



# CAARA Newsletter



CAPE ANN AMATEUR RADIO ASSOCIATION

MAY 2017 EDITION

## President's Desk

by Jon- K1TP



**A**s I write this, I have two weeks left in Florida. I will be home around May 3, well rested and ready to charge ahead with club activities and events.

The Rockport Cub Scouts have asked if we would setup a radio station during one of their campouts in early June. This is a great opportunity to get involved with young kids and introduce them to electronics and the hobby of ham radio. A few boy scouts will be in attendance and I will go over how we can help them earn a merit badge in communications. We will give them the info about tech-in-a-day and maybe we can get some young kids on the air.

Another fun low key event is the EmCom activation on Sunday, April 23 at Stage Fort Park in Gloucester around 1PM and on. We will setup a generator and run HF and VHF stations and make as many contacts as we can, sort of like a mini-field day. All are welcome to just visit and watch and participate with our radios or bring your own rig and antenna and have some fun.

CAARA Field Day is just around the corner in late June and all are welcome to stop by and operate or just visit, have a bite to eat and enjoy fellow ham companionship. More details on Field Day in the next issue.

Nearfest Ham Fest in on May 5-6 and is the largest hamfest in New England with hams coming from Canada and all over New England. If you need to sell some gear or just looking for a few connectors or parts, this is the place to be. Many seminars, free prizes, and great sausage, pepper, and onion subs. I may bring some stuff to sell for CAARA on a table for fund raising.

We have many road races to participate in

for public service which also generates much needed funds for our club treasury. We really could use the help from as many club members as possible. It is fun and a great way to give back to the community and club painlessly.

I have the contractors in place for siding and painting and managed to sharpen the bids by \$2200 dollars which will provide enough "extra" money to reshingle the kitchen roof. The building is going to look great and be weather tight for years to come, thanks to the grant money Stan- W4HIX and Hank- W4RIG worked hard to obtain.

Now that the weather is getting nicer, make a point of stopping by the club on any Tuesday night or Sunday morning and see what is going on at the club.

73 until next month, K1TP

## Information Desk

by Dean-KB1PGH



To start off things here are a few quick club dates.

The CAARA Board of Directors meeting will be held on Wednesday, May 3rd at 7:30 PM at the clubhouse and the monthly member's meeting will be held on Wednesday, May 10th at 7:30 PM at the clubhouse as well. CAARA will also hold it's monthly FCC License Test session on Sunday, May 14th at 9:30 AM at the clubhouse on 6 Stanwood Street as well. Please remember to bring \$15.00 and two forms of ID if you wish to take an exam.

We also welcome walk ins as well. If you want to reserve a spot please let Rick Maybury WZ1B the test leader know at [rmaybury@ppg-i.com](mailto:rmaybury@ppg-i.com). Rick is also going to hold a Tech in a day session on Saturday, May 13th at the clubhouse as well for those wishing to earn their FCC

Technician class amateur radio license. Tech in a day is an all day study course with a test session at the end of the day. So please spread the word if you know anyone who is looking to get licensed.

**MAY 10 MEMBER  
MEETING:  
OPEN MEETING  
Devoted to planning  
for the annual  
CAARA FIELD DAY  
EVENT**



**CAARA Newsletter**  
**Cape Ann Amateur Radio Association**  
**6 Stanwood Street**  
**Gloucester, MA 01930**

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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Jon Cunningham- K1TP Editor  
Dean Burgess- KB1PGH Reporter

**Board of Directors- 2016/17**

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David Linsky- KA1LKX  
Ross Burton- W1RAB  
Jake Heard W1LDL  
Hank McCarl W4RIG

## Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the 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. The former W1RK 443.700 repeater is now on the 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 rotating beam and vertical antenna along with a 2 meter packet station and 2/440 meter voice and 220 MHz transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00AM 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 9:00pm, 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.**

## Information Desk

by Dean-KB1PGH



You may also contact Rick at his e mail above for more information on Tech in a day and to reserve a spot.

In other update information don't forget that the yearly ARRL Field Day event is coming up on the last weekend in June which will be Saturday the 24th and Sunday the 25th of June 2017. As of now CAARA should be holding Field Day at the club and we may do portable, in the field, operation as well. More details to follow. I'll do more information on Field day in next months column.

CAARA is also in full swing of it's yearly public service communications events. Such as providing communications for many road races and the Horribles Parade. So keep an eye on on CAARAMAIL for those opportunities. I know they always need more ham radio volunteers at those events. CAARA is also in full swing of its annual fundraising drive. CAARA does a lot of Ebaying of old ham radio gear to raise much need funds for the club. So if you have any old ham gear lying around and want to put it to good use please contact any member of the Board of Directors and we will help you in donating it to the club. CAARA members have been very generous over the past few year in donating used equipment for the club to raise funds so the CAARA Board appreciates it.

I think I will cover the lack of listening on the HF bands that is out there. I think I will challenge whoever is out there to take the time to listen outside the amateur radio bands. Just put your HF on general coverage receive and scan around a bit. There's a lot of stuff to listen to

out there. You can listen to bootleg and pirate broadcasters and radio stations. You can listen to

U S Military and airliners traveling overseas. You can still listen to some HF Broadcasters out there even though its not like back in the day. So if the amateur radios bands are dead keep spinning that dial around off the ham radio bands and you might hear something good. See you next month!

### OOOPS!

– Rowlett, TX taxpayers are paying for a towering mistake after a radio tower was accidentally built on someone's private property.

An urgently needed police and fire radio tower is in a field adjacent to the city's property and the city's residents are baffled about how it happened.

"That's a shame, really," city resident John Carpenter said. "It seems like they'd do more research."

Rowlett's mayor and city manager said they thought the research was done.

The police and fire radio tower was going up on land the city bought in 2006. But after they started construction in February, they were told by the property owner the tower was on private property next to the land the city owns.

A representative with the contractor said it wasn't their fault, and that they built exactly where they were told. The city is under pressure to finish the

tower so it can join a regional network of police and fire radios by this fall.

So it bought the land where the tower is sitting for \$478,000. The city said the cost to move the tower would have been about the same as buying the land but the city would have to pay an extra \$400,000 dollars to join the radio network late.

Rowlett Mayor Todd Gottel said, "We've got to have communications for our police and fire."

"The cost to join the system at a later date would have been more than the property itself," he said. "Unfortunately, some things happen beyond our immediate scope of control and you have to be able to deal with those issues prudently." Now the city is looking to hire an independent investigator to figure out just how such a towering and costly mistake happened.

"That's what's bad about it," Carpenter said. "The taxpayer pays for it. It's always the taxpayer who has to make up for it."

The mayor and city manager said the city may build a public safety building on the original property.





# WHAT'S GOING ON AT CAARA?



N1JEI PHOTO



N1JEI PHOTO

The April Member Meeting Speaker was Leslie Bartlett, a well known speaker, historian, and photographer of all there is to know about stone cutting and quarry's on Cape Ann.

First, a big thank you for Ross- W1RAB for organizing the speaker, cleaning the club up, setting up chairs, etc. for this month's event.

Les did a nice job talking about how the quarry workers "communicated" among one another in life and death situations involving the booms and huge stones being moved around. A history of the quarry environment and how cutting was accomplished with such primitive tools and techniques with such beautiful results.

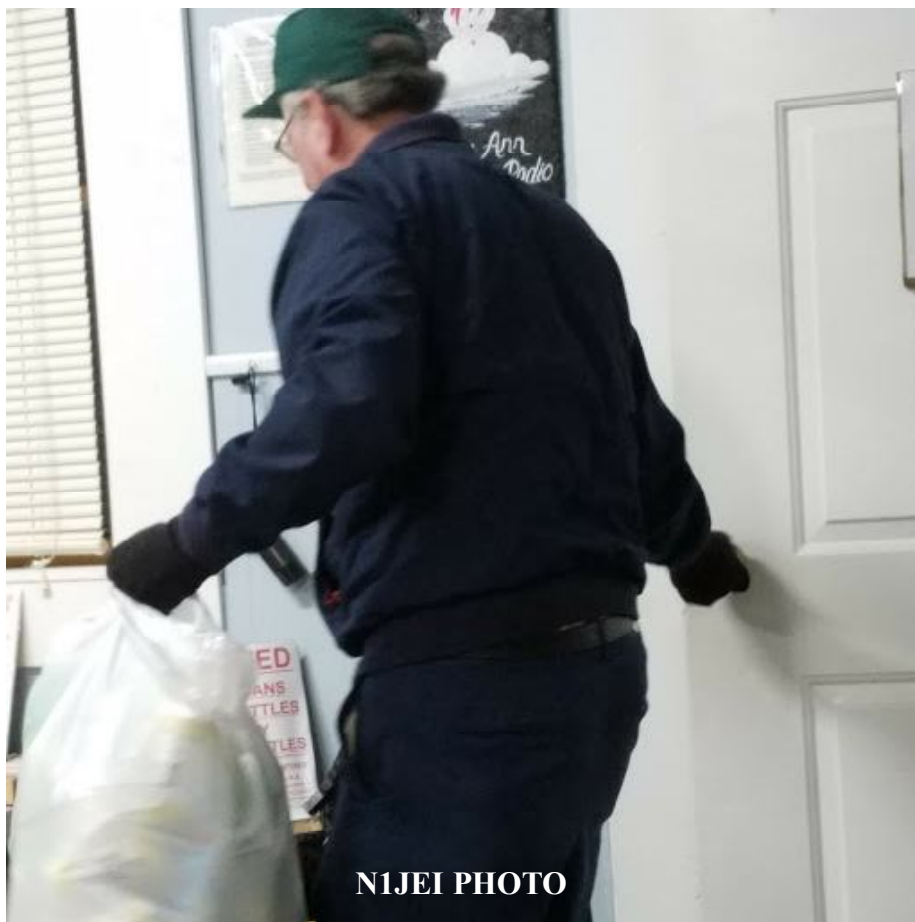
The club has been blessed with wonderful presentations the last three months: A Coast Guard veteran relaying his story of a rescue mission during the Blizzard of 78, Dave-KD1NA presentation on Elecraft transceivers, and Les Bartlett on Cape Ann Quarry's.

I am sure you realize it takes 10-20 hours talking on the phone, emailing, getting the club ready for the speaker, etc. for each presentation. A special thanks to Ross, Dave, and Gardi for all the work it took....too bad more members do not show up!

**CALM DOWN ABOUT THAT SWR READING.....AS YOU CAN SEE IT IS NOT THAT BIG OF A DEAL IN REGARD TO POWER LOSS....WITH AN AMPLIFIER A LITTLE MORE CRITICAL! K1TP**

*The table shown below illustrates the SWR readings vs RF loss relationship for a transmitter power output of 100 watts.*

SWR Reading	% OF LOSS	ERP*	Power Output in Watts	Power Loss in Watts
1.0:1	0.0%	100.0%	100.00	0.0
1.1:1	0.2%	99.8%	99.8	0.2
1.2:1	0.8%	99.2%	99.2	0.8
1.3:1	1.7%	98.3%	98.3	1.7
1.4:1	2.8%	97.2%	97.2	2.8
1.5:1	4.0%	96.0%	96	4.0
1.6:1	5.3%	94.7%	94.7	5.3
1.7:1	6.7%	93.3%	93.3	6.7
1.8:1	8.2%	91.8%	91.8	8.2
2.0:1	11.1%	88.9%	88.9	11.1
2.2:1	14.1%	85.9%	85.9	14.1
2.4:1	17.0%	83.0%	83	17.0
2.6:1	19.8%	80.2%	80.2	19.8
3.0:1	25.0%	75.0%	75	25



**N1JEI PHOTO**

## **CAUGHT RED HANDED IN THE ACT..**

...of stealing CAARA garbage.

Dave- KA1LKX has been keeping the clubhouse tidy and taking care of trash removal in and around the building.

Dave is this month's **Club Member of the Month- BEHIND THE SCENES!**

Dave has purchased and donated cases of water, paper towels, clip boards, and many other items we use around the club.

If you see him around the club, give him a big thank you.



# HIGH POWER MOBILE

Frank Giambrone ka2vti

Top W2IHY EQ

Middle Icom 756 pro2

Bottom Skymaster KW amp

(Along the left "B" pillar)

Left side bottom (hidden) Pos. & Neg 160 amp supplied buss from directly below frame mounted bank of two 100 ampere-hour batteries in parallel at 12 volts

Left side above amp Remote sensor for P 3000 SWR watt meter to protect amp from high SWR by dropping out the "key" line over 1.7 or so to one

Top Left Anderson Power Pole distribution panel with delayed turn on until truck DC system standardizes

...after glow plugs turn off and engine's DC charge alternator settles down (about 20 seconds delay time from cranking)

Hidden multiple Metal Oxide Varistors to squelch transients normally created during trucks operation

Additional DC filters and toroid on Anderson Power Pole input leads. Common mode filters on Coaxial Cable at antennae and again at the amplifier end .



Toroids on all control wires to antennae and linear actuator that tilts over mast and antennae to horizontal position  
Previously to attenuate the 45 caliber submachine gun 30 over 9 fuel injector created noise from the 6.0 litre diesel engine designed by International and bought and installed in my FORD by Ford, I removed the entire top of the engine to enable the removal of the fuel injection electrical harness.

I completely wrapped the harness end to end and soldered all of the seams with copper flashing material and then aggressively grounding it at many locations with 2 inch wide tinned braid on the top of the engine.

Additionally the continuation of the harness as it eventually wound up ending at the left front fender's fuel injection control modules mounting area. (This design fuel injection system runs 4 wires to each of the 8 dual action injectors and 48 volts of trigger voltage on each pair... just my luck)

Additional soda can sized GERMAN MADE DC filters found and scavenged at Dayton originally from a 200 KVA's battery bank's power supply filter bank on the multiple DC cables running to different engine management and fuel injection control modules removed over 95% of the engine generator noise.

With ZERO exaggeration just the under hood DC injector system grounding with the extensively involved turbo charger and associated engine systems including the exhaust pipes to and from the turbocharger took 48 hours minimally. Being a VAN body the job was so much more involved and I can only say I could not be happier finally reinstalling and slamming that hood upon completion.

With all the side cabinets on the exterior of the truck needing mechanically dependable and efficient RF grounding with 2 inch braid that job ate up another 12 hours easily.

Not forgetting one of the most overlooked and problematic areas to RF ground effectively is the underbody.

A major undertaking of grounding the independent "Utility Service Body" to each independent structure below was next. I used a high speed grinding wheel and exposed the silver steel of the main truck frame rails within an inch of the corresponding independent body's sheet metal and ground the body down to bare metal identically.

The corresponding exposed areas were heated with a torch, tinned and the 2 inch braid was soldered between the two in as short a span as possible typically 1-2 inches maximum. This occurred wherever there was mechanical

separation of the body to the frame or more than 30 inches between grounding points from the front of the body to the rear bumper inclusive. Once I got to the actual FORD body (cab) I did the same thing grounding the bodies under panels to the main frame rails.

Not stopping there in VANQUISHING the RF potentials I grounded the starter motor to the frame rail as well as the transmission's bell housing and tail shaft to the crossmember.

Finally grounding the crossmember to the frame rails left and right either by grinding to silver steel and soldering the two together with 2 inch braid or utilizing copper paste and stainless washers to back up the original bolts holding the assemblies together.

Suffice it to say I was rabidly attacking any potentials with an S0 noise level as my goal. (Actual noise level is now genuinely S 1/2 or so

I can genuinely say the truck while in operation does not now create noise sufficient to compromise my ability to hear DX or QRP operators although as any "HF Mobileer" knows the dreaded power line and standard QRM taxes anyones patience at times.

### **Small Satellites Could Be Playing a Dangerous Game of Bumper Cars in Space**

Space is full of all sorts of garbage that can cause problems, including some of the stuff we send up there with good intentions.

Take CubeSats. These nanosatellites, which weigh less

than three pounds, were first sent into space in December 2006, and have become increasingly popular in the years since as a cost-effective option for telecommunications companies looking to spread wifi and brand recognition. The thing is, there are so many of them now that experts are concerned about them bashing into each other—or worse.

This week at the European Space Agency's conference on space debris in Darmstadt, Germany, Hugh Lewis, a senior lecturer in Aerospace Engineering at the University of Southampton, detailed how catastrophic it could be for satellites should one rogue CubeSat crash into another and another. In the worst case, this could trigger a collisional cascade known as the Kessler Syndrome, which manifests as a terrifying cloud of space junk that would pose significant risk to working spacecraft, including the ISS. Haven't you seen *Gravity*?

New Scientist reports that Lewis and his team "have used a supercomputer to simulate 200 years of possible orbits for 300 different megaconstellation scenarios," or sprawling networks of CubeSats. Apparently, these vast networks of small satellites increase the risk of a catastrophic collision leading to destruction of a satellite by 50 percent.

Lewis and his fellow researchers have recommended that space agencies like the ESA bring down inactive satellites sooner to prevent the space junk situation from spiraling out of control. They've also encouraged redesigning small satellites so they can steer clear of objects and suicide plunge into Earth's orbit once their lifespan has ended.



# Flaming Brakes of Death

*by Curt-AA3JE*

No good deed goes unpunished. Back when I put new discs and rotors on the Chevy, I checked the brakes on my wife's car. Pads good, rotors good, no problem. So I got lazy, and didn't pull the rotors for a good look.

That was six months ago.

Anyway, she drives that thing so infrequently that the brakes will last forever.

But it was a spring day, a nice warm day, so I took her to lunch. We go to the barbecue place up toward Newburyport, where the portions are huge and the selection fabulous.

So we were merry, without a care, happy little campers.

Until we drove into the parking lot.

"HOLY SHIT! THE DAMN CAR'S ON FIRE."

SHE WHO MUST BE OBEYED has such a way with words. Poetic, eloquent, a master of the language.

I looked, and indeed there was a small plume of white smoke from the right front wheel. Close inspection showed that it was coming off the disc and the pads. The level in the master cylinder was fine.

"A little smoke off the pads, dear, no problem."

"MY BRAKES ARE SMOKING! THE CAR IS GONG TO EXPLODE! WHERE IS THE FIRE EXTINGUISHER? WHY DON'T YOU HAVE A FIRE EXTINGUISHER????"

"You made me take it out of the car, dear heart, you said carrying one was stupid."

"NOT HAVING A FIRE EXTINGUISHER IS MORE STUPID!"

"Yes, Dear."

Now I knew this, in fact, I had said this when she made me take it OUT of the car, but the smoke cleared while we were discussing it, and all was well.

Or not!

"The car is too old. I need a new car."

"You drive it once every two months, whether you need it or not. I'll look at it tonight."

"I HAVE FLAMING BRAKES OF DEATH! WE'RE GONNA DIE!"





"A smoking brake is not a sign of imminent disaster, dear."

"I NEED A NEW CAR! THIS CAR IS TOO OLD!"

"It has 50,000 miles on it, dear."

"WE'RE GOING TO THE CAR DEALERS! RIGHT NOW!"

"Can we eat first?"

We ate, a cheerless meal, and on the way home, we stopped every mile or so to check the brakes. Nothing. Perfectly normal brakes.

The people at the car dealership were very nice.

So when I got home, I pulled the wheel.

As I suspected, there was a small leak in the right front slave cylinder.

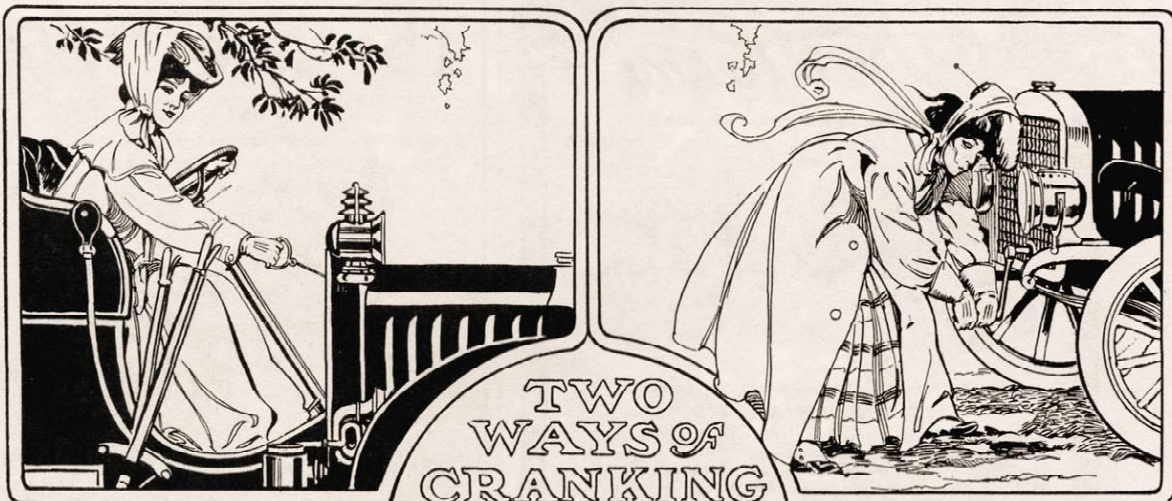
I ordered a seal kit. \$8.00 on Amazon.

But a word to the wise. If you don't want to have to buy a new car, make sure you check the seals on the slave cylinder when you inspect the brakes.

But it was fun.

## THE BALL SEAT STARTING DEVICE

Patents pending in the United States and Europe.



"This starts so easily that I love it."

"This is what I hate about driving a car."

Many progressive builders are arranging to use our device and dispense with the starting crank on their new models. Don't buy a car with a starting crank, for next year it will be a worse back number than the rear entrance car.

If you are tired of standing in the mud and cranking the engine of your old car, give us a description of it and we will see if it cannot be brought up to date in the matter of easy seat starting.

**F. H. & F. O. BALL**

**Plainfield, N. J.**

# **CAPE ANN AMATEUR RADIO ASSOCIATION IS HOSTING THE NEXT TECH-IN-A-DAY STUDY SESSION**

## ***What is Tech-In-A-Day?***

Tech-In-A-Day is program enabling new amateur radio operators to get their first operating license with only one day of preparation.

Tech-In-A-Day is a structured studied session beginning at 8:30 AM and testing begins at 4:00 PM. Participants are guided through a section by section preparation for the test. Tips and coaching for studying and test taking are provided. At the end of the day the group takes tests for their licenses.

The pass rate for new hams participating in Tech-In-A-Day is between 85%-90%, with some groups reaching 100%.

## ***What is the cost and what do I get?***

The total cost of the Tech-In-A-Day program is \$30.00. That includes the following:

- Personal study guide
- Study and test taking coaching
- Continental breakfast
- Pizza lunch
- Water and coffee
- FCC license test (\$15.00 of the \$30.00)

## ***Where and When?***

The next Tech-In-A-Day study session will be held:

Saturday, 13 May 2017

Cape Ann Amateur Radio Association

6 Stanwood Street

Gloucester, MA

## ***How do I reserve a seat?***

Email:

Rick Maybury, WZ1B

RMAYBURY@PPG-I.COM

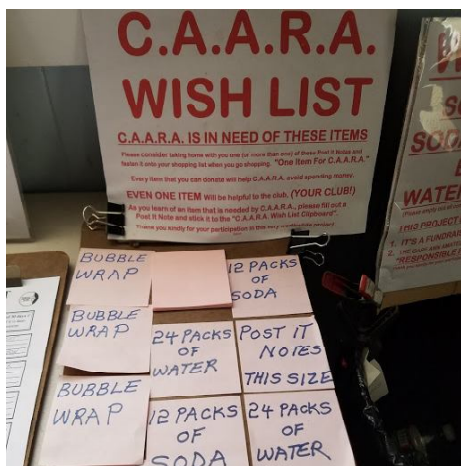
## ***What do I need to bring?***

You must bring a picture ID, government issue if you are 18 or over.

Bring cash or check for \$30.00. If check, please make the check out to: Cape Ann Amateur Radio Association.

## ***What other exciting things can I do that day?***

You can learn more about Ham Radio, get your hands on fun equipment and meet fellow hams! The Cape Ann Amateur Radio Association is a fully-outfitted amateur radio club that owns radios of which to talk around the globe, emergency communications equipment, and a host of digital communications equipment. CAARA members will be there throughout the day to teach you about the equipment, give you an opportunity to play with the radios if you want and, for the enthusiastic, work the bands with an experience radio operator and make your first contact with someone somewhere around the world. In past classes, folks made their first radio contact to places like Russia, Germany, Japan and South America... **before** they had actually passed the test and earned their license.



Dave- KA1LKX has started a program of “painless” donations to help out the club....already a club member has donated a gigantic bottle of dish detergent. At the front of the club is a list of things we need on a regular basis....so when you go shopping maybe you could buy one thing for the club!



Please save your bottles and cans, Dave also recycles them for us and it is another “painless” way to raise funds for the club. It all adds up!

**I'd appreciate your help in publicizing the upcoming New England QSO Party on May 6th and 7th. Please mention it at your next club meeting and in your newsletter.**

The NEQP is a great time to check out antenna systems and offers a moderately paced opportunity to work new states and countries. You'll find a wide variety of participants, from newcomers to experienced contesters, all interested in making contacts with New England stations.

We're working to make sure that all of the New England counties are active again this year and would appreciate your help. Get on for at least an hour or two and join in on the fun. Please let me know if you can put in any time at all so we can work on activity from the rarest counties.

**Will you be QRV? Let us know which county you'll be on from with a message to [info@neqp.org](mailto:info@neqp.org)**

Oh yes, the NEQP is also **lots** of fun when mobile. Every time you cross a county line the action starts over again. It's amazing what a 100w radio and mobile whip can do.

The QSO Party is 20 hours long overall, in two sections with a civilized break for sleep Saturday night. It goes from 4pm Saturday until 1am Sunday, then 9am Sunday until 8pm Sunday. Operate on CW, SSB and digital modes on 80-40-20-15-10 meters. For each QSO you'll give your callsign, a signal report and your county/state. Top scorers can earn a plaque and everyone who makes 25 QSOs and sends in a log will get a certificate.

Last year we had logs from 179 New England stations and 300 more from around the country and world.

The full rules are here -> <http://www.neqp.org/rules.html>

The 2016 results were posted over the weekend and the results since 2002 are also available -> <http://www.neqp.org/results.html>

**It's just about a month until the 2017 NEQP. Please make some QSOs even if you don't want to send in a log.**

Thanks!  
73 Tom/K1KI





## **President Trump makes special long-distance call to record breaking American astronaut**

President Donald Trump, First Daughter Ivanka Trump, and NASA astronaut Kate Rubins, KG5FYJ will make a special Earth-to-space call Monday, April 24, from the Oval Office to personally congratulate NASA astronaut **Peggy Whitson, KC5ZTD**, for her record-breaking stay aboard the International Space Station.

The 20-minute call will air live on NASA Television and stream on the agency's website and Facebook page at 10 a.m. EDT, and will be made available to schools, museums, and other organizations across the nation and globally.

The Department of Education and NASA are working together, on behalf of the White House, to encourage classrooms throughout America to tune-in to this historic event. They also are making available for voluntary use STEM on Station educational materials that may be helpful to further engage students in the classroom. STEM on Station is comprised of education activities that follow astronauts as they demonstrate STEM concepts such as Newton's Laws of Motion, surface tension and advances in technology. Commander of the station's Expedition 51 crew, Whitson will officially set the U.S. record Monday for most cumulative days in space, surpassing NASA astronaut Jeff Williams' record of 534 days. Additionally, she is the first woman to command the space station twice, and holds the record for most spacewalks conducted by a female astronaut.

Whitson will be joined for President Trump's call by NASA astronaut

**Jack Fischer, KG5FYH**, who is scheduled to arrive at the orbiting laboratory Thursday, April 20.

Whitson arrived at the space station Nov. 19, 2016, and is sharing her experiences in space on Twitter, Tumblr and Facebook. Fischer will share his first-time flyer experiences on Twitter, Facebook and Instagram. Get breaking news, images and features from the station on Instagram and Twitter.

Check out the latest NASA TV schedule and video streaming information at: <http://www.nasa.gov/nasatv>

## **Vietnam operation**

**Jesus, JP7MBO**, will be active as **XV9G** from Ho Chi Minh City between April 19th and May 9th.

He states that he will be active on 20 meters during the daytime and 40 meters during the night time and if the band is open, 15 meters.

Operations will be mostly CW and SSB occasionally

## **Motorola Solutions files patent infringement complaints in Germany against Hytera Communications and Hytera Mobilfunk**

Motorola Solutions, Inc. (NYSE: MSI) ("Motorola Solutions" or the "Company") today announced that it has filed patent infringement complaints with the Regional Court of Düsseldorf in Germany (the "Regional Court") against Hytera Communications Corporation Limited (SHE: 002583) of Shenzhen, China and Hytera Mobilfunk GmbH of Bad Munder, Germany (collectively, "Hytera").

This legal action follows the patent

infringement complaint filed by Motorola Solutions against Hytera with the U.S. International Trade Commission on March 29, 2017 and the patent infringement and trade secret misappropriation complaints filed on March 14, 2017 in the U.S. District Court for the Northern District of Illinois.

The Regional Court complaints assert that Hytera's two-way wireless communication devices that utilize "pseudo-trunking" functionality are infringing Motorola Solutions' patent EP 2 342 851 B1. Motorola Solutions seeks an injunction preventing Hytera from offering and delivering products with the pseudo-trunking feature in Germany, as well as the recall and destruction of infringing products and various damages.

Mark Hacker, general counsel and chief administrative officer of Motorola Solutions, said, "Today's action is another important step in our efforts to protect Motorola Solutions' long and distinguished track record of innovation. We are committed to safeguarding our valuable intellectual property, including our extensive portfolio of more than 4,000 patents, for the benefit of our customers, shareholders, employees, partners and other stakeholders around the world. We remain confident that the legal actions we are taking globally will be effective in stopping Hytera's unlawful conduct."

For additional information regarding Motorola Solutions' legal actions against Hytera, please visit <https://newsroom.motorolasolutions.com/presskits/motorola-solutions-intellectual-property.htm>.

## AREA HAM NEWS AND EVENTS *by Bill WZ1L*

May 3<sup>rd</sup> CAARA Board of Directors Meeting - 6 Stanwood St – Gloucester, MA

May 5<sup>th</sup> and 6<sup>th</sup> Nearfest – Deerfield Fairgrounds, Deerfield, NH

May 6<sup>th</sup> Streamline – Twin Lights Half Marathon – Gloucester, MA

May 7<sup>th</sup> Rocky Neck AA 5K — Rocky Neck — Gloucester, MA

May 13<sup>th</sup> Yukan Run Half Fast – Half Marathon — Hamilton, MA

May 15<sup>th</sup> NSRA Meeting, Speaker, Mike Raisbeck, K1TWF, Vice Director, ARRL Division

Eastern Mass — Peabody Municipal Light Plant Auditorium, Peabody, MA (7:30pm)

May 17<sup>th</sup> CAARA Members Meeting – 6 Stanwood St — Gloucester, MA

May 20<sup>th</sup> MOTIF #1 Day 5k Run – Rockport, MA

May 21<sup>st</sup> ADA Ture De Cure Bike Ride — Topsfield, MA



**CAARA WILL BE AT BOXBORO HAMVENTION AGAIN AND PROVIDE THE TECH IN A DAY COURSE AND TESTING! September 9...lead by Rick- WZ1B and CAARA club members....**



## Israeli high school students build CubeSat

Over 80 Israeli high school students have built a CubeSat called **Duchifat-2** as part of the QB50 Thermosphere research program

Duchifat-2 is one of 28 QB50 Cubesats from 23 countries launched on April 18, 2017 to the International Space Station (ISS) from where they shall be placed into orbit in six weeks time.

Duchifat-2 and its companion Cubesats will measure the plasma density of the Thermosphere between 85 km and 300 km altitude above the Earth's surface. Israeli students will study the data from the Cubesats at the Herzliya Science Centre, where signals from the orbiting satellites will be received.

Israeli Minister for Science, Technology, and Space, Ofir Akunis, said in a government statement that, "Duchifat-2 is not only an educational venture that brings space closer to youth and lays the way for tomorrow's generation, it is also an international research project. This is Israeli pride for the future generation, and an opportunity to increase public awareness about space."

Read the full story at

<https://spacewatchme.com/2017/04/israeli-high-school-students-build-duchifat-2-cubesat/>

All the CubeSats in the QB50 project will mainly operate on frequencies in the 2 m and 70 cm amateur bands. To avoid interference to terrestrial amateur radio activity the frequency was coordinated by the IARU Satellite Adviser and advisory panel <http://amsat.org.uk/iaru>

QB50 project <https://www.qb50.eu/>



Tony, AB1XX  
FIELD DAY  
CHAIRPERSON



## What is it?

Field Day is part educational event, part operating event, part public relations event – and ALL about FUN!

## When?

Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and running through 2059 UTC Sunday. Field Day 2017 is June 24-25. (UTC is 4 Hours **Ahead** of EDT)

## Objective?

To work as many stations as possible on any and all amateur bands (excluding the 60, 30, 17, and 12-meter bands) and to learn to operate in abnormal situations in less than optimal conditions. Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit, but are not eligible to submit entries.

More to follow as we get closer to the Date.

Tony, AB1XX

## CAARA Spring Emergency Communications Drill !

The CAARA Emergency Communications committee is planning a spring emergency communications drill. This drill will be held on Sunday, April 23rd starting at noontime and going throughout the afternoon. The drill will be held at Stage Fort Park in Gloucester Mass. This exercise is open to all club members and the main purpose is to give all club members the opportunity to get outside and operate their portable ham equipment. This is not an overplanned event and is for the sole purpose of having fun and getting on the air and making some contacts. You can show up whenever you want and operate however you want. Even if you don't operate portable you and want to learn how to there will be portable HF stations to study and learn from. Hope to see you there! If it rains we will reschedule for another weekend.



It's almost amazing . . . each time you touch the Electro-Tuner with a finger tip, a new station is "trapped" and tuned in for you!

The Electro-Tuner—exclusive to Delco—is a remarkable achievement in postwar electronics. It brings to auto radio its first truly automatic tuning . . . it makes obsolete the very latest types of push-button tuning, and even makes manual tuning unnecessary.

### No Dial Fumbling

With the new Delco auto radio there is no dangerous fumbling with dials or push-buttons . . . no taking your eyes off the road—even for a second! The Delco way is the safety way—you do nothing but drive and enjoy yourself.

### Transfer from Car to Car

Here's another feature of the new Delco auto radio: it is easily in-

stalled in any make of car or truck. And it is easily transferable when you get a new car.

### Enjoy the Best!

This is your opportunity to get an eight-tube, superheterodyne auto radio in which there is no pre-setting of stations and no push-button tuning—in fact, no tuning of any kind, because the tuning is done for you, automatically! Ask for a demonstration of the new Delco auto radio at your nearest United Motors Service station.

### THIS DOES IT!

This is the magic "trigger tube" which sets up a separate sensitivity field and tunes in the stations for you, one by one!



**UNITED MOTORS SERVICE**  
DIVISION OF GENERAL MOTORS CORPORATION  
GENERAL MOTORS BUILDING • DETROIT 2, MICHIGAN



## Morse in the brickwork

Back in the March 26, the WIA National News Service met artist Jackie Ferrara whose works feature Morse Code numbers and letters that actually are bricks featuring in landscaping AND buildings.

Well now Jim VK3PC has been doing a little ‘googling’ by the look of things and comes up with this tongue-in-cheek jibe with Morse code.

He says a new skate hall building in Oslo Norway is attracting professional and amateur skateboarders of all ages.

Part of its structure is a cladding of aluminium panels punctured by a surface pattern of Morse code symbols.

So what does it read?

The architects has some fun with this one, a literal transcription of the 1978 Norwegian law forbidding the use, sale, and advertising of skateboards. Of course that law was abolished in 1989 and skateboarding has flourished ever since.

## Hamvention webcast

**W5KUB.Com** will again be webcasting the Dayton Hamvention live for 6 full days (48 plus hours of live webcast) beginning May17 through May 22.

We will be giving out thousands of dollars in prizes to our viewers.

Please watch on [W5KUB.COM](http://W5KUB.COM) or if you are there in person please come by and see us at booth 5006.

Thanks, de W5KUB

## ARRL Hamvention Forum Topics Will Encompass Makers, Youth, HamSCI

When Hamvention® opens on May 19 for the first time in Xenia, Ohio, the focus of ARRL activities will be the ARRL EXPO in Building 2 of the **Greene County Fairgrounds and Expo Center**. ARRL will sponsor a slate of forums on all 3 days of Hamvention.

To highlight the new location, some fresh ARRL forum topics will accompany the old standards. Space is limited at some forum venues.

- ARRL has reached out to the Maker movement, and “**Ham Radio Makers and Hackers**” will kick off the League’s forum schedule on Friday at 10:30 AM (Room 4). The ham radio community has always promoted the DIY (do it yourself) approach — what some hams call “homebrewing.” The panelists at this hour-long session will share experiences about how ham radio is finding kinship with the new generation of creators, makers, hackers, and innovators. Panelists will include ARRL author Glen Popiel, KW5GP, and ARRL Education & Technology Program instructor Tommy Gober, N5DUX. Also on the panel is Cara Kouse, Innovation and Makerspace Manager at the Xenia Community Library, who will talk about the new Makerspace opened at the library early this year.

- Also new at Hamvention 2017 will be the “**•HamSCI, the Ham Radio Science Citizen Investigation**” forum, Saturday at 9:15 AM (Room 4). Nathaniel Frissell, W2NAF, will answer the question, “What is HamSCI?” A group of panelists will share information about professional research programs supported by radio amateurs. Presentations also will address investigations related to the total solar eclipse in August, and Frissell will discuss “The • **Solar Eclipse QSO Party**: Ionospheric Sounding Using Ham Radio QSOs.”

- One popular forum at the Orlando HamCation focused on the **ARRL Collegiate Amateur Radio Initiative (•CARI)**. Andy Milluzzi, KK4LWR, will bring the discussion to Hamvention on Saturday at 12:30 PM (Room 4). A growing number of campus radio clubs and student radio amateurs have begun to share ideas and suggestions on the CARI Facebook page to rekindle interest in ham radio on college and university campuses, bringing students together, and developing career connections. Students, alumni, and faculty will present at the forum. The ARRL Collegiate Amateur Radio Initiative is sponsored in part by the WIYSM Snyder Family Collegiate Amateur Radio Endowment.

- “**Learning. Discovery. And FUN!**” on Sunday at 9:15 AM (Room 2).
- **ARRL Teachers Institute** on Wireless Technology instructor Tommy Gober, N5DUX, will introduce teachers to a variety of tools, as well as a curriculum to take back to their classrooms. Topics include an introduction to basic electronics, the science of radio, space technology, and satellite communication, as well as weather science, introduction to microcontrollers, and basic robotics. Gober will share strategies to motivate students to learn and to inspire interest in STEM (science, technology, engineering, and mathematics) fields.

- ARRL Great Lakes Division Director Dale Williams, WA8EFK,

will moderate the **ARRL Member Forum** on Saturday at 11:45 AM (Room 1). It's an opportunity for ARRL members and prospective members to hear from local and national ARRL officials on key areas of membership interest. Learn how ARRL supports dozens of ways to get involved, get active, and get on the air.

- The wide-ranging **"Public Service Communications Panel Discussion"** on Saturday at 1:45 PM (Room 4) will offer a chance to hear from representatives of organizations active during disasters and emergencies. ARRL Emergency Preparedness Manager Mike Corey, K11U, will moderate. There will be presentations by representatives of the VoIP WX Net and VoIP Hurricane Net; the Military Auxiliary Radio System (MARS); the Hurricane Watch Net (HWN); the Salvation Army Team Emergency Radio Network (SATERN), and the US Department of Homeland Security's SHARES network.

- At **"Ham Radio and the Law: Antenna Permits and Problems"** on Friday at 2:45 PM (Room 2), attorney Fred H. Hopengarten, K1VR — the author of *Antenna Zoning for the Radio Amateur* — will head a panel of Amateur Radio attorneys in a discussion of legal issues to include avoiding restrictive covenants, tower permits, and recent court rulings on the PRB-1 limited federal preemption. The forum will present the latest information on H.R. 555, the Amateur Radio Parity Act of 2017.

- **"ARRL National Parks on the Air Recap"** on Sunday at 10:30 AM (Room 2) will review the highly successful • [NPOTA](#) activity that commemorated the centennial of the US National Park Service last year, inspiring more than 1 million contacts during park activations. ARRL Radiosport Manager Norm Fusaro, W3IZ, and ARRL Media and Public Relations Manager Sean Kutzko, KX9X, will moderate

### **South Africa cancels 2,100 ham radio licences**

South Africa's ICASA has cancelled **2,100** Amateur Radio licenses, believed to be more than 1/3rd of the total, for non-payment of licence fees

ICASA is under no obligation to take responsibility for non-delivery of invoices.

### **SARL News reports:**

At the quarterly SARL/ICASA Liaison meeting held this week, ICASA confirmed that 2 100 amateur radio licenses were cancelled for non-payment of licence fees. Over the past few months, the League has reminded radio amateurs in news bulletins, newsflashes and on the web to ensure that their license payment are up to date. In December, last year the League sent e-mails to members who were in arrears and whose licenses were about to be cancelled. This week another 143 members were e-mailed again.

ICASA sends invoices at the beginning of each year but many do not reach their destination, often caused by licensees not updating their addresses. The regulations are clear that the responsibility to pay the annual fee is on the licensee and that



As I get ready to head home, I stopped at the tourist gift shop and picked up gifts for my four grandkids and one of my selections was the gator head. I am giving it second thoughts because my grandson is going to ask if I killed it and what did I do with the rest of Mr. Gator? I will admit to a tough fight as he attacked me and I had no choice.....I just can't tell him he was farm raised for boots, wallets, purses, and belts.....and "fried gator bites."

Why the hell didn't I just buy him a few old shark teeth and a T-Shirt ?





## K1IRA STATION

Here is a pic of my FT-817ND with a modified H-250 handset and the portable zero escort frame. Also included is a pic from last summer making ssb contacts with 5 watts on the deck. The current antenna for this setup is a chameleon portable loop antenna which covers 10m-40m.

Regards, Nate K1IRA





# EBay AUCTIONS *by Jake-WILDL and Chris- KITAT*



Jake and Chris busy packing and shipping club EBay items being supervised by Davie- KA1LKX. CAARA has been auctioning gear excess to our needs for the last few months. Go to the Ebay auction via the CAARA website and follow the action. We have soldover \$1500.00 worth of gear to bolster the treasury so far. If you have any spare gear laying around and would like to donate it to the club, it would be appreciated....it does not even have to be ham gear, but.....**before you bring it to the club** ask Jake or Chris is it something we would use.

## **SPECIAL THANKS TO BOB SPANKS AND CREW FOR THE NEW REFRIGERATOR IN THE CAARA KITCHEN**

Bob- WA1UCG was cleaning out the club refrigerator one day and noticed he temperature was not very cold and the freezer section has always been suspect. Bob called out to members for donations or a refrigerator itself.

It did not take long before two donations were offered to the club, we took the one in the photo from a friend of Dennis Dalton, a club member. Bob lined up delivery with a family friend and club members Tony and Rick were there to open the doors and help out. Another member donated the service of removing and disposing of the old refrigerator.



# Working the Boston Marathon 2017

Stan Stone, W4HIX



The Boston Marathon is the premier running event in the world, and an opportunity for 280 hams to provide support and get a chance to observe it up-close. This year 30,000 runners participated, running the 26.2 miles through seven towns between Hopkinton and Boston.

Twenty federal agencies participate (including a canine unit from the National Park System, and a US Coast Guard helicopter that I saw in Wellesley), coordinating with police, fire and EMS from the seven cities and towns, as well as MEMA and the Massachusetts State Police. Other towns send support (including a motorcycle unit from Easton).

Approximately 9,400 volunteers work the marathon this year.

## **Boston Marathon and Amateur Radio**

So, what role does Amateur Radio play in the marathon? Hams provide communications support for the various operational aspects of the race, from coordination of the runners at the start, to supporting the 26 medical tents along the course, to shadowing the race officials at the finish in Copley Square. They support the medical sweep teams at the end of the race for the runners that finish, but then run into trouble as they transition to no longer running. They support the medical transportation system that transports runners who can't finish race back to Boston (it's a long way to walk if you run into trouble). Hams are assigned to every bus and van that's assigned to the race that transports runners, along with a medical volunteer and driver. They report their position and other information to the Net Control operators who then coordinate with the transportation company and medical resupply.

Four small buses are used exclusively for the Elite runners. Elite runners are invited by the Boston Athletic Association to run in the race, and are the top marathoners in the world. While your average runner who requires transportation is picked up at a medical station by a bus that runs a loop, then transferred to an "express" bus that then transports them Copley, Elite runners get direct service from wherever they are (medical tent, a house along the course, in a police car) straight to Copley. This is the assignment I've had for the last eight years I've worked the marathon. This year there were 44 Elite runners from 10 countries.

<http://www.baa.org/news-and-press/news-listing/2017/january/john-hancock-financial-announces-2017-boston-marathon-international-elite-field.aspx>

## **What's the Experience Like?**

Amateur radio operators who have worked the marathon previously start getting notices early in the year to sign up. Sign up is done through the Boston Athletic Association's website ([www.baa.org](http://www.baa.org)). This is critical because the BAA screen all of the volunteers. With nearly 10,000 volunteers, this is a lot of work. The medical volunteers have a seminar in March in Framingham to review what to expect, especially in relation to general security and the kind of medical issues they may face. The Amateur Radio crew has a breakout session to discuss the particulars. In recent years, a lot of emphasis has gone into documentation which is available online. (<https://www.hamradioboston.org>). Jim Palmer (KB1KQW) did a really nice job with videos of the session (<https://www.hamradioboston.org/?q=node/7>).

A frequency list is published and depending on your assignment, a block of frequencies are used for your section. These will depend on what you are doing (Start, Course, Transportation, Finish) and your location. It is critical to have these programmed into your radio before you arrive. For the first four years, my meeting place was the John Hancock building in Boston. There would be issued credentials and a jacket. The jackets are used for identification, and a very nice souvenir. Last minute details are discussed as well as

assignment changes. After the bombing in 2013, the Transportation group began meeting in Woburn at TransAction—easier to get to and free parking. Other volunteers have meeting places that are closer to their assignment locations.

Once you've check in, it's time to find your van and get set up. Most of the vans have fiberglass tops, so your mobile mag-mount antenna goes on the hood. It is best to have a mobile rig if you are assigned to the Transportation group, and this year mobile radio kits were provided for those without a mobile radio. Once you've installed your radio, you meet your driver and medical volunteer. This is the fourth year I've worked with the same driver and medical volunteer, though our medical person did drop out two years ago to run the marathon herself. I carry a handheld radio for the times when I'm away from the van.

The vans have a commercial two-way mobile radio already installed. It is the ham radio operator's responsibility to make sure this radio is operational, as this is the main connection for getting instructions. The ham radio operator relays information to the net control operators as to location of the van. They are also the backup for all other communication, including ambulance calls if necessary.

For the day, we find a convenient place along the course to wait—we usually pick Medical Tent 08 in Wellesley. When an Elite runner drops out and requests transportation, one of the vans is dispatched for pickup and return to Boston. This is not as easy as it sounds, as the most direct way to get to a Medical Tent is on the course, which naturally is not allowed. It depends on if the tent is on the right or left side of the course, and if the runner can cross the course. There are only a couple of places with overpasses for crossing the course, so it might turn out to be a long ride to pick someone up. The trip into Boston is not always easy either. Generally, two or three trips is about all that is possible. The Elite runners have either finished or dropped out by 1:00 PM, meaning Elite Runner vans are released early in the day.

### **Changes After the 2013 Bombing**

After the 2013 Marathon bombing, things changed pretty dramatically for volunteers. Backpacks were banned, only clear bags were allowed, vans were searched approaching the medical tents. The biggest changes were for Amateur Radio. Before the bombing, Amateur Radio was the primary communications on the race course. After that, commercial radios were brought in. The implementation had a lot of problems initially, including failed batteries and confusion as to who was in charge. There were directions given by the transportation company, Amateur Radio net control and cell phone—often time uncoordinated. There was much more coordination between the various state organizations, and a question as to the utility of Amateur Radio. From my understanding, there were discussions about eliminating Amateur Radio from the marathon, but the Boston Athletic Association insisted on retaining them. This isn't the first time that the Massachusetts Emergency Management Agency has dismissed Amateur Radio, but the BAA was a strong advocate and prevailed.

Amateur Radio doesn't have the same role as before the 2013 bombing, but is still an integral partner in the operation of the Boston Marathon.

### **Can You Get Involved?**

Anyone with a license and a radio (maybe not even a radio now for the Transportation group) can volunteer. I helped a young Chinese student from Holy Cross who had her license for a couple of years who had never really operated. She needed help installing the radio in Elite #4, which I did on the course. She was not perfect, but did her job without incident. It is an amazing event to be a part of.

### **Conclusion**

I've thoroughly enjoyed being a part of the Boston Marathon for the last eight years. I've met some great people, been able to practice my communications skills, and supported one of the most famous sporting events in the world. I'd encourage anyone to volunteer, ask me or anyone who's been involved and I think you'll get the same story—it's an experience you won't forget.



# CAARA holds Emergency Communications Drill

The Cape Ann Amateur Radio Association held its quarterly communications exercise on Sunday April 23rd at Stage Fort Park in Gloucester. We had Ross W1RAB set up a portable 440 repeater system on the back of his truck and his Icom 7000 with a end fed long wire off of a tree. We also had Dean KB1PGH with a set up that included a Yaesu FT 991 and a 4 band off center fed dipole on a mast.

Nate K1IRA showed up with his 5 watt Yaesu FT 817 QRP rig with a magnetic loop antenna. Even though band conditions were pretty bad due to a CME and solar wind we were able to make several contacts on 40 and 20 meters. We tried on 10 meters and 6 meters but those bands were dead. We were able to contact the Azore Islands, London England, Glasgow Scotland and Italy to name a few. We heard more but there was too much fading and QRM to make more contacts.

We were also able to operate locally on 440 MHZ with Ross's mobile repeater. There was also a sighting from Jim- W1DDX as he lended his moral support. We also had Richard Keyes- KC1FSR stop by for a while and Bill Canty- W1OKD showed up to of which the support was appreciated. We would like to thank Christine Drohan for helping in the set up and tear down of this event. We operated for 3 hours and then packed it in. Well at least we had fun on a nice spring day with some ham radio friends even though the DX Gods were not favorable.

Until next time and 73, Dean Burgess KB1PGH



**Christine**



**ROSS**



**Nate and Rich**



**Jim- W1DDX IN SUV**