



CAARA Newsletter



AN ARRL AFFILIATED CLUB

AUGUST ISSUE- 2009



President's Corner

by Curtis AA3JE

Well, for a month when the club is on holiday, you could fool me.

We had the Horribles Parade, the Manchester Parade and the Lanesville Parade this month, all successful and safe.

We have the Islands on the Air (Thatcher Island) and the Triathlon coming up this next month, and we are getting ready for the annual meeting.

So it's a time for preparation.

Think about service to the club. It does not run itself (just seems that way) and we need some new blood on the Board (Bob Quinn cannot spare any more).

Seriously, we are now in a great spot. We have service obligations and ham events most every month, the attendance at educational events (such as the Superhet Radio Class) has been outstanding, and we are positioned to improve our service to the community.

So won't you help? We need you, and you are uniquely qualified to help CAARA in 2010.

So participate in the Annual Meeting and consider a service obligation. It's fun and it really helps make CAARA the great club it is.

**CAARA Annual Meeting,
September 16, 2009 at 8:00pm**

THATCHER ISLAND DETAILS

Hello all, it's that time of year again. We're ramping up quickly to activate Thatcher Island and the lighthouses thereon! The full details are still condensing as I write this but the date is set for August 8-9 which is a Saturday-Sunday and some of us will be staying overnight too! In brief, it looks something like this:

- 1) Friday evening some of us will go to the island and set up/operate through Saturday and come home that day.
- 2) Some of us will go out Saturday and operate, and come home on the last boat of that day
- 3) Some of us will come out Saturday, operate AND stay the night and return home on Sunday.

Of course, everything is weather dependent but there is much more room for those who want to participate. And those who do want to participate need to let me know that ASAP! (BTW, join CAARAnet on Sunday at 9pm for Q&A regarding this year's activation). We will be operating HF Phone, PSK, and CW and VHF (50/144) as well. Further, we will be working stations via the WIGLO repeater including Echolink too however those contacts will not qualify for IOTA or ILLA credit. We will QSL all contacts however so we need operators! The coolest new items for this year is that we expect to have live streaming video so stations will be able to actually see us working them in real time! Again, much of the plan remains to be solidified but this is the skeleton so far.

Please check your calendars, make room, and get in touch with me regarding your availability. And tune in on Sunday night at 9pm for CAARAnet and Thatcher Island Q&A.

73

Briggs Longbothum, ab2nj

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-Editor
K1TP

Board of Directors- 2008-9

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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 Cingular 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 W1RK 443.700 repeater with antennas located in Magnolia is owned and operated by club member Ralph Karcher and it too is available for club use.

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 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 Bob Quinn 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.

CAARA SUPERHET THEORY AND RADIO BUILDING CLASS A HUGE SUCCESS!



CAARA and Dr. Curtis Wright, AA3JE, sponsored a free Wednesday evening class which was held at the CAARA Clubhouse. The course covered the theory of a typical AM superhetrodyne radio.

Curtis not only taught the radio theory, he brought it to life with a series of “hands on” experiments involving test equipment such as the oscilloscope, rf generators, spectrum analyzers, etc.

Students built a AM radio, section by section , and checked it accordingly with test equipment. The Elenco radio kit was free of charge to all participants and they all worked at the end!

I can hardly wait until the next class...perhaps a fm radio.



Curtis helping a student with the final alignment of his radio. Thanks from all of us Curtis!



AIM FOR THE CLOUDS AND GET BETTER “LOCAL” SIGNALS! AN NVIS STYLE “BEAM” ANTENNA FOR BETTER “LOCAL” AREA COVERAGE ON HF

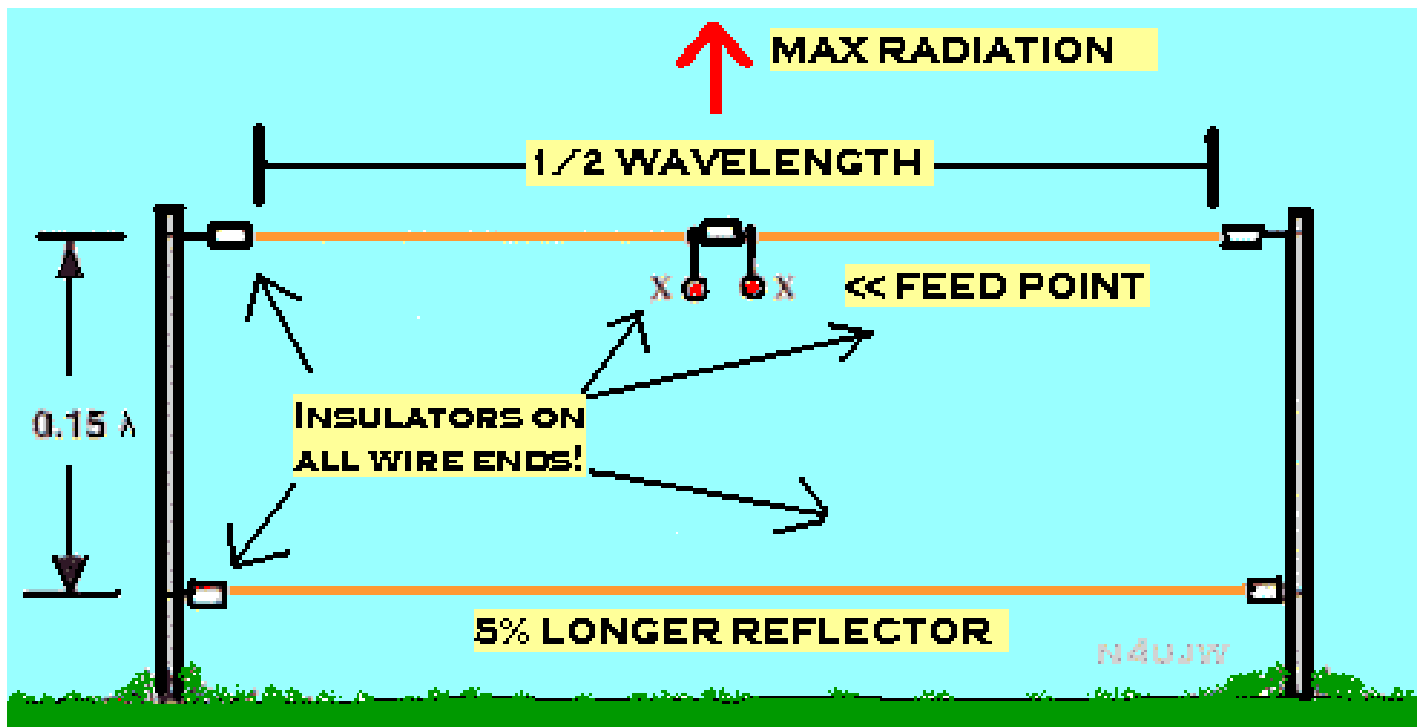
Some of you may recognize this design as nothing more than a half wave dipole, but upon closer examination, you will see that there is a reflector at the bottom of the antenna spaced at about .15 wavelength or less from the driven, (dipole), element.

This in fact, makes this antenna a 2 element wire “beam” aimed straight up at the clouds!

Hence the name “Cloud Warmer Beam”.

NVIS style antennas work best below about 8mhz as confirmed by the U.S. military.

If you already have a half wave dipole up and running, then you have been using this type of antenna to some



extent without knowing it, however, yours is not as effective in getting your signal to the “local” area out to a few hundred miles due to the properties of the ground underneath, your present dipole, and the nature of the dipole pattern.

This design gives you the ability to more closely match the ideal situation for your dipole to perform much better in the close in range, (a few hundred miles radius), from your station and give you a little added “gain”!!!!

The military uses the NVIS configuration while operating mobile for better “local” coverage on their low bands by laying down their whips in a horizontal position on their mobile units. THERE IS NOTHING SPECIAL ABOUT THIS ANTENNA CONSTRUCTION OTHER THAN THE ADDED REFLECTOR AT THE BASE OF THE DIRECTOR (DIPOLE)!

By adding the reflector, which is 5% longer than the driven element, and spacing it .15 wavelength or less below it, you turn your dipole into a beam type antenna projecting your signal up to that big reflector in the sky where it is bounced back down into a sort of upside down cone pattern extending out several hundred miles! **THIS IS NOT A DX ANTENNA!**

The standard formula can be used for calculating the length of the director... $468/\text{freq mhz}$

Reflector length = director length + 5% longer.

Spacing = approx $140/\text{freq mhz}$

Example:

Design for middle of the General Phone Band around 3.925mhz

$468 / 3.925 = 119.24$ FEET FOR DIRECTOR (DIPOLE)

REFLECTOR = 5% LONGER THAN DIRECTOR = $119.24 \times .05 = 5.96$ FEET ADDED TO $119.24 = 125.20$ FEET

SPACING = $936 / 3.925\text{MHZ} = 238.47$ FEET $\times .15 = 35.77$ FEET FOR SPACING

(See further experimentation concerning spacing below)

If your starting this project from scratch, start with the director, (the dipole), a little longer and prune to lowest swr for middle of band as with any other antenna project!

If your dipole is already up with low swr, then just add the reflector at the proper spacing distance.

The distance from the reflector and the ground should not make any difference.

You will note by the calculations above that the distance from the driven element and reflector would require that the director be at least 35.77 feet from the ground! If you can't get the formula spacing for installation reasons, then just do the best you can.

CAARA Annual Meeting, Sept. 16, 2009 at 8:00pm

Per order of our clubs Constitution, The Cape Ann Amateur Radio Association will hold its Annual Meeting on Wednesday, September 16th starting at 8 PM at the clubhouse on 6 Stanwood Street in Gloucester. Our club holds this Annual meeting for the purpose of nominating and voting for positions on the clubs Board of Directors. Here is a brief description of what occurs during the Annual meeting. Our club must have 4 officers which includes the President, Vice President, Clerk and Treasurer. We also must have a certain number of Directors which is determined by the amount of members in the club. The club currently has approximately 110 members and the Constitution states that we must a Director for every 20 members that we have so that comes out to at least 6 Directors. Any member that is an officer or a director can hold his or her position for a 2 year term, but they can be reelected to that position for another two year term. The club does however have a two consectutive two year term limit. This will all be made clear during the Annual meeting. The important thing is that we would like to encourage as many members as possible to show up for this meeting as it gives the club membership the opportunity to vote on the people who will best represent the club in a leadership role.

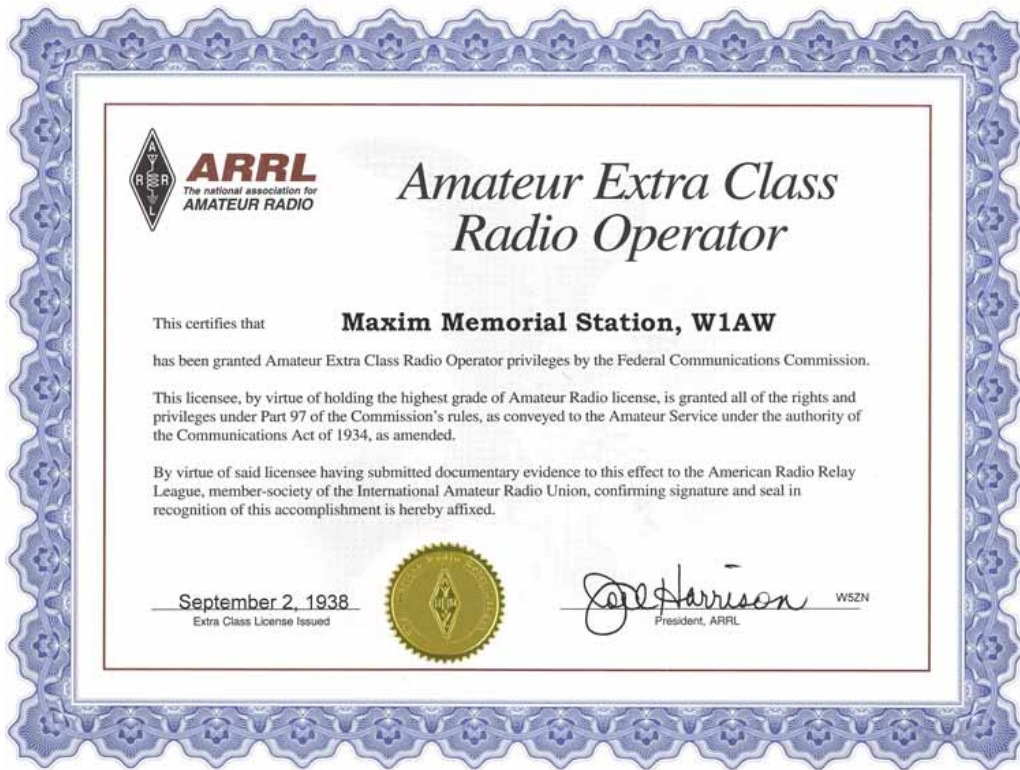
73

Dean Burgess KB1PGH

CAARA Clerk

CAARA held it's monthly volunteer test session on sunday July 12 at the clubhouse. The VE test sessions are led by Team leader Bob Quinn WV1A. This month we had one test taker. We would like to congradulate Joseph Burke N1IHZ of Penacook New Hampshire of passing his General Class Exam. If anyone is interested in becoming a Volunteer Examiner or needs any guidance on studying for a exam please feel free to come to our VE Test session that are held on every second sunday of every month starting at 10 AM at the clubhouse on 6 Stanwood street. We are always available to help you get your amateur radio license or to advance to a higher license class so you can use those new frequencies!

WHY NOT CHASE A FEW NEW CERTIFICATES FOR YOUR HAM SHACK WALL ?



This certificate and others are available from the ARRL for \$10.00 postpaid. Go to <http://www.arrrl.org/awards>

One of the most exciting facets of Amateur Radio operating is awards chasing. It's a major motivating force of so many QSOs that occur on the bands day after day. Indeed, it's a vital aspect that—if you want it—makes each and every radio contact a key element in your present or future Amateur Radio success. So transform those QSOs into beautiful certificates or plaques for your ham-shack wall!

Aside from the fun of operating itself, awards chasing is also a good way to get maximum performance from your station, become familiar with propagation, and even learn about the geography, history or culture of places near and far. The League sponsors some of the more popular operating awards (if you are in the US and Possessions, Canada and Puerto Rico, you must be an ARRL member to participate).





Field Day is never the same without our own Senator Bruce Tarr making a few contacts on hf.

Greeting to all club members,

There is a newer 2007 version of the clubs constitution now available for viewing and downloading on the clubs website at www.caara.net Just click on the Constitution link.

73's

Dean Burgess KB1PGH

Caara Clerk

QRP Quarterly - Summer 2009 issue is in the mail !

The latest issue of **QRP Quarterly** magazine has been published by the **QRP Amateur Radio Club International** (QRP ARCI).

64 pages of construction articles, reviews, operating techniques, contests and awards.

Full details and a sample issue for download at <http://www.qrparci.org>

QRP ARCI has more than 13,500 members worldwide. QRP Quarterly is edited, published and mailed from the USA

Hi from Gloucester, England.-The Gloucester Amateur Radio and Electronics Society will be running a special event station (GB2GHW) on September 12 and 13 from 5am to 11am EDT as part of Gloucester's Heritage Weekend. The station will be in the very centre of the city, in the 15th century St. Michael's Tower on the cross. (There are a few more details on our web site - www.g4aym.org.uk). Are any of your members interested in scheduling a Gloucester to Gloucester contact during this time? If so, please can they contact us at gares@g4aym.org.uk or via the "contact us" facility on our web site (www.g4aym.org.uk) so that we can arrange a suitable time and frequency.

ARRL responds to FCC's BPL re-load

The **ARRL** has reacted to the Federal Communication Commission's new proposal on **BPL** emission limits and does not believe it provides the fix to the radio interference potential of the technology.

The ARRL only made comment after carefully examining the proposal which included '800 Mb of previously unseen internal reports and videos'.

ARRL Laboratory Manager and BPL expert **Ed Hare, W1RFI** said that while the FCC continues to downplay the work of its staff by labelling it as being opinions of an individual, that is not really the case.

Ed Hare says the FCC technical people have strong experience in measurement techniques and interference assessment.

"This is generally good engineering, with a clear objective of providing the Commission with accurate technical information about BPL," he said on the ARRL website.

The FCC's own technical findings clearly spell out that BPL operating at the FCC limits has a very strong potential to cause interference to licensed radio users.

A major difference between the ARRL and the FCC is how to measure radiation at a distance from BPL energised powerlines. While the FCC is offering a compromise this is not being accepted.

The FCC's proposed new rules and its accompanying documentation, that is in part a response to an adverse court ruling against it in a case mounted by the ARRL, has escalated the debate to a new level.

The BPL industry, as acknowledged by the ARRL, has taken some action itself going beyond what the current FCC rules require, including filtering and not using the amateur bands in their systems.

Ed Hare states that the industry and ARRL have shown that it is possible to operate BPL systems without widespread interference problems.

The debate over complex technical issues surrounding BPL technology continues.

Subject: 2009 Field Day Score....2842 POINTS!!

2009 Field Day Entry form has been submitted using the b4h.net applet.

Below is the required supporting information:

- 1. List of stations worked by band/mode during the Field Day period.**
- 2. Supporting Information of all bonus points claimed. (Total Bonus Points: 1230)**
- 3. Copies of visitor/participant logs.**

Total Claimed Score consists of 1612 claimed QSO Score plus 1230 claimed Bonus Points for a Total Claimed Score of 2842 points.

**Thank you,
Submitted by: Dick MacPherson-WB1W**



Walter Cronkite, KB2GSD - an audio tribute from Amateur Radio Newsline

The Amateur Radio community has lost one of its ambassadors.

Walter Cronkite, amateur call **KB2GSD**, was a spokesman for the hobby. He Narrated the “Amateur Radio Today” production by the ARRL. The ARRL has presented him with many awards.

His love of Space science and the NASA Moon missions won our admiration. His coverage of those showed his interest in technology. Who doesn't remember listening to those exciting broadcasts of the Moon Missions?

Mr. Cronkite had won NASA's respect by winning one of their prestigious “Ambassador of Exploration Awards” given by them to

the only “outsider” by NASA. His contributions and support of Amateur Radio will be remembered For many years to come.

Steve Mendelsohn, W2ML, was Cronkite's radio engineer at CBS for many years. “I had many chances to discuss my favorite hobby, ham radio, with ‘the world's most trusted anchor man,’” he told the ARRL.

“Gradually, his interest increased, but on finding that he had to pass a Morse code test, he balked, saying it was too hard for him; however, he told me he had purchased a receiver and listened every night for a few minutes to the Novice bands.

“At the CBS Radio Network, Walter would arrive 10 minutes before we went on the air to read his script aloud, make corrections for his style of grammar and just ‘get in the mood’ to do the show. In those days Rich Moseson, W2VU, was the producer of a show called *In the News*, a 3 minute television show for children voiced by CBS Correspondent Christopher Glenn. On this day, Rich was at the Broadcast Center to record Chris' voice for his show and had dropped by my control room to discuss some upcoming ARRL issues [Mendelsohn was ARRL Hudson Division Director at the time — *Ed*].

“When Walter walked into the studio, I started to set the show up at the behest of our director, Dick Muller, WA2DOS. In setting up the tape recorders, I had to send tone to them and make sure they were all at proper level. Having some time, I grabbed *The New York Times* and started sending code with the tone key on the audio console. For 10 minutes I sent code and noticed Walter had turned his script over and was copying it.

“We went to air, as we did every day, at 4:50 PM and after we were off, Walter brought his script into the control room. Neatly printed on the back was the text I had sent with the tone key. Rich and I looked at the copy, he nodded, and I told Walter that he had just passed the code test. He laughed and asked when the formal test was, but I reminded him that it took two general class licensees to validate the test and he had just passed the code. Several weeks later he passed the written test and the FCC issued KB2GSD to the ‘most trusted anchorman in America.’

“Having passed the licensing test, Walter was now ready to get on the air. His first QSO was on 10 meters about 28.390 MHz. He was nervous and I called him on the phone to talk him through his first experience. As we talked on the air, a ham from the Midwest come on and called me. Acknowledging him, I asked the usual questions about where he was from, wanting to give Walter a bit of flavor of what the hobby was about. I turned it over to Walter, and following his introduction, the gentleman in the Midwest said, ‘That's the worst Walter Cronkite imitation I've ever heard!’

W1AW BULLETINS TO ADD DIGITAL

Still with news from the League, word that its W1AW bulletin station will add new digital modes to its transmitting schedule in mid-August. This following a survey of listeners who say that they want the digital transmissions.

On August 17th W1AW will replace its AMTOR and ASCII transmissions with PSK31 and MFSK16, respectively. RTTY will continue to be the first digital mode used in the transmission schedule. The frequencies used by W1AW for all its digital transmissions will remain the same.

The W1AW operating schedule complete with times and frequencies can be found on the ARRLWeb page . at <http://www.arrl.org/w1aw.html#w1awsked>. (ARRL)

STATISTICS: 1.5 MILLION NOT WATCHING TV

You might find this one hard to believe, but more than a month after the nationwide switch to all digital television, the AC Nielsen company says that some 1.5 million United States households with television receivers in them remain unready for DTV. The good news is that's down 200,000 households from the 1.7 million households that weren't ready two weeks before the June 12th changeover took place.

The A.C. Nielsen Company is a survey organization that specializes in television viewership statistics. It defines as unready any homes that rely on over-the-air TV and don't have a digital TV set or a DTV-to-analog set-top converter hooked up. It was Nielsen's statistic last January that 5 million homes not prepared for DTV that lead Congress to delay the DTV move to June. Put another way, about 1.5 million people who used to watch TV in the USA are not doing so right now. (MultiChammel OnLine)

Ham Radio Helps Out with Mountain Rescue

It was a quiet afternoon on July 11 and Rich Lippucci, KI6RRQ, of Vista, California, was monitoring the Catalina Amateur Radio Association ([CARA](#)) repeater on his base station. "I heard someone come over the repeater, calling, 'Is there anybody listening?' I responded and the caller said he was on his handheld transceiver hiking around the Mt Baldy area. He was about 2.5 miles off road and resting at the wilderness [San Antonio Ski Hut](#). A few hikers had arrived from farther in the backcountry — one of their friends had broken an ankle and was a mile or more up the trail and they needed help." Mt Baldy is the highest peak in the San Gabriel Mountains and the highest point in Los Angeles County.

Lippucci asked the caller for his call sign and name. "He told me he was Kirk Gustafson, KE6MTF," he told the ARRL. "I asked Kirk if he had a cell phone, but he told me there was no cell service where they were. I told him I would coordinate emergency services over my landline and asked for his exact location. He did an excellent job; he had a good idea of where he was and wasn't sure which county he was in, but he did have GPS coordinates."

Using his landline, Lippucci called 911 and was transferred three times until he was connected to Chelsea in the San Bernardino County Sheriff's dispatch center. "Chelsea coordinated the rescue with the San Bernardino Fire Department who sent a foot patrol to the area," he said. "The Sherriff's office dispatched a helicopter to meet someone at the ski hut to take them to where the hiker was down. It took a little less than an hour for emergency services to get above the location in a helicopter, but they were not able to land the helicopter due to the rocky terrain at the ski lift." Lippucci said that while the foot patrol and helicopter were on their way, the group of hikers had brought the injured lady down the trail to the ski hut, stabilized her leg and determined it was probably not broken. They still did not feel they could carry her out as the trail down from the wilderness ski lift was so steep." The ski hut can only be reached via a steep three mile hike and 2200 feet elevation gain.

The dispatcher told Lippucci that the helicopter would perform a skid rescue where a crew member suspends a bed basket from the helicopter; the victim is secured and pulled back up to the helicopter. The dispatchers asked Lippucci to relay back to Gustafson, asking if the group needed anything, such as food or water. Gustafson relayed back that they didn't need anything. "After about 15 minutes from arriving on site, the helicopter and its crew got the victim airlifted out successfully without further complications," Lippucci said. Gustafson took a video of the rescue with his cell phone that you can see [here](#).

Gustafson and Lippucci — both ARRL members — have been in contact since that Saturday afternoon. "Since the incident, Kirk informed me that the injured lady was around 40 years old and that there were up to 15 hikers hanging around the ski hut, some of which were search and rescue volunteers on vacation," he told the ARRL. "They had some kind of radios with them, but their batteries were dead. Kirk said when he got out of his car to start his hike, he grabbed his handheld transceiver radio and GPS. His friends told him 'That's just extra weight — you won't need that.' He told them, 'I go nowhere without my radio. If I need to call for help, the only way I would be able to let them know where I am is with GPS. I'm bringing them.' I don't think they will say that next time! Kirk said that one of them decided they need to look into getting a ticket and radio and that the search and rescue folks said they were going to look into getting ham radio licenses."

Lippucci said that ham radio saved the day: "A handheld radio, hitting a local wide-area repeater, was what was needed when cell and landline phones were not available. Many thanks to the CARA club for their awesome reach in Southern California on 2 meters. Thanks also to those on the air that were very gracious to respect the traffic and keep communications open during the rescue. This is such an excellent example of the

benefits of ham radio. If people had to hike out of the wilderness, get to their cars and find a cell signal, they might have been pushing up against the loss of daylight hours. Any rescue would have been significantly more difficult in the dark."

Lippucci told the ARRL that 911 and the Sheriff's office in San Bernardino accepted the ham radio call without hesitation. "They used a ham radio operator to relay questions to Kirk

through me, to gain all the information they wanted and needed to put assets on the emergency," he said. "It was as if I was calling about something in my own backyard, even though the problem was several counties away in the mountains, with people I didn't know. I am proud to have had the opportunity to use my license in service of an emergency situation. As a [CERT](#) member, this was the very reason I got my ham radio license in the first place!" — *Information provided by Rich Lippucci, KI6RRQ*



K1NKA & FAMILY TAKES A VACATION



Tom-K1NKA preparing a meal for the troops. It sure looks like they camped comfortably, played lot's of ham radio, rode the bikes and ate very well.



Tom's kids are licensed hams: Jake Howell is KB1RBR and Tommy Howell Jr. is KB1RBS. The station they used consisted of a Kenwood 480SAT with an Outbacker antenna and the HT is a Yaesu FT-60. Campground they stayed at was River's Edge in Caanan, NH



For Sale: A Rohn tilt-over tower of about 60ft including its rotator, tri-bander beam, and top 11 ele, 2m beam has been donated to the club. NOTE: Owner needs it removed asap if not sooner! If you are interested and can remove it in very short order, please contact Briggs, ab2nj **immediately**. This offering is located in Ipswich and in keeping with CAARA's donated equipment policy this item is advertised here. Interest in this item has already been received so a competitive bid will be required. The primary emphasis is that this tower and related gear must be removed very promptly so act NOW!

Sound Card Interface for FM Transceivers: This club kit project was a popular venture with 11 units sold (one still remains unsold) to date. Plenty of time has elapsed for everyone to complete this easy project and construction help has been continuously available up until NOW. For those who still have uncompleted kits, and have not taken advantage of construction help...you're on your own! The rest of us are ready to get on the air and start playing with FM digital modes, especially the new NBEMS format which enables file and picture transfers by radio in addition to keyboard to keyboard QSOs. This will be great for EmComms work! Also, the MT-63 mode is terrific for weak signal work too, so all of this really expands the use and functionality of our lowly 2m FM rigs and elevates you above the ranks of common "repeater beaters" on the air. Keep an eye on the CAARA.net website for scheds and/or drop by the clubhouse and let's get on the air with these new boxes.

Thacher Island is Radioactive (again)! Once again we are activating Thacher Island for IOTA (Islands On The Air) and ILLS (Int'l Lighthouse & Lightship Society) credit. The bold and ever fearless CAARA "Away Team" will depart T-Wharf (Rockport) early on Aug. 8 for an overnight activation of the island. We have already secured the Special Event Callsign "Whiskey One Tango," W1T, for the duration of our trip. We will be active on HF CW, Phone, HF Digital, 6&2m, as well as on our own W1GLO repeater (Echolink connected via the WB1GYM-R node). All QSO will be confirmed via a sharp looking QSL card, eQSO, and LOTW including those contacts made via the repeater. Note however, that repeater/Echolink facilitated contacts do NOT count toward official credit although we will QSL 100%.

Set aside some time that weekend to contact us on the island and earn yourself a cool QSL card. Better yet, grab the free boatripe out to the island and visit us/join us there for the fun. And if you've never been out to the island, bring your spouse, friend, kids and check it out! The twin lighthouses are open too! We should be on the air from roughly 10am Saturday till about 1pm on Sunday. Check the CAARA.net website for developing news!

10GHz & Microwaves Anyone? Briggs, AB2NJ, reports that he was "hilltopping" on 2m in Rockport a few weeks ago and caught up with Dale, AF1T. Dale and his wife Mickie are avid and well-known 10GHz "microwavers" (Dale holds an incredible world distance record on 10GHz!) and managed to get Briggs interested in 10GHz ops. "I attended their local club's picnic recently and met a terrific crowd of super high frequency hams there." "I'm wondering if anyone around Cape Ann or the North Shore area is or has been active on 10GHz, so I can pick your brain over a cuppacawfee sometime. If anyone else plays or has played in the SHF bands, please contact me!"

BTW: It was Dale's skillful catch of a transient tropospheric duct that channeled him to the Southwest toward a distant thunderstorm that enabled the ultra-rare combination of ducting AND rain-drop scattering to permit the 1100km QSO on 10GHz! Now that's a Wowser in anybody's book!

Ham Radio Insurance and CAARA: At a recent BOD meeting, the CAARA Board of Directors voted to consider an insurance policy for club gear held at the clubhouse. Prior to buying any policy, I wanted to look into the widely advertised ARRL's insurance program and make my own evaluation.

First, it needs to be understood that the ARRL Insurance program is an offering of Seabury & Smith and is administered through the Marsh Affinity Group. It's just like the NRA having their name on a credit card. They

are not in the credit card business but do gain monetary consideration for the use of their name and membership rolls as does most every other organization it seems!

Second, The ARRL insurance plan, MARSH Affinity Group, or whatever you call them don't seem to rank very high in the all-important customer satisfaction department! This deeply concerned me. A quick check on eHam will bear this out. However, upon a closer look into the eHam reviews, I noted that the preponderance of less-than-strongly positive reviews seemed to coincide with the activities of a particular claims representative who (I think) is no longer employed by MARSH. I don't know that for certain yet but I did note another insurance provider of the same kind of coverage was mentioned and who had earned much higher customer satisfaction ratings. This was the HRIA insurance program.

HRIA? Okay, so off I go looking into HRIA (Ham Radio Insurance Associates, I presumed!). While this company does garner outstanding reviews, far surpassing the League's program, I was dumbfounded by their gross lack of professionalism and sophomoric responses to my inquiries. I did discover that they represent the Great American Insurance Company and that their policies are underwritten by the American National Fire Insurance Co. Their website is www.hamradioinsurance.com. I should mention here now that all these companies are financially sound and well-known, reputable insurance outfits. This includes the companies behind the ARRL's program as well. My only complaint and source of my "dumbfoundedness" stems from the behavior of their representative with I was in touch with. He could not/would not send me any brochures describing their insurance program and he could not/would not even send me anything with a letterhead on it!!! I was asking for something in hard copy I could submit in support of their insurance offerings to the CAARA BOD. Claiming that they were a small budget operation(!) he would only refer me to the website. Somehow, that is just not enough to win me over much less my recommendation to the BOD. While, as stated, all these companies are reputable and sound financially, in the end it is the people who represent them with whom you will be doing business with and who will work for you and with you when your claim moves from push to shove.

At this point, I can only point to the eHam reviews in support of HRIA but simultaneously warn with caution toward the ARRL's offering. I would encourage other members to look for themselves and report back as this would bear on all of us as a club.

I should add here that many hams have decided to go with a separate policy for coverage of their ham radio gear versus adding it on their homeowner's policy. The rationale here is that a claim against one's homeowner policy for damaged radio gear may well result in raised rates or dropped coverage so a separate policy may well be a wise decision when considering such insurance.

–Briggs Longbothum, ab2nj

Amateur License VE Test Session

- **When:** Sunday, August 09 2009 @ 10:00 AM EDT - 12:00PM
- **Event Type:** Meeting
- **Where:** Caara Clubhouse, 6 Stanwood Street, Gloucester, MA 01930
- **Description:** If you are planning to take a amateur radio license exam please bring \$15.00 for the test fee and two forms of ID.

Remembering “Nautilus 90 North”

America desperately needed heroes in the late 1950s. Our country was still trying to recover from the nonvictory in Korea. Our space program was literally blowing up on the launch pads down at Cape Canaveral. Then the Russians launched *Sputnik*. That single event sent a shiver through the Free World.

Even the closest allies began to question US military might and her previous technological superiority over the Soviets. That was the primary reason President Dwight Eisenhower decided to send what was then the world’s most well-known vessel, USS *Nautilus*, through the unexplored waters beneath the Arctic ice pack, from Pacific to Atlantic via the North Pole. The *Nautilus* had achieved world renown as the first nuclear powered submarine, which made it capable of such a mission. It was a daring mission, one that could have been another spectacular and tragic failure — and almost was. Of course, there were other reasons, military and scientific, for sending the first nuclear vessel off on such a hazardous voyage. Still, the need for heroes, to show the world America still had the “right stuff,” was a compelling reason for the president to order the historic, top secret mission in the summer of 1958.

It is my opinion that the importance of what *Nautilus* and her brave crew accomplished at the top of the world is not fully appreciated now, more than 50 years later. At the time, it made a worldwide splash that would only be exceeded 11 years later by the first moon landing. That was one reason I was so proud to be asked to coauthor a book about the event with the man who was her skipper on the North Pole run, Captain William R. Anderson (*The Ice Diaries*, Thomas Nelson Publishers). It was also the reason I decided the 50th anniversary of the voyage was a perfect opportunity for a special event Amateur Radio operation — both to call attention to the historic event and to tie ham radio to what was sure to be a very public celebration. I had no way of knowing that it would turn into such a success.

Permission to Come Aboard

My goal from the beginning was to try to do the operation from the Navy’s Submarine Force Museum and Library in Groton, Connecticut. That also just happens to be where *Nautilus* is now berthed and open to the public as only the second vessel dubbed “Historic Ship” (*Old Ironsides* in Boston is the other). If we could actually operate from the deck or radio room of the world’s first nuclear-powered vessel that would be even better.

Moreover, if we could do the event over the weekend of August 2 and 3 (the actual anniversary of *Nautilus* becoming the first ship to reach the North Pole was August 3, a Sunday night East Coast time), then it would be a perfect alignment with history. That would guarantee us the biggest crowd at the ship and museum, too. Since the anniversary was going to fall on a weekend, it would be best to take advantage of that bit of luck.

I could see several big problems, including logistics and coordinating with the staff at the museum and ship. *Nautilus* is in Connecticut. I live in Alabama and, in addition to writing and promoting the books I write, I also have a day job.

I was not sure how I was going to get two good, working stations up to New England and set them up properly. How could I work with the museum management folks in Groton to get permission and direction on a location from which to operate? They did not know me and, I assumed, would be wary of somebody who wanted to come set up radios on their site. I had also heard that they were not particularly welcoming of such events.

Thankfully, that turned out to be anything but the case, but I suspect the organized and professional manner in which they were eventually approached contributed to what turned out to be a very warm welcome and plenty of gracious assistance.

The main reason for that was the Southern New England Navy/Marine Corps Military Affiliate Radio System ([MARS](#)) group. Back in January 2008, I had blindly sent e-mails to several clubs in the area looking for help in the operation and got a couple of replies saying they would float the idea with their membership. After a while, of necessity, I started considering alternate plans.

I could try to operate from the battleship USS *Alabama* and the submarine USS *Drum* in Mobile, Alabama. That was certainly closer to me and I had contacts there, plus they have onboard ham radio stations that participate in “ships on the air” events. The problem was that neither of those great museum ships had any connection to *Nautilus* or the North Pole, other than *Drum* being a submarine. As a last resort, I could just put my home station on the air, using a special call sign, but that would have been a poor effort to pay homage to those brave men and what they accomplished beneath the treacherous ice pack.



That is when I got a nice note from Chuck Motes, K1DFS/NNNØHAL, who is active in the Southern New England MARS group and helps man and maintain the MARS station at the US Navy’s submarine base, a few hundred yards from *Nautilus*. It seems that Scott Moore, W1SSN, had seen my original e-mailed plea for help and passed it along to Bob Veth, K1RJV/NNNØFCC, Director — Region One, Navy MARS.

He and his organization immediately recognized this as an excellent way to accomplish several ends. First, they could get exposure for their group during a special weekend at the museum. It would also enable them to test their emergency response trailer, mobile tower and station setup. And, of course, they wanted to help me give the *Nautilus* crew and this special anniversary some worldwide recognition via

Amateur Radio. Everyone in the organization was enthusiastic from the start and gave approval, appointing Chuck Motes, K1DFS, the point man. It was the perfect choice for several reasons including the fact that Chuck’s father and grandfather had worked on the construction of *Nautilus* back in the early ’50s.

Chuck’s second e-mail to me already had ideas for station configuration — pending approval from the *Nautilus* museum crew, of course — and a plan for approaching Lt Cdr Greg Caskey, who runs the place. I already had a presentation and book signing event scheduled for Saturday, August 2, at the museum, coordinated with the museum director, so we went at our contacts from both directions. The staff and Lt Cdr Caskey were extremely helpful, directing visitors to our eventual location, coming by to check on us and see if we needed anything and

even giving us 24 hour access to an area typically closed in the evening. That enabled us to keep the stations on the air at night as long as the bands lasted.

As it turned out, we were not able to operate from aboard *Nautilus*. They have quite a few visitors wandering through on any weekend. They anticipated being especially crowded on this particular one. That would make it difficult for us to work in already cramped quarters and we would have had to settle for compromise antennas. There was also a special commemorative ceremony planned for Sunday afternoon on the ship's deck, which included raising a replica of the North Pole flag on the sail of the submarine. The ship flew that flag when she first entered port in Portland, England, after the successful polar crossing. As it turned out, during the ceremony, the special event station was announced to the big crowd and everyone was invited to come by and visit.

Actually our eventual setup ended up being better in every way than if we had been below decks on the submarine, but more on that later.

“Nautilus 90 North”

Even before I started begging for help to pull this thing off, I was thinking about the call sign I wanted. There was one obvious choice. When *Nautilus* first emerged from beneath the ice pack in the Greenland Sea near the island of Spitsbergen, she wanted to report her success to the key people who had staked their careers — and presidency — on this mission.



The radio operators aboard the submarine ran into the typical propagation problems found in those high latitudes. They were finally able to raise a Navy radio station in — of all places — Pearl Harbor, Hawaii, the spot where the polar mission had started 2 weeks before. Not bad DX. The historic message sent in Morse code was, “Nautilus 90 North”. That short piece of traffic to President Eisenhower and the Pentagon confirmed that the submarine had successfully reached the most inaccessible spot on the planet, the North Pole, at 90 degrees north latitude.

I wanted N9N for the special event station call.

Thankfully, it was available for that weekend and I quickly went through a very efficient member of the VEC system to reserve it. The “9” caused some confusion during the weekend, since we were in the “1” call area. My being listed on several Web sites as the QSL contact in Alabama threw some folks, too. Some operators were still not accustomed to the 1 × 1 format, and kept arguing that there had to be another letter or two to make it a legal call sign. Further, a contest group in Indiana uses N9N for their state QSO Party in June every year. Since I listed the N9N call sign on QRZ.com as soon as I got it reserved, I was getting QSL cards long before the event, wondering if they had really contacted USS *Nautilus*. I should have waited until later to get it up on QRZ.com and I apologize for the confusion.

QSOs and Sausage Stew

When I arrived in Groton the evening before the event was to kick off, I was amazed at what Chuck and his guys had accomplished. They had a travel trailer for comfort, including air conditioning and restroom facilities. There were already two complete HF stations set up outside, Field Day style, protected from sun and rain — both of which we had an abundance of that weekend.

A converted boat trailer was parked nearby, bearing a 40 foot, portable, crank-up tower with a 4 element HF beam and a 2 meter Yagi on top. A G5RV for 40 and 75 meters was strung from the tower to end supports across the parking lot. There was even a legal limit amplifier available for the 20 meter station but we only used it when we really needed it because it required firing up a separate generator. Chuck and his crew had even organized volunteer operators and loggers; some from Navy and Army MARS and others who were not MARS members, and had them scheduled on big marker boards in 1 hour shifts throughout the weekend.

My contribution was a set of “talking points,” key facts about the submarine, the mission and why we were there. The whole operation was located right there on the banks of the Thames River, only a few hundred feet from *Nautilus*, in the middle of the museum parking lot. We had great visibility from the main entrance. Visitors could not miss us. Chuck and the crew had a table full of material about Amateur Radio and information on becoming a MARS volunteer and handed it out to curious people all weekend.

It was an inspiring location. As we operated and told over-the-air contacts about *Nautilus* and the North Pole, we could look over at the actual historic vessel with her famous hull numbers—SSN-571, the first ship to carry the “N” for “nuclear” — sitting there quietly in her final resting spot. Occasionally one of her modern sisters made its way up the Thames, bound for the submarine base next door, still using much of the technology *Nautilus* pioneered over 50 years ago.

Rick Castrogiovanni, N1JGR/NNNØJGR, was our designated chef and we were well fed all weekend. His sausage stew on Friday night was wonderful, the perfect kickoff to the weekend. The camaraderie was fantastic as well. Though I had not met any of these folks before, and had only exchanged e-mails with Chuck, they made me feel right at home. Of course, we had one big thing in common, a hobby we love. All I had to do was show up, operate and eat.

Rick, along with Gil Woodside, WA1LAD/NNNØWWW; Alan Lisitano, W1LOZ/NNNØLOZ; George Carbonell, N1RMF/NNNØRMF, and Chuck, K1DFS, made up the crew who stayed with the stations from Friday morning setup all the way through teardown on Monday morning. I dashed off down I-95 to New York City in the wee hours of Monday morning for some media interviews so I even got out of that thankless job, too. Bob Veth, K1RJV/NNNØFCC, drove down from Massachusetts and was there most of the weekend as well. His enthusiasm and support were invaluable.

We had literally scores of volunteers who operated, logged and did many other tasks to keep things running smoothly. When the tower support for the G5RV broke early Sunday morning, somebody had to climb the tower and restring it. When a sudden thunderstorm blew in on Saturday afternoon, everyone had to scramble to get the gear secured. Nobody complained. They just pitched in and helped. I wish I had room to mention everyone by name and call sign, but I hope they know that their efforts, time and expertise are appreciated.

I thank Betsey Doane, K1EIC, ARRL Section Manager for Connecticut, who sent us a warm welcome but was traveling and could not be there that weekend. She is, by the way, a member of Navy MARS with the call sign NNNØEBP.

History Repeated

We ended up the weekend with over 2000 contacts in the log, working all 50 states and 26 foreign countries. I do not know how this compares to other special event stations, but it has to be near a record for only two operating positions over one weekend. I have received about 500 QSLs that I responded to with specially designed cards.

There were so many highlights of the weekend it is hard to get them all into this article. Several former *Nautilus* crewmembers dropped by the stations, including a couple of men who were aboard for the North Pole run. At least one of the former 571 crew who visited is a ham and took a turn at operating. We worked a number of former *Nautilus* crew on the air, too, and others who had taken part in constructing that marvelous Jules Verne-like vessel at Electric Boat Corporation, which is located just a few miles downriver from where N9N was set up. It was also a pleasure to talk with many other former submariners and military veterans who are Amateur Radio operators.

But one especially thrilling moment occurred when I took a call on 20 meter SSB from Harold Dennin, AC3Q, from Des Plaines, Illinois. Harold explained that he was one of the naval radio operators at Pearl Harbor who copied the historic transmission of “*Nautilus 90 North*” that day in 1958. We promptly switched to CW and recreated that bit of radio traffic. Maybe it was only the magic of the moment, but Harold’s fist certainly sounded wonderful. I could imagine the feeling of the radio operator aboard the submarine when the message was safely sent and QSLed.

Another special feature of the event came on Sunday night. *Nautilus* officially reached the North Pole — the first vessel in history to do so — at 11:15 PM EDST on August 3, 1958. Thanks to K1DFS and his dedicated crew, N9N remained on the air Sunday night until that “magic minute.” At that time, stations were invited to “check in,” and as many as possible of the call signs were copied in 1 minute. Then the operators went back and conducted official contacts with as many of them as they could. We plan to send each of those stations a special certificate.

I cannot say enough about the Navy/Marine Corps MARS folks and what they did to make this event possible. In the true spirit of Amateur Radio, they gave up their weekend, took days off work and labored in heat and humidity to make the stations strong and viable, even with especially poor band conditions. I think propagation was the only thing Chuck and his guys were not able to fix! Thanks as well to all the other volunteers who took part in the weekend and to the staff at the Submarine Force Museum and Historic Ship *Nautilus* for their help and hospitality.

As a result of these efforts, Amateur Radio and the MARS program got excellent PR before thousands of visitors over the weekend and others who read about the event in local media. Thousands more who listened in or worked N9N learned more about the historic event that was the primary reason for the operation.

Most importantly, we were all able to honor 116 brave men who took their marvelous ship where no man had gone before. In the process, they changed the course of the Cold War and gave America the heroes we so desperately needed.

FUNcube a UK Linear Transponder Satellite

AMSAT-UK has announced a new amateur satellite project – *FUNcube* – that features a 435 to 145 MHz Linear Transponder for SSB/CW operation.

The project has received major initial funding from the Radio Communications Foundation (RCF) and is expected to be developed in collaboration with ISIS-Innovative Solutions in Space BV.

FUNcube is an educational single cubesat project with the goal of enthusing and educating young people about radio, space, physics and electronics.

It will support the educational Science, Technology, Engineering, Maths (STEM) initiatives and provide an additional resource for the **GB4FUN** Mobile Communications Centre.

The target audience consists of primary and secondary school pupils and FUNcube will feature a 145 MHz telemetry beacon that will provide a strong signal for the pupils to receive.

It is planned to develop a simple receiver board that can be connected to the USB port of a laptop to display telemetry in an interesting way.

The satellite will contain a materials science experiment, from which the school students can receive telemetry data which they can compare to the results they obtained from similar reference experiments in the classroom.

FUNcube is the first cubesat designed to benefit this group and is expected to be the first UK cubesat to reach space.

It is anticipated FUNcube will be launched into a Sun Synchronous Low Earth Orbit about 600-700km above the earth using one of the many launch opportunities that exist for Cubesat missions. In such an orbit the satellite passes over Europe approximately 3 times in the morning, and 3 in the evening, every day, perhaps allowing the morning passes to be used for educational purposes and the evening passes for Amateur Radio communications.

FUNcube will carry a UHF to VHF linear transponder that will have up to 1 watt and which can be used by Radio Amateurs worldwide for SSB and CW communications. Measuring just 10 * 10 * 10 cm, and with a mass of less than 1kg, it will be the smallest ever satellite to carry a linear transponder and the choice of frequencies will enable Radio Amateurs to use their existing VO-52 or DO-64 station.

A key feature of the satellite is the absence of an On-Board Computer. For reliability and maximum power efficiency, the design has been kept as straight-forward as possible with satellite control being achieved using simple commands.

AMSAT-UK has more than 350 individual members and is one of more than 20 such groups worldwide. AMSAT-UK teams have provided hardware for more than 10 satellites over the past 35+ years including SSETI Express in 2005.

They are presently involved with the development of hardware and software for a number of satellite projects including the European Student Earth Orbiter (ESEO), P3E, SUITSAT2, the Columbus module on the ISS and also the GENSO Ground station network.



FOR SALE, SWAP, OR TRADE

Items for Sale by CAARA: A 60 tower, hf beam, vhf beam and rotor located in Ipswich is available. It needs to be taken down as soon as possible Several members have expressed interest, if you are interested contact Briggs- AB2NJ.

Items for sale by K1TP: Icom 756 PRO. I am the original owner, smoke free environment and in great condition. Covers 6-160 all modes, color display, digital filters, original box, etc...looking to buy a Icom 7000. Great radio \$850BO

Any club members wishing to advertise here should drop a note to Jon-K1TP. There is no charge for advertising.

HOW ABOUT SENDING SOME PHOTOS OF YOUR SHACK FOR US TO SHARE WITH THE MEMBERSHIP?



Drake 2B with speaker/qmultiplier and the homebrew Ameco AC-1 clone I built last winter. I made my first contact straight key with a wonderfully chirpy signal to PA on 7040 last week.....Jon-K1TP