

CAARA NEWS



Cape Ann Amateur Radio Association
August 2017 Edition



PRESIDENT'S COLUMN

by Jon- K1TP



The summer is half over and activities have slowed down at the club as members enjoy the summer weather and family activities. We are still providing communications for the road races and have a few more races for YuKan Run, hopefully you can help us!

The fall meeting is approaching and we have several openings on the Board of Directors. Please contact Hank- W4RIG who is the head of the nominating committee if you have an interest or know of someone who would be a good fit for the board.

We will have a quarterly drill by the CAARA EMCOM group in September showing we can setup an emergency station anytime on Cape Ann in a short amount of time to be of local assistance in an emergency. You do not have to be member of the committee to attend, just show up and use the radios on site or bring your own , setup, have some radio fun. A low key event.

Gardi- BTK and Bill- WMM are in the process of organizing a fall general class course to get you up to speed to upgrade. More details after we nail down the dates and times.

We have two major hamfests coming up: Boxboro Hamfest and Nearfest, both are fun events with workshops, tailgate vending, and major ham vendors. I highly recommend these events.

We are still waiting for the siding contractor to arrive and re-shingle our building followed by a complete trim paint job compliments of the Gloucester Grant won by CAARA.

Until next month, 73....Jon

INFORMATION DESK

by Dean- KB1PGH



For a while now I have been hearing from the newly licensed hams the question of what HF radio should they buy for their first rig? I know in an earlier column I had mentioned that the newly licensed should ask themselves of how much money do they have and how much time to they have to play radio. I'll give you one example. I have been in the hobby now for a decade and I have been through 5 different HF rigs. The first was an Icom 718, then I sold that and got a Yaesu FT 857, Then I sold that and got an Icom 7000, then I sold that and got a Yaesu FT 991 and I just sold that and purchased an Icom IC 7300. In this newsletter I have a quick look at the Icom 7300. So for this months column I will stick with the premise of buying a brand new rig because you could buy a used rig for a difference price range. The first level of "Entry level" rigs will have a price tag in the \$ 650 Range. That includes the Yaesu FT 450D and the Icom 718. I owned the Icom 718 and enjoyed it very much as my fist rig so I would recommend that for a beginner in that price range. Next we have the Yaesu FT 857D and the Icom 7200 which both go for about \$ 850 to \$900. Both rigs are excellent for beginners. The Yaesu FT 857 is very small meant for portable work an the 7200 is meant for portable work as well. You can't go wrong with both rigs. Now I would say stay with those models for the beginner ham who wants to buy a new HF rig. One can learn how to operate HF very easily without a big learning curve. Believe it or not some of the more expensive radios have more menus and more abilities but for a newbie that might be too much too soon. For example. I have a new Icom 7300 and Icom calls it an "Entry Level" rig I'm not so sure about that. I will explain more in my review of the radio in this months column. One other aspect of buying a newer rig is that you can get a 1 to 3 year warranty on it. This is a bit of a piece of mind if you

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CAARA Newsletter
Cape Ann Amateur Radio Association
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CAARA Newsletter is a monthly publication of the Cape Ann Amateur Radio Association (CAARA).

It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to CAARA members, and space is available. Material is accepted on a first come, first serve basis. Articles and other materials may be submitted by internet to Jon at k1tp@arrl.net. If possible, material should be in Word format. Material may also be submitted as hard copy to Jon-K1TP or any Club Officer.

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Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the ATT cell tower in the Blackburn Industrial Complex in Gloucester Massachusetts. It has an average effective radius of 60 miles, and serves Eastern Massachusetts, Cape Cod, Rhode Island, Southern New Hampshire, and maritime mobile stations.

CAARA also operates the W1GLO repeater on 224.900 located at the CAARA clubhouse.

The former W1RK 443.700 repeater is now on the ATT cell tower in the Blackburn Industrial Complex with greatly enhanced performance.

The Association is one of the few amateur radio clubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, it includes a permanent HF station with beam, vertical/wire antennas along with an operating 2 meter packet station as well as 2/440 meter voice and 220 MHz Transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00 AM at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. There is no pre-registration necessary. Contact the head of our VE team Rick Maybury if you have any questions about monthly testing.

Monthly member meetings are held on the first Wednesday of each month at 7:30 PM except for July and August.

Each Sunday evening at 9:00 PM, the club operates a 2 meter net on 145.130. This is an open and informal net which disseminates club news and prepares operators for emergency communications work. All are invited to check into the net as club membership is not a requirement.

New! The club is open every Tuesday from 5-8PM for CAARA members to stop by and socialize, as well as use the extensive collection of ham radio gear.

"Break" it by the learning curve. All I'm saying here is try not to get a real complicated expensive new rig at first. It reminds me of the new techies that used to come to the club asking another ham to program their \$400 HT because the menu systems were to complicated for them.



Here's some more advice. If your planning on buying a new rig go onto Youtube and watch some videos of the rig you want to buy. Go Google any reviews of the radio you want to buy too. Do some research first. Maybe someone you know has the rig you want to buy. Ask them to give it a test run. I mean if money is no object you can spend several thousands on an Elecraft or Flexradio and even up to \$13,000 for an Icom 7851.

The other point I'm trying to make is invest your time on learning HF by listening and operating on a lesser expensive first to see if you like it and just to gain operating experience. I wish in order to earn the FCC Technician Class license one had to be taught how to operate a simple VHF/UHF HT and HF rig first.

I think next month I will cover the different ham radio vendors out there so you know where to shop around. Here's the prepper reminder for the month. If you have the time please go through your supplies and make sure nothing has gone bad like stored food and water and make sure all the batteries are fresh in your flashlights.

By the way, Don't forget the CAARA Annual meeting on Wednesday, September 13th at 7:30 PM at the clubhouse on 6 Stanwood Street.

See you next month! 73 KB1PGH

Motorola Files Additional Patent Infringement Complaints against Hytera

Motorola Solutions this week ratcheted up its legal battle with competitor Hytera, filing new patent infringement complaints in Germany against both Hytera Communications Corporation Ltd of Shenzhen, China, and Hytera Mobilfunk of Bad Munder, Germany. The latest legal actions, announced on June 24, are in

addition to Motorola's previously filed patent infringement complaints in Germany.

"With these additional patent infringement actions in Germany, Motorola Solutions now has five pending [patent infringement] litigations against Hytera," Motorola said in a news release. These include complaints filed with the US International Trade Commission and separate patent infringement and trade secret misappropriation complaints filed last March in the US District Court for the Northern District of Illinois. The complaints filed this week in Germany assert that Hytera's two-way wireless communication devices with improved squelch functionality infringe on a Motorola Solutions patent. Motorola says the focus of the new cases differs from earlier cases and represents the second patent covering acoustic performance of two-way radio devices.

Already known for its Land Mobile Radio Service products, Hytera entered the Amateur Radio digital mobile radio (DMR) market last year.

In its latest suit, Motorola is seeking seeks an injunction preventing Hytera from offering and delivering products with the acoustic squelch feature in Germany, as well as the recall and destruction of infringing products and various unspecified damages.

Last March Motorola alleged in its US District Court complaint that proprietary and patented information was taken illegally by three former company engineers who now work for Hytera, and that this was done as "part of a deliberate scheme to steal and copy" Motorola's technology. Motorola contended that its digital radio products were rendering Hytera's analog systems obsolete, and rather than develop its own digital products, Hytera stole Motorola's ideas. Motorola said technology features it developed started showing up in Hytera products soon after Hytera began hiring engineers who had left Motorola in 2008, according to the earlier lawsuit.



Hytera offered no immediate comment on the latest court actions by Motorola.

A review of the Icom IC 7300 SDR HF/50 MHz transceiver

by KB1PGH

The Icom IC 7300 was released in the spring of 2016 and so far over 10,000 have been sold worldwide making this radio an instant success. The 7300 seems like it is marketed as a software defined radio for the masses. In this review I will give you an idea on the real world performance as I used this radio for the first time during the ARRL Field Day event this past June. The biggest selling point of this software defined radio is the real time spectrum scope and touch screen display. After I purchased the radio from HRO I fiddled around with all the settings and I found the ergonomics and menu to be very easy to operate. Icom has made finding all the set up parameters very simple to find without going through a giant menu tree. The touch screen display is very responsive. I found that using a stylus pen works great. One thing I found out during field day that this radio has some outstanding audio quality just through the top mounted speaker compared to past radios I have owned. Having a real time spectrum scope which is independent of the audio is something to behold. Especially when you don't need a separate computer

for the scope. Sure, the display is small but the display is extremely sharp and easier to read in the ambient outdoor light than other HF rigs I have had. When I was on 6 and 10 meters the looking at the scope gave me much more "Situational awareness" of the activity on the bands where I could see stations 50 to 100 khz away and tune up to them in the search and pounce mode of operation. You can set the scope to see the entire band or you can set it to how many Khz you want to see at one time. What you see in the photo is the Icom 7300's scope on the 40 meter band. All those white lines one the spectrum scope and waterfall display is a separate station on the band! It almost was overwhelming to see that much activity all at once!. The spectrum scope and waterfall displays can be tailored to your liking. On the



receiving end this radio is rated number 12 in Rob Sherwoods list of all time HF radio receiver performance. It's even rated higher than Icoms 7600! The SDR makes for some great dynamic range where you can really hear the weaker stations next to the powerhouses. Plus with no pre amps on there is hardly any inter modulation distortion. The receiver on the 7300 is really quiet due to the SDR's low phase noise and noise floor. The DSP on this rig worked great and does not distort the audio much. The radio weighs 10 pounds and is just small enough for portable ops. The Icom IC 7300 also has a high speed antenna tuner which worked great to clean up and SWR issues on the 4 band dipole I was using. You can set it up where all you have to do is press the PTT on the mike and it will automatically tune for you which is nice. Icom created

a brand new style microphone for this radio and it matches beautifully with the radio. The microphone feels like it is built well and has some weight to it and is very sensitive to voice response. The 7300 also has a monitor feature so you can set up and monitor your audio before you

transmit. The 7300 as a great array of filters for SSB and CW where you can adjust the width of the passband filter and you have dual passband control where you can slide your passband either to the left or right of your signal eliminating interference. You also can choose either a sharp or soft filter as well. I could go on but if you have not checked one of these out yet please do. The Icom 7300 is a game changer in the "Entry level" arena of HF rigs. If you have never worked a rig with a real time spectrum display your in for a treat with the Icom 7300's "eye candy" The rig is going for around \$1300 and I say "BUY IT" all day long. You can't beat the SDR technology and performance for the price point. We are truly blessed to have this type of technology for our ham radio hobby.

The Gods have a Perverse Sense of Humor

By Curtis- AA3JE

Now I have a personal failing as a ham. It is a shameful secret. I try to avoid it, I try to hide it, but it comes out, eventually.

I am scared of heights. When I get near the edge of nothingness, it calls to me. To leap, to fly, to soar, to drop like a rock on my head.

For some reason this feeling has grown stronger after marriage. Puzzling. Why would being married to “SHE WHO MUST BE OBEYED” make you develop such a tendency?

So when I had to wash and stain the shingles on the house, I tried to require as little ladder work as possible. This seemed easy. Look on AMAZON, find 24 foot pressure washer extension wand, click, wait.

Now it would have been easier if I had been awake in physics class. 2.3 GPM out of a 15 degree nozzle at 2750 PSI is a very credible reaction jet. Put on a 24 foot stick, at right angles, it creates an amazing torque. Perfectly manageable if you are 2 meters tall and weigh 300 kilos. So I tried an 18 foot stick, a 16 foot stick and finally managed a 12 foot stick. That meant I only had to go up $30-12 = 18$ feet.

I had a 24 foot extension ladder, and that was about as high as I wanted to go.

So I washed, and washed and washed. I had to stop for a bit, as I lost the use of my left arm, but the doctor at AGH said my shoulder would heal, but I was gonna damage it permanently if I kept doing whatever it was I was doing.

(I told him I sprained it in Salsa class. It seemed easier than suffering through another round of “Hire a Kid to do it”).

So I went back to Ace.

“I need a 32 foot ladder.”

“We will have to order that, Doc. Have it Thursday. What kind you want?”

“Strongest, most durable, heaviest duty you got.”

“Be here Thursday. Whose helping you?”

That last comment made no sense, till I lifted the CLASS IA, 300 pound capacity, 32 foot ladder. It weighed 75 pounds, and it was long enough to make putting it in place single handed, difficult. Fortunately I had a spare window for the car.

Now I have faced this before. I had a sailboat with a 32 foot mast, and learned how to get it up and down without too much damage. What I had forgotten was that I had sold my rope bag with the boat.

So I got it about 45 degrees from horizontal, held up with a dog leash and prayer, when I realized that when I got it over the top, there was nothing to keep it from falling hard and punching a hole in the house, or worse yet, kick out and break both my legs.

So I tied it off, and made another emergency run to Ace. They are used to this. In fact, one of the guys shouted “Yahoo” and punched his fist in the air when I arrived.

I asked why.

“We have a pool on how many hours till you come back.”

20 minutes later, armed with 200 more feet of rope and several pulleys, the ladder glided to a gentle rest against the wall. Half an hour later, it was secured like the mast of clipper ship with eight stays.

I climbed up, washed, and climbed down, then lowered the ladder under perfect control (it was scared of all the ropes).

But there was one more thing. A small area that could only be reached by the roof. The roof where one side was safe (10’ drop to porch roof), and the other was 30 feet down onto hard asphalt. I puzzled and fretted, and went back to Ace.

(They are very fond of me at Ace).

20 minutes later I had 40 feet of chain draped over the roof, snugged tight with one inch nylon rope (usually



used to catch blue whales), several carabineers, and climbed up. I already had the safety harness.

This time my arm stopped working just as I finished.

Pressure washing all done. Now I gotta just stain it.

Wish me luck. I will need it.

Oh, I forgot, the perverse humor. When I got the ladder all down, I reached for my wallet. The roof had torn my pocket, and I could just see it sitting on the roof.



You know the rest. I had to put the ladder up again.

Sigh.

Royal Mint to Welcome Amateur Radio

The Royal Mint Experience in Wales will host “The Royal Mint Radio Experience,” July 30 until August 5 at the Royal Mint’s new visitor center in Llantrisant, Wales. School children and members of the public have been invited to enjoy a fun, informal, and interactive Amateur Radio workshop. According to an announcement from the Radio Society of Great Britain (RSGB), visitors will get the chance to use the FUNcube-1 CubeSat, launched in 2013 and used by schools and educational groups around the world.

“We’re delighted to be supporting this event which will give visitors to the Royal Mint a chance to experience the wonder of Amateur Radio and satellite communication,” said RSGB General Manager Steve Thomas, M1ACB. “Amateur Radio has many links with the science, technology, engineering, and maths (STEM) curriculum and can lead to rewarding careers.” Visitors will also exchange greetings with radio amateurs around the globe via CW, SSB, and data modes, including RTTY and JT65. As each country is contacted, it will be logged on a large map. The target is to contact each of the 100 countries with which the Royal Mint has worked over the course of its 1,000-year history.

Visitors also will be able to learn how to send their name using Morse code and will receive a special certificate to confirm their achievement.

Members of RSGB, Barry Amateur Radio Society (BARS), and AMSAT-UK will operate special event station GB4RME (GB 4 Royal Mint Experience); Ofcom granted that call sign just for this event. RSGB Regional Manager and BARS Chairman Glyn Jones, GW0ANA, said he believes this may be the first time Amateur Radio has been allowed to operate from a Royal Mint anywhere in the world. — *Thanks to RSGB*

Revised FCC Form 605 Will Ask Applicants “the Felony Question”

07/19/2017

A revised FCC Form 605 — *Quick-Form Application for Authorization in the Ship, Aircraft, Amateur, Restricted and Commercial Operator, and General Mobile Radio Services* — going into effect in September will ask all applicants to indicate if they have been convicted of or pled guilty to a felony. The Communications Act obliges the Commission to ask “the felony question,” as it did on the old Form 610 and still does on other applications. This action will correct its omission on Form 605, which has existed for years. Applicants’ responses and explanations will be used to determine eligibility to be a Commission licensee. The FCC told ARRL that it’s still deciding whether to issue a public notice on the change.

“The Commission is revising the basic qualifications section of the form to include a question regarding whether an application has been convicted of a felony in any state or federal court,” the Office of the FCC Secretary explained in a May filing with the Office of Management and Budget (OMB), which must okay the revision. “Applicants answering YES must provide an explanation regarding the conviction. This item enables the FCC to determine whether an applicant is eligible under sections 310(d) and 308(b) of the Communications Act of 1934, as amended, to hold or have ownership interest in a station license.”

The revision also will apply to NCVEC Form 605 — the *unofficial* Amateur Radio-specific version of the application that is completed and filed at volunteer examiner coordinator (VEC) examination sessions. VECs will have to start using the revised form on September 7. Responding to VECs’ questions, the FCC offered some guidance, with a particular focus on NCVEC Form 605.

ARRL VEC Manager and NCVEC Vice-Chair Maria Somma, AB1FM, thanked the FCC for honoring a request to amend the effective date of the change, initially in early August. "At the urging of the NCVEC leadership, the FCC took into consideration the undertaking to change and distribute all affected forms and update software and agreed to push back the execution date by 1 month," she said. The NCVEC will create a revised NCVEC Form 605 and release it to VE teams before September 7.

Once the Form 605 update has been implemented, assuming all other information is correct, negative felony question responses will result in a license grant, the FCC said. A YES will place the application in the "pending file for review" category. Applicants answering YES would have to, within 14 days, provide the FCC with a statement explaining the circumstances, and a statement "giving the reasons why the applicant believes that grant of the application would be in the public interest, notwithstanding the actual or alleged misconduct," the revised Form 605 instructions state. The FCC said an applicant's answer to the felony question and explanation will be public via ULS, unless a separate request is made to the FCC that the applicant's explanation be kept confidential. The FCC will review applications on which the felony question has been answered in the affirmative and decide whether to grant them or designate them for hearing.

"The applicant must provide sufficient information for the FCC to determine whether there exists any material and substantial question of fact regarding whether the applicant has the character qualifications to be a Commission licensee," the FCC said. There is no set checklist of items, but useful information would include such information as details regarding the conduct that resulted in the conviction or guilty plea, including time and place; the date of the conviction or guilty plea; the penalty imposed and whether it has been satisfied, and "any efforts taken to remedy the wrongs committed and ensure that the applicant will not engage in such conduct in the future," the FCC said.

The FCC said the only additional information that VECs will have to collect is the response to the felony question; any explanatory exhibits and confidentiality petitions will go directly to the FCC, and VECs will have no information as to the status of such applications. The FCC said the felony question must be answered every time — even if previously answered — for New, Modification, Renewal/Modification, and Amendment applications. "Assuming that nothing has changed, the attachment to the subsequent applications can simply reference the file number of the application where the

complete explanation was given, rather than having to set forth the complete explanation each time," the FCC memo said. "Clubs are not exempt from the felony question. The question applies to the club as an entity and to the trustee, but not to any other individual officers."

Individuals convicted of a felony and later pardoned or whose record has been sealed should answer YES, and include information regarding the pardon, "as that will be relevant to whether the conviction still presents any material and substantial question of fact regarding whether the applicant has the character qualifications to be a Commission licensee," the FCC told VECs. "An overturned conviction need not be disclosed — but a conviction still on appeal must be disclosed."

Amateur Radio Parity Act is Introduced in US Senate

The Amateur radio Parity Act passed the US House of Representatives in January.

"Amateur Radio continues to be a critical part of our emergency communications operations," Wicker said. "Mississippians learned firsthand after Hurricane Katrina how Amateur Radio operators can provide a resilient, distributed network to first responders and disaster relief organizations when other communications tools fail."

"Amateur Radio operators provide an invaluable service to their communities by assisting local emergency communication [Amateur Radio Parity Act](#) of 2017 was introduced in the US Senate on July 12, marking another step forward for this landmark legislation. Senators Roger Wicker (R-MS) and Richard Blumenthal (D-CT) are the Senate sponsors. The measure will, for the first time, guarantee all radio amateurs living in deed-restricted communities governed by a homeowner's association (HOA) or subject to any private land use regulations, the right to erect and maintain effective outdoor antennas at their homes. The Senate bill, S. 1534, is identical to H.R. 555, which parts when disasters occur and main lines are down," Blumenthal said. "This bipartisan measure ensures that operators have access to the tools they need to support our first responders when lives are at stake."

FCC Chairman Ajit Pai applauded the bill in late January, saying that it would "help Amateur Radio operators, and take several steps to promote public safety."

ARRL President Rick Roderick, K5UR, expressed the League's appreciation to the Senate sponsors. "ARRL

is grateful for the support of Senators Wicker and Blumenthal for sponsoring this important piece of legislation, and for advocating this bill for the past 3 years," he said. "Their continuing support is critical to the success of our efforts." President Roderick also thanked Senator John Thune (R-SD), who chairs the Senate Commerce Committee, for "championing the Parity Act in the Senate since the beginning of our effort." The bill has enjoyed widespread, bipartisan support. In the 114th Congress, nearly 130 cosponsors signed onto the legislation in the House and the Senate. The legislation, which strikes a carefully crafted balance for all concerned parties, is the result of months of work culminating in the accord reached by ARRL and the Community Associations Institute (CAI). The measure provides for the guarantee of an effective outdoor antenna while protecting the aesthetic concerns of HOAs.

In a statement, ARRL said it looks forward to working with the bipartisan leadership of the Senate and the Commerce Committee to help move the Wicker-Blumenthal legislation through the Senate and to the President's desk.

WWV 25 MHz Signal Swapped to Circular Polarization, Reception Reports Invited

The resurrected 25-MHz signal of time and frequency standard station [WWV](#) is now emanating from a circularly polarized turnstile antenna. WWV had used a vertically polarized antenna on 25 MHz in the 1970s. Silent since 1977, the 25-MHz signal returned to the air on an "experimental basis" in April 2014, and it's been transmitting ever since — initially on a broadband discone until August 2015, when it switched back to a vertical, which it used until the July 7 switch to circular polarization.

"[W]e are broadcasting with 2 kW from a circularly polarized turnstile antenna," WWV lead electrical engineer Matt Deutch, NØRGT, told ARRL this week. "It is just your standard plain-vanilla turnstile — two horizontal orthogonal dipoles with a quarter-wave phase-shifting coax linking them."

Deutch has explained that when the 25-MHz transmitter was shut down in 1977, the antenna's radiating element was "tossed in the bone yard, and a new longer section put on the tower to make it a 15 MHz stand-by antenna," Deutch recounted. When WWV first reintroduced the 25-MHz broadcast some 37 years later in response to requests, it used a broadband monopole. But, it was later

decided to use that antenna for WWV's 2.5-MHz stand-by transmitter and to rebuild the 25-MHz antenna. The old radiating section was retrieved and the antenna rebuilt, so that it looked like what was being used in 1977.

Deutch said it's hoped that the latest antenna change to circular polarization might be helpful to anyone studying propagation during next month's total solar eclipse, which will be visible across the US. "My effort right now is focused on getting the word out, just to make people are aware that [the 25-MHz signal] is available, if it can be useful to them."

Before the change, Deutch said WWV had received reports on the 25 MHz signal from across the Atlantic. The 25 MHz broadcast includes the same information transmitted on all other WWV frequencies and at the same level of accuracy.

Located in Fort Collins, Colorado, WWV is operated by the National Institute of Standards and Technology (NIST). WWV has invited listeners' comments and reports on its 25-MHz signal.

FCC Crackdown on Pirate Broadcasters Targets at Least One More Amateur Licensee

A recent flurry of FCC Enforcement Bureau correspondence to alleged unlicensed broadcasters has targeted at least one more radio amateur — this time in the Greater New York City area. It's not the first time Winston A. Tulloch, KC2ALN, of Paterson, New Jersey, has heard from the FCC, which has had Tulloch in its sights for at least several months regarding a pirate FM station on 90.9 MHz. Last November, the Enforcement Bureau sent Tulloch a *Notice of Unlicensed Operation* after receiving information that he was operating a radio station. FCC agents used direction-finding techniques to zero in on a signal on 90.9 MHz coming from his residence.

"The field strength of the signal on frequency 90.9 MHz was measured at 105,451 microvolts per meter ($\mu\text{V}/\text{m}$) at 101 meters, which exceeded the maximum permitted level of 250 $\mu\text{V}/\text{m}$ at 3 meters for non-licensed devices," the FCC said at the time.

Tulloch was sent a second *Notice of Unlicensed Operation* on June 8, after Enforcement Bureau agents from the FCC's New York Office on May 2 responded to a complaint of an unlicensed FM station operating on 90.9 MHz in Paterson. This time the signal, measured at 176,526 $\mu\text{V}/\text{m}$, was determined to be emanating from another residence about 1 mile from Tulloch's. The FCC

said someone at the residence identified Tulloch as the station's operator.

A [third Notice of Unlicensed Operation](#) followed on June 30, after Enforcement Bureau agents following up in the unlicensed FM station investigation in Paterson on June 12 confirmed by direction-finding techniques that the signal on 90.9 MHz was continuing to come from the same residence. On that occasion, the agents measured the signal at 5,705 $\mu\text{V}/\text{m}$ at 185 meters, still greatly exceeding the maximum permitted under FCC Part 15 rules for unlicensed devices.

FCC Enforcement Bureau Region 1 Director David C. Dombrowski now has advised Tulloch at least three times that the unlicensed radio operation on 90.9 MHz "must be discontinued immediately." The Commission's enforcement resources are already suffering from last year's closing of FCC field offices and the layoffs of field agents, however, and the current administration's budget allocates less money for the FCC.

In late May, the Enforcement Bureau issued a *Notice of Violation* ([NoV](#)) to Lyle E. Hilden, KD6LUL, of Vista, California, alleging that he had engaged in pirate radio broadcasting on the FM band.

In the past week, the Enforcement Bureau also sent *Notices of Unlicensed Operation* to other individuals in the Greater New York City area as well as to individuals and couples in Massachusetts and Florida.

Homelessness Not a Bar to Enjoying Amateur Radio,

Hawaii Ham Demonstrates Not having a permanent roof over his head has not hindered Alex Stengel, KH7CX, of Honolulu from enjoying Amateur Radio and indulging his passion for SSB QRP DXing, which he calls "very rewarding." As ARRL Pacific Section PIO Stacy Holbrook, KH6OWL, explained, Stengel sleeps on a bench, gets his mail and showers at a local church, and stows his personal items in a storage facility. Stengel shies away from attention to his "non-housing conditions," as he calls it, and would rather talk about his ham radio accomplishments.

"All my HF antennas and parts like baluns and ununs are made by me, and the antennas are very efficient — SWR around 1.06," Stengel told ARRL. He uses type N connectors and RG-8X as feed line, which he described as "a compromise in portability and weight," since the voltage balun and unun already make his temporary antenna system heavy enough when it's hauled aloft into some coconut palms.

"I do leave the pull line in the tree as long as possible, and when I set up the Carolina Windom, I just hook it in like a flag and pull it up, and the two arms of the antenna are just fixed to nearby trees, in a flat inverted V configuration. He is typically active between 0500 and 0800 UTC.

Holbrook said that living in Hawaii is expensive, and the biggest expense is housing. "Hawaii has an estimated 7,900 homeless, which is up 4%," he said, citing a federal report.

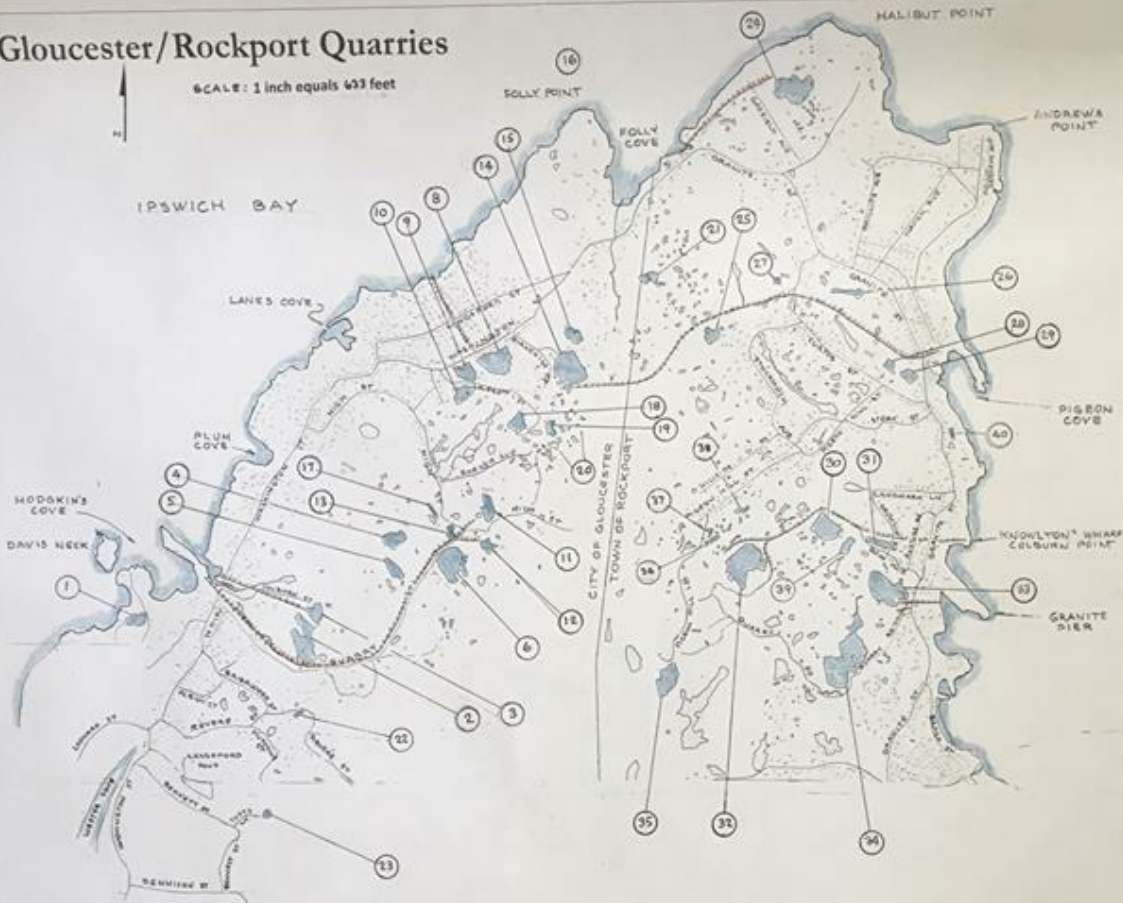
Licensed since 2008, Stengel does odd jobs for boat owners and elsewhere to feed and clothe himself and to purchase any necessary ham gear. His primary radio is a Yaesu FT-817ND, powered by an external 9 A/h 12.8 V lithium battery. Last year, he snagged VP8STI on South Sandwich, KH0EK on Heard Island, and 3XY1T, the Los Islands DXpedition. He said it took "many hours" to break the 3XY1T pileup with 5 W at the bottom of the solar cycle. He also just purchased an ILER-40 transceiver (40 meters, SSB), which he couples to what he describes as "an NVIS dipole." Stengel doesn't have a cell phone, and he uses the public library's computers to update his QRZ.com log and to check propagation.



Another idea for a go-kit, this is made from white pvc and spray painted black

Gloucester/Rockport Quarries

SCALE: 1 inch equals 433 feet



QUARRY TABULATION

MAP NO.	QUARRY NAME	GENERAL LOCATION	PROPERTY TYPE	EST. DATE	STONE DISCHARGE PT.
1	ANDERSON'S	TORREY	PRIVATE	1800	IPSWICH BAY
2	BIG PIT	KLOUSKE	QUARRY ST.	1855	HODDINGS COVE
3	COW PIT	MONS	GRANITE ST.	1857	HODDINGS COVE
4	VERANDE	MONS	GRANITE ST.	1857	HODDINGS COVE
5	WELSH'S	MONS	GRANITE ST.	1858	HODDINGS COVE
6	BLOOD LEDGE	MONS	QUARRY ST.	1867	DEWHOGG
7	BREAKWATER	ADULT COVE	FLAT ROCK	1900	OCEAN BARRE
8	CALVERT'S	BARRE	PRIVATE	1872	RR TO GRANITE
9	BUTLAND'S	LANES COVE	PRIVATE	1880	LANES COVE
10	VALLEY PIT	ANDOLA	PRIVATE	1880	LANES COVE
11	DEVILS ROCK	WALKERS	HIGH ST.	1875	RR TO HODDINGS COVE
12	DEEP HOLE	WALKERS	HIGH ST.	1875	RR TO HODDINGS COVE
13	CHEVEE RES.	WALKERS	HIGH ST.	1875	RR TO HODDINGS COVE
14	BAY STATE	WALKERS	HIGH ST.	1875	RR TO HODDINGS COVE
15	BENTON'S	WALKERS	HIGH ST.	1875	RR TO HODDINGS COVE
16	BRADDOCK	FLAT ROCK	PRIVATE	1900	RR TO DEWHOGG
17	LANES PIT	LANES COVE	PRIVATE	1880	LANES COVE
18	BARRE	BARRE	PRIVATE	1855	LANES COVE
19	BARRE	BARRE	PRIVATE	1855	LANES COVE
20	BARRE	BARRE	PRIVATE	1855	LANES COVE
21	HICKSON'S	ROCKY PT.	PRIVATE	1820	HODDINGS COVE
22	THORNTON'S	ROCKY PT.	PRIVATE	1820	HODDINGS COVE
23	JONES PIT	ROCKY PT.	PRIVATE	1820	HODDINGS COVE
24	BARRE	BARRE	PRIVATE	1855	LANES COVE
25	PHILBANK'S	HODDINGS COVE	PRIVATE	1855	LANES COVE
26	ORSON PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
27	PINE PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
28	MASSE PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
29	GARDNER'S	HODDINGS COVE	PRIVATE	1855	LANES COVE
30	BIG PARKER	HODDINGS COVE	PRIVATE	1855	LANES COVE
31	LITTLE PARKER	HODDINGS COVE	PRIVATE	1855	LANES COVE
32	STEEL DERRICK	HODDINGS COVE	PRIVATE	1855	LANES COVE
33	FLAT LEDGE	HODDINGS COVE	PRIVATE	1855	LANES COVE
34	CARLSON'S	HODDINGS COVE	PRIVATE	1855	LANES COVE
35	JOHNSON'S	HODDINGS COVE	PRIVATE	1855	LANES COVE
36	KING PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
37	QUEEN PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
38	PUTNEY PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
39	OLD PIT	HODDINGS COVE	PRIVATE	1855	LANES COVE
40	WILKINSON'S	HODDINGS COVE	PRIVATE	1855	LANES COVE

MAP LEGEND

- 14 KEY NO. SHOWN ON ABOVE PLAN
- DELIMITED QUARRY
- SELECTED KEY STREETS AND NAMES
- RAILROADS: INCLUDED AND LOCOMOTIVE DRIVEN

GENERAL NOTES

1. QUARRY MAP BASED ON 2011 AERIAL SURVEY OF CAPE ANN AND CAD MAPS PROVIDED BY GLOUCESTER CIVIL ENGINEERING DEPT. IN COOPERATION WITH ROCKPORT COUNTERPART.
2. SMALL QUARRIES AND/OR MOTIONS ARE SO NUMEROUS THAT THE LARGE MAJORITY ARE NOT NAMED, HOWEVER THEY ARE SHOWN ON THIS MAP.
3. THE LOCATIONS, INCLINES OR LOCOMOTIVE DRIVEN, ARE BASED ON TOPOGRAPHIC EVIDENCE AND AVAILABLE HISTORIC DATA.
4. MANY LOCAL CAPE ANN RESIDENTS HAVE BEEN CONTACTED DURING THIS MAP PREPARATION'S PRIMARILY TO VERIFY QUARRY LOCATIONS AND NAMES.
5. THIS WORKING QUARRY MAP AND ASSOCIATED TABULATION OF EACH QUARRY WAS DEVELOPED BY JAMES A. RYAN, JR. PE OR 115 WASHINGTON ST. GLOUCESTER, MA 01930. CIVIL ENGINEER, MA. NO. 24943. THE MAP IS STILL UNDER REVIEW BY A SMALL GROUP OF LANESVILLE CITIZENS.



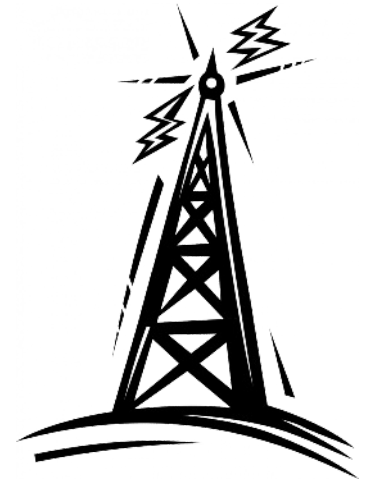
James A. Ryan, Jr.

JUNE 30, 2017

I found this new map done by a local showing the location of each quarry on Cape Ann and I thought you might like to see it. I am sorry the resolution is poor but it is a neat piece of work. Jon- K1TP

International Lighthouse Lightship Weekend Registrations Top 200 and Rising Registrations for the 2017 International Lighthouse Lightship Weekend (ILLW) have topped the 200 mark for the August 19-20 event. The ILLW is 20 years old this year, and with a bit more than 6 weeks to go, nearly 250 planned operations have registered throughout the world. During the annual event, Amateur Radio stations will be on the air from -- or in the immediate vicinity of -- various historic lighthouses and lightships in more than 25 countries. In past years, more than 500 stations in some 90 countries have taken part.

AREA NEWS By Bill- WZ1L



"Many enjoy linking portable Amateur Radio to the navigational beacons for shipping traffic of the past, and in doing so, help raise public awareness of the need to preserve the old structures," Jim Linton, VK3PC, remarked.

The Polish DX Club will mark the milestone anniversary as 3Z20ILLW, with six club members at the Jaroslawiec Lighthouse, Poland's oldest, on the Baltic Sea. In West Malaysia, the Borneo Amateur Radio Club will activate Tinagat Lighthouse for its first time, as 9M6SDX.

Registration guidelines call for operating sites to be officially listed as aids to navigation. That could include a classic lighthouse or lightship with a Fresnel lens, fog horns, time ball towers, and lighthouses or lightships moved to museums. According to the ILLW site, "lights such as range lights, channel markers, skeletal towers, and breakwall lights will probably not be accepted." Registration for the event is not required, but it does let other participants know which lighthouses and lightships will be active.

Sponsors stress that the event is not a contest -- and there are no prizes, certificates, or other enticements to participate. Each station's operators decide how they will operate their station with respect to bands and modes, and participating stations do not have to be on the air for the entire weekend.

Activity does not need to take place inside the structure itself. A Field Day-style setup at the light or other building adjacent to the light is sufficient. "Adjacent means next to or as close as possible," event guidelines explain. "The intention behind this requirement is that the station should have a visible presence to the passing public who may be visiting the lighthouse over the weekend. Permission to operate from a lighthouse/lightship should be obtained from the relevant authorities." -- Thanks to Jim Linton, VK3PC

I recently received an email advising that the ARRL Boxboro Convention 2017

Will be held Friday, Saturday and Sunday, September 8, 9 and 10 at the Boxboro Regency Hotel and Conference Center in Boxboro, MA. (Note: This is the weekend after Labor Day.)

This is one of New England ARRL's events and it is a good time to gather in the spirit of Amateur Radio. Please mark your calendars to participate in this event.

There are numerous Forums, Clinics, Demonstrations and talks on specific Amateur Radio subjects of which could be technical and non-technical in nature. **The Cape Ann Amateur Radio Association is holding a technician study course at the convention on Saturday, September 9th, from 9 AM to 5 PM. After the end of the class, there will be a special VE Exam for course attendees. There is a small fee to cover course materials, along with an FCC established \$15 exam fee. Find more information about the "Tech-in-a-Day" program from the CAARA website. Contact Rick Maybury, WZ1B, if you have any questions about the "Tech-In-A-Day" study course.**

VE EXAMS

Get an upgrade, or licensed for the first time! There will be two VE exam sessions on Saturday at 11 AM and 1 PM, and one session at 11 AM on Sunday. No preregistration required.

Those wishing to take an exam are required to bring the following:

- Two (2) forms of identification, one with photo
 - \$15 exam fee
 - Original of any Certificate of Successful Completion of Examination (CSCE) being claimed
 - Original one copy of current FCC issued license (if licensed)
 - Copy of any Certificate of Successful Completion of Examination (CSCE) being claimed
 - General: Non programmable calculators are allowed; cell phone calculators are NOT allowed. Scratch paper and writing utensils will be provided. The applicants are required to observe proper decorum, so as not to disturb other applicants.
- You need to use your FCC registration number (FRN) on the license application, which can be found on your current FCC license. If you do not have an FRN, your Social Security number can be used. If you wish to obtain an FRN before the exam, you can obtain one through the FCC's Commission Registration System (CORES).

GENERAL ADMISSION

General Admission grants access to the Flea Market, Forums & Classes, Vendors, and the Feature Film! It also grants you an opportunity to win one of our fabulous Door Prizes.

It's just \$15, good for all three days, and free for full time students with student ID!

General Admission tickets also available at the door.

Don't want to wait? General Admission tickets are now available at these retail locations: · Ham Radio Outlet in Salem, NH · Electronics Plus in Littleton, MA

Admission is reduced to \$10 on Sunday at 11 AM (no advanced purchase available), allowing you some extra shots at the final door prizes!

FLEA MARKET SPACES

Flea Market Spaces are \$10 each, good for both Saturday and Sunday. Each flea market spot measures 9 by 21 feet.

Note: General Admission is required to participate in the flea market!

SPECIAL DINNERS

There are two special dinners, both with good friends, good talk, and good food.

· DXCC/Contest Dinner: Join us Friday night for the DXCC/Contest dinner! Speaker to be announced. Doors will open at 6:30 PM. Tickets are \$40, and attendees will have the choice between chicken, fish, or a vegetarian dish.

· Saturday Banquet: Enjoy dinner as our keynote speaker, Paul Stoetzer, N8HM, of the Radio Amateur Satellite Corporation (AMSAT-NA), takes us on a talk that is out of this world. Tickets are \$40. Seating is limited for each and typically sell out, so it's highly recommended you buy your tickets online as soon as they are available!

DONATIONS

When purchasing your ticket, consider making a donation to FEMARA, Inc., the non-profit organization responsible for running the Boxboro New England Amateur Radio Convention.

Not only does your donation go towards sustaining the Boxboro New England Amateur Radio Convention, more importantly, it supports the FEMARA scholarship fund, which helps students attend a college or trade school of their choice.

FEMARA is a qualified 501(c)(3) organization, so donations to FEMARA are tax deductible!

WINAS SES / NAS South Weymouth

ARC:

On Saturday, August 19, 2017, from 0900-1500 EDT (1300-1900 UTC) WINAS will again be operating on 20 and hopefully 40 meters phone to commemorate the flight of the blimp Snow Goose from NAS South Weymouth to Resolute Bay on the Arctic Circle, while the submarine USS "Nautilus" sailed beneath them under the polar ice cap.

This SES has been well received the past two years and many contacts have been made with sailors who had been stationed at SoWey or its predecessor, NAS Squantum.

If you served in any branch of the service, especially the U.S. Navy, or had even served at SoWey in any capacity, please make an effort to contact us and let us know you served. We'd love to hear from you!

WINAS is the ARC of the Shea Naval Aviation Museum located in the old gymnasium building of the former NAS. Check us out at www.qrz.com/db/wlnas or at www.anapatriotsquadron.org. For more information contact Steve, W1OD, at w1od@arri.net.

A Handy-Dandy Super Cheap Field Meter

by Eric P. Nichols, KL7AJ

One of the most useful instruments one can have around the ham shack is a simple R.F. field strength meter. Most of the time we aren't looking for National Bureau of Standards accuracy, we just want a quick and simple method of tuning our system for "maximum smoke." The field strength meter I describe is just such a device; so simple and cheap, no ham should be without one, and sensitive enough to be truly useful. It will give a useable indication or relative field strength at power levels from QRP to full legal output.

You can deploy this instrument just about anywhere. You can just set the thing on your operating position, or if you really want to get picky, you can put it on a pedestal below your dipole and use a pair of binoculars to read the thing.

There is no sensitivity adjustment pot included, to make things even simpler. Sensitivity is adjusted by tweaking the length of a collapsible antenna.

The circuit is extremely simple, as you can see by the schematic. The most expensive part is the microammeter. (The last time I went to our local Radio Shack and asked for a microammeter, the genius behind the counter came back with some sort of battery tester and said, "This is the smallest ammeter we've got."

Needless to say, you will have to find a more apt source for your microammeter, such as Ye Olde Junque Box). The real "guts" of the device is the MPF 102 J-FET which acts as an R.F. detector and DC amplifier. Incidentally, this beastie is so sensitive, it will detect DC fields as well, such as approaching lightning storms....a handy little side-effect you should be aware of.

You can install the whole shooting match inside a small plastic project box, or you can build a box out of double clad circuit board, which gives you that rich coppery appearance. Mount the collapsible antenna securely to the top of the box. (You might want to add some dead weight to the bottom of your box, so the thing wont fall over with the antenna fully extended).

This device is also handy for tracking down excessive R.F. in the shack. Theoretically, you should have more R.F. near your actual antenna than you do in your shack...if not, probably some investigation is in order! By the way, you may find that the D.C. field strength capabilities of this are even more interesting than the r.f. aspect. A slight modification of the circuit, replacing the junction FET with a MOSFET, will make this a true static field instrument. (A J-FET requires a finite, if minuscule amount of gate current, while a MOSFET does not). The MOSFET version, with a long, vertical wire antenna, will also allow you to investigate phenomena such as electron precipitation events, if you happen to live in high latitudes. Electron precipitation is one of the major cause of sudden R.F. blackouts...and

