



SIGNAL



de NINC

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This Month's Meeting

The January meeting program will be a presentation on a program called Radio Mobile by Skip K1NKR. Radio Mobile is a radio propagation modeling software that does propagation modeling from 20 MHz to the GHz and displays on a map format.

Last Month's Meeting

Last month's meeting program was Homebrew Night. There were presentations by John KB1HDO, Jim N8VIM, Rod WA1TAC, Les N1SV, and Stan KD1LE.



John KB1HDO brought his home brew sound card computer to rig interface



Jim N8VIM shows off his implementation of the Tiny Trak transmitter with built in GPS interface.

After the necessary announcements and treasurers report each presenter gave a five minute introduction on their project or projects. After the formal part of the meeting ended people visited the projects that interested them to get more details.

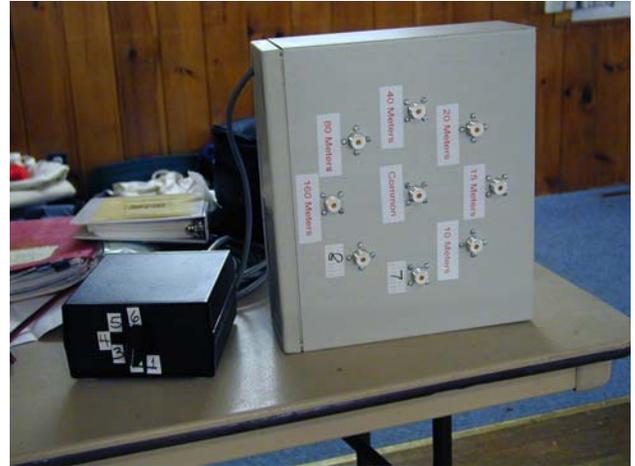


Rod WA1TAC shows off the restored aircraft receiver and home brew power supply he built to run it.



Les N1SV brought a sequencer he is building that properly turns on and off the rig, transverter, and amplifier for his 900 MHz rover equipment. He also showed the servo system (right) he is going to use to remotely tune his antennas.

Stan started his presentation with a slide show of his too-large-to-bring project the tower trailer we used at Field Day last year. The project was the addition of a deck and equipment cabinets for the trailer.



Stan KD1LE showed the eight port antenna switch he built for switching HF antennas at Field Day.

In addition to the many homebrew projects shown at the meeting there was one additional homebrew display. Stan had two tables of future homebrew projects yet unrealized. There were many parts including, transformers, ribbon cable and connectors, wire, microcontrollers, power supplies from 5 volts to 30KV, equipment that could be stripped for parts. There was also a classic Radio Shack TRS-80 the first laptop, computer video, network and modem cards, a morse keyer, network hubs, PC motherboards, video camera, and other goodies.



In attendance were Nancy KB1KEF, John KB1HDO, Dennis K1LGQ, Rod WA1TAC, Larry KB1ESR, Ralph KD1SM, Leo WA1ULK, Peter N1ZRG, Dave N1MNX, Stan KD1LE, Erik W1ZBT, Ken K1KEY, Gary K1YTS, Les N1SV, Skip K1NKR,

Thanks to everyone who put in the effort to give us these interesting presentations.

From the President

I want to thank everyone who supported all of the activities our club undertook in the past year. Everything we did including road cleanups, communications for races, parades, and soccer tournament, communications for town emergency exercises and others. We know it gets noticed locally since people have told us directly. But it also gets notice further away than that. In his final monthly Section News Summary email, Phil Temples, K9HI mentions the concept of volunteer service and the "thousand points of light" theme. He recognized what he called "deserving amateurs and ham radio organizations in Eastern MA who have made lasting contributions to our hobby-service and to their communities." He mentions six individuals and two clubs in his summary. You can be proud that NVARC was one of the two clubs mentioned with the following paragraph.

"I'm especially impressed by the community service shown by the Nashoba Valley ARC. Its dedicated members have participated in numerous public service events, including "Adopt-A-Highway" projects in which they've cleaned up debris along local roads and highways. Pepperell, Groton and other adjacent towns hold Amateur Radio in high regard, thanks to the efforts of NVARC."

Keep up the great work

Stan KD1LE

Adopt A Highway

Next cleanup April 2005. We meet at the traffic island on the east side of the Nashua River at 9:00 AM on the Sunday after the club meeting.

Board Meeting Notes

The NVARC Board met December 9th at the KD1LE QTH. In attendance were Stan KD1LE, Ralph KD1SM, Peter N1ZRG, Dave N1MNX, Les N1SV, John KB1HDO, and Ken K1KEY.

Items discussed

Ralph gave the Treasurers Report included in the newsletter.

Discussed possible outreach to handicapped persons and seniors with some presentation on Amateur Radio.

We discussed possible meeting program topics

There was some discussion on design requirements and analysis done on a possible bandpass filter design for Field Day use.

Upcoming Events

Jan 22 Antique Radio Flea Market Nashua NH
Feb 19 Algonquin ARC Flea Market Marlboro MA
April 24 Groton Road Race.

N1MNX Repeaters



Some may have noticed the two meter repeater is offline. It is in the shop for repair.

Dave N1MNX is the owner of the four repeaters and shoulders the burden of equipment costs and operating expenses. At this time he is asking for donations to help keep things running.

NVARC Club Net

The December 21st net was run by Larry KB1ESR. Checking into the net were Dave N1MNX, Stan KD1LE, and Ralph KD1SM. Stan announced the mention of NVARC in the last email news from the section manager Phil Temples K9HI. He also brought a quiz on strange Massachusetts laws. Subsequent nets were run by Dave N1MNX and Stan KD1LE.

The net is a good place to bring information for the club and questions or discussions. The net meets at 8:00 PM Monday evenings on the 442.900 N1MNX repeater.

Advertisements

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



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\$January Treasurers Report\$

Income for December was \$45 in membership dues and \$10 from PowerPole connector sales. Expenses were \$214.80 for the ARRL library book set and newsletter postage leaving a net expense of \$157.80 for the month.

Current balances:

General fund	\$4371.78
Community fund	\$1782.95

As of 13 January we have 55 current members and five renewals outstanding.

Leo WA1ULK won the December book raffle; a Radio Amateur's Satellite Handbook.

Welcome to new member Charly Smith KB1LVU of Pepperell.

If you are not yet an ARRL member and wish to join, please let me send in your new membership application and the Club receives a \$15 rebate.



The ARRL has reinstated its dues rebate program for affiliated clubs. When you need to renew your ARRL membership, you can save yourself the cost of a stamp and add to the Club treasury by handing me a check in the amount of your ARRL dues.

Please check your Club membership anniversary and renewal date on your newsletter mailing label. If you get your newsletter electronically, feel free to ask me for your renewal date. I circulate a member roster at the monthly meeting. This roster also contains renewal dates for everyone.

73,
Ralph KD1SM

ARRL Letter

AMATEUR RADIO PRAISED AS LIFELINE IN SOUTH ASIA

As the tsunami relief and recovery effort continues in South Asia, Indian Prime Minister Manmohan Singh has joined those paying tribute to Amateur Radio's ongoing emergency communication role. Director and Executive Vice Chairman S. Suri, VU2MY, of India's National Institute of Amateur Radio (NIAR), noted January 5 that the PM "was all praise for hams in India and the entire world who helped us in this hour of need." Suri said the administrator of hard-hit Car Nicobar Island has asked NIAR to keep on duty Rama Mohan, VU2MYH, and five other radio amateurs who have been providing communication with the island since shortly after the December 26 disaster.

"The district administration chief of Car Nicobar Island spoke to me this morning to say even now it is only the ham communication that is aiding them for relief and rehabilitation measures," Suri said in an e-mail to Jay Wilson, W0AIR, of the Disaster Preparedness and Emergency Response Association (DERA) and shared with ARRL. Mohan, who had received DERA training in the US, was part of NIAR's VU4NRO/VU4RBI DXpedition to Andaman and Nicobar Islands. When the earthquake and tsunami struck the region, DXpedition team leader Bharathi Prasad, VU2RBI, promptly shifted the op-

eration to handle emergency traffic and health-and-welfare inquiries between the island and the Indian mainland. More than 20 Indian radio amateurs are said to be involved in providing emergency communication support in the Andaman and Nicobar Islands. Ironically, until the recent NIAR DXpedition the Indian government did not allow Amateur Radio operation from the islands. It's since cleared the way for all Indian hams to operate from VU4.

In the disaster's immediate aftermath, Suri said, Mohan and other DXpedition team members risked their lives to alert the chief of administration on Andaman Island, since tsunami waves later overran the road they'd traveled. NIAR staff member Jose Jacob, VU2JOS, was providing emergency communication remote Hutbay Island.

Now back on the Indian mainland, Bharathi Prasad has reported that the VU4NRO/VU4RBI logs are safe and at NIAR headquarters, and QSLing will commence once the emergency operation concludes. DXer Charly Harpole, K4VUD/HS0ZCW, now in Bangkok, Thailand, told The Daily DX <<http://www.dailydx.com>> that QSL cards already are showing up at NIAR.

Harpole, who was visiting the DXpedition in Port Blair on Andaman Island when the earthquake and tsunami hit, has since been helping to handle emergency traffic from Thailand, where his wife's family lives. "I have been listening to the traffic from VU4 back to the India mainland, and by now it is smooth as silk with lots of H&W and some government messages running almost constantly," he said in an e-mail made available by QRZ DX <<http://www.dxpub.com/>> Editor Carl Smith, N4AA. Harpole advised amateurs worldwide to avoid the primary emergency traffic frequency of 14.190 MHz.

In Thailand, Harpole reports, hams have been using mostly 2 meters for their emergency traffic "and doing a huge job." He said he's heard very little from Bangladesh, and nothing from Sumatra and Burma (Myanmar). The earthquake's epicenter was some 100 miles off Sumatra, a part of Indonesia.

Just three days after the calamitous tsunami, Radio Society of Sri Lanka (RSSL) President Victor Goonetilleke, 4S7VK, declared that "uncomplicated short wave" radio had saved lives.

"Ham radio played an important part and will continue to do so," he said in an e-mail relayed to ARRL. Goonetilleke said Sri Lanka's prime minister had no contact with the outside world until Amateur Radio operators stepped in. "Our control center was

inside the prime minister's official house in his operational room," he recounted. "[This] will show how they valued our services."

Horey Majumdar, VU2HFR, in Calcutta, said improvisation was "the name of the game" in the emergency's aftermath. "Hams had to switch to good old CW and switch frequencies from 14.190 and 14.160 MHz to 7.090 MHz," he said. Majumdar noted that hams from all over "have been checking into the VU emergency nets and extending their fullest cooperation in the truest spirit of Amateur Radio."

According to the latest estimate, more than 150,000 people died as a result of the tsunami, about one-third of them children.

Although the US does not have third-party traffic agreements with any of the countries affected by the disaster, international emergency and disaster relief communications are permitted unless otherwise provided. While FCC Part 97 has not yet been updated to reflect revisions to third-party traffic rules at World Radiocommunication Conference 2003, FCC staff has told ARRL that if the government agencies responsible for the Amateur Service in affected countries do not object to their amateur stations receiving messages from US amateur stations on behalf of third parties, the US has no objection to its amateur stations transmitting international communications in support of the disaster.

Additional information on Amateur Radio and the tsunami disaster is on the ARRL Web site.

FCC RELEASES HUNDREDS OF PAGES OF BPL TEST DATA, FILINGS

The FCC has made public more than 650 pages of technical presentations, correspondence and filings that it says it used in making its decision on the BPL Report and Order in ET Docket 04-37. The Commission adopted new rules to govern so-called Access Broadband over Power Line systems on October 14, but they have not yet become effective. The ARRL subsequently filed a Freedom of Information Act (FOIA) request that called on the FCC to release any studies the Commission had relied upon in deciding to embrace the technology. Some information contained in the documents has been blanked out or redacted.

"Certain portions of those presentations have been redacted, as they represent preliminary or partial results or staff opinions that were part of the deliberative process," FCC Office of Engineering and Technology Associate Chief Bruce Romano said in a

cover letter releasing the documentation December 22. "Moreover, the redacted information was not relied on by the Commission in making its decision," Among the FCC Laboratory presentation charts the FCC redacted was one titled "New Information Arguing for Caution on HF BPL."

The documentation includes presentations and graphs resulting from field tests of BPL trials in Pennsylvania, Maryland, New York and North Carolina. The tests, conducted by the FCC Laboratory's Technical Research Branch, looked BPL technology by Amperion, Current Technologies, Ambient Technologies and Main.Net.

The ARRL is continuing to review the extensive documentation in detail. ARRL Laboratory Manager Ed Hare, W1RFI, maintains that the FCC documents tend to back up assertions the League made in its filings.

"The FCC reports clearly show that BPL operating at the FCC Part 15 emission limits generates a strong RF signal for long distances along overhead power lines," Hare said. "The FCC data showed noise that was many decibels above otherwise quiet ambient noise levels." Hare said that even in spectrum notched out by BPL system providers, the FCC-provided reports indicate a measurable increase in noise levels on amateur frequencies.

Approximately 150 pages of the documentation consisted of technical material and presentations by FCC staffers. The remaining 500-plus pages include correspondence, technical reports and interference complaints from radio amateurs to the FCC. Falling into the last category is extensive correspondence involving the Alliant Energy BPL field trial in Cedar Rapids, Iowa. That pilot project was abandoned after difficulties in resolving interference issues with local radio amateurs proved insurmountable.

The FCC just this week provided additional spreadsheet data to ARRL under separate cover. By releasing the information, the FCC made it part of the official record in the proceeding. Some, but not all, of the BPL-related material is on the FCC Electronic Comment Filing System under ET Docket 04-37.

In an interview January 3, OET Deputy Chief Bruce Franca asserted there's enough spectrum to permit Amateur Radio and BPL to coexist. Franca, who heads the Commission's BPL Task Force, spoke with Broadband over Power Line World's Marc Strassman <<http://www.etopiamedia.net/bplw/pages/bplw16-5551212.html>>.

"There are enough frequencies that amateurs can operate and BPL can operate in a compatible mode," Franca told Strassman. Franca also expressed confidence in technological solutions to any Amateur Radio-BPL interference issues that might arise. "I'm very optimistic at the end of the day," he said. "Technology is going to solve this problem."

In another BPL-related development, Electric Broadband LLC reportedly has dropped out of the Cottonwood, Arizona, BPL field trial, and project oversight has shifted to Mountain Telecommunications Inc (MTI), which had been handling system operations for EB. The FCC issued a Part 5 Experimental license to MTI on January 3.

On the same day, the Verde Valley Amateur Radio Association (VVARA) asked the FCC to hold up the swap and instead dismiss the pilot project's WD2XMB Part 5 license "with prejudice," alleging the operator had "failed to live up to the terms of the instrument." The VVARA also said it wanted the BPL field trial shut down.

"Mountain Telecommunications Inc has been involved in the field with the Cottonwood BPL trial since its start and has not complied with the requirements of the existing license by promptly mitigating harmful interference on the 60 meter Amateur Radio band," VVARA Vice President Robert Shipton, K8EQC, told the FCC, noting that six weeks have passed since the interference report was filed.

The Cottonwood Experimental license stipulates that the licensee "must establish and maintain a liaison relationship with the Verde Valley Amateur Radio Association" and respond to interference complaints "in a timely manner."

OKLAHOMA, BRAZIL YOUNGSTERS VISIT INTERNATIONAL SPACE STATION VIA HAM RADIO

Youngsters in Oklahoma and Brazil got a chance over the holidays to question International Space Station (ISS) Expedition 10 Commander Leroy Chiao, KE5BRW, about life in space. Both direct 2-meter contacts with NA1SS came off largely without a hitch, and Chiao answered all questions posed by each group. Sponsoring the contacts was the Amateur Radio on the International Space Station (ARISS) program. Students in grades 3 through 12 from schools in Oklahoma and Texas gathered December 22 at the Tulsa Air and Space Museum (TASM) for their contact.

"The kids were able to work in all 20 questions as well as wish the ISS crew a merry Christmas," said Tulsa Repeater Organization (TRO) President and ARRL Oklahoma Public Information Coordinator Mark Conklin, N7XYO. "Wow!" Participating students had attended TASM's summer aerospace camps.

Among other things, the kids asked Chiao whether the G-forces from leaving Earth's atmosphere cause you to have little red spots on your face--G-measles, how far along the ISS construction was and the space station's expected life, and what are the benefits of civilian space travel.

The museum cooperated with TRO and AMSAT to arrange the contact. TRO's Bill Griffin, NI5X, and AMSAT's Keith Pugh, W5IU, set up the Earth station at TASM. Pugh served as the control operator, and the station used the TRO WA5LVT call sign for the QSO.

Among those looking on were several news media representatives, including three Tulsa TV stations, two newspapers and CQ magazine.

On December 27, a Scout group in Brazil participated in the first ARISS school group contact with that country. Scouts from Rio de Janeiro and elsewhere gathered at the Forte de Copacabana military base where the contact took place. ARISS-Brazil member Tadeu Fernandes, PY1KCF, served as the control operator at PY1ERR.

Chiao answered all 20 questions the scouts posed during the approximately 10-minute contact. The Expedition 10 commander took the opportunity during his answers to describe the beautiful view from the ISS.

"The Earth looks wonderful from space," he told one Scout. "It is the most fantastic view, everything is very brightly colored and that's one of our favorite things to do--to look at the earth." The fact that space walks can be tiring is offset by the beautiful view of Earth, Chiao told another youngster.

He also told the scouts that the crew enjoys viewing the stars—provided the ISS is pointed the right way. The sun is "extremely bright," but the moon is "very fascinating too."

Chiao told another Scout that the crew had not yet spotted any unidentified flying objects yet, but he promised to keep looking.

Some 50 onlookers and news media turned out for the occasion. More than 200 amateur stations around Brazil were able to listen in on the contact via HF and EchoLink outlets.

ARISS is an educational outreach program with US participation by ARRL, AMSAT and NASA.

MORSE REQUIREMENT, LICENSE RESTRUCTURING REMAIN ON FCC'S RADAR

The ARRL does not anticipate the FCC will offer up any proposals on the Morse requirement and further restructuring of the Amateur Radio licensing system until sometime in mid-2005, possibly sooner. The FCC Wireless Telecommunications Bureau continues to review thousands of comments it received on 18 petitions for rule making--including one from the ARRL.

The various petitions called for eliminating or altering the Morse code requirement and changing other sections of the Amateur Service Part 97 rules, including further restructuring of the amateur licensing system.

In addition to agreeing on other changes affecting Amateur Radio, World Radiocommunication Conference 2003 (WRC-03), left the choice to require Morse proficiency for HF access up to individual countries, and several already have dropped Morse code as an examination requirement. That has not yet happened in the US.

Before the FCC adopts any changes in the Morse requirement and the license structure, it must complete its comment review, issue a Notice of Proposed Rule Making (NPRM) reflecting its interpretation of consensus within the amateur community based on comments received and invite further comments on the NPRM. The FCC then will review those comments before issuing a Report and Order that spells out any final rules. The ARRL does not anticipate any changes in the Morse requirement or in other Amateur Radio licensing requirements before 2006, possibly later.

While this rule making process is under way, no changes have been made in the Amateur Radio Service rules. The 5 WPM Morse code requirement (Element 1) to gain HF privileges in the US remains in place, and no proposed automatic upgrades or other rule changes have been put into effect. The ARRL has posted answers to frequently asked questions on its own restructuring proposals <<http://www.arrl.org/news/restructuring2/faq.html>>.

AMATEUR RADIO COMMUNITY FUELS "BEST YEAR EVER" FOR UNITED WAY TOY DRIVE

Contributions from the Amateur Radio community to the ARRL Holiday Toy Drive resulted in "the best year ever" for its benefactor, the United Way's White Doves Holiday Project in Martin County, Florida. Martin County United Way agreed to serve as a collection point and to coordinate toy distribution.

"They have enough toys to cover their own program and three others, all over the region," said ARRL Media and Public Relations Manager Allen Pitts, W1AGP, who says a toy stuffed bear inspired him to spearhead the program. The toys and donations will help brighten holidays for youngsters and families whose lives were devastated by the hurricanes that hit Florida earlier this year.

Carol Hodnett, a director at the United Way site, says the storms and their aftermath were especially traumatic for children. "In addition to the frightening experience of going through the hurricanes, youngsters are coping with a great deal of stress felt within their families and at school," she says.

In Central Florida, more than 22,000 homes were destroyed and another 40,000 received significant damage. Thousands of families remained homeless as the holiday season approached. Pitts says that radio amateurs, who had helped provide emergency communication in the hurricanes' immediate aftermath, came to the rescue yet again in the toy drive. Hams and ham radio clubs from Maine to California purchased thousands of new children's toys. Most hams included QSL cards with their toy or cash donations.

Among the elves: Phil Royce, KE4PWE, of the Palm Beach Amateur Radio Council--representing radio clubs in Palm Beach County--recently delivered a toy donation to Martin County. "The place is loaded with toys," he said of the fairgrounds staging area, where the donated toys have been stored and sorted since they began arriving.

ARES New York City District Emergency Coordinator Mike Lisenco, N2YBB, said the ARRL Holiday Toy Drive provided hams in his area an opportunity to pay back the assistance hams from all over the US rendered in the wake of the September 11 terror attacks.

"This is just one way we can say 'thank you,'" he said, "to be able to reciprocate and help someone else in their time of need. Paying it forward, if you will."

Lisenco also offered special thanks to Bill Davis, KC8CQT, and to FedEx. "Bill, who works as a member of the FedEx Customer Advocate Team, went out of his way to arrange for FedEx to pick up the cost of shipping the toys to Florida," he explained. "His help, and the generosity of the FedEx Corporation, is greatly appreciated."

Diane Tomasik, associate director of the Volunteer & Community Resource Center at the United Way of Martin County, said the toy distribution started Monday, December 20, even as more donations continued to arrive from the Amateur Radio community.

"We will not only serve about 1200 families from our own site but also have plenty to share with Indian town and the Children's Home Society--which covers the whole Treasure Coast region," she told ARRL. "We also will be able to give toys to children through the sheriff's department programs."

Tomasik noted the more than \$8000 in cash donations will allow the agency to fill the gaps for age groups that were short of toys. "The White Doves Project has had a phenomenal success this year, thanks to the efforts of the ARRL nationwide," she said. "It's our best year ever."

Pitts said the event's success has shown Amateur Radio's best side. "The ARRL is all of us working together," he said, "and the League should feel very proud of what we accomplished together for these children of the storms."

FCC APPROVES FIRST SOFTWARE DEFINED RADIO

The FCC for the first time has approved use of a software defined radio (SDR) device in the US. This new class of equipment allows users to share limited spectrum, increases flexibility and reduces interference concerns. "This is the first step in what may prove to be a radio technology revolution," FCC Chairman Michael K. Powell said after the November 19 action. "The industry's pioneering work to find more creative and efficient use of our airwaves will continue to bring benefits to consumers." The Laboratory Division of the Commission's Office of Engineering and Technology issued a Grant of Certification to Vanu Inc, a software development company, for a cellular base station transmitter. SDRs can change frequency range, mode or output power without resorting to hardware changes or switches. This programmable capacity permits radios to be highly adaptable to changing needs, protocols and environments. An FCC rule making proceeding, ET

Docket 03-108, is pending to further streamline SDR requirements. The ARRL has told the FCC that Amateur Radio is "a fertile testing ground" for SDRs and that the technology would be especially valuable to facilitate disaster communications.

CQ TO CELEBRATE 60TH ANNIVERSARY WITH "CQ GANG" ON-AIR EVENT

CQ Amateur Radio magazine invites Amateur Radio operators around the world to join in celebrating its 60th anniversary by taking part in an on-air event during the first 60 days of 2005. CQ's first issue was published in January, 1945. During the "CQ Gang" activity--January 1 until March 1, 2005—all hams ever associated with CQ as staff members, contributing editors or authors--as well as current subscribers to CQ, CQ VHF and Popular Communications may sign "/60" after their call signs. Certificates will be issued for contacts with enough /60 stations to garner a minimum of 60 contact points, based on number of contacts times the number of different position multipliers (eg, editor, columnist etc) worked. Shortwave listeners also are eligible to earn contact points and certificates. Endorsements will be issued up to 600 points. CQ club station WW2CQ will be active from various parts of the US during the event. Separate certificates will be available for working WW2CQ in all call sign districts from which it is active. Complete rules for the CQ Gang 60th Anniversary activity appear in the December 2004 issue of CQ and on the CQ Web site <<http://www.cq-amateur-radio.com/CQ60 Award Dec04.pdf>>.

Contest Calendar and DXpeditions

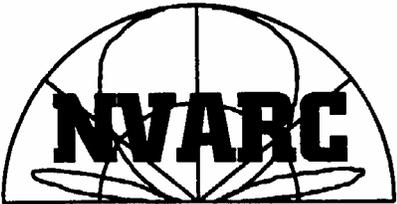
The information for a DXpedition can be quite detailed and may include bands, dates, number of stations, and times of day they plan to work certain continents so I can not list it all here. But if a country or prefix is of interest you can get more information at www.425dxn.org.

DXpeditions

Call	Location	Until
8Q7WP	Maldives	09/05
HA200CVM:	special station (Hungary)	Jan

9U6PM: Burundi * by HB9DTM
Feb

T98AQL: Bosnia-Herzegovina * by IZ4AQL Mar
5H3HK Tanzania till March 2006
ZD8I Ascension Is till March 2006



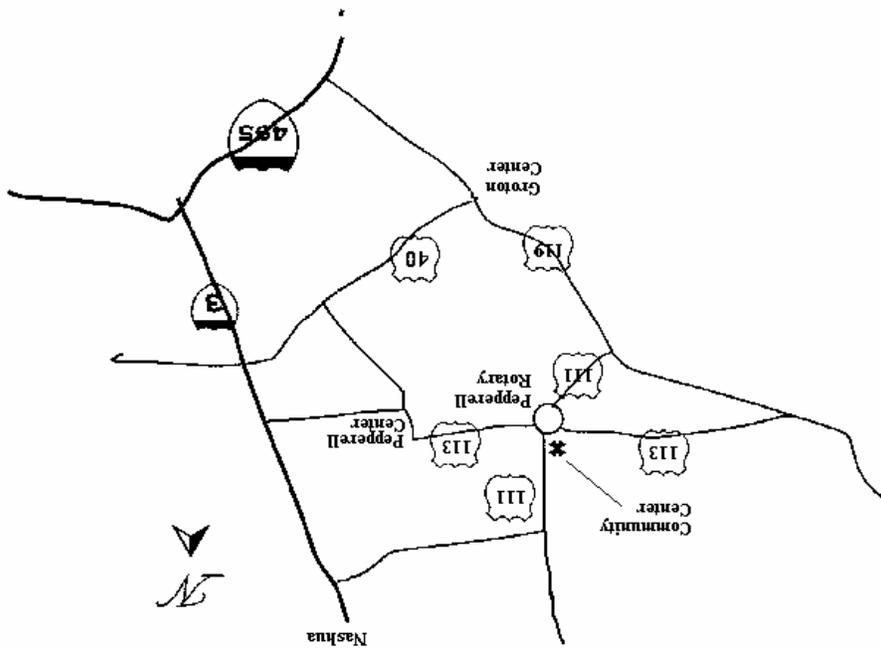
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Meetings are held on the 3rd Thursday of the month
- 7:30 p.m. - Pepperell Community Ctr. Talk-in
146.490 simplex
442.900 + 100Hz Repeater
147.345 + 100 Hz Repeater
53.890 – 100Hz Repeater

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