



CAARA Newsletter



AN ARRL AFFILIATED CLUB

SEPTEMBER ISSUE- 2009

President's Corner

by Curtis AA3JE

People accuse me of being biased with respect to CAARA, and I guess I am. I think that the members of this

club are the absolute BEST people I have ever had the pleasure to work for. This month we had the Second Annual Seagull and Mosquito Festival out on Thatcher's Island, with OVER 200 contacts!. The island team was supported by a base team at the club, and they overcame many significant obstacles. I know they overcame them, because I ended up dealing with the overflow of hams up and down the East Coast and across the country who wanted to contact the island hoppers!. Please pack the seagull repellent and consider joining the crew next year. It was fantastic.

Gloucester held its first Triathlon this year, and we helped with the COMS, supporting Gloucester EMS. It went very well, including our test of the 30 foot emergency mast system with portable adhesive mounting system. We were complimented by the Mass. EMS on the system, but were asked to remove the duct tape residue from their multi-million dollar command center vehicle.....

Special thanks to Bob Quinn and to the club members who did the testing the Sunday of the Island and the Triathlon. We ran three events at the same time, and could not have done it without our members.

Please remember to come to the September Annual meeting. It is your chance to decide who represents you in club leadership, and besides, if you don't come, we feel free to elect you in your absence.

You are all the very best in Amateur Radio.

CAARA and NSRA provide communications for Gloucester Triathlon

Members of the Cape Ann Amateur Radio Association and the North Shore Radio Association provided public service communications for Gloucesters first Triathlon which was held on August 9th. There were amateur radio operators placed at the Command center at St. Peters square, Addison Gilbert Hospitals emergency room and several other places along the race route. We were able to provide logistic support for the race directors such as the locations of the swimmers, bicyclists and runners, medical updates to Addison Gilbert Hospitals emergency room and bicycle mechanics along the route. We even were able to call for the ambulance for a fallen rider. Club President Curtis Wright AA3JE as the Race net control did an excellent job keeping the Command post fully up to date with what was going on along the race course. This event provided excellent exposure to the public of the communications abilities that amateur radio operators can provide. We would like to thank the following hams for volunteering thier time and experience on this event: Eric Horwitz KA1NCF Curtis Wright AA3JE Bill Poulin WZ1L Chuck Downey N1OCT Sue Downey N1XQW John Puskarik KC2CQI Bruce Pigott KC1USThe picture was provided by Dean Burgess KB1PGH, who was at

the Bicycle checkpoint at the corner of RT 127 and Magnolia Ave. The riders are coming down RT 127 North and taking the right onto Magnolia Ave.

Submitted by
Dean-
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

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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.



A review of the new Yaesu FT 2900R Mobile by Dean Burgess KB1PGH

I was in the search of a 2 MTR mobile unit for my car and I noticed a Yaesu ad in QST featuring the new FT 2900R mobile rig. I then went online to eham.net and looked for any reviews of the FT 2900R. I remember though reading some other reviews of the older version of this rig which is the FT 2800 that the quality of construction was not too good with the radio having wobbly control knobs. The Yaesu FT 2900 was just released so I did find a few reviews of the radio. So far the reviews were favorable and I've had good luck with my Yasu FT 857 so I decided to take the plunge. I called Ham Radio Outlet in Salem New Hampshire and ordered one. The price was \$ 159.95 and it arrived the next day with free shipping. Right out of the box I noticed the radio had some weight to it as it weighs 4 pounds. This is primarily because the whole radio itself is a massive heatsink. The radio has no fan to cool itself off from it's 75 watts of transmitting power. I am very impressed with the overall feel and build quality of the Yaesu FT 2900R. Especially for such a low price. The whole case is nice thick metal and it feels like it could be run over by Dick Copithorne's, KR1G, bucket truck and it would still work. The knobs have nice tension and don't feel

loose. The display is bright and the numbers or alpha numeric display are big as well. You certainly won't have to squint to see the display while driving. Setting the memories is a snap using the menu in sequence. Once I got CAARA's 145.130 MHZ repeater loaded up I hit the transmit key and had a QSO with Jon K1TP. Jon's voice came in crisp and clear and loud with the 3 watts of audio this radio has to offer. This radio has more than enough audio for any mobile environment. My transmit audio was good as well. There are many other nice features that come with the FT 2900R. Of course you can adjust the wattage output to accompany any mobile antenna but you can also adjust the Mic gain as well and have a password to prevent unauthorized use. The radio also has two small feet that you can attach and it has a DTMF backlit microphone. The DC cord is a heavier gauge and is fused. You can also listen to the NOAA weather broadcasts and it has weather alert. Overall I would highly recommend the Yaesu FT 2900R for any club member looking for a heavy duty, high watt, low cost mobile. For those who don't need all 75 watts or something so heavy duty, Yaesu has a new little brother in the FT 1900R. A 55 watt version which is \$15 cheaper.

CAARA members - Update on EQSL and ARRL (LOTW) Awards Status for W1GLO - Hank W4RIG

As of August 4, 2009 we have 71 Countries and 46 States verified on eQSL We need only Colorado, Maine, Montana and Wyoming for the eQSL WAS Award and only 29 more countries for DX100

With ARRL (LOTW) we have 68 Countries and 39 States with verified QSL contacts. We need 31 more verified countries on LOTW and 11 States for WAS - Arizona, Kansas, Maine Mississippi, Montana, North Dakota, Nebraska, New Hampshire, Rhode Island, Vermont, and Wyoming - Some can undoubtedly be obtained as W1T this next weekend August 8 & 9 - esp. the New England States if they file with LOTW and eQSL - please encourage contacts made as W1GLO from 6 Stanwood or W1T from Thacher Island to file their contacts with both eQSL and LOTW - Thanks for your help -

Hank W4RIG

W1GLO QSL Chairman

P.S. I have personally worked ME, CO, and WY and have heard MT on 20 M PSK 31 so they are out there to contact - I personally need 13 more states for WAS on eQSL working 20 M PSK 31.



I bit the bullet last week and purchased a new Icom 7000 at HRO Manufacturer's Day in Salem, NH and acquired a Tigertronic's Signal Link interface for running digital modes. The Icom 7000 works wonderfully on all bands and modes.

My first digital contact on 14070....with who else but Hank-W4RIG. I had visions of working far off places in distant lands and my first contact is 5 miles away in Gloucester!

I have worked about 20 countries and 15 states in just a few days running about 20 watts into my hexbeam. If you haven't tried digital, it might be just the mode for you especially if you can only run low power or have antenna restrictions.

Jon- K1TP



Nice job building a tennis ball-
antenna launcher by Tom-NiNKA

FCC to Utilities: Don't Look to Hams to Pay for Your Testing

In a case that goes back more than 10 years, the FCC has told a Pennsylvania utility that the utility is responsible for paying for "efforts to locate and correct instances of [power line] noise." At least one amateur has been complaining to the FCC since 2000 regarding harmful radio interference possibly caused by power line equipment that is maintained by Pittsburgh's Duquesne Light Company (DLC).

Bob Thacker, K3GT, of Allison Park, Pennsylvania -- a suburb just northeast of Pittsburgh -- first noticed harmful interference back in 1996. He told the ARRL that DLC would come out and fix things, but that he would soon hear noise again. After a few years of this, he complained to the FCC, and in 1995, the FCC notified DLC of the complaint. A month later, DLC responded to the FCC, detailing their efforts to resolve the matter and indicated that the most recent complaint was the result of changed conditions, not the continuation of an old problem.

According to the FCC, DLC again communicated with the FCC in a letter dated June 2, 2005, explaining the efforts they had taken to repair three lightning arrestors. During the latter half of 2005 and into 2006, Thacker continued to experience interference and continued to report these instances to DLC, requesting that DLC correct the problems. In 2007, he located a specific pole as one source of noise and advised a Mr Luther of DLC of this fact; Mr Luther advised Thacker that he would submit a work order.

In March 2008, DLC contacted Thacker, indicating that it had swept the area where suspected pole was located and discovered no noise. Rather, DLC indicated that the noise source was a neon light. Finally, DLC stated that it had spent "significant amounts of time and money" attempting to address the his concerns and that DLC would require him to pay for any additional efforts to locate and correct instances of noise.

Special Counsel of Amateur Enforcement Laura Smith responded to DLC in July of this year, saying "Such a response is not acceptable," spelling out what she called "the most important rules relating to radio and television interference from incidental radiators."

Long Wavelength Demonstrator Array

ScienceDaily reports that scientists from NRL's Space Science and Remote Sensing Divisions have generated the first scientific results from the Long Wavelength Demonstrator Array (LWDA).

The measurements were obtained during field tests and calibration of two prototype antennas for the much larger Long Wavelength Array (LWA), which will eventually consist of nearly 13,000 similar antennas.

Utilizing radio emissions from the approximately 300 year-old Cassiopeia A (Cas A) supernova remnant (SNR)—one of the brightest astronomical radio sources in the sky—to establish baseline measurements, NRL scientist and National Research Council (NRC) postdoctoral fellow Dr. Jake Hartman utilized the LWDA to confirm and extend a study initiated by fellow NRL-NRC postdoc Dr. Joseph Helmboldt.

Once completed, the LWA will provide an entirely novel view of the sky in the radio frequency range of 20-80 MHz, currently one of the most poorly explored regions of the electromagnetic spectrum in astronomy.

The LWA will be able to make sensitive high-resolution images, scanning the sky rapidly for new and transient sources of radio waves that may represent the explosion of distant massive stars or detect emissions from planets outside of our own solar system and previously unknown objects or phenomena.

Read the full story Scientists Make First Discovery Using Revolutionary Long Wavelength Demonstrator Array at <http://www.sciencedaily.com/releases/2009/08/>

The Ingenious Circuits of Sir Douglas Hall

Sir Douglas Hall had many radio designs published from the 1940's to 1990's in UK publications such as Practical Wireless, Radio Constructor and Radio Bygones. Fortunately scans of these classic designs are available on the web.

In a recent posting on the GQRP reflector Steve G0XAR highlighted a website that contains many of the classic radio designs by Sir Douglas Hall.

The first article on the website was published by Practical Wireless back in December 1943, a time when the Kingdom and Empire were engaged in total war with the Axis powers, and it starts thus:

"The writer lives in Northern Rhodesia and his nearest neighbours are 25 miles away. The nearest town, cinema, doctor and electric light mains are 77 miles away by a road that is not always passable.

Wireless is therefore supremely important but there are several problems in the design of a receiver suitable for these conditions. It must be very sensitive to provide reliable reception from Daventry [in the UK] under all conditions, and it must be very economical owing to the high cost of batteries in these parts. They are not only expensive, but very difficult to secure."

The designs of Sir Douglas Hall can be downloaded from <http://www.spontaflex.free-online.co.uk/>

The Telegraph Obituary - Sir Douglas Hall, Bt
<http://www.telegraph.co.uk/news/obituaries/1460853/Sir-Douglas-Hall-Bt.html>

GQRP Yahoo Reflector
<http://groups.yahoo.com/group/gqrp/>

PW Publishing Ltd
<http://www.pwpublishing.ltd.uk>

Radio Bygones
<http://www.radiobygones.co.uk/>

SEPTEMBER MEETING IN DC TO DISCUSS TEXTING WHILE MOBILE

A national ban against texting and possibly other forms of communication while mobile could be in the nations future. This with word that Transportation Secretary Ray LaHood plans to assemble a group of experts to figure out what to do about drivers who use cell phones and do texting while behind the wheel.

In an August 4th release Transportation Secretary Ray LaHood says that he intends to gather safety advocates, law enforcement and transportation officials, members of Congress and scholars who have studied distracted driving for a summit meeting in September in Washington D.C.. In his statement Secretary LaHood said that everyone knows that text messaging while driving is dangerous and the government is going to do something about it.

While no mention was made regarding the use of two-way radio while driving a vehicle this should be of concern to hams who like to operate mobile in motion. If some sort of federal ban on the use of electronic communications devices while driving does come about it could easily be broad based and all inclusive. This in turn could place hams, CB operators and other two-way radio users in the position of having to seek after the fact exemptions to continue the operations they have safely performed for years.

As we go to air there are fourteen states plus the District of Columbia that have passed laws banning text messaging while driving. Also, many states require the use of hands free devices to use cellular voice telephones while in motion although most have specific exemptions included for federally licensed ham radio operators.

LaHood indicates that that summit meeting will present several recommendations for specific actions to address the problem of distracted drivers on a national level. For ham radio it means keeping a close eye on the outcome and any laws that such a gathering of experts might recommend.

TWO ASTRONOMERS PREDICT SUNSPOTS WILL SOON COMPLETELY DISAPPEAR

Are sunspots disappearing for good? Two solar researchers say this is the case.

Most hams users know that there is a direct correlation between sunspots and high frequency propagation conditions. In general, the more sunspots there are, the more DX you will be able to work. This usually happens in 11 year cycles with the last solar maximum having taken place in 2000.

The current Solar Cycle which is Cycle 24 should peak in roughly next year in 2010. Only one problem. There have been few sunspots this year and very little easy to work DX. And now there may be an answer as to why.

Spaceweather.com reports that astronomers Bill Livingston and Matt Penn of the National Solar Observatory in Tucson, Arizona, have found that sunspot magnetic fields are definitely waning. Not only that. They say that sunspots could completely disappear within decades.

Livingston and Penn have been measuring solar magnetism since 1992. Their technique is based on a complex system called the Zeeman splitting of infrared spectral lines emitted by iron atoms in the vicinity of sunspots. They reached their conclusion by extrapolating their already collected data into the future.

But Spaceweather also says not to count out sunspots just yet. It notes that while the data of Livingston and Penn is widely thought to be correct, that any far reaching extrapolations may be premature. It says that this type of measurement is relatively new, and the data reaches back less than 17 years. In the end it appears as if the giant solar disk we call the sun is the only one who holds the answers to the future of its spots and how good DX will be in the coming years.

PAINT ON PHOTOVOLTAIC SOLAR CELLS HOLD PROMISE FOR EMCOMM

Science Daily reports that solar cells could soon be produced more cheaply using nanoparticle inks that allow them to be printed like newspaper or painted onto the sides of buildings or rooftops. This to absorb sunlight and produce electric power.

The article cites the work of University of Texas chemical engineer Brian Korgel. Korgel is hoping to cut the cost of producing high output solar cells to one tenth of their current price by replacing the standard manufacturing process for solar cells.

Right now photovoltaic cells are made using a gas phase depositing system that must be carried out in a vacuum chamber and requiring high temperatures. For the past two years, Korgel and his team have been working on this low-cost, nanomaterials solution to photovoltaics manufacturing. He believes that nanomaterial inks could be printed onto a surface using a roll-to-roll process on a plastic substrate or stainless steel. Because of this the prospect of being able to paint the inks onto a rooftop or building is not far fetched as one might at first believe.

His team has so far developed solar-cell prototypes with efficiencies at one percent but notes they need to be about 10 percent. He says that if he can get the level to the 10 percent mark, then there's real potential for commercialization. He says that then you could see this new production technique being used in three to five years. For hams involved in public service and emergency communications work, such a source of sunlight power used to charge battery banks would mean communications could continue even if the power mains were out of service for an extended period of time.

Funding for the research comes from the National Science Foundation, the Welch Foundation and the Air Force Research Laboratory. The complete story is at www.sciencedaily.com/releases/2009/08/090824115907.htm (Science Daily)

THE LATEST DTV CONVERSION STATS

Almost everyone in the United States who watches television can now see it digitally.

The A.C. Nielsen data survey company now reports that as of Wednesday, July 29th that 98.9% of United States homes are able to receive digital television signals. This is a gain of 229,000 homes in the last two weeks of July and 1.3 million homes since the week of the June 12 digital television transition.

Among the 56 local markets that Nielsen measures there are 32 markets not far behind with less than 1% of TV households completely unready. Albuquerque and Santa Fe New Mexico at 3.5% each continue to have the highest percentage of homes that cannot receive digital signals from full powered U.S. television stations. In fact, the markets with the most households unable to receive digital television tend to be in the Western United States. That's where cable availability is lower than to the East.

Weak Signal Communication Software

WSJT, MAP65, and WSPR are open-source programs designed for weak-signal digital communication by amateur radio. Normal usage requires a standard SSB transceiver and a personal computer with soundcard. SimJT is a utility that generates simulated signals for testing purposes.

[WSJT](#) ("Weak Signal Communication, by K1JT") offers specific digital protocols optimized for meteor scatter, ionospheric scatter, and EME (moonbounce) at VHF/UHF, as well as HF skywave propagation. The program can decode fraction-of-a-second signals reflected from ionized meteor trails and steady signals 10 dB below the audible threshold.

[MAP65](#) implements a wideband, polarization-matching receiver for JT65 signals. It works together with [Linrad](#) (by SM5BSZ) and dual-polarization RF hardware to receive and decode all detectable JT65 signals in a 90 kHz

passband, matching the linear polarization angle of each one and producing a band map of decoded callsigns sorted by frequency. Its principal application is EME on the VHF and UHF bands. MAP65-IQ is a single-polarization version designed to work with the SDR-14, SDR-IQ, and Perseus receivers. It has all features of MAP65 except the polarization matching capability.

[WSPR](#) (pronounced “whisper”) stands for “Weak Signal Propagation Reporter.” This program is designed for sending and receiving low-power transmissions to test propagation paths on the MF and HF bands. Users with internet access can watch results in real time at [WSPRnet](#).

[SimJT](#) generates JT65 and CW test signals with a user-specified signal-to-noise ratio. It is useful for testing the JT65 decoder and the relative capabilities of these two modes.

Go to <http://physics.princeton.edu/pulsar/K1JT/> for details

ILLW 2009 DEEMED AN OVERWHELMING SUCCESS

The International Lighthouse and Lightship Weekend held on August 15th and 16th had an all time record 442 registrations from 50 countries. The event began in 1995 in Scotland as the Northern Lighthouses Award for ham radio operators, and went international event two years later.

Alaska was a first this year with an entry for Sentinel Island. Germany listed 55 lighthouses, Australia 49, USA 47, and England 43. Malaysia celebrated its lighthouse weekend with nine lighthouses. The Azores, Balearic Islands, Egypt, Slovenia, Panama were some of the smaller countries represented with one entry from each. The initial tally shows participation by lighthouses and Lightships worldwide up some 10% over 2008. (Amateur Radio Victoria)

THE SOCIAL SCENE: CELEBRATING HPM AT AGE 140

And back in the United States the ARRL has announced that the Hiram Percy Maxim Birthday celebration is back this year honoring the 140th anniversary of the birth of the League’s first president and co-founder who held the call letters W1AW. The special event is open to all amateurs, and the goal is to work the stations adding /140 to their callsigns, and contact as many as possible during the event period, September 2nd to the 9th. A special certificate is available for making at least 25 contacts with endorsement increments of 25, and a maximum endorsement of 100. More information can be found in the September issue of QST magazine. (ARRL)

TEXAS CLUB TO ACTIVATE WILLOW ISLAND ON SEPT 5

On the air, the Tri-County Amateur Radio Club of North Texas, will activate for the first time as WC5C from Willow Island located in Lake Worth, Tarrant County, Texas. The operation will take place on September 5th mainly be on 40 and 20 meter SSB but they will QSY to accommodate stations on other High Frequency bands or modes. In addition to SSB, PSK31 and CW will both be available.

Willow Island is primarily Tanglewood and poison ivy with some wildlife. The club will access the island by boat, canoe and kayak. Primary hours of operation will be 1400 UTC to 2200 UTC, but possibly continuing into the night depending on conditions.

A commemorative QSL card will be sent to all contacts acknowledging them as remote participants in the first activation of Willow Island. Return cards from all who make contact will be appreciated by the club so as qualify the island for future status. (Southgate)

ON THE AIR: THE 2009 EUROPEAN PSK CONTEST

And the European PSK Club is inviting hams world wide to take part in the 2009 CIS DX QPSK63 Contest. The event is slated for September 19th and 20th. Contest, rules and other information can be found on the Web at www.cisdx.srars.org (Southgate)

The Amateur Amateur: Diary of a Mad Ham's Wife

By Gary Hoffman, KB0H, "assisted" by Nancy Hoffman, N0NJ

Stomp, stomp, stomp. It's not the stomping that concerns me so much as the ominous creaking. If he wants to spend his weekends on the roof, he had better start losing some weight. If he manages not to fall off the roof he may still come crashing through it.

Up on the Roof

Thunk!

Oh boy, I didn't like the sound of that. I'd better get out there and check on him.

"Gary?"

"Yeah?"

"Are you okay up there?"

"Just dropped my tool bag. Everything's fine."

Everything's fine, he says. What he means is that nothing mechanical is broken. But I'm not worried about some piece of metal getting bent. I'm concerned about him.

He's coming down. I can hear the ladder wobbling (shudder!). He'll go to one of three places: To the basement to get another tool, into the living room to sit down and cool off or to the bathroom to use the first aid kit.

Please, not the bathroom.

The basement. Thank goodness.

Now he's going back up the ladder. It scares me every time he goes up there. If he goes tumbling off the edge of the roof I won't even know it. Not unless he has the good sense to scream on the way down. At least then I'll know to call for an ambulance.

Stomp, stomp, stomp.

Did a little bit of plaster just fall from the ceiling?

Creeeeeeeaaak!

Please don't fall through the roof. Please.

Calm down. He knows what he's doing. He managed to put in new electrical wiring without setting the house on fire. He's clever.

Clever, yes, but not very safety-conscious. Not nearly enough. Oh, that one horrible accident — I can't go through that again.

Don't Let Me Down



At least he won't do anything without telling me first. He hasn't done anything really bad since I allowed him to start using power tools again. And he won't go up on the roof unless I'm here. "Safety Officer," he calls me. Worry Officer is more like it. But I have to worry, because he doesn't.

Crash!

That's it. He's dead. Or injured. Don't throw up. You'll have to be coherent when you call 911.

"Gary!?"

"S'okay. I overwound the preeble flange and the ocular grimsmack bent and banged into the fnargle blick and broke it. No big deal. I've got a spare."

"Um, okay."

No big deal, he says. I just aged 20 years.

Down the ladder again. Into the basement. Going to get his spare fnargle blick, whatever that is.

Back up the ladder.

Stomp, stomp, stomp. Creak, creak, creak.

Please, no more loud bangs. I can't take much more of this.

Slow creaking. That means that he's raising the antenna mast. Is it over? Can I breathe again?

Down the ladder. Into the basement.

Squawk! Screech! Squeel!

That's his radio. He's testing his antenna modifications. What a racket. But you can never tell — maybe it's supposed to sound like that.

How can the man make more noise when he's on the roof or in the basement than he makes when he's right here in the room with me?

Back up the ladder.

Slow creaking again. Uh-oh. He's taking the mast down again. I guess the commotion on his radio was bad noise instead of good noise.

Clang.

I know that sound. He dropped his wrench. No scraping, sliding sound, so at least it stayed on the roof.

He gets really mad when his tools slide off the roof.

One of these days a loose tool of his is going to come down and take out the postman, a Girl Scout selling cookies, or some other visitor.

If it has to happen, though, let it be the day one of those home renovation salesmen comes around. Not a direct hit, mind you, just a near miss.

[Vertigo](#)



I wish he'd come down.

The neighbors probably aren't happy about it either. "Your husband spends a lot of time on the roof, doesn't he?" they say. What they mean is, "When can we expect to see him fall?"

And I just smile and reply, "Yes, he is," and pretend that my stomach isn't knotting up.

It's awfully quiet up there. I haven't heard anything for a while. Is he alright? If I go outside will I find his broken body lying in the Japanese Holly?

I'd better check.

Still up there. Just sitting there, surrounded by tools and junk. Looks like he's concentrating on his argle-bargle or whatever he called it. I think he's safe for the moment. I'll just slip back inside.

Okay, this tension isn't going away as long as he's up there, but if I take some aspirin it's going to make my stomach ache worse. Maybe some Pepto and aspirin together?

Uh oh, he's in motion again. I can hear the tools clanging and some shuffling. He's getting up. He's walking. Sounds like the mast is going up again. Yes, he's definitely putting up the mast.

Careful! Don't make the ladder wobble so much! Oh, my stomach.

Basement. He's going to try his radio again. If he starts cursing then I'll know it was a failure.

Bleeee-bleeee-bleeee-bleeee-bleeee-bleeee!

"Eureka!"

Oh, thank heaven!

Up the ladder — no, don't run up it! You'll kill yourself for sure!

Running across the roof — no, don't do that. Please be careful.

Collecting his tools. Is it over? Dare I hope that it's over?

Down the ladder.

Clanging.

He's closing the garage door! It's over!

And here he is, grinning at me. Only one small adhesive bandage on his hand. I won't have to break out the Emergency Room Gold Card.

"Finished?" I say as calmly as I can. "How did it go?"

"Great!" he says, all excited. "You look a little funny. You okay?"

"Just a bit of a headache," I say, smiling. "Tell me about your project."

Just keep smiling...

THE STORY OF THE MAN WHO TRAINS ASTRONAUTS TO BE HAMS

And finally this week, since 1983 many orbital space missions have taken along amateur radio gear. The first ham in space was Owen Garriott, W5LFL. He was followed by Tony England, W0ORE, after which ham radio in space was formalized. First, under the title of the Shuttle Amateur Radio Experiment or SAREX and today as ARISS or Amateur Radio on the International Space Station. And with amateur radio a part of the astronauts training, someone on the ground has to teach them. Recently, Amateur Radio Newsline's Mark Abramowicz, NT3V, had a chance to meet and talk with the man who really is the ham behind the ham radio operators in space:

Do you remember where you were when NASA embarked on the Apollo space program that culminated with U.S. astronauts landing on and exploring the moon? Nick Lance, KC5KBO, does.

He joined NASA at the Johnson Space Center in Houston at the time of Apollo 7 in the late 1960s. He was there through that historic Apollo 11 mission and worked for some 40 years for the space agency until his retirement Aug. 1.

"The first 17 years I worked in advanced life support - that's where we developed the hardware and technology to keep the astronaut alive and comfortable," Lance recalls. "And, since that time I've been in many different roles in the program and project management, including program management for the international space station way back in the mid-80s to 90s, and other roles in the engineering directorate."

But in the mid-1990s, Lance says his friend, astronaut Marsha Ivins, came to him with a proposal. She has flown on five space shuttle missions and is currently assigned to the Constellation branch of the astronaut office.

"She said if you could teach ham radio to your young kids - my son got his license when he was 7 - that I could teach it to astronauts, too, probably," Lance says. "So we developed a course, an accelerated course because their time is valuable. And, were able to teach them, in probably at the time, maybe six hours when there were about 900 questions in the Technician question pool.

"And now that there are less questions, we can do that in about three hours for the current crew.

That was at least 10 years ago, Lance says, and a lot of astronauts have gotten their ham ticket thanks to his efforts as their Elmer.

"Well, we've probably licensed - I'm going to guess - in the 50 range or so, probably anybody with a Kilo Charlie or Kilo Delta or Kilo Echo 5 call sign has gone through the radio class that we provide there," Lance says. "There are some crewmen who have not gone up yet and hopefully they'll get a chance to before the space station program is over."

And, Lance says his classes have attracted more than just the astronauts.

"We had several classes of astronauts who brought their wives and their children in to so they could all learn together," Lance says. "It was a good opportunity because some of the crew wanted to talk to their family from space, too.

"And that afforded them the opportunity to do those direct contacts."

Lance says once licensed and aboard the space station on missions, the astronauts enjoy getting on the amateur radio spectrum talking to school students as well as regular hams around the globe.

"Well, a lot of them do like to participate in the ARISS program, get to talk to people on the ground. It's a neat way to be in contact, in direct contact with the supporting public."

Lance says he's pleased with the feedback he's gotten over the years from inside as well as outside NASA.

“It’s great to hear that other people have the opportunity now to talk to an astronaut, something that, you know, was heretofore reserved for capsule communicators,” Lance says. “But now it opens it up to anybody with a two-watt hand-held. So that’s really heartening to know that I had a small part in doing that.”

And, despite his recent retirement, Lance says he will voluntarily continue his work training the next generation of astronauts to get their ham tickets.



The New Icom IC-9100 is a versatile and expandable transceiver. It offers professional performance, out of the box on HF, 6 meters and 2 meters with 100 watts. The 440 MHz band is also built-in with 75 watts. The [UX-9100](#) band unit can also be added at any time to 1200 MHz band operation. This device requires 13.8 VDC at 25 amps.

More technical information and additional photos will be added shortly. Icom America has not yet announced price or availability on this model.

This device has not been approved by the F.C.C. This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained. The information shown is *very* preliminary and may be subject to change without notice or obligation.

Volunteers keep island shining

Many pitch in one day a week to help restore Thacher and its twin lighthouses..This is the island CAARA HAMS activated this summer!

By Brian Benson, Globe Correspondent | August 27, 2009

Connie Rohrbough has been intrigued by Thacher Island’s twin lighthouses since moving to Rockport 20 years ago.

But it wasn’t until her first visit to the island five years ago that she became drawn into the efforts to restore its structures.

“I live in a place where I can see the island from my deck, so I’ve been fascinated by it,” said Rohrbough over the din of the 18-passenger boat that transports volunteers to the island. “Once you get out there you begin to see that you want to get involved in the work and not just be a tourist.”

Rohrbough's story is typical of many volunteers who, despite the sometimes dreary weather, spend one day a week on the 50-acre island three-quarters of a mile offshore and 3 miles from Rockport Harbor. On a recent excursion, 14 volunteers laid a new water line, worked on the solar power system that supplies the island's electricity, and replaced porch railings.

A dedicated volunteer base is especially important for lighthouse renovations this summer, since the recession has reduced the amount of grant money. But the Thacher Island Association, the nonprofit group formed in 1983 to support the island's historic restoration, is undeterred by the economic climate.

"It's harder and harder every time you apply [for a grant], and we've seen more turndowns than acceptances," said Paul St. Germain, president of the association. "But we're not discouraged. We just keep plodding ahead and doing what we can do."

By using mostly volunteer labor, the Thacher Island Association has continued restoration efforts on the island, which is home to the only operating twin lighthouses in the country. In addition to seasonal maintenance, work this summer includes rebuilding a wall of the whistle house that was destroyed in the 1991 "Perfect Storm," adding screening to a rainwater cistern (the only source of fresh water), and restoring a section of a tramway that transported coal and other supplies from boats to buildings.

"The satisfaction of knowing the stuff will stay there and not just deteriorate makes people want to come out and continue," St. Germain said.

The association relies on contractors for larger jobs, such as restoring

the whistle house, which held the island's original fog horn. Funding, which was in place before the economy worsened, came from a variety of sources including grants, donations, a lighthouse cruise, and the sale of T-shirts, hats, and other merchandise, he said.

Twin lighthouses were first used on Thacher Island in 1771. They were replaced with the current 123-foot granite towers in 1861. The Coast Guard turned off the northern light in 1932, but it was relit in 1988 as a private navigational aid maintained by the association, and is still used by boaters as a visual reference. The southern tower is run by the Coast Guard.

The island's remote location presents logistical and financial challenges. Last month, the association rented a helicopter for a day to transport 10,000 bricks for the whistle house's wall.

"Islands carry with them a mystique that the mainland does not have," said Joseph Napolitano, a Gloucester



contractor who is repairing the whistle house. “You need to rethink how you build something. You salvage things, you recycle, and that I think intrigues me more than anything else.”

Napolitano, who has worked on historical preservation projects on the North Shore for 20 years, completed a \$350,000 restoration of the principal keeper’s house on Thacher Island in 2007. The current project is expected to cost \$70,000 to 100,000, he said.

Fund-raising is also harder for island lighthouses since they are not accessible by car. Thacher Island’s boat launch was also destroyed during the 1991 storm, decreasing accessibility and, thus, donations until it was repaired in 2000, St. Germain said.

From June to October, the public can kayak to the island, dock boats at a public mooring, or take the association-run boat on Wednesdays and Saturdays. The boat is free, although reservations are required. Boaters should also call the keeper’s house ahead of time to ensure that a mooring is available. Visitors can camp on the island for a \$5 nightly fee.

The association has relied on grants from the Massachusetts Historical Commission, the Rockport Community Preservation Committee, and the Essex National Heritage Commission, among other organizations, St. Germain said.

But the Essex commission suspended one of its grant programs this year because of a \$93,750 state funding cut. The commission had already awarded that money and, without the state aid, was forced to fund the projects internally, said Mary Williamson, the commission’s director of development and communications.

“Our board felt it was the prudent thing to temporarily suspend the grant program until we could find a more reliable source of funds,” Williamson said.

The commission, which hopes to resume the program in 2010, has awarded \$1.7 million to municipalities and nonprofits over 10 years, \$47,500 of which went to Thacher Island, she said.

In 2001, the lighthouses, officially known as Cape Ann Light Station, became a National Historic Landmark, placing them among 184 such sites in Massachusetts and about 2,300 nationwide.

“Once you’ve become a landmark, you have a leg up on other sites,” St. Germain said.

But volunteers, who sometimes come from companies or service organizations to supplement the regular crew, remain the backbone of the organization, said Syd Wedmore, a volunteer and chairman of the Thacher Island Town Committee, which oversees the island. The town owns 28 acres of the island; the remainder is owned by the US Fish and Wildlife Service as a wildlife sanctuary.

“It’s one of those things that either grows on you or doesn’t,” Wedmore said. “There’s folks that come out for a little bit, fall in love with it, and become dedicated volunteers.”

But most are retired, raising concerns about the long-term viability of a volunteer crew, he said.

The association hopes to involve younger people through a keeper internship program. Throughout the summer, there are always two volunteer keepers on the island. The internship allows people, generally college-aged or older, to spend a week with the keepers and experience island life.

“If they enjoy it, maybe they could become a keeper one day or join the volunteer ranks,” Wedmore said.

“There’s all kinds of work to do, but the feeling is that if we don’t get to it today, we’ll get to it next week or someone after us will do it.”

THATCHER ISLAND ACTIVATION AUGUST 2009



above- Rick- WZ1B on Thatcher Island with a Yaesu hat....I thought he didn't like Yaesu!

left-View from the tower showing one of the antenna's used- left

Radio China to vacate amateur-only section of 7MHz band

The IARU Region 1 website reports that **Radio China** is to stop broadcasting on five frequencies in the 7.1 to 7.2MHz range.

The Chinese authorities have made frequency adjustments midway during the A09 broadcasting schedule and it affects all transmissions that were previously operating in the new exclusive worldwide amateur radio service band of 7.1-7.2MHz.

INTERESTING MUSEUM TO VISIT

The Guglielmo Marconi Foundation, U.S.A., Inc. & The U.S. National Marconi Museum is located in the historic district of Bedford, New Hampshire, marking the town's link with Bedford, England, where Marconi spent much of his childhood. The exhibits follow with equipment, literature, audio-visual presentations - the development of radio communications from, "Spark to Space". Displayed is early Marconi wireless equipment together with the progression of radios up to the current cellular telephone exhibit. Included too, will be displays of early medical RF therapy, broadcast, amateur, mobile two-way radio and personal communication system products.

An important aspect of the 14,000 square foot building is its John Frey Technical Library, containing thousands of radio communication periodicals some in a series dating from 1920. All the publications are indexed by subject, author, date and publisher, cataloged on CD-ROM that can be accessed by Internet on the library computer. The shelves also hold hundreds of engineering, text and reference books. The visitor to the museum will enjoy browsing through historical literature.

There is a restoration room for repair of vintage radios, a machine shop and a facility room for educational lectures to school groups, and for meetings of electronic oriented organizations. Plans are underway to house a 100 watt FM broadcast station in the educational section of the FM band, with emphasis in its programming of world scientific news.

Since the Museum is education oriented, The Marconi Legacy Fund has been established to provide scholarships to students in the pursuit of studies related to the art of communications. Hundreds of items have been collected to date for the museum. However, your donation of vintage - and modern - electronic equipment will be most welcome. As the Marconi Foundation is a non-profit corporation, all donations will be acknowledged for personal and tax records.

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Amateur Radio Quiz: What Kind of Tool Am I? By H.Ward Silver, N0AX

1) Which tool is used to trim wire leads flush with a circuit board?

- a. shear
- b. side cutters
- c. gas pliers
- d. compound snips

2) Which is most likely to have a “T handle”?

- a. soldering iron
- b. crimping tool
- c. reamer
- d. flat file

3) Which type of tool family has a “Double D” member?

- a. punches
- b. drills
- c. saws
- d. calipers

4) What type of holes does a “fly cutter” cut?

- a. circles
- b. squares
- c. rectangles
- d. irregular

5) True or False?

T F A tap puts threads in a hole while a die puts threads on a rod.

T F The second number in a screw size (i.e. 6-32 represents body size).

T F The higher a drill’s number, the smaller the hole it drills.

T F It is desirable for a drill bit to walk.

T F Chips and curls are created by rip saws.

6) Which solder alloy is the easiest to melt? (%Sn:%Pb)

- a. 60:40
- b. 50:50
- c. Silver-Solder
- d. 63:37

7) What does a bend-and-brake do?

- a. Curves electrical conduit without crimping it.
- b. Removes material from the inside of square holes.
- c. Bends sheet metal precisely.
- d. Holds the workpiece for milling.

8) What does a nibbling tool nibble?

- a. wire insulation
- b. coax braid
- c. sheet metal
- d. finger stock

9) The material left around the edges of a hole after drilling is called a _____.

- a. frass
- b. burr
- c. kerf
- d. dross

10) Which of these is *supposed* to be used to poke holes in things?

- a. nail set
- b. thread chaser
- c. awl
- d. Phillips screwdriver

11) Which of the following is *not* a type of screwdriver bit?

- a. pan
- b. torx
- c. allen
- d. spline

12. Rank these measuring tools in order of least precise to most precise:

- a. calipers
- b. micrometer
- c. tape
- d. rule

Bonus: What tool is also the name of a popular antenna and why?

Answers

1) b — These have cutting edges on the side of the jaws to slide along a surface as they cut.

2) c — The T-handled reamer is used to enlarge holes by hand.

3) a — A double-D punch creates a round hole with two flat sides.

4) a — The fly cutter is used to cut large-diameter circular holes in sheet metal.

5) T; F (it represents threads per inch; T; F (walking means the bit is moving sideways; F (these are the material removed by drilling.)

6) d — This mix of tin (Sn) and lead (Pb) melts at the lowest temperature.

7) c — Built-in clamps hold the metal while forms shape the bend.

8) c — A nibbling tool removes small bits of sheet metal to form a non-circular hole.

9) b — The burr is then removed with a counterpunch, a de-burring tool, or by filing or scraping.

10) c — Yes, all of them *can* be used to poke holes in things, but the awl is the *proper* tool to use.

11) a — Pan (as in “pan-head” is a type of screw head, not the shape of the bit used to turn it.

12) — micrometer, calipers, rule, tape (with few exceptions).

Bonus: The variable-length mobile “screwdriver antenna” is so named because the original prototypes used dc motors from electric screwdrivers to adjust the length of the antenna’s whip.

Please attend the September Member Meeting at the CAARA Clubhouse and vote in the new 2009-10 Board of Directors.