



SIGNAL



November 1999 Volume 8 Number 11

This Months Meeting

The speaker for the November meeting is the ARRL Division Vice Director Michael Raisbeck K1TWF.

If you have a show-and-tell type of thing or a story you can share bring them along. Local content is encouraged for every meeting.

Last Month's Meeting

Last month Ralph and Stan talked about their adventures in Search and Rescue and what it means to get involved with a SAR organization. They covered many of the issues surrounding search operations.

Future Meetings

The December meeting will be Homebrew Nite. We would like to see lots of examples of what people are doing. If it is too large bring a picture.

If anyone has any suggested topics or speakers that they would like to see at future meetings let us know...

RACES and Y2K

The November RACES drill messages contained two pieces of information that may be of interest. The first one is that on November 29th there will be a RACES Operators meeting at Area 1 HQ in Tewksbury to discuss Y2K RACES operations. Secondly, Area 1 HQ will be providing RACES support on 12/31/99 on the 146.640 Waltham repeater after 1800 hours EST. Check in for more information. The Area 1 callsign is WC1ABL.

NVARC FoxFinder

Although I haven't seen the MMRA newsletter Ralph and I got advanced copy of an article that was to go into this months edition on the Fox-Finder. It was a positive review on our device.

A few additional FoxFinder kits have been sold. So far word-of-mouth has been the most effective means to promote the device. So, if you know someone that 'hunts' let them know about our great little device. We can also email them a one page document with a description.

The cost of the kit is \$59.95 plus \$5.00 shipping and handling. The kit can be ordered by sending your order to NVARC, P.O. Box 900, Pepperell, MA., 01463. Allow 4 to 6 weeks for delivery.

NVARC Public Service

In the last month members participated in a variety of public service activities.

Many members supported the Groton Cross Country Race. I don't have a list of participants but from memory (poor at best) the following members helped out; Bob W1XP, Karen KA1JVU, Wolf KA1VOU, Stan KD1LE, Erik KA1RV (NCS and coordinator), and Herm KE1EC. There were others from outside the club that I cannot recall.

Stan KD1LE supported the Jimmy Fund Marathon Walk and three callouts by the State Police for missing person searches.

Ralph KD1SM supported the Head of the Charles Regatta.

NVARC FoxBox

With the reduced daylight and the change of the clocks it is more difficult to put the FoxBox out on weekdays. We will be putting it out on Saturday mornings (earlier if possible) and picking it up Sunday nights. We will continue as long as the weather holds.

Local Activities

Last fall Ben KB1FJ moved from Pepperell to Shirley. A team of club members took down his antennas and fifty-foot tower. Now after collecting additional tower sections and parts the process has been reversed. The following pictures show various activities at Ben's new QTH as the once fifty-foot tower grows to one hundred feet. The first day forty feet of tower and guys were erected. The first picture is Ralph KD1SM working on the



top. The second day we put up sixty feet of tower bringing the tower to its final one hundred foot height. The next picture is Ralph and Stan struggling to make two of those ornery tower sections fit together. On the third day we straightened the tower, tensioned the guys, mounted the mast and

UHF/VHF antenna and pulleys and lanyards for HF wires. The crew in this project were Ben KB1FJ, Wolf KA1VOU, Dave N1MNX, Ralph KD1SM, Bob W1XP, Stan KD1LE.



The following photos are more of a guy thing...



Here Bob W1XP is really getting into tightening this guy.



Now that Tiny's is open again our Saturday morning breakfast meetings have returned there. We meet at eight AM for breakfast in the back dining area. All are welcome. Breakfast usually breaks up shortly after nine. So if you can get yourself out of bed why not stop in. Breakfast chatter can cover most any subject but often has a thread from the last meeting on some new antenna design or other on-going project. The breakfast also tends to be a jumping off point for fox hunts and projects such as tower work.

Here is the waitress taking orders from the smiling group.



There are all sorts of maintenance jobs required to keep the repeaters in good repair and they aren't all technically challenging. Early this Fall a group of club members headed up to the repeater site after breakfast to paint the repeater building. The members who helped out were; Bob W1XP, Karen KA1JVU, Craig N1ABY, Stan KD1LE, Wolf KA1VOU, and Dave N1MNX. We had a nice picnic lunch, delivered by Karen, on the mowed 'lawn'. We finished up shortly afterwards.



As you can see from the pictures the grounds maintenance over the past year has cleaned up the area and pushed the woods and poison ivy back from the repeater building and guy wire runs.



This year many things were accomplished. Some of them took several days to complete. We trimmed trees and branches, adjusted guy wires, replaced power wiring to the six meter repeater, painted the building, and performed general grounds maintenance. This is in addition to the regular tweaking necessary to keep the repeaters running properly.

Thanks to everyone who pitches in to keep the repeaters running. Stan

From the ARRL Newsletter

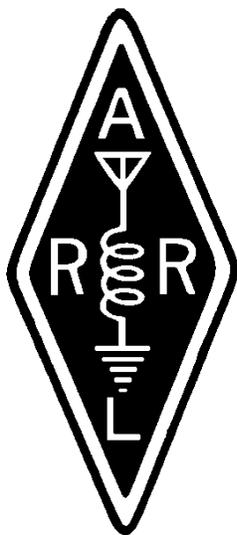
"BUZZ SAWS" ABOUND ON HF

"The HF buzz saw is dead; long live the HF buzz saw!" That might be the cry from the crowd these days as various buzzing intruders have been showing up with some regularity on HF. Sometimes, though, it's hard to distinguish one intruder from the other on the basis of anecdotal reports from amateurs.

Recent reports of the so-called 125-Hz "buzz saw" intruder on the 80-meter band are a case in point. The intruder—heard primarily in the US north-

east—had plagued amateurs as well as an aeronautical weather station just below 80. In the wake of protests from amateurs and coordination between the ARRL and Radio Amateurs of Canada, the transmissions—determined to come from two HF surface wave radar facilities in Newfoundland—moved off the amateur band. The signal has not been heard on 80 meters since early October.

IARU Region 2 Monitoring System Coordinator Martin Potter, VE3OAT, credited ARRL and RAC assistance in getting the HF SWR systems moved off the amateur bands. The HF surface wave radar sites in Newfoundland are a joint project of Canada's Department of National Defence and



Canadian industry. Canadian officials see the technology as playing a role in maintaining Canada's territorial sovereignty as well as for search-and-rescue operations and to assist in combating illegal immigration and drug smuggling.

Responding to the initial "buzz saw" reports, amateurs in the US and elsewhere alerted the ARRL Monitoring System to a plethora of signals they claimed

were the now-infamous intruder. It's now clear, however, that a similar mystery visitor on 40 meters is not coming from the Newfoundland HF SWR facilities. "Although a number of additional reports of buzz-like interference were received from the western USA and elsewhere, none could be confirmed as due to the same signal," Potter said. The signal has been widely reported in Region 1.

ARRL member Dave Bowker, K1FK, in extreme northern Maine was the first to report—and graph—both the "original" 80-meter buzz saw as well as the more-recent 40-meter signal. "Although it sounds similar, it has three distinctly different characteristics," he said. The signal's sidebands extend 7 kHz either side and "it is a frequency hopper, moving randomly in time and frequency steps."

Steve Yates, AA5TB, in Fort Worth, Texas, also has monitored, graphed and recorded the 40-meter signal, and his observations are consistent with Bowker's. "The transmissions would jump frequencies every few minutes but not at regular intervals," he says. He reports measuring the different transmission center frequencies at about 7020, 7040, 7050, 7070, 7080 and 7090 kHz, and believes the signals came from the same transmitter. Yates has posted information about this and other intruders at <http://home.swbell.net/aa5tb/>.

The IARU Region 2 Monitoring System now refers to the 40-meter intruder as an "unusual jammer," but concedes, "If the signal is truly a jammer, it is not clear who or what the target is." Potter says the signal is modulated by strong harmonics of 50 Hz and 100 Hz and seems to be associated with a "wobble" or "bubble" jammer on the same frequencies.

Another "buzzer" on 3795 kHz has been reported to the ARRL Monitoring System from hams in various parts of the US including Rich Chatelain, K7ZV, in California, and Bill Avery, K6GNX, in Nevada. Both agree that the signal appears to be coming from somewhere along the Utah-Nevada border. "It transmits for 80 seconds every five minutes. It is approximately 20 kHz wide," Avery said.

Potter says the 3795 kHz signal is worthy of further investigation.

Additional reports and observations are welcome to ARRL Monitoring System Administrator Tom Hogerty, KC1J, thogerty@arrl.org.

MISSISSIPPI HAM AWAITS COURT DECISION IN RFI CASE

A Mississippi ham arrested for interfering with his neighbors' telephones is awaiting a decision on his request to throw out the complaint on the grounds that the state court has no jurisdiction in the matter. ARRL member Bennie Stewart, KJ6TY, of Meridian, was arrested and charged September 10 after a neighbor filed a complaint with the Lauderdale County Justice Court.

Stewart, a ham for 12 years, appeared in court October 26. He says his attorney, Felecia Perkins, filed a request to dismiss the complaint, brought under a Mississippi law that makes it illegal to "intentionally obstruct, injure, break or destroy, or in any manner interrupt any telegraph or telephone

line or communication thereon between any two points." Stewart maintains that only the FCC has jurisdiction, and his station is operating properly.

The ARRL has provided legal defense assistance to Stewart's attorney. The case has been continued while the court mulls its decision. If convicted, Stewart faces a fine of up to \$500, six months in jail, or both.

"It should have never gotten to this point in the first place," Stewart said, adding that he's tried to work with his neighbors regarding telephone interference ever since the first complaints arose three or four years ago. "I put myself on a schedule," he said, explaining that he operates on 40, 20, and 10 meters only on weekday mornings. He says he never operates on weekends, only runs 100 W, and no longer owns a linear amplifier.

"The problem is not here," he says of his station.

A retired professional photographer, the 60-year-old Stewart is confined to a wheelchair. He described his arrest—which he says took place in front of his three-year-old granddaughter—as "humiliating."

Stewart says he expects the court to rule on the case very soon.

CQ VHF, CQ, MAGAZINES TO MERGE

CQ VHF magazine will end publication at year's end and be merged into an expanded CQ magazine. That announcement came this week from CQ Publisher Richard Ross, K2MGA. The merger takes effect with the January 2000 issue.

CQ says factors in the decision included its own survey results showing that a majority of CQ VHF readers also are active on HF; the inclusion of one or more VHF/UHF bands in many new HF radios; and the forthcoming FCC restructuring decision that is widely expected to make broad HF privileges more easily accessible to current Technician and Tech Plus class hams.

"The line between HF and VHF has been forever blurred, if not erased," said Rich Moseson, W2VU, who edits both magazines. "Clearly, the time for a separate VHF magazine is past."

A reader survey—conducted in the August 1999 issue of CQ VHF and published on page 32 of the November issue—revealed that 62% of CQ VHF

readers have at least some HF operating privileges, and that of that group, more than two-thirds--69%--are active on both HF and VHF. In addition, 46% said HF operating is an important part of their overall ham operating,

Starting in January 2000, CQ will be expanded by 32 pages to accommodate increased VHF coverage. Current CQ VHF subscribers will have their subscriptions transferred to CQ, while those who subscribe to both magazines will have their CQ subscriptions extended by the number of remaining issues. Additional details will be published in the December issues of CQ VHF and CQ.

CQ and CQ VHF magazines are published by CQ Communications Inc of Hicksville, New York, which also publishes CQ Contest, Communications Quarterly, Popular Communications and Electronic Servicing & Technology magazines. For more information, contact Rich Moseson, W2VU, or Richard Ross, K2MGA, 516-681-2922.—CQ Publications news release

FCC approves test reimbursement fee

The FCC has announced that the maximum Amateur Radio examination fee reimbursement that Volunteer Examiners and Volunteer Examiner Coordinators can collect during calendar year 2000 is \$6.66. The ARRL/VEC has set its 2000 test fee at \$6.65. Per ARRL-VEC policy, there is no examination charge for those taking only Elements 1A or 2. A \$6.65 fee will be collected from applicants seeking to upgrade using a physician's certification to waive the Morse code examination.—Bart J. Jahnke, W9JJ

Scary Riley? The "other" Dave Sumner, KD7DS, points out that someone at the FCC must have had a great sense of humor when they came up with FCC Legal Adviser for Enforcement Riley Hollingsworth's new title under the FCC reorganization. Hollingsworth—who's K4ZDH—will become Special Counsel for Amateur Radio Enforcement—or SCARE if you're into the sorts of acronyms our government seems to love. The FCC's new Enforcement and Consumer Information bureaus become effective November 8, along with Hollingsworth's scary new title. Just back from a visit to a hamfest appearance in St Paul, Minnesota, Hollingsworth reacted to the frightful acronym by declaring: "Wow, I hadn't thought of that!" (Guess it wasn't his idea, then; maybe it was someone's Halloween prank.—Ed.)--thanks to Dave Sumner, KD7DS

Astronaut Eileen Collins, KD5EDS, honored

NASA astronaut Eileen Collins, KD5EDS, a New York native, has received the Empire State's highest award, the Jackie Robinson Empire State Freedom Medal, for her achievement as the first female space shuttle commander. During the historic STS-93 mission, Collins and her crew deployed the heaviest, largest and most powerful X-ray telescope ever launched into space, the Chandra X-ray Observatory. The Freedom Medal, established in 1997, goes each year to those who best demonstrate the qualities of determination, dignity, fairness and honor exemplified by Jackie Robinson, who broke major league baseball's color barrier.

FCC Revises Conducted Emission Limits.

The FCC has gone along with recommendations from the ARRL and others to hold the line on conducted emissions below 30 MHz from unlicensed consumer electronic and industrial, scientific and medical devices operating under Parts 15 and 18 of the Commission's rules. The FCC has proposed new emission guidelines that are just slightly more stringent than the current FCC standards.

"We conclude that mandatory conducted emission limits continue to be necessary to control interference to communications services," the FCC said in a *Notice of Proposed Rule Making* in ET Docket 98-80, released October 18. The Commission announced plans to "harmonize" its conducted emission standards with international standards developed by the International Electrotechnical Commission, International Special Committee on Radio Interference--known as CISPR.

The CISPR emission limits for consumer equipment are "approximately 5 dB more stringent below 5 MHz and 1 dB more stringent above 5 MHz" than the existing standards, the FCC said. "We believe that these standards address some of the concerns expressed by ARRL" and others in response to last year's FCC *Notice of Inquiry* on the issue, the Commission commented.

The Commission said it was not persuaded by a National Association of Broadcasters' suggestion to impose much tighter standards--22 dB greater than present--to protect AM broadcasting.

Interfering devices include such common household appliances as computers, TV sets, and microwave ovens. Conducted emissions result from RF voltages imposed on the ac power line, which can, in turn, act as an antenna. In general, the

FCC's current conducted emissions limit is 250 uV. Equipment manufacturers had argued to relax existing limits to keep down production costs, while the ARRL and others representing spectrum users had asserted that the existing limits were not tight enough. In response to the earlier *NOI*, the League had commented that the proliferation of Part 15 and 18 devices over the past decade had resulted in "a marked increase in RF noise from conducted emissions generally."

The FCC said it agrees that that standards on the amount of RF energy conducted onto the ac power lines "are required to control potential interference to users of the radio spectrum below 30 MHz." It also invited comments on expanding the frequency range of the conducted emission limits from the current 450 to 30 MHz to the 9 kHz to 30 MHz spelled out in the CISPR standards. The ARRL has proposed that the FCC allocate new LF amateur bands at 136 kHz and at 160 to 190 kHz. Comments on the NPRM are due 75 days after its publication in *The Federal Register*, and reply comments are due 30 days later. A copy of the FCC's *Notice of Proposed Rule Making* in ET Docket 98-80 is available at <http://www.arrrl.org/announce/regulatory/et98-80/nprm.html>.

Pepperell RACES

Under the Pepperell RACES banner we plan to have some net presence on the evening of December 31 and morning of January 1. There will be a RACES presence on the Waltham repeater 146.640 run from Area 1 HQ in Tewksbury. The starting time is 1800 hours EST and the close will probably depend on the level of activity. At this time no other details are available. I expect more will come out of the RACES Operators meeting November 29th. Dave will be looking for some people to monitor activity there. Contact Dave N1MNX if you can help out.

On another Pepperell RACES matter we are considering having a brief check in of RACES stations prior to the regular monthly check in to the Area 1 net. We currently have only a few active stations and would like to know we can get a few more if we need them. The hardest part is to remember to check in since its only once a month. But it is important to think about the nets. I know I have forgotten to check an emergency net frequency during severe weather because things weren't as bad locally or I didn't have to go any-

where in the two feet of snow so it was no big deal. Since there may be no other way to contact other RACES members in an emergency it is important that we know and monitor the proper frequencies whenever things might be happening. We are lucky to have several options that provide town wide coverage. So the unofficial answer to the question I didn't ask is to listen on 146.490 MHz simplex, 442.900 MHz + 100 Hz tone, or 53.590 MHz - 100 Hz tone. Some things that should make you think to turn on the rig and listen are heavy snows of blizzard type, flooding, hurricanes or anything that causes wide spread power or utility outages or extreme difficulty travelling. We all hope to have a minimum number of disasters in our lifetime but we should be prepared to act should they occur.

2 Apr Southington ARA Southington CT.
16 Apr MIT

PEPMBX Callsign Change

The PEPMBX packet bulletin board system on 145.09 has changed callsigns. The BBS call is now N1MNX-4. Aliases PEPP and PEPMBX remain as before. Nothing else has changed; the BBS location and RF equipment remain as they have been. Mail forwarding into the BBS network is still disabled after the change in sysops at K1UGM two years ago, but the BBS remains on the air for KA-NODE forwarding and local message traffic.
de Ralph KD1SM

\$November Treasurer Report\$

NVARC had no income for the month of October. Expenses were \$13.20 for newsletter postage.

Current balances:

| | |
|----------------|-----------|
| General Fund | \$487.62 |
| Community Fund | \$1427.55 |



Forget whether your membership is up-to-date? Look at your newsletter mailing label; the mailing label always contains the date of expiration of your membership. And remember, the ARRL rebates a portion of your ARRL membership dues back to the club if you renew on a form that I must submit. So when your ARRL membership reminder arrives, bring it to a Club meeting with a check in the full amount made out to NVARC and I will do the rest. You save a stamp, the Club benefits. What could be easier?

73,-Ralph KD1SM

Flea Markets

20 Nov WARA/1200 Auction Newton MA

19 Feb Algonquin ARC Marlboro
26 Feb Vermont State Convention RANV Milton Vt

19 Mar Central Mass Public Safety Association Uxbridge Ma



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Wolfgang Seidlich KA1VOU 1997
Earl Russell 1998
Bob Reif 1999

Meetings are held on the 3rd Thursday of the month - 7:30 p.m. - Pepperell Community Ctr.
Talk-in 146.490 simplex
442.90 + 100Hz Repeater

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. You can leave items on PEPMBX, at Packet address:
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