and make sure your equipment is working. Make operating your radio station a natural and comfortable activity by keeping yourself in shape with regular radio exercise.

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Ten Tips...

6) Pay attention to detail

Masters know that the little things are what make the difference between 100 percent and 90 percent performance — or even between being on the air and off the air. The most expensive station isn't worth a nickel if it doesn't work properly when you need it. Waterproofing that connector completely or having your CQ sound just right really pays off in the long run. Masters are on the radio for the long run.



7) Know what you don't know

Take a tip from Mark Twain, who warned, "It's what you know for sure that just ain't so." If you get something wrong, don't be too proud to admit it. Find out the right way; track down the correct fact. People make their worst mistakes by ignoring the truth.

Radio waves and electricity don't care about human pride. A master isn't afraid to say, "I don't know."

8) Maintain radio discipline

When you are performing public service, whether in an emergency or not, practice your radio discipline: Know and follow the rules of the operation, follow the instructions of a net control station, transmit only when authorized and necessary, use plain language, and pay attention so you are ready to respond. Strive to make your operating crisp and clear so that anyone can understand.

9) Make small improvements continuously

Any improvement in the path between stations should not be neglected. Anything that makes your signal easier to understand — 1 dB (decibel) less noise received, 1 dB better audio quality, 1 dB stronger transmitted signal — makes the contact easier. Make your station and yourself better in small, regular steps and you'll get a lot more out of ham radio!

10) Help others and accept help from others

Sooner or later, you will encounter operators needing assistance. If they ask for help, offer your services. They may not be aware there is a problem, such as with poor audio, a distorted signal, or erratic operation. New operators may not know the right way or time to call another station. Before informing them of the problem, ask yourself how you would want to learn about a problem with your station. When describing the problem, be polite and be as clear as you can in your description.

When other operators tell you that you have a problem, don't get mad or embarrassed. Thank them for bringing the problem to your attention and make them feel good about helping you. Ask them to help you troubleshoot. Ham radio is all about helping each other, on and off the air.

How to prevent ESD damage

By Dan Romanchik, KB6NU

Here are some tips from Keysight Technologies, one of the leading electronic test equipment companies, on how to prevent ESD from damaging your electronics.

USE A GROUNDED WRIST STRAP whenever you are handling equipment or boards. Using a grounded wrist strap prevents your body from building up charge and causing damage when this built-up charge discharges into your equipment or test boards. Make sure to connect that alligator clip to ground!



USE GROUNDED WORK SURFACES OR MATS for your boards. Do NOT use static generating or insulating materials as a work surface. Non-grounded mats and static generating/insulated materials can inductively charge boards, especially exposed ones. When connecting a charged board to equipment, the board can cause damage by discharging into the equipment's inputs.

KEEP CHARGED MATERIALS AT LEAST 0.3 METERS FROM EXPOSED ASSEMBLIES. This includes plastics, foam, or other materials that can build up charge. Having a charged material near an exposed assembly can inductively charge the assembly. The assembly can then discharge into the equipment's inputs.

DISCHARGE YOUR CABLES BEFORE CONNECTING THEM TO YOUR EQUIPMENT. Electrostatic charges can build up on test probes and test leads, so it's important to discharge them before connecting them to your test equipment:

- Ensure your device is off.
- Connect your cable to your device.
- Attach a 50 Ω shunt to the open end of the cable.
- Remove the shunt and immediately attach your device to your equipment. This prevents the center conductor of your cable from discharging stored charge into your equipment. A charged assembly can charge connected cables.

USE BOARD STANDOFFS AS NEEDED. In some situations, you need board standoffs to provide extra insulation for your exposed assemblies. This prevents your grounded mats from making unwanted connections on your board.

NEVER USE "PINK" PACKING MATERIAL FOR BOARD TRANSPORT OR AS A WORK SURFACE. While many people think pink packing material is ESD safe, in most cases it easily builds up unwanted charge. Unless continuous, thorough testing is done, treat pink packing materials as charged.

CAP UNUSED EQUIPMENT INPUTS to avoid accidental ESD and physical damage. Damage often occurs by accidentally contacting equipment inputs. Capping unused inputs protects them from incidental ESD damage.

USE ESD-SAFE BAGS WHEN TRANSPORTING BOARDS. This protects boards from ESD damage while moving between ESD-safe locations.

DO NOT OVERDRIVE EQUIPMENT INPUTS. Start your testing at the least sensitive input setting and zoom in on your signal. Additionally, observe the maximum input levels for your specific equipment. The least sensitive setting is the most resilient, so starting there ensures that your inputs are at safe operating levels

After I wrote this, Dave, N8SBE offered some further tips. He writes:

Grounded heel straps also help reduce static charge. Test them with a floor tester every time you put them on. The floor needs to be somewhat conductive—not metal, that's a safety hazard—so use conductive wax on tiles, or conductive carpet to drain of electrostatic charges.

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Preventing ESD...

Keep materials, such as styrofoam cups, that form electrostatic charges easily away from your workspace. A styrofoam cup can generate thousands of volts.

Keep the humidity up in the workspace. That helps to keep static generation down as well.

I like to think that I follow ESD-safe procedures, but there are a couple of things here that I hadn't thought about before. For example, I'd never really thought about discharging test equipment cables before connecting them. I think that's a good tip

To learn more, go to <https://www.keysight.com/find/PreventESD>

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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 worrying about electrostatic discharge, he teaches online ham radio classes and operates CW on the HF bands.

A new feature for 2021 is "Shack of the Month"! Each month we'll highlight a club member's Amateur Radio setup and gear. Send a shot of your shack and a brief description to W2RBJ@Outlook.com

Shack of the Month N2CJF

Joe Ostering, N2CJF, has only been in his new QTH in Deep River, Connecticut for a couple of months, but he's already started building his "dream shack". His setup includes CW on a tented Omni Six, plus other rigs such as a pair of Kenwood twins TS-820 and TS-830.

His AM setup includes a Johnson Valiant and a Johnson Viking 2 with a Drake R4B for receiving AM.



Above: Joe's AM station



Left: Joe, N2CJF, sitting at the main shack setup

Please Support Our EGARA 2021 Hamfest Sponsors



Fun Fact:

The light emitting diode effect was first noticed in 1907 by H.J. Round, while experimenting on cat's whisker detectors. He published his results in the *Electrical Review*.

However, it took until the 1960s before LEDs were commercially available.



CALENDAR

January 13, 2021 - 7 pm - Monthly club meeting over 147.270 club repeater.

January 23, 2021 - Saratoga County ARA Virtual Hamfest.
Registration at: <https://www.eventbrite.com/e/copy-of-saratoga-county-amateur-radio-association-virtual-hamfest-2021-tickets-134281191659>. Register by January 9th.

January 27, 2020 - 7 pm - EGARA Roundtable on 147.270 repeater

Pro Tip: The Alpha Clip and Save

A	ALPHA	..-
B	BRAVO	----
C	CHARLIE	---.
D	DELTA	---.
E	ECHO	.
F	FOXTROT
G	GOLF	---
H	HOTEL
I	INDIA	..
J	JULIET	-----
K	KILO	---.
L	LIMA	...-
M	MIKE	---
N	NOVEMBER	..
O	OSCAR	----
P	PAPA
Q	QUEBEC	-----
R	ROMEO	...-
S	SIERRA	...
T	TANGO	-
U	UNIFORM
V	VICTOR-
W	WISKEY	---
X	XRAY-
Y	YANKEE	-----
Z	ZULU	----.



For Sale

- **Ameritron 811 Amplifier with latest updates.** Worn parts replaced. Does not include tubes. Asking \$450. Email: wo2h@nycap.rr.com or phone 518-860-4971

- **ICOM 7100, 100w HF/50mhz, 50w 144mhz, 35w 430/440mhz.** \$475.
- **Yaesu 891, Mobile HF / 6 meters.** \$425.
Contact Tom, KC2FCP, at 518-272-1494

- **Arrow Model 52-S4 - 4-Element 6 Meter Yagi antenna** in good condition. \$75.00
Contact Steve at: svansick@nycap.rr.com

- **Yaesu FT2DR/DE Digital Transceiver with Original box and parts.** Added accessories: Diamond SRH77CZ antenna, Yaesu MH-34 Microphone, Yaesu SDD-13 charger (for mobile) \$ 375.00 offers considered. Excellent condition. Sells new for \$419 without extra's.
- **Alinco DJ-596 2M/440 analog Transceiver with MFJ-1715 antenna, optional Battery Case (AA batteries), with Chargers including mobile.** \$30.00
- **Cisco Linksys Router EA6300** \$25.00
- **Cisco Linksys Router EA3500** \$20.00
Contact Fred, AJ4CN at: aj4cn@twc.com

Gear to Sell, Swap or Buy?
Send your listing to W2RBJ@Outlook.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.