NVARC
Nashoba Valley
Amateur Radio Club

SIGNAL

SPECIAL SERVICE CLUB

de N1NC

December 2009 Volume 18 Number 12

This Month's Meeting

This month's meeting program is Homebrew. Bring along those homebrew projects finished or not to show off what you've been up to.

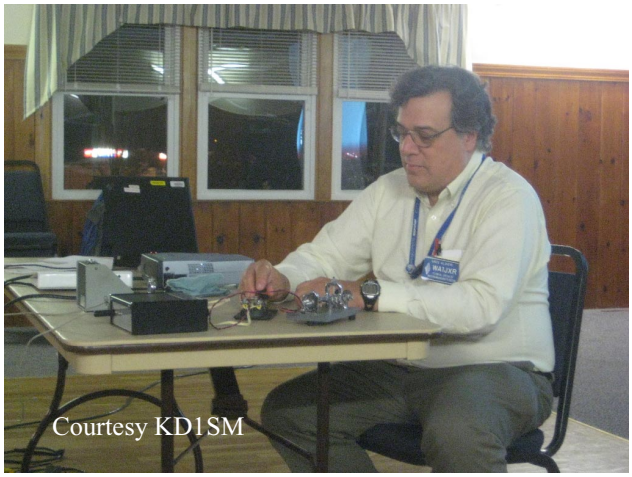
January is Members Short Subjects so we are looking for three or four 5-15 minute presentations to fill the program.

In-Club Recognition Program

The Club Recognition Program is still in effect. Submissions are due by year end. See Skip K1NKR for more information or help.

Follow the membership link on the club homepage for more information.

Last Month's Meeting



Greg WA1JXR demonstrating the use of a straight key

Last month's meeting program was "CW' by Greg WA1JXR. Greg talked about the many aspects of operating CW from signal advantages to the equipment such as straight keys, mechanical keyers, paddles and electronic keyers. Greg also talked about how to learn CW.

After the presentation Greg accepts an NVARC mug.

Wear your badge to the meeting so new members can tell your name and you can introduce yourself to them. It may be worth your while.

November meeting attendees:

Bruce K1BG, Dennis K1LGQ, Leo K1LK, Skip, K1NKR, Tom K1NNJ, Gary K1YTS, Erica KA1LDP, Larry KB1ESR, Phil KB1JKL, Stan KD1LE, Ralph KD1SM, John KK1X, Drew N1CSF, Les N1SV, Peter N1ZRG, Jim N8VIM, Paul NW1U, Bob W1XP, Erik W1ZBT, Greg WA1JXR, Rod WA1TAC

Gasoline Generator Safety

The following article should be of interest to anyone who owns or runs a generator for regular or emergency use. Each year injuries and deaths result from the misuse of gasoline powered generators used to power homes after hurricanes and ice storms. *Stan*

For Safer Emergencies, Give Your Power Generator Some Space

To subdue the steaming heat of hurricanes or to thaw out during a blizzard, gasoline-powered, portable generators are a lifeline during weather emergencies when homes are cut off without electricity. But these generators emit poisonous carbon monoxide—a single generator can produce a hundred times more of the colorless, odorless gas than a modern car's exhaust. New research from the National Institute of Standards and Technology (NIST) shows that to prevent potentially dangerous levels of carbon monoxide, users may need to keep generators farther from the house than previously believed—perhaps as much as 25 feet.

Up to half of the incidents of non-fatal carbon monoxide (CO) poisoning reported in the 2004 and 2005 hurricane seasons involved generators run within 7 feet of the home, according to the U.S. Centers for Disease Control and Prevention (CDC).

Carbon monoxide can enter a house through a number of airflow paths, such as a door or window left open to accommodate the extension cord that brings power from the generator into the house. While some guidance recommends 10 feet from open windows as a safe operating distance, NIST researcher Steven Emmerich says the "safe" operating distance depends on the house, the weather conditions and the unit. A generator's carbon monoxide output is usually higher than an automobile's, he says, because most generators do not have the sophisticated emission controls that cars do.

"People need to be aware that generators are potentially deadly and they need to educate themselves on proper use," Emmerich says. With funding from CDC, NIST researchers are gathering reliable data to support future CDC guidance.

NIST building researchers simulated multiple scenarios of a portable generator operating outside of a one-story house, using both a test structure and two different computer models—the NIST-developed CONTAM indoor air quality model and a computational fluid dynamics model.

The simulations included factors that could be controlled by humans, such as generator location, exhaust direction and window-opening size, and environmental factors such as wind, temperature and house dimensions. In the simulations the generator was placed at various distances from the house and tested under different weather conditions.

"We found that for the house modeled in this study," researcher Leon Wang says, "a generator position 15 feet away from open windows was not far enough to prevent carbon monoxide entry into the house."

Winds perpendicular to the open window resulted in more carbon monoxide entry than winds at an angle, and lower wind speeds generally allowed more carbon monoxide in the house. "Slow, stagnant wind seems to be the worst case because it leads to the carbon monoxide lingering by the windows," Wang explains. Researchers determined that placing the generator outside of the airflow recirculation regions near the open windows reduced carbon monoxide entry.

In the next phase of the study NIST will model a two-story house that researchers believe will interact with the wind differently. NIST researchers also have worked with the Consumer Product Safety Commission on related work. (See: "NIST to Study Hazards of Portable Gasoline-Powered Generators," NIST *Tech Beat*, March 5, 2008.)

The generator study can be downloaded at http://fire.nist.gov/bfrlpubs/build09/PDF/b09009.pdf.

* L. Wang and S.J. Emmerich. *Modeling the Effects of Outdoor Gasoline Powered Generator Use on Indoor Carbon Monoxide Exposures*. (NIST Technical Note 1637,) 2009.

Media Contact: Evelyn Brown, evelyn.brown@nist.gov, (301) 975-5661

Reprinted with permission from the NIST Tech Beat 10/06/09. Tech Beat is a biweekly publication of the National Institute of Standards and Technology.

A sample of articles in this issue; Report on Cowboys Facility Collapse, New Computer Security Guide Can Help Safeguard Your Small Business, New Publication Offers Security Tips for WiMAX Networks, Standards Development Plan for "Smart Grid" Announced. *Stan*

PSLIST

Every event needs communications volunteers

Nothing currently scheduled.

See www.n1nc.org/Events for the latest

Board Meeting

Renewed GM3TCW's honorary membership

Auction proceeds ($922) to be credited to the Community Fund

Auction item IC706 to be offered to the second highest bidder at his bid price with the new info.

Discussion of upcoming meeting presentations. The January will be Members Short Subjects so we need member participation.

Ralph was not present but submitted the Treasurers report for the newsletter.

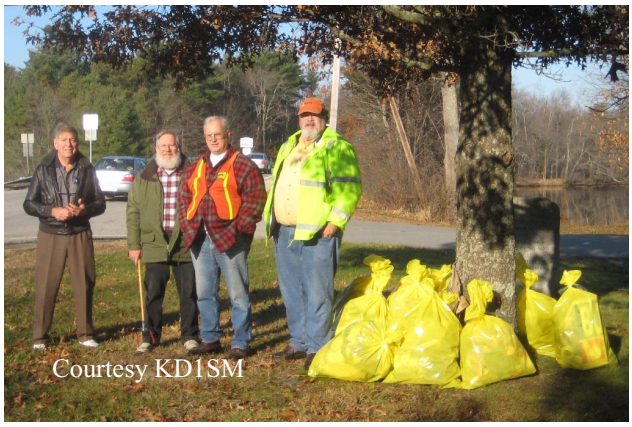
Discussed the results of a survey by the W1 QSL Bureau on the method various clubs use to sort cards and the accuracy they expect.

Discussed Field Day results.

In attendance were Stan KD1LE, Peter N1ZRG, Bob W1XP, Larry KB1ESR, Stan KD1LE and John KK1X.

Adopt A Highway

Our November road cleanup was completed November 21st.

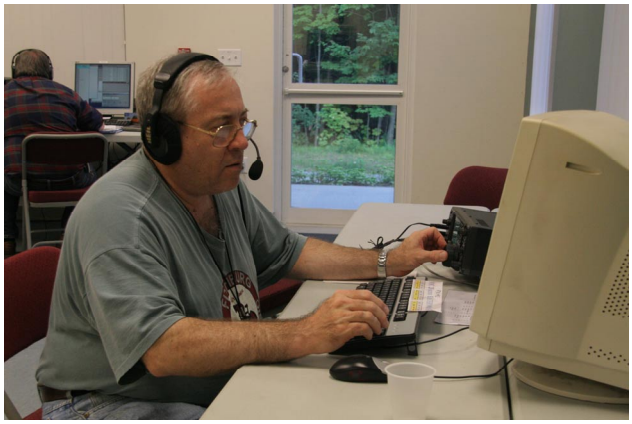


Thanks to Bob W1XP, John KK1X, Earl WR1Y, Ralph KD1SM, and Stan KD1LE who participated.

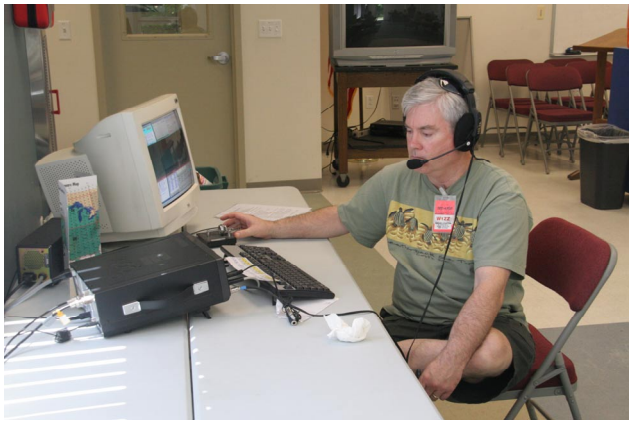
This was our last road clean up for 2009. We will have to decide in the spring if we will continue in the program which resumes in April.

2009 Field Day Results Published

Bruce K1BG, our Field Day Coordinator, reported at the November meeting that the results of the 2009 ARRL Field Day operating event were published in the November issue of QST.



NVARC finished 6th overall in the 2F class of 78 entrants with 1115 QSO's 4842 points which put us in the top 10%. We finished 1st in EMA and New England.



Other 2009 area club scores

Club	Class	QSO's	Points
NVARC	2F	1115	4842
Massasoit ARS	2F	60	1176
Algonquin ARC	3F	836	3748
W1AW	3F	2347	3637
WMA RACES	3F	745	2668
W1ECT WORC	5F	512	2670

For comparison past NVARC scores

Year	Class	QSO's	Points
2008	2A	1461	5230
2007	2A	895	4370
2006	2A	1375	5202
2005	3A	1112	4744
2004	2A	1950	7458
2003	2A	1424	4396

So with all the challenges of trying a new class and location we were still able to put together a very respectable performance. Thanks again to Bruce K1BG for leading this event and Larry KB1ESR for arranging the use of the fire station/EOC and the cooperation of the Groton Fire Department for hanging antenna halyards.

Energy Efficiency Standards for TV's

California has approved energy efficiencies for TV sets which take effect January of 2011. The regulations cover TV's with a screen size of 58 inches and smaller. The new regulation says that TV sets must consume 33% less energy by 2011 and 49% less energy by 2013. The regulations cover LCD, plasma, CRT and rear projection TV's. What triggered the regulations is the fact that in the 1990's residential energy consumption from TV's was 3-4% of household energy use. By 2008 that had risen to 8-10%. It was expected to increase to 18% by 2023. The California Energy Commission says there are already over 1000 TV models that meet the 2011 regulation.

Treasurers Report

Income for November was $43 from the November meeting book raffle, and $10 from PowerPole connector sales. Expenses were $17.60 for newsletter postage leaving a net income of $35.40 for the month. The N1OFX equipment auction proceeds were $922 which the Board has decided to designate to the Community Fund, per past practice for exceptional gifts to the Club.

Current balances:

General fund	$4,149.65
Community fund	$3,771.41

As of 9 December we have 42 members who are current with their dues and 22 renewals outstanding. Please check your renewal status on the roster circulated at the monthly meeting or ask Ralph.

If your ARRL membership is ready for renewal, you can let Ralph mail it in for you and the Club will get a commission. If you're interested in joining the ARRL and do so through Ralph the Club will get a bigger commission. ARRL membership checks should be made payable to NVARC so that our commission can be deducted before we forward your membership to Newington.

Ralph KD1SM

ARRL Letter

Advocacy: ARRL CEO, General Counsel Present ARRL's Stance on BPL to FCC Commissioners

ARRL Chief Executive Officer David Sumner, K1ZZ, and General Counsel Chris Imlay, W3KD, made the rounds of the five FCC Commissioners' offices during November to acquaint them with the ARRL's position on the regulation of interference from Broadband over Power Lines (BPL) systems. The meetings were conducted in accordance with the rules governing ex parte communications in pending rulemaking proceedings, in this case the Further Notice of Proposed Rule Making (FNPRM) in ET Docket No. 04-37.

Operating: From One End of HF to the Other: The ARRL 160 Meter and 10 Meter Contests

Get on the air and have some fun!

Both MF and HF offer a lot of breathing room for all interests in Amateur Radio. As the 2009-2010 Contest Season continues, two single-band events in December will highlight the magic of the opposite ends of the shortwave spectrum: the ARRL 160 Meter Contest (2200 UTC Friday, December 4 through 1559 UTC Sunday, December 6) and the ARRL 10 Meter Contest (0000 UTC Saturday, December 12 through 2359 UTC Sunday, December 13).

Operating: ARRL's Logbook of The World Reaches New Milestones

To date, more than 30,000 hams have entered more than 250 million QSOs into Logbook of The World (LoTW), the ARRL's online logging program. At this time last year, 22,959 hams had made just more than 192 million QSOs, marking an upswing in both users and QSOs of about 24 percent. The LoTW system is a repository of log records submitted by amateurs from around the world. When both participants in a QSO submit matching QSO records to LoTW, the result is a QSL that can be used for

ARRL award credit. While US amateurs do not need to be members of the ARRL to use LoTW, only members can use LoTW to apply for ARRL awards, such as DXCC and Worked All States (WAS). Some awards, like the Triple Play Award, only use LoTW credits instead of traditional QSL cards (foreign amateurs do not need to be ARRL members to apply for ARRL awards). Read more here.

The Doctor Is IN: The Fun -- and Challenges -- of Topband

By ARRL News Editor S. Khrystyne Keane, K1SFA

I have been fascinated with the 160 meter band even before I upgraded to General back in 2007 -- it amazes me that amateurs can use radio waves that stretch out that long. I've also been working on getting my CW skills up to speed -- while I can send fairly quickly and cleanly, I know that my receiving skills need some work. The idea of combining my favorite band with a new (for me) mode of operating -- in a contest, no less -- is very titillating, to say the least. Can you tell I'm itching for the ARRL 160 Meter Contest to get here now?

So the other day, the Doctor and I got to talking (his clinic is right next to my office, so we have quite a few conversations about Amateur Radio during his office hours). I asked him if he knew why the 160 meter band has what some might consider "special properties" during the North American winter. And when I get on the air this weekend for the contest, is there anything I should watch out for?

The Doctor -- who was in between patients at the time -- told me that atmospheric noise tends to increase with decreasing frequency -- since there is generally much less noise in winter, 160 meters is much more usable in the colder months. Our current position in the sunspot cycle makes the maximum usable frequency quite low on most days. The combination of these factors makes 160 a great spot -- just in time for the upcoming contest.

The key challenge, he told me -- and perhaps the most important factor for success on topband -- is antenna design and deployment. Since horizontal antennas need to be hundreds of feet high to provide useful low angle performance, the successful 160 meter DX operator will use vertical antennas. While arrays of full size 1/4 wave (126 feet) verticals are feasible for some, most use shortened antennas, either as a single element or in multi-element arrays with reasonable success. Recent QST articles have provided a variety of designs of such elements, some almost invisible. Improved reception can be obtained using special receive antennas that reduce noise pickup faster than reducing signal reception. The resulting weak signal generally has a higher signal-to-noise ratio than that from the transmitting antenna.

Wow! If you haven't tried 160, a contest like the ARRL 160 Meter Contest provides an abundance of signals to let you know what your station can do. Do you have a question or a problem for the Doctor? Send your questions via e-mail or to "The Doctor," ARRL, 225 Main St, Newington, CT 06111 (no phone calls, please). Look for "The Doctor Is IN" every month in QST, the official journal of the ARRL.
Coming up in QST : Look for the January Issue of QST to Arrive Soon

The January issue of QST -- our first-ever DIY edition -- is jam-packed with all sorts of news and information that today's Amateur Radio operator needs. With a focus on "do it yourself" projects that you can build in as little as a couple of days (or even an afternoon!), the January issue also includes product reviews, experiments, public service and on-the-air activities -- something for just about everyone. Click here to discover what's in store for you in the January issue of QST, the official journal of the ARRL.

ARRL in Action: What Have We Been Up to Lately?

This feature -- including convenient Web links to useful information -- is a concise monthly update of some of the things ARRL is doing on behalf of its members, such as holding elections for the two positions on the ARRL Board of Directors and 10 Section Managers, providing support for affected Sections during Tropical Storm Ida, conducting a frequency measuring test, sending out certificates and plaques for various ARRL contests and more. This installment covers the month of November.

Now You Know!: A Brief History of Modern Day 160 Meters

By ARRL News Editor S. Khrystyne Keane, K1SFA

This year marks the 40th anniversary of the ARRL 160 Meter Contest. In 1970, the ARRL Board of Directors authorized this new event at their meeting in May. According to the announcement that appeared in the October 1970 edition of QST, the ARRL Contest Advisory Committee (CAC) and "numerous 'top banders'" provided the guidance for the contest; based on their recommendations, they created its initial format.

This chart, found on page 147 of The Radio Amateur's License Manual: A New and Complete Study Guide (published by the ARRL in 1979) shows each state's power limitations by 25 kHz segments for day and night for 160 meters.

Those licensed prior to May 1981 can surely remember the limitations on 160 meters due to the LORAN-A (Long Range Aid to Navigation) stations. These stations -- developed during World War II -- used signals that were transmitted on frequencies in and around our present-day 160 meter band. The LORAN-A stations were responsible for reduced Amateur Radio operations -- including frequency and power limitations -- on 160 meters in the United States.

If you look at license manuals from this time, you will find a chart (Part 97.61, Authorized Frequencies and Emissions) that dictated how much power amateurs could use on topband. This was broken up into band segments of 25 kHz, going from 1800 kHz up to 2000 kHz. In band segments of 25 kHz, it lists each US state and dictated how much power could be used during the day and during the night. For example, amateurs in Connecticut on 1844 kHz could use 100 W during the day, but had to go down to 25 W at night; Connecticut hams were not even allowed on during the day or night between 1850-1975 kHz! Conversely, Oklahoma hams had daytime topband privileges of 1000 W and could use 200 W at night on 1800-1825 kHz.

"Mr Top Band" Stew Perry, W1BB, devoted much of his life to demonstrating what was possible 160 meters, receiving DXCC #1 for 160 on November 1, 1976. Through his W1BB 160 meter bulletins -- which he circulated to others for free -- he encouraged interest in the band until his death in 1990. Click here to read more about Stew and 160 meters.

On May 21, 1981, US amateurs got some good news when the FCC lifted most of the restrictions on 1800-1900 kHz: For the first time, kilowatt powers were authorized for both daytime and nighttime use as the LORAN-A stations were being phased out. In 1979, the Coast Guard began replacing the LORAN-A stations with LORAN-C stations. These newer stations operate on 100 kHz, enabling the restrictions on 160 meters due to LORAN functions to be dropped.

Most amateur transceivers didn't even begin to include 160 meters until the influx of Japanese imports began in the 1970s. As a result of that -- as well as the elimination of the HF LORAN system -- 160 meters has grown in popularity over the past couple of decades. Now in its 40th year, the ARRL 160 Meter Contest is still growing. From the first running in 1970 with 270 logs submitted, to 2008 with 1280 logs submitted, more amateurs are becoming fascinated with all that topband has to offer. If you've never been on 160 before, try making a few contacts. If you're a topband veteran, this is the chance to strut your stuff. For more information on 160 meters, check out DXing on the Edge: The Thrill of 160 Meters by Jeff Briggs K1ZM. Now you know!

Regulatory: FCC Looks to Revise, Clarify Vanity Call Sign Rules

In the NPRM, the FCC proposes to amend their rules to reflect existing procedures to the vanity call sign program. In addition, Amateur Radio clubs would be limited to only one vanity call sign; clubs that currently hold more than one call sign will not be able to obtain any more call signs, but will be able to renew or modify their existing station grants.

On Wednesday, November 25, the FCC issued a Notice of Proposed Rule Making (NPRM) -- WT Docket No. 09-209 -- seeking to amend the Commission's Amateur Radio Service rules to clarify certain rules and codify existing procedures governing the vanity call sign system, as well as revise certain rules applicable to club stations.

According to the FCC, almost 80,000 licensees have replaced their sequentially issued Amateur Radio call signs with a vanity call sign since the program began in 1996. When the program began, the Commission established what they called "the broad outlines" of the vanity call sign system, concluding that call signs generally should not be available for reassignment for two years following the death of a licensee, or expiration or termination of the license for that call sign. In doing so, the Commission made exceptions for former holders of the call sign, close relatives of a deceased former holder and club stations of which a deceased former holder was a member.

The Commission did not, however, specify all of the procedures governing the vanity call sign system, but indicated that the procedures "would be set out in the Public Notices announcing 'starting gates' for the groups receiving initial priority and that the procedures would be adjusted from gate to gate as experience dictated." The procedures announced in the Public Notices announcing the gates are still in effect, but they are not set forth in the Commission's Rules. The NPRM states that the FCC "now believe[s] that certain provisions should be codified in our rules, and others added, so that the vanity call sign system will be fair, equitable and transparent to all amateur service licensees. The Commission also decided in the Vanity Report and Order [issued in

1996] to resume issuing new club station licenses. We believe that certain rule changes to the club station licensing rules may be appropriate."

The comment period for WT Docket No. 09-209 will extend for 60 days after it is published in the Federal Register. Historically, items appear in the Federal Register approximately 7-10 days after they appear on the FCC Web site. Reply comments can be made up to 75 days after publication in the Federal Register.

Amateur Radio and Technology: ARRL, McSnyder Software Team Up to Provide iTunes Apps

This screen shot shows the ARRL General Exam prep software, published by McSnyder. All three versions -- Technician, General and Extra -- are available for the Apple iPhone and iPod Touch and can be purchased on iTunes.

ARRL is pleased to announce the availability of a new suite of Amateur Radio mobile software -- designed specifically for use with the Apple's iPhone and iPod Touch. The applications -- or "apps" -- are named ARRL Technician, ARRL General and ARRL Extra and function as an electronic version of practice exam flash cards. Amateur Radio exam candidates can use the applications as a study companion to the ARRL license manuals and classroom instruction. The apps include all the possible questions and answers that will be on each of the license tests. Users can flag questions that need more review, segment questions for study by sub-element, or even study the questions in a random order. The ARRL apps are produced and sold by McSnyder Software who has partnered with ARRL to provide the iPhone app series. McSnyder has also produced study applications for other organizations -- including exam preparation software for standardized educational testing in Texas, as well as US Citizenship immigration testing. "We are excited to introduce Amateur Radio and ARRL into the rapidly expanding mobile and portable technology arena," said ARRL Marketing Manager Bob Inderbitzen, NQ1R. "Not only do these applications demonstrate ARRL's commitment to users of these popular devices, the software helps promote Amateur Radio outside of our traditional publication channels." The ARRL apps are available for $1.99 each on Apple's iTunes "App Store."

Now You Know!: The ARRL Lab

By ARRL News Editor S. Khrystyne Keane, K1SFA

The hams who work in the ARRL Lab -- Ed Hare, W1RFI; Mike Gruber, W1MG; Zack Lau, W1VT, and Bob Allison, WB1GCM -- receive more than 100 calls each week, requesting assistance. I know that whenever I venture into the Lab, rife with deep, dark secrets of the Amateur Radio world, one, if not all four of these guys are either on the phone or on the computer, answering questions posed to them by members.

One afternoon, I wandered down to the Lab, and asked Zack, Mike and Bob, "What is the most common question you guys receive from our members?" Zack quickly answered: "They want to know what kind of radio to buy." Now, no one here at League Headquarters can tell you which radio to buy, but Zack explained to me how he walks through a question set with the caller: What do you want to do with the radio? Do you want to get on HF, or are you interested in emergency communications or just ragchewing on your local repeater? How much room do you have to set up a station? How much money is in your budget for a new rig? Once the caller answers these questions, Zack guides them toward certain classes of radios, giving the caller a narrower field to look at. He also suggests that they take a look at the ARRL online publication, Choosing a Ham Radio, as well as the Technical Information Service (TIS) section on the ARRL Web site.

The next most popular questions (in order) are:

* What kind of antenna should I get?
* When are the sunspots coming back?
* Why can't I get on HF?

So, even if you're an experienced ham who has seen just about everything, or if you just got your Technician license in the mail (or, like me, you're somewhere in between), and you have a technical question that you just can't seem to figure out the answer to, try calling on the ARRL Lab -- they just might be able to help you figure it out. Now you know!

Amateur Radio in Space: New Antennas Installed on ISS

Watch astronaut Mike Foreman install the 2 meter/70 cm ARISS antenna in this NASA video that highlights the second EVA of STS-129. The antenna installation begins at marker 9:46 and goes until 15:14. [Video courtesy of NASA]

On Saturday, November 21, astronauts Mike Foreman and Randy Bresnik completed the second EVA (extra-vehicular activity) -- NASA's term for a spacewalk -- of their mission. While on the 6 hour, 8 minute EVA, Foreman installed the Amateur Radio on the International Space Station (ARISS) antennas for 2 meters and 70 cm on the Columbus module.

NASA ISS Ham Radio Project Engineer Kenneth Ransom, N5VHO, told the ARRL that this new antenna -- along with another VHF antenna -- was developed by ARISS in cooperation with the European Space Agency (ESA) to support an experiment involving the maritime Automatic Identification System (AIS). "Both antennas were installed on the Earth-facing starboard edge of the Columbus module," he explained. "The AIS antenna is forward and the ARISS antenna is aft. The ARISS team is planning to migrate some stowed Amateur Radio gear to take advantage of the new antenna." Frequencies available for transmission to and from Columbus will be 2 meters, 70 centimeters and 13 cm. To start, two radios for 2 meters and 70 cm that don't see much use on the ISS will be moved and installed in Columbus . The space shuttle Discovery is expected to return to Earth on Friday, November 27 and will bring Nicole Stott, KE5GJN, back from her stay on the ISS.

Advocacy: End in Sight for "Third Battle of Bull Run"?

ARRL Chief Executive Officer David Sumner, K1ZZ, once termed the battle of Broadband over Power Lines (BPL) in Manassas, Virginia as the "Third Battle of Bull Run." While the war against harmful interference to Amateur Radio via BPL is not yet over, the battle in Manassas might soon be coming to an end.

In a Special Meeting on Monday, November 16 of the Manassas City Council, the Council voted "To allow the [City of Manassas] Utility Commission to make a recommendation to the [Manassas] City Manager as part of the FY 2011 Budget regarding the decision to continue offering Internet service; additionally, staff was instructed to discontinue all marketing and advertising of Internet service." This motion passed 4-2.

At the meeting, Manassas Director of Utilities Michael Moon told the Council that "it is not cost-effective to continue the internet service on the Main.net BPL communication system as a stand-alone cost center" and that the City "need[s] to make the decision for internet service in the context of what communication system will be used for the City's AMI [Advanced Metering Infrastructure]."

Hints & Kinks : PL-259 Connector Tool for Coax Cables

Use a step drill and ream out the female end.

Tired of using pliers to screw on the PL-259 connectors when you are preparing cables? Pliers always seem to do some damage by the amount of force this task requires. I use an inexpensive 1/2 inch PVC female to male coupler. Simply use a step drill and ream out the female end (see the arrow in the photo). This works for most half inch coaxial cables. PL-259s do vary in diameter. Be sure to measure yours before you ream out the PVC adapter. It will not take a lot of reaming for the connector to fit snugly. The outer part of the PL-259 that fits into the connector is 0.55 inch diameter. This makes a secure fit. If you wear out the adapter, purchase another, as they are inexpensive. This works for me. -- 73, Paul Marsha, K4AVU, 200 Garden Trail Ln, Lexington, SC 29072-7341

Now You Know!: It's All Greek to Me

Ask any high school physics student and they'll tell you that electrons govern pretty much everything we do. We call electrons in motion an electrical current, and those radio waves that we hams are so fond of are the result of high frequency electrons traveling in our antenna conductors. Think of a 40 meter wave as an accidental tourist who wants to go somewhere (somewhere nice and warm, maybe a rare DX station). But how to get there? It needs some mode of transport -- think of electrons as the transport providers.

We use our transmitters to move the electrons in our antennas to-and-fro to produce radio waves, hopefully to that rare DX destination. When the radio waves get there, they set electrons in another antenna in motion. That current -- electrons in motion -- is amplified and detected at the receiving location and a QSO is made.

But why do we call them electrons? The ancient Greeks noticed that amber attracted small objects when rubbed with fur; apart from lightning, this phenomenon is thought to be man's earliest known experience of electricity. Back in the year 1600, the English physician William Gilbert -- in his treatise De Magnete -- coined the New Latin term electricus to refer to this property of attracting small objects after being rubbed. Both electric and electricity are derived from the Latin electrum, which came from the Greek word (elektron) for amber. Now you know!

2009 Flea Markets/Conventions

February
13 Algonquin ARC Hamfest, Marlboro

March
20 ECARA Pomfret CT

April
18 MIT
30 NEARfest, Deerfield NH

May
16 MIT

August
27-29 ARRL NE Convention, Boxborough

Advertisements

Tell them you saw it in the Signal. Advertisers should contact the NVARC Treasurer for information.

Upcoming Contests

December:

ARRL 160m 2200z 112/4 – 1600z 12/6, ARRL 10m 0000z 12/12 – 2400z 12/13, Stew Perry Topband Challenge 1500z 12/26 – 1500z 12/27.

For further info on these and other contests refer to; http://www.hornucopia.com/contestcal/index.html.

NVARC

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http://www.n1nc.org/

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Vice President: Peter Nordberg N1ZRG
Secretary: John Griswold KK1X
Treasurer: Ralph Swick KD1SM
Board Members:
Bob Reif: W1XP 2007-2010
Skip Youngberg K1NKR 2008-2011
Joel Magid W1JMM 2009-2012

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Property Master: John Griswold KK1X
N1NC Trustee: Bruce Blain K1BG
Meetings are held on the 3rd Thursday of the month
7:30 p.m. - Pepperell Community Ctr.
Talk-in 146.490 simplex
442.900 + 100Hz Repeater battery power
147.345 + 100 Hz Repeater
53.890 – 100Hz Repeater battery power
This newsletter is published monthly. Submissions, corrections and inquiries should be directed to the newsletter editor. Articles and graphics in most IBM-PC formats are OK.

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