



CAARA Newsletter



AN ARRL AFFILIATED CLUB

JULY ISSUE- 2010



President's Corner

by Curtis AA3JE

Well its over. What a wonderful Field Day we had in 2010. We had tents, we had rigs, we had meatballs and cookies, we had gallons of coffee and we had lists. We had lists of what we needed to take, we had lists of what we needed to do, we had lists of who was there, we had lists of the lists we had.

And a wonderful time was had by all. This was the second year that we had our contest experts on line and up to speed, and it was literally amazing to see. We had GOTA stations, we had new hams making contacts, we had so many vertical antennas we looked like a CIA listening station. We were terrific!

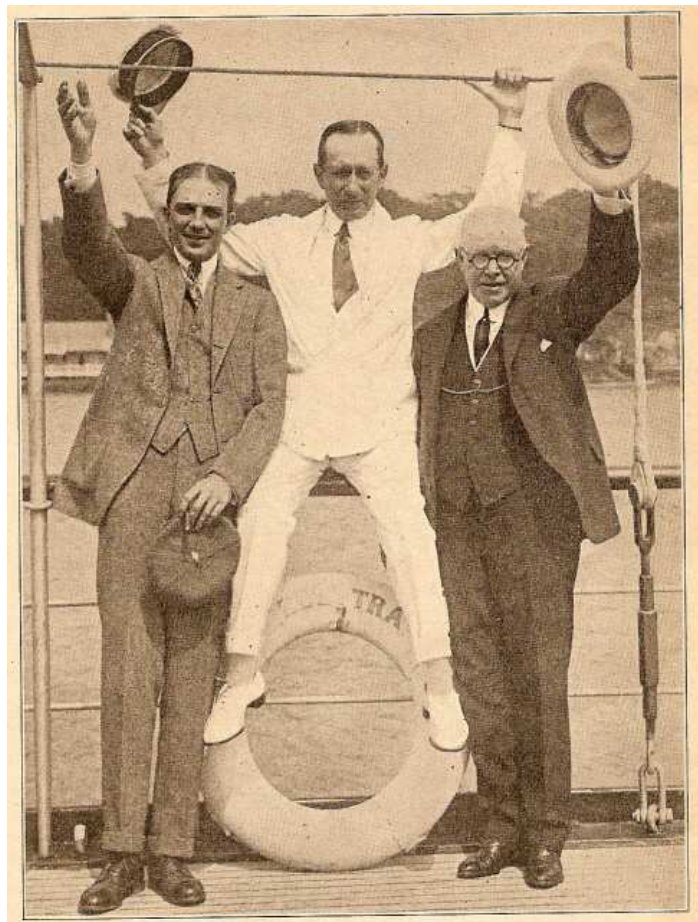
We had our fun. Now we pay.

July and August are public service months when we have foot races, triathlons, bike races, parades, boat races and similar events. If you have not done an event, contact me and I'll get you a place to start. We have Thatcher's Island coming up, so get out the bug spray and seagull repellent. It is going to be a glorious summer.

There are no official meetings till September, so keep an eye on your email for news. We have a busy first meeting that month, so please remember to come prepared for debate, nominations, hotly contested elections, the WORKS.

Till then 73, AA3JE

WHO ARE THEY?



Let's face it. Radio wouldn't have been "RADIO" without these guys. Center is Guglielmo Marconi. Left is Owen Young, board chairman of RCA, on the right is Ed Nally Jr., president of RCA. Owen Young, originally from GE, was instrumental in forming RCA from GE radio assets and with the acquisition of American Marconi in 1919. Ed Nally Jr. was former vice president of American Marconi and became the new president of RCA. RCA was officially created in November, 1919. This photo was taken on board Marconi's yacht, the "Elettra." *photo: Radio Journal, Sept. 1922*

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

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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.

Amateur radio enthusiasts abuzz over traffic ticket

TROY — Amateur radio enthusiasts are abuzz on the airwaves over a traffic ticket Steve Bozak received Sunday in Troy as he talked to his buddies over the very same frequency.

Bozak, who owns an antenna company and has been using so-called “ham” radios for 34 years, was pulled over at the intersection of 15th and Hoosick streets while on his way to breakfast with fellow enthusiasts of the technology. He was slapped with a ticket for talking on a cell phone while driving, and he said Officer Mark Millington dismissed his claims that the radio was not in fact a telephone.

“He assured me that I could not be speaking on that cell phone while I was driving,” said Bozak, who lives in Clifton Park. “I mentioned to him politely that it wasn’t a cell phone but an amateur radio. He assured me that it was all the same.”

The section of New York’s vehicle and traffic law Bozak was cited for violating, 1225-c, requires a phone to be “in the immediate proximity” of the driver’s ear. It defines the types of communication devices it applies to as ones “interconnected to a public switched telephone network ... provided by a commercial mobile radio service.”

On its face, the statute does not appear to refer to devices like a ham radio, which transmits its signal across the same airwaves as devices used by emergency personnel to communicate with each other and with dispatchers.

Such radios do not require the user to place the device to his or her ear — they are typically played over speakers — and need only be held while the user is actually speaking.

New York is among eight states with a law banning the use of cell phones while driving. Washington’s law specifically excludes ham

operators, who must first be licensed by the government to use the airwaves.

Bozak, who became licensed in 1976, said he believes the bulk of users have the devices in their vehicles. He said many are up in arms over the ticket, and some were audible on a scanner Wednesday voicing their displeasure over their radios — many of them while driving.

“I don’t know how many cops I’ve been around in how many different states, but nobody ever said a word to me,” said one man whose job takes him on the road.

Ultimately, a Troy City Court judge will decide whether the ticket issued to Bozak is acceptable under the state’s law.

Sgt. Terry Buchanan, the Police Department’s spokesman who worked traffic patrols for years, said he doesn’t recall this issue coming up in the past. He said the department would have no comment on the matter because it is still pending in court.

Bozak is scheduled to appear on June 23, and he said more than a dozen fellow radio enthusiasts plan on being there with him.

He faces a \$100 fine, according to the statute.

“I’ll have my day in court, and we’ll see how it goes,” he said. “But I certainly have every intention of pushing this politely, and through the right methods, to get it resolved.”

The date may be pushed back because Bozak has requested a supporting deposition from Millington, who is typically assigned to Troy’s public schools and rarely works traffic patrol.

Bozak wants Millington to detail what happened and explain how he was breaking the law.

“He’s going to have to prove that I was on a cell phone, which is going to be hard to do,” he said. “I wasn’t on a cell phone.”

BACK TO CAARA **by J.Pallazola, WB1CHJ**

At the beginning of March 2010, Jon, K1TP came to my QTH and gave me a CD with back issues of the CAARA Newsletter on it. After about 10 or 12 years of being inactive on ham radio, that gave me the incentive to pull off the dust cover and fire up the 2 meter rig. I listened to the CAARA repeater for a few days and discovered voices that are new to me. It has been said, "the only constant in life is change" In 1977, I took the novice test at CAARA and went into the FCC Boston office to upgrade. For those of you who don't know me, because of Cerebral Palsy my hands tremor. I had to go one on one with the FCC examiner. I would read the question and tell him the answer. Then we got into the dots and dashes. I found out what pressure is! The next six weeks I kept my eye on the mailbox for my ticket. Today, CW is not a requirement to get an amateur radio license. The novice and advanced licenses are history. There is always safety in numbers. I believe the FCC decision to abolish code has been an incentive for people to get a license and that will help us hams keep the frequencies we now enjoy. If you enjoy CW, keep enjoying CW. It is part of amateur radio history. On November 24, 1977, Ralph, W1RK came to my QTH and got my Kenwood TS-700S on the air. It wasn't too long after I went on the air, Warren, WA1YLX came into my shack and convinced me to join CAARA. Over the years, hams I have met at CAARA have helped me often. Tom, K0TB has done all my antenna work. Jon, K1TP has helped with my computer problems, Tom, KA1GTA has helped me many times making cables and more. Other hams have provided me with transportation to and from club events. With the help of these hams, I have been able to work 20m, 15m, 17m, 12m, 6m, 2m, 220 and the 440 band. The 15 meter band is GREAT! I have DXCC on the wall. In the past I've had the pleasure to write for this newsletter. I interviewed hams in the club. As a jazz buff, one interview that stands out is the one with Sylvester Ahola, W1PU, one of the all-time greats of jazz. I like contemporary jazz, but it was still a kick to meet a legend of jazz. If you care to read this interview, you will find it in the November, 1991 newsletter. It may still be on file at the club. John, WA1JG gave me a ride to the club for the May 2010 membership meeting. I wish they would have had roll call, so I could put

faces on the call signs I've listened to since March. Maybe they forgot or maybe even that has changed. The sad part of being a ham, is seeing friends become silent keys. This is one aspect of life that will NOT change.

Ed. Note: I hope Joe becomes a regular contributor to the monthly newsletter

Wireless Spectrum Crunch Has Feds Scrambling

WASHINGTON — It's no secret that the rapid uptake of smartphones has put a strain on wireless data networks, and most everyone agrees that carriers will need more spectrum to meet the demand. But when the conversation turns to where that spectrum should come from, the consensus breaks down.

In its national broadband plan, the Federal Communications Commission set the goal of shifting 500 MHz of spectrum to mobile broadband over the next 10 years, suggesting that broadcasters, satellite providers and other entities will need to relinquish portions of their airwave allotments.

But the FCC only administers the commercial side of spectrum policy, and wireless providers are hoping that the body that oversees government allotments, the National Telecommunications and Information Administration (NTIA), will begin to free up some of the large swaths of spectrum occupied by the various departments and agencies.

Here at a conference on the issue, NTIA Administrator Lawrence Strickling promised that the agency is taking a hard look at its federal spectrum dispersals.

"Given this growing and apparently insatiable demand, finding new spectrum for mobile broadband has become a key priority for policymakers," Strickling said.

At today's conference, hosted by the digital-rights group *Public Knowledge*, the organization released a policy paper outlining a proposal for opening access to federal spectrum through secondary markets, where portions of the airwaves would be dynamically allocated through real-time auctions.

Strickling acknowledged that the agency he heads would explore a dynamic-sharing regime similar to *Public Knowledge's* proposal, but he warned against an "overly simplistic view of the world of federal spectrum," noting that there are fundamental

differences between the public and private usage of the airwaves, and that commercial spectrum models don't translate perfectly into the government.

He also cautioned the effort under way in Congress to enact legislation to require an inventory of public and private uses of spectrum will only go so far, and that military and law-enforcement agencies will limit their disclosures due to concerns over national security.

“Federal spectrum is used to support sensitive national security and law enforcement applications that must be protected and preserved,” Strickling said. “As we work to increase transparency around federal spectrum use, keep in mind that information regarding federal operations actually belongs to the agencies themselves and they ultimately decide what is releasable consistent with the national security requirements.”

The House passed a spectrum inventory bill in April. The Senate version has been approved by the Commerce Committee, but has yet to be taken up on the floor.

Public Knowledge's proposal for dynamically sharing and reallocating federal spectrum would go well beyond the provisions of inventory legislation. The model the group is recommending is similar to the conditions the Federal Communications Commission ordered when it approved the unlicensed use of the so-called TV white spaces spectrum.

In an effort to ensure that devices using that spectrum don't interfere with television signals, the commission ordered the creation of a national database to catalog the used and unused bands of spectrum in each region. Devices running on white spaces spectrum would be required to connect to that database to ensure that they tap into a vacant frequency.

While the FCC cleared the use of white spaces spectrum, the database is still pending approval and the commission has only granted experimental licenses to establish proof-of-concept networks.

Google (NASDAQ: GOOG), Motorola (NYSE: MOT) and other firms have been working to advance the database effort at the FCC, but it has been slow going. And any effort to introduce a similar model to the government spectrum is likely to run into similar — if more significant — roadblocks, according to Rick Whitt, Google's telecom counsel.

“The technology works, but what we need now is something more difficult than technology and that's political will,” Whitt said in a panel discussion following Strickling's address.

Tuning the Imaginary Radio Flex Radio 3000

Part II

In Part 1, I described how a computer challenged, vacuum tube loving, older ham talked himself into buying a software defined radio. I also described how I installed it onto the very oldest “ham fest special” computer that we had in the house. Much to my amazement, IT WORKED PERFECTLY!. It was an amazing rig, super easy to use, and was the CW radio of my dreams.

I had only one problem. It used every last fragment of computing power my 15 year old \$90 computer had under its hood. As a result, every 20 minutes or so, the program would crash. So I did what I said I would never do, I looked on the Internet for help. Again, to my surprise, I found it within less than a minute. In a fit of paranoia, occasioned by a tragic email virus episode ten years ago, I had installed Norton's best antiviral program “Rabid Guard Dog Plus” on my computer. Yes, even on the old computer that had nothing of value to anyone on it. I found out on the Internet how to use CTL-

ALT-DEL to invoke Windows Task Manager to look for the process that might be causing the problem. I found out that a process called CCSVCHTS.EXE was periodically (and randomly) firing up and using about 40-60% of my system's computing power. This is a known effect of Norton programs, and though they have made it better, it is still a big resource hog.

So I looked at how to fix this. It took me to strange websites run by 19 year olds who called themselves the “Purple Python” or “The Black Madder” who described procedures for fixing the problem that would either work, or lobotomize the computer leaving it singing “Bicycle Built for Two” in a Minor Key. I did not have the courage to risk the lobotomy, and it was clear that I really had to get a newer computer. I asked my son if he could help, and he said “Sure Pop”, but he then started digging into his pile of old computers and softly cursing under his breath. I waited a few weeks, but he was still cursing and fiddling with things two months later.

So I needed to buy one. I was feeling braver, and logged onto Tiger Direct, looked about, and found that for about \$400 I could buy a computer that was MUCH more powerful. So I sent off for it, and in a very few days, a shining black beauty arrived. I unpacked it, plugged it in, and then I found out why my son was cursing.

#1 It came with Microsoft Office and Windows 7 and Norton Antivirus pre-loaded. So I dumped Office, kept Windows 7 and dumped Norton "Antivirus. This prompted the first attack of hysteria for my new computer....

"What are you DOING!!!!!"

"I am uninstalling Norton Antivirus"

"YOU CAN'T DO THAT! ITS DANGEROUS. I AM GOING TO CATCH SOMETHING BAD FROM THE INTERNET. I KNOW IT! BESIDES, HOW DO I KNOW YOU ARE ENTITLED TO DO THAT? YOU COULD BE A VIRUS PRETENDING TO BE MY OWNER!"

"I am your owner, I can do this, it will be ok, I am installing McAfee."

"MCAFEE! BUT I CAME WITH NORTON! YOU SHOULD USE NORTON! I LOVE NORTON. BILL GATES LOVES NORTON."

"I don't"

So I installed MacAfee antivirus, which was good for a 2 hour wait while it downloaded, but in short order I had an antivirus program which used about 20% of my CPU for about 2 minutes at startup, then faded into background.

Now I installed Flex Radio. Or rather, I tried to install Flex Radio. Windows 7 was very different than XP, and I had a lot of trouble with it. I was not alone. Flex Radio had a lot of trouble with it. I was not to find out for a few weeks that the chipset for the FIREWIRE port on the motherboard did not work well with Flex Radio, and the FIREWIRE card from the old radio would both fit and work great. But that was to come later. What I did find out was that rather than the manual driver installation I was used to with XP, Windows 7 installed drivers automatically. It also

uninstalled them when a device was powered down. Or if it wanted to. Or if it was Tuesday. Or the third Monday of the month. Or an Orthodox holiday. Or something.

So I installed the drivers, powered up the radio, the radio failed to find the computer, the drivers failed to install, and round and round I would go. I finally logged onto the Flex Radio website, and lo and behold there was a nice note telling me that I should turn on the radio, turn on the computer, and it would work. If I then turned off the computer and THEN turned off the radio, it would also work.

So I had FLEX RADIO on my new computer, and it was blazingly fast and worked GREAT. No one would ever be dissatisfied for any rational reason. But I was. So I promptly broke it again.

THE LURE OF MORE POWER

The problem was I had logged onto the website. It is a fabulous place. There is lots of good material about the radio, and there are many, many versions of the software.

Don't get me wrong. They know about people like me. The RECOMMENDED software is posted on the front of the website with a large sign "LATEST RECOMMENDED SOFTWARE", "USE THIS", and "OFFICIAL GOOD VESION". But I wanted more power. I wanted the bleeding edge of technology. I wanted the software that was described in the release notes for VERSION 2.x

Fabulous CW performance, 10:1 automatic antenna tuning, Completely variable and user defined radio appearance. Lots of great stuff. Only one problem. It all is sitting in a box with BIG RED LETTERS that say "**This is beta software, is NOT guaranteed to work, and you should not use it if you get upset easily when your radio stops working**". No guts, no glory I say, and I downloaded it all.

Well I tried to download it all. Windows would have none of it.

"WHAT ARE YOU DOING?"

"I am loading my software."

“YOU ARE NOT LOADING ANY OF THAT STUFF ON MY HARD DRIVE, NO SIREE! I REFUSE.”

“I own you.”

“Nope! you own the computer, Boyo. I belong to Bill Gates. You just license me. My name is Windows 7 Home Premium, I am two years old, and I don’t have to do anything I don’t want to do.”

“How about I log on as an administrator.”

“You? An administrator? Not likely.”

Well this went on for a few nights, and I finally got the program to accept the beta software, and to boot, and for one glorious moment it ran. Then I tried to tune the antenna.

CRASH

I reloaded the program. I tried to transmit.

CRASH

I reloaded the program. I tried the autotuner.

CRASH

This time when I tried to reload, the computer could not find the radio. Windows had had enough.

“I TOLD YOU IT WOULD END IN TEARS.”

“Just run the software. Please?”

“Nope! It does strange stuff to my insides. I don’t like it.”\

“I am not asking you to like it. Just run it.”

“NOT ON YOUR LIFE!”

So I went back to the website, downloaded the software versions that did not have big red warnings, and everything was just fine again. Working great. Fabulous radio.

But I wanted more. I wanted to go digital. What good is a fabulous electric radio if you can’t do digital?

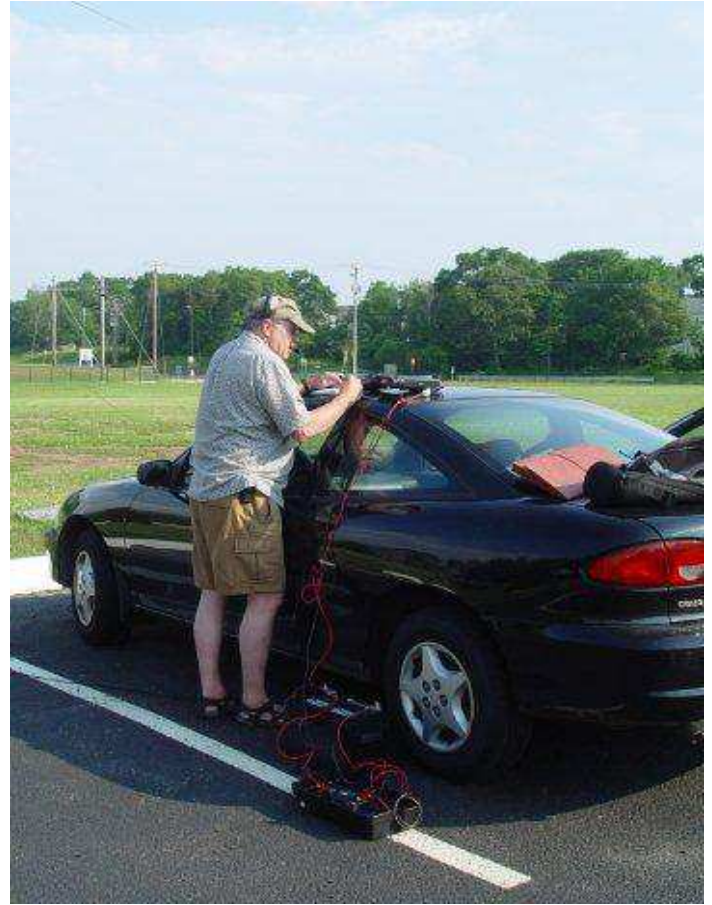
Tune in next time for “Digital Misadventures” or “No I did not order 5000 sacks of cement in Central Europe!”

GENERAL CONTACTS FROM THE ISS IS AN ON-ORBIT DECISION

Charlie Sufana, AJ9N, says that its up to the ham radio operators on board the International Space Station to decide if they do or do not want to make general ham radio contacts or just chat with kids in schools. In a posting to the SAREX remailer, Sufana, who is one of the ARISS Mentors, notes that lately there have been some comments on the various Internet bulletin boards about having general contacts or leaving the packet or crossband repeater on. In response to those hams critical of the lack of time that the licensed astronauts and cosmonauts are devoting to contacts with the general ham public, Sufana says that as with anything in society, the International Space Station crew have many different interests and a very heavy work load. He notes that some have been ham radio operators for many years before going on-orbit and may want to make a random contacts. Others have had next to no experience with the hobby and get on only sporadically. And notes Sufana, there have been quite a few who have gotten their license shortly before going up to the I-S-S and often times they only get on for the scheduled school contacts. And notes AJ9N, if they had not gotten their licenses then even the school contact list would have suffered because on some expeditions there would be no hams scheduled to fly. Sufana says that after every school contact, the crew is told how to configure the radio. If the crew does not set up the radios for general usage, then there is not much ARISS can do about it other than to remind them. He also advises all of us that that ARISS is a guest onboard the International Space Station and if the crew elects to not turn something on or to operate, then that is their decision. AJ9N says that ARISS can only suggest; it can never demand.

FCC FINES THREE WHO AIDED UNLICENSED BROADCASTER

The FCC has jointly fined three Massachusetts residents \$10000. This for what the regulatory agency calls providing services and facilities incidental to the operation of an unlicensed transmitter. In simpler terms, it means that the regulatory agency determined that Delroy Johnson, Paul Parara, and Richard Parara were in some way sanctioning or supporting the operation unlicensed transmitters on 97.5 MHz in Hyde Park and **Dorchester, Massachusetts. Its not asserting** that any of the three ran the transmitting facility, but that their support made it possible for the transmissions to be made.



Dean-KB1PGH and Briggs's-AB2NJ try out a new Buddipole Antenna System

Dean recently purchased a new antenna system to run his HF rig from portable locations, mainly because his home qth has a high noise level from the local business community. Dean tells me it worked great and they made contacts with many states and countries on twenty meters that day. Briggs has been telling us how well the Buddipole system works for years and has several of their models.

FYI: Buddipole antenna, an hf/vhf portable dipole antenna system which is designed to be modular, versatile, and efficient.





Home made ladder line constructed up in Jackson, NH last month by Bob-W1GWU.
Bob solders a wire to keep the insulator in place.
Ladder line is the feedline of choice for most of the big signal ops on 75/160 meters.
Coax is much more convenient to run and I find the swr is a lot more stable in our stormy winters but you will be surprised at what you gain in signal reports.

Home Made Ladder Line Party.

I was invited up to an antenna party in Jackson, NH a few weeks ago. I thought we were just putting up a new 160 meters dipole for a friend. Little did I know we were making 500 feet of ladder line as well as cutting and installing the dipole! k1tp

Below, Bob solders a wire to keep the insulator in place. Ladder line is the feedline of choice to most of the big signal ops on 75/160 meters and contrary to popular belief does not cause more stray rf/interference to be floating around in the shack.



Ladder Line vs Coax Cable

The antenna plays a major part in radiating a signal, but getting the RF to the antenna is as important as the antenna itself.

I've heard it too many times - "Listen, I've got an old piece of coax laying around somewhere, and you are welcome to it." When you think a fellow ham is doing a good thing for you, it may in fact, create more problems than you already have. There are many things that can destroy the integrity of coax, especially heat, caused when too much RF passed through it, that it wasn't designed for, as well as age. Just because it looks good, don't assume - it could be the very opposite.

Most insulation surrounding the shield and dielectric is made of rubber. Rubber is a great material, and will last many years in the weather. However, the dielectric will become brittle and crack due to age and RF, and if water is injected into the story, then you really have a problem.

Having been in the the communications business for many years, I have seen many strange things that could be attributed to coax. Some would make you pull your hair out trying to figure out what is going on.

Of course, with today's technology, we can actually examine transmission lines, and see where the problem may lie. So, as far as coax goes, never assume anything. If you are not sure about it, have it checked, if you can't do that, then don't use it. And if you are going to have runs greater than 50 feet, use a good quality coax such as 9913 or LMR400. The design parameters on these two pieces of coax are well equipped to handle just about anything up to 400 Mhz.

Now, let's look at something you may have never thought about, or even knew it existed.

What is it? It has been with Amateur Radio as long as radio has been around.

What is this mysterious item?? It's most common name is ladder line. You can get it in many sizes and shapes, and if you are willing to take the time, you can even construct

it yourself.

WHAT? Me make a transmission line? Yep! - You sure can.

Before we get into the construction end, let us take a look at some comparisons between this mysterious cable, and its common replacement - coax cable. Below is a copy from almost any Amateur Radio Handbook. It is very easy to understand - and as far as accuracy, it is kind of hard to beat:

If you look to the left hand side of the chart, it will show you the loss in a certain transmission line in "db's". This is very important, for it plays a major part in how effective your system will be. Your antenna gain is expressed in "db's", and the losses that you will suffer in the transmission line, will be subtracted from the antenna gain.

Remember in my last Tech Note's, I showed a little example of your transmitter producing 10 watts of power to an antenna having a 3 db gain, and the transmission line having a loss of - 3 db, your power to the antenna is 10 watts.

Along the bottom, you find a frequency range that is close to where you are working. The lines that run through the chart are marked as to the different types of transmission lines that are used today. If you will look up from the bottom of the chart about a third of the way, you will see Belden 9913 (one of the coax's suggested to be used).

Let's say we are going to be operating on 10m, if you look at the bottom at 30Mhz (closest to 28Mhz), follow the line up from the bottom at 30Mhz to where it intersects with the Belden 9913 line. Follow it over to the left, and you will see, that there is .5 db loss for every 100 feet of this coax at 30Mhz.

If you take this number, and use it with the previous formula, you can get an idea as to how much RF is actually getting to the antenna. Now, using the same information, start at 30 Mhz, and follow the line up to where it says 300 ohm Tubular, and follow it over to the left.

What have you noticed? There is .1 db loss less than

the 9913, and this Tubular line is normally used for TV antennas. What? TV transmission line? This is a joke, right? Nope. For years, 300 ohm line was used for TV antennas, and had less loss than coax. The main reason it has stopped being used is that even though it has less loss, it is subject to interference from a lot of things, and we will cover that in another article. Now, to confuse you even more, go to 30 Mhz and go up to Open Wire, "Window" Line, 1/2" and 1". As the kids say - "OMG!" This is even less! We're talking about .12 db loss. Can you imagine what your antenna is going to do now, that you only have .12 db loss, and putting 10 watts out? OK, I've spilled the beans, now you know what I know - and what all your grandfathers knew, that ladder line offers the best pipeline for RF transfer. This especially holds true at 50 Mhz on down. Look at the examples above, you have an Inverted Vee, and for longer antennas and not much Tera Ferma, the Bent Dipole: Both show the use of ladder line, and a Transmatch (tuner). We covered the Transmatch in one of the past Tech Notes, and when used in conjunction with these antennas, tuning will represent an almost perfect match to the radio.

This brings in to mind a couple of things I've heard in trying to get Hams to use ladder line.

- 1) "My station is located in such a way, that I can't get the ladder line to the radio." Use a remote balun. By using a balun, you can transfer from ladder line, to coax (which I assume you already have in the shack).
- 2) "I have an Auto-Tuner, and it isn't set up for ladder line."

The same answer holds true, use a remote balun, and when the coax gets to your remote tuner, or built-in tuner, you're still in business, just hook up the coax.

If you have to come through a window, then cut you a piece of plastic or plexiglass the width of the window, and about three inches high, cut a slot for the ladder line, or use feedthru insulators, fit it in the window, and then close the window onto the plastic.

Just remember, there is no "perfect" antenna, but this is as close as you can come. Some of us have gone as far as erecting two inverted Vee's, one with ends pointed north and south, and the other east and west, and using a switching relay at the antenna.

This gives you the best of both worlds. If you keep the antennas cut to the exact same length, then all you have is one ladder line, but two different directions. As close as you can get to omni-directional without the use of a rotor.

As an added note, if you don't have any ladder line, or a friend that may give you some, hamfests are coming up, and there will be numerous dealers there that will have as much as you need. I suggest you get some, and a good balun, and build you antenna that you will be amazed with, and at the same time, have something to work the world that you constructed.



2010 Boxboro Convention Info

Greetings to all CAARA Members!

This is the largest ham show in New England and only comes around once every two years. It is run by the group that runs the New Hampshire Nearfest event but on a much larger scale. The major Ham Vendors including Kenwood, Icom, and Yaesu will be present with the latest goodies. Antenna manufacturers like StepIR and Hexbeam will have antennas up in the air. Lot's of great seminars and a large outside fleamarket.

<http://www.boxboro.org>



Port City Amateur Radio Club Field Day: Check out the Air-Conditioned tent!





I purchased a TenTec Omni VII and can honestly say it is the best HF Transceiver I have ever owned. I have put it side by side with my Icom 756PROIII and Yaesu 1000MP MarkV and the TenTec wins hand down on receive in any mode. The radio is easy to use and I hope to demonstrate it at a fall club meeting. I am looking forward to hearing the receiver in Curt's-AA3JE new Flex radio which is said to be the best around. k1tp

Atlantic Hurricane Season 2010

The Atlantic Hurricane Season officially runs from 1st June to 30 November each year and Tropical Storm Alex has become the first 'named' storm of this year. Amateur Radio continues to play a part in gathering and distributing information for the weather and emergency services each year.

Radio Amateurs in Region 1 are reminded that the following frequencies may be in use by nets in North and Central America to track and deal with the consequences of these severe weather events. It is possible for Region 1 amateurs to cause unintentional QRM to these nets so please listen carefully if operating near these frequencies:

14.300 MHz is used by the Maritime Mobile Service Net daily and as well as handling traffic from Maritime Mobile Stations, also gathers weather reports from maritime stations to assist forecasters.

14.325 MHz is used by the Hurricane Watch Net and the net is established whenever it appears that a storm may affect the US mainland. The net gathers weather information and links to the American National Hurricane Centre.

14.265 MHz is used by the Salvation Army Team Emergency Radio Network (SATERN) provides Health and Welfare traffic links for those in affected areas as well as supporting the Salvation Army Disaster relief response should a hurricane strike.

Frequencies used in Cuba
7.045, 7.080, 7.110 MHz
3.740 MHz

Frequencies used in Central America;
Red Centro Americana : 7.090 and 3.750MHz
Guatemala: 7.075 MHz
Nicaragua: 7.098 MHz

Mexico (FMRE) 3.690 and 7.060 MHz

Cuba and Mexico co-operate with long distance relays on 40m when propagation makes this possible.

Local emergency communications groups may also activate if a hurricane approaches their area and those frequencies would be announced at the time.

Maritime Mobile Service Net
<http://www.mmsn.org/>

Original 13 Colonies Independence Day

Special Event

July 1st to July 6th 2010, all thirteen 1776 original colonies will be on HF and the Amateur Radio Satellites. One S.E. station per Colony state.

The original 13 are NY-NJ-RI-GA- PA-NH-SC-VA-CT-DE- MD-MA-NC

A magnificent, full color, 8 1/2"x11", certificate, printed on heavy card stock, with a map and the state flags of all the 1776 colony states, adorns this award. You can work one state or, all 13 and, be eligible for the certificate.

The theme for 2010 is George Washington. Each colony state worked will be marked by the Purple Heart Medal (given for being wounded in combat to US armed forces).

Also a special "Contact" logo will be affixed if you worked one or all 13 stations. A "Clean Sweep" indicator will also be affixed, for those lucky enough to "Q" all 13.

Special event call signs will be used (K2A Thru K2M).

All modes of operation should be represented SSB, CW, RTTY, Digital.

The mode of operation is up to the individual colony state station.

Full details at:
<http://www.13colonies.info/>

Field Day hacker discounts and party for Radio Hams

Diana Eng, KC2UHB is the ham radio correspondent for *MAKE Magazine* and she has been working with the hacker community to create some special events for Field Day.

Diana writes: The original tinkerers were radio hams. Many of the new generation of tinkerers call

themselves *hackers*. In honor of Field Day, members of the hacker community have teamed up to bring discounts and a free party in NYC to ham radio operators.

Adafruit Industries is like the Hendricks of the hacker community. They have fantastic kits ranging from retro Russian display tube clocks to TV-B-Gone a high power remote that can turn off TVs everywhere (like in noisy bars). Adafruit will be offering a 10% discount on their kits from June 26-27 for all licensed hams. Just enter code "HAMS" at check out and in the comments include your callsign. www.Adafruit.com

MAKE Magazine is the hacker's version of QST. MAKE Magazine has projects, profiles makers, and shows tips and tricks. MAKE is offering a 20% discount off of everything in the MakerShed including books, kits, and tools. Just enter discount code "HAMHACKER" from 6/25-6/27 (one time use, not combinable, no minimum purchase).

www.MakeSystem

MakerBot Industries is the first place to sell homebrew 3-D printers. And since the printers are homebrew, they are actually affordable (kind of like some of the early radios kits). MakerBot is offering a 5% discount

on MakerBots. Email your callsign this weekend to hamradio@makerbot.com to get the discount code.

<http://www.makerbot.com/>

Hacker groups are the amateur radio clubs of the hacker community. And if you are in NYC, hacker group, **NYC Resistor** is hosting a free party on June 26th, with demos, prizes, and a DJ mixing dance music from live Morse code transmissions. <http://www.nycresistor.com/2010/06/15/nycr-party-june-26-hackers-and-hams-unite/>



ARRL in Action: What Have We Been Up to Lately?

07/01/2010

This feature is a concise monthly update of some of the things ARRL is doing on behalf of its members.

This installment covers the month of June.

The ARRL, in comments and reply comments to the FCC, stated that it supports employee participation in drills, reflecting the position of the League's Board of Directors made at its January 2010 meeting.

The ARRL also filed comments regarding spread spectrum issues with the FCC in response to the Commission's Notice of Proposed Rule Making.

Three sessions of the ARRL's Teachers Institute on Wireless Technology — New Mexico, South Carolina and California — wrapped up.

The ARRL Annual Report for 2009 was made available in both an online and print version.

The ARRL reported on how hams in Arkansas and Ohio assisted emergency management officials when severe weather struck their states.

QST Technical Editor Joel Hallas, W1ZR, posted a description of the rest of the new items he tracked down during a very busy three days at the 2010 Dayton Hamvention®.

ARRL Field Day: W1AW, operating as 4F, was on-the-air for ARRL Field Day. ARRL HQ staffers Mike Corey, W5MPC; Michael Keane, K1MK; Khrystyne Keane, K1SFA; Bill Moore, NC1L; Steve Sant Andrea, AG1YK, and Joe Carcia, NJ1Q participated, as well as two amateurs from New Jersey. Lisa Kustosik, KA1UFZ, operated W1AW's GOTA station. ARRL Media and Public Relations Manager Allen Pitts, W1AGP, said that 25 governors declared "Amateur Radio Week" or "Amateur Radio Day" in their states.

ARRL Chief Technology Officer Brennan Price, N4QX, reports that an ARRL proposal on WRC-12 Agenda Item 1.14 (VHF radiolocation) has been adopted by the appropriate Informal Working Group of the FCC's WRC-12 Advisory Committee. Price continues work in support of a domestic allocation at 137 kHz and has completed an item for the Ad Hoc Narrowbanding Committee. ARRL Technical Relations Specialist Jon Siverling, WB3ERA attended ITU-R Working Parties 1A and 1B in Geneva and is

advising a regulator from the Caribbean on reciprocal licensing issues.

Mike McIntyre (D-NC-7) pledged his support for HR 2160, The Amateur Radio Emergency Communications Enhancement Act of 2009, bringing the total number of cosponsors to 40, including original sponsor Sheila Jackson-Lee (D-TX-18).

The W1AW antennas received their spring inspections. The 70 cm feedline was repaired and another tower section was installed on the roof of the Headquarters' building.

The ARRL now has a social media presence: Find us on Twitter and on Facebook.

The ARRL's Atlantic Division, along with ARRL staff, hosted a webinar on how to navigate the League's new Web site.

ARRL Chief Executive Officer David Sumner, K1ZZ, along with ARRL Marketing Manager Bob Inderbitzen, NQ1R, and ARRL Regulatory Branch Manager Dan Henderson, N1ND, represented the League at HAM RADIO 2010 in Friedrichshafen, Germany.

ARRL International Vice President Jay Bellows, K0QB, traveled to Canberra, Australia to take part in the Wireless Institute of Australia's centenary celebration.

ARRL Chief Development Officer Mary Hobart, K1MMH, traveled with Bob Inderbitzen, NQ1R to Plano, Texas for HamCom.

The July issue of QST and the July/August issues of NCJ and QEX were sent to the printer.

The winner of the QST Cover Plaque Award for June is Donald Huff, W6JL, for his article "Homebrew Challenge II Winner #1 — The Lowest Cost Entry."

Alleged Russian spies and numbers stations

A report on the German station Deutschlandfunk regarding the alleged Russian spies arrested in the US mentions the use of short-wave morse code numbers stations.

Mike Barraclough has spotted this report by Eike Bierwirth of the Hard Core DX mailing list:

According to an interview this morning on Germany's Deutschlandfunk, the Russian spies that have been arrested in the U.S. also used shortwave transmissions for number broadcasts in morse code.

So you want to listen to the spies?

<http://www.southgatearc.org/articles/spies/spyradio.htm>

CAARA FIELD DAY 2010



It all started at the clubhouse, getting the necessary gear organized and ready to be loaded in to trucks.



Hank, Marko(?) and Ruth soldering up connecting cables for Field Day



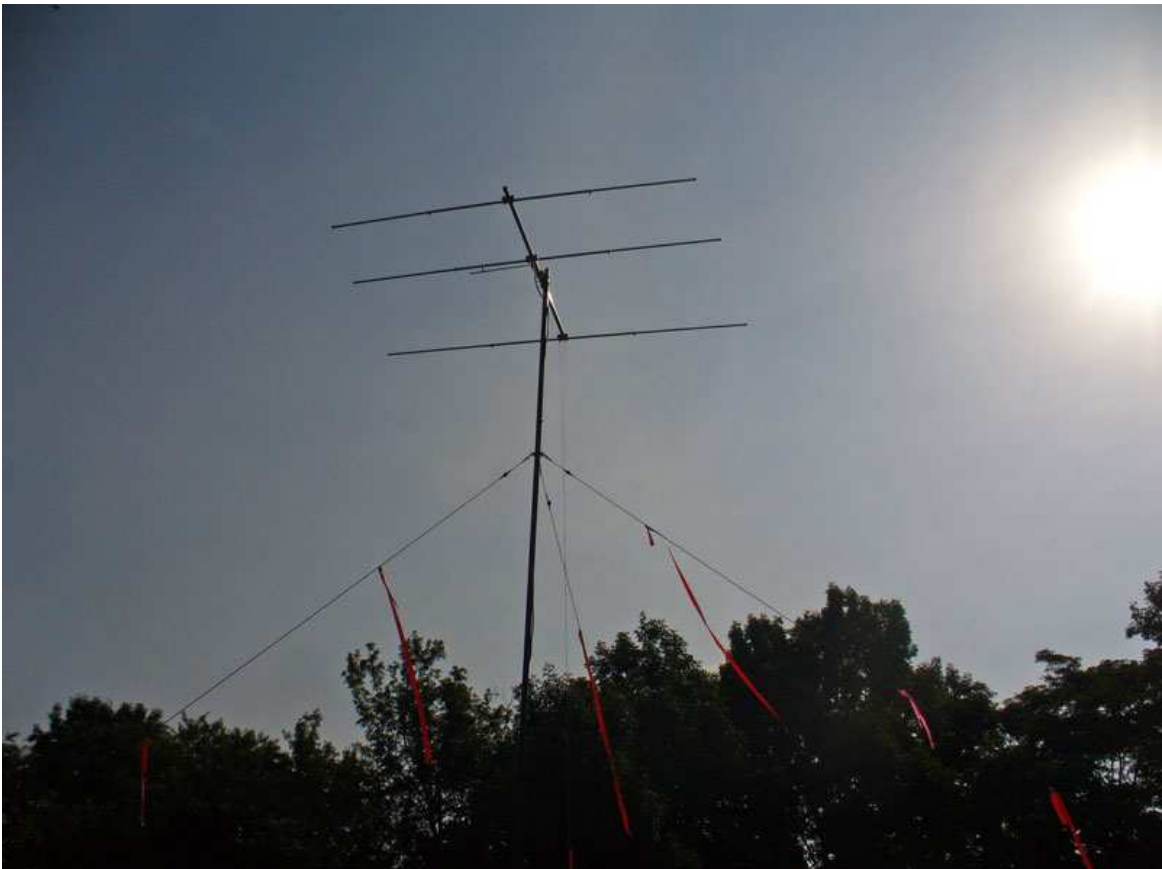
This tent was purchased last year and was a fantastic addition to Field Day. Inside were the welcoming materials for guests and the digital station.



Jon-K1TP checking out the Red Cross emergency vehicle.



Dick- KR1G doing a little operating after all the setup work.



The 6 meter beam looked great but seemed to have some SWR problems....next year!

Field Day Logbook Results

Another Field Day is completed, but how does our logbook look?

This year we had 41 Guest/Participant's in the logbook that visited our site.

During the 24 hour on the air period a total of 408 qualifying QSO's were completed. Operators in the W1GLO log making on the air QSO's for this Field Day were KB1PGH, KB1PQQ, KB1PVN, KB1SPB, KR1G, W1DDX, W1PLM, WB1W, WZ1B.

QSO's this year were made on 6 different bands and three different mode classifications. Digital mode classification included contacts in both PSK31 and RTTY. Below is a breakdown by band & mode classification.

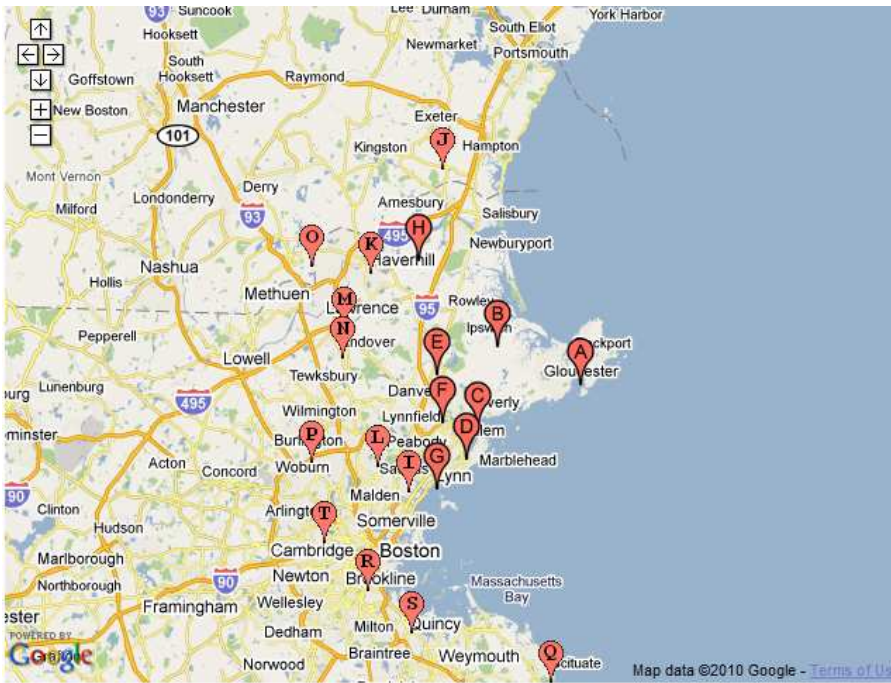
	<u>80m</u>	<u>40m</u>	<u>20m</u>	<u>15m</u>	<u>10m</u>	<u>6m</u>
CW	10	118	103	18	-	-
Phone	67	6	1	-	1	26
Digital	-	34	6	18	-	-

In total this qualified us for a total of 1430 QSO points.

Our final score has not been compiled yet as still need all the information from the bonus point champions to determine which points we may qualify for this year. These will be added to our QSO points for the final score to be submitted to the ARRL.

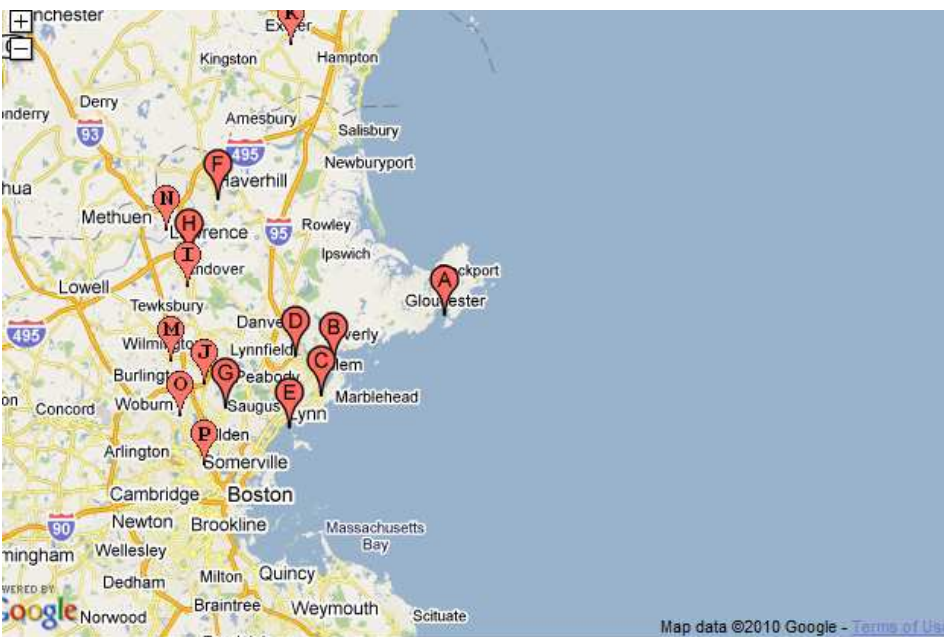
Last year our QSO score was 1612 points with 1230 Bonus points added for a total of 2842 points.

Our GOTA station again provided a source of activity for the new and future hams. Congratulations go out to KB1TEO (Marianne) & WW1N (Ruth) for both completing over 20 QSO's each to provide the club with added bonus points. In addition, we got young activity bonuses for each youth that completed at least one QSO. Congratulations to the following for completing a QSO(s), KB1TRB (Allen), KB1TZG (Marco), and Craig Anderson Jr. Craig is a 10 year ago future ham and Boy Scout and while under the coaching of AB2NJ (Briggs) completed a QSO with N4PRS, the Pamlico Amateur Radio Society in North Carolina.



- A Gloucester:** 145.130 (107.2) W1GLO
- B Ipswich:** 145.490 (131.8) KB1KHO
- C Beverly:** 147.390 WA1PNW
- D Salem:** 146.880 (118.8) NS1RA
- E Topsfield:** 147.285 (100.0) W1VVI
- F Danvers:** 145.470 (136.5) NS1RA
- G Lynn:** 147.015 (88.5) W1DVG
Lynn: 145.330 (88.5) W1DVG
- H West Newbury:** 146.625 (131.8) K1KKM
- I Saugus:** 146.910 (123.0) K1SVP
- J Kensington:** 145.150 (127.3) W1WQM
- K Haverhill:** 145.350 (136.5) KT1S
- L Wakefield:** 147.075 (151.4) WA1RHN
- M North Andover:** 145.290 (167.9) KA1LFD
- N Andover:** 146.835 W1CUO

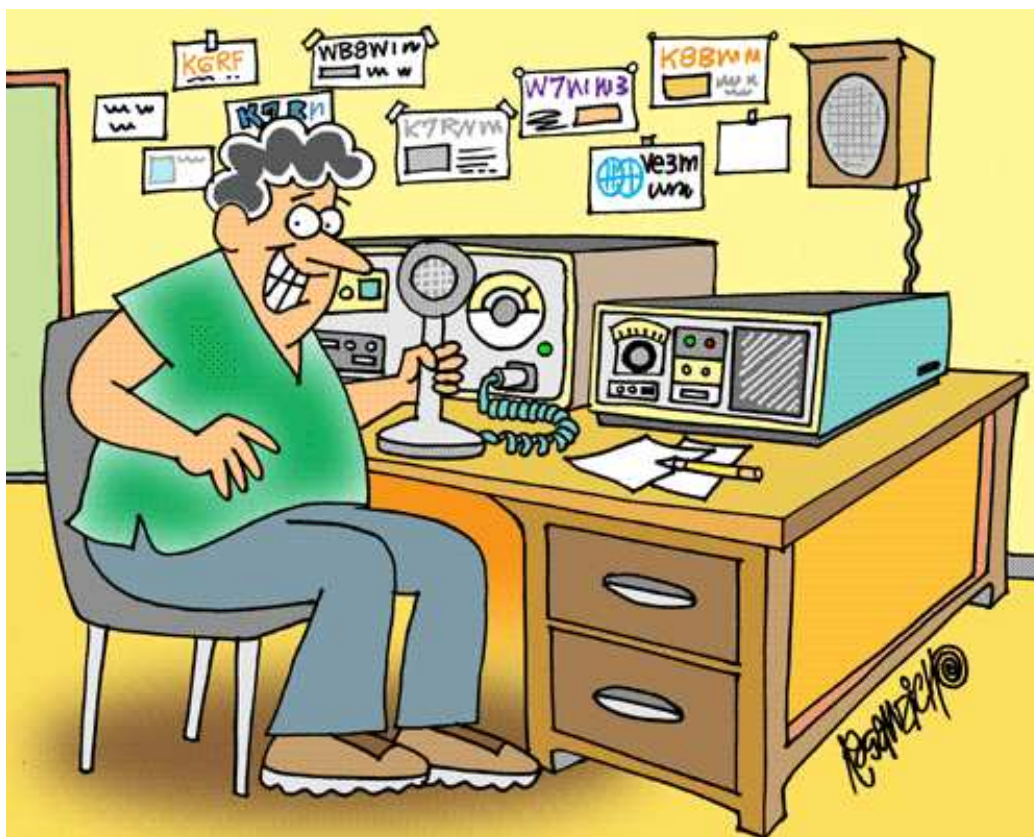
REPEATERS ON 2 METERS IN OUR AREA



- C Salem:** 446.625 (88.5) NS1RA
- D Danvers:** 442.800 (136.5) NS1RA
Danvers: 223.880 (136.5) NS1RA
- E Lynn:** 442.400 (88.5) N1VGJ
- F Haverhill:** 224.120 (103.5) N1IRS
- G Wakefield:** 224.260 (67.0) WA1WYA
- H North Andover:** 444.100 (123.0) N1LHP
North Andover: 224.520 WA1WLU
- I Andover:** 224.680 WA1WLU
- J Reading:** 446.525 (151.4) WA1RHN
- K Exeter:** 224.220 (67.0) K1KN
- L Greenland:** 444.400 (100.0) W1WQM
- M Wilmington:** 224.160 (71.9) K1KZP
- N Methuen:** 224.960 (103.5) KX1M
Methuen: 223.920 (141.3) WB1CXB
- O Woburn:** 449.825 (136.5) N10MJ
Woburn: 224.980 KA1RMF
- P Medford:** 446.925 (88.5) W1KN

REPEATERS ON 220 AND 440 MHZ METERS IN OUR AREA

CITY	FREQ	PL	CALL
Gloucester, MA	145.130	107.2	W1GLO
Gloucester, MA	224.900		W1GLO
Gloucester, MA	443.700		W1RK
Ipswich, MA	145.490	131.8	KB1KHO
Beverly, MA	147.390		WA1PNW
Beverly, MA	444.950	100.0	N1GSC
Salem, MA	146.880	118.8	NS1RA
Salem, MA	446.625	88.5	NS1RA
Topsfield, MA	147.285	100.0	W1VYI
Danvers, MA	145.470	136.5	NS1RA
Danvers, MA	223.880	136.5	NS1RA
Danvers, MA	442.800	136.5	NS1RA
Lynn, MA	145.330	88.5	W1DVG
Lynn, MA	147.015	88.5	W1DVG
Lynn, MA	442.400	88.5	N1VGJ
West Newbury, MA	146.625	131.8	K1KKM
Saugus, MA	146.910	123.0	K1SVP
Kensington, NH	145.150	127.3	W1WQM
Haverhill, MA	145.350	136.5	KT1S
Haverhill, MA	224.120	103.5	N1IRS
Wakefield, MA	147.075	151.4	WA1RHN
Wakefield, MA	224.260	67.0	WA1WYA
North Andover, MA	145.290	167.9	KA1LFD
North Andover, MA	224.520		WA1WLU
North Andover, MA	444.100	123.0	N1LHP
Andover, MA	146.835		W1CUO
Andover, MA	224.680		WA1WLU



Please send in pictures, articles, etc. for the next issue. We welcome your submissions for the newsletter!

Have anything for sale? CAARA members can submit ham radio related items for sale or swap and we will publish it free of charge.

Send newsletter info to K1TP @ ARRL.NET

73 until next month, Jon