

WorldRadio

ONLINE

Year 39, Issue 6

DECEMBER 2009

Happy Holidays!



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NEWS • FCC • DX • QRP • QCWA • CONTESTS • HAMFESTS • YL • AMSAT • CW



Four Radio Amateurs Killed in Plane Crash While En Route to CQWW Phone Contest

Feed: ARRL Amateur Radio News

Posted on: 22 October 2009 01:32

Author: ARRL Amateur Radio News

Just after take-off, a twin-engine plane carrying four Amateur Radio operators crashed into the woods, only 250 yards off the end of the runway in Jedburg, South Carolina, about 20 miles northwest of Charleston. The plane—piloted and owned by Peter Radding, W2GJ—carried Ed Steeble, K3IXD, Dallas Carter, W3PP, and Randy Hargenrader, K4QO. The four men were on their way to the Bahamas to operate in this weekend's CQ World Wide Phone Contest as C6APR, competing in the Multi/2 category.

Hargenrader, of Summerville, was 55; Radding, of North Charleston, Steeble, of Summerville, and Carter, of Laurel, Delaware, were in their 50s and 60s. According to Dorchester County Coroner Chris Nisbet, the four hams had made this trip before with Radding piloting the plane. Nisbet said that earlier this week, Radding flew to Delaware to pick up Carter.

"How quickly can a joyous event—setting off with close friends in anticipation of a weekend of intense radio activity—turn to unfathomable tragedy," said ARRL Chief Executive Officer David Sumner, K1ZZ. "As we mourn the loss of these four well-known members of our global Amateur Radio community, our hearts go out to their families."

Dorchester County Administrator Jason Ward characterized the crash site 250 yards east of the runway as "extremely severe" and that the plane was fully engulfed in flames when firefighters arrived; investigators were hindered by the flaming wreckage and "charred foliage" at the scene. A crew from the county public works department had to create a path to the wreckage. Chief Deputy Sheriff Sam Richardson said there was damage to treetops in the area of the crash. The coroner said it appears the severity of the crash, and not the fire, is what killed the men.

One of the victims was found beneath some of the wreckage, Ward said. Debris was spread around an area several yards wide at the crash site, and the wrecked plane was apparently upside down, he said.

It was extremely dark when the plane took off, Ward said. Airport Manager Don Hay said the weather was clear at the time. "[Radding] was a very experienced pilot who knew the area," Ward said. "He had been flying for over 40 years." Nisbet said Radding filed a flight plan detailing his route and who was on board, but the plane never climbed high enough for those plans to be activated.

Radding's neighbor, Jim Deaton, said the man and others planned to stop in Florida, pick up more passengers and then head to the Bahamas.

Stella Bazzle, who lives about a half-mile from the airport, described to The Summerville Journal Scene what she heard right before the plane went down: "The motor sounded like it was coming over the house. I heard the first explosion...then the second (explosion) wasn't as loud." She described the engine noise as "kind of a funny noise, like a grinding type thing." Bazzle said she then heard ambulances and called her neighbor, who'd heard similar noises.

Carter, Steeble and Radding were members of the Potomac Valley Radio Club (PVRC); Carter and Radding were also members of the Frankford Radio Club (FRC). Randy Hargenrader, K4QO, was a member of FISTS CW Club. PVRC President Ken Claerbout, K4ZW, told the ARRL that he was "stunned and saddened" when he heard the news of the crash: "I had several e-mail exchanges with Dallas over the last two weeks about our Sweepstakes effort. He spoke with excitement of the group's trip to C6 for CQWW SSB and vowed to be on for Sweepstakes CW. He said he might have to work the charter during Sweepstakes SSB, but if not, he would be there! Dallas joined PVRC in 1963. Ed was also a very active member of PVRC before moving to South Carolina. Ed joined PVRC in 1992 and is a past chairman of our Northwest Chapter. Our thoughts and prayers go out to the friends and families of all four gentlemen. Another stark reminder of how fickle life can be."—Thanks to the many friends of these four hams, the Associated Press and The Summerville Journal Scene for the information

SSB Intruders on 14.002 MHz

If something sounds strange on 20 meter SSB where there should only be Morse, then you have likely stumbled across what appears to be a African pirate radio net. According to Region One Intruder Watch, this group of likely unlicensed operators can be found every morning from 6:00 to 09:00 UTC on 14.002.2 MHz using upper sideband. They converse in what's described as an unknown tribal language they operate like a phone line. Beam headings taken from Germany place the operation at about 180 degrees and possibly putting the operation in central Africa or Angola. No calls have been heard and only names are being used to identify. (NZART, WIA News)

Canada Ham Community to Commemorate the 2010 Winter Olympics

Members of the Vancouver Olympics Amateur Radio Group will be activating three special event stations to promote and commemorate the Vancouver Winter Olympic and Para-Olympic Games to be held in February and March of 2010.

The special activity is already under way and will continue through March 2010. Operations will be on all bands and modes. VG7W will operate from December 1st of this year through January 31st of 2010. VG7G takes to the airwaves on February 1st and continuing through March 31st 2010.

The Vancouver Olympics Amateur Radio Group says that it will be consolidating all contacts and intends to post them electronically to the ARRL's Logbook to the World. In addition, commemorative paper QSL cards for those who want them will be available at the conclusion of the events in April 2010. Cards received via the QSL Bureau will be returned the same way.

In addition to the commemorative operation radio amateurs will also be handling many of the logistics for the games. Word is that most of this will be short range communications on the 1.3 meter or 220 MHz band using FM and numerous local repeaters. (OPDX)

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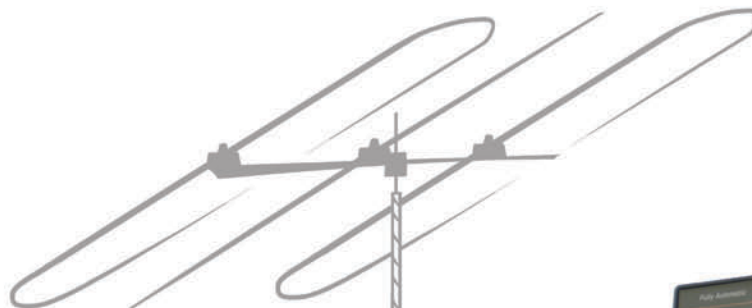
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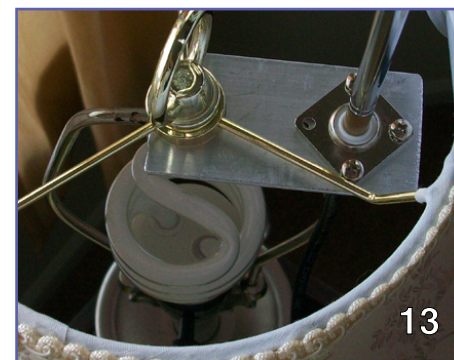
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ON THE COVER: Holiday wishes from the staff of *WorldRadio Online* for a safe and healthy New Year.





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Straight Key Night

Those who have been reading my Edlog over the years know that I'm a Morse aficionado, so it's no surprise that Straight Key Night (December 31-January 1) is my favorite ham activity. It is special because it is an occasion to celebrate our roots and traditions. We can dust off the old 'mean green machines'—the Heathkits—as well as the other wonderful tube gear that we have shelved in favor of more efficient rigs. The smell of dusty tubes is better than anything Glade® could dream up. Turning off the room lights and operating while basking in the glow from the tubes is an experience that I hope everyone has a chance to experience.

Straight Key Night is a night for relaxed chatting, exchanging meaningful RST reports, sending paper QSLs, and getting used to copying hand-sent Morse code again. I've met some of my closest ham friends during Straight Key Night; most are now Silent Keys. So, for me, it is a time to remember those who have gone before us and wondering if they're smiling, or even laughing, at our clumsy attempts to chat with a straight key. More likely, they're upset—back in the day, hams would be mortified to get on the air with less than an expert fist!

A friend of mine has been dealing with a medical problem for the last couple years. A while ago, she told me that she asked her physician the age old question, "How long do I have?" The doctor replied that while he didn't see an expiration date stamped on her anywhere, it didn't matter whether he told her 30 days or 30 years. She could be in perfect health, yet be hit by a car in the parking lot. He said, "It can be over in the blink of an eye, regardless of your health. Make the most of every day."

This conversation was brought to mind when I heard the tragic news of the October 21 airplane crash that killed Peter Radding, W2GJ, Ed Steeble, K3IXD, Dallas Carter, W3PP, and Randy Hargenrader, K4QO. You may remember we featured an article about the C6APR team in the April issue of *WorldRadio Online*. Randy, K4QO, was a long-time member of the FISTS CW Club. They were on their way to operate the CQWW Contest from Crooked Island, Bahamas.

Our hearts go out to their families and friends, especially at this holiday season. I know it won't be an easy one for them. As we celebrate the holidays and Straight Key Night, remember to make the most of every day and let our friends and families know that we love them. A line from one of my favorite songs by Warren Zevon sums it up: "Don't let us get sick, don't let us get old, don't let us get stupid, all right? Just make us be brave and make us play nice and let us be together tonight." I hope you have a memorable SKN being together with old friends and new ones, and will look for me on 20 meters during the day and 80 at night.

73 88 33, Nancy Kott WZ8C

WorldRadio Online

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**See
AT-1000Pro Review
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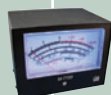


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Mini-Dxpedition to the Arctic Circle

By Cheryl Muhr, N0WBV

The Scandinavian Young Ladies' Radio Association (SYLRA) held its biennial meeting in September, but it was the trip after the meeting that caught my eye and that of my OM, John, KT0F. After the meeting, we were invited to go on a mini-DXpedition to Svalbard in the Arctic Circle. There we could operate both as JW1SYL with a special call for the SYLRA meeting and/or use our own call signs with JW/.

For more on the meeting itself in Norway, check out the YL column in next month's issue of *WorldRadio Online*.

There were 22 people who decided to make the trek to JW, including some of our OM and John's parents who are not hams, but are always ready to travel with us to a new and exotic place.

We were lucky to have two great co-chairs of the event, Ingrid Kleveland, LA8FOA, and Unni Gran, LA6RHA, who were in contact with the local operators in Longyearbyen, Svalbard. They obtained the use of the local ham shack JW5E with the help of Mathias Bjerrang, JW5NM, and his YL Inger, LA8KT. Inger also helped with the logistics.

Some of the group had been to Svalbard before, but everyone wanted a chance to operate with the JW call sign. There were enough of us to allow for chances to do some sightseeing as well as keep the station going.

September in Svalbard is considered summer, so unfortunately we didn't have the chance to see any polar bears. We did, however; see the famous sign that warns about them. Once you go past that point, someone in the group must carry a gun that



Ellen operating Morse code as JW1SYL.



YLS visiting at the JW hamshack.



Nicky operating the JW1SYL station.



The YLs enjoying a celebratory final dinner in Svalbard.

will actually do something if you run into one. The downside is that if you actually have an encounter and shoot it, there will be A LOT of paperwork, in addition to the unfortunate death of a polar bear.

A loose schedule was created so that operators who wished to try for a certain part of the world could get on to do so. Some of the group simply tried to make as many contacts as possible. Only one call-

sign that was activated for the event-JW1SYL-though some used JW/their own callsign. There were false rumors of another JW call on during the same period.

If you weren't operating, you had the chance to explore the town of Longyearbyen. With more tourist shops than you would expect, this small town has no retirees. If you are not working, you simply don't live there. There are also



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The town of Longyearbyen Svalbard.

a museum, two separate university study areas and a church to explore. Plus, there are a number of war monuments and an interesting airship museum. It was totally unexpected in such a small place.

Two other side trips were also made. For those who had already been to Barentsburg, there was a trip to an abandoned Russian coal settlement called Pyramiden. The other trip was to Barentsburg, an operational Russian coal settlement. The boat to Barentsburg was the Polargirl, which was headed to one of

the many glaciers when we got an unexpected surprise. The Governor's helicopter was coming to practice rescue drills on the boat. The helicopter pacing the boat was amazing, as were the "rescuers" who slid down ropes to the boat and were hauled back up again. Does anyone else get reminded of Field Day and practice drills?

We actually saw the glacier calve before heading to the Russian settlement of about 400 people. There we had a tour of the town before stopping to get some-

thing to drink and do a bit of tourist shopping. The history of this originally Dutch settlement is fascinating and the mine was recently flooded to stem a fire and was then reopened.

Back in Longyearbyen, we found out that the hotel had a resident arctic fox that would wander along the back looking to be fed by the staff. The temperatures reminded me of the fall just beginning in Colorado, so it wasn't the frigid piece of ice that was half-expected. It was a short walk between the shack, the hotel and the center of town. Thanks to it never being fully dark, it was easy to walk down to the shack to operate at all times of the day and night.

The exact number of contacts was still being tallied up at deadline as some logs were kept on the operator's own computer and sometimes we worked with our own calls, but the consensus is that it was a few thousand. We wish we could have worked more.

It seemed as if we had hardly got there when we had to get up to make the 02:30 bus heading back to the airport. For more information on the event and SYLRA, head over to the website at <http://www.SYLRA.is>, where we will be putting up more pictures soon.

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Lamp Shade UHF/VHF Antenna

By Bob Evans, WB0SVS

This simple low-cost project is a spin-off from my Tri-band Portable/Emergency Antenna known as the "EE-3" that is used by RACES/ARES/Skywarn groups nationwide. It will provide 1.5:1 or less SWR on 2 meters thru 70 cm. This is an easy project for anyone capable of sawing and drilling soft aluminum material. Remember to use low power when using this antenna, in order to minimize RF exposure to yourself and to others around you. For more information on the tri-band EE-3, visit <http://www.ee3.editme.com>.

The lampshade itself becomes the ground plane, performing well when a medium-sized conical shaped shade is used, providing an omni-directional pattern. I have used it for Skywarn spotter reporting during thunderstorms when an outside antenna is risky.

List of Materials

- 1/16" X 1 1/2" X 48" aluminum strip from home improvement or hardware store
- Custom SO-239 with threaded stud obtainable from Gateway Electronics (314) 427-6116 or the author
- Suitable telescopic rod with 3mm female thread (from Gateway Electronics or author)

Construction

- Cut a piece of 1/16" thick aluminum to 1 1/2" by 3 inches*. Drill 1/4" diameter holes on centerline 1/2" from each end. Open one hole to 5/8" with a chassis punch, or file to size.

- Insert custom SO-239 into the hole and drill four attach holes to suit your fasteners. Install fasteners and a suitable telescopic rod.

- Remove the nut from lamp hoop and place the bracket onto stud and replace nut. Connect coax and route it along lamp hoop with a twist-tie to hold it in place. Connect your radio and enjoy!

* may vary with your lampshade

Extend telescopic rod to proper length for the frequency chosen

19 1/4" for 2 meters

12 1/2" for 1 1/4 meters

6 1/4" for 70 cm

For a single band version, use a common SO-239 and solder a 5/32" O.D. brass tube to the stud. For 70 cm trim tube to 6 1/4". For higher frequencies use full 12" length and place a 1/8" O.D. tube inside the 5/32" tube, extend to lengths noted above. Add a brass round head machine screw at top to finish it off.



Thumb Area Radio Club of Michigan Field Day

By Nancy Kott, WZ8C

I visited several Field Day operations last June. The one that impressed me the most, both in the set-up and the camaraderie was the Thumb Area Radio Club in Michigan. The state of Michigan is shaped like a mitten, and the "thumb" region is a sparsely populated area compared to areas of the lower part of the state with big cities like Detroit and its suburbs and Flint or Port Huron. I wasn't expecting to see much of a Field Day when I drove to their site, but to my delight, a 3A operation was in full swing, complete with club trailer and tons of potluck goodies, as well as people operating the stations and visiting. The only thing missing was non-auto-

Jim Cumbow, WA8LUK, at the operating position during Field Day. →



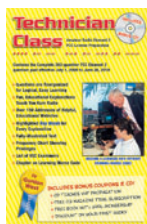
The Field Day site, showing two portable beams.

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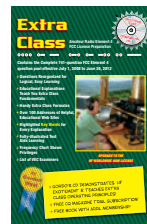
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Adam Filkins, KD8CCX, WRO Editor Nancy Kott, WZ8C, and Club President of TARC Ted Davis, KF8ZO.

mated sent and received CW operation - they were operating CW, but it was via computer.

I asked them to do a write-up on their club, and their secretary Mary Filkins, KD8CMT, was kind enough to oblige. Here is her report:

The Thumb Area Radio Club held its annual Field Day on June 27 and 28. The event was held in Sandusky, Michigan, at the Country Side Methodist Church. Local hams and visitors attended our operation, as well as the Emergency Coordinator and Sheriff of Sanilac County. This year our club chose a location so we could invite the public to promote amateur radio. Our club points for Field Day were 2098.

Our club has been holding Field Day consecutively since 1957. This year we ran 3 Alpha and used a variety of home-

made antennas. The antennas included a beam, G5RVs, and verticals. Two stations were run from generator power and the other used solar power. We use trees to erect antennas and have a guyed tower that is completely movable.

Every licensed operator jumped on the radio at one point during Field Day, and we had about 20 operators collectively throughout the 24-hour period. During the times of poor reception, our club always had a pot of dessert or a meal brewing over an open fire. This allows for great fellowship and gives us time to regroup and re-assess our operations and goals to ensure we are all on the same page.

Renewable resources such as wind and solar power are our current projects. Our club will strive to perfect and utilize these power sources for the 2010 Field Day operations. Our solar-powered station this year proved to be very effective, running the whole 24 hour period, plus some.

Next year our club could be changing Field Day location again, just to prove we can be an asset to anyone anywhere and anytime. In times of emergency, amateur radio comes through.

For more information on The Thumb Amateur Radio Club, visit www.w8ax.com or email Vice President Adam Filkins at kd8ccx@w8ax.com or Secretary Mary Filkins at kd8cmt@w8ax.com.



The Rules Say...

John B. Johnston, W3BE

PROVIDING EMERGENCY COMMUNICATIONS

Q Where are the rules for hams providing emergency communications?

A. The rules in Part 97 are designed to provide, in places where the FCC regulates communications, an amateur radio service whose fundamental purpose is expressed in five principles - the first of which is recognition and enhancement of its value to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications. See Section 97.1(a).

Our amateur service is for a uniquely-qualified segment of our American public: duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest. We are to use our allocated spectrum to carry out self-training, intercommunication and technical investigations. See Section 97.3(a)(4). In other countries, amateur radio is reportedly considered to be a form of recreation.

First and foremost, however, communications by emergency service providers is regulated under Part 90, Private Land Mobile Radio Services. Those rules establish a Public Safety Radio Pool and provide for the licensing of non-federal governmental entities - including law enforcement and fire protection - as well as medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated places, communications standby facilities, and emergency repair of public communications facilities.

Q. What should a FCC-licensed amateur operator do in providing emergency communications?

A. Read and heed the rules. Those for amateur stations providing certain specialized emergency communications are codified in Sections 97.401 through 97.407: operation during a disaster (Alaska); safety of life and protection of property (last resort); station in distress (SOS) and RACES. Section 97.101(c), moreover, says that at all times and on all frequencies, each control operator must give priority to stations providing emergency communications, except to stations transmitting communications for training drills and tests in RACES.

Section 97.111(a)(2) authorizes an amateur station to transmit two-way communications necessary to meet essential communication needs and to facilitate relief actions. Paragraph (a)(3) authorizes an amateur station to transmit two-way communications necessary to exchange messages with a station in another FCC-regulated service while providing emergency communications. Paragraph (b)(4) of that rule section also authorizes one-way transmissions necessary to providing emergency communications.

W3BE-O-GRAM: Sharpen your technical and operating skills to the very best of your ability. Have your station ready at all times to intercommunicate with local and distant amateur stations even under the most adverse occurrences. Then, should

normal communication systems prove to be inadequate when the unexpected strikes in your locale, you can summons any relief needed. Develop the ability to communicate by all popular emission modes, especially telegraphy. In some predicaments, CW may be the only option available to you.

Q. What types of communications may an amateur station transmit while providing emergency communications?

A. Communications transmitted by amateur stations are subject to the same authorized transmissions (Section 97.111) and prohibited transmissions (Section 97.113) whether or not emergency communications is being provided. Section 97.113 says, in effect, that no station licensee should cause or allow the station to be used for any communications unless "No" can be answered truthfully and completely to each one of the following questions. See BE Informed No. 3 Section 97.113 SMELL TEST:

1. Is this communication specifically prohibited in Part 97 of the FCC rules?
2. Is this communication for hire?
3. Is this communication for direct material compensation?
4. Is this communication for indirect material compensation?
5. Is this communications for paid material compensation?
6. Is this communication for promised material compensation?
7. Does the station licensee have a pecuniary interest in this communication?
8. Does the control the control operator have a pecuniary interest in this communication?
9. Is this communication on behalf of the station licensee's employer?
10. Is this communication on behalf of the control operator's employer?
11. Can this communication be reasonably furnished through another radio service? If it can, is this communication being transmitted on a regular basis?

Q. Section 97.113(a)(5) says that no amateur station shall transmit communications, on a regular basis, which could reasonably be furnished alternatively through other radio services. Does this mean my station is authorized to transmit such communications on an irregular basis, such as at different times of the day or different days of the week or on different channels?

A. No. The rule leaves it to us to adopt what we consider to be good amateur practices and be judged thereon as making the most effective use of our amateur service frequencies. See Section 97.101(b).

W3BE-O-GRAM: The core issue is in making certain that spectrum is being used for purpose for which it is allocated, i.e., Part 80 Maritime Stations; Part 87 Aviation Services; Part 90 Private Land Mobile Radio Services; Part 95 Personal Radio

Services; Part 97 Amateur Radio Service; or Part 101 Fixed Microwave Services.

Q. Can I use my amateur station to intercommunicate directly with a police officer?

A. Your amateur station is only authorized to transmit on amateur service frequencies depending upon the class of operator license held by the control operator. Should a police officer somehow having the capability of receiving your station's transmissions chose to intercommunicate with you while providing emergency communications, such is authorized by Section 97.111(a)(3). It says that an amateur station may transmit two-way communications necessary to exchange messages with a station in another FCC-regulated service while providing emergency communications. The police officer's communications, though, must be transmitted on an appropriate Part 90 channel.

W3BE-O-GRAM: This procedure is sometimes referred to as crossbanding. See BE Informed No. 31 HAMS LANGUAGE.

Q. What communications are specifically prohibited in Part 97?

A. Section 97.113(a) lists them. With exceptions, they include music using a phone emission; communications to facilitate a criminal act; messages encoded for the purpose of obscuring their meaning, obscene or indecent words or language; false or deceptive messages, signals, or identification; and communications, on a regular basis, which could reasonably be furnished alternatively through other radio services.

Paragraph (b) says, with exceptions, an amateur station shall not engage in any form of broadcasting, nor may an amateur station transmit one-way communications except as specifically provided (See Section 97.111(b)); nor shall an amateur station engage in any activity related to program production or news gathering for broadcast purposes. Paragraph (e) says, with exceptions, no station shall retransmit programs or signals emanating from any type of radio station other than an amateur station. Paragraph (f) says no amateur station, except an auxiliary, repeater, or space station may automatically retransmit the radio signals of other amateur station(s).

Q. What is the difference between an emergency and a disaster?

A. Because they are not defined specifically within the FCC rules, their common meanings apply. Dictionary.com defines emergency as a sudden, urgent, usually unexpected occurrence or occasion requiring immediate action. It can also mean a state, especially, of need for help or relief, created by some unexpected event. As an adjective, it means granted, used, or for use in an emergency.

Disaster is defined as a calamitous event, especially one occurring suddenly and causing great loss of life, damage, or hardship, as a flood, airplane crash, or business failure.

Q. Can amateur operators who are emergency personnel engaged in disaster relief use our amateur service bands while in a paid duty status?

A. Only within the constraints of aforementioned Section 97.113. Paragraph (a)(3) says that no amateur station shall transmit communications in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employer. Paragraph (a)(2) says that no amateur

station shall transmit communications for hire or for material compensation, direct or indirect, paid or promised, except as otherwise provided in the rules. Not included in those exceptions, however, are emergency personnel engaged in disaster relief.

W3BE-O-GRAM: Accepting compensation for being the station licensee or being the control operator of an amateur station belies our legitimacy as persons genuinely interested in radio technique solely with a personal aim and without pecuniary interest.

Q. It is a widely accepted practice for the station licensee and control operators of a 24-7 repeater to be employed in some capacity unrelated to the repeater. What are the rules for me being the station licensee and/or control operator of an amateur station while accepting pay for doing something else?

A. Although your employer's policy may frown upon you engaging in such activity while on the company-clock, the FCC rules do not prohibit you from doing so as long as your intercommunications pass the Section 97.113 Smell Test.

APPRECIATION



Our R&R Superham-of-the-Month...

is Jeff Beals, the ham with the palindromic call sign WA4AW. Congratulations, Jeff, on your appointment as Southeastern Division Vice-Director.

WA4AW, second from right, at the Palm Beach County EOC RACES room during Hurricane Wilma where, as South Florida SEC, he coordinated amateur radio emergency communications.

Read the rules - Heed the rules

See BE Informed No. 44 RULES IN EMERGENCIES at <http://www.w3BEInformed.org> with links to amateur service rules and information sites. E-mail your questions to john@johnston.net.



From the Mailbag: Feedback on Antenna Launching

By Richard Fisher, KI6SN

Don McBride, WA3ZBJ, of New Bethlehem, Pennsylvania and DeLand, Florida, writes that he has been enjoying Trail-Friendly Radio's focus on field operation—especially October's *Easy, Lightweight, Low Impact Antenna Launching for the Field Operator*.

"I built a new home in an antenna-restricted community and have had to become very creative to stay on the air. Since I'm essentially a QRP operator, much of my operating time is spent in local parks. Tossing wires into trees was, as you suggest in your excellent article, one of the first hurdles to successful field operation.

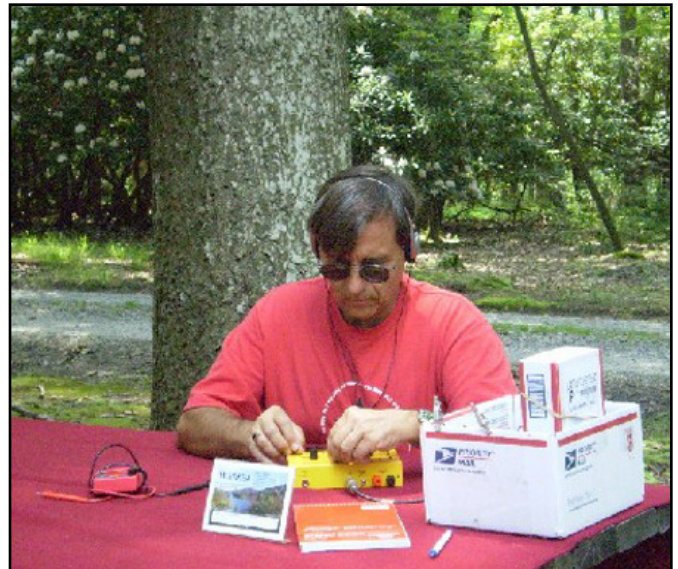
"Like everyone else, I've tried many different strategies. What works the best for me is a triangular fishing weight affixed through the integral eye hook to a long partially-unwound spool of fishing leader (line) through one of those small, lightweight fishing spin connectors. I suspect that the bulk of my fishing leader spool and fishing weight can't be much heavier than the water bottle bag and string suggested in the (October) article, and may be smaller in size.

"I think many of us have had that push-pull experience of which you wrote in your article as we try to coerce the line to drop within reach. My friend, Walter Crew, KG4LAL's suggestion of fishing leader over cord, string or whatever, greatly facilitates the ability of a smaller projectile to pull the line through the trees.

"In addition, the triangular shape of the fishing weight also facilitates dropping down through tree branches and foliage to the ground or within easy reach. I've also fashioned a number of eye hooks into old golf balls. They are not only cheap, plentiful and easily obtainable, but also work very well for this purpose."

With tongue in cheek, Don also suggests using this strategy: "You know how there always seems to be somebody standing around who wants to talk when you're trying to set up your portable operation? It took me more years than I'm willing to admit, but it eventually dawned upon me that this person is the perfect antenna launcher. Give them something useful to do, correct? With the fishing leader line attached to the fishing weight or golf ball, instruct the 'launcher' to swing the weight in a circle to build up momentum and then release it at just the right moment to propel the weight and line up over a good branch close to the one desired.

"It works very well—believe me. Yes, it may take more than a few tries depending upon the skill of the 'launcher,' but that only facilitates getting the other gear out and set up. By the time the 'launcher' has the line through the tree, you will be ready to attach the center insulator of your portable antenna and coax in place of the fishing weight or golf ball. It works every time!"



Don McBride, WA3ZBJ, operates a newly-completed Hendricks QRP PFR-3 "from a great spot near a fire watch tower on a hilltop in Cook Forest State Park in Pennsylvania." His favorite portable antenna is a jumper dipole "for 20-30-40 suspended in an inverted V configuration from one of the many trees in the area and fed with lightweight coax."

"ZBJ has accumulated a number of portable rigs from the joy of building and a quest for the next great solution to the perfect outfit. His lineup includes the Small Wonder Labs SWL-20 that goes in a soft case in the saddlebag of his motorcycle, the 2N240 with built-in keyer and FreqMite, the Hendricks QRP PFR-3, Elecraft K1, his trusty old 1975 HW-7 that he used to earn Worked All States, and the "amazing" Yaesu FT-817nd.

He says that like most readers, he's experimented with various antennas with mixed results. The venerable jumper dipole, one or more of which he's used for 30 years or more, is still the easiest, fastest, and most effective portable antenna that he has found.

Regarding tuners, he thinks the Emtech ZM-2 works well but it seems antiquated by the Elecraft T-1 autotuner.

Regarding portable operations, 'ZBJ writes that "you're surely correct that there must be many other hams with my antenna restriction situation who are enjoying more and more portable operation, at least as evidenced by the recent preponderance of related information on the Internet.

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WA3ZBJ, with a set-up along the St. Johns River in DeLand FL, uses a Wilderness Radio Sierra transceiver portable with an inverted V antenna suspended from 33-foot pole shown in the background.

"In Florida where my home antenna options are severely limited, I've had better luck at local parks on QRP . . . I'm in awe at the fellows who write about the success they have with QRP and modest equipment, as I'm struggling to get past 50-some countries and replicate my earlier WAS that was so much easier with a better location, good outdoor wire antennas and sunspots. I enter a number of the QRP contests, but usually rank in the lower half to lower third.

"However, portable operation has provided not only an outlet for operating, but has been a social event as I see more and more clubs with sub-groups getting together for such activities. The Daytona Beach Amateur Radio Association, <http://www.dbara.org/> for example, has a weekly portable operation that is far more social than radio, but provides a nice venue at the various waterside parks along the coast there, as well as the opportunity to compare various antenna ideas and new gear.

"A fledgling group in Orlando, the Central Florida QRP Group, has been making strides toward that goal on a monthly basis but is hampered somewhat in the lack of shoreline in the Greater Orlando area. Salt water, as W3FF says, is a great amplifier!

"Another brief success story, if you can stand it: I recently lured John Shannon, K3WWP, the vice-president of NAQCC (North American QRP CW Club) out for a portable operation

with my little K1. He has had astounding success, all well-documented on their website, from his downtown location along the river in Kittanning PA.

"John readily acknowledges his delight with the significant difference experienced from operating from near the top of one of the hills adjacent to his valley community a few weeks ago in a nice article in the club newsletter: <http://www.arm-tek.net/~yoel/>

". . . As you can tell, I'm fairly passionate about this topic and it has provided a great deal of enjoyment to me over the years. I shall continue to read your column with great interest and enthusiasm as the ranks of 'radio park rangers' continues to swell in correlation with improving propagation."

Another Perspective: To Have And Have Knots

Bruce Prior, N7RR, from Blaine, WA also enjoyed the October T-FR column.

"The (bottle bag) method you describe (for antenna launching) is the one I use for winter camping," he says. "A small bag is perfect for filling with snow and launching an antenna. During other seasons I use another method: Instead of any container, I find a suitable rock – a fist-sized one usually works best – and I tie it with a Scaffold knot."

He says this knot is "remarkably secure, but it's reasonably easy to untie . . . The neat thing about knots is that they don't weigh anything. I find a nine-loop tautline hitch works better than any tent-line fastening device, for instance, and, again, it doesn't weigh anything."

Here's a link to a video on how to tie the Scaffold knot: <http://css.answerbag.com/articles/video/How-to-Tie-a-Scaffold-Knot/fa8b565f-d1b7-2d8a-6189-4c018d487b1f>

For the Multiple Scaffold knot, check this out: <http://css.answerbag.com/articles/video/How-to-Tie-a-Multiple-Scaffold-Knot/d8c08bdd-4e37-6998-386a-dd97730e663c>

For the tautline hitch 'RR mentions, visit: http://video.google.com/videosearch?q=tautline+hitch+knot&oe=utf-8&rls=org.mozilla:en-US:official&client=firefox-a&um=1&ie=UTF-8&ei=smLCStG0MJCIswPvytC_Ag&sa=X&oi=video_result_group&ct=title&resnum=4#

Shortcomings Of "Bottle Bag" Antenna Launching

Wayne Ashwell, KØOHB, writes from St. Louis, MO that while he enjoyed October's T-FR column using the "bottle bag" antenna launching method, "I can almost guarantee that eventually you will lose it as the fabric will snag on branches and you will be unable to get it down.

"For years I used a couple of large bolt nuts on a string but they also got caught at times. To save carrying the extra weight if hiking, I tried using rocks I found at the site – but the ones that were the easiest to tie were of the shape that also hung up. Round ones are ideal but difficult to tie.

"My solution was to purchase (or beg) an old used billiard ball from a local pool hall. They are smooth and will never hang up on a branch.

"Drill a hole slightly larger than your twine through the center of the ball. Pass the twine through the ball and tie a knot.

"Even better is to enlarge the diameter of the hole about 3/8" deep on the knot side and press the knot up into it. After reach-

ing your branch, simply cut the knot off to pull up your antenna or tie onto the other end of your string. For extremely light twine a golf ball might do, but the heavier billiard ball works best, especially on tall trees.

"Be sure to use twine heavy enough to allow you to dislodge the ball should it wrap around a branch. The ball itself will never hang up . . . I let out what I think is enough line to reach over the tree and back down to earth. I then make coils of the twine in my left hand that droop down near the ground.

"The first loop out of my hand (the one nearest the ball) is near the tip of my fingers, the next loop is in 1/8" or so closer to my palm. And finally, the loose end of the twine is around my wrist or thumb.

"In my right hand I grab the line about 30" from the ball and begin to swing the ball back and forth – or in a complete circle if I need maximum height. Make a few revolutions and let it go.

"As it climbs, the loops are peeling off my left hand with no resistance and never get tangled since they were spaced apart in my hand.

"Some people try to throw the ball but they generally can't throw a ball straight up near as far as they can throw it horizontally . . . The billiard ball works great after a little practice of learning where to aim.

"Pool halls generally don't keep old balls if they are damaged in the least, but those chipped balls are more than adequate for you. Ask your local proprietor to save some damaged ones and you'll pick them up later. Sometimes you can find a slightly smaller ball from a kids' pool table that will work just as well but weigh a little less."

Trail-Friendly Radio Extra On The Web

More photographs of WA3ZBJ and easy links to the Web addresses covered in this month's column can be found at KI6SN's Trail-Friendly Radio Extra Internet site: <http://www.TrailFriendlyRadio.blogspot.com>

More Of Your Ideas, Please

Have you had success in trail-friendly antenna launching techniques? Do you operate urban trail-friendly radio from local parks? We'd love to hear about your experiences. Please drop a note to: KI6SN@aol.com

The NorCal140A Transceiver Kit

Sure, there are a few 40 meter cw kits out there to choose from. But the NorCal 40A stands apart from the rest with a unique combination of custom features and big-rig performance.

Open up most QRP rigs and you'll find a rat's nest of wires. Open up a '40A-a snap with our quick-release latches-and you'll find clean, no-wires construction that's worth showing off! Performance is equally impressive: of several popular QRP rigs, the '40A posted the best receiver sensitivity (-137dBm; see June '96 QST. With its fast QSK, 2W output, RIT, crystal filter and ultra-stable VFO, the '40A is a joy to operate.



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Women of the Key

By Randall Noon, KCØCCR

From the beginning, women have played an important role in brass pounding. In turn, brass pounding has itself played an important role in improving the social and political status of women.

With the introduction of the commercial telegraph in the 1840's, the profession of telegrapher opened a new kind of job to women both in rural and urban areas. A telegrapher had to receive and send Morse code with dexterity, had to be a good speller, needed to have a reasonable command of English, and needed to be able to troubleshoot and adjust the telegraph equipment. Most importantly for women, the cumbersome female attire of the period was not a significant barrier. Not surprisingly then, telegrapher was one of the first technical professions that opened to women, although not necessarily at first with open arms.

Perhaps the first woman telegrapher was Sarah G. Bagley in 1846. Ms. Bagley was the organizer and first President of the Lowell Female Labor Reform Association, had been a women's rights advocate and had also been a newspaper editor. Since there was a very strong social and religious prejudice about women working outside the home at that time, it is perhaps not surprising that the first woman telegrapher would have such a background.

One of the first female railroad telegraphers was Ms. Elizabeth Cogley in Lewistown, Pennsylvania. Ms. Cogley had worked as a messenger for the Atlantic and Ohio Telegraph Company in the early 1850's, and learned Morse code from the previous operator, Mr. Charles Spottswood, who had been a roomer with her family. She began as a telegrapher in 1855 and was quickly promoted to railroad depot operator a year later when the telegraph office was moved into the railroad depot.

The U.S. census of 1860 listed about 2000 people employed as telegraphers. Although the census typically did not break down occupation numbers by gender at that time, it is a reasonable guess that a significant fraction were women. In a remarkable social documentary book written by Virginia Penny in 1861 entitled, *How Women Can Make Money*, Ms. Penny systematically inventoried and described professions that employed women outside the home. She noted that just one company, the New York and Boston Magnetic Telegraph Company, employed perhaps fifty women telegraphers.

When the Civil War broke out, many of the male telegraphers either enlisted or were drafted into the U.S. Army Military Telegraph Corps. Women often filled the resulting operator vacancies. Remember Ms. Cogley? She was promoted to a position at the headquarters of the Pennsylvania Railroad in 1862. Similarly, Ms. Abbie Strubel, who by the way was one of the first telegraphers to send and receive by sound alone, worked for the B&O Railroad during the Civil War and was cited for many acts of wartime heroism.

Another heroine of the key was Ms. Hettie Ogle. She became a telegrapher to support her family after her husband was killed

in the Civil War. Ms. Ogle became famous for heroism during the famous Johnstown Flood. As part of her job, Ms. Ogle routinely dispatched Conemaugh River levels by telegraph. At 7:44 a.m. on May 31, 1889, the morning of the famous flood, the gauge indicated that the river had risen 12 feet in 24-hours. At 10:44 a.m. she telegraphed that the river had risen more and that 2 more inches of rain had fallen. When the rising water carried away the gauge, Ms. Ogle sent the message, "Water higher then ever known, can't give exact measurement."

At 1 p.m., Ms. Ogle and the other Western Union employees, which included her daughter Minnie, four other women and two men, moved to the second story and continued to send warnings about the flood. Just before 3 p.m., she received a message that the dam might fail. Ms. Ogle, however, stayed at her post and continued passing along information. When the telegraph lines went underwater, Ms. Ogle sent a message to Pittsburgh that said, "This is my last message." Her body was never recovered. Her bravery was popularized in a song, *My Last Message*.

With respect to establishing amateur radio, Ms. Lillian Todd is an important figure. Ms. Todd helped organize the Junior Wireless Club Limited in New York City in 1909. In recognition of her work, she was made the honorary president. This Junior Wireless Club later developed into the Radio Club of America, the world's oldest radio communications society.

The first women amateur operators listed in the 1910 ARRL "Blue Book" were Ms. Glass in San Jose, California and Ms. Olive Heartberg in New York City. Their respective calls were FN and OHK. The first woman licensed by the U.S. government as an amateur radio operator in 1915 was Ms. Emma Chandler, 8NH, who also was the 6th amateur to be licensed in the U.S. Both Ms. Chandler, and her husband, Dr. Charles Chandler, operated many years from St. Marys, Ohio. Incidentally, they initially shared the same station call sign.

On Washington's Birthday, February 22, 1916, Ms. Chandler participated in the relay of a wireless message originating from Davenport, Iowa, that was relayed to President Wilson as well as to 37 state governors and 137 mayors. The following was said of Ms. Chandler by W5CA, David Middleton, who had been a ham himself since 1919. "My first cognizance of YL ham radio came in listening in awe to 8NH as the skillful fingers of Mrs. Chandler in St. Marys, Ohio beat out rhythmic code on spark in her inimitable fashion as a veteran traffic handler. Ham radio owes much to those women pioneers who blazed a trail."

The cover of the October 1916 issue of *The Electrical Experimenter* was a color photograph of a 15-year old female radio amateur, Ms. Kathleen Parkin of San Rafael, California, busy at a key connected to radio equipment she had built. The associated article inside, entitled "*The Feminine Wireless Amateur*," described her as having received a first grade commercial radio operator's license with the call, 6SO.

The same article in *The Electrical Experimenter* also noted that Ms. Graynella Packer from Jacksonville, Florida had the distinction of being the first woman wireless operator for a commercial ship. Ms. Packer was herself later featured in the March 1920 issue of *Radio Amateur News*, in a piece entitled, "Autobiography of a Girl Amateur." The article described the discrimination problems Ms. Packer faced in becoming the first woman "sparks" aboard a ship, which is an officer level position. When she first applied for the position as ship wireless operator, for example, it was against U.S. maritime law for a ship to have a woman radio operator.

Incidentally, the term for a woman operator, YL, has a specific, well-documented origin. In a letter from the American Radio Relay League, dated May 13, 1920, to Ms. M. Adaire Garmhausen, 3BCK, of Baltimore, Maryland, Mr. E. C. Adams on the ARRL staff said the following. "My dear YL, We have had to coin a new phrase for your benefit as you will readily see that OM will not fit and OL would certainly be most inapplicable." After YL was established, the term XYL followed.

Does the name Susan Jane Helms ring a bell with anyone? Like Ms. Packer, Major General Susan J. Helms also has the distinction of being a first "sparks" aboard a ship. In this case, however, it was a spaceship. Not only did Ms. Helms spend 210 days in space during five separate flights, and not only does she hold the world record for the longest EVA, 8 hrs and 56 minutes, but she also was the first woman amateur to communicate directly with hams on the ground from the International Space Station. Some of you reading this may even have been lucky enough to have her NASA QSL in your collection.

There are many more marvelous stories about women of the key who have contributed to our noble avocation. I regret that space only allows me to briefly tell you about a few.

Reminders! Get ready for Straight Key Night on December 31st. Tell Santa that she or he can't ever go wrong with a new key. Look for 6-meter openings beginning two weeks prior to and perhaps a week after December 21, the winter solstice. Check for CW contacts at 50.125 MHz, but look mostly a little up or down from 50.058 MHz, and from 50.090 to 50.098 MHz. When six meters is open, it is like being in a really fun water fight!

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“The Deserving”

Kelly Jones, N0VD

As DXers we often hear the term ‘The Deserving’. It’s one of those terms that may seem a little unusual to the beginning or casual DXer. I remember first hearing the term shortly after I was licensed in the mid-1980s, however, I’m sure it was around long before then. And as someone that was new to the DXing ranks, it always left me a little perplexed. This month, Jim Kehler, KH2D, takes a tongue-in-cheek explanation of the The Deserving.

He writes:

I was wading through my email this morning and I saw those two catchy words again—The Deserving. Now for you new hams, and you guys who aren’t avid post card chasers, I should explain what those two words mean. Those two simple words define all the hams everywhere who sit in front of the radio, scream their call signs into the pileup, and hope they are lucky enough to get that proverbial ‘new one’ for the coveted DXCC award, and write checks.

Celebrity status, as it relates to ham radio, is something that I really never totally understood but I’ll explain it as best I can. I understand why we considered Senator Barry Goldwater a celebrity. He had reached celebrity status in real life, he was a ham, and he did some good things for ham radio in Washington, D.C. But we have a tendency to make ordinary people celebrities just because they are one of those hams whose main concern in life is to take care of The Deserving.

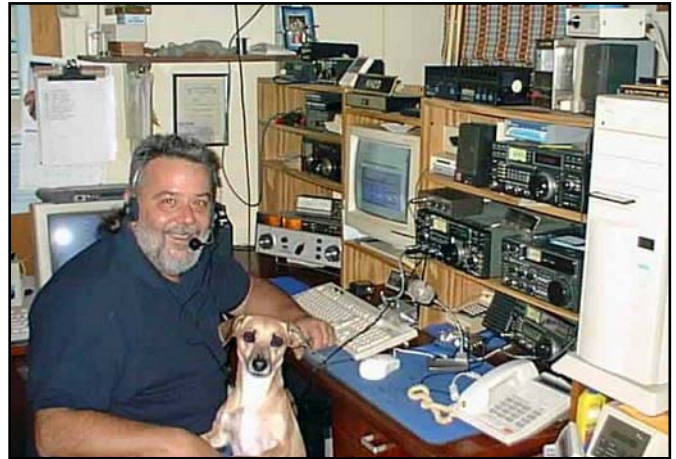
Why do we do that? What do these ordinary hams do to become ham radio celebrities? Simple. They earn celebrity status by risking life and limb with total disregard for seasickness, ship wrecks, aircraft disasters, famine, floods, earthquakes, typhoons, and by spending thousands of dollars to travel to remote, awful places at the far ends of the globe to get on the radio.

Really these guys are anything but ordinary. After seven days in a leaky sailboat, suffering the entire time from violent sea sickness, they still can swim to the beach carrying two amplifiers on their back and they aren’t even breathing hard after they’ve climbed to the peak of the two hundred foot cliff and reached the low-band tent.

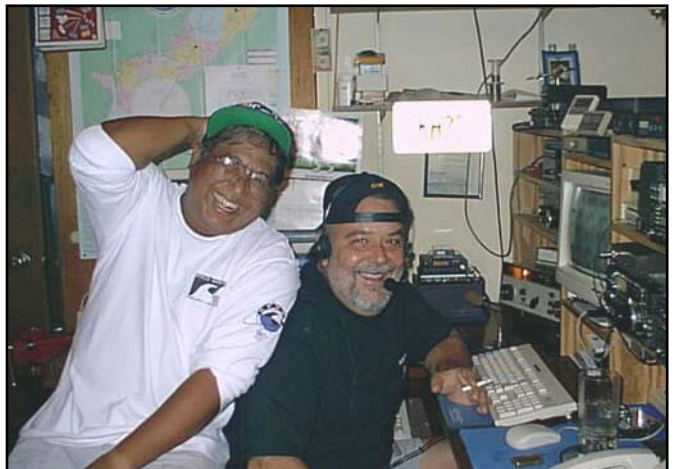
Every one of them can shinny up a fifty-foot pole with a tribander in one hand and a rotor in the other hand while clutching the coax and rotor cables in their teeth and install the whole mess in less than five minutes with only a pair of rusty vice grips.

They work pileups nonstop for seven days and six nights, never even thinking about stopping to sleep and with nothing to eat but the mosquitoes that land on their upper lip. And they do it all just for YOU, The Deserving!

I like to work DX as much as the next guy does, but I guess it’s safe to say I’m not as serious as some other DXers. I don’t lose any sleep over not working a new one and I’ve never bothered to mail post cards to anybody so they would send me a piece of paper. But if I hear a new one on, I’ll jump right in with the rest of guys and yell for a while. I enjoy slowly tuning around late at night with my beam pointed to far off places, with the



A nose for pileups—KH2D and DX hound Muttzy



KH2JU and KH2D pause from the pileups for an impromptu photo.

headset on so I won’t wake anyone else in the house, hoping to find that rare one as he calls his first CQ.

And one of the things I have noticed about life, in general, is that there always seem to be people who are trying to fool other people, but sometimes they wind up fooling themselves as well.

In 1985, I moved to a little island in the Pacific called Guam. It wasn’t really a career move, and I was only going to be there for a year - but I stayed for 16 years. Before I went to Guam, I was WB3IXC in Maryland, and like the rest of The Deserving, I’d wait for the celebrities to go on another trip and I’d yell and scream to work them. Sometimes I’d call CQ ‘til I turned blue, but when you are one of The Deserving, you don’t really expect any DX to answer your CQs anyway.

When I arrived in Guam, the first ham I met was Harvey, KH2A. I’d brought my radio with me, but hadn’t had a chance to put up any antennas and operate. One weekend Harvey and

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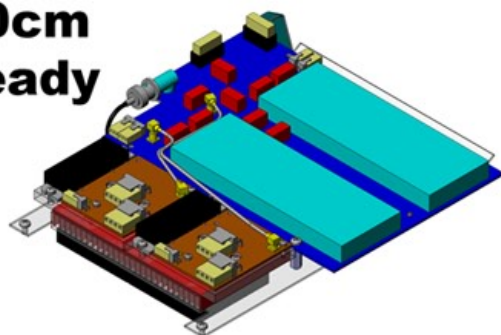
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DX Predictions

DECEMBER 2009

Maximum usable frequency from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 1934, Middleburg, VA 20118). The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa-Kenya/Nairobi, Asia-Japan/Toyko, Oceania-Australia/Melbourne, Europe-Germany/Frankfurt, and South America-Brazil/Rio de Janeiro. Smoothed sunspot number = 4.

Chance of contact as determined by path loss is indicated as bold *MUF for good, plain MUF for fair, and in parenthesis for poor. UTC is hours.

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SA
10	(9)	8	12	(7)	*11
12	(9)	7	11	(7)	(11)
14	(14)	7	11	(11)	22
16	(18)	9	*16	(10)	*26
18	19	(9)	(14)	(8)	*28
20	18	16	19	(8)	*28
22	16	*17	23	(7)	*27
24	*14	16	25	7	*23
2	11	13	23	7	*15
4	10	9	15	7	*14
6	(9)	*9	14	7	*12
8	(9)	8	*13	*8	12

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SA
8	(9)	8	*12	*7	11
10	(9)	7	12	(7)	*11
12	(15)	7	11	(11)	*21
14	19	8	*15	13	*24
16	20	(8)	16	12	*27
18	20	(7)	(15)	(9)	*28
20	19	(7)	20	(8)	*27
22	*16	(14)	23	8	*23
24	11	(12)	25	8	*16
2	10	(9)	(17)	7	*14
4	10	(8)	14	7	*13
6	(9)	(8)	13	7	*12

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SA
7	(11)	*8	(12)	7	*12
9	(11)	7	11	*7	*11
11	20	7	11	(12)	*21
13	*24	8	*21	15	*24
15	*26	(8)	18	14	*27
17	*26	(7)	(14)	12	*28
19	*22	(7)	(18)	(9)	*28
21	*18	(12)	22	8	*24
23	*14	(12)	22	8	*17
1	*13	(9)	15	8	*15
3	*12	(8)	(13)	7	*13
5	*12	(8)	(12)	7	*12

I were looking for something to do, and he suggested I use his station to operate a little bit.

It's hard to come up with the right words to describe my first weekend on the radio from Guam. Amazing. Exhilarating. Awesome. Adrenaline filled. Fun! No more CQ 'til I turn blue - just CQ one time and it seemed like the whole world would call at once.

Harvey and I spent a few hours in the shack on Saturday afternoon, went and got some of those world famous Guam ribs for dinner, spent a few more hours on the air that evening, and I was back at it again on Sunday. When the smoke cleared, I had worked over 900 stations - and it wasn't even a contest weekend!

I didn't figure out until years later that I had discovered a well-kept secret that weekend - a secret that most of The Deserving discover, and a secret that all the ham radio celebrities know full well. Thousands of QSOs later, I figured out another secret that even a lot of the ham radio celebrities never figure out.

A while back, I mentioned that one of the functions of The Deserving was to write checks. What does writing checks have to do with DX'ing? Well here's how the program works. The other thing that was mentioned in that email I told you about was that this particular group of ham radio celebrities needed a mere \$30,000.00 (US) to pay for the next trip they were going on. And since the ONLY reason they were going was for the benefit of The Deserving, then naturally they felt that The Deserving should finance the trip.

So they were asking me to get out my checkbook. Well, I did send them back an email explaining that I knew the secret, and that since I did know the secret, I wasn't going to send them a check. Then I started thinking about thousands of my fellow hams, all over the world, shoveling snow, sitting at home in front of their radios, yelling in the pileup, and facing the horrible fate of forever being only another one of The Deserving. At that moment, I decided that The Deserving everywhere deserve to know the secret, too.

If I sent you an email and said I was going to Hawaii on a three week vacation, I was going to enjoy the warm weather, hang around the beautiful beach and watch the babes, eat some great food I don't normally get to eat, do some shopping, and really enjoy myself, how fast would you reach for your checkbook and send me a donation to help pay for my trip?

If I sent you an email and told you I was going to a tropical island in the Pacific where I was going to enjoy the warm weather, hang around the beautiful beach and watch the babes, eat some great food I normally don't get to eat, and have an exhilarating, awesome, adrenaline filled, amazing, fun three weeks working pileups on the radio I don't normally get to work at home, how fast would you reach for your checkbook and send me a donation to help pay for my trip?

And if I sent you an email saying that I was going to risk life and limb, tote tons of equipment on my back, get eaten by mosquitoes, gamble everything I value in my life to visit some God awful stinking little good for nothing tropical island in the middle of the Pacific and be totally miserable sweating in front of a radio for three weeks with nothing to eat but stale cookies and warm sodas just so YOU - The Deserving can get a new one, how fast would you reach for your checkbook to send me a donation to help pay for my trip that I'm going on ONLY for YOU?

So there you have it. You now know the age old secret of ham radio celebrities. The secret is how they word their email.....

You know the great thing about being in Guam for all those years and being a ham is not just that first weekend that I got on the air. Lots of other hams came and went in the years I was there, and it's was a very enjoyable experience to watch their reactions to that first weekend on the air from Guam too. Some of them walked away from that first time at the radio simply amazed - others walked away with their heads so swollen up that it was obvious they would never be able to wear a hat again. For them the adrenaline rush was so great that they would do ANYTHING to make it happen again - kind of reminds me of those drug addicts you see on TV.

Anyway, I gave all the new guys in Guam the same advice. It's that secret that a lot of ham radio celebrities never figure out that I mentioned a while back. Whenever you get in the operating position at the business end of a pileup on that rare little island, you need only remember one thing. All those people who are screaming in your headset are NOT calling YOU. They are calling your QSL CARD. Remember that and you'll still be able to wear your hat on cold days when you're back home shoveling snow.

Most times we don't get to see situations from 'both sides of the fence'. I feel lucky that I've been fortunate enough to see ham radio from a few very different vantage points. If you ever get the chance to go on a trip to some rare little place and operate on the ham bands, I would highly recommend that you do it. If you've never been the operator at the business end of a pileup, it's something you have to experience yourself to fully understand and appreciate. Pay for the trip yourself and I'll guarantee that it will be an exhilarating, awesome, adrenaline filled, amazing, fun filled experience that's worth every penny you spend. Remember what I said about QSL cards and you won't have any problems with your hat when you get back home.

Oh, and if you ever decide that you really need a card from KH6, send me a check and I'll stick it in my travel fund. I love Hawaii.

That's it for this month's column. A very special thanks to Jim Kehler, KH2D, for his satirical look at "The Deserving"! I look forward to hearing your comments, complaints or whatever is on your mind. If you have a story or opinion you would like to share, please send it to me at nOvd@dxcentral.com. I'll do my best to include it in and upcoming column. Until next time, see you in pileups—and now on Twitter as N0VD!

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The Impact of a Deep Solar Minimum on 160m Propagation

By Carl Luetzelschwab, K9LA

We are currently experiencing the deepest solar minimum period of our lifetimes. It is lasting longer than what we've experienced during previous solar minimum periods (between Cycles 18 and 19, 19 and 20, 20 and 21, 21 and 22, and 22 and 23). And the smoothed sunspot number is the lowest we've ever

seen (it went below 2 in October 2008, and remains there as of the latest smoothed data of February 2009).

Normally these conditions would bring big smiles to low band operators – especially those who enjoy 160m. Why is that? Historically a quiet geomagnetic field is best for 160m propa-

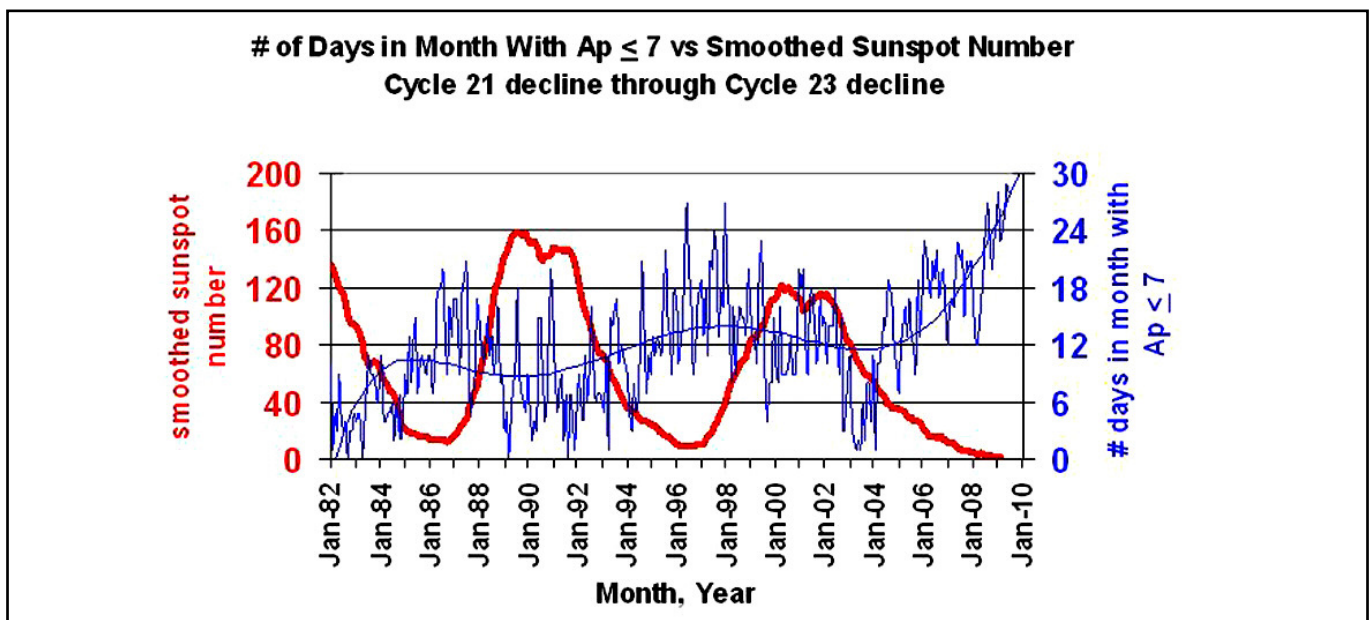


Figure 1 – Quiet Conditions at Solar Minimum

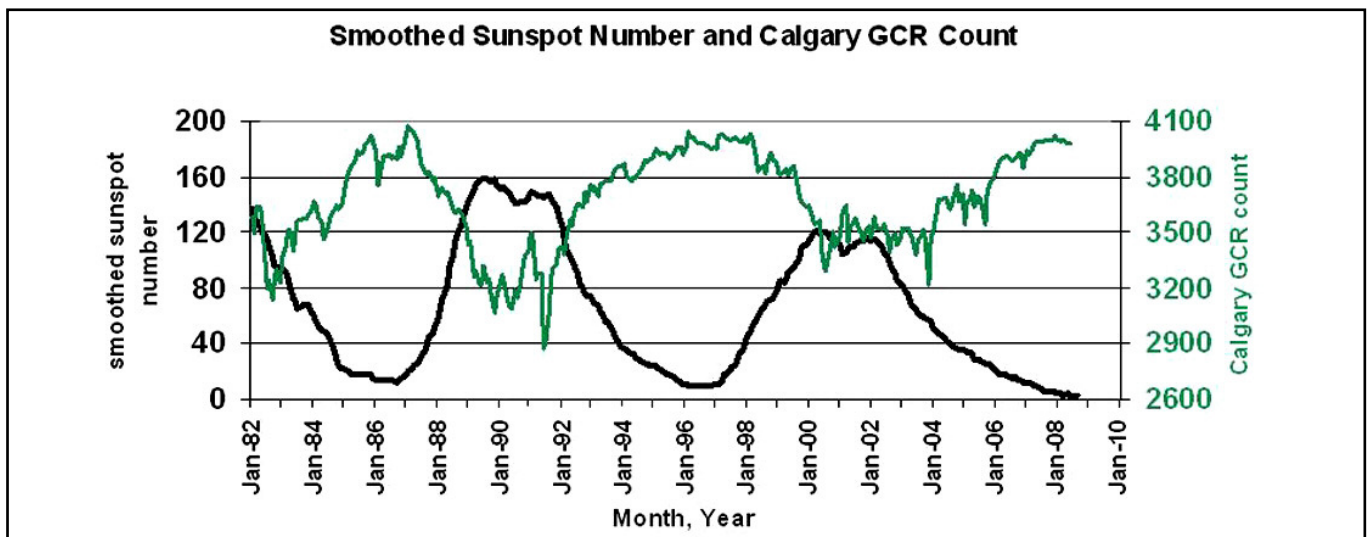


Figure 2 – GCRs versus Smoothed Sunspot Number

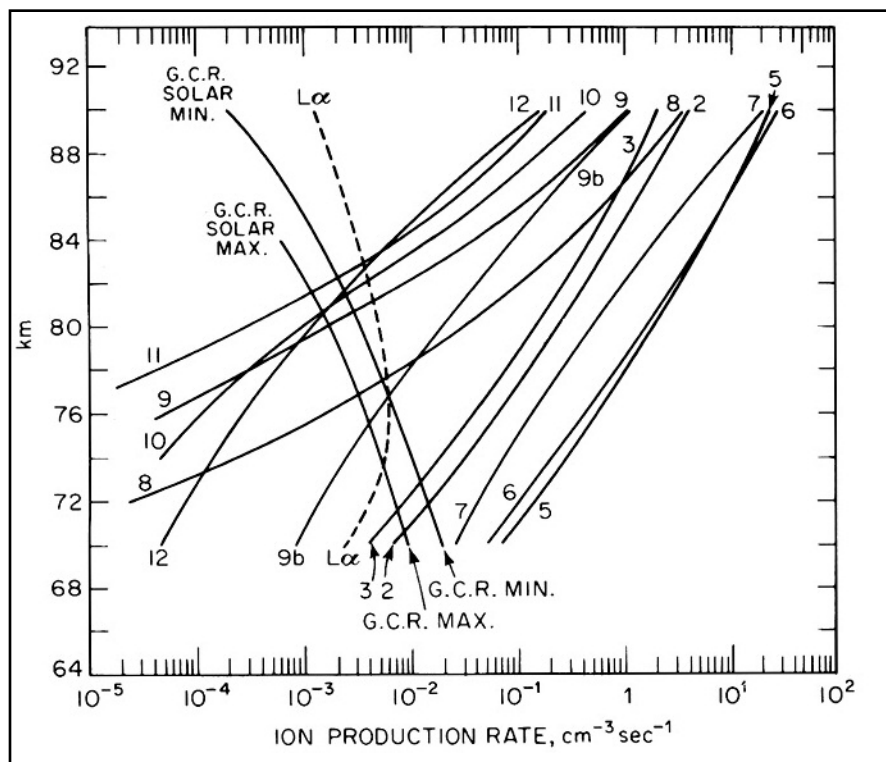


Figure 3 – Ion Production Rates

gation. And it's really quiet now. Figure 1 shows how quiet it is compared to the last two solar minimum periods (1985-1987, 1995-1998).

The red curve in Figure 1 is the smoothed sunspot number, starting from the decline of Cycle 21 through the decline of Cycle 23. The spiky blue curve gives the number of days in the month when the planetary A index (A_p) was 7 or less, signifying quiet conditions. I've add a blue trend line to this spiky data to better interpret the results.

During the solar minimum between Cycles 21 and 22, the number of quiet days in the month peaked at about 10. The next solar minimum, between Cycles 22 and 23, gave us about 14 days per month of quiet conditions. And now the current solar minimum has significantly more quiet days per month. So 160m should really be good.

But a recent unscientific survey that I conducted on the topband reflector (then moderated by Bill Tippet, W4ZV) indicated the majority of long-time 160m operators feel that the last solar minimum was better than this solar minimum. Is there a physical reason for this? Yes, there may be. And it has to do with galactic cosmic rays.

Galactic cosmic rays (GCRs) are very energetic protons. They come to Earth

from all directions both day and night. Their arrival at Earth is modulated by geomagnetic field activity. When we have an active geomagnetic field (like at solar maximum), the active solar wind "sweeps away" galactic cosmic rays. When we have a quiet geomagnetic field (like at solar minimum), the quiet solar wind lets them all in. Thus the amount of galactic cosmic rays coming to Earth is out-of-phase with a solar cycle. Figure 2 shows this.

Since GCRs are of very high energy, they can get down to low altitudes in the atmosphere (down to the lower E region and the D region) to cause additional ionization above and beyond the background ionization caused by solar radiation and X-rays. Figure 3, from Whitten and Poppoff (Physics of the Lower Ionosphere, Prentice-Hall), shows the ion production rate for GCRs at solar minimum and at solar maximum.

Note that the production rate is higher at solar minimum than at solar maximum. That's because GCRs are out-of-phase with the solar cycle as seen in Figure 2, and cause more ionization at solar minimum.

So how does the GCR count rate for this solar minimum compare to the last solar minimum? That's easy to see in the data from the Kiel neutron monitor in Figure 4.

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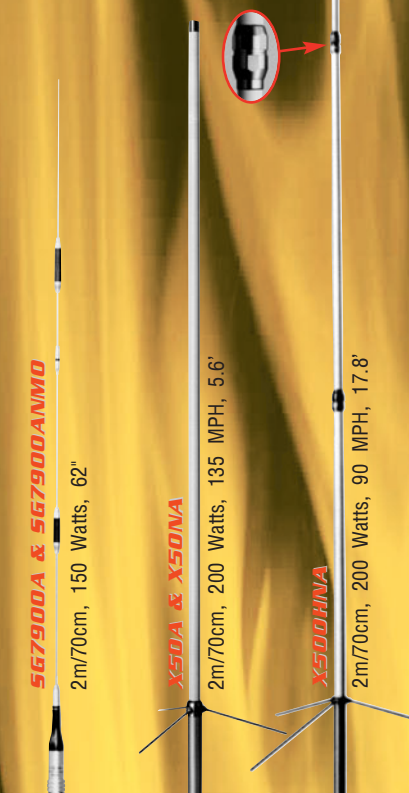
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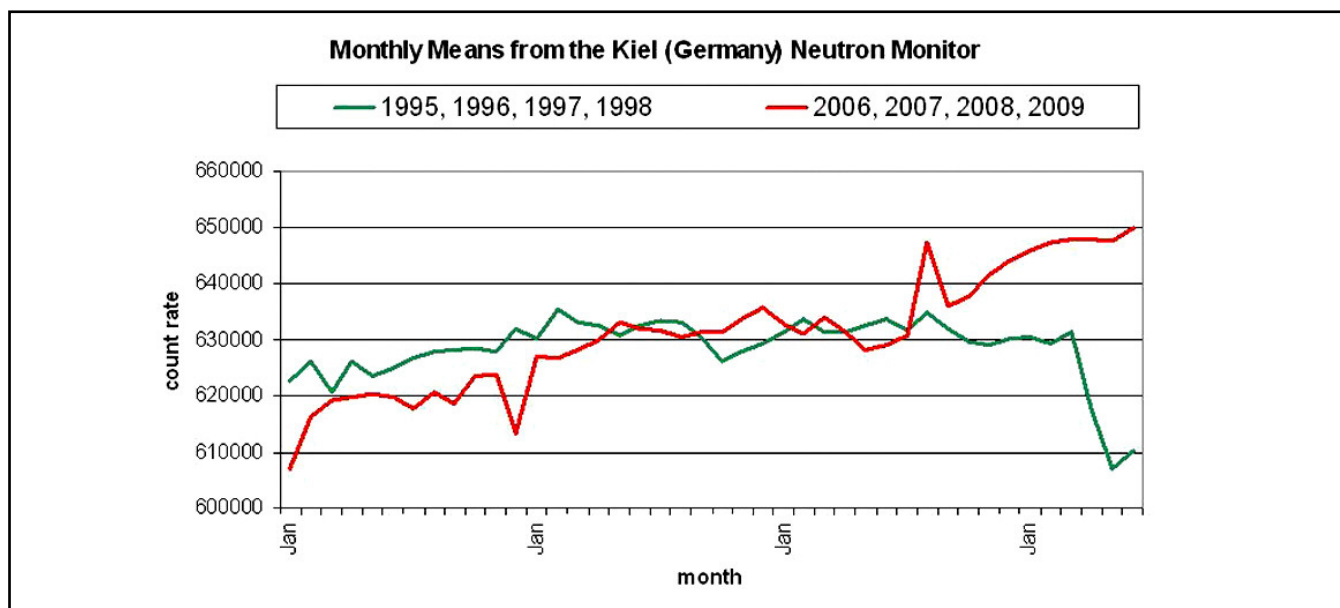


Figure 4 – Kiel Count Rate

The green line gives monthly mean count rate data from January 1995 through June 1998. The red line gives monthly mean count rate data from January 2006 through June 2009. It's easy to see that for the past year or so the GCR count rate is higher now than at any time in the last solar minimum. Thus there's more ionization now, and perhaps a more deleterious effect on topband propagation.

If this hypothesis is true, there is good news coming. When Cycle 24 starts ramping up, it will result in increased geo-magnetic field activity. That in turn will result in less galactic cosmic rays coming to Earth, and less ionization to cause more absorption. Thus 160m may pick up for a bit before the magnetic field gets too active. We can only wait and see if this happens.

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Common Courtesy

By Jerry Wellman, W7SAR

It's called common courtesy. My mom stressed it as I grew up in Casper, Wyoming. She would always teach around the dinner table (as well as by example) that we were expected to be polite and considerate of other people's feelings. To this day, it bothers me when I hear comments or observe behavior that is simply rude. It was the on-the-air behavior that attracted me to Citizens Band radio many years ago. People conversed and were mostly polite.

But, you know the story: The CB craze exploded. Rules were relaxed, call signs were no longer required, along the way conversations became crude and behavior just simply became rude. Polite conversation is still a selling point for amateur radio—and I often hear public agency officials compliment operators on their polite on-the-air manners.

Last week, I made arrangements to buy an appliance from a private party. The fellow asked me to call the next morning and arrange to pick up the item. As asked, the next morning I delayed heading to work and called. I was impolitely told the item had been sold, picked up and paid for. I reminded him he had promised it to me and asked me to come over this morning. The reply was simply, "too bad" and the party hung up on me.

I was somewhat shocked by the reply and wondered when the focus on being polite had stopped being important in today's world. My own children and even my grandkids have learned that being polite is part of an ethic that we expect in our home. Apparently it's no longer a value that gets a lot of attention—based on what I see as I shop or walk on public streets or take public transportation. Might I encourage you in your local radio groups to mention, once in a while, the value to amateur radio of being polite and considerate to others? These values set us apart from others and are noticed more and more by those we serve!

A Trip To Boise

Late last month I was required to attend a conference in Boise, Idaho. I'd not been

to Boise for many years and was looking forward to getting on the highway and heading west. The weather was perfect. The Interstate wasn't crowded and conditions were ideal.


Before I left, I did the normal things, like checking the oil level and tire pressures. I cleaned the windows and did a vehicle safety check. I made sure the radios were programmed for the repeaters I'd encounter and I made sure the HF radio was operating properly. Loaded with some snacks and my normal emergency gear, I was under way. I made a few contacts on HF and even found another traveler on 146.520 simplex.

What surprised me was my attitude toward having (and using) radios on my trip. Years ago the radios were my link to emergency help, if needed. I can recall getting on HF and relaying a message back home to let someone know I'd arrived safely. I would travel and make many contacts along the way both for safety and for pleasant conversation. On this trip, the single VHF conversation lasted only a few moments—it was a quick contact to exchange pleasantries and call signs. I returned to listening to my satellite radio and the other fellow, well, he went on ahead of me. I had mentioned I was on HF and where I was going, but there was no triggering of interest for further conversation.

I noticed the same trend when I tried CB channels. It was the same kind of quick connect and then off to other things. Because my SUV has a number of antennas, one or two contacts wondered about the odd number of antennae, but once I said I was an amateur radio operator, they had no further interest. I asked one long-haul driver about my observation and he simply said that on the highway, radios were there for immediate traffic concerns, but emergencies were handled on a cell phone and entertainment was provided by satellite radio or a CD player. About that time, a friend in Boise called me on the cell phone to see where I was.

My observation is simply that as technology advances, how we use technology

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gy also changes. It's no longer a curiosity item for a vehicle to be equipped with two-way radio that could, in the case of HF, talk to far-away places. It is important we realize this as we market our value to public service agencies and other groups. It's not the equipment, it's our ability to provide communications in places where other means don't work effectively. Amateur radio can reach many stations simultaneously and make efficient use of time in sending immediate messages to many people.

Keeping Amateur, Amateur

There's been some healthy discussion recently as to what is OK with regard to compensation while using amateur radio stations. It's a great discussion and you can find details at many sites, so I won't rehash it here.

You and I should, however, realize that as the rules are refined and defined, we must be willing to step up and offer our time and talents in service to various agencies. Where an agency may be incorrect by thinking that having employees licensed would suffice in emergency situations, they might be thinking they should dump amateur radio entirely if there are no operators available. It's a good time to renew associations with various agencies and let them know we're still there and still willing to operate. I believe many more doors will open to amateur radio involvement as the compensation issue is understood.

Some have complained that the FCC's recent rulings would hurt amateur radio. I don't think this is the case. It means that agencies will need to work with volunteers all the more and it should help local groups attract members, as the opportunity to serve increases. Help your served agencies stay legal—and step up to get involved (and trained) to serve.

Signal-To-Noise Ratio

Each day I trash hundreds of unwanted e-mail spam messages. One local agency chief remarked that a significant portion of his day is spent dealing with e-mail and phone calls, all seeking to sell him (and his agency) on unsolicited items. It's somewhat a result of today's economics and also that e-mail is low or no-cost and telephone service is inexpensive.

The chief did compliment amateur radio and said with hams, there is no unwanted sales pitch or extra, and unwanted, messages. In his view, the signal-to-noise ratio in using amateur radio is a good deal. He said we communicate effectively and are there when needed. As we talked emergency communication, he could not envision a plan that didn't include volunteer hams—or embrace e-mail as a primary connection. As much as we depend on the Internet and other commercial means to connect people and agencies, our signal-to-noise ratio means we're going to be highly effective.

My guess is that the future holds greater emphasis on using ham radio and that more and more agencies will see benefits of using a dedicated (and trained) cadre of communications specialists.

Until next month, best wishes from Salt Lake City!



Individual Training – Be Prepared

By Jim Wades, WB8SIW

When most Amateur Radio magazines write about emergency preparedness, their focus is on organized EMCOMM programs such as the American Radio Relay League's ARES program and similar efforts. It has long been the accepted wisdom that the organized group approach is the most efficient method of emergency communications response. This remains as true today as when the ARRL implemented its AREC program in the late 1930s.

Despite the excellent work done by most ARES type programs, there are reasons why one may not want to register with the local program. In some cases, qualified radio amateurs might be chased away by power and control struggles, an excessively officious air on the part of some leadership officials who view themselves as the emergency management director's personal Praetorian Guard, or a simple disagreement over policy and direction. In other cases, a community may not be large enough to support an EMCOMM program.

The lack of membership in an EMCOMM group doesn't prevent the individual radio amateur from being prepared. Situations can arise, which require only an individual effort, whether it is originating a message for a fellow hiker while in a remote area lacking cellular coverage or originating some welfare messages for one's neighbors after a tornado or earthquake. Regardless of ARES membership, every active radio amateur should want to be minimally prepared for a communications emergency.

Training, like response, needn't be a group effort. The ARRL ARECC training courses offer an excellent blend of programmed study, exercises, and mentorship designed to prepare the individual radio amateur for an emergency. The cost is minimal, and the knowledge gained may someday prove "priceless."

Plenty of useful information is available on-line. Hundreds, if not thousands of web pages associated with local EMCOMM programs, various ARRL Sections and the like provide emergency communications training material. It is important to remember that much of this information is not subject to peer review. Some of these resources contain biases based on mode parochialism or an excessively narrow range of experience in emergency operations. However, a broad exposure to a large number of these resources can provide a very balanced understanding of emergency communications preparedness.

One excellent resource that is not well known is the *World Radio Relay League*. The WRRL publishes an excellent electronic newsletter covering a wide variety of subject matter. The WRRL also encourages individual efforts by promoting standardized HF emergency frequencies and the like. One can learn more about the WRRL at <http://www.emcomm.org>.

In past columns, we have discussed how the National Traffic System can serve as an ideal training tool. NTS nets are on-air at multiple times and frequencies throughout the day. There is simply no reason one cannot occasionally check-in and originate a radiogram using one of these networks. The skills one develops on traffic nets will translate readily to any EMCOMM situation, including the more common VHF or UHF "tactical" communications nets common to major disaster operations.

One can learn a lot about individual preparedness through casual portable operation. For example, a QRP enthusiast can take his portable gear to an outdoor location (one's backyard or a nearby park) once a month or so, set up a temporary station, and originate a message or two through a Section NTS Net. CW nets are ideal for portable, low power operation due to the improved readability

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ty and spectrum efficiency of the mode and the combined simplicity and portability of the gear.

When one deploys a portable station to the field periodically, it uncovers lots of little problems that would normally go unnoticed until a disaster strikes. These range from the missing RF-adaptor to a degraded battery pack or intermittent connection. An experienced operator should be able to take a small portable HF transceiver, such as an IC-703 or FT-817 with the usual ancillary equipment (tuner, battery pack, solar panel, etc.), and have an operational station running in five to ten minutes maximum time once he arrives on site.

The field exercise can be a fun activity to share with a buddy. Simply meet at a local park, proceed to set up a couple of small field portable HF transceivers, and see whose installation works better. Who has greater success being copied on the net? Critique each other's ability to efficiently and accurately transmit the radiogram using the correct radiotelephone procedures.

The fact is; one needn't be a member of ARES, RACES, or a similar program to

be an effective emergency communicator. That having been said, when it comes to your local EMCOMM program, one should remember that the mission is often more important than any one or two individuals. Unless there are real ethical reasons or personal restraints, which preclude participation in your local EMCOMM program, it is still wise for all active radio amateurs to support their local group.

Mission Creep

While we're on the subject of ARES and the like, perhaps we should address the concept of "mission creep." Mission creep occurs when an organization or agency fails to remain focused on its primary mission. Over time, this lack of focus, combined with the inherently finite resources of time and talent present in all organizations, results in inefficient service delivery.

It seems to me that many of our post 9-11 EMCOMM groups (as well as their served agencies) are falling victim to mission creep. Radio amateurs should keep their eyes on the ball. Our primary responsibility is the development of a robust emergency communications capability. There is nothing wrong with the addition of some value-added services and training, but it should not be done at the expense of the primary mission.

An excellent example of mission creep in our post 9-11 EMCOMM groups is "NIMS Training." In my humble opinion, it is an absolute waste of time. While it is wise for the volunteer to have a general knowledge of NIMS and the Incident Command Structure, he simply needn't be an expert in it. Much of the time spent obtaining the necessary certifications could be better spent learning about a host of communication subjects.

If you find your local EMCOMM group is spending the majority of its time on subjects such as hazmat training, NIMS, directing (auto) traffic, search and rescue, and the like, it is likely your group suffers from mission creep. Get back on-track. Refocus your training on emergency communications preparedness, procedures, and technology. There is nothing to preclude those interested in these other topics from joining the local SAR group, police reserve, volunteer fire department, or similar agency while maintaining an ARES or RACES membership.

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Bill Sexton N1IN/AAA9PC

World War II barely seemed won before the next outbreak of war in Korea and with it the U.S. Army's call for hams to help. This time, unlike WWII, amateurs got an invitation to keep the troops in touch with their homefolks.

And how the amateur community responded—in Korea, later in Vietnam and finally in Southwest Asia! It was a glorious 40-year chapter in the history of the Military Affiliate Radio System.

As this is being written, there is serious discussion within the Army MARS leadership of reaching out once again for an influx of new members. The reason once again is an external enemy, this time not only physical terrorism like 9/11 but also the new and mounting peril of cyber-aggression. That's a threat never faced before.

There does seem a small problem, though. Now, just when the need is acknowledged for new and younger members with technological qualifications, Army MARS has imposed the strictest entry requirements in half a century. But please don't rush to judgment.

In 1950, North Korean aggression prompted hasty abolition of a post-WWII rule limiting MARS membership to military-connected amateurs such as National Guardsmen or the Coast Guard. Otherwise, an FCC Novice license and the CO's permission sufficed. Starting this year, the minimum category is General class. Moreover, digital is overtaking HF voice as the primary mode, and it's no longer enough to master the military's radio procedure. FEMA and the National Incident Management System (NIMS) are increasingly central to MARS activity on and off the air. Serving as net control and taking part in exercises are now mandatory.

Suddenly it's a new ballgame.



As Army MARS director for Northern New England, Ray Machel (KC1BT/AAA1NN) was an early champion of new technology. He's shown here installing the Winlink station at Central Vermont Medical Center, Barre, one of 67 Vermont agencies and offices he's set up for the MARS e-mail-over radio system. The state funded the IC-706 receivers, tuners and SCS pcIIpro Modems. (Photo: Betty Machel)

And in more ways than one: At September's end Stu Carter, whose three years as Chief culminated in a thorough reshaping of Army MARS doctrine, handed the helm over to Jim Griffin (KE7LJA), a longtime military communicator specializing in training and quality control at high-tech installations.

Tightening the entry standards

—and the day-to-day participation requirements as well—was a logical response to the much more complex nature of emergency communication.

MARS itself was being redefined as then-Chief Carter's February 2009 "Army MARS Road Ahead" planning document made clear. Now the service needs to attract the new 21st century model of radio-cum-IT techno-ham (which, come to think of it, is what the original pioneer amateurs were at the start of the 20th century).

During leadership discussions before the "Road Ahead" plan was formally published, it was argued that heightened standards might serve to attract such candidates. Like the traditional hams before them, they should relish contributing

their information technology skills to public service in time of national need. What better way to serve and to hone those skills at the same time?

Since then, another factor has heightened the recruitment issue. The announced deadline of April 1, 2009 for all current members to meet the revised standard produced an unintended but not unexpected consequence. A considerable number are not renewing their MARS licenses.

Not all that surprising, really. Something very real was lost to MARS when cell phones and e-mail ended the long and much-admired run of MARSgrams and phone patches. Operation Desert Storm in 1991 provided the last big window for morale and welfare traffic, although a later effort was made in Iraq and Afghanistan.

With that rewarding mission largely gone, the camaraderie of the daily voice net took on new importance. But then Winlink absorbed the voice net's traffic-

handling function. Members uncomfortable without their accustomed roles began dropping out. The positive side: MARS would have ample room for new blood attuned to the new roles.

MARS Evolves

That new generation may encounter an Army MARS in mid-mutation.

The organization now shows some evidence of evolving into twin teams defined

Change of Command

Ft Huachuca, AZ—Veteran Army communicator Jim Griffin (KE7LJA) is the new Chief of the Army Military Affiliate Radio System (MARS).

Maj. Gen. Susan S. Lawrence, Commanding General of the 9th Signal Command (Army), named Griffin to succeed Stuart S. Carter who held the Chief's post since December 2006. MARS, the Defense Department-sponsored organization of amateur radio operators who volunteer for communications support in emergencies, is a component of the 9thSC(A).

As a uniformed member of the Signal Corps and subsequently a civil servant, Griffin has amassed 52 years in government service. Before today's appointment he had served for two years as Deputy Chief of Army MARS with special responsibility for construction of its new gateway communications station at Ft Huachuca.

"It has been a fast three years, and I believe we've positioned Army MARS to better support the missions of the Army and to provide critically needed communications capabilities to Civil Authority when needed," retiring Chief Carter said in a message to the force. Carter, a retired Air Force communications officer, will continue in his concurrent post as Chief, Sustainment Operations, 9th SC(A) G3, with continued oversight for MARS as well as for Force Protection and Antiterrorism responsibilities for 9th SC(A)'s Global force of 22,000 military, civilians and contractors.

"I will remain Jim Griffin's number 1 supporter," Carter said.

Griffin's career spans both the modern era of radio communications and the global reach of American military commitment. "My early days of radio were in the army as a Fixed Station Repairman," he recalled in a broadcast greeting to MARS members. "I started out with vacuum tubes, filament voltages, resistors, capacitors and other items that are found in museums today. I have been stationed in some of the more interesting places of the world such as Japan, Vietnam, France, Germany, Thailand and Italy. I have run a gamut of positions in radio, microwave, AUTODIN and satellite as a technician, Installer and instructor."

The new chief, a native of Hawaii, enlisted in the Marine Corps in 1956. Joining the Army in 1959, he developed a personal specialty of quality control/assurance at major installations around the world. He retired from active duty in May 1979 with a total of 23 years military service and became a civilian staff member in December that year.

The change of command at MARS HQ comes just as Army MARS completes an intense eight-month retraining program in preparation for the Army's expanding support for homeland security. The three years of leadership by Carter and his deputy



The new Chief of Army MARS, Jim Griffin, left, receives an emergency vest from his predecessor Stu Carter during an informal change-of-command event at Ft Huachuca AZ Sept. 25. (Photo: Dave Bly)

saw almost daily change as MARS adjusted to the government's rapidly-evolving homeland security structure.

The MARS role includes operation of an e-mail-over-radio backup system for participating federal, state and local agencies as well as HF radio command-and-control nets in all 50 states, both capabilities maintained in constant readiness in case commercial circuits became severed by natural or manmade disaster. MARS also provides trained members to assist state and local emergency operations centers.

Because of its dual responsibility to both the Army and the civilian agencies supported by the military in emergencies, MARS members undergo training in both military and civil communications procedures.

Carter presented his successor on the Chief's Friday evening broadcast net. Formally assuming command with the MARS call sign AAA9A, Griffin told the national linkup of MARS stations:

"We are on a steady course based on the *Road Ahead* planning document that Chief Carter published last February. In fact, this week marks the completion of re-training of the entire Army MARS membership to meet the plan's long-term goals.

"Now the work really begins," he said.

by function and somewhat roughly comparable to the uniformed army's infantry and artillery. That is, they serve the same mission but with different weaponry.

Saying this involves not so much forecasting things to come as observing trends already underway. I wouldn't be surprised if Air Force and Navy-Marine Corps MARS weren't experiencing the same sort of incipient differentiation.

One of the functional branches might link MARS customers (the supported civil agencies and military units) with automated text delivery via Winlink and/or whatever high-speed error-correcting technology comes down the pike next. Call this the "Winlink Team" for convenience. Its members would establish and maintain RMS (Radio Message Server) stations, help install Winlink for customers, and assist in training customer staff. They would not be involved in originating traffic. That's what the customers do. We simply deliver. The distinction is important.

The other branch might operate more traditional activities such as HF and VHF nets, both voice and sound-card digital; also populate the newly-inaugurated Emergency Response Teams; and provide agency augmentation (lending staff to customers for specific tasks). You might name this the "Command and Control Team" after its primary function.

"C2" nets may lag on throughput but are absolutely invaluable for imparting information to all participants simultaneously, directly, without rehandling delays for, and with provision for instant feedback heard by all. Operators may join the net from virtually anywhere with minimal equipment. And a familiar voice on the air conveys meanings invisible to text.

It's essential, all of it, for maintaining the common operating picture that NIMS requires. Originating traffic is thus a major responsibility and requires a high level of specialist training as (as does the technical aspect for the automatic messaging system). C2 is even more vital, not less, in the expanding terrorist climate described by the new Secretary of Homeland Defense, Janet A. Napolitano, as "even more decentralized, networked and adaptive than on 9/11."

Note how the uniformed service comparison cited above might actually apply. Today's infantry is agile and flexible, reconfiguring itself swiftly to meet any fast-developing emergency, as the C2 nets must do; artillery delivers maximum

throughput aimed at specific targets as does Winlink to a message's addressees.

Challenges Ahead

A number of challenges would have to be expected in such an imaginary scenario whereby a historically unitary organization hatches twins.

At HQ, new levels of coordination probably would be required to assure that each branch receives the necessary resources and oversight. Bifurcation would reach all the way down the chain of command, too. So . . . would each region have one single director, or would there be co-directors for each branch?

There's a training issue, too: Just how much knowledge needs to be imparted so that everyone understands the mission and history and traditions of MARS on top of the knowledge specific to each job whether generalist first-responder or transport layer specialist? That's so important to the sense

of "belonging" that is the foundation of any military undertaking.

Externally, does the customer—say, a state emergency management agency—call on one POC (point of contact) at MARS for all MARS business, or would there be separate ones for WL2K and C2? That question could require a lot of thought and planning and perhaps a cautious tryout or two. (Truthfully, it's a pressing issue no matter what shape the future brings to MARS, or when. One struggles to conceive of Incident Commanders carrying half a dozen different MARS emcomm numbers on their Blackberries for use at the height of crisis. No way.)

Well, it's all speculation, but doesn't it make sense to get a discussion going? The Road Ahead document of 2009 spelled out the tactics of the future in splendid detail. The next step might well set forth the strategy.



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2009 10-10 International Net Scholarship Winners

By Gerald F. Gross, WA6POZ

Congratulations to the winners of the 2009 10-10 International Net scholarship winners! We thought you'd enjoy reading about the up-and-coming shining stars in ham radio.

David Clark KD7NZK

David Clark, KD7NZK, from Phoenix, AZ is a junior at Arizona State University, studying computer systems engineering and computer science. He holds an Extra class license, is president of Explorer Post 599 (W7BSA) and is active in emergency communications, contests and community events involving amateur radio.



My fascination with computers began at an early age; I could type and load commands and games on an old Commodore 64 before I could even write. At the age of 12, I became a ham radio operator, learning about electronics before I knew enough Algebra to even understand Ohm's Law. At this stage, most of what went on inside a computer was an interesting and mysterious thing; as Albert Einstein said, "the most beautiful thing we can experience is

the mysterious. It is the source of all true art and all science." During the following years, I began exploring computer security and the Linux operating system, and quickly found that you can't possibly understand either without some background in programming. After that, I self-studied enough Python to make some simple programs, and then enough TCL to write some useful scripts to sort and analyze the log files of an APRS ham radio program, all while trying different Linux operating systems and expanding my general knowledge of computers. When the time for deciding a major in college came, the only real question was between the Computer Science, Computer Systems Engineering, or Electrical Engineering program. I decided on Computer Systems Engineering because it provides me the opportunity to understand hardware and software, as well as scratch the surface of mathematics and physics, making electronics, computers, and the world itself a little less mysterious.

Josh Fisher W4WJF

Josh Fisher, W4WJF, is a senior at North Carolina State University in Raleigh, NC where he is studying for double majors in Electrical and Computer Engineering. Josh has maintained a 3.9 GPA during his time as a student and will begin graduate school at NC State in spring 2010 in Electrical Engineering.

Josh was first licensed as KG4EGC at 12 years old and is currently an Extra class operator. DX'ing and contesting are two

of W4WJF's most favorite activities. As a VHF contester, Josh finished #1 in the USA in the 2005 CQ Worldwide VHF contest in the 2M SOSB category; and, W4WJF earned several top five finishes with the AA4ZZ VHF contest team. As a HF contester, Josh finished number one in the Roanoke Division and North Carolina in the 2004 ARRL DX Phone contest as a 20M Single Op. W4WJF has also participated in several North Carolina QSO parties. He went on his first DXpedition in October 2008 to Willis Island as VK9DWX after he won a worldwide contest among young hams.

Josh is a member of the ARRL, Carolina DX Association, NCSU Student Amateur Radio Society, and the AA4ZZ contest team. He also is an avid sports fan who enjoys playing and watching most sports. In his free time during the school year he plays intramural basketball and football and roots on all athletic programs at NC State.



James Hunt KI5DQ

James Hunt obtained his novice amateur radio license in high school as KA9FHF. His electronics instructor inspired and "Elmered" him. Morse code was a different element of life. Amateur radio was a fascinating aspect, being able to talk to people on an international level by sharing different lifestyles and concepts. It all began with SWL listening. As time passed, he upgraded to Technician, Advanced and then Extra class. He skipped over the General class at one VE test session and has only changed his call sign once, to KI5DQ.

He is married with children and resides in Sherman, Texas. He is active in community events, which include: Volunteer Examiner (VE), Skywarn, ARES, RACES and CERT. He is also a member and officer of the K5GCC Amateur Radio Club, as the Newsletter Publisher and Trustee. He is also a 10-10 International member, #75122.



Extra-Curricular community events include providing communications for community charity fund-raiser events such as the Red Cross and Kiwanis Bike Rallies. Usually, he is the Net Control Station (NCS).

Alex Brech KCØYLD

Thank you for providing financial support to students who are part of Amateur Radio. I was selected to receive the 10-10 International Net Scholarship for the 2009-2010 academic year and I thank you very much for this aid. It will help me focus on my class work in Computer Engineering. I am proud of the fact that I have received this scholarship. I have contacted my high school and hometown newspaper to notify others of another benefit of being a ham.



I come from a family of amateur radio operators. My father has Extra class privileges. My mother and two older brothers are General class licensees. My sister-in-law had General privileges until she became a Silent Key in 2004. I was first licensed in August 2006. I met my goal of being licensed before going to college. I took a class from the sheriff's deputy and passed the Technician test. I upgraded to General in March 2007. Dad and I studied the Extra class book together. We both learned as we discussed why answers were right and how to remember them easily. I upgraded to Extra in August 2007. I have been accredited as a VE with the ARRL and W5YI and joined Murray County ARES. In September 2007, I started college at the South Dakota School of Mines and Technology in Rapid City, SD and quickly became involved with the ham radio club (KØVVY) on campus.

10-10 Future Events

The 10-10 Winter Phone QSO Party will be held on 0001Z February 6, 2010 through 2359Z February 7, 2010. It is open to all; however, logs can only be submitted by paid up 10-10 members as of the date of the party. 10-10 members should exchange call, 10-10 number, name and QTH (state, province or country). Stations without a 10-10 number should use 00000. For non-10-10 members this is a good time to make those initial 10 contacts. QSO Party logs must be returned to the QSO Party Manager and be postmarked no later than 22 February 2010.

Each year 10-10 holds the Anniversary QSO Party. This event runs from 1 January 2010 through the 31 December 2010. Entrants work members that have the 10-10 anniversary year contained in their 10-10 number. For example: 2010 is 10-10's 48th Anniversary; therefore, one must contact members who have 48 in their 10-10 number, i.e., 48xxx, x48xx, xx48x or xxx48.

A second year-long operating event is the 'Meet the 10-10 Volunteers'. The idea is to work as many of the 10-10 members who volunteer, as defined by the 10-10 Organization Chart, beginning on 1 January 2010 of each year.

Logs for the 2009 Anniversary QSO Party and Meet the 10-10 Volunteers Party are due to the 10-10 QSO Party Manager by 15 January 2010.

For complete details on all 10-10 QSO Parties refer to the 10-10 NEWS, 10-10 Information Manual or to 10-10 Party page on the 10-10 web site, www.ten-ten.org.

Information about 10-10

The easiest way to obtain information about 10-10 is to visit the web site at www.ten-ten.org. Everything you want to know about the organization is on the web, including a downloadable membership application form. You can make inquiries into the 10-10 Database or download the 10-10 Information Manual. If you do not have computer capabilities, you can receive a copy of the 10-10 NEWS by writing to: 10-10 International Net, PMB 142, 643 N. 98th Street, Omaha, NE 68114-2342. Please enclose \$3.00 to cover the cost of shipping.

If you have been issued a 10-10 number and have forgotten your number, send me an e-mail and I will find your number. A 10-10 number is issued to you as an individual for life, regardless of the call(s) you may hold.

I would also appreciate any comments or suggestions. Please send to:

Gerry Gross, WA6POZ, #21274, 10-10 President, 16046 Orchard Cir, Omaha NE 68135-1068 or e-mail at: wa6poz@ten-ten.org

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FUNCube and YouTube

Terry Douds, N8KI

**Hi everyone,
Let's get to the latest in Amateur Satellite news.**

A little over a week after I write this column, the annual meeting of AMSAT-NA will be in full swing in Baltimore, and for those of you able to attend, I'm certain you will have had a great time. I'll report on it in the next column. Last July was the AMSAT-UK Colloquium – something I hope I'll be able to attend in the future. The dates of the 2010 AMSAT-UK Colloquium will be the weekend of July 30 to August 1, 2010. The location will be the same as in 2009, the Holiday Inn, Guildford, Surrey, United Kingdom. (G3WGM)

Videos of the presentations from this year's meeting (July 2009) are available to watch on the British Amateur Television Club (BATC) website

There are 18 videos on many subjects, such as:

- FUNCube, the new AMSAT-UK linear transponder satellite project by Graham Shirville G3VZV
- AMSAT-NA Update by Drew Glasbrenner, KO4MA
- AMSAT-DL Update by Peter Guelzow, DB2OS
- Electronics and Teddy Bears: A Near-Space Adventure by Ed Moore, M0TEK, and Fergus Noble, M0NBL, Cambridge University
- Engineers Wanted! Tempting Teenagers to Explore Technology by Garry Bulmer, Software Architect
- Medium Earth Orbits by David Bowman, G0MRF

All the videos can be seen at <http://www.batc.tv/> Click on the "Film Archive" icon on the left to see all the videos available then select the video you wish to see (they start with 2009 AMSAT).

PDFs of the slides from the presentations can be found on the AMSAT-UK website at: http://www.uk.amsat.org/component/option,com_wrapper/Itemid,278/

Since a video presentation was done on the FUNCube, let's talk a bit about this new project. FUNCube features a 435-145 MHz 1-watt linear transponder for SSB/CW operation. Measuring just 10_10_10 cm and with a mass of less than 1 kg, it will be the smallest satellite to carry a linear transponder. According to AMSAT-UK, FUNCube will "enthuse and educate" young people about radio, space, physics and electronics. "The idea of FUNCube is to combine an educational project to excite young people with a simple linear transponder for radio amateurs to use with either legacy modes like CW and SSB, or, still to come, digital ones," said IARU Region 1 Satellite Coordinator Graham Shirville, G3VZV. Shirville is also affiliated with AMSAT-UK and ARISS-Europe.

The new satellite will feature a 145 MHz telemetry beacon that will provide a strong signal for the pupils to receive. "A simple receiver board is being developed," Shirville explained.

"This can be connected to the USB port of a laptop to display telemetry in a fun way for the kids to learn."

A key feature of the satellite is the absence of an on-board computer. For reliability and maximum power efficiency, Shirville explained that the design has been kept as "straight-forward as possible," with satellite control being achieved using simple commands.

The American Radio Relay League (ARRL) has posted a Web story on it at <http://www.arrl.org/news/stories/2009/07/29/10985/?nc=1> FUNCube was also featured in the UK's Electronics Weekly e-mail newsletter at <http://tinyurl.com/kmlssm>

Speaking of newsletters, AMSAT INDIA newsletters are available for download at <http://www.amsatindia.org/Newsletter>. The July Issue has more information about FUNCube, as well as many articles concerning AMSAT internationally. It is a pdf file, and looks great. It will be published bi-monthly, so check it out!

A map showing the current satellite location for most of the active amateur satellites is now available on the AMSAT web site. You can go there using this URL: <http://www.amsat.org/amsat-new/satellites/status.php>

Click on an underlined satellite name in the left hand column. This will display a satellite summary. Scroll to the bottom of the page and there will be a map showing the current location of that satellite and the illuminated and dark portions of the earth.

This feature can be used for a quick check of a satellite's location or verifying your tracking program is setup correctly. Thanks to Rick, W2GPS, and Chip, N2YO, for providing this useful feature.

The SuitSat-2 project now has a new name to go with its new shape: ARISSat-1.

Gaston Bertels, ON4WF, the ARISS Chairman announced the new name for the satellite and project recently. The project team is moving ahead using the same hardware that was to fly in the Russian Orlan suit. That suit had to be disposed of ahead of schedule, so a new "container" for the satellite was needed. The team is re-configuring some of the modules to fit into the new structure.

iPhone Applications

Well, you could pretty much guess that iPhone applications for satellite operation would arrive sooner or later. Well, it's sooner, now. If you are interested in having a free satellite tracker application in your iPhone, here are two for you to test. They are downloadable from the AppStore via these links:

Space Station Lite (ISSLite) FREE

<http://itunes.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=305522724&>

Satellite Tracker FREE
<http://itunes.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=306260378&>

Contact The ISS Via YouTube

Space Daily carried a story dateline September 3, from Paris, France about a new way to contact the International Space Station.

Is there something you always wanted to know about being an astronaut? Are you curious about an aspect of living and working in space? Well, now is the time to ask. Instead of searching the Internet, you can ask an ESA astronaut directly. Frank De Winne, on the International Space Station, is keen to answer your questions via ESA's YouTube channel.

Questions answered so far have been "Will you exercise a lot on your bike?", "What medical conditions would stop you becoming an astronaut?", "Will Europe have its own Space Shuttle in the future?" and "Do you use washing powder for washing clothes in space?"

Frank, ON1DWN, is answering questions from space fans all over Europe, and he will greet you in English, French or Dutch in your personal video response.

All you have to do is record your question using a webcam, video camera or mobile phone, and post it on ESA's YouTube channel. Each week, Frank posts his responses to your questions on the site, directly from space.

Frank is part way through his six-month mission on the

International Space Station. Later in his mission, he will also become the first European commander of the ISS.

Record and upload your questions to ESA's YouTube channel as a 'Video Response' to De Winne's video message which can viewed at this link: http://www.youtube.com/watch?v=okpNcG3vu_E

Many of the responses already posted are quite interesting indeed! This is a wonderful use of our existing technologies, and can get everyone involved very easily via your own webcam.

SumbandilaSat

South Africa's SumbandilaSat satellite is now in orbit after a successful liftoff aboard a Soyuz rocket from the Baikonur Cosmodrome in Kazakhstan on September 16. The main payload is a multi-spectral imager, but the satellite also carries an Amateur Radio component consisting of a 2 meter/70 cm FM repeater.

After SumbandilaSat is fully commissioned, the repeater will be activated with an uplink at 145.880 MHz and a downlink at 435.350 MHz; there will also be a voice beacon at 435.300 MHz. The transponder mode will be controlled by a CTCSS tone on the uplink frequency. The CTCSS tone frequencies have yet to be announced. Amateur use is not expected for at least three months.

This was a full month of info, but I'm out of space. Until next time, I hope to see you all very soon on the birds!

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2009 Year-End Promotional Ideas

Devere "Dee" Logan, W1HEO

How has your year been? For many of us, it was far from normal. What about promoting amateur radio? Did your club do something to bring our great hobby to the public's attention? If so, take a bow. If not, there's still time to make a move.

For those who have done some publicizing, and for those who are yet to swing into action, a gentle reminder: *WorldRadio Online* wants to recognize your efforts. This year marks the first nationwide Golden Megaphone Awards competition. It was established to motivate clubs to actively promote amateur radio in their areas. There are four award categories:

1. Best overall promotion program that includes a list of objectives and a variety of communication elements. For example, media publicity, displays, fliers, special events etc.
2. Best individual promotional event that reflects planning, publicity and specific elements such as a display or an audio-visual presentation.
3. Best targeted promotion is one that concentrates on a specific audience such as youth, seniors or some specific organization.

4. Best club-developed promotional materials includes printed material, displays, internet messages, Web pages and radio-TV announcements.

An application blank can be downloaded from the *WorldRadio Online* web site, which is included in the *CQ Magazine* home page at www.cq-amateur-radio.com. Deadline for receipt of entries is January 30, 2010. We hope that your group is among the entrants.

Last-Minute Promotional Ideas

In what remains of the year 2009, there is time for a last-minute burst of enterprise that will enable your club to send in a Golden Megaphone entry.

One of the basic communication needs of any group is to establish its identity with various publics. The easiest way is to explain who you are and what you do to serve the public interest. Amateur radio's emergency role is worth mentioning, along with a description of your club's activities such as Field Day. This can be done easily in a letter—using your club or group letterhead—and sent by regular mail or e-mail. You could

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Calendar includes dates of important Ham Radio events such as major contests and other operating events, meteor showers, phases of the moon, and other astronomical information, plus important and popular holidays. The CQ Amateur Radio Operators Calendar is not only great to look at, it's truly useful, too!



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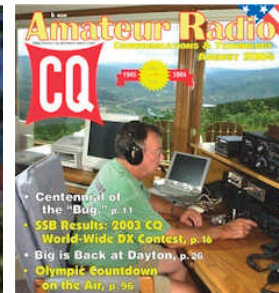
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call this an annual report, and send it to local officials, including law enforcement, fire, emergency management, and educators etc.

Ham radio benefits from the power of demonstration. Has your club ever invited key officials to experience a ham shack visit and orientation? You might prepare a mock emergency communication exercise while pointing out the benefits of such a volunteer corps.

A spin-off of such an exercise could be a news release to area media and others, explaining how your group has prepared for emergencies or performed during an actual event such as a major storm, flood, or similar. You might include a summary of the volunteer hours provided, number of volunteers involved etc. This release could be called an annual summary.

Human interest stories are often reported by local media.

Has a member of your group used amateur radio in an unusual way? Perhaps radio has helped a local shut-in to stay in touch with the outside world, or hams who met by shortwave radio visit in person after years of talking over the air. Many amateurs enjoy contacting the countries from which their ancestors came, exploring their cultural roots and native languages. You may want to contact a local reporter to see if there's interest in developing such a story.

Do You Tweet Or Twitter?

The buzz these days is about social media such as Facebook or Twitter. Certainly you're surrounded by people who participate in blogs and various Internet sites. The interesting thing about this is that communication originates with individuals and is sent without outside editing. Unlike newspapers and other media, these Internet channels are free and open to all who wish to express themselves. Interactive blogs and chat rooms provide a great way to exchange information about our hobby and even stimulate interest in becoming licensed.

We radio amateurs should be able to benefit from such a powerful communication resource. Our Internet messages, on-line newsletters, club home pages and similar can be circulated widely at no cost as compared with ordinary mail. Many of our messages may be forwarded to others, producing a major, expanding network.

Fun Things That Hams Do

During a recent presentation on ama-

teur radio, we distributed a list of interesting things that hams do. Here are a few, but we're sure that you can add more. Send us yours.

Hams talk to the world and make new friends both near and far. We build things, tinker, and learn electronics through personal application. Computers and digital technology are part of today's radio hobby. Some operators practice a foreign language on the air and learn about other cultures and lands. Conversations with other operators are often interesting, fun and educational. Amateur radio operators provide emergency backup communication when normal channels fail during floods, fires, and storms. Hams enjoy fellowship in radio clubs and help each other with radio projects and operating techniques.

Most of these activities would lend themselves to human interest stories. When focusing on hometown people, they can attract journalists seeking local angles for their stories. Clubs can sketch out the basic details of "who, what, where, when and why" in their newsletters and send copies to reporters who may decide to do follow-up features.

Saluting The Elmer Corps

We recently invited our readers to consider joining the Elmer Corps, which includes volunteers who agree to be first contacts with persons interested in ham radio. The list of current members is posted on the web site of the Ham Radio Promotion Project (www.neoham.org). It is our hope that clubs will develop their own Elmer list and circulate it locally, or even reproduce the master roster that appears on the web site.

If you'd like to join the Elmer Corps, please send us your name, call, and contact information and we'll add you to the list.

As we contemplate the New Year 2010, we hope that your radio club or group will plan for some promotional activities that can also lead to new members. By having your own Elmer Corps members and some training help with licensing candidates, you will become "radio active." It's far better to wear out than rust out, as the saying goes. Please make an effort to set a few goals, even though they may be simple ones. And good luck!

Devere "Dee" Logan, WIHEO, is an accredited public relations counselor, writer and veteran radio amateur with a passion for DX and CW.

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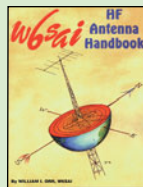


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W6SAI HF Antenna Handbook

by Bill Orr, W6SAI

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Order No. HFANT **\$19.95**

Sloper Antennas

By Juergen A. Weigl, OE5CWL

Single- and Multi-Element Directive Antennas for the Low Bands

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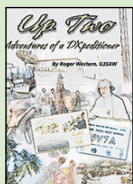
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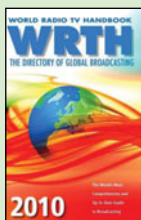


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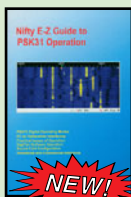


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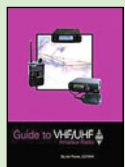
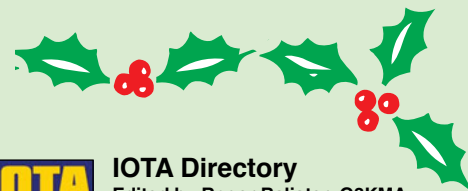
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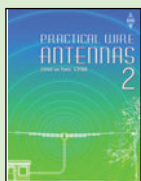
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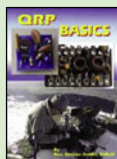
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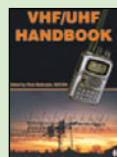
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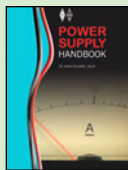
HF Antenna Collection

2nd Ed., 2002. 252 pages.

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How power supplies work, selecting components, building and modifying supplies, measuring the finished supply,

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By John Clarricoats, G6CL

1st Ed., 1993 307 pages.

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of the development of a hobby that has provided technical knowledge and service to the community.

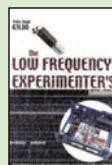
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The Low Frequency Experimenter's Hdbk

By Peter Dodd, G3LDO

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This third compilation of 'Tech Topic' articles is a fascinating collection of circuit ideas, antenna lore, component news and

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Edited by Roger Balister, G3KMA.

2007 Ed..

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By Pat Hawker, G3VA

1993 Ed., 346 pages

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RSGB Prefix Guide

RSGB, 8th Ed., 70 pages

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Order: RSPFXG **\$15.00**

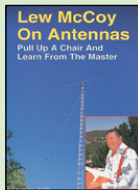
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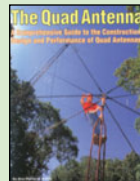


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CONTEST CORNER

CONTEST: ARRL 160M

DATE & TIME: 2200Z 4 Dec - 1600Z 6 Dec

BANDS/MODE: 160M CW

POINTS: 2 Pts. W/VE QSO's; 5 Pts. DX

MULTIPLIERS: ARRL/RAC sections + Northern Territory (VY1, VY0) + DXCC countries

EXCHANGE: RST + ARRL/RAC section; DX gives RST; Aeronautical or Maritime Mobiles give ITU region

ENTRY CATEGORIES: Single Op, QRP, Low, High; Multi Op, Single XMTR

ENTRIES: 5 Jan. ARRL 160M Contest 225 Main Street Newington, CT 06111 E-mail 160meter@arrrl.org (Cabrillo)

Rules at: <http://www.arrrl.org/contests/rules/2009/160-meters.html>

CONTEST: TARA RTTY Melee

DATE & TIME: 0000Z Dec -2400Z 6 Dec

BANDS/MODE: 160-10M RTTY

POINTS: 1 Pt. per QSO

MULTIPLIERS: States/Provinces/Countries

EXCHANGE: RS + State/Province/Country (DX gives serial #)

ENTRY CATEGORIES: Single Op - All Bands high or low (<150W); Multi Op - All Bands, High or Low

ENTRIES: 2 Jan. by online submission only at: www.n2ty.org/seasons/tara_melee_score.html

Rules at: http://www.n2ty.org/seasons/tara_melee_rules.html

CONTEST: NAQCC Sprint

DATE & TIME: 0130-0330Z 9 Dec

BANDS/MODE: 80/40/20M CW

POINTS: 1 Pt. non-member QSO; 2 Pts. member QSO

MULTIPLIERS: States/Provinces/Countries

EXCHANGE: RST + State/Province/Country + Member # (non-members give power)

ENTRY CATEGORIES: SWA (Simple Wire Antenna(s); Gain

ENTRIES: 7 Days John Shannon, K3WWP, 478 High St., Kittanning, PA 16201; Autologger available at: <http://naqcc.n4lcd.com/sprintlog.html>

GenLog program available at: <http://mysite.verizon.net/dmscaro1/>

E-mail: naqcc33@alltel.net (GenLog preferred).

Logging instructions at: http://www.armtek.net/~yoel/sprint_log_form.txt

Rules at: http://www.arm-tek.net/~yoel/sprint_rules.html

CONTEST: ARRL 10M

DATE & TIME: 0000Z 12 Dec - 2359Z 13 Dec

BANDS/MODE: 10M CW/SSB

POINTS: 2 Pts. SSB; 4 Pts. CW

MULTIPLIERS: States + DC/Canada/DXCC countries + ITU regions (Maritime Mobiles QSO's only)

EXCHANGE: W/VE sta's give RS(T) + QTH; DX gives RS(T) + serial #; Maritime Mobiles give RS(T) + ITU region

ENTRY CATEGORIES: Single Op - QRP; Single Op - Mixed; Single Op - SSB; Single Op- CW (Specify high or low power for all categories except QRP)

ENTRIES: 13 Jan. ARRL 10M Contest 225 Main St., Newington, CT 06111 E-mail: (Cabrillo) 10meter@arrrl.org

Rules at: <http://www.arrrl.org/contests/rules/2009/10-meters.html>

CONTEST: MDXA Death Match

DATE & TIME: 0000Z 12 Dec - 2359Z 13 Dec

BANDS/MODE: 160-6M PSK31/63

POINTS: 1 Pt. per QSO 80-10M; 2 Pts. 160 and 6M QSO's

MULTIPLIERS: DXCC countries, once per band

EXCHANGE: Name + State/Province/Country

ENTRY CATEGORIES: Single Op - Single XMTR only! Class 1 = 50-75W; Class 2 = 25-50W; Class 3 = <5W

ENTRIES: 30 Days by e-mail only to: w8vom@sbcglobal.net Rules at: <http://mdxa1.org/deathmatch.html>

CONTEST: QRP ARCI Holiday Sprints Homebrew Sprint

DATE & TIME: 2000-2359Z 20 Dec

BANDS/MODE: 160-10M CW

POINTS: 2 Pts. non-member, same continent; 4 Pts. non-member, different continent; 5 Pts. QRCI member QSO (Bonus points - 2,000 for homebrew XMTR, 3,000 for homebrew RCVR, 5,000 Pts. for homebrew TRCVR. If using portable station with battery power AND a temporary antenna, add 5,000 pts.

MULTIPLIERS: SPC (State/Province/Country) total for all bands. The same station may be worked on multiple bands for QSO points and SPC credit.

EXCHANGE: RST + State/Province/Country + ARCI Member # (non-members give power out)

ENTRY CATEGORIES: All-Band, Single Band, High Bands (10m-15m-20m) or Low Bands (40m-80m-160m)

ENTRIES: 31 Dec. ARCI Holiday Spirits c/o Jeff Hetherington, VA3JFF 139 Elizabeth St. W. Welland, Ontario, Canada L3C 4M3

E-mail: (Plain text logs) contest@qrparci.org

Rules at: www.qrparci.org/content/view/8108/118/

CONTEST: RAC Canada Winter

DATE & TIME: 0000Z - 2359Z 19 Dec

BANDS/MODE: 160-2M CW/Phone

POINTS: 2 Pts. non-CA QSO's; 10 Pts. CA QSO's; 20 Pts. QSO with official RAC sta's (calls end in RAC)

MULTIPLIERS: CA Provinces (10) and Territories (3)

EXCHANGE: CA sta's give RS(T) + Province/Territory; All others give RS(T) + serial #

ENTRY CATEGORIES: Single Op - single band; Single Op - all bands; Single Op - Low (max 100W); Single Op - QRP (max 5W); Single Op All Bands, CW only; Single Op All Bands, Phone only; Multi - Op, Single XMTR, Low power (<100W); Multi Op, Single XMTR, High power (>100W); Multi Op, Multi XMTR

ENTRIES: 31 Jan RAC 720 Belfast Rd., Suite 217 Ottawa, Ontario K1G 0Z5 Canada

Entry form at: [http://www.rac.ca/en/rac/programmes/contests/files/RAC%20Contest%20Entry%20Form%20\(Current%20Year\).pdf](http://www.rac.ca/en/rac/programmes/contests/files/RAC%20Contest%20Entry%20Form%20(Current%20Year).pdf)

Cabrillo entry procedures at: www.rac.ca/downloads/raccabrillo1.pdf

Rules at: <http://www.rac.ca/en/rac/programmes/contests/files/2008%20Rules%20-%20French-English%20with%20Entry%20Form.pdf> (2009 rule page not available at current time, but are the same as 2008)

CONTEST: OK DX RTTY Contest

DATE & TIME: 0000-2400Z 19 Dec

BANDS/MODE: 80-10M RTTY/Baudot

POINTS: 20/15/10M - 1 Pt. QSO own continent, 2 Pts. other continents; 80 & 40M - 3 Pts. own continent, 6 Pts. other continents

MULTIPLIERS: DXCC Countries and OK sta's each band

EXCHANGE: RST + CQ Zone

ENTRY CATEGORIES: Single Op, Single band; Single Op, All bands, Low; Single Op, All bands, High; Multi Op, All bands

ENTRIES: 15 Jan E-mail submission only of Cabrillo format to: okrtty@crk.ca Rules at: <http://www.crk.cz/ENG/DXCONTE>

CONTEST: Run for the Bacon

DATE & TIME: 0100-0300Z 21 Dec

BANDS/MODE: 80-10M CW

POINTS: 1 Pt. non-member QSO; 3 Pts. FP member; 5 Pts. FP member different continent

MULTIPLIERS: States/Provinces/Countries

EXCHANGE: RST + State/Province/Country + FP #; (non-members give power)

ENTRY CATEGORIES: Single band; All band

ENTRIES: 7 Days Online only! Form at: www.fpqrp.com/autolog.php

CONTEST: Stew Perry Top Band Distance Challenge

DATE & TIME: 1500Z 26 Dec - 1500 27 Dec

BANDS/MODE: 160M CW

POINTS: 1 Pt. per QSO + 1 Pt. for every 500 kilometers distance

MULTIPLIERS: 5-100W X2; <5W X4

EXCHANGE: Grid Square's (RST optional)

ENTRY CATEGORIES: Single op; Multi op

ENTRIES: 31 Jan Boring ARC 15125 SE Bartell Rd., Boring, OR 97009 Cabrillo format can be found at: <http://web.jzap.com/k7rat/stew.html> Submission by E-mail: tbdc@contesting.com

Rules at: <http://jzap.com/k7rat/stew.rules.txt>

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ARIZONA

Green Valley Amateur Radio Club. Meets 7:00 p.m., 2nd Wed. of the mo. @ SAV Building. Nets weekly on 2M, & 20M in the summer. Come join us for breakfast every Wed. 7:00 a.m. Contact Gene W0KAD, 214 N. Crocodile Rock Dr., Green Valley, AZ 85614 or 520/207-4706 or theschou@cox.net. 12/09

CALIFORNIA

Catalina Amateur Rptr. Assn., P.O. Box 425, Garden Grove, CA 92842. Meets 2nd Sat. (even months) 8:00 a.m. Hometown Buffet, corner of 17th & Lincoln Ave., Santa Ana, CA. Rptrs: AA6DP 147.09(+), 224.42(-) PL 110.9 on Catalina Island; www.edcarc.net. 12/09

El Dorado County Amateur Radio Club, Meets 4th Thursday/monthly, 7:15 p.m., Federated Church, Thompson Way, Placerville, CA. Net 8p.m. Tuesday 147.825-PL82.5Hz, POB 451, Placerville, CA 95667, www.edcarc.net. 3/10

Independent Radio Club, WA6IRC meets 7p.m., last Friday of the month, Lamplighter Restaurant, 5043 Van Nuys Blvd., Van Nuys, CA. We are a family-oriented radio club whose members are interested in all aspects of Amateur Radio. Check out our weekly nets Tues. 6 p.m. & Thur. 8 p.m. on 445.340 (-)PL 103.5 & 224.480 (-)PL 110.9. More info, www.ircradio.org or 3624 Foothill Blvd., #1, La Crescenta, CA 91214. 12/09

Nevada County ARC meets 2nd Mon./monthly, 7 p.m., Salvation Army Bldg., 10725 Alta St., Grass Valley, CA. Net Tues. 7 p.m. 147.285, www.ncarc.org. For info. e-mail president@ncarc.org. 12/09

River City A.R.C.S. Meets 1st Tues./monthly, 7:30 p.m., N. County Corp. Yard Facility, 5020 Don Julio at Elkhorn, Sacramento, CA. Message Phone: 916/492-6115; www.n6na.org. 12/09

South Bay Amateur Radio Club. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on W6SBA rpt. 224.38(-). Info: 310/328-0817; www.w6sba.org. 12/09

Southern Sierra ARS meets 2nd Thurs./monthly, 7 p.m., except Jul., 600 Dennison Rd., Tehachapi, CA 93561 (The club house at Mountain Aire Estates). Info: N6MLD, 661/203-7005, 224.42(-) PL 156.7. APRS 144.390(S). ARS nets 7 p.m. 147.51(S) Mon. 1/10

Tri-County ARA (TCARA). Meets 7:30 PM 2nd Wed monthly, Administration Building, Brackett Field, La Verne, CA, Pilot's Lounge. Different guest speaker every month. Anyone may attend, Ham & non-Ham welcome! Club net Sun., 7 PM, Mt Baldy Rpt. 145.440 MHz -600 PL 136.5; website: www.tcara.org, e-mail: k6agf@arll.net. 12/09

Victor Valley ARC. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., Lewis Ctr, 17500 Mana Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-), www.vvarc.org. 01/10

COLORADO

Denver Radio Club (DRC) meets 3rd Wed, 7:30 p.m., St. Joseph Episcopal Church, 11202 West Jewell, Lakewood, CO. Learning/Tech sessions 6:30 p.m. Oldest club in Colorado (1917). Net Sun 8:30 p.m. 145.490 rptr.; w0tx@arll.net; www.w0tx.org. 4/10

HAWAII

Honolulu ARC meeting 0900 for breakfast in Jan, Mar, May, Jul, Sep and Nov at the Sizzler Restaurant at Pearl Ridge. Contact John, K1ER, 808/484-9748. 4/10

ILLINOIS

North Shore RC, www.ns9rc.org, is one of Chicago's largest and most active radio clubs. Monthly meetings feature a wide variety of topics relating to amateur radio and are normally held on the second Tuesday of each month at 7:30 PM, the Heller Nature Center, 2821 Ridge Rd., Highland Park, IL. Regular weekly net is held on Thursday night at 8:00 PM on the 147.345+ (107.2) and 442.725+ (114.8) repeaters. The ARRL Newsletter, Newsline and RAIN Report and items of local interest are featured. Club's other repeaters include: 224.32- (110.9), D-Star 442.09375+ and 1292.20- voice and 1242.20 data. Club also provides licensing classes, exams and help to new hams. 11/10

Peoria Area ARC, (PAARC). P.O. Box 3508, Peoria, IL 61612. Meets 2nd Fri./monthly, 7 p.m., Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Superfest each Sept. Rptrs: 147.075(+), 146.85(-). D-STAR: 144.505 (+), 448.46875 (-), 1272.4000(+). Web: www.w9uvi.org; e-mail: w9uvi@arll.net. Voice mail: 309/692-3378. 12/09

The Starved Rock RC, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7 p.m. Rptr. net 7 p.m. Wed./weekly, 147.12(+ PL 103.5. w9mks@qsl.net; <http://www.qsl.net/w9mks>. 12/09

MASSACHUSETTS

Boston ARC meets 3rd Thurs. 7:00 p.m. (except July/Aug), Salvation Army Boston HQ, 147 Berkeley St. Boston, MA. Free parking in adjacent lot. Talk-in: 145.23MHz (-) PL 88.5, www.barc.org, email: w1bos@arll.net. 12/09

Framingham Amateur Radio Association meets 1st Thurs., 7:30 p.m., Sept-June in the basement of the Danforth Museum, Framingham, MA. Contact Gordy, K1GB, 781/891-5572; k1gb@arll.net. 01/10

MICHIGAN

Hiawatha ARA of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m. Marquette County Health Department, R. Schwenke, N8GBA, 906/249-3837; www.qsl.net/k8lod. 12/09

NEW YORK

Orleans County ARC, (OCARC). Meets at the Orleans County EMO 14064 W. County House Rd., Albion, NY 14411, 2nd Mon./monthly 7:30 p.m. Contact: Marion Toussaint, KA2BCE, 585/798-0861. 1/10

OREGON

Umpqua Valley ARC, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:00 p.m., Douglas County Court House, #310, Roseburg, OR. Info: K7AZW 541/679-9338 or 146.90(-)(PL100), <http://www.aa7gc/uvarc/index.html>. 12/09

PENNSYLVANIA

RF Hill ARC meets 7:30 p.m. last Thurs/monthly, Perkasio Fire Company, 5th St., Perkasio, PA. Info: Jim Soete, WA3YLQ, 215/723-7294; wa3ylq@hotmail.com; www.rthill.ampr.org. 12/09

WASHINGTON

San Juan County Amateur Radio Society meets 2nd Fri./monthly 11:30 a.m., Friday Harbor Firehouse. Serving hams throughout the San Juan Islands, Washington, we welcome members and visitors to our weekly nets, Wed. 8:00 p.m. local, through linked repeaters N7JN, 145.250MHz PL 133.8 Hz & 443.45MHz PL 103.5 Hz & CW @ 7:30 p.m. local on 3710 kHz or nearby. Contact Dan Drath, N6AU, for more information; drathmarine@rockisland.com. 11/09

WYOMING

University ARC N7UW, University of Wyoming, Dept. 3625, 1000 E. University Ave., Laramie, WY 82071 meets 1st Tues/monthly in the Wyoming Student Union room 2 or 10 at 7:30 p.m. local time. All interested persons are welcome. johnmh@uwyo.edu. 12/09

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As a service to our readers, WorldRadio Online presents a feature listing of those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is two months in advance. For example, if your group is scheduling an exam for December, please have the information to us by October 1st. *World Radio Online*, VE Exams, 25 Newbridge Road, Hicksville, NY 11801. List the location (city and state), any information examinees should have (advance registration, etc.) and the name of the person to contact for further information. Examinees should bring their original license (along with a photo copy), two forms of identification (at least one should be a photo), and required fee.

p/r pref. = pre-register preferred but w/i OK

w/i = walk-in only

p/r = pre-registration only-no w/i

w/i pref. = w/i preferred to p/r

CITY	DATE	CONTACT	NOTES	CITY	DATE	CONTACT	NOTES
ARIZONA				NEVADA			
Mesa	3rd Mon	Steve KY7W, 480-804-1469, kj7wk@cox.net	w/i	Stagecoach	2nd Sat	Jack Ruckman, AC6FU, 775-577-2637, ac6fu@arrrl.net	
Phoenix	4th Sat	Gary Hamman, 602-996-8148, K7GH@arrrl.net		NEW JERSEY			
ARKANSAS				Bellmawr	3rd Thurs	Diane, N2LCQ, 609-227-6281	p/r
Harrison	2nd Sat	Bob, AJ5C, 870-365-3871, aj5c@cox.net		Roselle	12/19	Gerry, AA2ZJ, 732-283-2795, aa2zj@arrrl.net	
Little Rock	12/19	Daryl Stout, AE5WX, 501-227-9183, ae5wx@arrrl.net		NEW YORK			
CALIFORNIA				Bethpage	2nd Tues	Bob, 631-499-2214, w2ilp@optonline.net	p/r
Highland	12/19	Ed, WU6I, 909-864-0155, wu6i@arrrl.net	p/rw/I ok	Canandaigua	1st Wed	Squaw Island ARC, David A. Foster, 585-398-0216, D1161F@aol.com	w/i
LaVerne	Last Sat	Frank, K6FW, 909-628-8661, k6fw@arrrl.net	p/r				w/i
Long Beach	3rd Sat	Louise, N6ELK, 562-429-1355	p/r	Canandaigua	1st Wed	David Foster, 585-398-0216, www.siarc.us	
Manteca/Tracy	4th Sat	David, N5FDL, 209-835-6893, n5dfi@arrrl.net	p/r	Yonkers	12/6	Paul, AC2T, 914-237-5589, w2yrc@hotmail.com, www.yarc.org	w/i ok
Redwood City	12/19	Al, WB6IMX@arrrl.net, www.amateur-radio.org	w/i	OHIO			
Sacramento	Hotline!	916-492-6115, n6na@arrrl.org		Cincinnati	1st Sat	Dale, KC8HJL, 513-769-0789	p/r pref
Santa Rosa	Hotline!	Hotline-Recording 707-579-9608	w/i ok	Sandusky	12/15	Luther, N8HC, 419-684-7864, n8hc@arrrl.net	p/r
Sebastopol	Hotline!	Recording 707-579-9608		OREGON			
Sunnyvale	12/12	Gordon, W6NW, Sv@amateur-radio.org, www.amateur-radio.org	w/i	Astoria	Call!	AA7OA, 503-338-3333	p/r
FLORIDA				Bend	Weds	Joe, K7SQ, 541-385-3152	p/r
Longwood	4th Sat	James, N4ZKT, 407-333-4245, N4zkt@bellsouth.net		Lincoln City	1st Sat	Carl, w7i@arrrl.net, 503-965-7575	w/i ok
Melbourne	1st Sat	John, AA8IS@earthlink.net, 321-412-2779	w/i ok	McMinnville	Call!	Mark, AC7ZQ, 503-843-3580	w/i only
North Port	Call	Bill Norris, KC7TSG, 941-426-0214	w/ipref.	Sisters	Call!	Dave, N7TYO, 541-549-7831	p/r
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Burr Ridge	Any Day	Argonne ARC, W9DS, 630-986-0061	p/r	SOUTH CAROLINA			
Lake in the Hills	4th Sat	Jeffrey Dubin, N9MXT, 847-815-9407		Charleston	3rd Wed	Robert Johnson, ae4rj@amsat.org; www.qsl.net/wa4usn/	w/i
Roselle	2nd Tues	Sam, W9SFB, 630-894-0708, w9sfb@aol.com	p/r	Charleston	2nd Sat	Riley Stone, 843-832-9105, k4hyy@sc.rr.com	w/i
INDIANA				VIRGINIA			
South Bend	3rd Mon	Alan, NY9A, 574-232-6883	p/r	Alexandria	2nd Sat	John, WZ4A, 703-971-3905, wz4a@arrrl.net	w/i
MASSACHUSETTS				Stafford	Sat	Bart, N3GQ, 540-373-4506, n3gq@arrrl.net, www.qsl.net/semcomm	p/r
Brookline	2nd Mon	Dick Doherty, KA1TUZ, 617-527-2968, ka1tuz@arrrl.net, www.barc.org	w/i ok	WASHINGTON			
MICHIGAN				Tacoma	2nd Tues	Radio Club of Tacoma, 253-759-2040, www.w7dk.org	
Garden City	12/23	Ken Wardell, AB8ZD, 734-421-7730, gsnapsht@att.net	w/i ok	Vancouver	Hotline!	CCARC, 360-896-8909	p/r
MINNESOTA				Vancouver	12/12	Vancouver ARC-Clark County, 360-892-5580 C. Wayne Schuler, AI9Q ai9q@arrrl.net	w/i ok
Apple Valley	2nd Thur	Jim, N0OA, 612-384-7709, N0OA@arrrl.net	p/r pref.	WEST VIRGINIA			
MISSISSIPPI				Parkersburg	2nd Mon	Dana Pickens, WV8G, 304-422-6101	w/i, p/r
Harrison Cty	1st Sat	Don, W5DJW, 228-868-5670, donw5djw@bellsouth.net	w/i ok	WISCONSIN			
				Racine	1st Sat	Robert, W0WLN, 262-886-8551	w/i pref.

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Trees

Kurt N. Sterba

K5KKV writes, "I have been a licensed ham for 52 years and have heard consistently through my ham career that 'trees soak up RF power'. This is essentially an unchallenged aphorism, best I can tell, and no book in my library offers either support or contradiction. This concerns me, since I operate for several weeks about four times a year in Vermont, where I stay with friends who have a home on their mountaintop. There are many tall trees handy for antenna hanging, but obviously antenna elements are, in some places, close to foliage. Is a vertical antenna more likely to have this problem than a common horizontal dipole? What amount of separation would be acceptable? What is the evidence that 'trees soak up RF'? You repeated this caution in the right hand column on top of page 48, May 2009 (WorldRadio Online column). Can you provide some source(s) that I might read?"

Krusty Olde Kurt thinks that, before getting into actual evidence, it is worthwhile to look at the problem from the theoretical point of view. This way we can see what is really going on and thus get a better understanding of the problem. The electromagnetic waves we use to communicate die off directly with distance. However, right close to the antenna, in what is called the inductive field, they die off as the square of the distance. Some even die off as the cube of the distance. That means that if trees absorb RF, then you don't have to move the antenna very far to greatly reduce the absorption.

At great distances from the antenna, the electric and magnetic fields are equal in strength. But in the inductive field, the electric field is a lot stronger than the magnetic field. The high voltage points on the antenna are affected the most by proximity to trees. This means that the ends of a horizontal dipole and the top of a vertical are most susceptible to loss from nearby foliage (or any other nearby conductors). Trees are conductors primarily from the sap in them, but most likely are very lossy conductors. Kurt remembers reading of a ham who hammered a nail into a tree and used it as an antenna. How efficient it was has not been reported.

So, we can see that you should keep the top of your vertical and the ends of your horizontal dipole away from trees and their foliage. But, how far away, K5KKV asks. Kurt knows of only one good reference in the amateur radio literature that gives an answer. KF4IX and K0QK described their tests in November 1991 *QST*.

They put up two 160-meter vertical top-loaded cage antennas in a grove of oak trees. Their modeling showed that the resistive component of the verticals should be about 25 ohms. One of the antennas showed 37 ohms but the other showed 75 ohms. This indicated big loss resistance in the second antenna. They tried moving the base (high current point) of the antenna away from the tree by about 15 feet. This made no difference. So they moved the base back where it had been - about one foot from the tree.

Next, they moved the top of the antenna (high voltage point)

about six feet from the tree. The resistance dropped from 75 ohms to 47 ohms. The capacitive top loading wires were still only two feet from the trunk. So, they moved them six feet away from the trunk. The resistance dropped to 45 ohms. They could not reach the desired 25 ohms and attributed this to the fact that the antenna was surrounded by trees. The top was about 15 feet from three large trees.

They concluded, "The implications are that trees can introduce significant losses to a vertical antenna, particularly when the top (or voltage maximum) is close to large trunks or limbs. This problem may even extend to horizontal antennas where the end is close to a large tree or to other antennas that have voltage maximums very close to large trees. Small limbs (less than two or three inches in diameter) did not seem to add loss."

So what does this all mean? You should keep the high voltage points of your antenna at least six feet from the tree. There will still be some loss but not too bad. To reduce the affect to almost zero, keep the high voltage points twenty feet away.

There is also loss due to the forest itself. There is a difference between a clear field and a forest of trees. Kurt has no reference with numerical results but there are some interesting comments in a 1985 broadcaster's magazine. "Foliage growth has a direct effect on the radiation performance of your transmitting antenna. The vegetation surrounding your transmitter absorbs and reradiates some of the energy radiated by your antenna. At AM frequencies, the vertical field can be reduced significantly by high grass and green trees near the antenna farm. At FM frequencies, this signal loss can be approximately 2.5 dB."

Of course, you can't cut down the forest but this information from broadcast engineers reinforces the fact that trees do absorb some of your transmitter's output. This information applies to HF and lower frequency antennas. At higher frequencies, even the leaves of the trees absorb RF. If you operate on UHF stay out of the forest!

Velocity Factor

A reader wants to build a folded dipole in his attic. He needs to know the velocity factor of 450 ohm ladder line so he can cut it to the proper length. This information is located in the *Antenna Book* in the chapter on transmission lines. There is a table giving the characteristics of all the most popular transmission lines. Near the bottom of the table are the two-wire lines. 300 ohm twin-lead, which has plastic insulation between the conductors, has a velocity factor of 80%. Window line, which has cutouts so that only part of the line has plastic between the wires, has a velocity factor of 91%. The real open-wire line is usually home made with the two wires separated at intervals with spreaders. These used to be wooden spreaders dipped in paraffin and spaced about a foot apart. The recent antenna books give it 92% velocity factor. Older editions give it 98%. It depends, of course, on the quality of the spacers.