

# WorldRadio

**ONLINE**

Year 39, Issue 7

JANUARY 2010

## **A Portable Antenna Mast That Bends The Rules**

**Turlock Amateur Radio  
Club's 2009 Auction**

**DXing and International  
Friendships**

**A Radio-Active Reunion**

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



## BPL: Manassas, Virginia Pulls Plug

The Manassas City Council in northern Virginia is saying goodbye to BPL. The council is in the process of deciding whether to abandon its broadband over power line project now, or to let it die at the end of the city's fiscal year.

BPL was Manassas' attempt to bring the Internet into the homes of every resident by providing low-cost broadband service. Subscribers were told they could access the Internet through the regular electrical outlets, but for a number of reasons it never caught on with the public. First, the connection proved to be slower than cable or DSL. It was expensive to maintain and caused massive reception interference to those using the spectrum it shared, including the Manassas ham radio community, who were highly vocal in its opposition.

The result was that the project only garnered about 670 subscribers while costing the city hundreds of thousands of dollars in ongoing maintenance. It also faced a strong challenge from Comcast cable, which claims the potential to serve the entire city, and Verizon, which has rapidly been expanding its FIOS service in the Manassas area. Now like a bad dream it will shortly be fading away.

(*InsideNoVa.com*)

## Restructuring: 60 Meter Operation in Trinidad and Tobago

Trinidad and Tobago may by now be permitting Amateur Radio operation in a 200 kHz segment of the 60-meter band. In a posting to the Digital Radio Yahoo group, Julian Dedier, 9Z4FZ, notes that his license permits operation from 5.250 to 5.450 MHz with 1.5 kilowatt maximum power output. While amateur radio operation in this band would be a welcome development, as yet no reference to the allocation could be found in the frequency allocation table issued by the Telecommunications Authority of Trinidad and Tobago.

(*Southgate*)

## India Expected to Expand 40 Meter Ham Band

According to an email circulated by VU2JOS, hams in India will soon have access to the spectrum from 7.0 to 7.1 MHz. The email states that information coming from official sources indicates that Indian amateur radio operators are being allocated an additional spectrum of 100 KHz on the 40-meter band.

According to the VU2JOS note, this is in line with the recommendations at WRC-2007. Since then, shortwave broadcasters in India have shifted their transmitting frequencies beyond 7.2 KHz. In fact, in the region, only 7.190 MHz is still in use by the Srilanka Broadcasting Corporation.

VU2JOS says that an official notification of the 40-meter expansion is likely to be released soon. He also says that this is not the first time that hams in his nation have had access to this spectrum. He notes that Indian amateur radio operators were allowed to operate between 7 to 7.1 MHz, with the allowance of additional spectrum.

(*VU2MYH*)

## New Technician Question Pool to be Released in January

The Question Pool Committee of the National Conference of Volunteer Examiner Coordinators is due to release the new Technician class question pool to the 14 VECs on December 1st. It will then be released to the public in January 2010.

Each question pool for the three Amateur Radio license classes is reviewed on a four-year rotation. This new Technician class pool will become effective on July 1, 2010.

(*NCVEC*)

## San Francisco Unlicensed Station Issued \$10,000 Notice of Apparent Liability

The owner of an unlicensed broadcast station in the San Francisco Bay area has taken it off the air after being hit with a proposed \$10,000 fine from the FCC in August.

The Notice of Apparent Liability (NAL) was issued to Daniel Roberts, the founder of unlicensed broadcast station Pirate Cat Radio. The station's website says the proposed fine effectively ends Pirate Cat Radio's thirteen-year run as one of the Bay Area's most consistent voices of protest against what it calls corporate-run media monopolies.

Pirate Cat Radio will continue as an Internet-only station and says that the majority of its listeners were already tuning in online or via podcasts. No word on whether or not Roberts will appeal the proposed fine.

(*Radio*)

## Harry Helms, W5HLH – Silent Key

A sad changing of the guard in amateur radio, as we learn of the passing of noted personal radio author Harry Helms, W5HLH, following a long fight against cancer.

Helms, the former AA6FW, was best known for his many hobby radio related books, including the *Handbook of Radio Communications Servicing and Maintenance*, the *Handbook of Home Security Electronics*, the *Shortwave Listening Guidebook* and *The Complete Guide to Hearing the World*. He was also the author of the book *All about Ham Radio* and had been a monthly contributor to *Popular Communications* magazine.

Helms was only age 57 when he succumbed to the disease at a hospice not far from his home in Fort Mill, South Carolina. In his last blog entry dated August 28th, he noted that he was now living just a few miles from the graves of his parents and grandparents. He continued by saying that while it might sound illogical, he found this comforting.

To quote W5HLH: "My journey began here, and it will soon end here."

Sadly for all of us, it did on Sunday, November 15th. Now everyone involved in private radio is mourning the passing of this gifted writer who contributed so much to every aspect of the personal communications hobby.

Harry Helms, W5HLH, is survived by his wife, Di. (*NZ4O, ARRL, others*)

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# WorldRadio

## ONLINE

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**ON THE COVER:** The KI6SN OM portable antenna mast. It is inexpensive, lightweight, easy to carry and a quick study in geometry to get in the air. Story on page 18.

# Icom Digital Technology Leads the Way

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## *Congratulations to K3LR!*

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**A**h, January. We start a new year with clean slates, new resolutions and good intentions. I considered giving up making resolutions because it seemed I rarely carried them through. However, looking back, I realize resolutions that were the most important to me have been achieved—but sometimes not during the year allotted to the task.

I got my Novice license in June of 1988, and after having read about exotic locales in the ham magazines for a few years prior to getting licensed, my 1989 New Year's resolution was to go on a DXpedition. I didn't have the first clue what actually went into planning, packing or operating a DXpedition, I just knew that I was going to do it. That resolution wasn't fulfilled until almost 20 years later in 2006, when I went to Belize with members of the Texas DX Society.

During 1989, I wanted to upgrade to Extra, but hated CW and was having a very tough time learning it. Since code was a requirement, I vowed on New Year's 1990 to get to 20 WPM, upgrade and get a 2x1 callsign. I probably would have procrastinated for years, but the FCC was getting to the end of the 2x1 calls for my section. That really lit a fire under me. I was going to get to 20 WPM and earn a 2x1, even if it fried my brain and ears fell off! I did accomplish that resolution, just in the nick of time. Not only did I get one of the last 2x1 callsigns (WZ8C), but to my surprise once I stopped fighting it, the brick wall that had kept me at 10 WPM tumbled down, and code became a joy. I can literally say that it changed my life. Not only my ham life, but my career path—I'm coordinating a successful International Morse club and am the editor of a ham magazine. It's ironic, considering I detested code and fought it for so long!

They say to be careful what you wish for, because you just might receive it. But, resolutions aren't frivolous wishes, they are goals. Webster defines a goal as "the result or achievement toward which effort is directed." Boy that sounds like work doesn't it? It is! If it isn't worth working for, it isn't worth having. I urge you to make a "ham resolution" this year—upgrade, learn about propagation, antennas, assemble a kit, whatever. The resolution you make this year may not be achieved during 2010, but if you keep working toward it, it eventually will. And it will be worth the wait. Let me know how it goes!

There is an error in the URL included with the Lamp Shade Antenna article in the December 2009 WRO. The clickable link in the online article will take you to the correct web page, but it should read [ee3.editme.com](http://ee3.editme.com)—with no www. in front.

Also, there was a typo in December's *Aerials*. You can read about it at the bottom of The Krusty One's column this month.

Two notable anniversaries are being celebrated this month—*CQ Magazine's* 65th anniversary and the 50th anniversary of the first Earth-Moon-Earth contact. *CQ* will be detailing the changes ham radio has been through since 1945 over the course of 2010, and in WRO this month, we have a very interesting story of the first EME contact.

Happy New Year from the *WorldRadio Online* staff, and keep those emails and letters coming. We are evolving as an online publication and appreciate your suggestions. I'm always looking for feature articles, too, so let us know what you're up to!

73 88 33 Nancy Kott, WZ8C

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Carl Wheeler, KE6FOA, shows off the merchandise while auctioneer Grady Williams, K6IXA, prompts the crowd to bid higher.

# Turlock Amateur Radio Club's 2009 Auction

By Don Thomas, W6LRG

The eighty-one year old Turlock Amateur Radio Club in California conducted its 35th Annual Auction October 10th. The purposes of the auction are to help the families of Silent Keys sell their loved ones ham radio equipment and to raise money for club equipment. The club retains 10-percent of the sales. This year's auction included the consignment of a local radio operator's equipment and four estates. There were over 50 hams at the event. Their bidding resulted in the equipment going for fair prices or better. The owners of the consigned equipment are allowed to "buy-back" their equipment if the bidding price doesn't satisfy them. The fee for that privilege is \$1.00 per \$100.

The auction was held at the Turlock Youth Center at 1030 East Ave. The auctioneer was once again Grady Williams, K6IXA. He has been the auctioneer every year, including the first one! His humor and ability to conduct the auction is well-known and the event has often been referred to as the "Grady Show." The annual auction is considered by most local hams to be the high point of ham radio activities in the local area.

Everything was available for inspection at 8:00 a.m. The auction began an hour later. Kurt Jaus, KF6HJO, once again traveled 77-miles from Selma to handle the Chuck Wagon. He was ably assisted by Marge Lowe, KB6DXM, and Cathy Decker. They offered donuts and coffee in the morning and pulled pork sandwiches with the trimmings for lunch. The club's theory is "Keep them in the building with food and they will stay and spend."

Grady brought the milling crowd to order so he could outline all his disclaimers about the "fine merchandise" that was available. His bottom line was that there were no guarantees on any of the equipment. Any understanding about the condition of the consigned equipment was between the owner and the buyer.

Grady had four indispensable "straight men" in his act. They kept dragging boxes from under the tables and pulling out "things" for Grady to sell. They additionally held the more expensive equipment high in the air for all to see. Everyone was issued a numbered paddle to wave in the air and bid. Grady's prompting to the bidders included, "Is that all the money your wife gave you?" "Your guys aren't looking," "It's worth that," and "For two bucks you don't have to know what it is."

Mid-afternoon, after everything was over and the hams secured the treasures in their vehicles, several of them pitched in to put away the furniture and clean up the place. Everyone had a great time.

This writer couldn't resist bidding on a clean Icom IC 735 to replace my old Kenwood TS130 mobile station. I installed it later in the day and drove into town. My first contact with that "new" radio was on 20 meters with a station in Eastern Russia near the Manchurian Border. He gave me an S-8. Wow! Other ham radio clubs should consider providing this service in their areas for the families of Silent Keys to help them dispose of the equipment. The Silent Keys need not be members of the radio club. It's a worthwhile thing to do.

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# Anniversary of First EME on January 10<sup>th</sup>

By Randall Noon, KC0CCR

*“Sending a radio signal to the moon and back was the first time in history that mankind had in some physical way ‘touched’ the moon, or any other celestial body outside the atmosphere of the earth.”*

Just 41 years and 24 days after the first radio messages traversed the Atlantic Ocean, at 11:58 a.m., E.S.T., January 10, 1946, the first ever earth-moon-earth radio signal bounce was accomplished. The effort was part of a military project of the U.S. Army Signal Corps, dubbed project Diana, the Roman moon goddess. Sending a radio signal to the moon and back was the first time in history that mankind had in some physical way “touched” the moon, or any other celestial body outside the atmosphere of the earth. It also proved that radio signals could pass through the earth’s ionosphere, that they could be used for communication to and from places outside the earth’s atmosphere, and that the moon itself could be used as a passive communications reflector.

While the idea had been suggested in 1940 by Mr. W. Bray of the British General Post Office, the first actual moon bounce signal was generated at a laboratory at Fort Monmouth in New Jersey. The transmitter was modified radar set from WWII, an SCR-271 unit. This provided 3000 watts at 111.5 MHz, or 2.7 meters, sent out in 0.25-second pulses. The antenna was a “bed-spring” dipole array. This antenna arrangement provided 24 db of gain. The high power and gain was certainly needed. The moon is a poor reflector of signals, perhaps returning 7 to 12% of the incident signal. Coupled with the distance to and from the moon, and attenuation effects by the earth’s atmosphere, the path loss was estimated to be from 250 to 310 db.

The transmitted signal took about 2.56 seconds to make the round trip, which put the moon at a distance of about 238,000 miles from the transmitting station. The receiver had to be adjusted about 300 Hz, to account for the Doppler Effect due the moon’s motion and position at the time. Because the antenna’s elevation angle was horizontal, the signal could only be transmitted when the moon passed through a 15-degree wide window at moonrise and moonset. This allowed about 40 minutes of time to get the job done. Having shown that the bounce was possible, a little while later the U.S. established an RTTY communication link between the Navy Headquarters in Washington, D.C., and Pearl Harbor using EME.

As the reader may suspect, an amateur operator was involved in this event, Lieutenant Colonel John DeWitt. Mr. DeWitt had been an amateur since 1921 he was 15 years old.

He then went on to build his hometown’s first radiobroadcast station at the ripe old age of 16. By 1940, he was listening to radio noise coming from outer space, using built receivers he built himself. After his military stint, Mr. DeWitt returned to his hometown of Nashville and become president of a commercial radio station, WSM. He passed away in January 1999. Perhaps some readers worked him as N4CBC when he was still active on the bands.

Seven years later in 1953, the first official amateur radio operators accomplished an earth-moon-earth signal bounce on the 2 meter band. The honor of this accomplished goes to two hams: Ross Bateman, W4AO, and William Smith, W3GRP. Like LTC DeWitt’s accomplishment, however, this signal was sent and received by the same station. On July 21, 1960, a true two-way earth-moon-earth bounce was achieved on 1296 MHz between W6HB, the Eimac Radio Club, and W1BU, the Rhododendron Swamp VHF Society.

*“Now, 64 years later after the first EME bounce, amateur radio operators bounce signals off the moon for sport on weekends with 300 watts or less, and sometimes even as low as 100 watts on home built antennas.”*

Now, 64 years later after the first EME bounce, amateur radio operators bounce signals off the moon for sport on weekends with 300 watts or less, and sometimes even as low as 100 watts on home built antennas. Bounces are being done on nearly all the amateur VHF, UHF and microwave bands: 6, 2, 1.25, 0.70, and 0.23 meters, using a variety of modes. This includes SSB voice, one of the family of WJST programs such as JT65, a multi-frequency shift-keying computer based mode originally developed for meteor scatter work, and of course, always reliable, CW.

By the way, the record for the lowest power, successful two-way EME was set this past summer on June 29, 2009, aka World Moon Bounce Day, to celebrate the first landing on the moon by Apollo 11. The University of Tasmania used a 26-meter dish to send a data signal via the moon to a similar dish at the Dwingeloo Radio Observatory in the Netherlands. The transmit power was 3 milliwatts!

The International EME Contest for the year just finished up this past December, and there are even clubs whose main purpose is EME communication. Recently, a German group even bounced signals off of Venus. Like the slogan says, “Yes, we do that!”



# The Rules Say...

John B. Johnston, W3BE

## AUTORISÉ À PARLER DANS FRANÇAIS?

**Q** I was asked by a non-ham couple if they are permitted to converse in French over our repeater. Our concern is that none of our control operators speak French and therefore cannot maintain control. My understanding is that it is allowed if they ID every 10 minutes in English. I was then informed that this is correct only when communicating via simplex, but not if communicating via a repeater. Is this correct?

**A.** The control operator ("SCO") of every station must have some way of determining that all communications being transmitted are compliant with those authorized in Section 97.111 and that they do not run afoul of the transmissions prohibited by Section 97.113. Making that determination for messages in a language that the SCO does not comprehend, therefore, may preclude such message transmissions.

As for the station identification announcement, Section 97.119(b)(2) says that for any FCC-licensed amateur station being identified by a phone emission, it must always be in the English language.

**Q.** That answer assumes that the control operator is present at the repeater control point and is responsible for determining the transmissions are compliant. Neither, however, are requirements.

**A.** Setting aside the unlikely possibility that the repeater station licensee was also unaware of Section 97.103(a) - which establishes the station licensee as being responsible for the proper operation of the station in accordance with the FCC Rules - it must be assumed that the SCO is at the repeater station control point and is ensuring the immediate proper operation of the station. See Section 97.105(a).

This is because third-party voice messages are being transmitted. The SCO must be present at the control point continuously monitoring and supervising the third party's participation in stating their messages (Section 97.155(b)). No station may transmit third party communications while being automatically controlled except a station transmitting a RTTY or data emission (Section 97.115(c)).

**Q.** Section 97.3(a)(6), however, tells me my repeater can comply with FCC rules "without the control operator being present at the control point."

**A.** It is Section 97.205(d) that authorizes a repeater to be automatically controlled. Section 97.3(a)(6) defines automatic control as the use of devices and procedures for control of a station when it is transmitting so that compliance with the FCC rules is achieved without the SCO's presence at a control point.

Automatic control is also authorized for three other types of special operations: auxiliary, beacon, and certain digital stations. For each of these, its proponents have made a convincing argument to the FCC that compliance with the FCC rules is achievable without the SCO being present at a control point. Even then, Section 97.109(d) says that automatic control must cease upon notification by a District Director that the station is transmitting

improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the District Director.

*W3BE-O-GRAM:* Summary: Your automatic control scheme must work or it can't be used.

**Q.** I believe that I am responsible only for my repeater's carrier and for non-interference-causing operation. Where in Part 97 is the requirement that I am responsible for determining that any communication being transmitted by my repeater is compliant?

**A.** Believe instead: the station licensee and SCO are accountable for any prohibited communications transmitted by your repeater. The responsibility for making that determination is codified in Section 97.103: It says that the station licensee is responsible for the proper operation of the station in accordance with the FCC rules. It also says the station licensee must designate the SCO. Section 97.105 says that the SCO must ensure the immediate proper operation of the station, regardless of the type of control.

The compliance line-drawn-in-the-sand is in Section 97.113, Prohibited transmissions. It lists the types of transmissions that no FCC-licensed station shall transmit. See BE Informed No. 3 Section 97.113 SMELL TEST. Further, Section 97.111 authorizes the transmission of certain other types of communications.

**Q.** But Section 97.205(g) says that the control operator of a repeater that retransmits inadvertently communications that violate the rules in Part 97 is not accountable for these communications.

**A.** The key word there is "inadvertently." Whether any slip-up is excusable might likely depend upon the corrective action was taken and when taken.

**Q.** According to a listing on a website, a one-by-one call sign was issued. How could that have ever happened?

**A.** It is but one among our 780 special event call signs. Section 97.3(a)(11)(iii) says that the special event call sign is selected by the station licensee from a list of call signs shown on a common data base coordinated, maintained and disseminated by the SECSC. The call sign must have the single letter prefix K, N or W, followed by a single numeral 0 through 9, followed by a single letter A through W or Y or Z (for example K1A). The special event call sign is substituted for the call sign shown on the station license grant while the station is transmitting. The FCC issues public announcements detailing the procedures of the special event call sign system.

**Q.** What is a "special" event?

**A.** The FCC, wisely, does not attempt to figure out what we mean by that term.

*W3BE-O-GRAM:* It's one of those terms that sound great when you say it fast. Ask for gobbledygook and sometimes you just might get gobbledygook.

**Q. Our frequency coordinator has recommend that each repeater append its call sign with "/R." As I interpret what has appeared in your column, the letter of the rule and the intent of the rule are a bit "fuzzy." There is a 'gray zone' here when repeaters, mobiles, maritime mobiles, beacons, etc. use the /whatever suffix. If the intent of appending an identifier to a FCC-assigned call sign, such as "/R," is to identify a repeater, and not to identify itself as a Russian station, is it legal?**

**A.** Rule-interpreting is not for this column; the FCC rules mean what they say. Section 97.119 says that each amateur station must transmit its assigned call sign. Paragraph (c) says that one or more indicators may be included with the call sign. No self-assigned indicator may conflict with any other indicator specified by the FCC rules or with any prefix assigned to another country. There is a link on my website that may aid you in finding out whether a prefix is so assigned.

*W3BE-O-GRAM:* When the examinations were administered in FCC offices, there was a schedule of indicators keyed to the city where each office was located. The monitor of a possible out-of-band station transmission could call the designator office for conformation that the license grantee had recently upgraded for the privileges being used.

Complaints soon came in from DXers that the indicators conflicted with call sign prefixes assigned to other countries and could confuse DX operating. For instance, "DL" for the "Dallas" FCC Field Office conflicted with the prefix assigned to Germany. That system was replaced with the current provision. Should those complaints not represent the views of our community, you should file for a rule amendment. If you do so, please coordinate it carefully beforehand and do not ask for a "how-to" rule.

**Q. What are those certain types of emergency-related messages that RACES stations can transmit?**

**A.** Section 97.407(e) says that all communications transmitted in RACES must be specifically authorized by the civil defense organization for the area served. Only civil defense communications of the following types may be transmitted:

(1) Messages concerning impending or actual conditions jeopardizing the public safety, or affecting the national defense or security during periods of local, regional, or national civil emergencies;

(2) Messages directly concerning the immediate safety of life of individuals, the immediate protection of property, maintenance of law and order, alleviation of human suffering and need, and the combating of armed attack or sabotage;

(3) Messages directly concerning the accumulation and dissemination of public information or instructions to the civilian population essential to the activities of the civil defense organization or other authorized governmental or relief agencies; and

(4) Communications for RACES training drills and tests necessary to ensure the establishment and maintenance of orderly and efficient operation of the RACES as ordered by the responsible civil defense organization served. Such drills and tests may not exceed a total time of 1 hour per week. With the approval of the chief officer for emergency planning in the applicable State, Commonwealth, District or territory, however, such tests and drills may be conducted for a period not to exceed 72 hours no more than twice in any calendar year.

#### Read the rules - Heed the rules

Visit <http://www.w3BEInformed.org> for links to amateur service rules and information sites. E-mail your questions, in the English language, to [john@johnston.net](mailto:john@johnston.net).

## APPRECIATION



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

is the Shenandoah Valley Amateur Radio Club. Congratulations, SVARC, for sponsoring the annual Berryville (VA) Hamfest with that great barbeque chicken dinner.



# DXing and International Friendships

Kelly Jones, N0VD

If you have been a reader of this column for any length of time, you know that I occasionally make reference to my favorite island – Bonaire (PJ4). My first visit to Bonaire was in October, 2006 for the CQWW SSB contest. As I'm a "sometimes contender", the opportunity to operate from the DX side in "3-point land" was an opportunity I could not pass up. Little did I know that three years later, I would still be coming back to the island on a regular basis and have made lifelong friends as a result of that first visit.

Bonaire is a small island located in the Southern Caribbean just 50 miles off the coast of Venezuela. It is part of the "ABC" islands and the southern half of the Netherland Antilles. Recently, the Netherland Antilles has been receiving a lot of interest regarding their scheduled breakup, which is to take place on 10/10/2010. This is significant in the DX world because it's expected that we will see several new DXCC entities as a result.

As the island is very small, the total ham population can be counted on exactly two fingers – Hans, PJ4LS, and Peter, PJ4NX. I happened to meet both of these operators during that first visit in 2006 and have become very good friends with Peter, PJ4NX. Peter is by far the more active of these two operators. If you have worked Bonaire outside of a contest during the past several years, it's quite likely he is the one you worked.

Originally from Holland and holding the callsign PA3CNX, Peter and his wife permanently moved to Bonaire in 2007. They had been coming to the island for many years on vacation, but on one trip decided they would move to Bonaire. In June 2007, Peter hosted an EME DXpedition which I was fortunate to witness. At that time, Bonaire had never been activated on EME so there was a large demand in those circles. In the end, several hundred EME QSOs were achieved and many DXers were happy.

In 2008, Peter made his first visit to the United States and attended the Orlando Hamfest. However, this trip would mark a tragic event. While attending the hamfest, his wife unexpectedly passed away and would not be found for another two days. After not being able to reach her by phone, Hans, PJ4LS, was the one to find her and deliver the terrible news to Peter. I was not able to attend the funeral but was able to be on the island a couple of weeks later. It was clear that the most active DXer on the island would likely be QRT until the shock of his wife's passing lessened.

Fast forward to October 2008. I was again scheduled to be a member of the CQWW SSB team operating from Bonaire. We invited Peter to join us and in turn he invited a couple of his ham friends from Holland - PE2MC and PE2KY. During that trip Peter introduced me to a very lovely lady named Irma. She obviously had made a huge impact on his life and it was really great to see the positive change compared to my visit earlier in the year. At the time I didn't think much of it, but I would later be invited back to the island in October, 2009 for a very special event.



The newly wed Peter, PJ4NX, and his wife Irma.

In mid 2009 Peter announced that he was getting married to Irma and asked if I would be able to attend. The original wedding date was scheduled for sometime in November, 2009. As I had already made plans to be on Curacao (PJ2) for CQWW SSB in October, the likelihood of either staying until the wedding or coming back so quickly was pretty slim. I let him know that I would try my best to arrange something, but I didn't hold much hope.

Several weeks later I was informed that the wedding date had changed and now it would be the weekend after the CQWW SSB contest. This certainly presented the interesting possibility that I would be able to participate in the contest from Curacao and be able to attend the wedding on Bonaire the following weekend. Schedules were slightly adjusted and I made plans to make the trip over to Bonaire for a week.

I have to say the week of the wedding was one of the most enjoyable times I've ever had. It's an exhilarating experience to work pileups when on a DXpedition (and I did a little of that too, of course), but this "DXpedition" was one of a different type.

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**Peter & Irma cutting their cake.**

This was a DXpedition in international friendships – one that began three years ago during a chance meeting. It was also a chance to experience cultures and traditions different from my own. It was an opportunity to strengthen old friendships

and make new ones. This is one of the greatest things about our hobby and being DXers. DXing opens the doors to people and places that many non-ham operators will likely never experience.

So the next time you happen to hear

PJ4NX on the air, take an extra minute or two congratulate him on his recent marriage. Who knows, you might find yourself a new friend as well – one that will unlikely come from a simple “59” QSO.

**A35-Who?**

Paul Kidd, well known as A35RK, was recently issued A35A as a “regular” call and he has been thinking about if-and-when to use his new call.

Paul states “I had the initial impression that A35A was restricted to contest/special event use. But that's not the case. It's a regular everyday callsign now that the rules have been changed. I had a chat this morning with Fe'ao Vakata (the radio licensing officer) about this. He told me it is his intention to issue A31x callsigns for visiting contest and special event operations. Basically, that prefix block is reserved for 'groups', not individuals. The A31xx block is reserved for other short-term visitors, yachties, etc. The A35x and A35xx blocks are intended for resident operators, like me. When he issued me the A35A license, it was with the understanding that I could use it any way I choose—as a ‘regular’ call, or as a special event/contest call. Fe'ao said that it's entirely up to

me, and he has no objections to my using it anyway I want to. Therefore, effective immediately, A35A will be my 'full-time' callsign - for DXing, contests, ragchewing, the whole coconut."

Paul's QTH remains the same: Lifuka Island, Ha'apai Group, IOTA OC-169. QSL A35A and A35RK via W7TSQ, W7 Bureau, or LoTW (No direct mail to Tonga, no A3 Bureau)

### FT5GA now on LoTW

Didier, F5OGL, recently announced that the FT5GA log has been uploaded to the LoTW. He says, "Of course some stations will not find one or several of their QSOs on LoTW. To these hams I say 'don't worry!'. Every situation will be checked with big care. It had been possible, in the huge pileups, that some mistakes happened. However, know also that FT5GA was pirated a lot of times, even on the scheduled DXpedition frequencies. These malevolences are not of our [fault], and we ask the community to understand us if some QSOs will be rejected for having not been found in the log."

### New Signals from Zimbabwe

Fernando, EA4BB (ex-ST2BF, TU5JL, D2BB, 9Q5BB), states that he has obtained his license in Zimbabwe and is "already making some QRM from Harare." His callsign is Z21BB and he hopes to be using it for the next two years or so.

Fernando says "For the time being I have only dipoles and delta loops for 10, 15 and 20 meters. I plan to build new antennas for the WARC bands as well as two loops for 40 and 80 meters, and maybe to increase power (for the time being I am limited to 100W). Also, later in the year I hope I will put up a 3-element beam for 10, 15 and 20 meters. For now I am mostly on CW, but I will scale up SSB operations as I improve my antenna system. My QSL Manager is Joe, W3HNK. Best regards from Zimbabwe, and CU on the air."

That's it for this month's column. A very special thanks to Peter de Graaf, PJ4NX, for the invitation to attend his wedding! Also thanks to OPDX for additional information. 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 [n0vd@dxcentral.com](mailto:n0vd@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 Old Man - A Portable Antenna Mast that Bends the Rules

By Richard Fisher, KI6SN

**T**he Old Man portable antenna mast derives its name from its somewhat crooked “spine” – thanks to the multiple coupling joints along its 15+ foot height.

As we know, “OM” is a term of endearment throughout amateur radio. In this case it’s bestowed on an antenna mast that may appear a little bent and crooked, but is extremely lightweight, easy to carry and pretty darned versatile.

Five 3-foot-long PVC pieces and a 6-inch PVC stub combine to make up this textbook example of scoliosis.

Properly guyed, though, the OM overcomes its shortcomings of alignment and can be a great performer in the field.

At KI6SN, the idea for the OM portable mast grew out of the need for an antenna support for use where there are no trees or other natural elements to keep wires in the air. Open fields. The desert. In the mountains above the tree line. You get the idea.

Since we had a very nice yard-long nylon carrying bag with a draw string, we chose 3-feet as the maximum length for any single piece of the mast. Most likely the bag was used to tote a soccer sideline spectator’s fold-up chair – ditched from a season long ago.

If you’re designing your own OM, any number of other PVC lengths can be substituted. You can even mix and match. Grab your own bag and cut things to fit.

After some experimentation at KI6SN, it was determined that the maximum number of 3-foot pieces that could be coupled together and reasonably supported with two sets of guy lines was 5. That adds up to a total of about 15-feet – a very respectable height for the center of a 20-meter coaxial-fed inverted V antenna – or for 30- or 40-meters, for that matter.

The OM mast can also be used as an end support for an EFHW (end-fed half wave) antenna.

If you’re getting a picture that this configuration has the potential for many antenna applications, you’re right.

To get things started, we sketched on paper what this mast might look like. It is made of 3 / 4 inch PVC pipe – the kind you find in the sprinkler system area of your local home improvement store. We bought two 10-foot long pieces for 97 cents each. You can build a lot of masts at that price!

Since the 10-foot long PVC would be cut into shorter pieces to fit in that nylon bag, we also purchased five 3 / 4 inch in-line PVC couplers to assemble the parts into a finished mast in the field.

A 3 / 4 inch T-coupler is used on top of the mast as a faux pulley to raise the center of the inverted V or an EFHW.

And finally, there are two rectangular plastic pieces for tying guy lines to the antenna at the 6- and 12 1 / 2 foot heights.

The KI6SN OM also features a short 6-inch PVC stub – also made of 3 / 4 inch PVC. It goes on top of the second 3-foot section and is a key element during the erection process.



**The KI6SN OM portable antenna mast is inexpensive, lightweight, easy to carry and a quick study in geometry to get in the air.**

Accompany photographs and multiple images on the Trail-Friendly Radio Extra Web site – <http://www.TrailFriendlyRadio.blogspot.com> – help tell the story of how this mast goes together.

After arriving home from The Home Depot with the 10-foot-long PVC sections, it took us all of about 20 minutes to cut and couple the OM mast. Another half hour was spent figuring out the guy line system and the methodology for how this mast could be put up by one person.

An illustration on the T-FR Extra web site shows how the pieces fit together. It’s like working with a jumbo set of Tinker Toys®.

Since there are five coupling points in the OM, there are five points where the mast can bend and get a little crooked as you’re putting it up.

Providing guy lines at two different heights of the mast, though, can keep alignment fairly straight. And once aloft, the structure is as solid as a rock – despite its unpredictable bends.

So, why is that 6-inch long PVC stub needed at the 6-foot height of the mast? Well, the thinking is this:

The idea is to erect the lower part of the OM first, get it guyed and sturdy and then add the top piece – completing a 15+ foot vertical support.

I'm about 5-foot, 8-inches tall, so with an arm fully extended, I can reach the top of the stub at 6-feet, 6-inches to place the already-assembled upper portion of the OM on top of the already-erected lower portion. The upper portion is light enough to be held over your head vertically and then simply "docked" into the PVC coupler on top of the 6-inch-long stub.

The guy lines are tied to rectangular plastic pieces drilled with a center hole that slides over the 3/4 inch PVC and "sits" on top of the lip of the PVC coupler at the 6-foot height. So, as you can see, the 6-inch stub creates a coupling point for the top pieces of the mast that makes it possible to erect the OM in two stages.

There is a similar rectangular plastic guy line anchor at the 12.5-foot height for securing the upper portion of the OM.

In a nutshell, after the bottom is erected and guyed, the field operator simply hoists the top section of the antenna on top of the 6-inch stub and completes guying the top part of the mast – which is tethered 12.5-feet above the ground.

Granted, this is a lot to process in the way of description. We think, though, the OM drawing and accompanying photographs on the T-FR Extra web site will help put in focus the mast's design, construction and execution.

Since we conceptualized this as a one-man operation, it is critical that the guy line lengths and the placement of the ground pegs to hold them be worked out carefully in advance.

To put the OM up by yourself in the field, it means having two-thirds of the guying loosely completed at each height and then simply pulling the last guy line to its ground peg as the vertical mast flies into place.

Of course, as in any antenna erecting situation, use extreme caution to stay clear of any hazards—especially power lines.

For the KI6SN version, we dusted off the ol' Pythagorean theorem for deter-

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Plastic guy line support points at 6-feet and 12.5-feet along the mast's height help keep the OM's "scoliosis" in check.

mining the hypotenuse (guy line length) of a right triangle: A-squared plus B-squared equals C-squared – where A is the vertical height in feet along the mast, B is the distance in feet from the base of the antenna to the guy line ground pegs and C is the length in feet of the guy lines.

We chose 14-feet as the distance from the antenna base to the guy line pegs for both the 6- and 12.5-foot heights. That makes things manageable and easy to deal with at the field operation site.

So, let the geometry begin. For guy lines at the 6-foot height, it's:

6-squared plus 14 squared (or 36 plus 196, which equals 232, or C-squared). The square root of 232 is 15.2315. So our guy lines at the 6-foot level need to be about 15-feet, 3-inches long.

Similarly, for the 12.5-foot height, it's 12.5-squared plus 14 squared (or 156.25 plus 196, which equals 352.25, or C-squared). The square root of 352.25 is 18.76. So our guy lines from the 12.5-foot height need to be about 18-feet, 9-inches long.

Since all of the guy line ground pegs are 14-feet from the base of the OM mast, we simply made a marker string 14-feet long, looped it around the base of the mast

and scratched a 14-foot circle around the base of the antenna mast. Each of the six pegs would go along that line. But where?

Well, it's simply a matter of placing a hiker's compass at the OM's base and marking direction points from the mast at 0, 60, 120, 180, 240, and 300 degrees. Guy lines from the 6-foot level would be pegged at 0, 120, and 240 degrees, while lines from the 12.5-foot level would be pegged at 60, 180 and 300 degrees.

You can even put the 0 and 180-degree points to actual North and South respectively. That way you've got a 28-foot diameter compass built into your operating site. Neat!

One other suggestion: Use a taut-line hitch knot in your guy lines at the ground peg. It's a great knot for adjusting tension on the guy lines. For a video of how it's tied, visit: <http://www.youtube.com/watch?v=1jkN3K5G8eE>

Multiple photographs of the OM portable mast, a comprehensive parts manifest, a detailed drawing of the mast and a quick link to the knot-tying video can be found at the Trail-Friendly Radio extra Web site.

Why not bring an OM along on your next excursion to the field?

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# Is There A Most Advantageous Band and Time?

By Carl Luetzelschwab, K9LA

The FT5GA DXpedition to Glorioso is history. Being Number 4 on the Most Wanted List (a survey initiated annually by Carl N4AA, the editor of The DX Magazine) generated a lot of interest for this one. Along with the interest, though, came a lot of frustration, as the primary mission of the French DXpeditioners was not playing on the radio – it was their military duties. I had to remind myself of that several times to keep from getting too excited.

I needed Glorioso as an all-time new one, and I managed to work them on 20m SSB and on 80m CW. I tried to work them on several other bands and modes, but couldn't get through the big pile-ups. Although my work schedule pretty much dictated when I was available to work them, in retrospect I should have looked at propagation predictions with respect to other areas of North America (and even the world, for that matter) to optimize my probability of working them by reducing the competition. Interestingly, Ed, N4II, and I discussed this very concept in June prior to the Glorioso DXpedition, but I didn't carry it through.

The concept is rather simple. Run predictions (I'll use VOACAP in this exercise) from your QTH to your target location, and compare them to predictions from other areas to your target location. Then pick the band and time that most favors you over everyone else (if such a condition exists!). But how do you tell who has the advantage? Since the outputs of our prediction programs are statistical over a month's time frame, they are probabilities. Thus we can compare probabilities for MUF

(maximum usable frequency) and signal strength to determine when you have the best shot (least competition).

So who is my competition? Of course those in the general area of my QTH are my competitors, but the only way to beat them is to have a better antenna and be a better operator, since propagation should be similar (if not identical). The other competitors are those DXers scattered throughout the world who have propagation at the same time. For this analysis I'll consider my competitors as the eastern coast of North America (W1, W2, and W3), Southeast North America (W4), and Southwest North America (W5). I'll also throw in a European QTH (Italy).

The bands I'll look at are 40m, 20m, and 10m via short path. I'm restricting this to three bands and short path to keep this from turning into a book. After all, the true goal of this month's column is to show the concept, not perform an exhaustive analysis. I'll also assume everyone is using the same antenna, running the same power, has the same ground conditions (composition and terrain), and the same noise environment. As a side note, any one of these four items could provide a big advantage regardless of location.

From each prediction on each band I'm going to extract VOACAP's MUFday (the probability indicating how many days of the month a band is predicted to have enough ionization to support the path) and VOACAP's REL (reliability – the probability that the predicted median signal to noise ratio

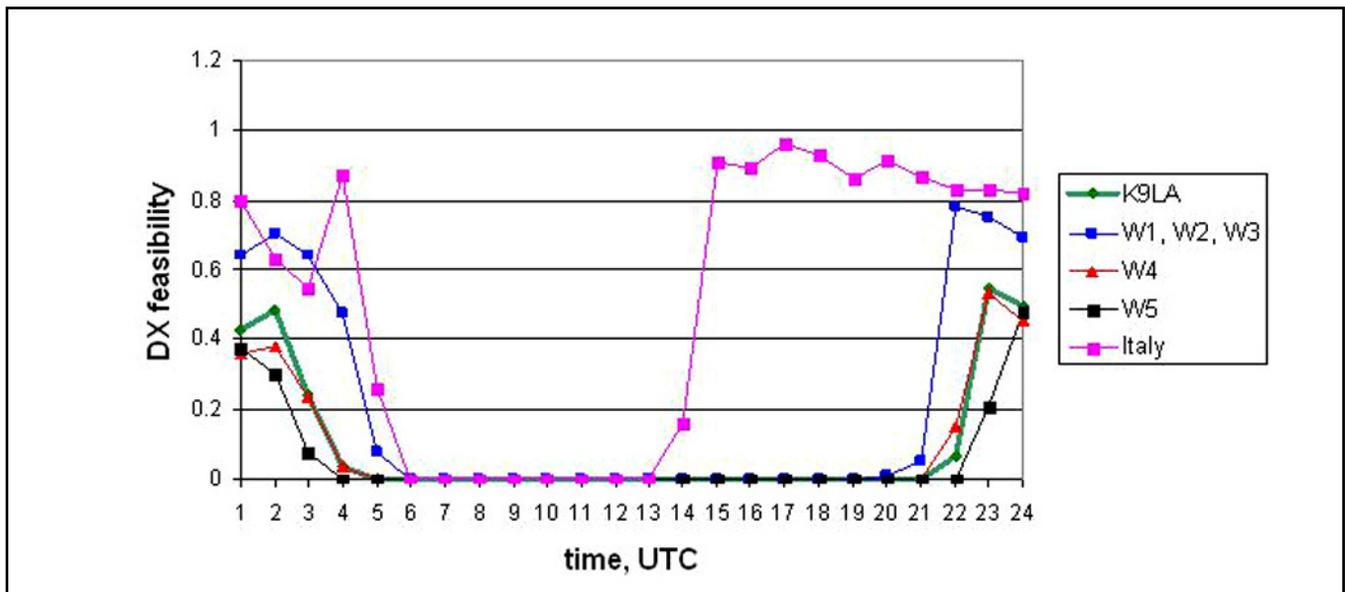


Figure 1 – DX Feasibility to FT5GA on 40m

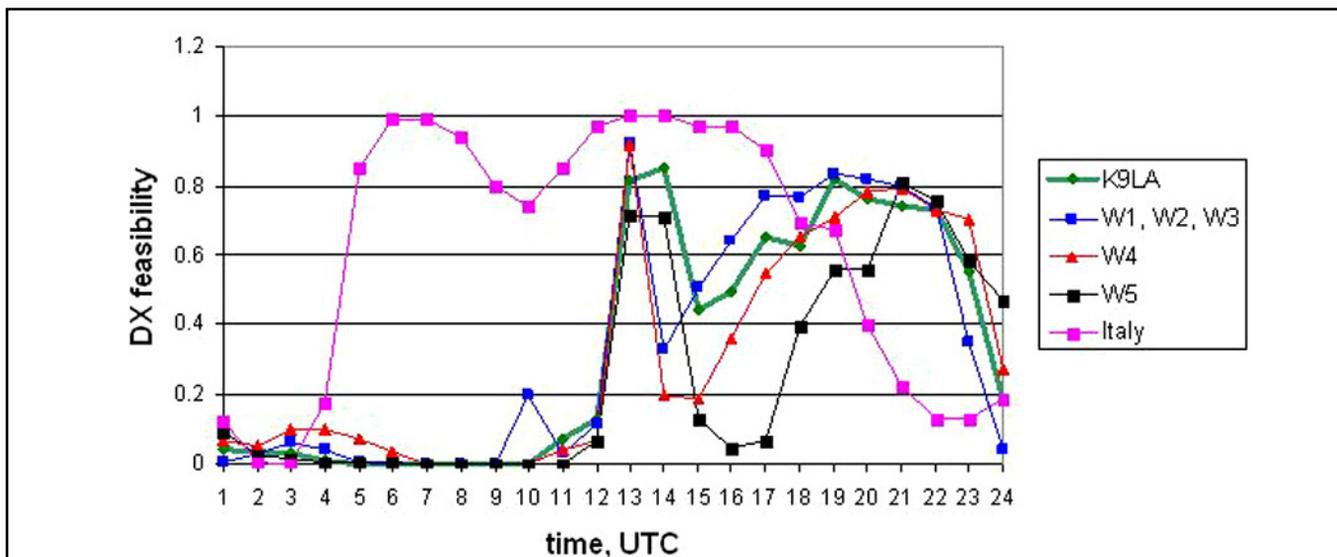


Figure 2 - DX Feasibility to FT5GA on 20m

exceeds my desired level). Since both probabilities are needed for a QSO, I'll multiply them together to give the overall probability – in other words, a DX Feasibility parameter. Figure 1 shows the results of this exercise on 40m.

When 40m is open to FT5GA for me (2200 to 0400 UTC per the thick green line), I have competition from Europe, East Coast North America, and Southeast North America. The competition from Europe and East Coast North America is

especially tough. But it may not be as bleak as it looks. The latter times of my opening are pretty late in Europe, so hopefully many Europeans will be in bed. So my plan for 40m would be to look towards the end of my opening. Of course it would be wise to check early on, too, to see if the FT5GA operators call for North America only – that would certainly help.

Next, Figure 2 shows the results of this exercise on 20m.

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When 20m is open to FT5GA for me (1100 to 2400 UTC), I have competition from everyone. My best shot might be around my sunrise (1400 UTC), when only Europe is predicted to have a better shot – and with a little luck the FT5GA operators may only be calling for North America. If that fails, I'd maybe look towards 1900 UTC to slug it out on a more or less even basis with the other North Americans.

Finally, Figure 3 shows the results of this exercise on 10m.

This by far is the worst band with respect to hoping for advantageous propagation to just me. The problem here on 10m is

most likely tied to being at solar minimum, and me being up north. If I was going to pick a "best" time, it'd probably be around 1800 UTC. At least Europe shouldn't be too much of a factor, and I'd be somewhat comparable to East Coast North America and Southeast North America.

Hopefully I've adequately explained the concept of looking for advantageous bands and times to your area. I have to admit it's a lot of work to go through, with perhaps minimal results. But if it's an entity you really need, it will be all worthwhile when you work them!

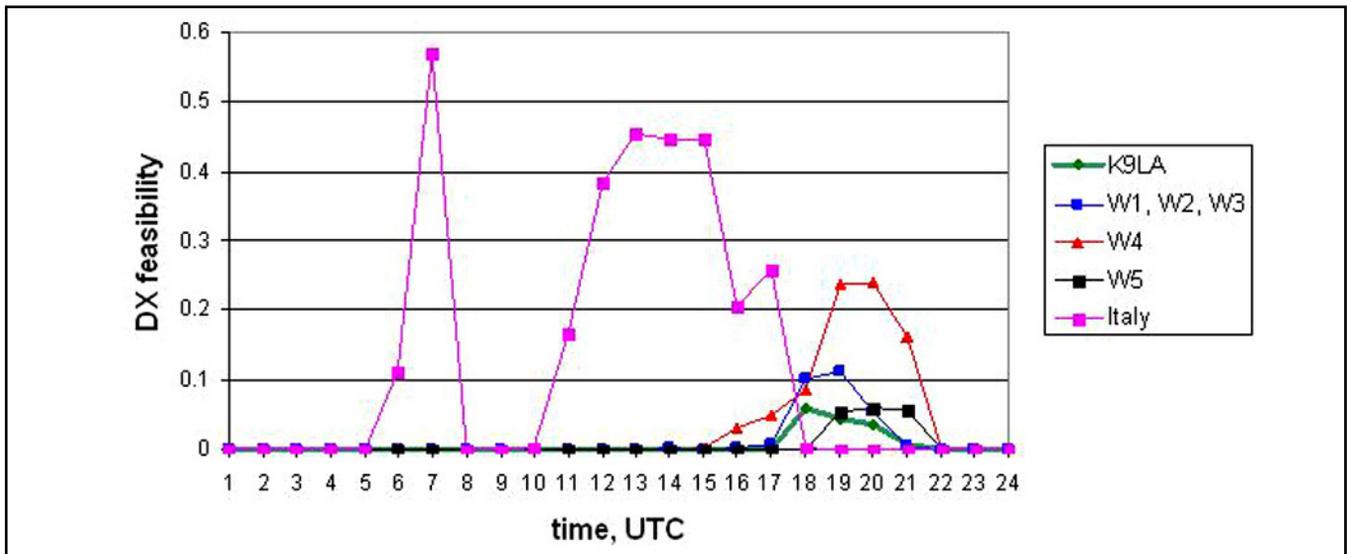


Figure 3 - DX Feasibility to FT5GA on 10m

# DX Predictions

## JANUARY 2010

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 Janerio. 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	(8)	*11
12	(9)	8	12	(7)	(11)
14	(15)	7	11	(7)	*22
16	(18)	7	*16	(12)	*26
18	20	(9)	(14)	(9)	*28
20	19	(9)	19	(8)	*28
22	16	*17	23	(8)	*27
24	*14	*17	25	(8)	*23
2	11	15	23	7	*15
4	10	(9)	16	7	*14
6	(10)	(9)	14	7	*13
8	(9)	*8	*13	*8	12

### CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SA
8	(9)	8	*12	*8	*12
10	(9)	8	12	(7)	*11
12	(16)	7	11	(7)	17
14	19	7	*16	14	*24
16	21	(8)	16	13	*26
18	21	(7)	(15)	(10)	*28
20	19	(7)	20	(9)	*28
22	*16	(15)	23	(8)	*26
24	11	(14)	25	8	*20
2	10	(10)	(18)	7	*15
4	10	(9)	14	7	*14
6	(9)	(8)	13	7	*13

### EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SA
7	(11)	*8	(12)	7	*12
9	(11)	7	12	*7	*12
11	20	7	11	12	*17
13	*25	8	*16	15	*22
15	*27	(8)	17	15	*25
17	*27	(7)	(14)	13	*27
19	*22	(7)	(18)	(9)	*28
21	*19	(12)	22	8	*26
23	*14	(12)	25	8	*21
1	*13	(9)	(18)	8	*17
3	*12	(8)	(14)	7	*15
5	*12	(8)	(13)	7	*13

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## A Radio-Active Reunion

By Carole Perry WB2MGP

**W**ho ever could have known what a fateful day it would be when Ellie Van Winkle N0QCX, a Dayton Hamvention® Youth Forum attendee, spoke with me after the forum? Sometimes things that have a lifelong ripple effect start out in the simplest of ways. Ellie merely wanted to comment about what a great idea she thought it was to showcase young people in ham radio. When I responded with, “Well, you have kids in Boulder, Colorado, don’t you? Why not start a group and send me the very best kids you have to do presentations at my Youth Forum?” I could see the “wheels turning” above Ellie’s head.

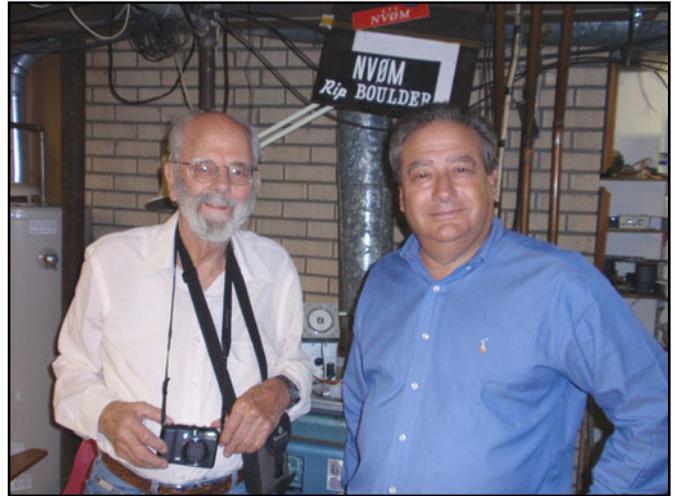
So began a seventeen-year friendship with Ellie and her husband, Rip, and the amazing children of BARC Jr. (Boulder Amateur Radio Club.) For the past 17 years, this incredible couple has been inviting youngsters into their home for training in basic electronics. Ellie, who has a background as a kindergarten teacher and is presently 76 years old, (she gave me permission to use her age) loves working with kids and is responsible for organizing everything and everyone at their gatherings on Saturday mornings.

Rip, NV0M, celebrated his 85th birthday when I was there in October, and is a retired electrical engineer who worked at IBM for 37 years in Research and Design. He, along with members of BARC, volunteer their time as Elmers, and Elmiras, work at individual stations with the kids and do hands-on projects, experiments and demos in an organized, fun, way. It’s really something to see, as all the available space in “Rip’s Lab” gets filled, how the learning stations are moved up to the dining room table, kitchen, living room and any cleared area that can be found.

For seventeen years, this working arrangement has provided me with young speakers for my Dayton Youth Forum; all of the highest caliber. I can’t imagine having the Youth Forum without looking out at the sea of fluorescent green BARC Jr. caps in the audience every year. Besides Ellie and Rip who organize and escort the kids, there are always parents, grandparents, siblings, friends, a Seeing Eye dog, and Elmers of the presenters in attendance. What a group of dedicated and wonderful individuals!

For many years, Ellie has been inviting me to come to Boulder and see the inner workings of BARC Jr. for myself. Well, I finally took her up on it. This past October, I treated myself to a trip to Colorado for the sheer fun of it. Little did I know just how extraordinary an experience this was all going to turn out to be. Not only did Ellie go into high-gear and arrange for a reunion, but Stan Reubenstein, WA6RNU, President of the Radio Club of America arranged for me to meet with other club members at an RCA luncheon in Denver. Ham friends like Steve Meer, K0SCC, and Jeff Grazi, WA0MJX, along with Stan, personified all that is best about hams with their cordiality and hospitality.

Jeff was even able to arrange for me to meet with someone from the Denver Public School District while I was in town.



**Rip Van Winkle, NV0M, (left) and the President of RCA, Stan Reubenstein, WA6RNU.**



**Carole Perry and Ellie Van Winkle, N0QCX.**

He accompanied me to help give a “pitch” to incorporate a ham radio/technology program in the school district.

When the big night came for the reunion, I was really excited about meeting with people who had been 10 or 12 years old when they spoke at Dayton. The evening began with a birthday celebration for Rip which was attended by Greg Schlender, ND0V, and his wife Shelly, KC0GQB, who are the parents of Walt, KC0BPC, and Amory, KC0BPB, who couldn’t attend, but were Youth Forum presenters years ago. I had the pleasure of meeting Mike Ballbach, N0ZTQ, who is a wonderful young man who began working in computer programming while still in high school, and was the official photographer for the evening.



The current BARC Jr. group, some of whom are studying and preparing to be considered for the Hamvention® Youth Forum.

Once the door to the Van Winkle home opened that night, the parade never stopped. I stood in amazement as a steady stream of parents, relatives, friends and Elmers came into the house laden with trays of food, fruits and cakes. But it didn't take long for tears to come to my eyes once the men and women who were my young speakers years ago began to arrive.

Amongst the former presenters who attended that night, was Eric Permut, KG0YS, who is a geologist and helps out as an Elmer for BARC Jr. and is currently 29 years old. He was my very first BARC Jr. speaker at the age of twelve years old. Blair Harness, KBOROM, who is an electrical engineer and presented at Dayton 16 years ago when he was 10 years old, was delightful to speak with that night.

I never would have recognized my beautiful little girls, all grown up now; Kathryn Kiefhaber, KSOP, and Kristin Wilson, KC0INX, both presently college students. I was thrilled to be talking to and hugging Sarah Wisotzky Basden, KB0ZRV, presently an ophthalmic tech, and Hargobind Khalsa, AB0YL, a math/computer student -- all grown up.

Nathan Wang, KB0UQS, a Ph.D student in geology and David Stearns, KC0DDR, a computer programming student both brought back memories of their times at the Youth Forum.

A 2009 speaker was Austin Schaller,

KD0FAA, who wowed the audience with his presentation on "Fractal Antennas." It was a pleasure to see him and his wonderful family at the reunion.

Meeting with these talented young adults was an experience I will never forget. Ellie and Rip even arranged for the present BARC Jr. members to be at the reunion. The present "hopefuls" for Dayton had a chance to meet and socialize with the "graduates."

It was a real pleasure to speak with Jack Ciaccia, WM0G, who is the President of BARC. He is so proud of the Van Winkles for all their dedication and hard work. It was very obvious to anyone who was at the reunion that night, that these people have one common goal of doing what's best for their children. The interest, and support from the parents and families of these youngsters, coupled with the hospitality of Ellie and Rip make for a fabulous opportunity for these kids.

Ellie invited me to say a few words to the assembled group of 69 people including the nine who were former presenters. Looking out a sea of happy, eager young adults who were sitting on the living room floor, surrounded by their families, I felt as though I were part of something extraordinary. As I thanked everyone for coming, I knew that I would never forget that reunion and the coming together of so many special people through our common love of children and the radio.

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# Farewell & Hello, Why & How

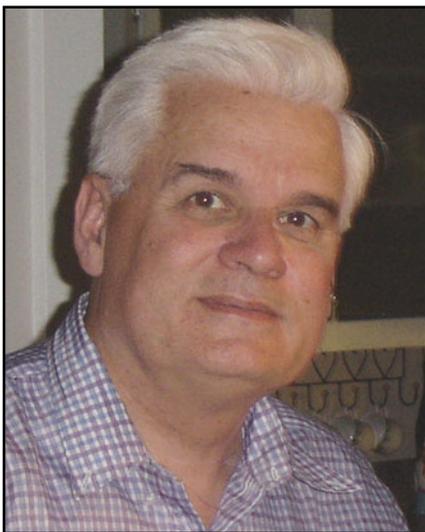
by Dave Hayes VE3JX



## Farewell

“Folks, it is time—time for a change and an opportunity for me to thank you all for your most kind attention to the ten years of QCWA columns that I was able to send your way, with thanks to Editor Nancy Kott and the good folks at *WorldRadio*. I leave with nothing less than my appreciation to all, and with high certainty that Dave Hayes will do at least as well, probably better than I at reminding *WorldRadio Online* readers of the important work being done by the Quarter Century Wireless Association—the Proud, the Elite, and the Many.

Please give Dave and Nancy your thanks for making this transition so smooth and easy. I leave you with an old story about Slim and Jim (and me), QCWA Octogenarians: Slim says to Jim, “I’m 82 years old today and I am just full of aches and pains. I know you are about that old, too, so how do you feel about being in your 80’s?” Jim replies: “I feel just like a newborn baby. Yep, no hair, no teeth, and I think I just wet my pants!” So, it’s time, while I am still dry, to say goodbye and farewell to you, my readers for this past decade. May the next ten years serve you all well as the past ten served me.— 73 + 25, de Alan, KJ9N”



Dave Hayes, VE3JX, the new QCWA columnist.

## Hello

Thank you very much, Alan, for your outstanding legacy. I am a great admirer of Alan’s columns. I once described his writing style as “conversational-intellect-

tual.” Indeed, we all appreciated his well-worded and well-researched information. I am looking forward to meeting Alan in the near future “while he is still dry.”

Let me start by introducing myself. My name is Dave Hayes, VE3JX, and I live in Sault Ste Marie, Ontario, Canada. If you want to know where that is, follow I-75 up to its extreme north end. Interstate 75 ends at the bridge leading to the Canadian Sault. (We are actually twin cities up here: Sault Ste Marie, Ontario, and Sault Ste Marie, Michigan.) Alan, on the other hand, lives towards the other end of the same highway, with I-75 terminating at the southern end of Florida in Miami.

I was first licensed as VE3BRT in the spring of 1967, Canada’s centennial year. There was a short break from amateur radio when I left home and discovered romance. After marrying and starting a family, I was re-licensed as VE3EIH. I obtained the 2x2 call, VE3JX, about four years ago. In Canada, we have two classes of license, Basic and Advanced. I have the latter.

When I was first interested in ham

radio, I became aware of QCWA and wondered if I’d ever qualify. (When you’re young, 25 years seems like forever.) Basically, I had forgotten all about QCWA over the years, until I ran across the QCWA table at the Petoskey Swap ‘n Shop, in July of 2006. Jim Bishop, W8JFB, was manning it and he reintroduced QCWA to me, giving me a sample copy of the QCWA Journal and a Canadian application form. Jim is one of the friendliest people I’ve ever met. He was the Secretary-Treasurer of Chapter 10 for many years. He and his wife Stella devoted countless hours to the chapter membership as well as to the chapter’s history preservation.

Shortly after returning home and gathering the evidence of “year first licensed” and “current licence”, I applied through Jim to become a Life Member. I hold QCWA Member Number 33597.

## Why?

Why does one want to become a member of QCWA?

The reasons can be many and varied. Alan has spoken of the QCWA as “*The Proud, the Elite, and the Many.*” Contained within that phrase are reasons for wanting to join. In his first *WorldRadio* QCWA column in July of 2000, Alan explained this descriptive epithet. He highlighted the PROUD as referring to our feeling of achievement in being involved with amateur radio for 25 years or more. Longevity in a hobby is not always the norm. All of us probably began a coin or stamp collection when we were young. Most of us are no longer engaged in that. Some have started in ham radio, but given that up as well. We, the QCWA, have not. Joining QCWA is a celebration of that fact of continuity in our individual lives.

Alan spoke of the MANY as referring to the thousands who have joined and are current members of QCWA. The 'Many' are very active in their chapters, and on the various nets sponsored by them. Among the 'Many' are not a few old timers who have witnessed the evolution of our hobby, and telecommunications in general. A very few may have operated during the spark-gap era. At one time, the QCWA could boast many, many of such experienced individuals. However, most "sparks" have become Silent Keys, but the memories of their past exploits live on.

Alan also spoke of the ELITE. He highlighted this term as being not exclusive but inclusive. All of us are not outstanding pioneers of the radio art. However, we do include in our ranks several who are, and they have been at the forefront of communications development in general, and our hobby in particular. I think it would take a whole column to list those among us who have furthered the interests of amateur radio in an outstanding way. Both Canadian and U.S. people (as well as International members), who have contributed their time and energy to technical advancement or to organized ham radio in their respective countries, are part of a list of "who's-who" in amateur radio, past and present. The Elite: yes; but by no means exclusive of any who have been in this hobby for 25 years or more.

And so, we're back to the question: Why? Why join QCWA?

1 Out of celebration for our longevity in this great avocation of ours.

2 To associate with like-minded and like-experienced individuals as ourselves.

3 To participate in the many activities carried on by our active chapters, with those who have also been around the block a time or two.

4 To have a social network of chapters "from sea to shining sea" where we are welcome as local or visiting QCWA members.

Incidentally, one would expect that the retirement and 'snowbird' areas of the U.S. would have more chapters and more opportunities to socialize than other areas. That expectation is reality. For example, there are 17 active chapters in Florida. Croft Taylor, VE3CT, a former QCWA President and a "snowbird", told me that he was a member of 7 chapters in his winter-retreat area of Florida. He has a ball keeping up with all the meetings associated with these chapters. The only

downside he reports is the effect they have on his waistline, since most of these are luncheon or dinner events. He spoke of some very famous people he has met in that area of the country, and of the exciting technical presentations made.

As a national organization, QCWA honors its members and their longevity milestones with certificates, starting at 50 years in ham radio. These are usually presented at chapter meetings by the highest officer present. There are also annual QCWA National (International) Conventions hosted in a different locale each year. In 2008, the Convention was held in Virginia Beach, hosted by the Tidewater Chapter 119. 2009 saw the Convention venue being a Caribbean cruise in October, hosted by Southeast Wisconsin Chapter 162. A major part of each convention are the variety of seminars presented; usually a mix of technical and organizational subjects. It is also a great time for meeting members from all over. During this past decade, there have been three conventions held in Canadian cities, the last one being Calgary, Alberta, in 2006, hosted by the Wild Rose Chapter 151.

### How?

How does one become a member?

First, you need to have been first licensed as a radio amateur in 1985 or earlier. (The month doesn't count; if you were licensed anytime during 1985, you are eligible to join QCWA on January 1st, 2010.) You need to provide evidence of this, perhaps a photocopy of your first license. If you don't have that, there are other ways to verify it. QCWA's General Manager, Chuck Walbridge, K1IGD, may be able to help you with this.

Second, fill out the application form for your area (U.S., Canada, or DX) and indicate the membership type you would like to obtain. There are incentive discounts for multi-year memberships. Application forms are available on the internet at: qcwa.org.

Third, send it in, along with the appropriate fees.

Once you have joined QCWA National, you will probably want to link up with a local chapter. It is at the chapter level where most activities take place.

Finally, be prepared to have the time of your life, among "The Proud, the Elite and the Many."

Cheers, DaVe3JX.

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# Make a Simple Emergency Plan...and Follow it!

By Jerry Wellman, W7SAR

**W**hat is an emergency communications plan? What is the best emergency communications plan? If I had the answers to both questions, I would sell the answers and retire wealthy beyond measure. Since I don't have the answers, let's ponder the questions this month. As emergency communications people, we should have some understanding of emergency communications planning and what some of the underlying principles are.

Let's talk about one plan that's not OK. My son Zach, KC7GKE, and I were at a station and an operator began to describe his emergency communications plan for a group he represents. The fellow pointed to his radio and said, "I've done the MARS/CAP mods." That was his plan. Zach smiled and I asked for some examples. He said if there were a Civil Air Patrol plane overhead, he'd dial in the CAPs frequency and call the plane. If he needed the fire department, he had that channel programmed. If he needed search and rescue or any other agency, he'd simply call them directly. He explained that he also had all the MARS repeaters programmed into his radio. I probed a little and asked if he was a member of the CAP or MARS. He assured me he wasn't, but that it didn't matter—these groups would be more than happy to hear from him in an emergency. After all, he said, "I'm a trained communicator and I have a radio."

I asked him about the current changes to narrowband for many agencies, including the CAP. His response was that sure, it made it difficult to listen and he'd have to crank up the volume. But it would cause no problems for the agencies, they can crank up the volume too. EGAD! I thought. This fellow has no clue as to following the rules or knowing the potential damage of using a wideband signal on a narrowband channel or repeater.

He finally took his "emergency plan" and left, and I never did tell him the CAP would probably not want to talk with him. I began to wonder how many of our well-meaning operators just figure that modifying a radio is the best plan? What part of following the rules or understanding the rules don't they get? Having even one operator with a modified wideband radio (and high powered) would cause a significant amount of interference to a narrowband system.

Folks, an emergency plan is something you do in advance and you plan to follow the rules! You talk about contingencies and coverage and training needed and equipment and antennas and readiness and possible scenarios -- and you figure out how best to offer communications. Can you cover every event? NO! Can you plan for every problem you might encounter? NO! However, you can plan, you can prepare, and you can plan to follow the rules.

In most, if not all, crisis events I've been involved with, operators cooperate and communicate and work together. Operators rely on experience, training and expertise and they work together. And, they follow the rules.

In my not so humble opinion, the best plan is a simple plan. Over the past years, readers have sent samples of their plans. Some are hundreds of pages in length and cover everything including what sizes of fuses you should have in your emergency kit. Some medium-sized plans cover required training and participation to ensure you're ready. The best plan I saw was a couple of pages and outlined some principles to follow - leaving the training and equipment preparation up to the operator and the radio group. The complex plan had lists of people and who would do what in each projected scenario. Every time someone moved (or died of old age), the plan had to be revised. Do you see where this goes? It's a lot of work and in short order the keeper of the plan gives up and the plan is out of date.

A simple plan that is easy to understand and remember will always serve you better. In an emergency you don't have time to re-read and re-familiarize yourself with the plan while you're headed to support the emergency. There's great wisdom in Keep it Simple, Silly (KISS). Just please keep your plan within the rules. If you have authorization in advance to use an agency's frequencies, get it in writing, be trained on their procedures and use legal equipment. Don't damage your reputation by even suggesting you use illegally modified radios. Do it right!

## Business rules

A local fellow mentioned that he'd been called by a commercial business and was asked about ham radio operators providing communications for events that make money and have paid employees. He said the radio business owner mentioned how hams were costing his business money.

Interesting discussion! I've had lengthy arguments with other operators when hams are solicited and used by others to increase their profit margin. Others have argued with me that even though the event sponsors are making money, it allows ham radio operators to test their gear. But why should I load my gear, buy my own food, buy my own gas and then spend two days of my own time so an event sponsor doesn't need to pay for a commercial radio setup? One day I calculated how much an event sponsor (a registered business entity) was making from entrant fees and it was a staggering sum of money. The event was not a non-profit group and the event sponsor was making a boatload of dollars. I opted to find other ways to spend a weekend.

On the other hand, I'm excited to go play when the event is actually a non-profit endeavor (with no paid employees) or an event where no one is paid (if they're not a non-profit organization).

With the newly emphasized rules on where ham radio might properly be used, I'm excited. You should be, too. Ham radio has long been a volunteer service that benefits others. It should not damage business endeavors and should not help people make money. Agencies should not have an emergency plan that

just shifts their employees from a business/public safety system onto a ham system. The emergency plan should involve volunteer ham operators that come into the agency and provide communications. This gives purpose to local emergency communications groups! You now have customers who need you to do more than train an agency's employees to use ham radios.

This is good news for ham radio operators. Agencies might actually need to have trained volunteer operators included in their emergency planning. Rather than petition the FCC to relax the rules, go work with your local agencies, get involved, and be of service.

### Following the rules

In case you have not figured it out, this month my focus is one of discipline and following the rules. I was chatting with an agency supervisor about using volunteers and asked him why the agency didn't have an outreach policy to use CERT, ham radio or even church groups. His answer was simple: They cannot follow the rules, they don't follow their leaders and they're too much trouble to supervise. That's blunt and honest.

He gave some examples of trying to use

a group of well-meaning volunteers at an event and described how they were simply rude to their leaders and did not want to follow instructions. He pointed out how many of the volunteers ignored their leaders and said, "You can't make me" with regard to following directions. Please take this example to heart when you recruit and organize your volunteer group. Often you have no teeth (as volunteers get no pay) and just open your group to everyone -- seeking numbers instead of quality. Having a nice social group is one thing, having people willing to follow policies is another thing altogether.

Before you just invite everyone to become a member of your group, develop some criteria and performance policies. If you do this in the beginning, you don't have to deal with the "We've always done it this way" members who will not want to follow the rules. You want a culture of adherence to the rules and some mechanism to boot them from the group if they misbehave. If you do not have these types of policies in place, you risk having your rogue members cause problems and having an agency invite your group to go away.

Until next month, best wishes from Salt Lake City!

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## A Big Boost for D-Star

# Georgia Hams Given \$165,000 To Build D-Star Rescue Radio Network

Bill Pasternak, WA6ITF

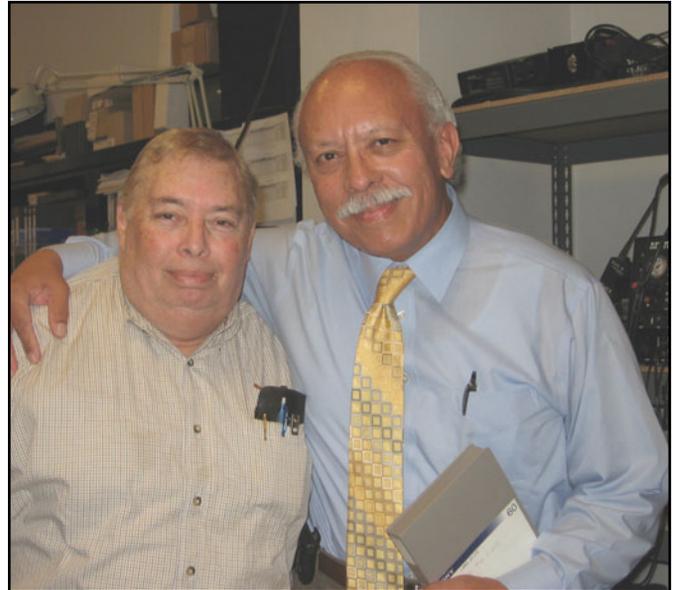
**F**ederal funding of \$165,000 has been secured by Georgia Emergency Management Agency to complete a statewide D-Star based ham radio emergency communications network. The network's creation was born in 2005; the result of a vision of what amateur radio emergency communications could one day achieve in the state of Georgia, according to John Davis, WB4QDX. That is when Mark Fehlig, WA6NGC, the former Director of Engineering for the state's Public Broadcasting System had the opportunity to install two amateur radio antennas on each of nine television towers, providing statewide coverage. Fehlig designated Georgia's Amateur Radio Emergency Service to control the use of those sites for emergency communications. The next task was to figure out the best technology to use at those sites.

Linked FM repeaters and packet were among the modes considered. However, radio amateurs were also watching emerging D-Star technology. They recognized it as a state of the art platform providing simultaneous voice and data communications. Knowing that D-Star also allows repeaters to be linked on a flexible basis and that it permits simultaneous voice and low speed data along with high speed Internet connectivity at 1.2 Gigahertz, the decision was made to go D-Star for the state's new system.

When the network is finished, radio amateurs will have access to voice and data repeaters on all nine towers across the state, operating on 2 meters, 440 MHz and 1.2 GHz. Because those towers are strategically located to provide maximum public television coverage, amateur radio communications will benefit from wide area coverage as well. Commercial grade 1 5/8" transmission lines will connect the antennas, which will be between 500 and 600 feet above ground. Georgia's Public Broadcasting Network will provide indoor space for equipment, along with backup power at each site. Internet access will be available, too, thanks to the broadcasting system's DS-3 data network. This means flexible linking of repeaters will be possible using a stock D-Star interface.

The federal money will also pay for 20 dual-band D-Star radios to be installed at EMA offices across the state, along with a portable UHF D-Star repeater available for emergency deployment. In addition, three 1.2 GHz D-Star radios and laptops for sending data and photos from field locations will be purchased. The money will be used to build a robust reflector to serve the state's network during emergency conditions and for general use during non-emergency times.

Two of the emergency network's D-Star repeaters are already on the air. One is located at Pembroke, Georgia, near Savannah. The second operates from atop Stone Mountain, serving the Atlanta metro area. The complete Georgia D-star amateur radio



**Bill (left) with reporter Tony Valdez, KC6LXQ. Tony is the best "street reporter" in the business. Bill's proud to say that he got Tony interested in joining the hobby.**

emergency communications network is expected to be in operation in early 2010.

The Georgia network will complement other D-Star based emergency communications systems planned or in operation in the neighboring states of Alabama, Florida and South Carolina. Once all are in operation, it will create regional ham radio emergency capability across the American Southeast. This monetary grant is only second in size to one of \$250,000 given by the governor of Oregon in 2007 to ham radio first responders for a Winlink-based statewide amateur radio emergency communications network.

Not long ago, I predicted D-Star would eventually replace analog FM as the mode of choice for VHF and UHF daily chatting on thousands of repeaters, as well as established networks for rescue radio operations.

As we enter 2010, I think that even those who remain totally opposed to any form of change away from FM will have to agree that the creation of this Georgia state-wide D-Star ham radio emergency response network signifies acceptance of D-Star as a formidable challenger to today's established analog operations. If the surrounding states follow Georgia's lead by developing D-Star based rescue radio networks as the provided infor-

mation suggests will happen, it will only be a matter of time before the entire nation— if not the entire continent— adopts D-Star as its utility communications scheme of choice.

This is not going to happen overnight. Many hams see the price of D-Star equipment far out of reach in today's economy. Others are afraid that with Icom currently the only source of ready-to-go D-Star gear, they might wind up holding the proverbial bag if it fails to gain universal worldwide acceptance as FM's replacement. Many others are satisfied with the analog FM status quo and tend to oppose any change for that reason alone.

But please, once again permit me to point out that almost everything that happens in ham radio is "evolutionary" rather than "revolutionary." FM is a prime and recent example. In the early 1960s almost all ham radio communications on 50 MHz, 144 MHz and above were using AM and some Morse. By the late 1960s and early 1970s, hams on AM wanted to be where the "action" is taking place and the "action" was moving away from AM to FM. Now in the 21st century, if the important "action" is D-Star based, the ham community of today and tomorrow will eventually make the switch.

## D-Star Contacts To Japan Made Easier

Ray Russell, M3ZRJ, in London has contacted the Southgate News with an interesting development for those using the D-Star system to contact Japan. During a QSO with Kohji Tanaka, JA4NYY, Russell was told that to contact an individual Japanese radio amateur by D-STAR, all one has to do is to enter their callsign in the URCALL field of your transceiver. RPT1 and RPT2 will, as usual, need to be set to access your repeater's gateway, e.g. GB7AU<sup>^</sup>B and GB7AU<sup>^</sup>G respectively, where <sup>^</sup> is a space. Your call should then be routed to their last recorded location.

## Coining A New Term: Contact Facilitator

Just when you thought you might have seen it all, along comes something new or unexpected. In this case, it is called the Automatic Voice Relay System (AVRS). Its proponents are calling it the perfect marriage of APRS with any of the VoIP amateur programs, such as IRLP, EchoLink, eQSO, etc.

Programs such as IRLP, EchoLink, eQSO and the like are not "modes" because none can originate or deliver a message without the use of a true "mode" to carry the information. By contrast, a simple carrier wave generated by the most rudimentary transmitter becomes a mode unto itself when that carrier wave is turned on and off according to some pre-determined convention that everyone using it has the ability to understand. In the case of making and breaking a carrier wave, we use a "convention" called Morse code.

Another word for a convention is "protocol" which has become a buzzword in the world of digital communications to describe just about anything capable of transferring information from point A to point B. However, all of these protocols must rely on some form of transfer vehicle to bridge the path. That might be pure RF, pure wire-line or a combination of both. But until the day that IRLP, EchoLink, eQSO can function without some form of interconnect, these are in reality protocols that use wire-line over the Internet to per-

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mit radio gear to interact over great distances using VoIP technology.

With this in mind, we welcome AVRS. In my view, AVRS is best described as a “contact facilitator” that will allow any APRS equipped mobile to establish a voice link to any other APRS station anywhere on the planet by simply knowing only his callsign. According to an article in a recent edition of the Wireless Institute of Australia News credited to VK7AX, this interlinking is accomplished using the global APRS, IRLP and EchoLink systems with only the addition of a single AVRS engine on the Internet.

According to the VK7AX article, the purpose of the AVRS engine is to add to this process and make it possible for the mobile to initiate a call to anyone knowing only his/her callsign or node number. The AVRS engine interacts with the APRS - Internet system and monitors the status of all IRLP and EchoLink Nodes. Being fully aware of everything needed for end users to find each other, calls, locations, frequencies, PLS and status, the AVRS engine passes the needed information and messages to the users to help establish the call.

In Australia, to assist with this program VK7AX says that experimentation is under way in the North and Northwest of VK7 with the three IRLP Nodes currently sending pertinent position and status information to the internet. He says this is being done to facilitate the ultimate interconnections mentioned above using AVRS.

So, is AVRS a “mode,” a “protocol” or more likely a new category that I call a “contact facilitator?” You can judge for yourself on-line at <http://www.aprs.org/avrs.html>.

## Call For Papers For The 2010 Southeastern VHF Society Conference

While on the topic of exotic modes on the bands of 50 MHz and above, a “Call for Papers” to be presented at the 14th Annual Southeastern VHF Society Conference has gone out to the worldwide ham radio community. This year’s conference will take place on April 23 and 24th at Morehead State University in Morehead, Kentucky.

Papers and presentations are solicited on both the technical and operational aspects of VHF, UHF and Microwave weak signal amateur radio. Some suggested areas of interest include transmitter, receiver or transverter design, antenna design, low noise preamplification techniques. On the operational side, topics might include DXpeditions, Rovers, EME operation, use of digital modes and exploring such items as Sporadic E propagation, Meteor Scatter and Tropospheric Ducting.

In general, papers and presentations on non-weak signal related topics are not accepted, but exceptions may be made if the topic is related to weak signal. For example, a paper or presentation on the use of APRS to track rovers during contests would be considered.

The deadline for the submission of papers and presentations is February 5, 2010. Please indicate when you submit your paper or presentation if you plan to attend the conference and present it there or if you are submitting just for publication. Papers and presentations will be published in bound proceedings by the ARRL.

Send all questions, comments and submissions to the program chair, Robin Midgett K4IDC via [K4IDC@comcast.net](mailto:K4IDC@comcast.net).

For further information about the conference, please go to <http://www.svhfs.org> on the World-Wide-Web.

## A Personal Note: I Have Retired From KTTV

In the late 1970s I was happily self-employed. Thanks to the late Rupe Goodspeed, WA6QLE, I had carved a niche business converting documentary and industrial film makers away from 16mm film and over to the emerging world of Electronic Field Production. This was the era of Sony-designed portable 3/4" U-Matic recorders and relatively heavyweight “portable” cameras carrying such exotic names as RCA, Ikegami and JVC. It was the dawning of the electronic video production age and I was happy to be a part of it.

One afternoon in 1980, I received a call from Burt Hicks, WB6MQV. Burt had been working in maintenance at KTTV Metromedia TV for a few years while still managing his ham radio and CB supply store in Burbank. Chatting with Burt, I heard a voice in the background asking Burt if he knew anyone with experience in repairing Sony U-Matic recorder/players.

To make a long story short, from 7 a.m. to 3 p.m., five and some times six days a week, I did nothing but repair and rebuild Sony VO-2800s, 2850s, 2860s and three or four 1/2 inch open-reel VTRs. By the end of the third week, most non-functioning machines were repaired, but the boss asked me to stay on a bit longer as he had not yet found a full-time replacement. I agreed to another 30-day stint. This dragged into 60 days then 90 days and so on. Soon, I was holding membership in the National Association of Broadcast Engineers and Technicians.

By the end of the first year, I was hooked but I was also still working week to week. A few months later, I was notified that I had been elevated to a staff position. Now, just shy of 30 years from that phone conversation, I have departed from KTTV Fox 11 and the duopoly station KCOP My 13.

In the three decades I worked there, I did almost every job one can at a TV station, from fixing video recorders, to filling in as a camera operator, audio mixer, remote location engineer to satellite operations to—well you name it. I think the most fun I had was during the last decade as the unofficial ombudsman between the Engineering and News departments. My last major assignment was as the ombudsman between the stations and the cable TV distributors, the satellite suppliers and the public during the switchover from analog to digital telecasting. For about three months, I had my own office, my own computer and a dedicated phone line that never seemed to stop ringing. In addition, I even got a few moments on-camera as an expert on “all things electronic and radio communications” for news stories reported by my friends Bill Smith, Hal Eisner, Phil Schuman and others.

I feel honored to have had the opportunity to have worked very closely with some of the best professional news people in the business.

Now it’s time for the next adventure of life. I’m not sure what it is yet, but by the time I sit down at this keyboard to write the next edition of this column I should have all those proverbial ducks in a row and I’ll let you in on just what that adventure will be. After close to 50 years of nonstop work, it is time to relax a bit—but not for too long. There’s still a lot for me to do before I say a final 73 and I hope that’s decades away.

How many people can look back and say that their career has been both rewarding and a lot of fun? That’s the way that I feel.

As I write this, I also cannot help but think of the 1970’s pop song “Love Will Keep Us Together” written by fellow Brooklynite Neil Sedaka that was later covered by The Captain and Tennille. Now, in 21st century, with almost everyone being on-line, as I said at my retirement party: “It’s not love that will keep us together. It’s Facebook®!”



# The September SYLRA Meeting

Cheryl Muhr, NØWBV



A group shot of all the YLs attending the meeting.

The Scandinavian Young Ladies' Radio Association (SYLRA) has 113 members from 23 different countries. This past September they held a meeting in Kolbotn, Norway, with an open invitation for everyone to attend. Fourteen different countries were represented.

We were invited to operate the special call, LA6SYL, and in my case, could also use LA/NØWBV. The club station, LA3F, was also thoughtfully provided for our use. This was especially good news for those not joining the group in Svalbard after the meeting. QSLs can be sent via LA8FOA for both special callsigns.

We were also offered a tour of Fort Oscarsborg and other historic Norwegian sites. And while the YLs were in their meeting, the OMs who joined us toured a fire station, and had a good time sliding down the firemen's pole, shooting the fire hose and riding 26 meters up in the cher-

ry picker! (I was quite jealous!) And we also had time on our own. Local OMs deserve kudos for all the help and transportation they provided - it was much appreciated.

The club has members from all over the world, but is based on the Nordic countries. At the meeting, each section gave a report including Finland, Norway, Iceland, Sweden and Denmark. The new officers were also announced.

Many of the sections provided net or "ring" information for YLs. Most are on 80 meters, with a few on 20 meters. And there are a few new YL contests debuting, including a SYLRA contest, so look for more details as they are received!

That evening we had a wonderful dinner celebration. The Vice Mayor of Oppegård met with us and made a nice welcome speech. She is now the mayor. After dinner we had a number of members provide the entertainment including

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**Kay and Mia having fun with the streamers at dinner.**

a belly-dancing lesson from Anna HenriksdÖttir, TF3VB, and an Indian dance by Sarla Sharma, VU2SWS. We threw streamers at each other and enjoyed a fine raffle. As always, the YLs got to talking about the different YL groups they belong to, so there were pictures for BYLARA (Great Britain), JLRS (Japan), YLRL (USA), ALARA (Australia) and YL Club Radio Italiano (Italy).

We were also reminded about the SYLRA webpage at [www.SYLRA.is](http://www.SYLRA.is), where you can find out more details about the organization. The next SYLRA meeting will be held in Finland in August of 2011.



**A belly dancing lesson from Anna, TF3VB.**



**The group meeting with the mayor.**



# HAMFESTS

## JANUARY

**MICHIGAN - Hazel Park Amateur Radio Club 44th Annual Hamfest** - January 17, 8 AM - 12 Noon, Hazel Park High School, 23400 Hughes, Hazel Park. Talk-in 146.640 (100hz.pl) D.A.R.T. Repeater. For more info: email wd8s@comcast.net, phone WD8S at 248-399-7970, website www.hparc.org

**NEW YORK - Ham Radio University 2010** - Sunday, January 10, Briarcliffe College, 1055 Stewart Ave., Bethpage, NY. 11th Annual - sponsored this year by the Great South Bay Amateur Radio Club, it's a cooperative effort of over twenty local clubs and organizations. Talk-in on W2VL 146.850 -600 136.5 PL. For more info: Neil, KC2KY 631-737-0019, email kc2ky@arrl.net, website www.HamRadioUniversity.org

## FEBRUARY

**OHIO - K8BF 5th Annual Freeze Your Acorns Off (FYAO) QRP Special Event Station**, Saturday, February 27, 1500 UTC - 2300 UTC. Fred Fuller Park, Kent, OH. Portage County Amateur Radio Service (PCARS). General areas of 15, 20, 40 and 80 meters both CW & SSB. Also Echolink through the KC8RKY echolink node. Certificate available - SASE to: Al Atkins, KBVJL, 12433 Chamberlain Rd., Aurora, OH

**PENNSYLVANIA - WACOM Special Event Station** - February 1 through February 8th, 1900Z-1900Z, Washington, PA. Washington Amateur communications, W3C, Washington County, Pennsylvania Sportsmen Show. 21.285 14.280 7.260. QSL, Ed Oelschlager, 60 Carl Ave., B2, Eighty Four, PA 15330. For more info: wa3com@gmail.com or www.wacomarc.org

**SOUTH CAROLINA - 37th Annual & Original Charleston Hamfest and Computer Show** - Saturday, February 2, 8AM - 3 PM, Exchange Park Fairground, 9850 Hwy 78, Ladson. Talk-in The WA4USN linked Repeater System - 146.790-No-Tone Charleston, 145.250-Tone 123.0 Summerville and 147.045+ Tone 103.5 St. George. For more info: email wa4usn@amsat.org, phone Jenny, WA4NGV 843-747-2324, website www.wa4usn.org

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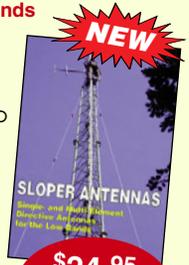
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# CONTEST CORNER

**CONTEST:** Straight Key Night  
**DATE & TIME:** 0000-2359Z 1 Jan  
**BANDS/MODE:** 80/40/20 CW  
**POINTS:** None  
**MULTIPLIERS:** None  
**EXCHANGE:** Conversation! Include "SKN" so others know you are participating.  
**ENTRY CATEGORIES:** Single op  
**ENTRIES:** A list of stations worked to: ARRL Straight Key Night 225 Main Street Newington, CT 06111 or  
 E-mail: StraightKey@arrl.org. Note: Be sure to vote for best fist heard!

**CONTEST:** SARTG New Year's RTTY  
**DATE & TIME:** 0800-1100Z 1 Jan  
**BANDS/MODE:** 80/40M RTTY  
**POINTS:** 1 Pt. per QSO  
**MULTIPLIERS:** DXCC Countries except JW, JX, LA, OH, OH0, OJ0, OX, OY, OZ, SM, TF  
**EXCHANGE:** RST + Serial # + "Happy New Year" in your native language  
**ENTRY CATEGORIES:** Single op - All band; Multi op - All band  
**ENTRIES:** 31 Jan SARTG Contest Manager Ewe Hakansson, SM7BHM Pilspetsvagen 4 SE-291 66 Kristianstad, Sweden  
 E-mail: contest@sartg.com  
 Rules at: <http://www.sartg.com/contest/nyrules.htm>  
 (No changes from 2009 rules)

**CONTEST:** AGCW Happy New Year  
**DATE & TIME:** 0900-1200Z 1 Jan  
**BANDS/MODE:** 80/40/20M CW  
**POINTS:** 1 Pt. per QSO per band  
**MULTIPLIERS:** AGCW members  
**EXCHANGE:** RST + Serial #; AGCW members give member #  
**ENTRY CATEGORIES:** Single op - High (>150W); Low (<150W); QRP  
**ENTRIES:** 31 Jan Daniel Schirmer, DL5SE Am Teich 15, 25917 Stadum, Germany Cabrillo (preferred) to: [h NYC@agcw.de](mailto:h NYC@agcw.de)  
 Software available at: [www.arcomm.de/afusoft.htm#numnews=10&programmenews=n\\_01&programmedl=#z1](http://www.arcomm.de/afusoft.htm#numnews=10&programmenews=n_01&programmedl=#z1)  
 Rules at: [www.agcw.org/en/?Contests:Happy\\_New\\_Year\\_Contest](http://www.agcw.org/en/?Contests:Happy_New_Year_Contest)

**CONTEST:** Original QRP  
**DATE & TIME:** 1500Z 2 Jan - 1500Z 3 Jan  
**BANDS/MODE:** 80/40/20M CW  
**POINTS:** 1 Pt per QSO  
**MULTIPLIERS:** DXCC X 2; + IT9  
**EXCHANGE:** RS(T) + Serial # + Entry category  
**ENTRY CATEGORIES:** Single op only! VLP = <1W out; QRP = <5W; MRP = <20W  
**ENTRIES:** 31 Jan Cabrillo (preferred) to: [OQRPC@qrpc.de](mailto:OQRPC@qrpc.de) Lutz Gutheil, DL1RNN, Bergstrasse 17, D-38446 Wolfsburg, Germany  
 Rules at: [www.qrpc.de/contestrules/OQRPC.html](http://www.qrpc.de/contestrules/OQRPC.html)

**CONTEST:** ARRL RTTY Roundup  
**DATE & TIME:** 1800Z 2 Jan - 2359Z 3 Jan  
**BANDS/MODE:** 80-10M RTTY, ASCII, AMTOR, PSK31, Attended Packet  
**POINTS:** 1 Pt. per QSO  
**MULTIPLIERS:** States/Provinces/DXCC (Hawaii and Alaska count as DX) once per band  
**EXCHANGE:** RST + State/Province; DX gives RST + Serial #  
**ENTRY CATEGORIES:** Single op - Low; Single op - High; Multi op - Low; Multi op - High  
**ENTRIES:** 2 Feb 2010 RTTY Roundup 225 Main St., Newington, CT 06111 Cabrillo format (preferred) to: [rttyru@arrl.org](mailto:rttyru@arrl.org)  
 Rules at: [www.arrl.org/contests/rules/2010/rtty.html](http://www.arrl.org/contests/rules/2010/rtty.html)

**CONTEST:** Kid's Day  
**DATE & TIME:** 1800-2359Z 3 Jan  
**BANDS/MODE:** All bands 80-10M SSB (Not on 30M band) + 2M repeaters  
**POINTS:** None  
**MULTIPLIERS:** None  
**EXCHANGE:** Name + Age + QTH + favorite color  
**ENTRY CATEGORIES:** Single ops encouraged to bring in a group of kids and have fun!  
**ENTRIES:** Certificates are available for 9 X 12 SASE to: Boring ARC P.O. Box 1357 Boring, OR 97009  
 Information at: <http://lists.contesting.com/mailman/listinfo/kids>  
 Rules at: [www.arrl.org/FandES/ead/kd-rules.html](http://www.arrl.org/FandES/ead/kd-rules.html)  
 Survey at: [www.arrl.org/FandES/ead/kids-day-survey.html](http://www.arrl.org/FandES/ead/kids-day-survey.html)

**CONTEST:** North American QSO Party  
**DATE & TIME:** 1800Z 9 Jan - 0600Z 10 Jan  
**BANDS/MODE:** 160-10M CW  
**POINTS:** 1 Pt. per QSO  
**MULTIPLIERS:** State/Provinces/Territories/NA Countries  
**EXCHANGE:** Name + State/Province/Territory/NA Country; non-NA sta's give name only  
**ENTRY CATEGORIES:** Single op; Multi op, 2 XMTRS  
**ENTRIES:** 14 Days Bruce Horn, WA7BNM 4225 Farmdale Ave., Studio City, CA 91604 Cabrillo (preferred): [www.ncjweb.com/naqplogssubmit.php](http://www.ncjweb.com/naqplogssubmit.php) E-mail: [cwnaqp@ncjweb.com](mailto:cwnaqp@ncjweb.com) Rules at: [www.ncjweb.com/naqprules.pdf](http://www.ncjweb.com/naqprules.pdf)

**CONTEST:** Hunting Lions In The Air  
**DATE & TIME:** 0000Z 9 Jan - 2359Z 10 Jan  
**BANDS/MODE:** 160-10M All modes  
**POINTS:** 1 Pt. QSO with Lions Club member (Class 1); 5 Pts. other countries; 25 Pts. QSO with VU2LCI;  
**MULTIPLIERS:** Lions Clubs worked  
**EXCHANGE:** RS(T) + Serial # (If operation on behalf of a Lions, Leo or Lioness Club give Club Name, Number and District Number)  
**ENTRY CATEGORIES:** Single Op, Multi-Op (single XMTR only); Class 1 = Lions Club members; Class 2 = Operation on behalf of a Lions, Lioness or Leo Club;  
**ENTRIES:** 28 Feb HLITA Contest Committee, Lions Club of Bangalore North, c/o Lion Ajoy, VU2JHM, 9/1 Kshitija, Opp Geentanjali, 5-Cross, Malleswaram, Bangalore-5600003, India. E-mail submissions to: [lions@vsnl.net](mailto:lions@vsnl.net) Rules at: <http://lionshuntingintheair.lionwap.org/>

**CONTEST:** LZ Open Contest  
**DATE & TIME:** 0000-0600Z 16 Jan  
**BANDS/MODE:** 80 & 40M CW  
**POINTS:** 1 Pt per QSO  
**MULTIPLIERS:** None  
**EXCHANGE:** Serial # + Serial Nr of the last correspondent's QSO  
**ENTRY CATEGORIES:** Single Op, Multi-Op, QRP  
**ENTRIES:** 10 Days Online submission only, Cabrillo (preferred): [lz1gl@yahoo.com](mailto:lz1gl@yahoo.com) Rules at: <http://www.lzopen.com/>

**CONTEST:** Run for the Bacon  
**DATE & TIME:** 0100-0300Z 20 Jan  
**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:** Online only! Form at: [www.fpqrp.com/autolog.php](http://www.fpqrp.com/autolog.php)  
 Rules at: [www.fpqrp.com](http://www.fpqrp.com)

**CONTEST:** North American QSO Party  
**DATE & TIME:** 1800Z 16 Jan - 0600Z 17 Jan  
**BANDS/MODE:** 160-10M SSB  
**POINTS:** 1 Pt. per QSO  
**MULTIPLIERS:** State/Provinces/Territories/NA Countries  
**EXCHANGE:** Name + State/Province/Territory/NA Country; non-NA sta's give name only  
**ENTRY CATEGORIES:** Single op; Multi op, 2 XMTRS  
**ENTRIES:** 14 Days Bruce Horn, WA7BNM 4225 Farmdale Ave., Studio City, CA 91604 Cabrillo (preferred): [www.ncjweb.com/naqplogssubmit.php](http://www.ncjweb.com/naqplogssubmit.php) E-mail: [ssbnaqp@ncjweb.com](mailto:ssbnaqp@ncjweb.com)  
 Rules at: [www.ncjweb.com/naqprules.pdf](http://www.ncjweb.com/naqprules.pdf)

**CONTEST:** CQ 160M  
**DATE & TIME:** 0000Z 26 Jan - 2359Z 27 Jan  
**BANDS/MODE:** 160M CW  
**POINTS:** 2 Pts. own country; 5 Pts. different country, same continent; 10 Pts. other continents; 5 Pts. Maritime Mobile QSO's  
**MULTIPLIERS:** 48 States + DC/CA Provinces/KH6/KL7/DXCC  
**EXCHANGE:** RST + State/Province/Country  
**ENTRY CATEGORIES:** Single op - High (>150W); Low (<150W); QRP; Multi op  
**ENTRIES:** 28 Feb CQ 160M Contest 25 Newbridge Rd., Hicksville, NY 11801 E-mail: (Cabrillo) [160cw@kkn.net](mailto:160cw@kkn.net)

**Click here for information on listing your contest in the next issue of WRO!**

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## CALIFORNIA

**Fresno Amateur Radio Club** - Meets 2nd Friday/monthly, 7 PM at Cedar Lanes bowling alley, Cedar and Shields in Fresno. Net Sunday at 7 PM on W6TO/R, 146.94 (-) PL 141.3hz. Tech net Wed 7 PM on W6TO/R [www.W6TO.com](http://www.W6TO.com); [W6TO@ARRL.net](mailto:W6TO@ARRL.net). Contact Ken, WA6OIB @559-323-6753 12/10

**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](http://www.edcarc.net). 3/10

**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). ARES nets 7 p.m. 147.51(S) Mon. 1/10

**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](http://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 rpt.; [w0tx@arrl.net](mailto:w0tx@arrl.net); [www.w0tx.org](http://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](http://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

## MASSACHUSETTS

**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@arrl.net](mailto:k1gb@arrl.net) 01/10

## 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



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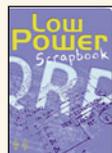


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# VE EXAMS

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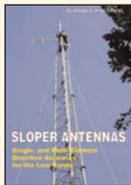
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Phoenix	4th Sat	Gary Hamman, 602-996-8148, K7GH@arrl.net		Roselle	4th Sat	Gerry, AA2ZJ, 732-283-2795, aa2zj@arrl.net	
<b>ARKANSAS</b>				<b>NEW YORK</b>			
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Cabot	3rd Sun	Daryl Stout, AE5WX, 501-227-9183, ae5wx@arrl.net		Canandaigua	1st Wed	Squaw Island ARC, David A. Foster, 585-398-0216, D1161F@aol.com	w/i
<b>CALIFORNIA</b>				Canandaigua	1st Wed	David Foster, 585-398-0216, www.siarc.us	w/i
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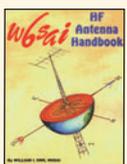
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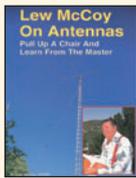
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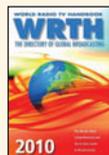
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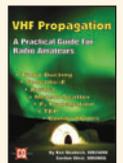
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# Beverage Antenna

Kurt N. Sterba

**A** reader wants to build a Beverage antenna. "Living in the suburbs I will be limited, so I intend to purchase 500 feet of electrician's wire from Home Depot and run it around the eaves of the house, then on top of the fence line and around as far as I can go."

Krusty Olde Kurt can tell you that that will not work. A Beverage antenna has to be all in a straight line pointed in the direction from which you want to hear. To see why this is so, let's look at a drawing of a Beverage and see just how it works. Note that we put just one wire above ground but, with the ground, we have a two-wire transmission line. Kurt has drawn a second wire along the ground to make this clear. But there is no second wire – just the lossy ground to serve as the second wire.

The receiver is at one end of the antenna. At the other end is a terminating resistor. The antenna is pointed toward the desired signal. This signal passes from the terminated end going towards the receiver end. As soon as it passes the resistor, it starts to induce a signal voltage in the wire. This is an RF signal and it follows the RF wave as it travels past the wire. As additional signal voltage is induced onto the wire, it adds to the signal voltage already there because, since the signal voltage follows right along with the RF wave, it is in phase with the RF wave at all times. By the time the wavefront reaches the receiver end of the wire, the signal voltage has increased significantly.

Signals from the opposite direction also induce a voltage in the antenna but they dissipate in the terminating resistor. So, the antenna is unidirectional.

Waves coming from the sides induce very little useful signal voltages so the antenna pattern is mostly one big lobe toward the desired direction. It is useful about 45 degrees each side of the direction the antenna points.

Although it is a good receiving antenna, it is very lossy and so it can't be used for transmitting. The best directivity in a

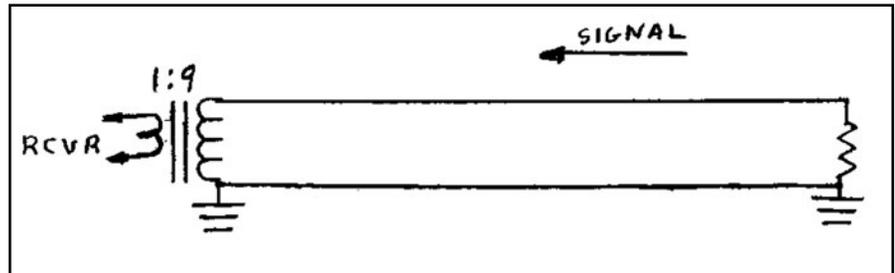


Figure 1.

Beverage is at low heights, about two feet above ground. Signal strength gets a lot better at increased height above ground up to about 10 feet above ground. The Beverage should be at least one wavelength long. This means over 500 feet long on 160 meters; 250 feet on 80 meters.

### Bent Around

Kurt stated that the Beverage has to be in a straight line. Let's see why that is so. In the drawing below, we have a straight-line section at A. Then we've run the wire around the eaves of the house in sections B, C, and D. Then we have one more straight section E. (See Figure 2.)

When the wave starts to pass section A, it induces an RF voltage into the wire. The wave is traveling from right to left, so as soon as it passes A, it starts to induce voltage in section C. However, the signal voltage in A has to pass through B before it gets to C. This takes time, so when it

gets to C, it is no longer in phase with the RF wave. So it does not add to the C voltage as we would like. Not only that but it is attenuated as it passes through B. Remember, this is a lossy antenna. In addition, it picks up signals and noise that arrive from the directions B points. This is all bad.

We have the same sad situation when the signal voltage passes through section D. As the wave passes E we pick up some signal voltage but the overall signal the receiver sees is a lot less than we would have if the wire were in a straight line. And it has picked up noise and signals from other directions due to B and D. So, do not do it this way; it is not a Beverage antenna.

### Multi-Dipole Antenna

As Kurt was looking around the Internet, he found an interesting antenna on [cham.net](http://cham.net) designed by N4JTE. This is

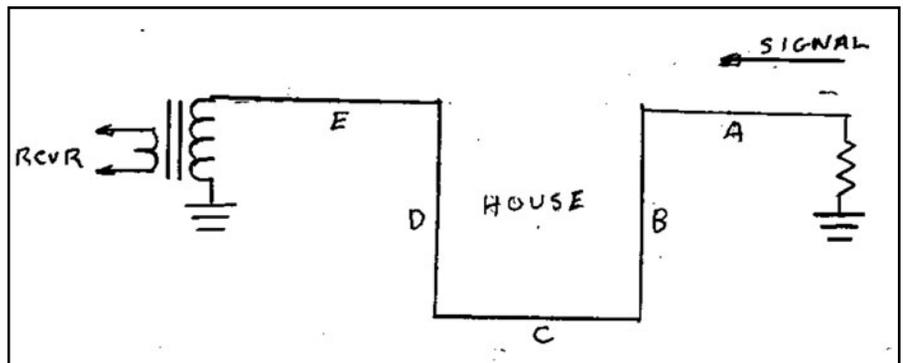


Figure 2.

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a 6-band antenna using 5-conductor 18-gauge Atlas ribbon cable. The basic idea goes back many years. Several dipoles, each cut for a different band, are paralleled at the feedpoint. The principle is that if you are transmitting on one of the bands the dipole cut for that band will take the power. The other dipoles will look like high impedances and will not affect the operation.

Usually the dipoles are separated by several inches to reduce any interaction. Two band antennas have been built using twin-lead, but this one has six bands with very close-spaced dipoles. There are five dipoles with the 40-meter dipole serving for 15 meters on its third harmonic. He pulled the ends of the dipoles out a few inches and let them dangle; this avoids arcing from the high-voltage ends.

N4JTE spent 6-hours adjusting the dipole lengths to get resonances where he wanted them. The problem is that changing the resonant frequency of a lower frequency dipole changes the resonant frequency of the higher frequency dipoles. Therefore, you want to start with the lowest frequency dipole. Then work your way up in frequency adjusting the rest of them.

The attractive feature of this antenna is that you do not need a tuner. Other multi-band antennas such as the off-center-fed dipoles get resonant impedances low enough for old-time transmitters but not low enough for today's 50-ohm transceivers. So, you have to use a tuner with them.

Naysayers in the comment column call this 6-bander a "compromise" antenna. Piffle! What compromise? It is just as efficient as a single dipole. Close to 100% of power radiated. For those who like to work all bands and switch between them quickly, Kurt thinks it is a winner.

*Nancy WZ8C's note: Kurt finished 2009 with only one error. On page 49, near the bottom of the left column of his October column titled **Antenna Tuning**, item one should read "... to cancel the 150 ohms inductive reactance." The column had "50 ohms." However, since I'm the editor I should have caught the typo. So technically, The Krusty One had another flawless year!*

*Thanks to Leon Perrett, K4GCR, for being the first to point out the mistake.*