



CAARA Newsletter



AN ARRL AFFILIATED CLUB

NOVEMBER ISSUE- 2012



President's Corner

by Stan-W4HIX

October was a busy month. We continue to sell off surplus equipment through ebay, making money for the club and clearing much needed space. The ebay process has worked well—the task is divided between club members for listing items, answering inquiries, packing and shipping. There's work on the accounting side too, keeping track of the sales, ebay commissions and shipping costs.

Speaking of gear, Curtis AA3JE recently dropped off some very fine vintage equipment. If I'm right, Jake K1LDL will have these on the air to give them a test run. We plan to have a vintage station and upgrade the equipment as opportunities present themselves. As we upgrade, we'll surplus gear so we don't turn the entire second floor into a radio museum.

The Boy Scouts stopped by this month to learn a bit about amateur radio during the Jamboree on the Air (JOTA). I gave them a little talk on various ways hams communicate with each other, and that we've been "texting" for a very long time. The clubhouse was full of scouts, siblings and parents—it was a great time.

Our fundraisers continue, with a movie night for the repeater fund and our monthly scholarship breakfast. Thanks to everyone who help organize these events and those who participate.

A little more work is on the clubhouse—this time getting the chimney lined. The chimney is in bad shape, so a new stainless steel liner will be installed soon and will make everything shipshape.

Lastly, I want to thank all of the CAARA members who helped with the Hurricane Sandy event. We

had several members man the EOC both for running the W1GLO network, and supporting others in the ECO in monitoring radio traffic. Also thanks to everyone who reported conditions into the ECO—all was very helpful and appreciated. I spoke to Mayor Kirk, Congressman Tierny and State Rep. Ann-Margaret Ferrante at the EOC and all were very supportive.

That's it for now—see you around the clubhouse.

73 de Stan, W4HIX

Clerk's Corner

Attention all members! That time of the year has come to begin the collection of the 2013 Caara membership dues payments. This year once again we will not be mailing out dues notices as the Board heard that members wanted to option and ease to pay online. Especially in this day of age where most bills and banking are now paid online. Plus by paying online it saves the club money in mailing costs and is a green way of saving paper. For 2013 the CAARA yearly dues amounts stay the same. It is \$30.00 for a regular membership, \$15.00 for those members who are retired and \$10.00 for every additional ham who lives in the same household. To make your dues payment online please go to the club website at www.caara.net. Please click on the "Payments and Donations" link on the top of the front page. This will take you to the dues payment section. Just click on your dues amount and it will bring you to the payment page. You may pay by your Paypal account or with your credit card. Just make sure to print out your receipt. Of course you may still pay by check. Just mail your dues payment into the Caara Clubhouse, 6 Stanwood Street, Gloucester Mass 01930-care of the Treasurer. If you want to save on the stamp just stop the clubhouse on a Sunday and make your payment that way. I have included the letter that we used to mail out if you need proof of your dues request for any reason. The CAARA Board wants to thank those



(continued on page 3)

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

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

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Jon Cunningham- K1TP Editor
Dean Burgess- KB1PGH Club Reporter

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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 former W1RK 443.700 repeater with antennas located in Magnolia is now located at the CAARA clubhouse and has a very limited range.

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.

Clerk's Corner (continued from page 1)

members who make their dues payments on time. Your yearly dues are critical to even paying the basic bills for the clubhouse. For example we have to pay liability insurance and equipment insurance every year. We have to pay filing dues to the state every year. We have electrical, gas as well as phone and internet bills every month. We also have to pay for upkeep and maintenance to the clubhouse. For example the Board just approved \$800.00 to put a flue liner and chimney cap in for the clubhouse heater. Plus we have to spend \$1000 a year on clubhouse maintenance due to our agreement with the city on the lease. I could go on but you get the point. So for an idea CAARA has 100 members, times \$30.00 equals \$3000.00. You can see what the Board set for a budget for income and expenses on the membership section on the club website if you would like more details. Of course if you are feeling extra generous we have a couple options for any donations that you would like to make above your dues payment. You have the option of making a general donation for club expenses, or a donation to the club's 2 meter repeater fund, both are on the same "Payments and Donations" page. To be frank every penny the club receives is wisely used, either for the basics, or to promote amateur radio. There are not too many amateur radio operators like us who have the luxury of their own clubhouse, plus the use of club test equipment and radio equipment. Just this past year for example the Board approved the purchase of a used Icom 7000 for the membership to use during field day and Thatcher Island. Please remember that all donations above your dues payments are fully tax deductible as CAARA is a registered IRS 501 (C) 3 non profit charitable organization. Regarding dues and money in general. We know that money is tight for some people nowadays. If you find yourself financially unable to pay your dues but still want to part of the fun at CAARA please contact me at dburg101@aol.com. We may be able to find you a sponsor as no one should be denied the fun of ham radio due to their inability to pay. So a big thank you for paying your dues and financially supporting and active club such as CAARA.

73

Dean Burgess KB1PGH -CAARA Clerk



My (first) Tractor Accident by Curtis-AA3JE

When I bought my first tractor, I was the focus of much ribald comment from family and friends. Since my garden is all of 30 feet by 50 feet, most inquired if I was not going a little overboard in my planning. The one serious comment I received was from John, my landlord at the office. He was an older man, former owner of a construction company, and a wise and much respected elder statesman. He looked at me, and in a perfectly serious tone of voice said: "Remember, every single time you turn that key, that tractor is going to try to kill you".

This was not what I expected, and quite sobering. I thanked him, and when I went home I read everything I could find about tractor accidents. I do not recommend it. Tractors are unique, in that they are powerful, heavy industrial machines that look harmless. They are not harmless. I don't care how many fairs and farms you have gone to or seen in photos, showing happy and carefree kids cruising on Grandpa's Model A John Deere. Tractors are dangerous. The statistics on tractor accidents are appalling. Tractors roll over, tip over, catch the operators in the rotating PTO (power take off) equipment, and every website for every agricultural state has dozens of web pages dealing with tractor accidents, tractor safety, tractor rollovers, and related topics.

I was sobered, chastened, and decided I would not have it happen to me. Then it happened.

It was not a dangerous job. I was using the front end loader to dig a drainage ditch. I thought about it beforehand, checked the slope, adjusted my seat belt, checked the counter-weight to make sure everything was in balance (my Kubota needs a counter weight on the back when using the front end loader), and made sure I was at right angles to the embankment, put everything in compound low, and edged forward. First load, no problem. Second load, no problem, third load, big problem.

The bank was about 20 degrees down angle, the loader bucket was over the ditch, and I had a big load of nice muddy soil and rocks. I started to back up, realized that I still had the tractor in high range after dumping the last load (it made nasty squealing sounds) and quickly put my foot on the brake. Well MEANT to put my foot on the brake, actually I missed the brake and pushed down on the forward pedal instead. In a second I had the tractor head down in the ditch at a 45 degree angle, and only the ROPS and seat belt (roll over protection system) kept me from going head over teacups into the ditch UNDER THE TRACTOR. I can't tell you anything else about it, because it happened so fast.

Now here is the important part. When this happens, and it will, do nothing at first. You are safe, you are in the seat, held by the seat belt. Do not engage in frantic efforts to back up the tractor. This will only dig the wheels in to the mud and turn the ground under you into a churned up mess.

STOP, TURN OFF THE TRACTOR, take a few photos, have a cup of coffee and consider what you might do next. You have about a ton of heavy machinery stuck head down in a ditch on the wrong side of a 20 degree muddy slope, and it will take some thought as to how to get out of this one.

AFTER you have calmed down, and are making rational decisions, dump the load, put the tractor in low, and try to use the loader to lift the front end and back out using the differential lock. This will not work, but it is worth a try. Sometimes the push from the loader bucket combined with the little traction you have will do the job. It didn't.

Now you have to find a heavy vehicle. I strongly recommend

NOT using your wife's car. It is big, heavy, and has 4 wheel drive, but DO NOT USE IT.

You are already in a big pile of trouble for getting the tractor stuck. Do

not add to

it. Try the pickup. It has a tow ring, right? Perhaps if you pull it up to the tractor and give a gentle tug? A bigger tug? Yank like heck? Nothing doing.

Ok, how about getting that 4 ton come-along you bought? Run a chain to the truck, chock the wheels, set the brake, and winch the tractor up? Easy?

NOPE. Pickup is pulled toward the tractor.

OK, how about moving the pickup, running about 50 feet of 1 inch nylon rope, cranking the rope till the truck just starts to drag, then try to move the tractor backward? It works, sort of, The tractor moves about a foot. Then stops.

OK, how about tensioning the rope, get the tractor set, use the bucket of the front end loader to push, WHILE holding down the differential lock and lifting the front end?

Two feet this time.c

After 10 cycles of lift, pull, crank, and spin the tractor moving about a foot each time, I got it up the slope and on level ground.

Moral of the story. You can read all the material from the Dept. of Agriculture, plan your job, take every



precaution, do it all right, and the darn tractor will still try to kill you. When you do get stuck, as you will, stop and think about how to get unstuck, unless you want to be a star on YouTube. Next time I'm calling Tally's.



OCTOBER MEMBERS MEETING WRAP-UP

The Cape Ann Amateur Radio Association held its monthly members meeting on Wednesday October 3rd at the clubhouse. In the photo CAARA President Stan Stone W4HIX stands with Bob Stone, Mark Pride and Bill Fleig from Newfield Design Inc.. Mark is holding the new Proham repeater controller that they have created. All 3 gave a very informative talk to the members about their new, state of the art controller and all of the functions it can do for interoperability between an amazing amount of transmission modes. If you are interested in the controller they have two websites, www.ercsystem.com or www.proham.com. In the second half of the meeting Bob gave a detailed overview of the upcoming World Radiosport Team Championships that are coming to New England in 2014. The powerpoint presentation can be found on the CAARA website at www.caara.net

November 2012 Calendar

Wednesday November 7th: Emergency Communication Group meeting @ 7:00 PM
Wednesday November 7th: Monthly members meeting @ 7:30 PM
Sunday November 11th: ARRL VE Test Session @ 9:30 AM
Wednesday November 14th: Board of Directors meeting @ 7 PM
Every Sunday @ 9:00 PM : CAARANET on 145.130 MHZ with no PL tone

Universal HT Battery Charger

Review by Dean KB1PGH

As we all know every ham owns at least one Handie Talkie and its safe to say that we all have an extra battery as a back up. The only problem is charging HT batteries via the wall wart plugged into your HT takes overnight at least, and while that's happening you can't use your HT to transmit. This HT power problem really come into play during public safety events and long duration emergencies. Well at my recent trip to Boxboro I bumped into this exhibit booth run by WW Manufacturing. They were doing a demonstration on their new HT battery charger. Their new product is the UC1 Universal Charger. This HT battery charger works on all makes and models of HT's by doing one thing. The charger base that houses the microprocessor and charger stays in the base, but on top of the base there is a cup holder which holds the HT. What they do is they

make all sorts of different cups that fit all sorts of HT's and they all plug into the top of the charger. As you see in the picture provided I have a cup that is specifically made for the Yaesu VX 8 series radio. That cup clips into the top of the charger and can be removed just as easy to accommodate another type of HT. As you can also see the HT fits snugly into the charger. One great feature about this charger is that while I'm using my HT I can put just the battery I just ran down itself into the charger so I'll never run out of juice. Plus this charger is a constant current rapid charger that charges HT batteries in anywhere to a half hour to 2 3/4 hours depending on the size of the

battery. Once the battery is charged the microprocessor in the base senses it and automatically puts it on a trickle charge so no burning out batteries. This charger takes Nickel based and Lithium Ion batteries and charges batteries from 1.2 Volts to 13.2 Volts. This charger can also be used on 12 Volt DC current for portable use. It's easy to tell when the battery is charging and when its done by the red led that changes to green when its done. This charger cup size also allows for the charging of the larger size HT batteries can you can buy in the aftermarket. I have been using this charger for two months now and so far so



good. When you purchase the Universal Charger you get one battery cup with it, but if you have multiple differing radios each cup costs extra. The cup stays snug in the charger and the build quality is such that your HT will not tip over when charging. I paid \$69.00 at Boxboro for the charger and I believe it is money well spent. I would highly recommend this charger for those who want quick reliable recharging of HT batteries. This charger would be great for ARES Emergency Communications use and for EOC's that ham radio. They also make a rack version that can hold 6 HT's at a time. Their website is www.ww-manufacturing.com.

Samuel Morse: The man who (almost) never succeeded

In my various readings, which I do far too much of, I learned a bit about Samuel Morse and became fascinated. This guy had more careers than I have. (Hey, some of those careers I wanted to leave. Don't be tacky.) At various times he was a preacher, a painter, a professor, an inventor, a photographer, and a politician.

But when I looked a little deeper, I found he wasn't a Renaissance-type Polymath as I had assumed. Morse was an argumentative, whining man who failed at one career after another, fought with and sued (or was sued by) virtually every associate he ever had, and played the poor-pitiful-me victim card at every turn. He succeeded at almost everything he did for a while, then failed miserably and left to do something else.

He is recognized as the inventor of the telegraph, which he really wasn't, and the originator of Morse code, which he probably was. On one of his many career side-trips he also had a large role in bringing photography to the U. S. It is largely because of Morse that American photography took a leading role in the mid-1800s. That wasn't really his intention, though. He spent far more time and energy telling everyone he had done it than he actually spent in doing it.

He was an ugly man, as my sainted mother would say in her best *Steel Magnolia* voice. In the South ugly doesn't refer so much to physical appearance as it does to personality. When I told the story of Petzval and Voigtlander it was a bit tragic: a great inventor robbed of his just rewards by a sneaky businessman. That happened to Morse, too, but he was his own worst enemy.

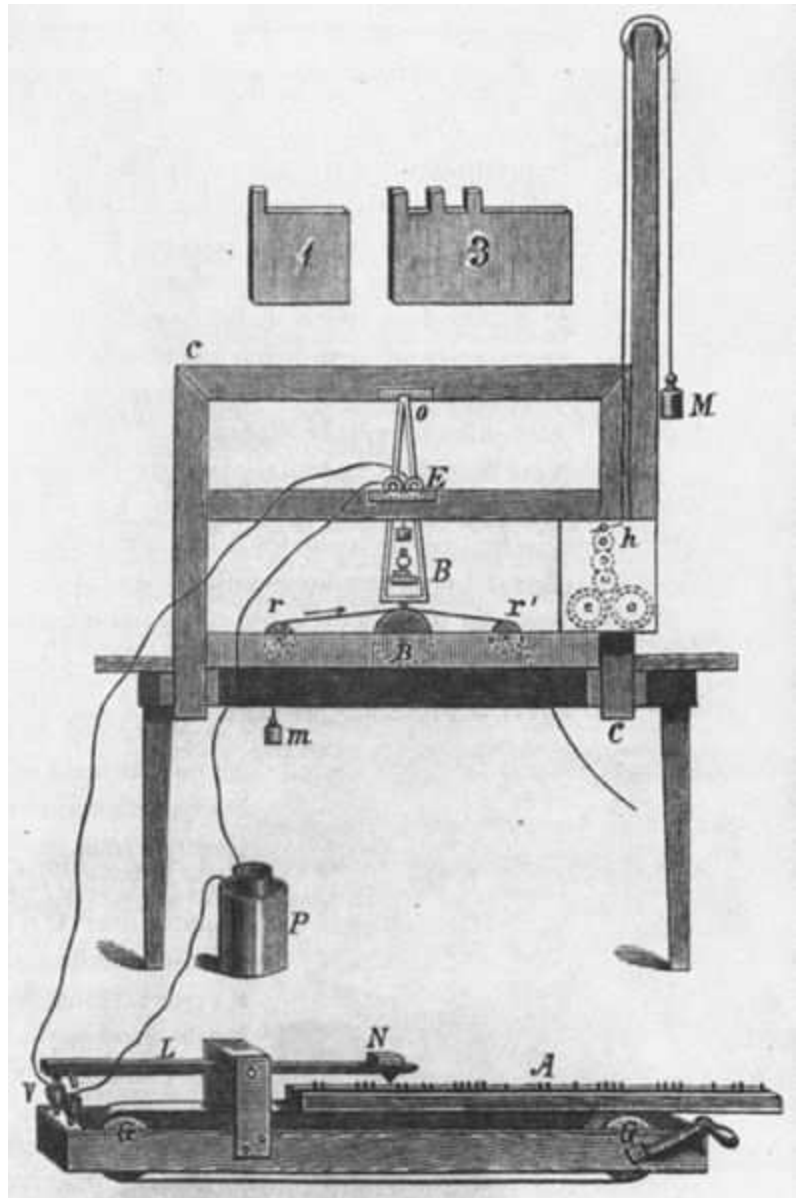
Morse's Origins

Morse probably came by his rather opinionated personality rather naturally. He was born in 1791, the eldest son of Jedidiah Morse. As you would expect, with a name like Jedidiah, Papa Morse was a fire breathing, New England Congregationalist Minister. He also wrote most of the Geography books that originated in America in the decades around 1800, and was widely known as 'the Father of American Geography'.

Jedidiah followed the 'Often wrong, never in doubt' school of thinking, with a nice dash of paranoia thrown in. He spent most of his time fighting Unitarianism, Popery, Freemasonry, and anything else he considered a threat to America. He knew most of the founding fathers of America, idolizing Washington but despising Adams and Jefferson as Jacobinists.

Samuel Morse spent most of his youth at various boarding schools, which wasn't unusual in the day, and eventually attended Yale College. Yale was largely known for two things: training Puritanical clergy—his parent's hope for Samuel—and experimentation in newfangled sciences like electricity. In those days, Yale was largely a reaction to the more liberal Harvard College, with Yale's Puritan roots showing in rules against 'card playing, tavern going, and acts of disobedience to college authorities'.

Morse dutifully followed his father's directions and took the job his father arranged at a Boston



publisher. He proceeded to write home weekly that he was completely miserable, had no reason to live, but he would die happily knowing he had followed his family's wishes. After some months of this Jedidiah was willing to pay any price to get Samuel out of his hair, so off to study art in England he went.

The Painting Years

Morse was quite successful in his art studies, producing at least one critically acclaimed painting, *Dying Hercules*. He also managed to gain admittance to the Royal Academy in 1811, which probably had the added benefits of driving his Anglophobic father completely insane. Remember, the war of 1812 was right around the corner, and so the U. S. and Britain weren't exactly best friends at the time.

Morse returned to America in 1815 and did quite well as a painter — for a while. He was commissioned to paint portraits of John Adams, James Monroe, and the Marquis de Lafayette, among others. But commissions dried up as the American economy soured. For a decade Morse struggled financially. He moved constantly, taught students in Charleston and New York, and took commissions where he could get them.

He married, but his wife and children lived with his parents or other relatives while he worked to establish himself. However, even when Morse was doing well—at one time he had a large house in New York City and was regularly sending money home—he never sent for his family. When his wife died suddenly in 1825, Morse sent the children to live with various relatives and rarely visited them.



The Early Telegraph Years

Morse returned to America on board the sailing ship *Sully* in 1832. During the voyage he had lengthy discussions with Dr. Thomas Jackson regarding the ability of electricity to pass a current instantaneously through a wire over great distances. After arriving back in America he began to work on a device using batteries and copper wire that would transmit a signal over distances.

Having no real scientific education, Morse spent a lot of time with Professor Leonard Gale who helped him develop a power source and the electromagnetic relays that let the system work over long distances. Having no practical engineering background, nor any money, he partnered with Alfred Vail, whose family owned a large machine shop and provided both funds and equipment to develop Morse's ideas.

Morse and Vail exhibited a working device in 1838. Rather than using the series of dots and dashes that eventually became Morse code, they sent a series of numbers. The numbers each correlated to a word in a large dictionary. The number 29 might mean 'horse' while 162 might be 'rider', etc. (Morse felt selling the dictionary would be a major profit for his new invention.)

Finding no one in America was interested in purchasing his invention, Morse travelled back to Europe hoping to sell it there. Once again he was unsuccessful. Great Britain already had a working (in a limited way), patented telegraph system developed by Sir William Cooke and Charles Wheatstone. The system wasn't nearly as good as the Morse system, which required just a single wire and was much simpler. On the other hand, it was Britain and Cooke and Wheatstone were British.

A similar reception awaited in Europe where Gauss and Weber had developed a telegraph system that Carl Steinheil had deployed in Munich. Again, the system was more complex than Morse's, but the Germans weren't interested in paying Morse when they already had a system in place, even though it was a limited system.

As an aside, in 1839 Steinheil became the first German to use Daguerre's newfangled camera system. (Can you believe I got this far without an aside?) Within a few months he had developed a method to create a negative image and multiple positive prints on paper, similar to Talbot's photographs. In the 1850s he founded the Steinheil optical works and his son, Hugo, developed some of the most important [camera lenses of the 1800s](#).

Apparently the closest Morse came to selling his system while in Europe was to Russia, who found it attractive largely because it wasn't British or German. But the Czars spent all their money on Faberge Eggs and such in those days, and never got around to purchasing the telegraph.

The French also took a look but they already had a high tech system in place: they had built a series of small towers a few miles apart, each of which had moveable wooden arms on top. The arms were controlled by ropes,

sending a series of semaphore signals. The French felt this was far more reliable than some signal traveling through electrical wires. They sort of glossed over things like darkness, fog, rain, and wind; all of which made their system shut down.

Morse returned to America broke and unsuccessful. But his trip to Europe wasn't entirely useless.

The Rest of the Story

In 1843 Morse and his associates obtained a \$30,000 grant from the U. S. Congress to create a telegraph line from Washington, D. C. to Baltimore, MD. It was hugely successful. Over the following years, the telegraph became perhaps the most important invention of the 1800s. Communication, which had been limited to the speed of a train or sailing ship, became almost instantaneous. Huge corporations, like Western Union and the Associated Press developed directly as a result of the new technology.

While Morse was successful, it seems unlikely he was ever happy. He was embroiled in dozens of lawsuits with various business partners and competitors for the remainder of his lifetime. While he became financially successful, it was largely because he had received 5,000 shares of the Western Union Company when it incorporated. He got very little money directly from the telegraph.

In Europe, the patents of Wheatstone, Cooke and others prevented him from making any income from his now worldwide telegraph

system, although several European countries banded together to give him some small payments in gratitude for his invention. He was also given honors equivalent to Knighthoods by several countries, including Denmark and Turkey. While he was immensely proud of this, it caused him problems back in the United States because accepting such honors

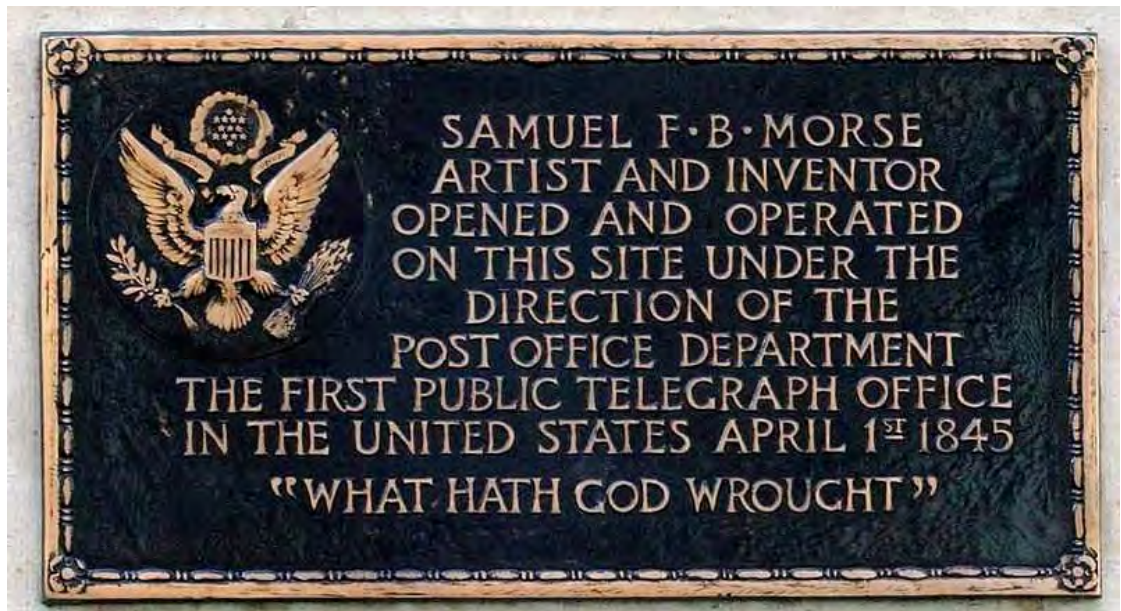
should have meant giving up his U. S. citizenship.

Morse also appears to have forgotten those who helped him. He wrote dozens of letters-to-the-editor, depositions, and even books defending himself from charges that Vail, Professor Gale, Dr. Jackson, and numerous others were the true inventors of the Morse telegraph. Rather than graciously offering a bit of credit that was due, he generally claimed all the ideas were his in entirety.

In U. S. court cases, he was largely, but not entirely, successful in defending his patents. Vail, however, received a significant portion of the money Morse made from his inventions. He is also arguably credited with changing Morse code from the 'word associated with a number' method used originally to the Morse alphabet code that was eventually adopted for general use. It was also Vail who developed the telegraph key and Gale who created the repeater system that made long-distance transmission possible.

Some of this fighting was unavoidable with such a landmark invention, of course. There were obviously fortunes to be made by those who owned the rights to the telegraph. Some of the fighting appears to have just been Morse's nature. Long after his patents had run out and his financial success was assured, he continued to write long letters to various newspapers refuting anyone who claimed any shared credit for his invention.

Americans idolized Morse for years after the telegraph was introduced. From his position of fame, he became rather political and wrote at length against—well, basically everything that wasn't Calvinist American.

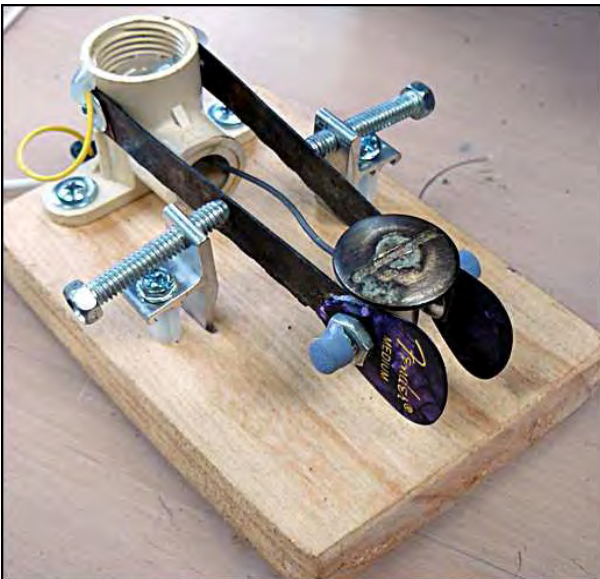




CAARA Movie Night a success!!

The Caara repeater committee would like to thank all those who attended the movie night 2 meter repeater fundraiser on Saturday, October 20th . We watched the movie **“Frequency”** and we raised over \$80.00 which will go towards purchasing the CAARA’s new 2 meter repeater! In the photo you can see everyone reaching for the popcorn and sodas right before showtime! Dean-KB1PGH

RANDOM SHOTS



HOMEBREW PADDLE KEYER



SMALL CROWD AT NEARFEST OCTOBER 2012

CUB SCOUTS VISIT THE CLUBHOUSE TO EXPLORE HAM RADIO-
Stan- W4HIX gives the presentation which was well received.



Complete HF station giveaways to support youth

Greetings, my name is Jeff Demers, N1SNB and I wanted to take a quick moment to tell you about a new program to support youth activity on the HF bands. Chances are, if you were like me, getting on the air after getting your first license was a little challenging. Parents were bugged. Pennies were saved. Numerous “compromise” measures were taken to get that first station on the air!

My company, **Amateur Radio Supplies LLC**, of Haverhill, Massachusetts seeks to help a few lucky young hams get on the HF bands and make some contacts! Do you know any deserving young hams? We will be giving away 3 complete HF stations per year in order to support activity on the ham bands. Details at: <http://www.amateurradiosupplies.com/youth-s/222.htm>

My sincere hope is that you can spread the word to your club membership. Link the giveaway from your club website, mention it in your newsletter - anything you can do - to help make sure this program is a success is greatly appreciated. The more kids we can get on the air, the better!

If you have a young ham to nominate, email us.

Otherwise individuals are invited to apply right from our website: <http://www.amateurradiosupplies.com>

Your support is greatly appreciated. The future of ham radio depends on youth activity. Please help spread the word.

73!

Jeff Demers, N1SNB

President - Amateur Radio Supplies

Seventy Three

| by Bob KØNR

Like many technical activities, amateur radio has its own set of jargon and protocols used both on and off the airwaves. As part of our Technician license course, we cover basic jargon but also encourage the use of plain language. A new Technician recently asked about the use of the term “733 on the local FM repeater, so I am posting this short piece.

Much of amateur radio history and practice is rooted in Morse Code, which traces back to the electrical telegraph. Two shorthand codes you’ll hear on both voice and Morse Code communications are:

73 means *Best Regards*

88 means *Love and Kisses* (sometimes *Hugs and Kisses*)

These codes originated with telegraph operating and are listed in the Western Union 92 Code, a set of numerical shorthand codes. On voice (phone) transmissions, you often hear something like this: “Great to talk to you, Joe. Thanks and Seventy Three. This is KØNR, clear.”

Since 73 is often used at the end of a radio contact, it almost takes on the meaning of “best regards and goodbye.” “Eighty Eight” is used in a similar manner but is heard much less frequently on the ham bands. Sometimes you’ll hear 73 expressed as “Seven Three”, which corresponds to how the Morse characters were sent. It is incorrect to say “Seventy-Three’s” since this would literally mean “Best Regards’s”. Of course, most of us have made this error from time to time, very similar to grammatical errors in the English language. (“Somes time we forget to talk good.”) QRP operators often use 72 instead of 73 because low power operating is all about getting by with less. And I normally use 73 at the end of most ham radio related email messages.

History This Week

A look back at events that made history this week - compiled by the Summerland Amateur Radio Club of Lismore, NSW

Tuesday, 30 October, 2012

1572 Supernova is observed in the constellation known as Cassiopeia

1815 Sir Humphrey Davy of London patents miner’s safety lamp

1862 Gatling gun patented (Richard J Gatling)

1862 New York-San Francisco direct telegraphic link established

1895 First US patent granted for automobile (George B Selden)

1931 First commercially produced synthetic rubber manufactured

1936 First high-definition TV broadcast service, by BBC in London

1939 First jet plane, Heinkel He 178, demonstrated to German Air Ministry

1952 First hydrogen device exploded at Eniwetok Atoll in the Pacific

Special event with astronaut wins public relations award

As radio amateur Clint Bradford K6LCS of Jurupa Valley said, "It was 13 months of planning for 10 minutes of conversation, but, oh!, what a conversation!"

"LIVE! ... from outer space!" Students speak to an astronaut in the orbiting International Space Station was the special event on April 19, 2012 that earned an award for **Karen and Clint Bradford** in the annual competition by the Public Relations Society of America. The event was planned for the 120 students of Flabob Airport Preparatory Academy and more than 80 parents, community leaders, media representatives and interested persons.

Clint initiated the event because of his hobby in ham radio and volunteer position with NASA through Amateur Radio on the International Space Station (ARISS): He provides school technical support for students in North America to talk to astronauts aboard the orbiting space station. NASA's "Teaching from Space" program is

available to any school that applies, but the typical wait-time from application to event is three years. He approached Kathy Rohm, vice president and director of community relations at Flabob Airport Preparatory Academy, which is supported by the Tom Wathen Center. She was enthusiastic to sponsor the literally out-of-this-world, once-in-a-lifetime special event to inspire students. More than 2,900 emails flew between Clint, Kathy, NASA, Flabob staffer Nina Bentham and ARISS volunteers to produce the event. NASA-Houston flight director Phil Engelauf, who grew up in Rubidoux and whose mother, Beverly, still lives here, was invited to the event. His duties prevented him from attending, but he sent warm regards to the students in a special message that is posted at the event's Web site - <http://iss-flabob.com> (on the blog).



The event went according to plan, except for a momentary glitch with audio quality, despite having tested the system for three days preceding the event. Clint quickly figured out a solution, although he later said that he was only 90 seconds from NASA terminating the call if he had not succeeded.

"When we looked around the hangar at the conclusion of the contact, hearing the students' whoops of happiness, we saw more than a few adults wiping at their eyes ... us included," Karen said. "We felt intensely rewarded to think how our students may feel throughout their lives when they look up in the sky and remember the thrilling day when Flight Engineer Don Pettit answered their questions."

Student Brittany Cain had asked, "Besides missing your family and friends, what is the biggest adjustment you have made for this mission?" The assembled

group laughed when Pettit replied he missed not being able to take a bath for six months!

The mission of Flabob Airport Preparatory Academy is to use aviation as a tool to motivate students to achieve their personal, academic, and career goals.

Current statistics reveal that American students

severely lag behind their foreign peers: In a study of 31 countries, the Organization for Economic Cooperation and Development ranked Americans 21st in science and 25th in math. Consequently, President Obama launched the Educate to Innovate Campaign in 2009 to unite teachers, parents, businesses and students toward excellence in STEM (science, technology, engineering and math) studies.

Karen is a current member and past president of PRSA's California Inland Empire Chapter. There are more than 80 local members.

Flabob Airport students talk to Space Station
http://www.southgatearc.org/news/april2012/flabob_airport_students_talk_to_space_station.htm

Clint Bradford K6LCS
<http://www.k6lcs.com/>

The ultimate ham radio vacation rental

by Matt W1MST

Prince Edward Island, in Eastern Canada, is a popular vacation destination for New Englanders. Just about 11 hours by car from Boston, it's within easy range and offers immense beauty and a special kind of charm.

I've been going there since I was a child and have many great memories. The red sand beaches are unforgettable and despite it's northern location, the ocean water is the warmest on the east coast north of the Carolinas.



Well, needless to say as I was browsing vacation accommodations, this place caught my attention! Purchased in 2002 by California attorney Ken WidELITZ, K6LA / VY2TT, the ham radio shack at the 4-bedroom, 3,000 square foot PEI DX Lodge features some amazing amenities including an Elecraft K3, ICOM 7800, and ICOM IC-756 PRO III.

Oh, and did you notice the antenna farm? There are five towers: 30 feet, 84 feet, 140 feet, 145 feet and 150 feet. They're all yours for the duration of your stay. Amazing!



<http://peidxlodge.com/reservations.htm> for info

October CAARA Scholarship benefit breakfast at the Clubhouse on Sunday morning which benefits a high school senior at Rockport, Gloucester, and Manchester- Essex High Schools.



ARRL Requests Hams Do Not Self-Deploy to Areas Affected by Hurricane Sandy

11/01/2012

Amateur Radio operators who want to assist those Sections affected by Hurricane Sandy *should not self-deploy* to those areas. “There are many ARRL Sections involved in the impact area, and each has different requirements on how they locate, credential and deploy volunteers,” explained ARRL Emergency Preparedness Manager Mike Corey, KI1U. “If a need for manpower is identified that cannot be met locally or in the Section, Section leadership may contact other Sections for assistance. If the need is still not met, Section leadership may then contact ARRL HQ for assistance.”

2012 ARRL Field Day Results Now Online

11/01/2012

If you can't wait for your December issue of [*QST*](#) to arrive in the mail to see how you did in the 2012 ARRL Field Day, don't worry!

The results — including a [copy of the *QST* article](#) (with line scores) and a [results database](#) — are now available on the ARRL website. Be sure to also check out the 101 comments in the [Field Day Soapbox](#).

It's not too soon to start making plans for next year — the 2013 ARRL Field Day is scheduled for June 22-23, 2013.

160 Inverted L Antenna; Welcome to Winter!

Submitted by N4JTE

Between watching unending Law and Order repeats and the XYL's Lifetime movie sagas, compounded by a dead 40 meter band here at night, I became so totally bereft of late night activities that I got the bug to get back on 160 meters again with something that would fit in my backyard. I have had, in previous QTH's, the luxury of a full size 160 dipole, those were the days.

Well, 240 plus feet at any reasonable height is beyond my backyard limitations as I am sure it is, along with many of you.

The 160 band is to me, a throwback to my AM and SWL days as a youngster when I would lay in bed at night with my crystal radio and listen to all the AM broadcast stations I could discern and check them off on my Knight's Radio Log. Those days, are to me, the genesis of my love for the magic of radio, some of those AM stations are still legendary!

Enough nostalgia.

I wanted to get back on the band with a respectable signal and try out the much discussed and prevalent 160 inverted L antenna. Previous to the inverted L, I tried a few ideas, some of which I am sure others have attempted also.

PREVIOUS ATTEMPTS:

1; 80 meter dipole, coax fed. Whew, lucky I did not burn something up, I know why it stunk but there are still some out there that figure if their good old trusty tuner loads up and somehow a length antenna seems too work on 160 they are good to go, NOT! Besides the neighbors getting tvi, your tuner and feedline were probably contributing to global warming.

2; 165 ft. 40 edz at 60 ft. ladderline fed. I really thought this antenna would work as its only 60ft. short.

The fact was that my 3kw tuner told me that with

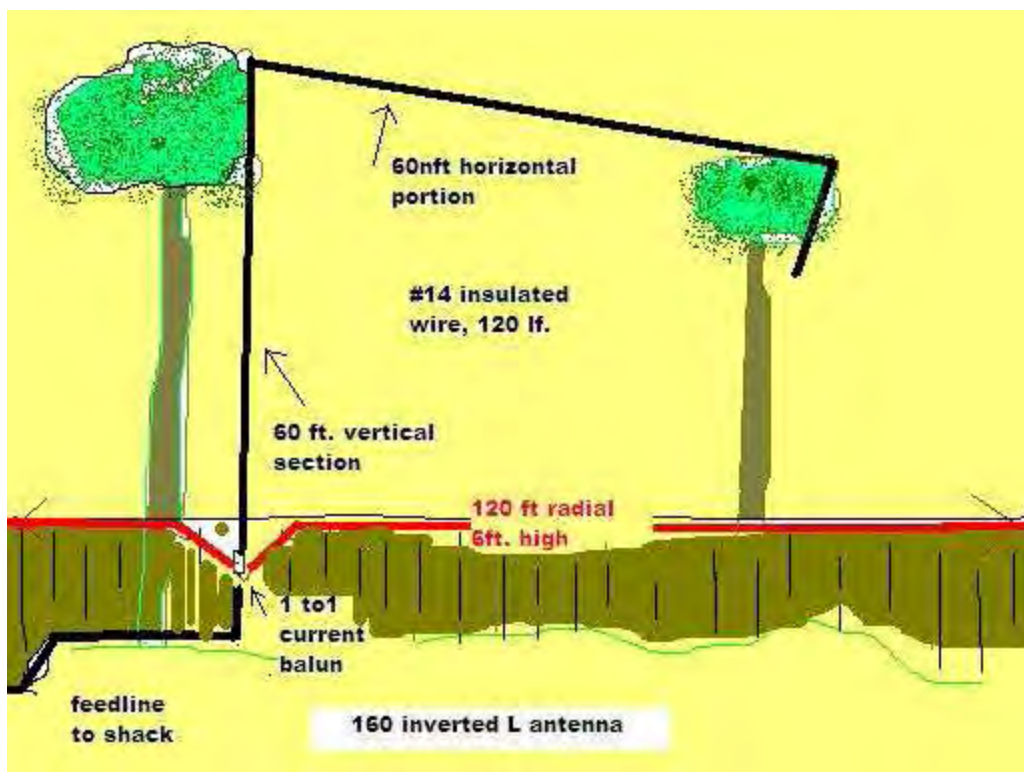
anything over 100 watts, I was dreaming, as Christmas came early with all the flashing lights inside the tuner.

3; The good old G5RV with the shorted feedline and ground plane approach. I'm sure I remember a contact or two on a quiet night but pretty lame.

160 inv L

There are a lot of 160 designs out there on the internet with quite a few adding coils etc to match shorten verticals, or top loading with various configurations. My feeling is that the coil losses and tricky matching problems with top loaded wire antennas make the inverted L the way to go for simplicity of construction and relative ease in matching 50ohms.

The inverted L is what it is; picture your Hamstick or any vertical and bending it 90 degrees halfway up and expecting some improvement over a nice simple straight vertical. Let's be aware of the physics involved and keep our expectations within reality.



But: That's the mystery and fun unique to the 160 band, anything that approaches a well thought out antenna, even in a restricted place will compete well. The really big guns with the phased 120 ft towers and 4000 buried radials only show up for the contests. The rest of us peons have a pretty level playing field when we are content to work a new state or keep in contact with friends around the country, with the occasional DX station popping in to say hello.

THE CONSTRUCTION:

The best I could do here was to get the old trusty 2oz weighted fishing line over my now bare 65ft. maple tree. Hobby money is tight here so I scabbed together 120 ft of insulated # 14 wire from previous endeavors and pulled back some masonry line. Taking care to keep the ends from tangling, the string was attached to the 60 ft. midpoint of the insulated wire and hoisted up to the top of an outside branch on the tree with the feed point end about 6 ft. off the ground.

FIRST ATTEMPT:

Because I had nothing better on first thought and it was getting dark I ended up having to slope the remaining 60 ft. to a tie off point in the backyard which resulted in the end at about 10 ft. off ground. I hooked up two raised insulated radials at 120 ft. long each and hung them up at 6ft. high along the wood fence. Definitely not as symmetrical as I would have preferred with some zigs and zags thru the available branches etc. but ran them at 180 degrees from each other. Be advised there will be a lot of voltage on the radial ends and make a supreme effort to isolate the ends from any human contact.

RESULTS:

Not bad, first of all the amp, AL80B, was finally showing some life and providing 400 watts indicated. Reports were good from local to 1500 miles out but the S/N, noise was horrendous, so I figured it was time for some improvements.

SECOND ATTEMPT:

Well, I was happy to be heard and the amp and 3kw tuner were silently applauding my work so I figured lets work on the noise situation. I figured out a way to get the horizontal portion over a nearby tree at about 45 ft. high, and try to get closer to a flat top configuration, but unfortunately it is only about 40 ft. away. End result was that the last 20 ft ended up coming down in a vertical direction to the tie off point, sorta ended up with a skewed inverted U configuration.

Voila! Ended up with a relatively flat 1.5 to 1 on 1865. I know that can be misleading, especially when using a bizarre shaped vertical, but it works. See note #5 in final comments.

FINAL COMMENTS:

- 1;** If you are in tight restricted environment, the inverted L will get you on the air with a respectable signal and good match to 50 ohm coax.
- 2;** Yes it will be noisy in an urban near field environment; I use my 40 meter antenna as a listening antenna when my local noise competes too much.
- 3;** I placed a 1 to 1 current balun at the feedline junction; I did not see any significant noise reduction.
- 4;** From talking to other Hams more advanced and experienced with the 160 inverted L, I found a few that liked the 3/8 wl configuration as it moves the current point further up the antenna and improves efficiency beyond the 28% we can expect from the inverted L. However I believe the 3/8 configuration is adding more horizontal polarization as a trade off for better efficiency which is fine if your interests are more in line for closer in contacts. I don't see any major signal loss on close in stations but the inv L definitely shows it's worth beyond 800 or so miles, (whose counting ?) as compared to a 165 ft. flattop at 60 ft.
- 5: If you build it,** I offer the following insights from my experiment. Going the raised radial route is the only way I could consider this or any vertical design with my rocky conditions, your mileage may vary, but read up on them. If you do use raised radials make every effort to run the feed line away at a right angle if possible, mine isn't. As mentioned, a 1 to 1 current balun is a big **MUST**; it will reduce any stray induced current on the coax shield.

My MFJ analyzer indicated 40 ohms resistance and about 1.2 to 1 swr. Anything way above or below that number should tell you that your ground plane is inadequate or you have common mode current problems. To achieve your best match, prune the horizontal section length.

Lastly, the hard part, try to make the vertical section as tall as possible and if you are concerned with a DC path to ground while using elevated radials, throw a choke between the coax shield and the ground rod or equivalent. Do not just hookup the coax shield directly, unless you like talking to worms.

FINAL FINAL COMMENTS:

The setup as laid out in this article is working than better than expected and has reawakened my appreciation for the challenge and fun to be found on the 160 meter band. It is noisy at times here in upstate NY with my backyard surrounded by commercial businesses and transformers for the extended care facility 100 ft away, (there, but for the grace of God go I) so I use my flattop 40 as a backup receive antenna when it gets too annoying.

Try it out, the inverted L is as cheap as it gets and will give you a horizontal and vertical sky wave easily matched to coax. Definitely more entertaining than the Lifetime Channel!

Don't forget; 160 meters separates the men from the boys, see you there!

American Legion Radio Club:

The American Legion Amateur Radio Club (TALARC) will run a Special Event Station commemorating Veterans Day on Sunday, November 11 from its downtown Indianapolis station, K9TAL. Located at the National Headquarters of The American Legion, K9TAL will operate USB on or about 14.270 MHz and occasional CW on or about 21.040, conditions permitting, between 0900 and 1630 EST (1400 to 2130 UTC). Contacts can also be made in the central Indiana area on 146.46 MHz SIMPLEX or via IRLP Node 4816. A TALARC QSL will be sent to stations who contact K9TAL with receipt of a SASE. Details on QRZ.com.

Since its inception in May of 2011, The American Legion Amateur Radio Club has grown steadily to nearly a thousand members. Any U.S. military veteran who is a Legionnaire, American Legion Auxiliary or Sons of The American Legion member and holds a valid FCC Amateur Radio License of any class is eligible for free membership in TALARC. Information is available on the club's website at www.legion.org/hamradio.

The American Legion is the nation's largest wartime veterans organization.

Kickstarter crowdfunding site launches in the UK

Kickstarter, which been used to fund a number of Amateur Radio projects in the USA, has now launched in the UK.

Radio ham Zac Manchester KD2BHC used Kickstarter to raise \$74,586 in donations to fund the development and deployment of 200 amateur radio KickSat sprite satellites.

The amateur radio satellite project ArduSat managed to raise donations of \$106,330 in just 30 days. Kickstarter is not just about raising large sums of money, for example Sandy Antunes used Kickstarter to raise \$2,780 to buy a ham radio transceiver and antennas to create an amateur radio satellite ground station Calliope

Embudu Island operation

Andrew, G7COD, is once again active as **8Q7AK** from Embudu Island on the South Male Atoll, Maldives (AS-013), for three weeks in February 2013. If like last time, this trip is a holiday and he will be active on 80-12 meters, including 30/17/12 meters using CW and SSB.

The following are suggested times of operations: 0730-0830z, 0900-1100z, 1300-1500z and 1730-1800z.

Suggested frequencies (+/- QRM) are:

CW - 3503, 7003, 10103, 14003, 18073, 21003 and 24893 kHz

SSB - 3795, 7063, 14190, 18133, 21253 and 24953 kHz

QSL via his home callsign, direct (see Web page) or by the Bureau.

Andrew now has a dedicated Web page at: <http://8q7ak.freewebspace.com>

Hurricane Sandy has pulled down around 25 percent of the U.S.' wireless companies' cell sites in the 10 states affected by the storm, federal regulators said on Tuesday.

The U.S. Federal Communications Commission (FCC) told reporters that most of the cell towers still operational are being powered by generators but could run out fuel before domestic electricity service is

restored to the affected areas, reports the *Associated Press* news agency.

In spite of the downed trees and the massive power outages, the landline phone network has held up better in the affected 10 states hit by Sandy than the cell networks have. That said, more than a quarter of landline customers are affected by outages in Virginia, New Jersey, Massachusetts, and New York City and state.

However, the FCC did not give an estimate to how many users were affected by the cell outages.

911 call centers have held up well, according to the regulator, but some are affected by the power outages and are re-routing calls to other centers outside of callers' nearby locations.

"The storm is not over. And our assumption is that communications outages could get worse before they get better, particularly for mobile networks because of the flooding and loss of power," said FCC Chairman Julius Genachowski said during a conference call late yesterday.

Out of the major U.S. cellular networks, AT&T, Sprint, Verizon and T-Mobile all said they would continue to "assess the damage" left by Sandy, but did not have a time frame of when services might be up and running again.

Verizon said its offices had flooded, and those served by those offices "will experience a loss of all services including FiOS (voice, internet, video), high speed internet, and telephone services." Sprint said customers "particularly in the New York tri-state area, parts of Pennsylvania, and parts of New England" would be most affected.

Meanwhile, T-Mobile USA did not give any definitive response on where it was most hit; neither did AT&T, but said they would continue to assess the situation on the ground.

Robin Walbridge, KD4OHZ, Missing at Sea after Sinking of Tall Ship Bounty; Ship's Electrician Doug Faunt, N6TQS, Rescued

Every DXer knows the story of the HMS Bounty and Pitcairn Island, VP6: In 1789, the HMS Bounty — a small three-masted sailing vessel sent by Britain's Royal Navy to the Pacific on a supply expedition — was roiled by tension between its crew and its captain, William Bligh. After landing in Tahiti and taking on a cargo of breadfruit, the Bountysail for the West

Indies; it never reached that destination. Instead, Master's Mate Fletcher Christian led the men in a mutiny, eventually allowing Bligh and his loyalists to sail off in a longboat. After an arduous journey, they reached safety at the Dutch-owned port of Kupang. Christian and his followers ended up on Pitcairn Island where they burned the Bounty and settled on the island. Passing ships did not discover the enclave until after the turn of the century.

Bounty Captain Robin Walbridge, KD4OHZ, is presumed lost at sea.

On Monday, October 29, a replica of the Bounty — built in 1960 for a remake of the 1962 film *Mutiny on the Bounty* — sank off the coast of North Carolina as Hurricane Sandy made its way toward New Jersey. Of its 16 crew members, 14 were rescued by the US Coast Guard. *Bounty* Captain Robin Walbridge, KD4OHZ, never made it to one of the two deployed life rafts and is presumed dead. Claudene Christian, who claimed to be a direct descendent of Fletcher Christian, was unresponsive and passed away at a North Carolina hospital on Monday evening.

Doug Faunt, N6TQS, of Oakland, California, was one of the 14 who was rescued by the Coast Guard; Faunt served as a deckhand and was also the ship's electrician. A noted DXer and ARRL Life Member, he was part of the FO0AAA DXpedition crew in 2000 to Clipperton Island. He was also a member of the VP6DIA DXpedition to Ducie Island, and in 2007, he was part of the DXpedition to Lakshadweep.

According to Spud Roscoe, VE1BC, Faunt had satellite communications equipment and Winlink capabilities on board the Bounty, but he was not the ship's radio officer. "Sailing on replica ships was a hobby of Doug's," Roscoe told the ARRL. "He had previously sailed across the Great Australian Bight on a replica of the HMB Endeavour, Captain Cook's ship. He was an able seaman of the watch." Roscoe was the radio officer on the replica Bounty for its original

voyage to France in 1962.

Doug Faunt, N6TQS, served as a deckhand and electrician on the *Bounty*. He,



Robin Walbridge, KD4OHZ

along with 13 others, was rescued by the US Coast Guard.

Faunt told the ARRL that the Bounty crew tried various methods, including a satellite phone, to call for help, “but we got nothing when tried calling out on HF. We tried calling the Maritime Mobile Net, but nothing was out there. We had Winlink on the ship that we used for e-mail and accessing the Internet to post to blogs and to Facebook, and we finally found an e-mail address for the Coast Guard. As a last-ditch effort, we used Winlink to e-mail the Coast Guard for help. Within an hour, we heard a C-130 plane, and later, a helicopter overhead.” According to Faunt, it was Walbridge, as master of the ship, who sent out the distress messages.



“I don’t know how I made it off the ship,” Faunt recalled. “I had finished serving a long watch, and then we started going down. I was exhausted. I had to swim to get to the life raft. The water was full of rigging, and here I am, in my Gumby suit, trying to swim. It was so difficult. While swimming to the raft, I came up for air and a spar was coming at me. I finally found a raft and tried to climb into it, but I almost didn’t make it, tired as I was. Through the help of my shipmates who were already aboard the raft, I got on.” The two life rafts were out about 100 miles from shore when they were rescued.

The vessel left Connecticut on Thursday, October 25 with a crew of 11 men and five women, ranging in age from 20-66. After being treated at a hospital in Elizabeth City, North Carolina, Faunt arrived back home in California on Wednesday, October 31. “I’m looking for a new boat to sail and a DXpedition to go on,” Faunt told the ARRL. “Ham radio got me into my position on the Bounty, and ham radio got me out alive!”

Courtesy ARRL Newsletter

This Week in Radiosport

This week:

- November 2 — NCCC Sprint
- November 3 — IPARC Contest (CW)
- November 3-4 — • ARRL EME Contest; Ukrainian DX Contest
- November 3-5 — • ARRL November Sweepstakes (CW)
- November 4 — IPARC Contest (SSB); High Speed Club CW Contest; DARC 10 Meter Digital Contest
- November 6 — ARS Spartan Sprint

Next week:

- November 9 — NCCC Sprint
- November 10-11 — Kentucky QSO Party; WAE DX Contest (RTTY); 10-10 International Fall Contest (Digital); JIDX Phone Contest; OK/OM DX Contest (CW)
- November 10-11 — CQ-WE Contest
- November 11 — SKCC Weekend Sprintathon
- November 12 — NAQCC-EU Monthly Sprint
- November 14-15 — CWops Mini-CWT Test
- November 15 — NAQCC Straight Key/Bug Sprint

A second Saturday Night Movie at the CAARA clubhouse is being planned later this month.... details will be sent out by CAARA EMAIL or by listening to the Sunday Night 2 Meter Club Net! Last movie, **Frequency**, was a lot of fun and pretty well attended! Don’t miss out.

