# Sidebands

The Newsletter of the EAST GREENBUSH AMATEUR RADIO ASSOCIATION



**April 2019** 

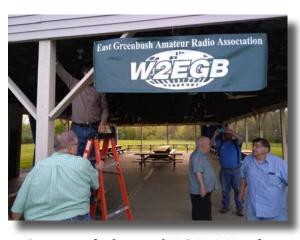
President - Tom Scorsone, KC2FCP Vice-President - Nick Field, KD2JCR Secretary - Steve VanSickle, WB2HPR Treasurer, Webmaster & Newsletter Editor - Bryan Jackson, W2RBJ Board Members: David Jaegar, Jr., K2DEJ - Russ Greenman, WB2LXC - Dave Gillette, KC2RPU

# May Shaping Up as a Busy Month for EGARA Events include Hamfest, VE session and Race for Literacy

EGARA members will find lots to do in May.

The month's events will kick off on May 5th when the club once again provides communication support for the annual Rensselaer County Race for Literacy. As in the past, members will staff various points along the race route, providing updates on the progress of the race, coordinating communications between race officials and relaying information on any issues or emergencies that might arise. Club members who are available to help are asked to sign up by email to Bryan Jackson at *W2RBJ@outlook*. com. Volunteers should expect to be on site at the Schodack State Park on Route 9-J at 8 am and bring a fully charged portable VHF/UHF radio with them. The frequency to be used will be emailed prior to the race.

The following weekend will bring the club's biggest event -- its annual Hamfest on May 11th! This year's event will again be held in the pavilion at the East Greenbush Fire Department on Phillips Road -- and a large



Setting up for last year's EGARA Hamfest

crowd of hams from across the region are expected to attend. This year the club is working with KJI Electronics to feature an HF/6 meter Yaesu FT-891 transceiver as the Grand Prize! In addition, a variety of door prizes will be offered by sponsors such as Quicksilver Radio and MFJ Enterprises. Details and work assignments will be discussed during the club's regular membership meeting on May 8th, so please plan to attend.

"Hamfest is always an 'all hands on deck' event," said President Tom Scorsone, KC2FCP. "It's our biggest fund raiser of the year and it takes everyone's help to make it a success. We've had a great turnout over the past several years, so I'm confident we'll see the same level of support again this year... from set up to clean up"

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Among the many jobs to be filled by club volunteers are set up, parking coordination, cooking, ticket sales, assisting visitors, talk-in and clean up. The pavilion will be available Friday evening and club members will meet at the Masonic Temple at 6 pm to move supplies and equipment to the firehouse. Setup at the pavilion will begin at 5:30 Saturday morning, with vendor setup at 6 am and the opening of the Hamfest starting at 8 am.

This year's Hamfest is expected to be a big draw thanks to enhanced marketing of the event and the list of impressive prizes that are expected to be given away. In addition, a new email list of past attendees will allow for direct outreach.

The final event scheduled for the month is the club's Spring VE session, which will be held on May 18th at the East Greenbush Community Library. Exams will be given starting at 10 am for all license classes -- Technician, General and Extra.

## **Basic Test Equipment for the Shack**

By Steve Van Sickle, WB2HPR

Have you been wondering about the use of some basic electrical test equipment? Have you suddenly found your station "off air" due to equipment malfunction? How about that assortment of coax cables that are lying around the shack - - are they any good? With just a couple pieces of basic test equipment, you can answer these questions and keep your station ready-to-go and on the air.

The most important troubleshooting aid we all have is our senses. That's right, our eyes, ears nose and sense of feel. If a power supply is not working right, it may overheat, its indicator light may be out, it may be making an abnormally loud hum, or may even "smell" too hot. If these conditions were to occur, you would surely know that something is not right! Then it would be a good time to break out your multimeter and perform some basic tests.

For instance, you could measure its output (DC or AC – depending on its application). Or perhaps one of the output terminals has failed, or a connection at the output connector has given up.

Another common problem may be traced to a suspected coax connector or jumper cable assembly. If a cable is repeatedly connected and disconnected, the plug to cable connection is likely to fail over time, despite the best of care. Again, by using your multimeter, you can easily check the cable for continuity and/or short circuit.

Your "senses" are also a key diagnostic tool. A visual inspection can often lead you to the problem quickly

Suppose that you wished to verify whether or not your antenna was radiating all that power that you are pumping out from your transceiver. Did you know that

you can do a simple "go/ no-go" test by adding a small signal diode and a clip type jumper wire? By using your multimeter and your senses, you can isolate problem areas in your station equipment, repair or replace the defective parts, and get back on the air.

In addition to a multimeter, you can add a so-called antenna analyzer to your test equipment arsenal. You can use it to make your antenna perform at its peak efficiency by making critical adjustments to maximize forward power and reduce reflected power due to mismatch. There are several types of antenna analyzers available, at many different price points, depending on accuracy, frequency range, and measurement capabilities. Even a very basic one will allow you to make most antenna measurements to facilitate adjustments over all the HF and VHF bands.

Knowing how to use these basic pieces of equipment will ultimately save you time and frustration in trouble shooting station problems. Don't wait for problems to crop up before you have your test equipment in hand. It's a matter of time, sooner or later, that something will fail, and you'll need to diagnose the problem, and knowing how to use your senses and your gear will get you back in operation as soon as possible.

If you are unsure, bring your test gear to a meeting and ask for an "Elmer" to show you how to use it. Read the literature packed with the equipment, and perform some practice tests so you will familiar with the equipment operation and capabilities. Finally, if you haven't purchased test equipment yet, ask a fellow club member for some ideas about their equipment and check the on line reviews at the eHam website to help you finalize your choice.



A multimeter can be your best friend in the shack. Some include extra functions, such as a transistor checker.

## A Refresher for Volunteer Examiners

Several EGARA members also service as Volunteer Examiners -- better known as "VEs" -- administering Amateur Radio Licensing exams on behalf of the FCC. All of the club's VEs hold Extra class tickets and have been certified by the ARRL, which sanctions the club's VE sessions. Although the club offers testing sessions three times a year (January, May & October), changes and updates to the licensing process make it important for every VE to stay up-to-date. With our next exam session coming up in May, here is a quick review of their responsibilities:

**GRADING EXAMS:** Each VE must grade each exam taken or must agree to the score given. After all three VEs agree to the number of correct answers shown, the score is announced to the person who has taken the exam. Upon completion of grading an exam, the VEs must inform the person who took the test as to whether they passed or failed, and state their score (such as, 26 correct out of 35 questions).

#### NEW! BASIC QUALIFICATION (FELONY) QUESTION PROCEDURES:

Exam applicants are now required to answer on FCC Form 605 whether or not they have ever been convicted of a felony in any state or federal court. Applicants answering "yes" must provide an explanation. This section enables the FCC to determine whether an Applicant is eligible to hold or have ownership interest in a station license. Applicants are required to answer the question only if they are filing any Form 605 for one of the following purposes indicated: New, Amendment, Modification (Upgrade or Call sign change), or Renewal/Modification. Applicants using any Form 605 for any other purpose are not required to answer this question.

After the application data from the session is submitted to FCC and an FCC file number is created, the applicant is required to provide an explanation directly to the FCC within 14 days. VEs are not to collect information from the candidate and are not to send any documents to the VEC other than those normally submitted for an exam session.

#### NCVEC QUICK-FORM 605 APPLICATION INSTRUCTIONS:

Exam Applicants must fill in **SECTION 1** for a new license or license upgrade and must provide the following information:

- Applicant contact information, including: Full name, call sign (if licensed) address, Social Security Number, or FCC-issued Federal Registration Number [10 digits beginning with a "0"]), city, state, zip code, e-mail address, daytime phone number.
- Social Security Number (SSN): Social Security Number, or FCC-issued Federal Registration Number (10 digits beginning with a "0").
- Basic Qualification Question: Applicants that check "YES" follow the FCC instructions outlined above.
- Application Purpose: Check the box or boxes that the applicant is applying for. (eg, Examination for Upgrade, and Change of mailing address might both be checked for some applicants).
- Does applicant have another license application pending at FCC? If yes, explain.
- Applicant Signature and Date Signed.

#### VEs must fill in SECTION 2.

- Indicate license class earned at this session (if any) for the exam date and location shown to the right.
- In the boxes to the right, fill in the exam date, exam site city and state or country, and VEC name.
- Enter the Three Administering VE's Certifications Each of three qualified and VEC-accredited administering VEs must PRINT their name,
- PRINT their call sign, SIGN their name and enter the date signed.

Once all the exam documents are completed and checked, they should be mailed to the ARRL VEC section at the League's offices, 225 Main Street, Newington, Connecticut, 06111-1494.

## FCC Invites Comments on Proposal to Expand Technician Privileges



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.

<u>Interested parties have until April 15th to comment.</u> The Technician enhancement proposals stemmed from the recommendations of the ARRL Board of Directors' Entry-Level License Committee, which explored various initiatives and member opinions in 2016 and 2017.

"This action will enhance the available license operating privileges in what has become the principal entry-level license class in the Amateur Service," ARRL said in its Petition. "It will attract more newcomers to Amateur Radio, it will result in increased retention of licensees who hold Technician Class licenses, and it will provide an improved incentive for entry-level licensees to increase technical self-training and pursue higher license class achievement and development of communications skills."

Specifically, ARRL proposes to provide Technician licensees - both present and future - with:

- Phone privileges at 3.900 to 4.000 MHz, 7.225 to 7.300 MHz, and 21.350 to 21.450 MHz.
- RTTY and digital privileges in current Technician allocations on 80, 40, 15, and 10 meters.

The ARRL petition points out the explosion in popularity of various digital modes over the past 2 decades. Under the ARRL plan, the maximum HF power level for Technician operators would remain at 200 W PEP. The few remaining Novice licensees would gain no new privileges under ARRL's proposal.

ARRL's petition points to the need for compelling incentives not only to become a radio amateur in the first place, but then to upgrade and further develop skills. Demographic and technological changes call for a "periodic re-balancing" between those two objectives, ARRL maintained in his proposal. The FCC has not assessed entry-level operating privileges since 2005.

The Entry-Level License Committee offered very specific data- and survey-supported findings about growth in Amateur Radio and its place in the advanced technological demographic, which includes individuals younger than 30. It received significant input from ARRL members via more than 8,000 survey responses. "The Committee's analysis noted that today, Amateur Radio exists among many more modes of communication than it did half a century ago, or even 20 years ago," ARRL said in its petition.

Now numbering some 384,500, Technician licensees comprise more than half of the US Amateur Radio population. ARRL stressed in its petition the urgency of making the license more attractive to newcomers, in part to improve upon Science, Technology, Engineering, and Mathematics (STEM) education, "that inescapably accompanies a healthy, growing Amateur Radio Service."

ARRL said its proposal is critical to develop improved operating skills, increasing emergency preparedness participation, improving technical self-training, and boosting overall growth in the Amateur Service, which has remained nearly inert at about 1% per year.

The Entry-Level License Committee determined that the current Technician class question pool already covers far more material than necessary for an entry-level exam to validate expanded privileges. ARRL told the FCC that it would continue to refine examination preparation and training materials aimed at STEM topics, increase outreach and recruitment, work with Amateur Radio clubs, and encourage educational institutions to utilize Amateur Radio in STEM and other experiential learning programs.

The ARRL's full proposal can be found at: https://ecfsapi.fcc.gov/file/1022823795806/2018%20Entry%20Level%20License%20PRM%20FINAL.pdf.

## Follow up on the news...

## WWV Centennial Special Event Will Use WW0WWV

In a follow up to a story Sidebands carried last month...

With its funding secure for another year, WWV, the world's oldest continuously operating radio station, will have extra reason to celebrate its centennial this fall. The National Institute of Standards and Technology (NIST) and the Northern Colorado Amateur Radio Club (NCARC) have teamed up to organize 100th anniversary events. A memorandum of understanding is pending.

The WWV Committee has announced that the call sign WW0WWV was granted on February 23 to the WWV Amateur Radio Club for use during the Amateur Radio special event, planned to run September 28 – October 2, with operators on the air — no pun intended — around the clock. NCARC predicts the effort will require "hundreds" of volunteer operators.



The WWV site in Ft. Collins, Colorado

"The 100th anniversary is an occasion to celebrate radio and our understanding of the electromagnetic spectrum, and an opportunity to help people everywhere appreciate what radio does in their everyday lives," said Dave Swartz, WODAS, who has been spearheading the on-the-air event.

The WWV Committee met on February 22, with representatives of NCARC and NIST on hand, to further firm up plans for the centennial celebratory events. Although the US government cannot fund any Amateur Radio special event expenses, club members will be allowed to use a 15-acre parcel on WWV property, Swartz has explained. The operating site lies outside the security fence. For its part, NIST will focus on plans for an October 1 recognition ceremony and an open house at the radio station north of Fort Collins.

## Get Ready Hams - the 2019 State of the Hobby Survey is Here!

The third annual "State of the Hobby" Survey is now underway and it's your chance to let the world know what you think about Amateur Radio. *But act quick, because the survey ends on March 31st!* It's a project begun in 2017 by Dustin Thomas, N8RMA, a Michigan ham. His inaugural survey got around 600 responses, but 2018 came booming in with nearly 3,000 hams voicing their opinions!

The survey started out in 2017 as simple curiosity. While browsing Reddit, Thomas began to notice several users posting surveys for highly specific topics. He then decided to host his own survey, to collect the opinions from the Amateur community.



Thanks to feedback and inquiries from hundreds of participants, Thomas has made a few minor changes to the survey. For example, this year's includes some questions specific to 2019. However, he plans to keep the core portion of the survey intact for comparison. He stresses that he is not affiliated with any company or organization and that none of the data collected will be sold or given out, and that no personal information will be associated with specific responses, including call signs.

Hams who are interested in giving their input will find a link to the survey at: https://www.radiosoth.org/2019/03/2019-state-of-hobby-survey.html. Results from the 2017 and 2018 surveys can also be found at that web address. The survey began March 1st and will end on March 31st. The results will then be tallied and posted. Sidebands also plans to publish the findings when they become available.

## **EGARA March Meeting Minutes**

- The March meeting of the EGARA was called to order at 7:05 PM by President Tom Scorsone, KC2FCP;
- Raffle Tickets were sold for a variety of items, including a multimeter, ARRL tote bag, screw driver set, etc;
- Treasurer Bryan Jackson announced that a dozen Amateur Radio manufacturers and retailers have agreed to be sponsors of the club's 2019 Hamfest. A listing can be found on page 10 of this issue of Sidebands;
- It was announced that election of officers will take place at the April meeting. The incumbent officers indicated they all plan to see reelection. All members were reminded that they may seek election to any open office;
- On May 5th, the club will once again provide communications support for the Race for Literacy. A sign-up sheet for volunteers was circulated and several members agreed to help;
- The club welcomed its newest member, Stephen Lohnes, KD2RJZ. Steve holds a Technician class license and is planning to upgrade. He was welcomed by the membership;
- The membership discussed preparations for the Hamfest on May 11th, including the possibility of running a Special Event station. Chris Linck, N2NEH, offered to bring his field gear and set up the station. It will use the club's call sign, W2EGB;
- Following the business meeting, Steve VanSickle, WB2HPR, gave a presentation on basic test equipment and how to use it to troubleshoot common problems in the shack. Fred Carroll, AJ4CN, won a drawing for an ARRL publication on setting up an efficient Amateur Radio station.
- Member were served pizza and refreshments;
- The meeting adjourned at approximately 8:45 pm.
- -- de Steve VanSickle, Secretary





ARRL is launching a new bi-weekly podcast geared to those who are just getting started on their Amateur Radio adventure. Whether you're new to the hobby or looking to get back on the air after an absence, we know that you've got lots of questions.

So does podcast co-host Michelle Patnode, W3MVP, ARRL communications content producer. So, to help her (and maybe you), she's got co-host Joe Carcia, NJ1Q, to help her learn more about this hobby. Joe is the W1AW station manager and a member of the ARRL Lab team.

Join Michelle and Joe as they explore the topics that every newcomer to amateur radio needs to know. Shows can be found online at: <a href="https://www.blubrry.com/arrlnowwhat/">https://www.blubrry.com/arrlnowwhat/</a>. You can also submit a question by email for Joe or Michelle at: <a href="mailto:sonowwhat@arrl.org">sonowwhat@arrl.org</a>.

Make sure you can participate in the EGARA elections on April 10th! Submit your outstanding dues online today at: www.EGARA.club/dues

One year memberships remain \$15 for an individual and \$25 for a family -- New two and five renewal options offer the following savings:

EGARA members can now save money on their dues when they take advantage of multi-year discounts.

Two years: Individual \$29 (save \$1) and Family \$48 (save \$2) Five years: Individual \$70 (save \$5) and Family \$115 (save \$10)

## On the Beam

News & Notes

## **April Brings EGARA Elections**



The April membership meeting will be highlighted by the annual election of club officers, with all of the incumbents expected to seek another term. Offices to be filled include, President, Vice President, Secretary and Treasurer. Board members are not on the ballot, as they were elected last year and serve three year terms.

Any member of the club who is in good standing (dues paid in full) is eligible to run and can be nominated by others or self-nominated. Anyone interested in running for one of the offices can do so by informing the Secretary of their candidacy. Nominations should be submitted as early as possible so they may be included on the ballot, but will be accepted any time before the election is held. Candidates may also be included as write-ins.

Likewise, all members in good standing are eligible to vote in the club's election. Members who have dues outstanding may submit them any time prior to the election to place themselves in good standing. All members are urged to consider running for office and to attend the April meeting to cast their votes.

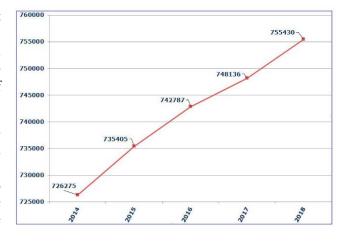
Once ballots are counted at the April meeting, those elected assume their offices immediately.

## Amateur Radio Grew in 2018... but only slightly

The US Amateur Radio population once again grew by about 1%, based upon 2017 and 2018 year-end FCC database statistics. The 755,430 total licensees represent nearly 7,300 more ticket holders than those that were in the database at the end of 2017. Nearly 51% of the Amateur Radio population in the US — 384,145 — hold a Technician license. Generals are second with 175,949, and Amateur Extras number 147,369. Advanced and Novice licensee populations continue to decline, with 39,607 Advanced and 8,360 Novices, as the FCC no longer issues Advanced or Novice licenses. A more significant statistic is 31,576 new FCC licenses last year, although that's 620 fewer than came aboard in 2017.

"New amateur licenses granted by FCC are down 2% over last year," noted ARRL Volunteer Examiner Coordinator (VEC) Manager Maria Somma, AB1FM, "but this is the fifth year in a row the total has been greater than 31,000. I predict that the number of new licensees will be more than 30,000 at the end of this year as well -- and I'm optimistic this trend will continue."

Upgrades also are down slightly, compared to last year — 9,456 in 2018 versus 9,576 in 2017, she added. "For the fifth year in a row, we have conducted more than 7,000 Amateur Radio exam sessions in a year — an important milestone for the ARRL VEC," Somma recounted. "Our program continues to provide outstanding service to the ARRL, its members, and the entire Amateur Radio community."



ARRL VEC filed a total 30,393 license application forms last year, compared to 31,014 in 2017. That includes new, upgrade, modification, renewal, and club station filings. At 7,035 in 2018, the number of exam sessions conducted by ARRL VEC marginally trailed the 7,075 held in 2017. ARRL VEC served 34,493 exam applicants in 2018, compared to 35,352 in 2017. Exam elements administered by ARRL decreased from 47,152 last year to 45,817 this year, Somma said. Nearly 1,800 new Volunteer Examiners (VEs) have been added to the ARRL VEC program.

## The History of Ham Radio: QRM & Cooperation

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)

Tn mid-February 1916, coincident with Maxim's second article on relaying, one of the first organized relay tests was run. ▲ With everyone sharing very little spectrum, cooperation was the only way to avoid QRM (a constant fact of life at the time) and hear weak, distant signals. In a rare cooperative operation between an amateur group and the government, a relay test was conducted on Washington's Birthday by Colonel W. P. Nicholson, 9XE at the Rock Island Arsenal in Illinois, and included many other stations.1 Its straightforward goal was, "... to show the United States Government that the amateurs of the United States were in a position to co-operate in radio work," by relaying a single message across the country and delivering it to various state governors and city mayors.

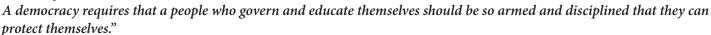
In preparation, US Navy station NAA even sent a warning about QRM. A plan was worked out after considering hundreds of suggestions by potential participants. QST noted, "Considerable diplomacy was necessary in handling the situation, as a certain amount of jealousy was found to exist between Special stations, First-class amateur stations, and the little fellow with the gas engine coil and a few dry batteries."

Relay stations' locations and approximate ranges were plotted on a map and covered most of the US except for some of the western desert areas.

On 18 February, as the time for the first test approached, QRN at 9XE was the worst in recent memory—surprising considering the season. Besides the static, 9XE reported being bombarded at the start by requests from the press (including the Associated Press) for copies of the message—which he refused to provide until after it was sent. At 11:00 that night the test began and, "every amateur in the country was quiet truly a remarkable thing," he observed.

The message:

"QST QST QST de 9XE -.-.-



(Signed) Colonel Nicholson, U.S.A.

Island Test message in Philadelphia. QST relay MSG

The Washington's Birthday or Rock Island Test was judged a success despite numerous errors in relaying, particularly the spelling of the Colonel's name. The message reached the west coast in 55 minutes, the east coast 5 minutes after that, and sooner at various points north and south. Amateurs had "bounded the United States in one hour" that night—an impressive accomplishment.

The New York Times reported that the message had been received in Williamsburg, Brooklyn by A. R. Boedar at 1:30 a.m. and would be delivered to the Mayor.2 The exercise, it said, had tested "the preparedness and skill of the 25,000 licensed amateur wireless operators." They were only off by a factor of five.

9XE's account in QST included a collection of reports contributed by participants, some illustrated with small cartoon drawings. Amateurs reported delivering the message to their state governors, some of whom were awakened at 2:00 a.m. to receive it—such was the importance of the message and the test. One operator in Washington D.C. had delivered it personally, written on an ARRL message form, to the White House.



A group of Boy Scouts helps 3XC receive the Rock

## Navy Finds Amateur Radio Makes for Better Engineers

When a group of Navy engineers and software developers took time away from their day jobs in December, they spent the time pursuing a task long considered passe: they became licensed amateur radio operators.

Some 23 employees from Naval Air Warfare Center Weapons Division (NAWCWD) took a week-long class in amateur radio at Point Mugu, California culminating with an FCC amateur radio license test. All passed and are certified at the "technician" level for amateur radio operation.

Now, Navy officials say the move may make the workers better at their jobs. The staff gained an understanding of radio frequency (RF) propagation that's essential to what they do, said Brian Hill, electromagnetic maneuver warfare experimentation lead and collaborative electronic warfare supervisor at NAWCWD.

Hill, who earned his amateur radio license in high school, noticed that while most of his department's recent hires had degrees in computer science, many had little background in RF theory or operation.



Some Navy leaders are turning to ham radios to improve understanding of electronic warfare.

"You can explain antenna patterns and concepts like omni-directional vs directional using Smith charts, but it's helpful to add a demonstration to really convey the concept," Hill said. "You can explain modulation as a concept, but for a demo... let them listen to how modulated digital signals with audio frequencies sound... For those who never knew the joy of hearing a 2400 bps modem connect over a telephone line, it was a new concept!"

These concepts are central to electromagnetic maneuver warfare.

"We need to be able to have awareness of all threats and opportunities from [zero frequency] to light within an integrated system," Hill said. "Our adversaries are looking at the entire spectrum to use against us, and we need to do the same. Having awareness of how the atmosphere changes from daylight to night and how that affects propagation of [high frequency] is important."

This can be critical for young developers/engineers whose experience is typically limited to the UHF/EHF-based systems now in vogue across communications, guidance and ISR technologies.

When Ian Mann, the division's target design engineering branch head, heard about Hill's class, he wanted his team to attend as well. Having earned his own license, when he previously worked at drone-maker Aerovironment, Mann knew the course could help inspire ideas among engineers.

"When I talked to Brian and found out his small class was already on a waiting list, I knew we needed to make the class bigger," he said. "Many of our engineers know their specializations, but rarely does an aeronautical engineer think about how he changes the polarization of the C2 antenna when the airplane banks for a turn. They are not just moving the airplane but the antenna too. This has already started conversations and I hope many more continue."

Taught by a local amateur radio instructor, students enjoyed the course, he said.

"It was worth the effort and people are already asking to go to the next class offering," Mann said.

"We are looking at doing a fox hunt soon," Hill said. "The team will design a directional antenna, actually build it in class, and then use their antennas to find a hidden RF beacon somewhere on base."

Similar plans for developers to get hands-on experience performing basic electronic warfare support functions are in the works as are potential cross-disciplinary classes in additive manufacturing.

As for a new amateur radio "handle" for the Point Mugu hams, Hill suggested borrowing from history and the term for an expert in electronic warfare. "How about CROW?"

## **EGARA 2019 Hamfest Sponsors**







Please show our sponsors your support when shopping for your Ham radio gear and accessories!





www.hamradio.com













ENGINEERING

## Vacuum Tube Sales Earned a Profit for the Club's Radio Fund

At the Ballston Spa spring swap meet held on March 9th, club volunteers Steve VanSickle, WB2HPR and Tom Scorsone, KC2FCP sold several vacuum tubes and some miscellaneous test equipment that had been donated -- resulting in a profit for the club's radio fund. Sale proceeds are used to purchase a new mobile radio that's given to a newly-minted licensee at the EGARA VE sessions. The winner is chosen through a raffle held among those who pass their Tech exam at the testing session.

Over the past three years, EGARA has awarded eight new radios to help get the new Techs on the air. We are grateful for the generosity of those who have donated used equipment, parts, and vacuum tubes to help us keep this program alive.



Most recently, Joe Ostering, N2CJF made a large donation of parts and equipment to the club – "Thanks, Joe!" We welcome any and all donations of your used electronic parts and equipment. Usable items are refurbished and are offered for sale at area Hamfests.

Steve and Tom plan to sell additional items during the upcoming hamfest "season" to help keep the program alive.



#### Ready to Get Mobile this Spring?

DX Engineering carries the latest mobile rigs from leading brands, including Yaesu's FTM-7250DR C4FM/FM Dual Band Digital Mobile Transceiver; ICOM's IC-7100 HF/VHF/UHF Base/Mobile Transceiver; Kenwood's TM-V71A Dual Band Transceiver; Alinco's DR-B185HT 2 Meter Transceiver; and many more.
Enter "Mobile Transceiver" at DXEngineering.com for the full lineup.



ICO-IC-7610



#### ICOM IC-7300 and ICO-IC-7300 IC-7610 HF/50MHz Transceivers

Both the IC-7300 and IC-7610 transceivers are packed with features that can take your station to the next level. The IC-7610 introduces dual RF sampling receivers that achieve 110db RMDR, built-in automatic antenna tuner, high-quality speaker, 7" color display with touch screen, and much more. The IC-7300's RF Direct Sampling System borrows SDR tech to replace the conventional superheterodyne design with an RF Direct system. The result is a versatile and budget-friendly radio that delivers incredible receiver performance, easy filter adjustments and awesome audio clarity.



KENWOOD Kenwood TS-890S HF/50MHz Transceiver

The TS-890S is Kenwood's most advanced DSP transceiver to date, providing HF enthusiasts with stellar receiver and audio performance. Features include 160-6 meter, 100 watt coverage in all modes; 7" TFT color display; full down-conversion superheterodyne; and extra-low phase noise local oscillator. KWD-TS-890S



#### **New Yaesu SDR Transceivers Reservation\***

Place your reservations for two new elite rigs from Yaesu. The FTdx-101D 100 watt and FTdx-101MP 200 watt transceivers come with leading-edge hybrid SDR technology and a host of other perks: 160-6 meter coverage, large touch-panel color display, real-time waterfall and spectrum scopes, and two independently controlled receivers. Both models deliver superb close-in dynamic range performance, even in crowded bands. Enter "FTDX Reservation" at DXEngineering.com for full details. \*These devices have not been approved by the FCC and may not be offered for sale or lease, or be sold or leased, until approval of the FCC has been obtained.



#### VHF/UHF/1.2 GHz Transceiver Reservation\*

The introduction of a new rig from ICOM is always an event—and the new IC-9700 all-mode direct sampling SDR transceiver is no exception. It's loaded with features, including high-definition real-time TFT display, dual real-time spectrum and waterfall displays, dual watch, and main and sub RX. Place your reservation today. Enter "IC-9700" at DXEngineering.com for full radio and reservation details. \*This device has not been approved by the FCC and may not be offered for sale or lease, or be sold or leased, until approval of the FCC has been obtained.

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## ARRL Opens Registration for Emergency Online Training Course

The ARRL Lifelong Learning Department has launched a revised and updated Introduction to Emergency Communications (EC-001) course, and demand to sign up is prompting the recruitment of additional course mentors to expand the schedule. Registration just opened for the first of four EC-001 online sessions, which will run from Monday, April 1, until Friday, May 31.

"The demand for this course has exceeded our projections, and the four sessions scheduled for 2019 are already filling quickly," ARRL Lifelong Learning Manager Kris Bickell, K1BIC, said. "This course is designed to be interactive with mentors guiding each session, so we're seeking additional mentors and will schedule more course sessions as quickly as possible. Thanks for your patience as we expand capacity for this updated version of EC-001." Bickell is developing a notification list (scroll down) to alert those who didn't get into the first round of courses when a new round of sessions becomes available.



The new EC-001 course has been beta-tested by course mentors and transferred into a new online learning platform. With the closing last year of the Connecticut Distance Learning Consortium (CTDLC), EC-001 lost its virtual home and was taken offline. At that point the ARRL Emergency Preparedness and Lifelong Learning teams started exploring short- and long-term alternatives to offer the course. After careful evaluation and review, a decision was made to move the course to a more modern learning management system called Canvas, which will be used while the new Lifelong Learning Initiative program is under development. EC-001 will eventually become a part of a comprehensive online learning environment.

"We're very excited to be able to offer Introduction to Emergency Communications EC-001 once again," Bickell said. "The Emergency Preparedness staff here has been incredibly helpful as we've worked together to get the course back up and running. Input from previous EC-001 mentors has been an invaluable part of the testing phase. The timing is right to put the course back online."

EC-001 is designed to provide basic knowledge and tools for emergency communications volunteers. With the online format, students can access the course at anytime from anywhere during the 9-week period and may work at their own pace and on their own schedule. As in the past, students will be able to register and take the course entirely online. The Canvas platform is also mobile-responsive, meaning that students can view the course materials, interact with fellow students, and complete assignments from any mobile device.

"We hope this course will be the starting point for you in your service to your community as radio amateurs and inspire you to think outside the box and look at new and useful ways the radio amateur can lend a hand to the public that has given us the trust of our spectrum of skills," ARRL Assistant Emergency Preparedness Manager Ken Bailey, K1FUG, said.

Individual EC-001 sessions will serve up to 30 students, supported by an experienced mentor. Courses are free of charge. To be eligible, students must meet certain prerequisites, listed on the registration page. The registration page includes the entire 2019 schedule of EC-001 sessions.

Register online at: https://www.arrl.org/online-course-enrollment/1

If course sections are filled, you can be informed by email of new course openings by registering at: http://www.arrl.org/online-course-registration

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#### IC-7700 | HF/50MHz Transceiver

The Contester's Rig • HF + 6m operation • +40dBm ultra high intercept point . IF DSP, user defined filters . 200W output power full duty cycle . Digital voice recorder



#### IC-7610 | HF/50 MHz All Mode Transceiver

· Large 7-inch color display with high resolution real-time spectrum scope and waterfall . Independent direct sampling receivers capable of receiving two bands/two modes simultaneously



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#### IC-7100 | All Mode Transceiver

 HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP D-STAR DV Mode (Digital Voice + Data) . Intuitive Touch Screen Interface • Built-in RTTY Functions



#### IC-718 | HF Transceiver

. 160-10M\*\* . 100W . 12V operation . Simple to use . CW Keyer Built-in • One touch band switching • Direct frequency input • VOX Built-in . Band stacking register . IF shift . 101 memories



#### IC-2300H | VHF FM Transceiver

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#### IC-2730A | VHF/UHF Dual Band Transceiver

 VHF/VHF, UHF/UHF simultaneous receive • 50 watts of output on VHF and UHF . Optional VS-3 Bluetooth® headset . Easy-to-See large white backlight LCD . Controller attachment to the main Unit



#### IC-R8600 | Wideband Software Defined Receiver

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#### **ID-5100A Deluxe**

VHF/UHF Dual Band Digital Transceiver

· Analog FM/D-Star DV Mode · SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver . AM Airband Dualwatch



#### ID-4100A | VHF/UHF Dual Band Digital Xcvr

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#### IC-R30 | Digital/Analog Wideband Xcvr

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## CALENDAR

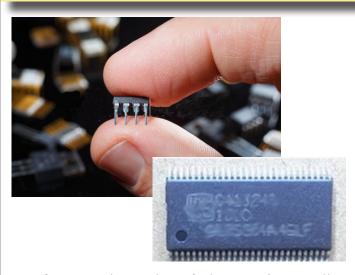
**April 10, 2019** - EGARA Membership Meeting, Masonic Temple @ 7 pm. Election of Officers.

May 5, 2019 - Race for Literacy, Schodack State Park, Route 9-J, @ 8 am, communications support.

**May 11, 2019** - Annual EGARA Hamfest, East Greenbush Volunteer Fire Department, 68 Phillips Rd - 8 am to 1 pm.

May 18, 2019 - VE FCC Exam Session - East Greenbush Library, @ 10 am - Tech, General & Extra Exams

#### **Pro Tip: Avoid Oily Fingers**



Your fingers are host to lots of oils. No, we're not talking about the leftover pizza grease from lunch. Even freshly washed hands have natural oils in them.

These oils, though seemingly harmless, can erode markings on chips. For many repairs, this probably won't be an issue, but play it safe by cleaning your hands before working.

Always handle boards from their edges and never rub your finger directly over a chip. When in doubt, slip on a finger stall, which keeps grubby fingerprints off of delicate components.

Finger stalls also protect against ESD and keep delicate electronics safe in case electrons get excited and discharge.



#### Want to Buy

Rohn 25 Series Tower - 40 foot crank up type Contact Joe at Joeostering4@gmail.com

#### For Sale

Acer Aspire Laptop with Intel i3 processor, 4GB ram, 500 GB HD, DVD/rw, wifi and SD card reader. Win 7 -- \$100 or trade for digital HT radio of equal value.

Contact Dave: wa2wap@verizon.net

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

For items above, contact Tom at: KC2FCP@nycap.rr.com

Arrow Model 52-S4 - 4-Element 6 Meter Yagi antenna in good condition. \$75.00 See: http://www.arrowantennas.com/solid/52-4s.html for details.

For item above, contact Steve at: svansick@nycap.rr.com

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Generator - 10KW - Honda Powered - electric start portable, 120v./240v. Self contained, on wheels. with automatic low oil shut off. Includes connecting cable, owner's manual. 21 hours total run time, recently serviced. \$1100.

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#### 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.