

WorldRadio

ONLINE

Year 39, Issue 5

NOVEMBER 2009

So, You're One
of **Them**

- FAR Scholarship Awards 2009
- Florida Amateur Radio Clubs and Kids
- An Early Christmas Present



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



RAC Asked to Help Find Elmer Hams

The Army Cadet League of Ontario, Canada is considering the establishment of a Royal Canadian Army Cadet Radio Network based on amateur radio technology. Dubbed 'ACORN', for 'Army Cadet Ontario Radio Network', the aim is to support optional training and certification of Army cadets as licensed amateur radio operators throughout Ontario.

Radio Amateurs of Canada has been asked to facilitate this project by identifying hams who live in the various pilot areas and who have the interest, time and qualifications to mentors and provide instruction to young would-be hams. Amateurs will also be needed to assist in setting up and managing amateur radio stations.

Any interested Canadian radio amateur residing in a pilot area is asked to contact Rod Hardman, VE3RHF by e-mail to rod.hardman@gmail.com. Military experience would be helpful but is not a requirement. (RAC)

Walter Cronkite KB2GSD Remembered

A memorial service for former CBS newsman Walter Cronkite, KB2GSD, took place on Wednesday morning, September 9th in Avery Fisher Hall at Lincoln Center in New York City. Among those present to speak at the service were President Barack Obama and former president Bill Clinton. The program also included presentations by Cronkite's son Chip and astronaut Buzz Aldrin.

Walter Cronkite anchored the CBS Evening News for 19 years from 1962 to 1981. During that time, he became known as the most trusted man in America. His legacies in the world of amateur radio are the two videos he hosted for the American Radio Relay League. These are "Amateur Radio Today" and "The ARRL Goes to Washington."

Walter Cronkite, KB2GSD, died on July 17th from complications to cerebrovascular disease. He was 92 years old. (ARNerwslne™ from published reports)

ELF Claims to have Toppled Two Radio Towers in Washington

A radical group calling itself the Earth Liberation Front is claiming responsibility for toppling two radio station towers in Snohomish County, Washington early Friday morning, September 4th. The towers, owned by station KRKO were felled using a stolen excavator machine. A sign left at the scene said the Earth Liberation Front was responsible.

The two towers have been at the center of controversy for several years. There are four towers currently at the location and there have been plans to build two more. Opponents of the expansion claim that radio waves can harm people and wildlife. More recently, nearby residents said that signals interfering with home phone and intercom lines have increased since KRKO recently boosted its broadcasting power.

The station is still broadcasting on a backup transmitter and antenna. It says that it is going to offer a reward for information leading to the arrest and conviction of those responsible for this criminal act. (Published reports)

IARU Says to Morse Operators: Jam Intruders on 40 Meters

The International Amateur Radio Union is encouraging amateurs to get on the air and use CW on the 7 MHz band to discourage intruders on 40 meters. Portuguese fishermen are abusing 7,000.4 kHz, using USB every morning between 07.00 and 09.00 UTC and later.

The fishermen are located off the North of Portugal. The IARU says that hams should use this frequency for CW traffic as much as they can. (Southgate, others)

Ham Ceases EmComm Activity

Jeffery Casselberry, W0WLS, who posted on an Internet website that he had assisted in an emergency communications drill at work, was contacted about his action by FCC ham radio rules enforcer Laura Smith.

Last July, he volunteered to take part in a state-sanctioned communication drill that was backed by the Missouri Hospital Association. According to Casselberry, this drill took place during business hours while he was on the clock. He explained that he had built the amateur station for the hospital and with it the facility was better than most in communicating locally and to the state capital.

W0WLS went on to say that he was so thrilled about the drills success that what he made what he terms as the mistake of posting his excitement on the QRZ website. Someone who read it decided to cut and paste his comments to the FCC. As a result, W0WLS says he received an informal email from the FCC's Smith, which requested a response.

Casselberry says that he responded to Smith and explained in detail the events of his alleged violation. Smith responded with the following e-mail, which reads as follows and we quote:

"Jeff: Again, just so we are clear, Section 97.113 (a)(3) of the Commission's rules specifically states that "no amateur station shall transmit: communications in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employer." This means that if you are an employee of the hospital you may not operate the amateur equipment on their behalf even after hours or while you are on a break. The operation of the amateur equipment must be conducted strictly by volunteers." -- end quote.

Casselberry went on to say he does not want to become a poster child for some emergency communications cause on QRZ.com. He told his employer that he is done with this type of radio activity and will take no further part in its emergency communications program.

W0WLS ends by noting that he is a hobbyist and doesn't need this sort of turmoil in his life. As such, he will make no further comments on this issue. (Amateur Radio Newsline.)

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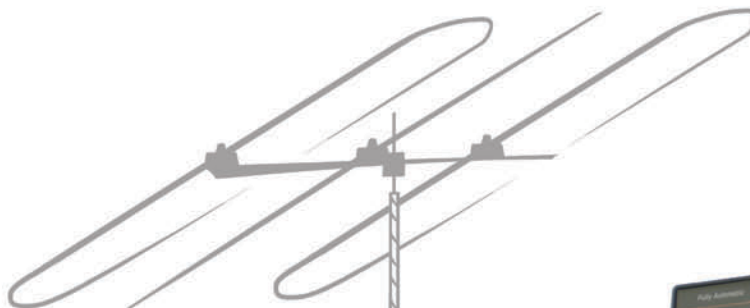
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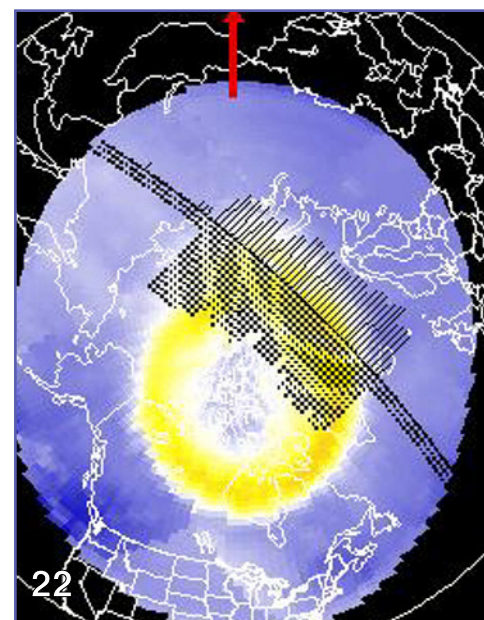
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ON THE COVER: Christine Burke, K0ALT, enjoys the view from the top of her seventy-foot tower shortly after its construction in 2004. Her husband, Mike Gross, and members of the Ski Country Amateur Radio Club helped to install a tri-bander and a 17-meter Yagi. Since then, Christine has worked over 150 countries, and has also learned to use a fall arrest harness, which is safer than the old climbing belt seen here.



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Thank you for your response!

Thank you for the response to my plea for your stories and articles in last month's EdLog! We have received several heart-warming stories in addition to antenna articles and club activity reports. *WorldRadio Online* is the only major publication that focuses on the human-interest side of amateur radio. Other hams really are interested in what you are doing, so please keep sending in your stories, as well as photos (.jpg format).

Have you noticed that more women are active on the HF bands? I'm not saying there is anything wrong with staying on two meters to keep in touch with your family. But, if you're letting fear of the unknown or thoughts that the HF bands are a "man's world" hold you back, you are missing out on a lot of fun. Our YL column is full of news from women who have made the transition from using their radios to ask their husbands to bring home a loaf of bread, into the world of DXing, contesting and rag chewing on the low bands.

A feature story in this month's issue by Christine Burke, KØALT, is an example of how women are breaking the two-meter barrier and getting involved in having, and maintaining, their own HF stations.

Christine enjoys climbing and working on her own 70-foot tower—she has gone all the way to the top several times and assisted with some of the antenna installations. She doesn't do much wrestling with the "big projects" since the guys have more upper-body strength, so she also works on the ground crew. She recently replaced the balun on her tri-bandner.

While at HamCon in Colorado, Christine attended a tower-safety seminar, and learned that a climbing belt is just one safety option that tower climbers can use. The more ways you are connected to your tower, the better. Never climb a tower, no matter how low, without using a safety harness or belt of some sort. We want our readers to be as safe as possible, so if we have any tower-safety experts in our reading audience, please consider writing an article about this topic.

This issue we are saying good-bye to Alan Pickering, KJ9N, our QCWA columnist. Alan has been writing the column for over ten years and has decided to retire, much to our dismay. Alan always brought an interesting, fresh, and often, unexpected perspective to his column and he will be missed

73 88 33, Nancy Kott, WZ8C

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NEW! YT-100

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AT-1000Pro

The AT-1000Pro has an Automode that automatically starts a tuning cycle when the SWR exceeds a limit you set. Operates at any power level between 5 and 1,000 watts peak. RF Relay protection software prevents tuning at greater than 125 watts. Tunes from 1.8 to 54.0 MHz (inc. 6 meters), with tuning time usually under 4 seconds, transmitting near a frequency with stored tuning parameters, under 0.2 seconds. 2000 memories. 2 Antenna connections. All cables included. **Suggested Price \$599**

**See
AT-1000Pro Review
in Nov. '08 CQ**

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AT-100Pro

Covers all frequencies from 1.8 - 54 MHz (including 6 meters), and will automatically match your antenna in no time. It features a two-position antenna switch, allowing you to switch instantly between two antennas. The AT-100Pro requires just 1 watt for operation, but will handle up to 125 watts. All cables included. **Suggested Price \$219**

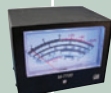


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So, You're One of Them

By Christine Burke, KØALT

Lunch time had arrived at the local ski lodge. My husband Mike and I pulled off our helmets and wedged ourselves into the narrow space afforded by the attached bench seat of the school-cafeteria style table. As we attacked our sandwiches, our friend, John, wandered over to say hello. John is a retired doctor who, at eighty years old, skis with more agility and speed than I ever will.

"It's pretty icy this morning," observed John. "I'm afraid spring is upon us."

At that moment, one of my ham radio acquaintances strolled over to our table.

"Don't you ski with your handi-talkie?" he roared with a grin. A handheld radio, a speaker mike, and its coiled cord adorned his rainbow-striped suspenders.

"Um, not always," I mumbled. I felt a little bit like a teenager who had just been forced to admit that she was related to her parents. "I don't have a good carrying case for it. And I don't want to fall on it."

"That's too bad." He ambled away, ski boots clunking.

John's eyes narrowed slightly. "So, you're one of *them*?" The over-fifty ski club includes several hams, whom he had apparently met.

"Well, yes," I admitted. "I really enjoy ham radio. I get to talk to people all over the world."

John considered that. "Do you still have to know Morse code?"

"No, they got rid of the code requirement in 2001. It's easier to get a license now."

Mike chimed in. "But certain people, such as one sitting right here, are still crazy about the code. She even listens to Morse code transmissions that are sent straight out of magazines, word for word! Ha ha!"

"You do what?" John's face was incredulous.

"It's for practice!" I protested. "I get rusty sometimes. I try to copy the code at twenty-five words per minute. I can only do about twenty now." Please, Mike, I thought, don't start talking about the contest I worked last weekend. John will think I'm really nutty.

"Gosh, that's fast!" John shared a few reminiscences about radio operators in the army during the Second World War before he rose and returned to his own table.

In spite of the way he makes fun of me, Mike is the best non-licensed spouse a YL could ask for. He even let me buy a used tower and provided most of the brain and muscle power to erect it. He's popular among the local hams for his willingness to climb towers and maneuver beams up through the guy wires.

I'm not a construction expert myself. But I dug one heck of a hole for that tower. When it was four feet deep, Mike begged me to stop digging. "Good grief, that'll need eighteen bags of concrete at the very least!"

"Are you sure it's enough?" I gasped, wiping the sweat off my face. "I want a really strong base."



The author, Christine Burke, KØALT, working on her tower.

"Yes, yes, for goodness' sake. Just put the shovel down, okay?"

Having a non-ham husband helps me to keep my hobby in perspective. "I worked Wallis Island!" I hollered the other day, as I bounded into the kitchen. I had busted the big pileup. Mike turned away from the fragrant soup he was preparing.

"So how are things in Wallis Island?" he teased. "Do they say five-nine?" This is his way of pointing out that DXing doesn't always result in a meaningful contact. But I know that deep inside, he's impressed that I can work a remote island. He majored in geography, and reads lots of books about the history of exploration.

The book that I'm trying to get him to read is *The ARRL Ham Radio License Manual: All you need to become an Amateur Radio Operator*. I've left it in various strategic places, including the prime reading spot—the bathroom. But so far, I've had no luck. He hasn't cracked it open even once.

Whenever a local VE session is coming up, I offer a gentle reminder. I've assured him that he doesn't have to grow a big belly or wear rainbow-striped suspenders. But for whatever reason, Mike is not quite ready to become one of us.

Perhaps I shouldn't push my luck. After all, the next time there's a big opening into Europe on seventeen meters, I won't have to share the radio with anyone.



FAR Scholarship Awards 2009

Compiled by Diane Zimmerman, AA3OF

**Congratulations to the scholarship winners of the
Foundation for Amateur Radio® scholarships!**

Ralph V. "Andy" Anderson, K0NL, Memorial Scholarship - \$1000
Emily M. Stewart KC0PTL – Leavenworth, KS

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Elizabeth Albert-Bruninga WE4APR – Glen Burnie, MD

Rose Ellen Bills Memorial Scholarships - \$2000

Jacob Wagner KD8CDC – Rocky River, OH

Richard G. Chichester Memorial Scholarship - \$2000

Sponsored by Patricia and Jack (W9AMF) Chichester
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Columbia Amateur Radio Association Scholarship - \$1000

Nathaniel Heatwole WZ3AR – Damascus, MD

FAR Silent Key Memorial Scholarships - 2 @ \$5000 each

Patricia Dobson N3DUH – Reisterstown, MD
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Dan N. Tran KI4WFZ – Manassas, VA

Free State Amateur Radio Club Scholarship - \$500

Charles A. Johnson N3HY – New Castle, PA

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Robert P. Hoops W3EGL – Watsontown, PA

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Stephanie Schaefer KC2NSA – Binghamton, NY

Phil-Mont Mobile Radio Club Memorial Scholarship - \$2000

In Memory of Claude H. Haring W3IIM
Robert P. Hoops W3EGL – Watsontown, PA

QCWA Named Memorial Scholarships - 9, Amounts Vary

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Fynn W. McPherson AB3AT – Harrisonburg, VA

Leland Smith, Sr. (W5KL) Memorial Scholarship (\$1500)

Stephen M. Sciarini, KC8IDJ – Dover, OH

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Wes Randles Memorial Scholarship (\$1100)

Jeremy D. Pedersen AB3DL – Milford, DE

Leo Meyerson (W0GFQ) Family Living Scholarship (\$1000)

Kayla M. Check N8KAY – Independence, OH

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Alexander S. Jasper KB9TTO – Plover, WI
Kerry Manderbach K0XOK – St. Louis, MO
Blake McCabe KC2GQX – Vestal, NY
Stephen Oi NV6A – Brentwood, TN
Lori A. Rose N9BRH – Franklin, IN
Jack H. Short KC0QIO – Columbia, MO
Stephen T. Simpson, KC8IOY – Ocala, FL
Edward Schnell KC2TGD – Montwuk, NY
John Sohl III KG4WWE – Shepherdsville, KY

Radio Club of America Scholarships - 3 @ \$1000

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Nicholas Brennan KD7YDD – Shoreline, WA
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Chuck Reville K3FT Memorial Scholarship - \$1000

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Caleb Braff KC0FKO – St Paul, MN

10-10 International Net Scholarships - 4 @ \$1500 each

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James Hunt KI5DQ – Sherman, TX
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Robert E. True Memorial Scholarship - \$1000

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Tulare County Memorial Scholarship - \$1000

Frederick J. Meyer KG6ECE – Soquel, CA

Ernest L. Walker, WB3DVL Memorial Scholarship - \$1000

Sponsored by the Baltimore Radio Amateur TV Society
Thomas Christovich KB3HUR – Baltimore, MD

Dwight Weller Memorial Scholarship - \$1000

Sponsored by Philip Karn, KA9Q
Matthew Poppe AD7HF – Spokane, WA

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6 m / 2 m / 70 cm
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VX-6R 2 m / 70 cm
Dual Band



5 W Heavy Duty 2 m/70 cm
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FT-60R 2 m / 70 cm
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The Rules Say...

John B. Johnston, W3BE

ILLEGAL ALIEN

Q Can an illegal alien obtain an FCC amateur operator license?

A. That may well be possible. Section 97.5 (b)(1) says that, except for a representative of a foreign government, any person who qualifies by examination is eligible to apply for an operator/primary station license grant. The VEs, moreover, are not required to ask for information regarding an examinee's citizenship.

The foreigner might otherwise have eligibility under Section 97.107. It authorizes a non-citizen of the U.S. ("alien") holding an amateur service authorization granted by the alien's government to be the control operator of an amateur station located at places where the amateur service is regulated by the FCC, provided there is in effect a multilateral or bilateral reciprocal operating arrangement, to which the U.S. and the alien's government are parties, for amateur service operation on a reciprocal basis.

Q. What call sign does an amateur operator use when he has two homes in different locations if he can only have one station license?

A. For each location at a place where the amateur service is regulated by the FCC, he must use the call sign assigned on his ULS primary station license grant. See Section 97.119.

Q. The rules reference a primary station license. Is there such a thing as a secondary station license?

A. They were discontinued. Modern direction-finding technology and tote-about stations had obsoleted their need.

Q. If there are no secondary stations then why designate stations as primary?

A. "Primary" distinguishes a station license grant to an amateur operator from the other types: to a club station license trustee or a military recreation station license custodian. See Section 97.5(b).

Q. The FCC does not ask for the location of my station. Therefore, can it be anywhere the licensee desires it to be, be it the EOC, hospital, summer home, etc.?

A. Yes, outside the boundaries of restricted locations. Section 97.5 says the station may transmit from any place that is (1) Within 50 km of the Earth's surface and at a place where the amateur service is regulated by the FCC; (2) Within 50 km of the Earth's surface and aboard any vessel or craft that is documented or registered in the United States; or (3) More than 50 km above the Earth's surface aboard any craft that is documented or registered in the United States.

Section 97.13, however, imposes restrictions on station location. They include land of environmental importance or significant in American history, architecture or culture; locations within 1 mile of an FCC monitoring facility; and any place where the operation of the station could cause human exposure to RF electromagnetic field levels in excess of those allowed under Section

1.1310. There are also certain frequency-sharing requirements codified in Section 97.303 that can preclude an amateur station transmitting from certain locations.

W3BE-O-GRAM: The property manager, moreover, might have something to say about your station transmitting from there.

Q. I am authorized to operate my station wherever I like. When I am at my friend's house operating, therefore, I am both the station licensee and the control operator. The fact that the equipment is at someone else's house is meaningless - as is the fact the equipment belongs to someone else. The rules make no distinction on ownership of equipment.

A. Not exactly. As you mention, the FCC rules do not address equipment ownership. Section 97.5, however, says the station apparatus must be under the physical control of a person named in an amateur station license grant or a person authorized for alien operation. The station licensee, therefore, is the amateur operator having physical control of the apparatus. Section 97.103 says the station licensee is responsible for the proper operation of the station in accordance with the FCC Rules.

Section 97.13, moreover, does impose restrictions on station location. Do not place indiscriminately your station on (a) land of environmental importance or that is significant in American history, architecture or culture; (b) within 1 mile of an FCC monitoring facility; or (c) any place where the operation of the station could cause human exposure to RF electromagnetic field levels in excess of those allowed under Section 1.1310.

Q. Do I use my home call sign while I am working from an EOC or a hospital during a drill or an emergency?

A. That's but one option. Under that choice, you are the station licensee, responsible for the proper operation of the station, as it says in Section 97.103(a). The station transmits your primary station call sign in the station identification announcement. You then designate yourself as the control operator.

Another option would be for another amateur operator to agree to be the station licensee and then designate you as the control operator. The station transmits that amateur operator's primary station call sign in the identification announcement. That station licensee and you - the control operator - are both accountable for the duties of its control operator being performed properly. Note that Section 97.103(b) says that the FCC will presume that the station licensee is also the control operator unless there is documentation to the contrary. See BE Informed No. 1 W3BE CHECKLISTS for the duties of each.

Another possibility is for a club station license trustee to agree to be the station licensee. Again, the trustee would have to designate you as the control operator.

Q. Our radio club has recently put a beacon on 1296 MHz and we put /B into the ID. It appears that is not the correct thing to do. So, what is the correct way to ID the beacon?

A. Read and heed Section 119. In paragraph (a), it says that each amateur station, except a space station or telecommand station, must transmit its assigned call sign on its transmitting channel at the end of each communication, and at least every 10 minutes during a communication, for the purpose of clearly making the source of the transmissions from the station known to those receiving the transmissions. The assigned call sign is the one appearing on the ULS for the station license grant under which it is transmitting.

Should you desire to use the station identification announcement to inform listeners that the station is transmitting under the special operations accommodations for beacon stations in Section 97.203, such is an allowable option. Paragraph (c) of Section 97.119 authorizes: "One or more indicators may be included with the call sign. Each indicator must be separated from the call sign by the slant mark (/) or by any suitable word that denotes the slant mark. If an indicator is self-assigned, it must be included before, after, or both before and after, 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." A link on my website should help you make a suitable selection.

Q. When you are operating portable or mobile, you must add /P or /M to your ID. But that will violate the prefix assigned to another country rule, won't it?

A. There is no FCC rule requiring you to include those indicators in your station identification announcements. Should you want to include information on your station being portable or mobile, check for available prefixes through the link on my website.

Q. Section 97.503 states, "A written examination must be such as to prove that the examinee possesses the operational and technical qualifications required to perform properly the duties of an amateur service licensee." Where are the operational and technical qualifications for each class of license (or any qualifications regardless of license class) and the duties of amateur service licensees located since I can't find any further reference to them in Part 97 of CFR Title 47?

A. The VECs' combined pools of 1614 questions establish the expertise required to operate any amateur station anywhere the FCC regulates our amateur services under all conditions. The manner in which the questions are distributed within their three pools reveal how they envision the privileges being utilized amongst our operator classes. See BE Informed No. 39 for the VEC'S QUESTION POOL SYLLABI of operational and technical qualifications.

Q. Is the playing of pre-recorded voice announcements on our repeater permissible?

A. Yes. Section 97.305 authorizes the transmission of phone type emissions according to the frequency band or segment. Section 97.3(c)(5) defines a phone type emission as speech and other sound emissions having specific designators. It does not go into the matter of how the sound is generated.

Read the rules - Heed the rules

Visit <http://www.w3BEInformed.org> for links to amateur service rules and information sites. E-mail your questions to john@johnston.net.

APPRECIATION



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

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Simply Wonderful: An Antenna and Tuner for the Minimalist Field Operator

By Richard Fisher, KI6SN

April's T-FR column touting the trail-friendly attributes of the W3EDP multi-band antenna apparently captured the imagination of many readers. Lots agreed it's a fine skywire for use in wide-open spaces, but some lamented it's a bit too high-maintenance for short stints along the trail.

They've got a point. The W3EDP's 84-foot-long end-fed element is used in concert with its 17-foot-long matching section. A handful of plastic spreaders are used to assure proper spacing of the two. Agreed: that's a lot of pieces to deal with.

Is there a trail-friendly antenna that's a lot easier to erect and has the kind of efficiency needed to make contacts along the trail under average band conditions? Absolutely.

Way back in July 2003, the *WorldRadio* QRP column focused on the construction, care and feeding of the EFHW antenna – a wonderful radiator for the minimalist field operator.

In longhand, that's the End-Fed Half-Wave antenna, which requires only one support – a tree, rock wall or even tall brush do just fine. For higher efficiency, the half-wave wire antenna is often configured with a quarter-wave counterpoise. And those two easily-managed wire elements will match nicely with any 50-ohm output transceiver – provided you include an EFHW tuner in your T-FR radio line-up.

Many of you recalled the 2003 column and asked to be reminded of the details of the EFHW, the counterpoise and antenna tuning unit, as we described them back then.

Well, the antenna couldn't be simpler: A half-wave end-fed wire is the main radiating element, along with a quarter-wave counterpoise that snakes along the ground under it.

To calculate the length of the half-wave wire, simply divide 468 by your target frequency in megahertz.

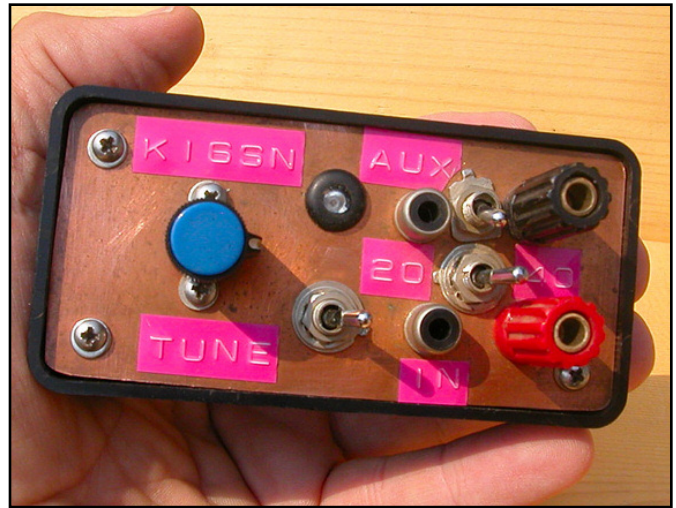
On 40 meters, for example, it's 468 divided by 7.040 MHz. That comes out to 66.477272 feet, or about 66-feet, 6 inches.

If you're challenged (as I am) with decimal-to-feet-and-inches conversion, you can plug your values into this Web site and let the Internet do the heavy lifting for you: <http://dave.osborne.com/dave/articles/decimalfeet.php>

To calculate the 40-meter quarter-wave counterpoise, simply divide 234 by your target frequency in megahertz. That's 234 divided by 7.040 MHz, which equals 33.238636 feet, or about 33-feet 3 inches.

Using the same formulas, at 14.060 MHz on 20-meters, the longwire is 33.285917 feet, or about 33-feet 3 inches. The counterpoise works out to 16.642958 feet, or about 16-feet 8-inches.

Note that the counterpoise for the 40-meter EFHW antenna can be used as the longwire element in the 20-meter EFHW configuration. Both are 33-feet 3-inches. Nice!



Controls for the EFHW / counterpoise antenna tuning unit are mounted on a piece of double-sided PC board.

So, for two-band field operation – on the popular 20- and 40-meter bands – you'll need to carry only three wires: one 66-feet 6 inches; another 33-feet 3 inches; and a third, 16-feet 8-inches.

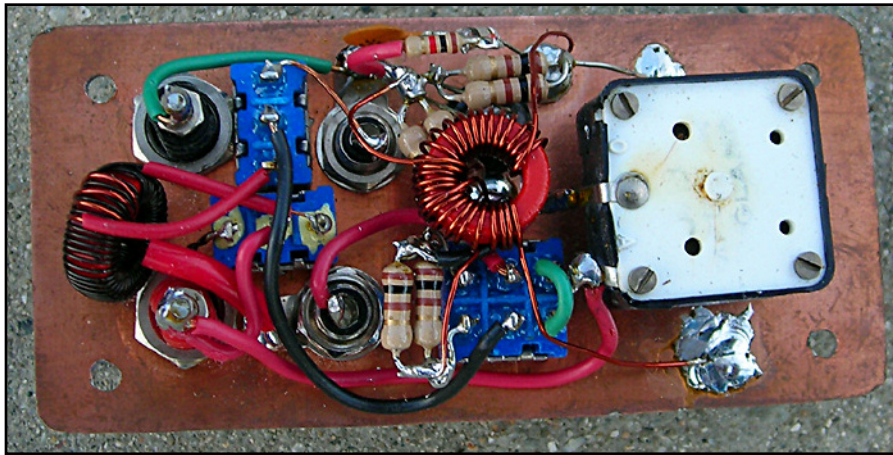
Combined with the EFHW tuner, you'll have easy-to-use antenna systems that require only one support each and can be put up and taken down in mere minutes.

The tuner described here is quite small, lightweight and has two-band capability – 20- and 40-meters. There's a built-in resistive SWR bridge with LED indicator. As we noted in 2003, that's a great package for the field.

The ideas of four superb designers were combined to come up with the ATU circuit featured at KI6SN: The LED-based SWR bridge is from designs by Dan Tayloe, N7VE, and Charlie Lofgren, W6JJZ. The transmatch is from Bill Jones, KD7S, and modifications for two-band capability are from David Bixler, WØCH.

The schematic for the EFHW ATU can be found on the Trail-Friendly Radio Extra Web site: <http://www.TrailFriendlyRadio.blogspot.com>

Why a counterpoise? As Joe Everhart, N2CX, so succinctly puts it, "The ground or counterpoise connection simply acts to decouple the tuner and rig from the antenna system by providing a path for ground current to flow. A quarter-wavelength wire, which is half the antenna length, laid out along the ground or tucked out of the way is usually sufficient." He says that a



Components are soldered "ugly" style on the underside of the ATU's front panel.

quarter-wave counterpoise is just the ticket for cooling off a "hot chassis."

Accompanying photographs show the KI6SN ATU unit's simplicity. A double-pole / double throw (DPDT) switch – S1 – is used at the input to toggle between the unit's OPERATE and TUNE modes. One side puts the SWR bridge in line for tune-up. The other bypasses the bridge for on-air operation.

An SPDT switch at S3 toggles between the 20- and 40-meter windings on the matching inductance. Another SPDT switch at S2 gives the operator – via an alternate output, designated AUX – the option of using antennas other than end-fed wires by bypassing the end-fed matching network.

Two 100-ohm resistors in parallel were used to achieve each 50-ohm leg of the bridge. A Radio Shack LED (RS 276-309) serves as the SWR indicator.

The KI6SN version of this EFHW ATU was shoehorned – along with the SWR bridge – into a Radio Shack plastic project box 2 inches wide, 4 inches long and 1 inch deep. A 100 pF tuning capacitor with a shaft was used across the output inductance.

A piece of double-sided printed circuit board does duty as both the panel for the unit's controls and the ground plane for the parts that are mounted inside the box. You'll see from the schematic on the T-FR Extra Web site that there are two T50-2 toroids to wind. Both have primary and secondary windings, and the output inductor is tapped. Even for homebrewing newcomers, though, they're pretty easy to make.

When using the ATU with your EFHW longwire-counterpoise combination, simply attach a transceiver at the input of the ATU and a half-wave longwire and coun-

terpoise to the output terminals – the longwire to the RED terminal; the counterpoise to the BLACK terminal.

With your antenna wires attached and the ATU switched to the proper band, it's simply a matter of flipping the ATU into TUNE mode and tuning the panel-mounted variable capacitor for minimum brilliance from the unit's LED.

Once the LED is dark, or tuned to bare illumination, you've reached an antenna match condition and it's time to flip the ATU into on-the-air operation mode.

In a QRP To The Field (QRPTTF) event several years ago – running about 3 watts from a NorCal-20 transceiver in Southern California – I was able to work 13 states, including Washington, Arizona, Colorado, Minnesota, Oklahoma, California, Oregon, New Mexico, Nevada, Idaho, North Dakota, Texas and South Dakota while using this 20-meter EFHW configuration.

Switching to 40 meters was as easy as replacing the 20-meter longwire with a 66-foot 6-inch longwire for 40 meters and connecting a 33-foot 3-inch counterpoise.

Flip the switch to the 40-meter position to change the tap on the ATU loading coil, TUNE the configuration for minimum LED brilliance, flip to OPERATE, and you're ready to go.

Again, on tune-up the antenna dipped beautifully as S3 was toggled to the 40-meter tap and the tuning capacitor found a good match – the LED dimming to near darkness. QRPTTF signal reports received on 7 MHz were solid 579 to 589s.

If you've never considered the EFHW / counterpoise combo in your trail-friendly radio grab bag, maybe it's time. For the minimalist field operator, it's tough to beat this antenna configuration and simple ATU.

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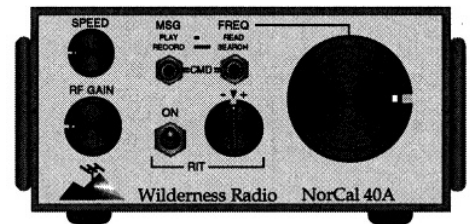
Sure, there are a few 40 meter cw kits out there to choose from. But the NorCal 40A stands apart from the rest with a unique combination of custom features and big-rig performance.

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Field Day

Cheryl Muhr, NØWBV

More YL news of Field Day! There were a lot of YLs working that weekend. Here's what a few of them wrote.

Anne Manna, WB1ARU, said, "At least it wasn't raining Field Day weekend. My OM, WA1ENO, Tony and I operated as a 1D station in our own shack. We were on the air for about 18 hours and made over 1300 contacts. Of course, after checking for dupes and eliminating all the 1D contacts our submitted log had closer to 1000. We had a great time and managed a few QSOs with friends along the way. We would like to go out in the field again for FD in the future—however there are advantages to the home QTH!"

Emily Bishop, WE4MB, describes Field Day this way, "When someone in my hometown of Cleveland, Tennessee asks, 'When is Field Day?' someone always answers, 'The last rainy weekend in June.' It seems to rain on us every Field Day, but we always have fun and that's what Field Day is about...having fun, as well as testing your communication skills, showing your community what ham radio is and introducing newcomers to our hobby."

Anne wasn't the only YL in 1-land to get on the air for Field Day. Jane Oliver, N1PVT, writes that she "...heard a lot of YLs on during Field Day, including WB1ARU. I spent a few hours and picked up a couple of hundred contacts. It is always great fun, and it's wonderful to hear YLs doing their part."

In the Second District you might have heard Joyce Birmingham, KA2ANF, the ARRL Hudson Division Vice Director. "I did get the opportunity to visit quite a few clubs in the NNJ area. It was a nice weekend weather-wise and the bands were in pretty good shape. After making the rounds to several local clubs, I came back to the house and got on the air with the club station, K2VK. Operating with my OM, George, KC2GLG, and our two daughters, Krista, KB2MER and Holly, KB2ZMM, we had a great time. We made over 150 contacts operating a variety of bands and modes."

Ginger Wonderling, AB6YL "[I] operated with the San Fernando Valley ARC in Northridge, CA. The weather was perfect and the band conditions were not too bad either. Jennifer O'Connell, KI6OIL, split her FD time between the SFVARC and the local ARES site a few miles away. Since we are in an urban setting, many hams find themselves splitting time between FD sites—something that isn't possible for clubs that operate from remote sites."

What a great YL presence during Field Day. I hope some of you were YLs I heard on the air!

Emergency Operations

Gloria Saylor, N3IOP, found herself going into amateur radio action during a windstorm in her area. Here's what happened:

"I teach art at the North Clarion County Elementary School in Pennsylvania. I have had the radio club - North Clarion School Amateur Radio Club, W3NCS - at the school for 18 years. Our ham shack is a mobile cabinet in the corner of the school art room. The club is thankful for the generosity of amateurs who have loaned or donated equipment, and given of their time and talents to help the students. We meet each Wednesday that is also a school day from 20:00 to 20:40 UTC.

"The students and I have great fun working the School Club Roundup contest during the second full week in February. The School Club Roundup is a contest for amateur radio clubs all over the world. The purpose of the contest is to give school-children a special time and place to communicate with each other and with the amateur radio community. The objective is to make as many contacts as possible in one week, especially with other schools. Extra points are also earned from contacts made with other states, Canadian Provinces, and countries.

"We have worked the School Club Roundup contest 19 times, always placing in the top 8! Among the United States entries, we came in First Place for the Elementary School Division in the years 2000, 2002, 2004, 2007, and 2009. With this win in 2009, we are five-time National Champions.

"This year really showed the value of amateur radio in an emergency situation. A severe windstorm hit our area and emergency power was needed the Thursday of School Club Roundup week. Joe Beichner, AA3TH, and I, N3IOP, arrived at school early to get the radio gear ready. The elementary school had no electricity, and the students were coming with a two-hour delay. We drove 20 miles to Joe's house, grabbed his generator, a couple of batteries, and drove back to the school.

"Here's what the scene in the art room looked like - Joe at the radio, the kids gathered around, the only light was from the window and two candles. A power cable was strung out of the window to the small portable generator pounded by wind-driven sleet. The coax draping out of the window was connected to a long wire hanging in a tree.

Nobody in the building had email, text messages, the Internet was down, cell phones were not working, and we were talking to the world! It was a school club roundup to remember."

Great job to Gloria, Joe and all the kids involved! It is nice to see the practical application of why we love this hobby.

SYLRA 2009

As of early September, press time for this article, I am getting ready to head to Norway and Svalbard for the Scandinavian Young Ladies' Radio Association (SYLRA) meeting. This group is a wonderful collection of ladies mainly from the Scandinavian countries, but who are willing to open their association to the world. Hence, I was able to become a member.

The first part of the trip and actual meeting will be held just outside of Oslo, Norway and then many of us will head north to Svalbard as well. At both locations we will have radio opportunities, so there should be a number of ladies on the air from both LA and JW. Hope you heard us on! Look for more information on this trip in the next YL column!

What is Next?

What did YOU do this summer? Do you have any YL-based ham radio trips planned? Will you be attending the international YL meet in Germany next year? How about the YLRL convention in Boston 2011 or will you go to Australia in 2012? Let me know what is going on and we can share it in the YL column. Pictures are always great. You may notice we didn't get any to share this time, so keep them coming with the information.

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An Early Christmas Present

Kelly Jones, N0VD

Christmas came a little early this year for DXers who worked the German-led 701YGF DXpedition to Yemen in April, 2000. While there have been a couple of limited operations from there since, this DXpedition was the last “full fledged” operation to take place from Yemen. It was announced shortly afterwards that no DXCC credit would be issued due to “lack of documentation.” The operation has remained in “pending” status and much debate has taken place for over nine years since, but on August 12th, ARRL DXCC Manager, Bill Moore (NC1L) announced the operation was now approved for DXCC credit. Moore cited a review of “recently received information,” as well as “additional dialogue” with the leader of the 701YGF DXpedition, as reasons for the approval.

Because so much time has passed since the DXpedition Moore asked that those amateurs seeking credit for 70YGF follow certain procedures.

If you are seeking credit for 701YGF only and:

A. You live in the US: Send only the 701YGF QSL card with your application to DXCC and enclose a self-addressed, stamped envelope.

B. You live outside the US: Please enclose return postage so the DXCC Desk may return the card to you.

The DXCC Desk will then process the 701YGF card. Applicants will not be charged a submission fee if this is the only card submitted for processing.

Alternatively, you may bring the card to a DXCC Field Checker. The field checker will forward the confirmation to the DXCC Desk for processing. Again, there will be no submission fee if this is a single card submission; however, you still must fill out an application form.

If you are submitting 701YGF with other QSL cards, you may include the 701YGF QSL card with your next QSL card submission and it will be handled as usual.

As an added bonus, the 701YGF team has uploaded the logs to Logbook of the World. So, if you are worried about losing your coveted card in the postal system, you may apply for credit via LoTW. Again, no charge will be assessed if you are only requesting a 701YGF credit. While the LoTW system will present you with a charge, the charge will be waived by the DXCC Desk.

Don't forget that the annual DXCC listing deadline is also fast approaching. Moore says, “Remember, the cutoff date for the 2009 DXCC Annual listing and Honor Roll is December 31, 2009.” Finally, Moore reminded DXers, “We encourage applicants to handle this soon, rather than waiting until the last minute.”

In other DXCC news, Bill Moore reports that the following operations have been approved for DXCC credit: Wake Island —

WA2YUN/KH9 (for operations commencing 2007); Willis Island — VK9DWX (2008), and Andaman and Nicobar Island — VU4RG (2008). Moore states, “If you had cards rejected for the Wake Island operation, please send an e-mail to the ARRL DXCC Desk and you will be placed on the list for update.”

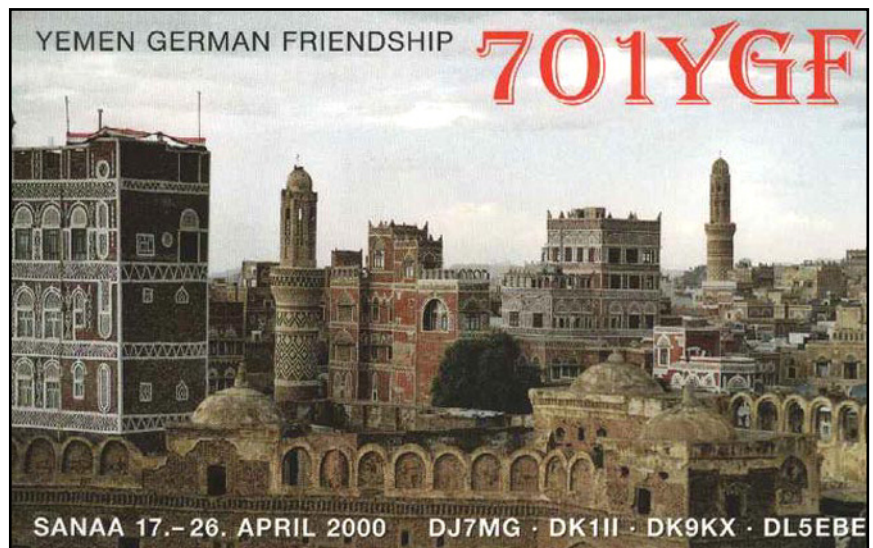
Netherland Antilles Revisited

The breakup of the Netherland Antilles is still progressing — albeit slowly. The original date for this event was to have been in June 2007. That extended into 2008 and now it looks like it will take place “before October, 2010.”

I recently spoke with Peter de Graaf, PJ4NX, about the progress and what he is anticipating. There has been a date of 10/10/2010 floating around, but at the time of this writing, Peter was unable to confirm this as a firm date. His response was that “Officially, it is being targeted for before October, 2010.” The reason this event is significant to DXers is that once finalized, we should see up to five new DXCC entities born from the dissolution of the Netherland Antilles.

St. Maartin and Curacao will become what is called “status aparte” — similar to what happened to Aruba in 1986. This creates two new DXCC entities. Saba, St. Eustatius and Bonaire will all become “municipalities” within Holland. They are expected to become DXCC entities due to geographical separation from the Dutch mainland.

Peter explained there are plans in the works, at least on Bonaire, to be ready to put the new DXCC entity on the air once an official date is set. He did not know if the prefixes would change immediately, but he has been working with the telecommunications authorities to ensure a smooth transition and to ensure there is a coordinated effort when it comes time to activate the new entities.



The 701YGF operation now accepted for DXCC credit.

Mark your calendars and be looking for some "new" countries to hit the air next year.

Watch the Wording

I received an email from our own Carl Luetzelschwab (K9LA), regarding my August DX column. In August, I recapped a presentation I gave at the ARRL Rocky Mountain Division Conference. One of the topics I touched on was the different layers of the ionosphere.

I mentioned that "during the day, solar radiation causes ionization to form distinct layers." Carl pointed out that "using the term 'distinct layers' leads one to believe that there are high densities of electrons at certain altitudes, with nothing in between. As you're probably aware, the true picture is an electron density that varies with altitude as per the solid line in the attached

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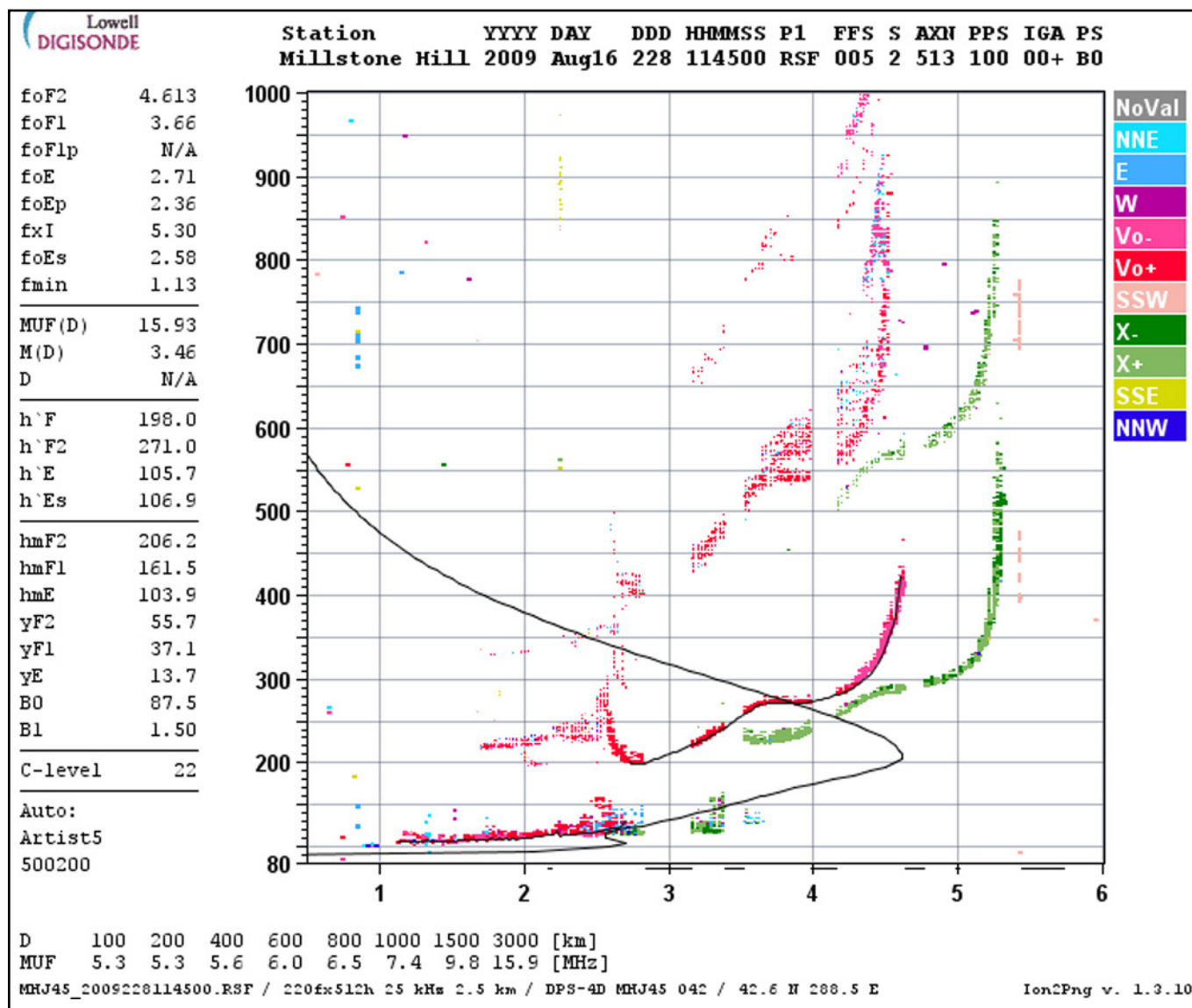


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Ionosonde data showing "regions" rather than "layers".

ionosonde data (the electron density was derived from the red echoes).

"There certainly is a maximum in the electron density at E and F2 altitudes, but typically the D and F1 altitudes are just inflection points in the profile - not maximums. I think it's better to use the term 'regions' - D region, E region, F1 region, and F2 region."

I'm certainly no expert on propagation and I'm sure Carl has forgotten more than I've ever learned. We had a couple of additional email exchanges and I let Carl know I would note the wording choice. His humorous response to that was "maybe it will keep someone else from saying stuff like 'ducting occurs between the F1 layer and F2 layer'." Indeed!

A Satirical Look at Ourselves

If you have been reading my column for any length of time (or if you know me personally), you know I tend to have a very dry sense of humor. I recently came across (yet another) ham radio blog, but this one was different - very different.

The Fi-Ni Report (<http://fi-ni-report.blogspot.com/>) has to be one of the funniest, best-parodies of ourselves as DXers that I have seen in a very long time. The

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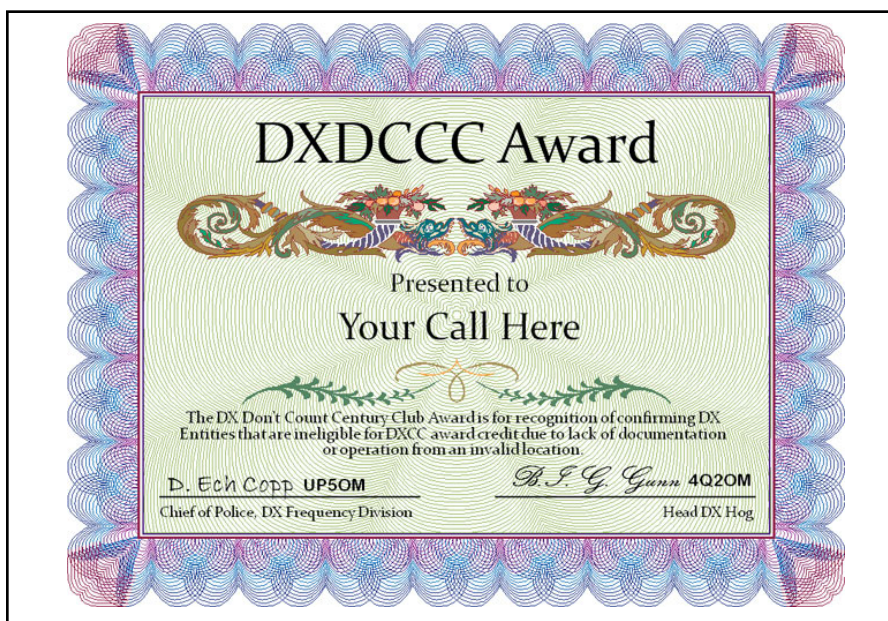
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The new "DX Don't Count Century Club (DXDCCC) Award"

author takes a no-holds-barred approach and leaves no stone unturned. For example, in a post entitled "LIDS Announce DXpedition", we learn about an upcoming "DXpedition": "LIDS is proud to announce a unique dual DXpedition as part of their observance of International Frequency Police Month. The Lost Island DX Society is sponsoring not one, but two simultaneous DX operations from rare entities. [from Kazakhstan (UN) and Sri Lanka (4S)]"

"To commemorate International Frequency Police Month and this unique double DXpedition, LIDS have obtained special call signs for both operations. The Kazakhstan DXpedition will be using the call UP5LID and the Sri Lankan DXpedition will be using 4Q2LID."

Other "news" includes "Venutian QSL Update," in the wake of the recent MFJ purchase of Cushcraft, we find out "MFJ To Acquire ARRL" and the new "DX Don't Count Century Club (DXDCCC) Award".

Big Gun DXer and Cousin QRM offer a tongue-in-cheek look at DXing. In my opinion, it's well worth a read — especially if you don't take yourself too seriously!







That's it for this month's column. 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. I'll do my best to include it in upcoming column. Until next time, see you in pileups - and now on Twitter as N0VD!



**Peter de
Graaf, PJ4NX,
one of only
two local hams
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More on SSSP (Short-path Summer Solstice Propagation)

By Carl Luetzelschwab, K9LA

The February 2009 column reviewed polar mesosphere summer echoes (referred to as PMSE in the technical literature). That column also mentioned that PMSE is the hypothesis of JE1BMJ for 6m propagation across high latitudes (for example, from Japan to the East Coast of North America) during the summer rather than multi-hop sporadic E. The conclusion of the February column, after looking at a typical QSO (from W4DR to JE1BMJ), was that the PMSE/SSSP hypothesis is certainly possible based on the observed times of PMSE and the time of the referenced QSO.

That February column, in a roundabout way, resulted in an e-mail from Joe CT1HZE. And that e-mail resulted in me acquiring JE1BMJ's article titled "SSSP: Short-Path Summer Solstice Propagation" that was in the Six News (JE1BMJ's article was originally published in the September 2006 issue of the Japanese magazine CQ Ham Radio). After carefully reading the article, I came away with the feeling that JE1BMJ's evidence for SSSP via PMSE is not very strong. Some of his evidence is based on incorrect assumptions.

For example, JE1BMJ states, "It is often said [Ref 1] that the F1 layer is likely to occur in the daylight time of a summer season and constantly has an MUF of 4 to 5 MHz which is nearly independent of solar activity. When assuming F1-layer as the first control point of a 50 MHz signal, the incident angle should be less than five degrees by the secant law."

First, the 4 to 5 MHz values cited are critical frequencies, not MUFs (maximum usable frequencies). I will assume that this is simply a typo or a Japanese-to-English translation problem. Second, and much more troubling, is his application of the secant law. The secant of 5 degrees is 1 over the sine of 5 degrees, which would be 11.47. Thus, the MUF for low elevation angles is 11.47 times the critical frequency, which puts the

angle	M-Factor for a fictitious flat Earth-ionosphere system	True M-Factor for the real spherical Earth-ionosphere system
90 degrees	1.0	1.0
50 degrees	1.3	1.3
25 degrees	2.4	2.1
10 degrees	5.8	3.4
5 degrees	11.5	3.9
0 degrees	infinite	4.1

Table 1 – M-Factor Comparison for 200 km Height

MUF for 4 to 5 MHz critical frequencies around 50 MHz. The math is ok, but unfortunately, JE1BMJ assumed a flat Earth-ionosphere system (which is a fictitious system).

In the real spherical Earth-ionosphere system, the angle of incidence of a wave on the ionosphere is limited to about 15 degrees at F1 region altitudes. Thus, the secant is actually about four, which means the critical frequency needs to be around 12.5 MHz for 6m propagation – not 4 to 5 MHz. That is a big difference – and a big problem.

Table 1 compares the secant (commonly called the M-Factor) for a fictitious flat Earth-ionosphere system to the actual spherical Earth-ionosphere system for F1 region altitudes (I used 200 km). For more about this fundamental topic, visit mysite.verizon.net/k9la, go to Fundamental Concepts, and read the article titled The M-Factor.

It's important to note that the altitude at which refraction occurs does not come into play in the fictitious flat Earth-ionosphere system – but it's a critical parameter in the real spherical Earth-ionosphere system.

Another problem area is evidence based on a lack of understanding of space weather data. With respect to his Figure 4, JE1BMJ states, "Figure 4 on page 42 shows the image of the auroral oval of the Arctic pole at 06 UTC on July 19th 2006.

This was one of the excellent days when I made many QSOs with European stations via SSSP. The map shows how a high electron density area covers the JA – EU path."

Unfortunately, that plot (NOAA loosely refers to it as a pmap, with the first 'p' standing for power input to the auroral zone) does not directly tell us anything about the electron density. The yellowish oval in the plot of Figure 4 only tells us where visible aurora is likely to occur based on the measurements by the satellite for that pass (that's why the title of the plot is Statistical Auroral Oval).

We can retrieve the original plot with the satellite measurements on it (thanks to Janet Green at NOAA) and estimate the electron density. Figure 1 shows the original plot (it's from the NOAA-16 satellite, not the NOAA-14 satellite of JE1BMJ's figure – thus the time of the pass over the northern pole is several minutes different).

The solid lines to the right of the satellite track indicate the energy flux of precipitating electrons (in essence, how many electrons). The dots to the left of the track indicate the energy of the electrons (how far down in altitude they get). For more on understanding these maps, visit mysite.verizon.net/k9la, go to General Articles, and read the article titled A Look Inside the Auroral Zone.

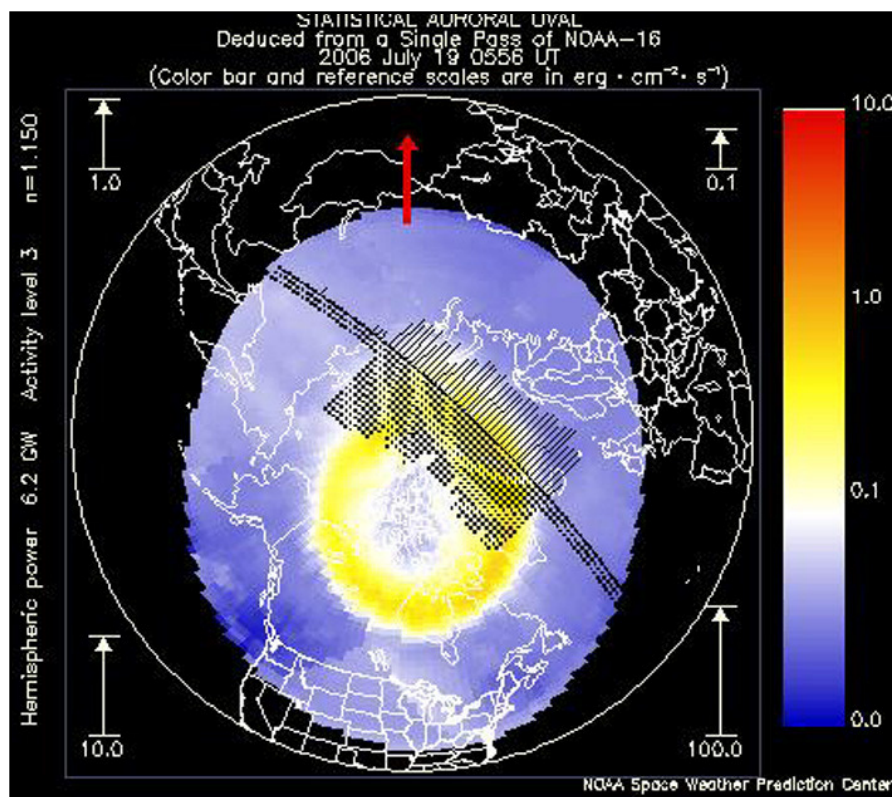


Figure 1 – PMAP for June 19, 2006 at 0556 UTC

The satellite data says the precipitating electrons got down to around 125 km (from the text at <http://www.swpc.noaa.gov/pmap> and Figure 9.23 in *Physics of the Upper Polar Atmosphere* by Brekke, 1997) and the resultant electron density was around 7.5×10^{10} electrons per cubic meter (from Figure 12-19 in *Handbook of Geophysics and the Space Environment* by the USAF, 1985). That low electron density equates to a plasma frequency of around 2.5 MHz. Thus, the high electron density that JE1BMJ claimed is simply not true (at least not from the auroral map he showed).

JE1BMJ also dismisses multi-hop sporadic E because of too many hops and the resultant scattering and absorption of inefficient ground surfaces. I can't speak for scattering, but ground reflections aren't really a limiting factor. Calculating reflection coefficients for seawater, ice cap, and average ground on 50 MHz indicates the loss due to a single ground reflection is at most 2 dB for a grazing-angle wave. This value suggests 5 to 6 hops are still possible for stations with 1000 watts and decent Yagis. Of course, what helps is the extremely low ionospheric absorption on 50 MHz, since ionospheric absorption is inversely pro-

portional to the square of the frequency.

I believe the key aspect that is missing from the SSSP analysis is any evidence of a sufficient amount of particles to refract 50 MHz. Remember PMSE is not an electron density – it is likely an ice particle density. One could say that since VHF radars see echoes, it must be enough. However, these radars typically run an extremely high effective radiated power (ERP). For example, the Poker Flat transmitter in the first referenced article in the February 2009 column ran an ERP of 36 million Watts. That's some 30 dB above a 1000-watt amateur station with a 15 dBi Yagi. But to our advantage these radars are essentially looking straight up and expect lossy scattered signals (since the MUF isn't high enough at high angles per the secant law), whereas 6m operators are looking obliquely along a path and expect refracted signals (since the critical frequency may be high enough to give a high enough MUF at low elevation angles per the secant law).

In summary, I believe JE1BMJ overestimated the conditions for 6m propagation and this decreases the credibility of his 'evidence'. I'm not saying SSSP isn't the mechanism, but right now I'm not at all convinced of SSSP based on JE1BMJ's article

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Winding Up the Year

Bill Pasternak, WA6ITF

It's the first week in September as I prepare this November column. I was about to sit down and write about the now concluded summer of 2009 DX season when a posting on that very subject by Dave Bernhardt, N7DB, appeared on the W6YX VHF Reflector. Dave graciously gave me his permission to include it in this column.

Guest Writer: Another Summer VHF DX Season Hangs

By Dave Bernhardt, N7DB (Via the W6YX VHF Reflector)

The season got off to an early start in Boring, Oregon. The first recorded 6-meter E was on the evening of 27 April. It has been a while since I have encountered a late April opening. The next north to south opening was on the evening of 4 May.

The big news was JAs into the west coast on 5 May. I am pretty sure this is the earliest date that a trans-Pacific E opening has occurred. KB7ME and KE7V scored on JE1BMJ late afternoon of the 5th.

May was single hop through most of the month with some southeast USA showing up late in the month, which is typical for me. Others had better luck. From my notes: "KE7V->AC4TO on 3 May along with VE7IRA -> K4RX".

VY1DX/b recorded 0432Z on 3 May. KE7V and VE7SL heard TI2NA/b the morning of the 21st of May. K7RWT had contact with JA the afternoon of the 22nd. I had a contact to EM52 the morning of the 26th.

In June, single hop was noted on the 1st. The band was quiet leading up to the VHF contest weekend which, historically, has been a good thing. It turned out to be one of the better weekends for the VHF contest, as noted in my report. 10 June saw some more double hop to the southeast USA plus some northern tier. WA7GCS reported NH6 beacon midday on 16 June. JAs reported in here on the afternoon of the 17th. The following day HI8 and NP4A were in. Later the NH6 beacon was in followed by weak JAs in the afternoon. Of course, when JAs were weak here, they were good copy in Southern California and central North America! NN7J heard the VO1 beacon around 1000Z on the 20th.

The 23rd was pretty good DX-wise at this QTH. EN24, EO10, and then 5J0BV at 1637Z, DM16, XE2WWW, TI5ERS, XE2MX, DM13, DM07, DM04 and XE1SOV. TI2NA/b was 419 at 1726Z followed by the KH6s later in the afternoon. KH7Y was in weakly the evening of the 25th. The morning of the 26th, V29JKV was in.

July had V29 in again the morning of the 2nd. Stronger ionization was noted the first part of July with W7KNT/b in on the 1st and K6FV/b on the 4th. KH6 late morning of the 6th. The 9th saw a lot of action. I picked up EN13, EN56, FN00, EM89, EM63, DO60, EM48, DN38, DO43, EN50, EM64, EN51, EN61, EM79, DO23 and DN61. WA7GCS reported hearing a 0.5 sec LDE (Long Delayed Echo) from K6UM at 1629Z, also on the 9th. Next morning, NP4A was worked here with

VE8NSD in the early evening. Other locals reported JA & TI were also in this day. Strong, short E to N7UWQ, DN33, the morning of the 21st. Long northern tier 23 July, W3EP, at 1623Z and later in day K1TOL at 0056Z. I note that N7CFO/m made some good contacts from some rare grids during his trip across North America.

In August, 7JA worked JE1BMJ on 5 August at 0130Z, plus heard another JG2. Speaking of JA, I note that JA2DDN worked K0HA on the evening of the 8th. Last 6-meter DX logged here was K4KOR, EM65, on the evening of the 12th.

The astronomers were correct about the peak of the Persiads. I recall the rate was up to about 200/hr. More local stations were reporting working digital this summer via meteor scatter and EME on 6-meters.

W3ZZ noted KE7V worked Europe on 3 & 8 July. W7CAR heard CT1 very early one morning.

No solar flares, so the only aurora was at high latitudes. There was some 2-meter E reported, but I do not have any specifics on those events.

The most noteworthy item from my perspective was how early JA's were in, and how late in the season they were in. They were like bookends to the season.

The sun continues to show a lack of activity as we go into what should be Cycle 24. Frankly, I am not sure anyone knows what is up next for solar activity. Will Cycle 24 be a weak one or are we to see an extended minimal period? This extended low solar activity period is certainly reshuffling the deck when it comes to understanding E propagation. The conditions over the next few years may change how we operate on the amateur bands. 6-meter F2 in the future? Good question. Back to you, Bill...

The Icom IC-9100 From A VHF/UHF Point Of View

Icom's new IC-9100 HF/VHF/UHF/satellite-band transceiver is generating a cult-like following, complete with a discussion group on Yahoo (<http://groups.yahoo.com/group/ic9100/>).

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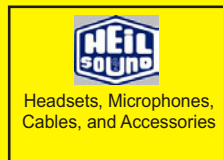


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Ray Novak, N9JA, the Division Manager of Amateur and Receiver Products for Icom America, Inc., stated his opinion that "...the optional 1st IF filters should provide excellent front end filtering for those VHF/UHF weak signal aficionados!"

It's often been said that in every generation there is a piece of gear that has been the right thing at the right time. In the 1950s it was the blinking green eye of the Gonset Communicators that got hams to go mobile on 6 and 2 meter AM. In the 1960s, Swan made 6 meter SSB available with its models 250 and 250C at a price most could afford. By the early 1970's 6 meter SSB was redefined by the Drake TR-6 just as a then unknown company called Inoue Communications introduced a simple to use, a 10-watt 6-channel 2-meter FM transceiver called the IC-2F that totally revolutionized that mode.

Today, Inoue Communications is known as Icom. In the years since the IC-2F, many of their products have become trend-setting. If history repeats itself, the IC-9100 could be the next step in the evolution of the VHF and UHF side of our hobby. See for yourself by downloading the IC-9100 brochure at

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PS: This note to Santa. If the FCC approves it for sale in the USA before year's end, can you please leave one in my stocking?

From The Old E-Mail In-Box

For our last column of 2009, I'm going to publish some comments on past articles along with my replies. We begin with September's column on finding very little 2 meter activity driving to and from work in rush hour in Los Angeles, CA. According to Dave Hayes, VE3JX, it's not just the United States that's seeing this trend:

Greetings Bill, I enjoyed your thought-provoking article in September's WRO on 2m repeater usage. Your experience is not unique. We have a nightly net that is reasonably supported; however, the repeaters are generally dead most of the time. It wasn't that way in the nineties and before. There could be several factors involved. One is the current availability of compact mobile transceivers capable of HF. Or, it could be that many licensees are not active anymore, but have their free lifetime license. In Canada, our licenses are granted for life (or 125 years, whichever ends first). Since there is no normal renewal process, we don't know how many of the now record-number of licensees are still active in the hobby. There is also the problem of unreported Silent Keys corrupting the numbers as well. At least in the US, you have to indicate renewal every ten years. In short, is the lower activity a sign of mobile migration to HF, or of fewer active amateur radio operators? Or, does it indicate something else entirely?

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WA6ITF responds: Dave, I think that there are several reasons and I doubt that migration to HF mobile is one of them. True, some hams may have made the move away from 2 meters to HF, but the attrition from the former does not match the gains on the latter. My guess is that the declining interest in this aspect of the hobby is because of the cellular telephone. Most cell phones are smaller than an HT and so advanced that they can supply many features that ham radio currently cannot, or can only do in the most rudimentary form. A good example of this is APRS. While it can tell a limited number of people where you are, a GPS equipped cell phone can not only tell you where you are, but how to get where you want to go. And it lets you hold a voice QSO, in full duplex without someone else "breaking in" to offer his or her comments.

Its also quite interesting to note that here in SoCal, this lack of users seems to be a problem only associated with open, carrier-access repeaters. When you listen across 2 meters, and with the lone exception of the 147.435 "Animal Farm" which seems busy 24/7, the other repeaters with heavy levels of activity

are for the most part the "private" ones. This is ironic in the face of the repeater coordination bodies that claim there are no channel pairs available because all are in use. It is long past due to tell any repeater owner/licensee that if his machine does not have a large, established user base, it's time to take it down or be ready to share the channel pair with 6 or 7 more systems.

Next is a note from Tom Taylor, KE6VT, of Longdale, Nevada: I read your article in WorldRadio Online "Will Digital Voice Revitalize Repeaters". It was a good article and a subject the ham community needs to address. I travel all over the USA and have noticed the decline in repeater use.

In my case, I don't use repeaters more while traveling because of the PL tones. I do have a repeater directory and programmed some repeaters in the radio, but they never seem to be the ones I hear or want to talk on while going down the road. I find it very hard to program the PL tones in the radio while moving down the road.

My solution is to establish a set of tones for common repeaters. We would need to have repeaters which are used by travelers, like, say 146.88 all across the USA would have a PL tone of either 100Hz or 123Hz a repeater at 146.820 would have a PL tone of 123Hz or 77Hz and etc.

This could be also set up on for a north/south Interstate and an east/west Interstate for further division. A traveler would be able to set a few frequencies on their radio with this PL tone standard radio, have it scan and be assured of having the correct PL tones so they could use the repeater. Just using the PL tone on the output would help also.

WA6ITF responds: This is an idea that I first put forth way back in 1976 or 1977 when I was writing "Looking West" for 73 Magazine. The gist of the article was an overall coast to coast - border to border plan that utilized only two repeater pairs on 2 meters with systems with mild overlapping coverage and different CTCSS access tones from machine to machine. The frequency pairs I suggested were 146.34/.94 east to west and 146.37/.97 for north to south and vice versa. Keeping in mind that this was proposed in an era before synthesized radios with built in CTCSS encoders, and was fully dependant on the CommSpec add-on all frequency CTCSS encoder box which was a one of a kind product mainly for commercial FM two-way use.

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Another problem was the emerging repeater coordination politics of the day. Most coordinators wanted nothing to do with the ARRL, or each other, and there was little interchange of information. The only repeater directory available ran about 20 pages from CQ and there was no way to vouch for its accuracy.

The idea went nowhere because neither the technology nor the information exchange was ready for it to happen. I fully agree with you that it's needed. The technology is there. But would those who own repeaters on those two-channel pairs be willing to undertake such a far reaching project?

Now, back more than a year ago, to a website I wrote about called Don's Bulbs. (<http://www.donsbulbs.com>) Carl Lodstrom, KQ6AX/SM6MOM, of Ventura, California gave us a lesson in Ohm's Law when he wrote: I took a quick look at the Don's Bulb web domain and it is interesting. However, what I found a bit further down your column is truly amazing!

First, you mention the data for a light bulb, 6.3V / 0.15A, one we all are familiar with. That, and the 6.3V / 0.3A. These are, of course, the values for an operating bulb or there would be no current, so divide 6.3 with 0.15 and you get 42 ohm. So, the resistance is not for the cold bulb, as you say, but for the warm.

The equation, $R = V/A$ is called Ohm's Law and ought to be familiar to all ham operators. It should be part of the test. A moment later you mention George S. Ohm as if you never heard of him, can this be true?

Most regular, normal, incandescent lamps have a cold resistance that is 1/9th of the normal operating resistance, so the cold resistance of the particular lamp here is probably ~4.7 ohm.

This can be interesting, in that the cold start current of a lamp can be quite severe. In a car, if the cables have sufficient dimensions, the headlight may be 13V / 60W => 4.6A times 9 for cold state => 41.5A. If there are two such lamps, like in the headlights on a car, and the relay to control them has contacts for, say, 20A, they will be severely overloaded by an 80A current. In reality, the cables are probably not coarse enough, so they act as limiters, but the relay can be overloaded anyway, and often is. Ohm's Law can be very useful and is one of many equations worth studying.

And lastly, this short note from Giles Berry, KE3CR, in Newcastle Delaware: The local fire companies had problems

when the state government decided to go digital with their communications. Their radios were ineffective inside the buildings.

WA6ITF responds: That seems to be an ongoing problem caused mainly by the so-called "cliff effect" of any digital radio system. The "cliff effect" basically means that there is sufficient data and/or signal strength to decode and convert the received signal or there is not. If not, then as far as the receiving station is concerned, the signal might as well have fallen off of a cliff and into the proverbial bit-bucket of oblivion.

To this writer, the sad part is knowing how many first responders may well lose their lives because no digital radio can match the fade margin of good old analog. Be it AM, SSB, FM or what have

you, if there's even a modicum of signal, a trained listener will get at least part of the message. Maybe just enough to save his or someone else's life. But with digital, it's either perfect or as the signal degrades its unintelligible gobbledygook and then silence.

I don't know about you, but if I were stranded in a burning high-rise building and had my choice of calling for help with the latest and greatest digital HT or a \$29 CB hand-held I would choose the latter. There's likely a far better chance of that "10-4 good buddy" hearing my plea for help in the din of 11 meter AM than those responding with their fancy digital gear hearing me digitally in the steel and concrete jungle.

And that ends another year. See you in January 2010.

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Promotion vs. Selling Ham Radio

Devere "Dee" Logan, W1HEO

“Would you buy a used car from this person?” is a well-known phrase that emphasizes the importance of reputations and degree of trust we have in the persons we deal with. What we know about organizations or activities such as amateur radio can influence our decision to “buy into” them.

Selling amateur radio, like automobiles, rests upon the amount of information that the public has about our “products.” Our reputation tips the scales of public opinion. Many organizations realize this and emphasize the need to do things that will build a good reputation. For our radio service, it is the sum total of what we do, what we say, what others say about us, and how effectively we communicate the value and attractiveness of ham radio.

Since actions speak louder than words, it’s logical that to build acceptance and interest in our hobby, we must first do things that will build a solid record worth communicating. Providing emergency communication is a great way to influence public acceptance and support. Field Day, for example, supplies an excellent way to display this capability “up close and personally.”

We also have to tell the public about the many interesting, fun and personally satisfying aspects of ham radio before we try to “sell” them on joining us. One of the most influential techniques is demonstration. We have historically done this by personally showing individuals how ham radio works and demonstrating its fun, exciting and interesting aspects. This “Elmer” role remains one of the most powerful ways to attract potential radio amateurs, but it is not the only one.

Multi-channel Options

Today, many new avenues of communication are available to us. Social networking offers some unique advantages to reach the digital-using generation. Typical are Twitter®, YouTube®, MySpace®, Facebook®, blogs, various websites and even text messaging. These Internet-based communication channels are rapidly displacing conventional media such as newspapers, as advertising funds emigrate from print to electronic alternatives.

How we communicate the advantages of amateur radio to an increasingly digital-savvy audience is stimulating a great deal of discussion today. We’ve all heard the comment, “I have a

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cell phone and a computer, so why do I need ham radio?" Most of us would quickly respond, "But your cell phone costs you money and you can only call people whose number you know. Ham radio operation is free and you can communicate with a variety of people all over the world."

We must communicate solid reasons as to why ham radio is unique, even among today's digital options. This is what marketing people call the "unique selling proposition."

Some recommend developing a persuasive 60-second message that includes powerful advantages of ham radio that will stimulate the interest of a variety of individuals.

Target audiences differ

While the main selling features of ham radio are basic to our messages, the way in which we communicate them should be custom tailored for each audience. For example, techniques for reaching adults who grew up with radio in the pre-television era will be less effective when addressing youths accustomed to using cell phones for text messaging and spending hours on internet chat rooms.

During this year's Dayton Hamvention® youth forum, Simon Boehme, KC8ZYD, 17, talked about capturing young people through recruiting, advertising and the "cool factor." Ham radio isn't "cool," he said, because it's often regarded as "nerdy" and old fashioned. He suggests just calling it radio.

A few of his ideas for reaching young people included going where the kids are, such as schools, finding "cool" teachers who are looked up to by kids, and showing them videos. Radio clubs, in his opinion, often have boring meetings and should reduce boring business meetings. "Be a youth-friendly club," he said, "have youth-oriented activities, be a youth-friendly club and put kids on the board." Adults and youth must be on the same page, he added.

Another youthful perspective provides a more positive note regarding the fun and attraction of amateur radio. Listen to the comments of 19-year-old Briton Mark Dumbleton, 2E0NCG, winner of the Radio Arcala essay contest:

"I have spoken to people in 100 different countries – yes, one hundred – using 1/5 of the power it takes to light a light bulb," he wrote. "The best bit? You can meet somebody on the radio, get talking to them, send letters and photos. You

may even be invited to their country; there are so many opportunities. I have friends in Russia, Australia and on the Isle of Man, to name but a few. Mobile phones and internet are ordinary. Stand out from the crowd; switch on to amateur radio and there's a whole world of people waiting and wanting to talk to you."

Each audience has special characteristics that can make it easy to customize our presentation. Shared experiences and common references can help. For example, seniors who have warm memories of their families gathered around console radios while enjoying an evening of popular programs will be receptive to hearing about the personal satisfaction possible with today's ham radio. Handicapped persons with limited mobility will recognize the potential that a ham radio license can provide in meeting new friends over the air. Ethnic groups may be thrilled to find that they can chat with their home countries in their native language over shortwave. The list of different audiences is endless, and so are the possible ways of reaching them.

Share Your Experiences

This has been a small sampling of ways in which we can spread the word about our wonderful radio service. The diverse audiences we can meet, the changed technical environment in which ham radio now exists, and our contemporary lifestyles, all influence the manner in which we present ourselves.

Ham radio is changing. Our potential audiences are, too. We must continue to adjust to the world as it is. Let's recognize that amateur radio itself is evolving, while still offering the same fun, excitement, adventure and public service it always has. Our challenge is to shape our messages in ways that connect with each unique audience, while highlighting amateur radio's special benefits to be enjoyed by those who join our ranks.

We invite you to share your case histories by telling our readers about your approach and how you customized your presentation. Drop us a line at delogan@ameritech.net and send a photo, too. Tell us what issues you'd like to have covered in future columns. Good communication is a two-way street, so let us hear from you.

Devere "Dee" Logan, WIHEO, is professional public relations counselor and writer who has been an active radio amateur for 45 years.

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Florida Amateur Radio Clubs and Kids

Carole Perry, WB2MGP

One of the terrific speakers at this year's Dayton Hamvention® Teachers' Forum was David Jordan, AA4KN. David belongs to LMARS; the Lake Monroe Amateur Radio Society. He really impressed the audience with his presentation on the good work his group is doing with public schools and children's hospitals by introducing the youngsters to fun experiences through amateur radio. He also shared stories of other radio clubs in his area that are doing a wonderful job with children.

For several years, LMARS has been a part of the November Teach-In held in local schools in Seminole County, Florida. Their target school is English Estates in Fern Park, Florida, near Orlando. They present ham radio to approximately 100 kids during the day.

This introduction includes showing the kids what ham radio is all about, demonstrations of 2-meter communications, letting the students be part of a QSO and an introduction to satellite communications. To top it off, there is a demonstration of an R/C (radio-controlled) truck that sports an ATV camera in the front of it. The kids love this because they can see themselves on the overhead TV as the truck is driven around.

Thanks to my conversations with Dave about the wonderful work his club is doing, LMARS became the recipient of donated ham radio equipment from the widow of Silent Key Al Miones, WB2OGU, of Staten Island, New York. Through the Radio Club of America (RCA) Education Committee, donated equipment is inspected, repaired if needed, and forwarded to schools or groups that are in need of the equipment to teach children. Please check out the RCA Home Page at <http://www.RadioClubOfAmerica.org>.

LMARS has also applied for an ARISS contact at the school and is eagerly awaiting the chance to contact an astronaut. I promised to attend because I know how exciting these contacts are for the kids...and the rest of us, too.

Another group that David talked about is TVARC, The Villages Amateur Radio Club. They joined a Teach-In day at the Anthony Elementary School in Anthony, Florida in early April 2009. Highlights of the Teach-In were 2-meter QSOs with the young students. In addition, CW transmissions were carried out across the classroom, letting the kids learn enough code to converse with other students in short QSOs.

Pine View School in Osprey, Florida, has a very active ham



The Pineview High School Amateur Radio Club.



Dennis Hardoin W4DIH, VP of The Village ARC from The Villages Retirement Community in The Villages, Florida. The ham club visited the Anthony Elementary School to introduce the kids to ham radio.

club with many activities. Jon Hamlet, W4ZW, and Dan Brandenburg, K5RQ, are very involved in promoting interest in ham radio with the students there. They hold one-hour weekly club meetings. According to David, much of the activity here is due to Jon's efforts. For example:

1. The biggest hurdle Jon faced was finding a faculty sponsor for the ARC. A biology teacher volunteered to help and allowed a section of the classroom to be used for a club station area.

2. Classes were started December, 2008. Two classes of 9 kids each both passed their written tests, along with the biology teacher.

3. Jon applied for and chartered the club station, W4PVC. He immediately scheduled the kids to work contests to hold their interest once they got their licenses.

He acquired mobile rigs for kids to take home to operate.

4. Jon also established a remote operation of the club station to allow more students to get on the air.

5. Jon continues to promote ham radio to teachers and students at the school.

We then heard about Bayside Engineering and Technology Academy in Palm Bay, Florida. Aaron Mitchell, a past participant and instructor at the Academy, received a grant of amateur radio equipment for the school club in mid 2009. In addition, the Platinum Coast ARC of Melbourne, Florida donated a classroom area for the club. Antenna gear was donated by DX Engineering and Al Hernandez, K3VN.

The audience at Dayton was impressed with the tremendous effort being carried out by these groups in Florida. Those of us who work with young people know that the ripple effect of exposing kids to ham radio leads to so many good oppor-

tunities, career choices, and just plain learning and fun for them.

Maybe reading about the efforts of these clubs will inspire you to organize a small group in your local schools. Why not get permission to set up a radio demo in a school cafeteria one morning? What child can resist getting on a microphone that's right in front of them? There is lots of support and help available so that you don't have to reinvent the wheel. Get in touch with one or more of the groups you just read about. The rewards for everyone involved will be great. Have fun!!

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A Baseball Metaphor

Alan Pickering, KJ9N



Baseball has been a favorite American sport for a good long time – long enough to provide the Quarter Century Wireless Association many examples than can be transferred from the playing field and infield diamond to the meetings and ongoing affairs of our over 200 active chapters. Living, as I do, in west-central Florida I cannot avoid the annual rituals of spring training and the ecstasy and agonies of minor league players coming and going as their skills and playing fortunes dictate. Given the extraordinary amount of space that our local newspapers provide for describing these comings and goings, I have been able to study at length the numerous behavioral metaphors between baseball and the QCWA. Here are some of the most obvious of them, I am sure that fans more avid than I can find many more:

Teamwork Is Necessary

If you are a baseball statistician and enjoy measuring the individual performances of the players on your favorite team, then you will be aware of an important statistic that marks the work of both infielders and outfielders. This statistic is the measurement of the activity of a player who is directly involved in a play, but a play where some other player (or players) gets credit for a “put-out.” That direct involvement is called an “assist,” and the number of “assists” that a player accumulates becomes, over time, a rough measure of his skills in teamwork.

In order to win at baseball, each fielder to whom a ball is hit or thrown is responsible to either “put-out” the opposing player or to assist another player or players to “put-out” that opposing player, all according to the rules of play. You do not expect an outfielder, should a batter hit a ground ball to him, to then leave his position in the outfield and run all of the way to first base in an effort to get a “put-out.” No, the outfielder is expected to throw the ground ball (that was hit to him) to the first baseman and thereby “assist” the first baseman in getting the “put-out.” Were the outfielder to attempt to get credit for the “put-out” all by himself by running to first base, he likely would not get there in time and would be guilty of an error. The ratio of direct “assists” to the number of times a player handles a ball in his possession thereby becomes a measure of his skills of teamwork.

No one is more conscious of “assists” than a pitcher, who may seek to throw a perfect game of 27 consecutive outs (no runner reaches base safely). Whenever a pitch is hit by the batter at the plate (something that occurs approximately a third of the time), the pitcher is dependent upon the “assists” of his fielders. When the late, great pitcher “Lefty” Gomez was once

asked the secret of his success as a winning pitcher, he said: “Clean living and a fast outfield.” Yep, Lefty knew that no matter how well he pitched, he needed the backup of colleagues who were committed to teamwork.

Teamwork is equally necessary to produce a winning QCWA chapter. We all need one another to succeed. No one single person can claim that their efforts alone led to their succeeding as a chapter leader. As poet John Donne said so long ago, “No man is an island...” The so-called “rugged individualism” of the frontier cowboy is a thing of the past. We are now accountable in today’s world for one another. My success is sure to enhance yours and vice-versa.

The QCWA succeeds best when we give and we receive in equal ardor, for no chapter survives alone, no matter how great our immediate leadership. Every QCWA chapter needs “a fast outfield.”

Concentrate On The Basics

The best baseball teams and the best QCWA chapters always concentrate on the basics and recognize that over the long haul, it is their ability to master and then repeat that mastery on a daily basis that makes a winning team or a successful chapter. Baseball at its best, is only four things: throwing, catching, batting, and running. Do those four things well and you’ll be a winner every time. Oh, I know that given the potential to measure trends and results down to the smallest minutiae by the use of computers and time-linked statistics, there will be gurus who claim that some immediate statistical strategy will guarantee a winning baseball season. Yeah, right. But the truth is, if your team can’t throw, catch, bat well and run fast, then you’ll not win on any regular basis. No team makes it to the World Series without mastering the four basics.

Baseball lore tells of the time in the early 1960s, when Casey Stengel was the manager of the New York Mets. After a particularly poor performance on the field, Casey closed the clubhouse to all the reporters so that he could have a private word with his team. It was later reported that at that meeting, Stengel said, “Youse guys played lousy today. You were terrible out there. So, we’re going to have to go back to the basics. This is a ball...”

Then, according to the story, from one of the corners of the clubhouse up piped catcher Clarence “Choo-Choo” Coleman, who called out, “Wait, you’re going too fast!”

Sometimes in the real life of QCWA chapter activities we go way too fast. We need to slow down and concentrate on the basics. We have to remember that it is the relationships between

our members that count far more than the zippity-doo-da of some technologically cutting edge mode of communicating. Maybe D-STAR is just around the corner, and maybe not. My fellow columnist Bill Pasternak, WA6ITF, writing in the May issue of *WorldRadio Online*, suggested that our analog repeaters will continue to be our primary VHF and UHF equipment for a majority of users of FM for at least another ten years. I think he is right – we can get so excited about the latest technology as promoted by its manufacturers that we forget to give adequate attention to the basics.

Good Decisions Result In Fewer Mistakes

Baseball is a game with a lot of ongoing decisions. Every pitch requires a series of decisions, starting with the pitcher, who must agree or disagree with the suggestion of his catcher as to what kind of a pitch to throw. Any runners must make a decision to steal or stay where they are. Every fielder has to make at least one decision as to which way to move or field the variety of hit balls that may come his way. And so on and so on. Decisions, decisions, decisions – hopefully the right decisions which will result in fewer mistakes. Victories in baseball can often be traced to the accumulation of just a few decisions made by just one player. To quote Yogi Berra, “When you come to a fork in the road, take it.”

Yeah, take it! In other words, decide on the best course of action. Then proceed. We always have to decide much of what the future holds. Every QCWA chapter is always at risk in that respect. Will it face declining membership without making a decision? Will the chapter make a collective decision that might well avoid some future mistakes? Decisions always have to be made, and making no decision is, in fact, a decision in and of itself. Failure always awaits the person or the chapter which ignores the basics, doesn't pay attention to the importance of teamwork, or delays the decisions which must be made. Then error creeps in. Failure looms. Tragedy awaits. A final illustration - “Merkle's Boner” which happened on September 23, 1908. The game was between the New York Giants and the Chicago Cubs for the National League Pennant. The score was tied, 1 to 1 in the bottom of the ninth inning. The Giants had runners on first and third with two out when shortstop Al Bridwell hit a

single to center field. This permitted the man on third base to score. But wait! The runner on first, 19-year-old Fred Merkle ran for third base but failed to touch the second base bag as he rounded the corner on his way to third. The alert second baseman of the Cubs, Johnny Evers, got the ball on the relay from center field to home. Instead of sending it on to the catcher, he simply stepped on the second base bag, which meant that the single by Al Bridwell was now invalid because Merkle was forced out at second.

A great controversy erupted, and finally the game was declared a tie. A play-off then followed – which the Cubs won instead of the Giants – and the Cubs went

on the win the pennant and to win the World Series. Why? All because Fred Merkle made a minor but fatal mistake by failing to touch second base on his way to third.

In all things it is important to make the right decision and then act upon it. Every QCWA chapter must make every effort to make good decisions, based on teamwork, and rooted in the basics. It is just that simple, and just that difficult. Baseball is a metaphor of how to proceed. I wish to each of you the outcome you deserve in all of your choices in life and in the great work of the QCWA. Indeed, we are the Proud, the Elite, and the Many.

We are the QCWA! 73, Alan, KJ9N

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Customer Service

By Jerry Wellman, W7SAR

What amateur operators do at public service events, in its pure form, is customer service. So, let's explore customer service from a radio perspective.

My thoughts this month stem from interesting events where a local bank "customer service" person made a rather insulting remark and from a letter I received from an "extended warranty" company that was just plain dishonest.

The first event happened after I was looking at the charges made to my credit card account with a local bank. I've had the account for about 31 years and while the fund balance isn't in the millions, in today's economy I'd call it very healthy. I noticed a charge for a late payment, yet the payment was actually recorded properly and on time. Without looking, the bank person told me, in essence, if I would get my act together and make timely payments, I'd not have to pay the penalty. Our discussion went downhill from there. I was a little upset and walked across the street to the branch office and began to close my accounts. To the bank's credit, the teller asked why, and when she heard the story, she called in one of their higher-level officers and discussed the issue. I was a little calmer by then and agreed that if they'd offer me a written apology, I'd keep my funds in the bank. They wrote and I stayed.

The second event was a letter I received addressed to me personally and started out: "You recently contacted us about a vehicle service plan on your 1991 Ford Explorer. . ." The problem is, I've not owned that vehicle for over a year and I had not contacted anyone about any such plan on any vehicle. I called the company and asked when and how I'd contacted them. They said I had indeed called, gave a date and time of the call, and said they were just following up on my request. I pointed out that I could not have called at that time and on that date (about a week earlier than the letter). They began to argue. They just flat out lied to me. When I pointed out that I no longer owned

the 1991 Explorer and had not for over a year, they began to argue again and then asked me what vehicles I did own. No way was I going to tell them what year and model vehicles we had -- they'd be sending me more "offers" that I hadn't requested.

Two events, two outcomes. What about your service as an amateur radio operator?

First, the level of service is always in the perspective of the customer. You may be right or wrong but it's the customer who decides whether you met expectations or not. I've been on events where a huge amount of effort was expended only to have the customer be upset because something simple wasn't done. I've also been on events where we literally did nothing but got high marks (and certificates and awards) from the customer.

And second, the customer may be right, but you can choose to participate or not. Just don't leave in a huff before the event is over and possibly create an unsafe situation.

Preventing Customer Service Challenges

The first line of defense is in the expectations you and your customer have, or should have, agreed to in advance. You may even choose to have a memorandum of understanding prepared in advance as an umbrella to your participation or some sort of written rules of engagement for each event. I've always advocated such and prefer to have in writing the minimum of what's expected. Usually volunteers choose to go above and beyond what's expected so having a list of minimums is a good thing.

The most critical step, however, is to communicate to your team what's expected! You may know or the group's coordinator may know, but if these expectations are not communicated to the folks in the trenches, you have a good chance of things going awry. For example, the customer may ask that you have

more secure communications in the form of packet radio. You didn't get the word and are on scene with your very often overheard VHF voice radio. The customer isn't happy that messages are being heard on every radio at the event. You did your best, but the customer's expectations were not met because you didn't get the correct rules of engagement. The bottom line is the customer is not happy even though you did provide communications.

I would also add that your group's members must clearly understand that it's the customer that drives the involvement. One challenge of volunteers is our own perception that we know more than the customer when it comes to communications. We may or may not, but that's irrelevant. During a hospital exercise, the requirement was for operators to use low-power UHF portable radios. The group collectively decided the hospital coordinator did not understand communications and we needed to use mobiles at higher power and use some gain antennas. Without asking the customer, we participated with equipment contrary to what was asked.

We were wrong! The hospital did indeed want low-power UHF only! Had we asked we'd have learned the reasoning. Had we asked we would have had to set up some relay stations and supported the exercise with different equipment. What we demonstrated to the hospital was a simple thing: we could not follow instructions.

Finally, honesty is one of the most important attributes we have. If a mistake is made, acknowledge it, vow to improve and move on. Never argue with the customer! As with my 1991 Explorer, I KNEW that I'd not contacted this company. If they'd acknowledged that their letter was simply a marketing ploy or that it was in error, I might have listened to their sales pitch -- even if I had no need of an extended warranty. Because they persisted in being dishonest, I never even gave them a chance.

Years ago, as a high school student, I worked for a large department store, one of two in the town. Our store manager had a firm policy that the customer was always right. I watched as tents were returned at the end of the summer for "defects." I saw people buy ten gallons of custom-mix paint and then return four gallons because they were the "wrong color." Each time, the customer was given a refund. Being young and knowing everything I asked the store manager about his "stupid policy" and set about informing him about how much money he lost.

Kindly, he told me that we may have given back money on one or two tents or even a dozen gallons of paint -- but the markup was such that the store actually lost very little money and the customer went away content and not critical of the store. He was actually a very smart manager and store sales were very high. One day in another store nearby, I heard one man say to a clerk that he was never coming back because the store refused to give him a refund on a defective item. I never heard customers complain about our store policy and we seemed to always have lots of customers spending lots of money.

In later years I discovered the cost of obtaining a customer was very high compared to keeping a customer. Trying to regain a customer who is dissatisfied is very expensive. The lesson was to take care of your current customers.

Years ago a local sheriff was very unhappy with a volunteer group. For years, that group could not even get an audience with the sheriff. Something had happened in the past and the sheriff never forgot. He also told other sheriffs and the group's image was tarnished over events of long ago. In recent years, the sheriff has been replaced and the volunteer group is working with the new sheriff. Things look good and lessons were learned. I was impressed that the volunteers visited with the sheriff and upfront said that if they ever do anything that the sheriff might find objectionable to please let them know so they could take corrective action before feelings and relationships were hurt. It was an open and honest way to let the sheriff know they are willing to please the customer.

Stuff

I was wondering last week why I was so reluctant to get rid of "stuff." I have several portables that are at least 15 years old and had hardly been used. They still

worked, but mostly they sat in the charger, unneeded, with batteries that no longer held a charge. I was using my newer (and smaller and nicer) radios, yet I just couldn't bring myself to dispose of the old gear.

Last weekend I helped a neighbor move. She was a single lady and was moving in with her daughter. I could not believe how much stuff she had. I also noted how much stuff she was throwing away -- and I was sorely tempted to lug some of it home. Being older and smarter and able to be taught by example, I resisted the urge to claim some of the stuff she was tossing. Some of the younger guys

helping in the move gave into the urge and carted some away.

I just sold several of the older portables. I no longer have to worry about buying replacement batteries that will only go bad from sitting in the charger. I have a much less cluttered hobby room. Several newly licensed operators have some functional gear at a low price. The gear I sold wasn't worth much, but I can attest to feeling great about having less stuff. Heck, I might even need to buy a new radio this year to celebrate.

Until next month, best wishes from Salt Lake City!

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SLOPER ANTENNAS

By Juergen A. Weigl, OE5CWL

Single- and Multi-Element Directive Antennas
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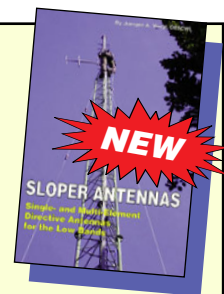
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CONTEST CORNER

CONTEST: ARRL Sweepstakes

DATE & TIME: 2100Z 7 Nov. - 0300Z 9 Nov.

BANDS/MODE: 160-10M CW

POINTS: 2 Pts. per QSO

MULTIPLIERS: ARRL/CRRL sections + VE8/VY1

EXCHANGE: The required exchange consists of: A consecutive serial number; Precedence; "Q" for Single Op QRP (5 Watts output or less); "A" for Single Op Low Power (up to 150 W output); "B" for Single Op High Power (greater than 150 W output); "U" for Single Op Unlimited; "M" for Multi-Op; "S" for School Club; Your Callsign; Check - The last 2 digits of the year of first license for either the operator or the station. The same Check must be used the entire contest. ARRL/RAC Section

ENTRY CATEGORIES: Single op; Single op - QRP; Multi op - single XMTR

ENTRIES: 15 Days ARRL Contest Branch 225 Main St., Newington, CT 06111

Cabrillo (preferred) to: sscw@arrl.org E-mail: contest@arrl.org

Rules at: www.arrl.org/contests/rules/2009/novss.html

CONTEST: IPARC

DATE & TIME: 0600-1000Z & 1400-1800Z 7 Nov.

BANDS/MODE: 80-10M CW

POINTS: 1 Pt non-member QSO's 5 Pts. IPARC member QSO

MULTIPLIERS: DXCC + U.S. States with at least 1 IPA member QSO

EXCHANGE: RS(T) + serial # (Members give IPARC #)

ENTRY CATEGORIES: A = Multi/Single, Multi/Multi, Club or Special Event;

B = Single op/single XMTR

ENTRIES: 31 Dec. Uwe Greggensen, DJ6QQ, Hurststr. 9, D-51654 Gummersbach,

Germany E-mail: dj6qq@darf.de Rules at: www.ipa-rc.de/cont-e.htm

CONTEST: Ukrainian DX

DATE & TIME: 1200Z 7 Nov. - 1159Z 8 Nov.

BANDS/MODE: 160-10M CW/SSB

POINTS: 1 Pt. own country; 2 Pts. same continent; 3 Pts. other continent; 10 Pts. QSO with Ukrainian sta's

MULTIPLIERS: DXCC/WAE counties + Ukrainian oblasts on each band

EXCHANGE: RS(T) + serial # (Ukrainian sta's give RS(T) + Oblast

ENTRY CATEGORIES: Single Op - single band, mixed mode; Single op - all bands,

mixed; Single op - QRP <5 Watts, mixed; Single op - RTTY, all bands;

Multi op - single XMTR, mixed

ENTRIES: 30 Days Ukrainian Contest Club HQ P.O. Box 4850 Zaporozhye, 69118

Ukraine E-mail (Cabrillo): urdx@ham.kiev.ua Web site: www.ucc.zp.ua

CONTEST: IPARC

DATE & TIME: 0600-1000Z & 1400-1800Z 8 Nov.

BANDS/MODE: 80-10M SSB

POINTS: 1 Pt non-member QSO's 5 Pts. IPARC member QSO

MULTIPLIERS: DXCC + U.S. States with at least 1 IPA member QSO

EXCHANGE: RS(T) + serial # (Members give IPARC #)

ENTRY CATEGORIES: A = Multi/Single, Multi/Multi, Club or Special Event;

B = Single op/single XMTR

ENTRIES: 31 Dec. Uwe Greggensen, DJ6QQ, Hurststr. 9, D-51654 Gummersbach,

Germany E-mail: dj6qq@darf.de Rules at: www.ipa-rc.de/cont-e.htm

CONTEST: Kentucky QSO Party

DATE & TIME: 1400Z 14 Nov - 0200Z 15 Nov

BANDS/MODE: 160-6M CW/SSB

POINTS: 1 Pt. SSB, 2 Pts. CW, 500 Pts. QSO with KY4DXA

MULTIPLIERS: KY sta's count States/Provinces/Countries; All others count KY Counties (120 possible)

EXCHANGE: RS(T) + State/Province/Country; KY sta's give County (120 possible)

ENTRIES: 31 December WKDXA, P.O. Box 73, Alvaton, KY 42122

Cabrillo (preferred) logs to: k4cms@aol.com;

Rules at: www.wkdx.com/mainsite/index.php?option=com_content&view=article&id=45:wkdx&catid=35:kyqsorules&Itemid=56

CONTEST: WAE DX

DATE & TIME: 0000Z 14 Nov. - 2359Z 15 Nov.

BANDS/MODE: 80-10M RTTY

POINTS: 1 Pt. per QSO

MULTIPLIERS: WAE Countries

EXCHANGE: RST + serial #

ENTRY CATEGORIES: Single op - Low (<100W); Single op - High (>100W); Multi op

ENTRIES: 30 Days Cabrillo to: waerty@dxhf.darc.de

E-mail: waedc-info@dxhf.darc.de

Web: www.waedc.de Rules at: www.darc.de/referate/dx/fedcw.htm

CONTEST: Japan International DX

DATE & TIME: 0700Z 14 Nov - 1300Z 15 Nov.

BANDS/MODE: 80-10M SSB

POINTS: 1 Pt 40/20/15M; 2 Pts 80 or 10M

MULTIPLIERS: JA Prefectures + JD1 (Maximum of 50)

EXCHANGE: JA's give RST + Prefecture #; all others give RST + CQ Zone

ENTRY CATEGORIES: Single op - single band high or low; Single op - multi-band

high or low; Multi op; Maritime Mobile

ENTRIES: JIDX CW Contest C/O Five-Nine Magazine P.O. Box 59, Kamata Tokyo

144-8691 Japan Rules at: <http://jidx.org/jidxrule-e.html>

CONTEST: OK/OM DX

DATE & TIME: 1200Z 14 Nov. - 1200Z 15 Nov.

BANDS/MODE: 160-10M CW

POINTS: 3 Pts. per QSO with OK/OL/OM sta's

MULTIPLIERS: OK/OL/OM prefixes (WPX rules)

EXCHANGE: RS(T) + serial #; OK/OL/OM sta's give RS(T) + district

ENTRY CATEGORIES: Single op - high (1500W max), all band; Single op - high, sin-

gle band; Single op - low (100W max), all band; Single op - low, single band;

Single op - QRP (<5W), all band only; Multi op - Single XMTR, 1500W max

ENTRIES: 1 Dec. OK-OM DX Contest - CRK P.O. Box 69 113 27 Praha 1 Czech

Republic Cabrillo (preferred) to: okomdx@crk.cz

Rules at: <http://okomdx.crk.cz/g.html>

CONTEST: NAQCC Sprint

DATE & TIME: 0130-0330Z 19 Nov

BANDS/MODE: 80/40/20M CW

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

MULTIPLIERS: States/Provinces/Countries

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

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

ENTRIES: 4 Days Logs submitted online only!

at: www.arm-tek.net/~yoel/sprint_submit_log.html

Autologger available at: <http://naqcc.n4lcd.com/sprintlog.html>

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

CONTEST: Run for the Bacon

DATE & TIME: 0100-0300Z 21 Nov

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.fqrp.com/autolog.php

CONTEST: LZ DX

DATE & TIME: 1200Z 21 Nov. - 1200Z 22 Nov.

BANDS/MODE: 80-10M CW - No WARC bands

POINTS: 1 Pt. QSO same continent; 3 Pts. different continent; 10 Pts. QSO LZ sta's

MULTIPLIERS: ITU Zones + LZ Districts

EXCHANGE: RS(T) + ITU Zone; LZ sta's give RS(T) + district

ENTRY CATEGORIES: Single op - single band; Single op - multi band; Multi op -

multi band, single XMTR

ENTRIES: 30 Days BFRA P.O. Box 830 1000 Sofia Bulgaria Cabrillo (preferred)

logs to: lzdx@yahoo.com or lzdx@bfra.org.

Rules at: <http://lzdx.bfra.org/rulesen.html>

CONTEST: ARRL Sweepstakes

DATE & TIME: 2100Z 21 Nov. - 0300Z 23 Nov.

BANDS/MODE: 160-10M SSB

POINTS: 2 Pts. per QSO

MULTIPLIERS: ARRL/CRRL sections + VE8/VY1

EXCHANGE: The required exchange consists of: A consecutive serial number; Precedence; "Q" for Single Op QRP (5 Watts output or less); "A" for Single Op Low Power (up to 150 W output); "B" for Single Op High Power (greater than 150 W output); "U" for Single Op Unlimited; "M" for Multi-Op; "S" for School Club; Your Callsign; Check - The last 2 digits of the year of first license for either the operator or the station. The same Check must be used the entire contest. ARRL/RAC Section

ENTRY CATEGORIES: Single op; Single op - QRP; Multi op - single XMTR

ENTRIES: 15 Days ARRL Contest Branch 225 Main St., Newington, CT 06111

Cabrillo (preferred) to: ssphone@arrl.org E-mail: contest@arrl.org

Rules at: www.arrl.org/contests/rules/2009/novss.html

CONTEST: CQ WW DX

DATE & TIME: 0000Z 28 Nov. - 2359Z 29 Nov.

BANDS/MODE: 160-10M CW - No WARC bands

POINTS: 3 pts for contacts with another continent, 2pts for contacts between different

countries in N. America, and 1 pt for contacts between different countries on the

same continent outside of N. America

MULTIPLIERS: States/VE call areas/ARRL-WAE countries/CQ zones

EXCHANGE: All stations exchange RST and CQ zone

ENTRY CATEGORIES: Single op - single band (High >100W, Low <100W, QRP

<5W); Single op - multiband (High, Low, QRP); Multi op - multiband; Single op -

assisted (QSO alerting assistance allowed), single or multiband" and "Xtreme (using

technologies that do not qualify one for other categories)

ENTRIES: CQ WW DX Contest 25 Newbridge Road, Hicksville, NY 11801

E-mail: (Cabrillo preferred) - cw@cqww.com

Rules at: www.cq-amateur-radio.com/WWDXCcontestRules%20200973109.pdf

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DX Predictions

NOVEMBER 2009

Maximum usable frequency from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 1934, Middleburg, VA 20118). The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa-Kenya/Nairobi, Asia-Japan/Toyko, Oceania-Australia/Melbourne, Europe-Germany/Frankfurt, and South America-Brazil/Rio de Janerio. Smoothed sunspot number = 2.

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

CENTRAL U.S.A.

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

EAST COAST

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



VE EXAMS

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

p/r pref. = pre-register preferred but w/i OK
p/r = pre-registration only-no w/i

w/i = walk-in only
w/i pref. = w/i preferred to p/r

CITY	DATE	CONTACT	NOTES	CITY	DATE	CONTACT	NOTES
ARIZONA				MISSISSIPPI			
Mesa	3rd Mon	Steve KY7W, 480-804-1469, kj7wk@cox.net	w/i	Harrison County	1st Sat	Don, W5DJW, 228-868-5670, donw5djw@bellsouth.net	w/i ok
Phoenix	4th Sat	Gary Hamman, 602-996-8148, K7GH@arll.net		NEW JERSEY			
ARKANSAS				Bellmawr	3rd Thurs	Diane, N2LCQ, 609-227-6281	p/r
Harrison	2nd Sat	Bob, AJ5C, 870-365-3871, aj5c@cox.net		Roselle	11/28	Gerry, AA2ZJ, 732-283-2795, aa2zj@arll.net	
CALIFORNIA				NEW YORK			
Fresno	11/21	Charles, W6DPD, 559-431-2038	w/i pref.	Bethpage	2nd Tues	Bob, 631-499-2214, w2ilp@optonline.net	p/r
Highland	11/21	Ed, WU6I, 909-864-0155, wu6i@arll.net	p/rw/l ok	Canandaigua	1st Wed	Squaw Island ARC, David A. Foster, 585-398-0216, D1161F@aol.com	w/i
LaVerne	Last Sat	Frank, K6FW, 909-628-8661, k6fw@arll.net	p/r	Canandaigua	1st Wed	David Foster, 585-398-0216, www.siarc.us	w/i
Long Beach	3rd Sat	Louise, N6ELK, 562-429-1355	p/r	Yonkers	11/1	Paul, AC2T, 914-237-5589, w2yrc@hotmail.com, www.yarc.org	w/i ok
Manteca/Tracy	4th Sat	David, N5FDL, 209-835-6893, n5dfl@arll.net	p/r	OHIO			
Mission Viejo	11/16	Ernie Senger, W6ETS, 949-458-2504, w6ets@aoara.org, www.soara.org	p/r pref.	Cincinnati	1st Sat	Dale, KC8HJL, 513-769-0789	p/r pref.
Napa	11/8	Rich Rau, 707-252-6276, ko6rQarll.net	w/i	Independence	11/8	Gary Dewey, NI8Z, 216-642-8705	p/r pref.
Redwood City	11/21	Al, WB6IMX@arll.net, www.amateur-radio.org	w/i	Sandusky	11/17	Luther, N8HC, 419-684-7864, n8hc@arll.net	p/r
Sacramento	Hotline!	916-492-6115, n6na@arll.org		OREGON			
San Francisco	11/22	Dave Gomberg, NESEE, gomberg1@wcf.com		Astoria	Call!	AA7OA, 503-338-3333	p/r
Santa Rosa	Hotline!	Hotline-Recording 707-579-9608	w/i ok	Bend	Weds	Joe, K7SQ, 541-385-3152	p/r
Sebastopol	Hotline!	Recording 707-579-9608		Grant Pass	11/20	Bill Tyner, WX7U, 541-450-2703	w/i
Sunnyvale	11/14	Gordon, W6NW, Sv@amateur-radio.org, www.amateur-radio.org	w/i	Lincoln City	1st Sat	Carl, w7i@arll.net, 503-965-7575	w/i ok
FLORIDA				McMinnville	Call!	Mark, AC7ZQ, 503-843-3580	w/i only
Longwood	4th Sat	James, N4ZKT, 407-333-4245, N4zkt@bellsouth.net		Sisters	Call!	Dave, N7TYO, 541-549-7831	p/r
Melbourne	1st Sat	John, AA8IS@earthlink.net, 321-412-2779	w/i ok	Tigard	Call!	John, KS0F, 503-626-7399	p/r
North Port	Call	Bill Norris, KC7TSG, 941-426-0214	w/i pref.	PENNSYLVANIA			
St. Pete	Call	Mark, NP3R, 727-528-0071	w/i pref.	Erie	3rd Sat	Ron, KB3QBB, 814-833-6829, kb3qbb@arll.com, www.wattsburg-wireless.us	p/r
HAWAII				Pittsburgh	11/14	Bob Benna, N3LWP, 412-366-0488, n3lwp@verizon.net	
Oahu	Call	Lee, KH6BZF, 808-247-0587, 808-551-3494, leewical@aol.com	p/r	PUERTO RICO			
ILLINOIS				San Juan	Last Sat	Hotline: 787-789-4998, prarl@prarl.org	w/i
Bolingbrook	3rd Sat	Dale, W9KHX, 815-723-3332	w/i ok	SOUTH CAROLINA			
Burr Ridge	Any Day	Argonne ARC, W9DS, 630-986-0061	p/r	Charleston	3rd Wed	Robert Johnson, ae4rj@amsat.org; www.qsl.net/wa4usn/	w/i
Lake in the Hills	4th Sat	Jeffrey Dubin, N9MXT, 847-815-9407		VIRGINIA			
Roselle	2nd Tues	Sam, W9SFB, 630-894-0708, w9sfb@aol.com	p/r	Alexandria	2nd Sat	John, WZ4A, 703-971-3905, wz4a@arll.net	w/i
INDIANA				Stafford	Sat	Bart, N3GQ, 540-373-4506, n3gq@arll.net, www.qsl.net/semcomm	p/r
Richmond		Mike Chambers, 765-439-4230, w1idx@arll.net	w/i	WASHINGTON			
South Bend	3rd Mon	Alan, NY9A, 574-232-6883	p/r	Tacoma	2nd Tues	Radio Club of Tacoma, 253-759-2040, www.w7dk.org	
IOWA				Vancouver	Hotline!	CCARC, 360-896-8909	p/r
Ames	11/18	Goerge Oster, NP2N 515-233-3535		WEST VIRGINIA			
Vinton	3rd Thur	Ken, N0EGV, 319-223-5739, Al K0HWE, k0hwe@inav.net	w/i ok	Parkersburg	2nd Mon	Dana Pickens, WV8G, 304-422-6101	w/i, p/r
MASSACHUSETTS				WISCONSIN			
Brookline	2nd Mon	Dick Doherty, KA1TUZ, 617-527-2968, ka1tuz@arll.net, www.barc.org	w/i ok	Racine	1st Sat	Robert, W0WLN, 262-886-8551	w/i pref.
MINNESOTA				Sheboygan	11/7	Art Pahr, K9XJ, 920-876-2370, k9xj@arll.net	w/i, p/r
Apple Valley	2nd Thur	Jim, N0OA, 612-384-7709, N0OA@arll.net	p/r pref.	Tomahawk	Last Sat	Terry, KB9AUP, 715-453-4633, dcollins@newnorth.net	w/i ok

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GEORGIA

SPECIAL EVENT STATION - N5I - November 11th, 1400-2200Z, Honoring Americas Veterans from the grounds of the all new National Infantry Museum & Soldier Center, Fort Benning, Columbus, GA. CW: 7.045, 14.045 or SSB: 7.225, 14.250. QSL or Cert with SASE to Columbus ARC, PO Box 6336, Columbus, GA 31917.

DECEMBER

MARYLAND

SPECIAL EVENT STATION - W2W - Pearl Harbor Remembrance Day December 5th & 6th, 1400-2200Z. ARC of the National Electronics Museum, Baltimore MD. 7.187, 14.241, 7.041, 14.041 MHz. for certificate send QSL and 9x12 SASE (for QSL only, send business-size SASE) to ARCNEEM, Box 1693 MS4015, Baltimore, MD 21203 <<http://k3nem.org/>>

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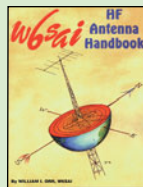


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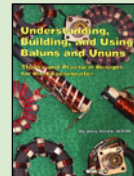


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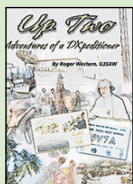
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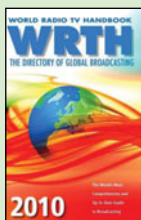


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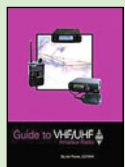
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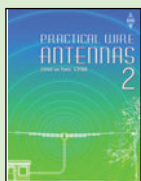
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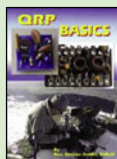
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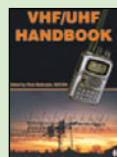
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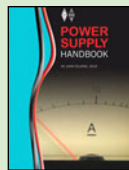
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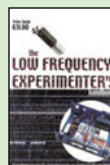
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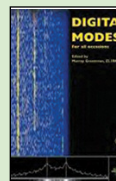
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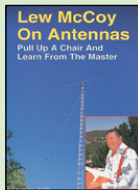
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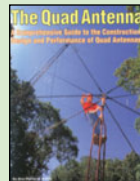


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ARIZONA

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

CALIFORNIA

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

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

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

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

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

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

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

Tri-County ARA (TCARA). Meets 7:30 p.m. 2nd Wed monthly, Administration Building, Brackett Field, La Verne, CA, in the Pilot's Lounge. Different guest speaker every month. Anyone may attend, Ham & non-Ham welcome! Club net Sun., 7:00 p.m., Mt Baldy Rpt. 145.440 MHz -600 PL 136.5; web site: www.tcara.org, e-mail: k6agf@arri.net 12/09

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

COLORADO

Boulder Amateur Radio Club (BARC) Meets 3rd Tues. monthly, 7 p.m., Bld J, Boulder Municipal Airport or Valmont Community Presbyterian Church, 3262 N. 61st St., Boulder, CO. Talk-in: 146.70(-) Info: BARC70@arri.net or www.qsl.net/w0dk/ 11/09

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

CONNECTICUT

Connecticut DX Association, (CTDXA). Meets at ARRL HQ, Newington, CT. 1st Wed. (except Summer) 7:30 p.m. Contact Dan, W1ZTQ; 860/583-1165 11/09

FLORIDA

Englewood ARS. P.O. Box 572 Englewood, FL 34295. Meets 3rd Thurs./monthly 7:30 p.m. Englewood United Methodist Church, 700 E. Dearborn St., Englewood, FL. Rm: Fellowship Hall. Info. Vic Emmelkamp, K4VHX, 941/473-5560 or www.earsradioclub.org. 11/09

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

Fox River Radio League, www.frrl.org. Open meeting 2nd Tue./7:30 p.m. Rasmussen College, 2363 Sequoia Dr., Aurora, IL 60506; 147.21 MHz (+600 kHz, 103.5 Hz), 444.30 MHz (+5 MHz, 114.8 Hz, IRLP), 2M net Tue. 7:30 p.m., except 2nd Tue. P.O. Box 673, Batavia, IL 60510-0673. 11/09

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

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

MASSACHUSETTS

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

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

MICHIGAN

Genesee County Radio Club, Inc. Meets 3rd Tues. of the month during school year. 7:30 p.m. Davison High School, 1250 N. Oak Rd., Davison, MI 48423; www.qsl.net/w8acw/, e-mail: w8acw@arri.net. 10/09

Hiawatha ARA of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m. Marquette County Health Department, R. Schwenke, N8GBA, 906/249-3837; www.qsl.net/k8lod 12/0

NEW YORK

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

OREGON

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

PENNSYLVANIA

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

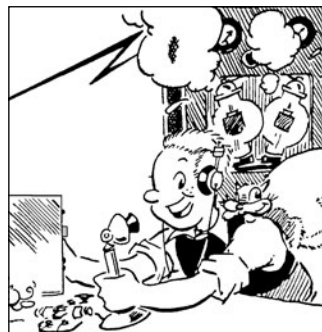
Washington Amateur Communications Radio Club (WACOM) meets 1st Thur./monthly, 7:30 p.m., Washington Co. Bldg., 100 Beau St., Washington, PA 15301. Contact Elmer Plants, N3TIR, 724-484-0207. 145.490. www.wacomarc.org 11/09

WASHINGTON

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

WYOMING

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



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Cable Loss

Kurt N. Sterba

WA9KCU, a loyal reader of Krusty Olde Kurt's Korrekt Kolumn says, "I have enjoyed reading Kurt Sterba's column in *WorldRadio* for years. I just opened my August QST to page 10 and saw an ad for the Hy-Gain self-supporting vertical.

"A middle paragraph states: An optimized balun design allows direct coax feed with a negligible coax loss (typically less than 1/2-dB 60-6 meters and less than 1 dB 160-80 meters with good quality low loss coax).

Please tell me how coax loss can be less from 60-6 meters than from 160-80 meters. I thought coax loss was determined by the coax quality and length, and was always higher as you go up in frequency. Perhaps you can shed some light on how this balun does this?"

Kurt can tell you that the balun is not at fault. He is sure that the engineers at Hy-Gain know that coaxial cable attenuation goes up with frequency. Let's assume that the numbers were accidentally reversed when the ad was made up. So, on 160 and 80 meters, the typical loss would be 1/2-dB and from 60-6 meters it would be 1-dB. Actually, the numbers are meaningless because, as you point out, loss depends on coax quality and length. Kurt will add that it also depends on SWR. These things are not given in the ad, so we can only guess as to what the actual loss is.

We can make an educated guess by looking at the antenna and its construction. It is a simple 43-foot long vertical and has a 4:1 balun between the coax and the antenna. If Kurt were designing it, the balun would be connected as a step-up so the antenna would see 200 ohms. On the higher frequency bands, 60 to 6 meters, the antenna is long enough that it is a halfwave or more long. Since it is fed at the base, we are looking at high impedances, quite likely as much as 2000 ohms. If we fed directly with the coax we would see 2000/50 or 40:1 SWR. The balun cuts this down to a much better figure - 2000/200 or 10:1.

The ad asks us to use "good quality, low-loss coax." Belden 9913 coax meets this description. On the 6-meter band, it has 1-dB loss per 100 feet. That is with 1:1 SWR. However, we have 10:1 SWR. So, we look in our handbook in the chapter on transmission lines and find the handy chart showing the increased loss with SWR. In this case, the increased loss is 1.7 dB for a total loss of 2.7dB per 100 feet. Hy-Gain's ad says 1-dB loss typical. Dividing 100 feet by 2.7 then gives us 37 feet of cable for 1-dB loss. This seems a reasonable length for a backyard installation.

But how about the 80 and 160 meter bands? The antenna is 43 feet long, so on 160 it is about a tenth of a wavelength long,

giving it a radiation resistance of about 3 ohms. The ad suggests a minimum of one radial. This will give you about 40 ohms of ground resistance. Don't do that. The efficiency will be awful. You find that by dividing the radiation resistance by the total resistance. In this case 3 ohms divided by 43 ohms = 7%. 7 watts out for 100 watts in won't get you very far on 160. It will be a little better on 80 meters but not much. You need power on these low frequency bands.

Twelve radials would be a lot better. The ground resistance will be about 10 ohms. Now the efficiency will be 3 ohms divided by 13 ohms = 23%. 23 watts out for 100 watts in is 5 dB better. Still not good, but about as good as you are going to do with this vertical.

As for the cable loss, 9913 cable has .2 dB loss on 160 meters. With just one radial, we have almost a 1:1 SWR so with our 35 feet of cable we'll see .07 dB loss. Negligible. With 12 radials, the SWR goes up to 50/13, about 3.8:1. The cable loss then is about .15-dB. MFJ states that is less than .1 dB. Actually, it's a LOT less. We can conclude that the MFJ numbers are *really* meaningless.

Kurt wants you to note that when the antenna efficiency went up, the cable SWR got worse. This is typical of grounded verticals and a good lesson: Higher SWR is not always bad. Let us go over that once more because it is an important point and not recognized by many operators. Kurt wants you to be sure you get it right. Let us suppose that our antenna has 3 ohms radiation resistance and that we have a very poor ground system with 47 ohms resistance. Total resistance is 50 ohms and we have a perfect match with 1:1 SWR. The antenna efficiency is awful, 3/50 or 6%. 6 watts out for 100 watts in.

Now let us put in 120 radials like the big broadcast stations do. Ground resistance now is less than 1/2 ohm. So, the total resistance is now 3.5 ohms and our efficiency is 3/3.5 or 86%. 86 watts out for 100 watts in. This is an improvement of 11.5 dB. Much much better. However, our SWR now is 50/3.5 or 14:1. With our 37-foot cable, we will have a cable loss of .5 dB. Subtract this and our improvement overall is 11 dB. Higher SWR is not always bad.

Kurt uses a vertical about the same length as this one but runs a horizontal wire from the top out about 50 feet. This raises the radiation resistance and thus the efficiency. But, this would take away some of the advantages pointed out in the ad: Stealth operation (your neighbors will hardly notice it) and the ability to telescope it down for improved operation on the higher bands. In many situations, there is no room for the horizontal wire anyway. Don't worry, you will get out on 160 and 80 if you put in those 12 radials.