



CAARA Newsletter



AN ARRL AFFILIATED CLUB

NOVEMBER ISSUE- 2010



President's Corner

by Stan-W4HIX

CAARA conducted another successful Tech-in-a-Day program on October 9th. Nine out of ten of the participants passed. CAARA continues to introduce more people to amateur radio, and now has the responsibility to help them get on the air. I want to thank everyone who helped out, including the on-site demonstrations from Briggs and VE's who helped grade exams.

On Friday, October 29th, CAARA will help support an evaluated emergency drill funded by FEMA for the Cape Ann Emergency Planning Team. This drill will involve the communities of Cape Ann and their political leaders. CAARA continues to make its presence known in emergency communications.

I just returned from two weeks in Europe, seven days aboard the MSY Wind Star. I tried to convince the captain to let me see the radio room, but no luck. I did meet the communications officer, Iain (GM4EHP), who was an amateur radio operator. I'd love to spend a day going over the communications on the ship, satellite TV, satellite phone, onboard cell phone link (GSM and CDMA), internet, VHF, HF, plus mundane things like PBX, navigation systems (gyro and GPS), AIS and GPS. Oh well, maybe next trip.

The Board of Directors is investigating becoming a Special Services Club in ARRL. This will require more involvement with the ARRL, something that I think will be beneficial to both the ARRL and CAARA. More on this as we move along.

As we head into the fall there are many club events coming up, plus we need to get the committees set up and running. Please volunteer in areas you can help out—remember, "many hands make light work."

Stan, W4HIX

As you all know the Cape Ann Amateur Radio Associations Emergency Communications group provides emergency back up disaster and volunteer public service communications for the surrounding communities as a part of Ham Radio's missions.

As CAARA has gotten more involved with supporting Gloucester in the past few years by participating in several Massachusetts Emergency Management Agency

Communication Drills and our numerous public sporting events that go on throughout the summer here on Cape Ann another opportunity for its members to serve has become available.



Dean-KB1PGH

CAARA club member Ross Burton, W1RAB is a member of a completely volunteer community emergency response team out in California and he has recently spearheaded, along with the Lanesville LEAP, a group that has just started here in Gloucester. This newly formed group is called CERT which is short for Community Emergency Response Team. A few members of CAARA are going to begin training in the first course held in Gloucester coming up in November. This course will further expand CAARA's role in being closely involved in Gloucester's Emergency Disaster preparations.

If you want to more about CERT which is going on nationwide you can go to www.citizencorps.gov/cert or go to the Gloucester CERT website which is www.gloucester-ma.gov/cert.

73's

Dean Burgess KB1PGH

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

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

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Jon Cunningham-Editor
K1TP

Board of Directors- 2010-11

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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.

On Saturday, October 9th CAARA Club President Stan Stone, W4HIX, held one of his famous Tech In a Day Courses at the Lanesville Community Center in Gloucester. This all day study course started at 8:30 AM and went to 4 PM with a Technician Class License Exam held by CAARA VE's Ruth Hodsdon WW1N, Rick Maybury WZ1B, Dick Macphereson WB1W, Briggs Longbothum and Dean Burgess KB1PGH. During this class we had 10 attendees and 9 passed their Tech exams. A good number of those attendees came from the public service sector as local cities and towns are increasingly seeing the necessity to include amateur radio as a back up during disasters.



Tech-in-a-Day Class another huge success for the new hams and the CAARA Club!

In the above picture you can see the prospective hams studying hard for their exam.

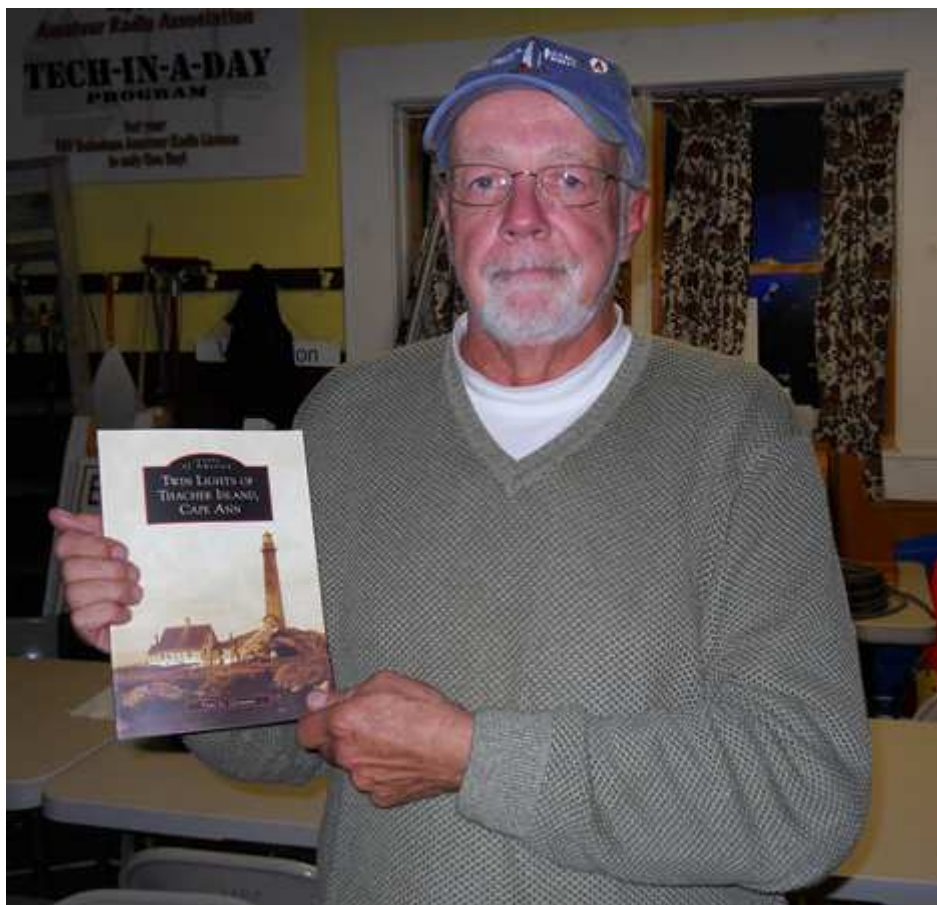
In the bottom picture you can see CAARA club member Briggs Longbothum AB2NJ giving one of the newly licensed hams a demonstration of portable, battery powered amateur radio operations with the Yaesu 817 and a Outbacker Vertical Antenna.



CAARA held it's monthly members meeting on Wednesday, October 6th. As you know in CAARA's club logo you can see the twin lights of Thachers Island which lies just off the coast of Cape Ann and Caara has held several ham radio expeditions to activate Thachers Isand for IOTA and the International Lighthouse weekend. CAARA has also been working closely with the Thachers Island Association as its members have installed a high speed internet connection link between the island and the mainland so the association can have better contact with the individuals manning the island. During Octobers members meeting the President of the Thachers Island Association, Mr Paul St Jermain, provided the members with a great pictorial presentation of the history and lore behind Thachers Island. In the photo is Mr Paul St Jermain and the book that he wrote on Thachers Island called "Twin Lights of Thachers Island, Cape Ann" which is part of the Images Of America series published by Arcadia Publishing. Paul has some of his books for sale at the meeting and I purchased one and I highly recommend getting one as it gives a great pictorial history lesson of one of the islands that we see everyday off of Cape Ann. It gives you an appreciation of the struggles of what went on during the hieght of the shipping era.

73's

Dean Burgess KB1PGH
CAARA Clerk



Rick-WZ1B was operating his Index Transceiver at the club Sunday morning.

It operates on 10-80 meters at 5 watts on phone and cw.

The receiver is very sharp and selective. You should drop by the club Sunday morning at the coffee hour, you will be amazed at the number of operating rigs and test equipment available for your use.





Sunday morning at the club house has Rick playing cw and Dick just enjoying his chair.



FCC Ban on Expletives Struck Down Supreme Court Editor, CQ Press

A federal appeals court has struck down the Federal Communications Commission's policy banning so-called "fleeting expletives" on radio or television. In a unanimous ruling Tuesday [July 13], a three-judge panel of the Second U.S. Circuit Court of Appeals called the 2004 policy "impermissibly vague" and likely to result in "self-censorship" by broadcasters apprehensive of FCC penalties for broadcasting an otherwise worthwhile program with a single use of a prohibited obscenity.

"Under the current policy, broadcasters must choose between not airing or censoring controversial programs and risking massive fines or possibly even loss of their licenses, and it is not surprising which option they choose," Judge Rosemary Pooler wrote for the court in *Fox Television Stations v. FCC*. "Indeed, there is ample evidence in the record that the FCC's indecency policy has chilled protected speech."

The ruling marked the second time the New York-based appeals court has struck down the FCC policy, which tightened the agency's indecency rule to prohibit even a single use of what the Supreme Court later called "the F word" or "the S word." In June 2007, the Second Circuit ruled that the FCC had not adequately justified the change in policy.

In its earlier ruling, the Second Circuit voiced doubts about the constitutionality of the policy, but left the question unanswered. In 2009, the Supreme Court reversed the appeals court on the administrative law question and sent the case back for a ruling on the First Amendment issue raised by Fox and other broadcasters.

Fox TV stations had been found liable but not penalized for broadcasts of the 2002 and 2003 Billboard Music Award programs. In the 2002 program, the entertainer Cher extemporaneously used the "F" word to refer to her critics. In the 2003 program, the TV celebrity Nicole Richie made unscripted use of both the "F" word and the "S" word in a comic dialogue with co-star Paris Hilton.

The appeals court's 32-page opinion cited apparent inconsistencies in the FCC's enforcement of its rule. Pooler noted that the FCC raised no objection to the use of obscenities in the World War II movie "Saving Private Ryan," but did object to obscenities in a public broadcasting documentary, "The Blues." The judge speculated that the FCC was "simply more comfortable" with the themes in a "mainstream movie" than

with a documentary about "an outsider genre of musical experience."

"Even if there were a perfectly benign way of explaining these particular outcomes," Pooler wrote, "nothing would prevent the FCC from applying its indecency policy in a discriminatory manner in the future."

In its policy, the FCC had urged broadcasters to use tape delay to guard against unscripted obscenities in live programs. Pooler noted, however, that tape delay had been in use in the 2003 awards program, but the two expletives "slipped through" anyway. "Even elaborate precautions will not protect a broadcaster against such occurrences," she wrote.

The FCC policy includes an exception for "bona fide news programs," but Pooler said that even so some broadcasters had dropped planned coverage of events because of fears that speakers would use an offending word. She also said that some broadcasters had decided to rewrite or not to broadcast programs with sexual themes even though no obscenities were scripted or uttered.

Pooler closed by leaving open the question whether the FCC could create a constitutional policy. "We hold only that the FCC's current policy fails constitutional scrutiny," she wrote. Judges Pierre Leval and Peter Hall joined her opinion.

The FCC had no immediate comment, but an appeal to the Supreme Court seems likely.

For background, see William Triplett, "Broadcast Indecency," CQ Researcher, April 16, 2004.

CQ WRITER TACKLES THE DEMISE OF THE FCC INDECENCY LAW

With the Federal courts having recently struck down the FCC's policy on broadcast indecency, many are wondering what impact if any that decision will have on the prosecution of wayward members of the ham radio community. Now, writing in his Washington Readout column in the October issue of CQ Magazine, columnist Fred Maia, W5YI, confronts this issue head on.

In his article, W5YI notes that in the past, the FCC has held that the indecency rules applying to radio and television broadcasting also applied to amateur radio transmissions. That in making obscenity or indecency determinations that the FCC staff analyzes what was actually said. If the FCC determines that the curse words transmitted actually violate its rules, it can issue a Notice of Apparent Liability or N-A-L which is a preliminary finding that the rules have been violated.

But says Maia, to date the FCC has never issued a citation or a N-A-L to a ham radio operator for solely violating its obscenity or indecency rules. The violation notice usually mentions other accompanying offenses which can be easily proven and do not involve controversial First Amendment issues.

Fred Maia is not an attorney but is a longtime FCC watcher and writer. He also possesses a very good understanding of communications law and has the ability to make it understandable to the general ham radio public. And he does that very well.

HAM RADIO BUSINESS: MORE CHINA BUILT HAM GEAR ON ITS WAY

The sales success of the low priced Wouxon dual band hand held transceivers has apparently not been lost on the well established ham radio retail trade. This with the announcement by the five member buying group Ham Pros will be selling both the Wouxon and other made-in-China ham radio gear under the banner of nowchinadirect dot com.

In addition to the Wouxon HT, other gear in their full psagre ad in the November QST Magazine include several metered power supplies, a pair of SWR and power meters and two hand held transceivers from TYT. These are the TH-F5 single bander that covers 2 meters and the UV-F1 that covers both 2 meters and 70 centimeters.

The ad notes that all of the H-T's carry Part 90 FCC certification. According to ARRL Counsel Christopher Imlay, W3KD, writing elsewhere in the same issue of QST, Wouxon and presumably other mainland China manufacturers who have obtained Part 90 certification for their equipment can legally sell these units and hams. Also that hams can use them as long as they are operated strictly in the ham radio bands.

Imlay also notes that Wouxon U.S. has chosen to limit the range in which their HT's can transmit to the ham radio bands. He says that this is akin to good fences making for good neighbors.

You can read the entire text of Attorney Imlay's regulatory interpretation along with a full review of the Wouxon dual band HT beginning on Page 52 of the November issue of QST. More on the new mainland China manufactured equipment from Ham Pro's is on-

line at nowchinadirect dot com. (ARNewsline™ from nowchinadirect.com, QST, others)

NRA's 139th Birthday Special Event Operation

The Yavapai Amateur Radio Club, Prescott, AZ, will operate a special event operation on Nov. 17, 2010, to celebrate the NRA's 139th birthday. The operation will take place from 1500 – 2300 UTC (0800 – 1600 MST) on the following frequencies: 7.250, 14.250, 21.335.

To obtain a certificate for a contact, send a 9" x 12" SASE (self-addressed, stamped envelope) to:

Michael Campbell, K7NRA
404 Lampliter Village
Clarkdale, AZ 86324

For more details, contact:

John Broughton, WB9VGJ wb9vgj@arrl.net or Terry Pemberton, KB7TRE kb7tre@cableone.net

BV100 CELEBRATES THE 100th ANNIVERSARY OF THE REPUBLIC OF CHINA

Amateur radio operators from the Republic of China Centenary Foundation in Taiwan will be activating special event station BV100 between now and December 31st, 2011. This operation is to celebrate the 100th anniversary of the Republic of China. Operations will be on all bands and modes. QSL via BV2KI. (OPDX)

2011 CAARA Dues are due,
Hello to all CAARA members,
This is a reminder that I will be sending out the yearly club membership dues notices in the next couple of weeks in the mail so keep your eyes peeled. Once again if any club member is in severe financial hardship and cannot afford the dues, please contact either me at dburg101@aol.com or club President Stan Stone and we can help find a sponsor for you.
73's
Dean Burgess KB1PGH
CAARA Clerk

CAARA Flea

CAPE ANN AMATEUR RADIO ASSN
AMATEUR RADIO FLEA MARKET

**Saturday
November 20th**

9:00 AM 'til 12:00 PM

**Pigeon Cove Circle Center
8 Breakwater Ave**

Rockport, MA

next to Cape Ann Tool, just off Rt. 127 in Pigeon Cove

General Admission: \$5

Lunch will be served after the Flea Market

Seller's Information

Doors open for sellers at 8am and buyers at 9am. Advanced tables \$10, same day tables \$15 which includes one admission for each. General admission for all buyers is \$5. Please, no computers, monitors, peripherals sold at this event.



Directions

Take Rt. 128 N to Gloucester

1. Stay on Rt-128 N over the A. Piatt Andrew bridge Exit 12
2. At the 1st traffic circle (Grant Cir), take the 2nd exit and stay on Rt-128 N--go 0.8 mi.
3. At the 2nd traffic circle (Blackburn Cir), take the 2nd exit and stay on Rt-128 N--go 0.9 mi.
4. Turn left at Eastern Ave/Rt-127 N (To Rockport) and continue to follow Rt-127 N--go 3.1 mi.
5. Turn left at Rt-127 N/Main St/Railroad Ave (5 Corners) continue to follow Rt-127 N--go 1.8 mi.
6. Turn right at Breakwater Ave just past the old Cape Ann Tool Co. and go 174 ft. Pigeon Cove Circle will be on your left

Contact Dick Copithorne at dickc911@yahoo.com or 1-508-269-4941

Talk-in frequency: CAARA club repeater on 145.130 Mhz - no pl

DONATIONS NEEDED

Dick, KR1G and Rick WZ1B have been repairing radios and putting them into service. Rick has been focusing on getting clubhouse stations in service and fixing equipment for the purpose of loaning to new hams.

Currently there is a HW 9 QRP CW rig with tuner and power supply, an Index Laboratories 10-80 meters, SSB and CW transceiver, straight keys, iambic keyers, electronic keyers and an all mode, all band Kenwood receiver. More on all these later.

In our continuing work in finding new radios and repairing them for use by club members, we could use a few donations. Up to now, there have been a few of us donating equipment and parts.

It would be VERY helpful if anyone has extra parts or spare equipment that they could donate.

Though we could use most anything, we have immediate needs for the following:

- PL259 connectors
- Spare coax cable to make jumpers
- FM mic with a 3.5 mm stereo plug
- Solder
- 10 amp power supply
- 3 am power supply
- Tuners
- Desk lamps. We need 4 of them.
- 3/4 inch to 3.5 mm stereo plugs
- Fuses of all sizes and kinds
- 150 Watt solder gun
- Spools of wire of all sizes.

THANK YOU for anyone who has spare stuff that you can donate. This is all going to make serviceable equipment for us all to enjoy.

Please leave at the club with WZ1B's name on it and your name so we can be sure to thank you.

73,

Rick, WZ1B

NEWS FROM THE CAARA CLERK

We have a date and location on the Club's Christmas Party so you can mark your calendars. The party will be held on Saturday December 4th at St, Johns Episcopal Church Parish Hall which is located at 48 Middle Street in Gloucester. Middle Street is right off of Washington Street which is the first right off of the Grant circle which is the first rotary off of RTE 128 as you come off of the Annisquam Bridge. Take Washington Street as you head towards the center of town, you'll go over railroad tracks then Dunkin Donuts on the right and keep going straight. You'll see the 48 Middle Street parking lot directly across from Winchester Fishing supply which will be on your right.

Set up for the party will start at 5 PM and the party will start at 6 PM-same time and theme as the years past. There will a pot luck covered dish dinner, Yankee Swap, and door prizes. More details to come as we get closer to the date.



Bob Heil K9EID at age 18 A rare shot of Bob's state of the art VHF station in 1959. You can still hear Bob on this 20A which he built from a kit in 1958. The antenna was a 128 element 'J' beam. His receiver was a Collins 51J4 and Parks converter. Also in the 6' rack was a Heath Seneca and home brew modulator. Bob still has the gold plated 664 microphone.



Email from a local lobsterman I know in town: I hooked up a section of the transatlantic cable yesterday off Halibut Point in the Ipswich Bay. We wrestled it on deck washed it off and brought it in. Though interesting, this is not uncommon. Fishermen for years have been hooking into the cable . *The photo on the next page is a sample piece at a museum and I have asked and have been promised a section of the cable !!* K1TP-Jon





<http://www.atlantic-cable.com/Article/AtlanticCables/index.htm>, a good site for info on this early telegraph system.

RADIO UGANDA ON 7.195 MHZ

A shortwave station on the African continent is playing hardball and is refusing to leave the amateur only portion of 40 meters. This, even after notification from the government, Radio Uganda continues to operate on the amateur radio frequency of 7.195 MHz.

Following notification by 5X1JM, the Uganda Communications Commission informed Radio Uganda the broadcaster is not permitted to use the frequency within the amateur radio exclusive spectrum. So far, the station has continued to use the frequency and its believed that it may be some time before they move out.

Observers say that at least the point has been made and action initiated by Ugandan government telecommunications authorities against the now unauthorized use of the frequency.

One other note. Uganda radio amateurs have been authorized by Uganda Communications Commission to use the band 7.1 to 7.2 MHz.

Two New ARRL Kits Coming Soon

Two new ARRL kits are in the final throes of production. The first is a Morse code oscillator, produced for ARRL by MFJ Enterprises. The project is a good "beginners" electronics kit. We expect the kit will be popular with members, particularly newcomers, and with clubs, instructors and teachers seeking a classroom kit-building experience. rcuit and its components.

A second kit is a PIC programming lab and project, produced for ARRL by Cana Kit (Canada). This more substantial kit is intended to be used with ARRL's PIC Programming for Beginners book. The kit includes all the necessary components, parts and boards, and follows the book's step-by-step exercises and tutorial. The kit also includes all the necessary parts to build a microprocessor-controlled CW keyer, which is the book's culminating project. Both the ARRL Morse Code Oscillator and ARRL's PIC Programming Kit will be available later this fall. Watch for details at www.arrl.org/shop.



CAARA Participates in CAEPT Drill,

On Friday October 28th several members of the Cape Ann Amateur Radio's Emergency Communications Team participated in a day long Cape Ann Emergency Planning Team Emergency (CAEPT) Preparedness Drill which was held at the Fuller School in Gloucester. This tabletop drill was to coordinate emergency responses between the 4 communities of Cape Ann in case of a fictional "Ice Storm" that hit Cape Ann. Local fire, police and DPW agencies participated in the drill, along with the Red Cross, MEMA, Addison Gilbert Hospital and other top city officials. This \$ 30,000 exercise was paid for by the Department of Homeland Security through the Massachusetts North East Homeland Security Regional Advisory Council. In the photo you can see Caara Club member Rick Maybury, WZ1B assisting Gloucester's Mayor Carolyn Kirk at the Gloucester Table as he passes communications between the other communities which each had their own table to organize themselves and to utilize the Incident Command System.

73's

Dean Burgess KB1PGH

Make A Quick, Easy, Cheap, NVIS Antenna for Roadside Operating.

Or... "K.I.S.S." (Keep It Simple Sherlock) by D. W. Thorne, K6SOJ

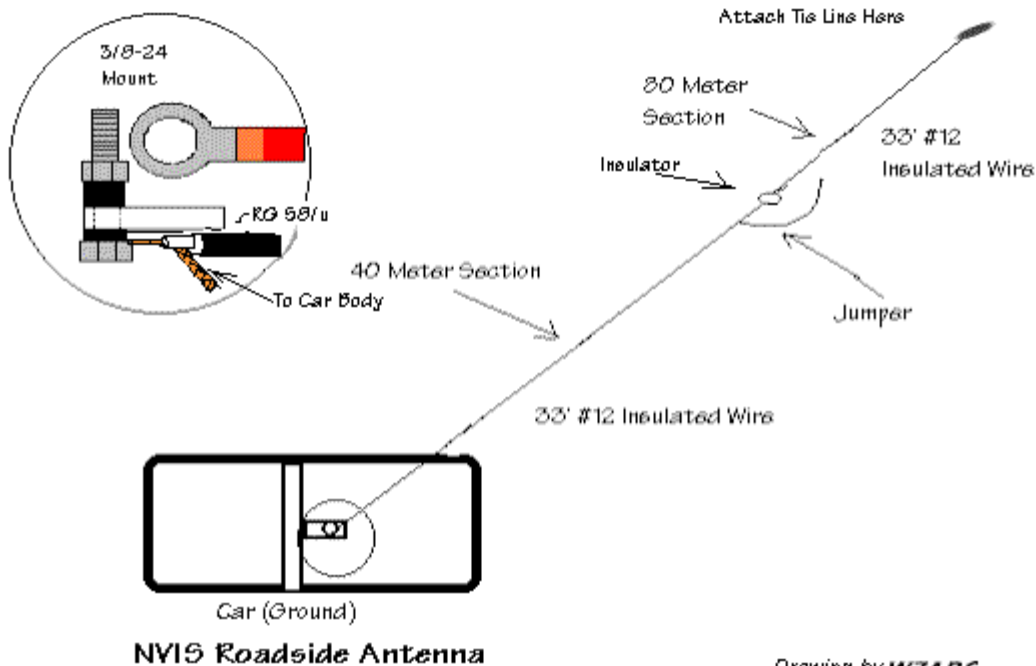
I recently purchased a second hand ICOM 706 Trans-

ceiver. What a great rig! A lot of radio neatly packed in a compact rugged case. But...that is another story. As most EMCOMM operators know, most of our communications are regional. (In the 30 to 200 mile range.) We also know that for this range, a NVIS (Near Vertical Incident Skywave) signal usually works best.

After installing the IC-706, and connecting it to my Outbacker Perth 2M through 80M mobile vertical, I was anxious to make a few contacts. The Outbacker is an excellent antenna, but as with all verticals, the radiation angle is towards the horizon. For regional work it left much to be desired.

On 40 meters, initial signal reports were only poor to fair between my home location in Macdoel, CA and KA7RAM, Bill, in Klamath Falls, OR, (30 air miles) and N6SSQ, Fergy, in Alturas, CA, (80 air miles). At the same time of day (1500L), and under the same conditions, good signals reports were received from Spokane, WA. It was nice to talk to the boys in the Evergreen State, but not necessarily useful for regional EMCOMM work.

I don't plan to do a lot of HF mobile operating while actually moving. In the past, for "mobile at rest" HF work, I have erected a 20 ft. (or so) portable mast, and hauled up a G5RV. This works well, but is a lot of hassle and takes more time than I wished. A "dipole" also requires more space, in two different directions, plus additional support. Also, an ATU (antenna tuning



unit) of some sort is also required for non-resonant antennas.

I wanted a quick, easy to erect antenna, that would allow me to pull to the side of the road, and quickly get on the air with a NVIS signal.

The solution? Go to the shop junk box! (Or your local electronics supply house.) I found an old 3/8 x 24 antenna mount, and affixed it to the end of the steel light bar on the roof of the Land Cruiser (which is grounded well to the vehicle's body). Next, a 33 ft. long piece of #12 insulated wire was cut and a heavy duty lug (3/8" bore) was soldered to each end. (Make sure the connections are mechanically strong as well as making a good electrical connection.)

Using a short 3/8x24 cap screw and a couple of "jam nuts". One end of the 1/4 wave wire was attached to the center feed point and strung out just above head height, using a length of parachute cord tied through the solder lug on the other end. This distal end can be secured to a tree, a post, a rock, or even a stake in the ground.

The wire can be strung out in any convenient direction. The initial meter readings by the antenna analyzer gave a SWR of 1.5:1, and a impedance of 40-60 ohms depending upon where in the 40 meter band I tuned.

Close enough for "government work"!

I decided to give it a try on 7232 kHz. I heard a signal just below that frequency and tuned down to 7230.

There was my old friend W6US, Howard, in

McArthur, CA (about 60 air miles) calling CQ!

I answered. Howard responded with, "Hello K6SOJ, you are 5 by 9 here." It tuned out that he was also testing a new mobile installation. BINGO! We chatted for awhile. Later K7DXV, Ed, in Klamath Falls chimed in.

"You're 5 x 9 here Dave."

What a simple solution!

I am far from what you would call an expert on antenna theory. What I am mainly interested is being able to quickly communicate from a "mobile" location; not cause any interference; and NOT damage the transceiver.

From what little I know, the 1/4 wavelength wire element is one half of this type of antenna, and the 5000 lbs. of steel in the Land Cruiser (or your vehicle) is the other half. I now have a 40M NVIS antenna, with which I can pull off to the side of the road, and be operating in less than five minutes!

For longer distances, and if you can park close enough to a tree or other support that is high enough, and you have enough cord (and a rock and a good throwing arm - HI), you can have a vertical or "sloper" on the air in just a few more minutes.

Since most of HF EMCOMM work is in the 40 and 80 meter bands, the next step was to cut another 33 ft. long wire, solder two more lugs, and use a machine screw, lock washer, and wing nut to convert it quickly

for 80M use. Or, install an insulator, and a wire jumper with an alligator clip and you have a quick 'n easy 40-80M antenna.

Be sure to check any antenna for SWR and impedance before transmitting. (I use an MFJ-259 antenna analyzer.)

This antenna is basically nothing more than a unbalanced, 1/4 wavelength, horizontal wire, using a vehicle as the other half of the "dipole". A longer than 1/4 wave "random wire" will also work well if an ATU ("tuner") is used.

So...use your ingenuity and make a "quickie, NVIS, roadside portable antenna" for yourself! I'll wager that just about anything could be used for a mounting terminal, and could be mounted to a truck mirror mount, a roof rack, or a homebrew bracket secured to a metal camper, trailer, or motor home. Feed with a piece of RG-58 coax and make sure the mount is grounded well to the vehicle's body and frame.

NOTE: If you have a fiberglass or plastic car, this system will not work, unless you also add a 1/4 wave "counterpoise" that can be laid out on the earth.

Oh yes, don't forget to take down your "roadside" antenna before you drive away. And, be sure to park safely, where another vehicle can't zoom by you and get snagged on the contraption!

Communication Support for Dual Disasters in Indonesia

Following two natural disasters, an earthquake triggered tsunami, and separately an erupting volcano, radio amateurs are providing their help as the enormous response effort continues.

ORARI (Organisasi Amatir Radio Indonesia) International Affairs Coordinator Wisnu Widjaja, YB0AZ, has provided initial information about the involvement of ham radio operators in the dual disasters that hit the Indonesian archipelago earlier this week.

He said that the ORARI Communication and Rescue Task Force has joined the team of the Disaster Management of Directorate General Post and Telecommunications, Ministry of Communication and Informatics Republic of Indonesia.

"They have been operating in the field and providing communications support to the government and communities in the area where the eruption of Mount Merapi catastrophe at Yogyakarta province and the earthquake also followed by tsunami at Mentawai of West Sumatra," said Wisnu, YB0AZ.

Media reports that more than 400 died, mostly drowned after the tsunami triggered by a 7.7 magnitude offshore earthquake struck the Mentawai islands late Monday off the west coast of Sumatra. Up to 300 others are missing.

On the island of Java, several hundred kilometers away, 29 were killed when the volcano, Mount Merapi, erupted on Tuesday releasing clouds of hot gas, rocks and lava into the air. Almost 42,000 people had fled to temporary shelters around the nearby city of Yogyakarta as the area is covered in volcanic ash. The remoteness of the affected areas, poor communications, and the ongoing disaster response and relief efforts are likely to see the ORARI Communication and Rescue Task Force involved for some time yet.

News reports described repeated eruptions of Mount Merapi on Friday, October 29.

The National Disaster Coordinating Agency said 270 people were seriously injured and 142 had minor injuries. More than 22,000 people have been displaced or affected by the tsunami, which swept up villagers and their homes without warning, the agency said.



Curtis and Linda Wright at the Gloucester House Restaurant on October 29, 2010. The event was a surprise Birthday Party for our fearless Ex-President!

Radio Uganda reluctant to move from amateur radio band

An Ugandan broadcaster is playing hardball and is refusing to leave the amateur radio only portion of 40 metres. This, even after notification from the government, **Radio Uganda** continues to operate on the amateur radio frequency of 7 195 kHz.

Following notification by 5X1JM, the Uganda communications Commission informed Radio Uganda the broadcaster is not permitted to use the frequency within the amateur radio exclusive spectrum. So far, the station has continued to use the frequency and its believed that it may be some time before they move out.

Observers say that at least the point has been made and action initiated by Ugandan government telecommunications authorities against the now unauthorized use of the frequency.

Fred Scheepers, ZS1FCS, is requesting your participation in monitoring the 40 metre amateur band and report any intrusion by unauthorised stations to the SARL - IARU monitoring service by email to intruder@sal.org.za.

Please include as much information as possible such as time of operation, station identification and, if available, an mp3 recording of the station identification which can normally be heard on top of the hour and on the half hour.

W1FSK- Steve Marshall is now a silent key.

Steve was an active member of CAARA years ago and attended our fleamarkets with radio treasures to sell every year.

Email from his wife:

Dear dear and treasured friend of my beloved,
This morning at 6:46AM Stephen was born on the breath of dawn and is now forever held in the palm of God's hand.

His funeral will be at the St Mary's Rockport Episcopal Church, Rockport Ma at 11AM NOV 6th with buffet to follow at the Emerson Inn also of Rockport.

Please hold him close in your hearts. He treasured you and your friendships. His life was richer for your part in it.

Shalom with love,
Elsa

Battery History

Although Alessandro Volta in Italy is usually credited with being the inventor of the modern battery (Silver-Zinc), ancient cells have been discovered in Sumerian ruins, origin around 250 BC.

The first evidence of batteries comes from archaeological digs in Baghdad, Iraq. This first "battery" was dated to around 250 B.C. and may have been used in simple operations to electroplate objects with a thin layer of metal, much like the process used now to plate inexpensive gold and silver jewelry. Possibly one of the first uses for batteries, although there is some dispute among scholars. Wikipedia entry for Baghdad Battery.

Batteries were re-discovered much later by Alessandro Volta after which the unit of electrical potential was named, the volt. The jar was found in Khujut Rabu just outside Baghdad and is composed of a clay jar with a stopper made of asphalt. Sticking through the asphalt is an iron rod surrounded by a copper cylinder. When filled with vinegar - or any other electrolytic solution - the jar produces about 1.1 volts.

What is a Battery?

A battery, in concept, can be any device that stores energy for later use. A rock, pushed to the top of a hill, can be considered a kind of battery, since the energy used to push it up the hill (chemical energy, from muscles or combustion engines) is converted and stored as potential kinetic energy at the top of the hill. Later, that energy is released as kinetic and thermal energy when the rock rolls down the hill. Not real practical for everyday use though.

Common use of the word, "battery" in electrical terms, is limited to an electrochemical device that converts chemical energy into electricity, by a galvanic cell. A galvanic cell is a fairly simple device consisting of two electrodes of different metals or metal compounds (an anode and a cathode) and an electrolyte (usually acid, but some are alkaline) solution. A "Battery" is two or more of those cells in series, although many types of single cells are usually referred to as batteries - such as flashlight batteries.

As noted above, a battery is an electrical storage device. Batteries do not make electricity, they store it, just as a water tank stores water for future use. As chemicals in the battery change, electrical energy is stored or released. In rechargeable batteries this process can be repeated many times. Batteries are not

100% efficient - some energy is lost as heat and chemical reactions when charging and discharging. If you use 1000 watts from a battery, it might take 1050 or 1250 watts or more to fully recharge it.

Internal Resistance

Part - or most - of the loss in charging and discharging batteries is due to internal resistance. This is converted to heat, which is why batteries get warm when being charged up. The lower the internal resistance, the better.

Slower charging and discharging rates are more efficient. A battery rated at 180 amp-hours over 6 hours might be rated at 220 AH at the 20-hour rate, and 260 AH at the 48-hour rate. Much of this loss of efficiency is due to higher internal resistance at higher amperage rates - internal resistance is not a constant - kind of like "the more you push, the more it pushes back".

Typical efficiency in a lead-acid battery is 85-95%, in alkaline and NiCad battery it is about 65%. True deep cycle AGM's (such as Concorde and Deka) can approach 98%.

Practically all batteries used in PV and all but the smallest backup systems are Lead-Acid type batteries. Even after over a century of use, they still offer the best price to power ratio. A few systems use NiCad, but we do not recommend them except in cases where extremely cold temperatures (-50 F or less) are common. They are expensive to buy, and very expensive to dispose of due to the hazardous nature of Cadmium.

We have had almost no direct experience with the NiFe (alkaline) batteries, but from what we have learned from others we do not recommend them - one major disadvantage is that there is a large voltage difference between the fully charged and discharged state. Another problem is that they are very inefficient - you lose from 30-40% in heat just in charging and discharging them. Many inverters and charge controls have a hard time with them. It appears that the only current source for new cells seems to be from Hungary.

An important fact is that ALL of the batteries commonly used in deep cycle applications are Lead-Acid. This includes the standard flooded (wet) batteries, gelled, and AGM. They all use the same chemistry, although the actual construction of the plates etc varies.

NiCads, Nickel-Iron, and other types are found in a

few systems, but are not common due to their expense, environmental hazards, and/or poor efficiency.

Major Battery Types

Batteries are divided in two ways, by application (what they are used for) and construction (how they are built). The major applications are automotive, marine, and deep-cycle. Deep-cycle includes solar electric (PV), backup power, and RV and boat "house" batteries. The major construction types are flooded (wet), gelled, and AGM (Absorbed Glass Mat). AGM batteries are also sometimes called "starved electrolyte" or "dry", because the fiberglass mat is only 95% saturated with Sulfuric acid and there is no excess liquid.

Flooded may be standard, with removable caps, or the so-called "maintenance free" (that means they are designed to die one week after the warranty runs out). All gelled are sealed and are "valve regulated", which means that a tiny valve keeps a slight positive pressure. Nearly all AGM batteries are sealed valve regulated (commonly referred to as "VRLA" - Valve Regulated Lead-Acid). Most valve regulated are under some pressure - 1 to 4 psi at sea level.

Lifespan of Batteries

The lifespan of a deep cycle battery will vary considerably with how it is used, how it is maintained and charged, temperature, and other factors. In extreme cases, it can vary to extremes - we have seen L-16's killed in less than a year by severe overcharging, and we have a large set of surplus telephone batteries that sees only occasional (5-10 times per year) heavy service that are now over 25 years old. We have seen gelled cells destroyed in one day when overcharged with a large automotive charger. We have seen golf cart batteries destroyed without ever being used in less than a year because they were left sitting in a hot garage without being charged. Even the so-called "dry charged" (where you add acid when you need them) have a shelf life of 18 months at most. They are not totally dry - they are actually filled with acid, the plates formed and charged, then the acid is dumped out.

These are some typical (minimum - maximum) typical expectations for batteries **if used in deep cycle service**. There are so many variables, such as depth of discharge, maintenance, temperature, how often and how deep cycled, etc. that it is almost impossible to give a fixed number.

- Starting: 3-12 months
- Marine: 1-6 years
- Golf cart: 2-7 years
- AGM deep cycle: 4-7 years
- Gelled deep cycle: 2-5 years
- Deep cycle (L-16 type etc): 4-8 years
- Rolls-Surette premium deep cycle: 7-15 years
- Industrial deep cycle (Crown and Rolls 4KS series): 10-20+ years
- Telephone (float): 2-20 years. These are usually special purpose “float service”, but often appear on the surplus market as “deep cycle”. They can vary considerably, depending on age, usage, care, and type.
- NiFe (alkaline): 5-35 years
- NiCad: 1-20 years

Mini Factoids

Nearly all batteries will not reach full capacity until cycled 10-30 times. A brand new battery will have a capacity of about 5-10% less than the rated capacity. Batteries should be watered **after** charging unless the plates are exposed, then add just enough water to cover the plates. After a full charge, the water level should be even in all cells and usually 1/4" to 1/2" below the bottom of the fill well in the cell (depends on battery size and type).

In situations where multiple batteries are connected in series, parallel or series/parallel, replacement batteries should be the same size, type and manufacturer (if possible). Age and usage level should be the same as the companion batteries. Do not put a new battery in a pack which is more than 6 months old or has more than 75 cycles. Either replace with all new or use a good used battery. For long life batteries, such as the Surette and Crown, you can have up to a one year age difference. The vent caps on flooded batteries should remain on the battery while charging. This prevents a lot of the water loss and splashing that may occur when they are bubbling. When you first buy a new set of flooded (wet) batteries, you should fully charge and equalize them, and then take a hydrometer reading for future



reference. Since not all batteries have exactly the same acid strength, this will give you a baseline for future readings.

When using a small solar panel to keep a float (maintenance) charge on a battery (without using a charge controller), choose a panel that will give a maximum output of about 1/300th to 1/1000th of the amp-hour capacity. For a pair of golf cart batteries, that would be about a 1 to 5 watt panel - the smaller panel if you get 5 or more hours of sun per day, the larger one for those long cloudy winter days in the Northeast.

Lead-Acid batteries do NOT have a memory, and the rumor that they should be fully discharged to avoid this “memory” is totally false and will lead to early battery failure.

Inactivity can be extremely harmful to a battery. It is a **VERY** poor idea to buy new batteries and “save” them for later. Either buy them when you need them, or keep them on a continual trickle charge. The best thing - if you buy them, use them.

Only clean water should be used for cleaning the outside of batteries. Solvents or spray cleaners should not be used.

NASA celebrates 10th anniversary of Space Station

The **International Space Station** partner agencies

will mark a major milestone on November 2 with the 10-year anniversary of people living permanently aboard the space station. NASA will commemorate the event with a news conference featuring the six crew members currently in orbit. NASA Administrator Charles Bolden will begin the event, speaking live to the station crew at 9:15

a.m. EDT from the Kennedy Space Center in Florida. His remarks and the following news conference will be broadcast live on NASA Television.

The news conference will begin immediately after the administrator’s conversation with the crew and be open to participation from accredited media representatives at participating NASA or international partner locations. U.S. media planning to attend

should contact their respective NASA newsroom by 4 p.m. Monday, November 1.

Expedition 25, the 25th crew to live and work aboard the station, consists of Commander Doug Wheelock, KF5BOC; his fellow NASA astronauts Scott Kelly and Shannon Walker, KD5DXB; and Russian cosmonauts Fyodor Yurchikhin, RN3FI Alexander Kaleri, U8MIR and Oleg Skripochka, RN3FU.

The crew is awaiting the launch of space shuttle Discovery's six astronauts on the STS-133 mission to deliver supplies, spare parts and a permanent cargo module to the station. STS-133 is scheduled to lift off at 4:40 p.m. EDT on Nov. 1 from Kennedy.

“As we look forward to the next 10 years, taking us through 2020, the space station will serve many roles,” said Mike Suffredini, International Space Station program manager.

”With its permanent human presence, it will serve as a foothold for long-term exploration into space, being an integral part of testing human endurance, equipment reliability and processes essential for space exploration.”

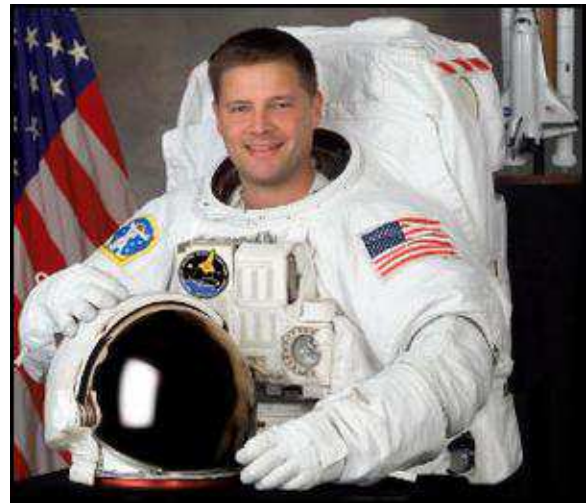
Since the Expedition 1 crew arrived at the station, humans have continuously occupied the orbiting laboratory. More than 196 people have visited the complex, and by the exact time of the anniversary (5:21 a.m., Nov. 2, 2000), the station will have completed 57,361 orbits of the Earth, traveling some 1.5 billion miles.

Representatives of the five international agencies that built and operate the station have agreed in principle to continuing its use for another decade. The governments of the 15 participating nations in the station partnership are in the process of formally endorsing that plan. More than 600 different research and technology development experiments have been conducted on the station, many of which are producing advances in medicine, recycling systems and a fundamental understanding of the universe.

In addition to the crew news conference, NASA is updating the content of the International Space Station section of its website in recognition of the 10th anniversary. The update supports the on-going transition from station assembly to utilization. The website now will focus on the research in the unique microgravity environment of low-Earth orbit.

The updated section of the NASA website incorporates an improved organization system to help visitors find what they are looking for with regard to research and technology development, crews and expeditions, international cooperation and the new capabilities of the station as a U.S. national laboratory.

The new space station section also provides better linkages with social media applications, including a new International Space Station Program scientist blog, and Twitter accounts for astronauts aboard the station and the National Laboratory.



NASA astronaut Doug Wheelock,
KF5BOC



Russian cosmonaut Fyodor Yurchikhin, RN3FI



Shack Pictures: K1TP in Rockport. Main station consists of a TenTec Omni VII with an Alpha 99 Amp, and a secondary station consisting of a Icom PROIII and the Ameritron 80B amplifier. Icom 7000 for digital modes on HF, FM on 2/440, and portable applications. Antennas include dipoles for 40/80 and a beam for 10-20.

I would like to post a few pictures each month of different ham shacks and antenna farms. Please Email me with photos of your shack, radio projects, etc....thanks in advance, Jon



1959 station...can you identify the radio's?

NEXT MONTH'S ISSUE:

- ◆I will be interviewing two CAARA members and hopefully get some photos of their shack and antenna farm.
- ◆Photo's from the CAARA November Fleamarket
- ◆Details of the “**Great CAARA Crystal Radio Design Contest**” being organized by Briggs-AB2NJ. This contest is open to all club members and sounds like it will be a blast. Briggs will be offering kits at a low price for each entrant with core parts.....more details next month.