



SIGNAL



de NINC

May 2008 Volume 17 Number 5

This Month's Meeting

This month's meeting will be Alternative Energy by Walt W1ZPB. Some of you may recognize Walt's name or call as he was our tour guide for the wind turbine tour we went on in Vermont. Walt has been using alternative energy for many years.

Please Note this month's meeting is downstairs at the Pepperell Library just west of the Community Center on Route 113/Main St. Since we need to close at 9:00 PM we need to start on schedule.

Meeting site info and maps on the back page and the NVARC Website.

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

Last Month's Meeting

Last month's meeting was Thursday April 20th. Tom Kinahan N1CPE gave the presentation which was on Winlink 2000 (WL2K). Tom Kinahan is also the Massachusetts RACES Radio Officer.



Tom covered the basics and infrastructure that is WL2K and how to get connected.

Dave N1MNX won the badge raffle.
Leo K1LK won the "book" raffle (Power Poles).

April meeting attendance:

Bob AB1CV, Bruce K1BG, Dennis K1LGQ, Leo K1LK, Gary K1YTS, Larry KB1ESR, Ben KB1FJ, Phil KB1JKL, Jim KB1JLE, Nancy KB1KEF, Stan KD1LE, Ralph KD1SM, Den KD2S, John KK1X, Dave N1MNX, Bill N1ONE, Peter N1PQ, Les N1SV, Jim N8VIM, Joel W1JMM, Richard W1LTN, Jim W1TRC, Erik W1ZBT, Bob WA1SMI, Russ WR1Y

Tom N1CPE

Need a Ride?

Do you need a ride to the club meetings? Do you know someone who does? If you do please contact Bob W1XP 978-448-6559 and leave a message. We'll see that you get to the meeting.

Welcome to New Members

Bill Hahn N1ONE of Leominster joined NVARC at the April meeting.

Bill lists his special interests as radio building and home improvement. (Adding any radio is a home improvement!)
Welcome, Bill.

Jim Mosca KB1JLE of Lancaster joined NVARC at the April meeting.

In addition to Amateur Radio, Jim says his hobbies include woodworking and stained glass.
Welcome, Jim.

Groton Road Race



Courtesy KB1ESR

The week of warm sunny weather leading up to the Sunday of the Groton Road Race did not last, to the chagrin of the 39 radio operators who helped with communications for the 17th annual Groton Road Race.



Courtesy KD1SM

Lt. Cathi stopped in at NCS to see if we were ready. (L-R) Stan KD1LE, Lt Cathi, Joel W1JMM, Joseph N1QDZ, behind the camera Ralph KD1SM

NVARC members Bob AB1CV, Gary K1YTS, Callie K1ZAK, Karen KA1JVU, Larry KB1ESR, Nancy KB1KEF, Stan KD1LE, Ralph KD1SM, John KK1X, Dan N1LLG, Dave N1MNX, Jim N8VIM, Joel W1JMM, Bob W1XP, Russ WR1Y, and Herm WW1HR were joined by AE1Y, K1JHC, K1SUB, K1WD, KB1EET, KB1JYD, KB1KTP, KB1LRL, KB1NEW, KT1I, N1BDA, N1HTS, N1IW, N1MOR, N1QDZ, N1RKO, N1RXV, N1VUQ, NF1A, W1KQ, W1OJP, WA1RHP, and WO1N from MARA, BARS, and WECT to provide essential radio communications.

Groton Police Lieutenant Cathi Welch, Officer In Charge for the race, described the Hams as critical to maintaining the safety of this event.

With Ralph's RV as Net Control.

KD1LE, W1XP, KB1ESR, and KD1SM have put together a design for a frequency-agile repeater that can be deployed quickly to replace any of the fixed repeaters. They had performed several tests in the field and felt sufficiently confident in the design to deploy it in service for the first time at this event. General reports were that this repeater performed well. A future article will describe the design.

Townsend Lions Canoe Race

April 20th NVARC and MARA members provided communications and tracking for the 50+ canoeist who participated in the Townsend Lions Canoe Race on the Squannacook River.



Courtesy W1HFN

Canoeist portaging around one of the obstacles.

Bob AB1CV, Tom K1KAY, Paul KD1YH, Barry W1HFN, Charlie KT1I, Nancy KB1KEF, Gary K1YTS, Stan KD1LE, Tom K1JHC, John KK1X, Ralph KD1SM,

PSLIST

Every event needs communications volunteers

Date	Location	Event	Contact	Tel/Email
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May 18	Devens, MA	Parker Classic Road Race	Stan KD1LE	978.433.5090
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Jun 8	Boston, MA	Bikes Not Bombs Bike Ride	Bob WA1IDA	508.650.9440 wa1ida@arrl.net
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July

4-6 Fitchburg Lonsjo Classic Ralph KD1SM

12 Woburn MA New England Classic Tour
Mike K1LJN 978.244.0417 k1ljin@arrl.net
see <http://www.newenglandclassic.org>

18 Rindge NH New England Classic Tour Mike
K1LJN 978.244.0417 k1ljin@arrl.net

Jul 26 Devens, MA Alzheimer's Assn Memory Ride
Ralph KD1SM 978.582.7351 kd1sm@arrl.net

WSPR

Joe Taylor strikes gold again By W1XP

About March 13, there was an E mail from Joe Taylor K1JT on the WSJT reflector about a new program Joe had written. Joe is the Nobel Prize winning physicist and ham that wrote the WSJT (Weak Signal Joe Taylor) software package used by many VHF/UHF amateurs. This software is used for High Speed Meteor Scatter and EME/tropo communications on the six meter and higher frequency amateur bands. An earlier presentation at a NVARC club meeting by me demonstrated an earlier version of the WSJT software package. In the March 13th E mail Joe described a new program that he had just written. This software had been suggested to Joe by Murray Greenman, ZL1BPU. Murray had approached Joe with the idea that Joe write a program that could be used by the world wide group of amateurs that were using QRP, QRSS (very slow speed CW transmissions) to study HF propagation. These amateurs were transmitting very slow low power CW signals to learn what they could about propagation, primarily on the 30 meter band. After some discussion with Murray, Joe came up with a specification and proceeded to write a simple no bells and whistles program to test the new system. This new system is called MEPT_JT for Manned Experimental Propagation Tests, by K1JT. This is the name of the protocol implemented by WSPR. WSPR is pronounced Whisper. This is a suitable name because the program is very sensitive and can hear the weakest of signals. WSPR is the software that runs under Windows. (I believe a Linux version is now available). The original program was version 0.3 and ran in the command prompt window. Joe is now up to version 0.7 and version 0.8 is soon to be released. But let's get back to the beginning.

The MEPT_JT is a propagation research tool that uses a narrow low power signal operating in a narrow band segment to gather data on radio wave propagation via the ionosphere. This is an attempt to automate to a degree the collection of data from

stations worldwide. Whisper is the first program to implement this new research method.

So what does this new program do? Well it is a sound card digital signal processing program that accepts audio from the receiver. The audio is first digitized and then processed by the computer. The software tries to decode the signals and if there are any decodes they are displayed on the computer screen. If the computer is connected to the internet the decodes may be sent to a central collection point automatically, or it may be sent as an upload later. The encoded information consists of the sending station's call sign, his or her four digit grid square, and output power expressed in dBm (dB referenced to one milli-watt. For example one watt is 30 dBm). At the sending end, this information is encoded by the program and sent to the sending transceiver as an audio tone centered around 1500 Hz. The information is sent very slowly and has extensive forward error correction. The forward error correction allows the decoder to correct for transmission errors so that near perfect copy is guaranteed or there is no copy at all. To accomplish this many extra data bits are required to be sent slowing the data rate further. The data is sent as continuous phase 4-FSK modulation. The tone spacing is only 1.46 Hz and the signal bandwidth is only about six Hertz. This slowly varying tone is used to SSB modulate the transceiver using upper sideband. The 1500 Hz signal can be tuned under operator control to establish his or her final transmitted signal frequency. (More on this later). At the receiver end the receiver is set to the same dial frequency as the transmitter and upper side band reception is used. The computer software scans the 1400 to 1600 Hz audio band looking for signals. It will decode any and all signals that it finds in this 200 Hz. frequency range that have an adequate signal to noise ratio. It will then display the decoded information along with the date/time, a signal to noise ratio for each signal, the frequency of the signal, a time error (more on this later) , a drift value, and a width value (also more later). Since the bandwidth is narrow the information rate is low. The message block is two minutes long. The message actually takes 110.6 seconds to send because of the slow data rate and forward error correction overhead. Each two minute message block starts on the even minutes of the hour. The actual transmission starts two seconds into the block. So when the software is started it waits till the start of the next block before it begins the decoding process. After two minutes it will display any decoded data on the screen. There is also a waterfall (curtain) display of signals in the 200 Hz bandwidth. Decoded information (called spots) can be stored for transmission via internet connection to a central data base. This can happen in real time or sent in batches later if you

choose. It is not necessary to do this, but since the primary purpose is the propagation research sending the spots to the central data base is encouraged.

Now the transmit mode can be selected as full time (no listening) or as a percentage of time based on a random function. The choices are 20, 25, and 33 percent of the time. This random function makes sure you are not always transmitting at the same time as another station so you have a chance to hear all other stations that may be on. You may also select receive only if you do not desire to transmit.

After Joe's announcement many of us downloaded the early version and started listening in on 30 meters. The setup is fairly simple and it can run in the receive mode for hours. Since it is a synchronous system it is necessary to keep the computer clock close to the correct time so the computer knows when to start and stop the processing. Too large an error in the computer time and the decoder start to fail. This time error is what is displayed for each decoded signal. This allows you to judge if your computer clock needs setting. Now you can buy a watch for \$20 that will tell WWV when to beep, but a \$2000 computer may need help to stay within a few seconds a day. The WSPR program will not tolerate more than a couple of seconds of error. But there are ways to use the internet to keep the clock on time. I've installed a program that now is setting the computer clock every hour. (Thanks KK1X). If your computer needs help keeping time I suggest you look into this if you have a high speed internet connection. Anyway it is very exciting to check the computer screen every few hours and see what had been logged. Checking in the morning after running in the receive mode all night has produced decodes for stations as far away as New Zealand. I've logged about 100 unique calls mainly on thirty meters. When the program became available the initial operation was on thirty meters. Since then the operators have been moving off thirty meters to other bands. I suspect it has been tried by hams on every band from 160 meters to 440 MHz by now. I have been on 160 and 80 meters in addition to the thirty meter band. Thirty meters is the watering hole, but another band will be suggested and a lot of the guys will all move there for the night. This provides some interesting operating and some surprises. One surprise is the range that can be consistently covered on these bands with low power. Most stations are running about one watt. Five watts seems to be more popular on the lower frequency bands. Stations are not using high power in keeping with the QRP aspect. On thirty meters I have used my 80 meter dipole and a 30/10 meter wire antenna. This antenna is basically a dipole on thirty meters.

WSPR can be a useful mode to do your own tests. Besides learning a bit about propagation, such as when a band may be open to a particular area, it can be useful to evaluate antenna performance for example. By switching back and forth between two antennas and observing the changing S/R on a particular station, data on the antenna performance can be obtained. It is important to take several readings but since the measurement period is two minutes for each test some averaging of the normal HF QSB has all ready been taken into account. There is the danger that the other station is doing the same thing. That is switching his antenna also. Note that the reading is signal to noise and not signal strength. I'm not sure just how this is calculated and it is probably a good idea to understand just how this number is calculated before you write the paper.

With a narrow band width system such as WSPR, signal stability can be an issue. This was a bigger problem with the earlier versions of the software. Joe has added the ability for the decoder to track a certain amount of signal drift. There is now a drift measurement of the signal and this is displayed on the output screen for each signal along with the other data.

Another addition to the output of the program is a signal width measurement. Signal dispersion is caused by a disturbed propagation path, so Joe has added this measurement of signal quality to the program output.

So what do I need to give a listen or get involved you ask? Well the first thing is probably to download the software and install it on the shack computer. Going to <http://physics.princeton.edu/pulsar/K1JT/> and downloading the latest version will get you started. It isn't a large program and will download quickly. Then just run it to install. Just keep answering "next" to the questions as it installs until you are finished. There is not a full blown manual yet, but there is a users guild that you can download from the same site. I suggest you read this before you proceed. You will need a sound card interface with your HF transceiver. A cable between the headphone or speaker jack and the sound card input will get you on the air in the receiving mode, but a full interface is probably a good investment if you plan to do anything with the digital sound card modes, so Go For It!. Make sure the computer clock is set to a second or better. Now click the receive box and it should start decoding. But of course you need to know where to listen. On thirty meters, the most popular band, the dial frequency is 10.1387. (See the web page listed at the end of the article for other bands and frequencies) The dial frequency should be entered into the left hand box on the display screen. The transmit fre-

quency is this frequency plus 1500 plus or minus any offset from the center frequency you desire. For example to transmit on 10.140150 which is 50 Hz below the 200 Hz wide band center frequency, you would enter the 10.140150 in the transmit frequency box. The program does the math to calculate what tone frequency to generate to come out on the desired frequency of 10.140150. In this case the tone would be 1450 Hz. Remember to stay in the 200 Hz wide band which is between 10.140100 and 10.140300 on thirty metres. Also allow for any transceiver calibration error. It takes some time getting use to such a narrow frequency range. To just listen you don't need to worry about the transmit frequency, but I enter the center frequency of 10.140200. The transmit offset is so everyone doesn't transmit on the same frequency, so if you plan to transmit be sure to move off the center frequency.

After you start the program to receive it will wait for the start of the next two minute block. At this time a green "Receiving" indicator will come on in the lower right corner of the WSPR window. This will go off briefly at the end of the two minute block and then come on again. If a decode was accomplished, the results will be printed in the window on the screen. It is likely that there will be more than one decode. The program will continue in the receiving mode until it is stopped. If the transmitting mode is selected the program will go into the transmit mode at the next two minute block and transmit for nearly the full two minutes. It actually starts two seconds into the block and stops a few seconds before the end of the block. On the screen are three buttons to select 20, 25 and 33 percent for the transmit duty cycle. The actual transmit blocks are selected in a random manor by the program so that you are no transmitting in a fixed pattern. This random feature allows you to hear other stations than may be transmitting with the same duty cycle, and of course allows them to hear you. This is a very useful feature as the intent of the program is to gather the most data possible.

One shortcoming of the program is there is not a direct way to set the input receive audio level. There is access to the audio mixer via the program but no indication of the level. I have exchanged E mail with Joe about this and it may be addressed in a late version of the program. But the level is not critical and a level that works for any other program seems to work fine with WSPR. There is a curtain type of spectrum display and if you don't see anything on the display and are hearing tones on the speaker than I would increase the level from the radio or increase the level at the Windows sound card mixer. Anyone that is having trouble with this area let me know and we will try and work it out.

To transmit you need to connect the sound card audio output to the radio microphone or data audio input, preferably via a sound card interface. The program can use a serial port for PTT again via an interface circuit or you can use the VOX in the radio to key on with the audio tone from the sound card. I prefer the PTT method but use whatever works for you. Adjust the sound card level as you would for any other digital mode for your particular radio. Remember to keep the power down. One watt is enough on most bands. There is a set up window where you enter your call and chose the sound card and serial interface. Be sure to enter the correct output power in dBm as this is part of the data file and may be used by someone in the future. The call and grid square should be entered even if you only intend to receive if you are going to make your received data available to the data base via the internet.

There is a web page at <http://WSPRnet.org> that has more information and both a listing of the spots and an active propagation map. The spot data may be filters by band, or it may be searched looking for a particular call. Some stations upload their received data in real time so you can see if you are being heard by someone after you transmit. This data base has nearly 500,000 spots (May 2rd) and is growing at over 20,000 spots a day.

So if you are interested in propagation, playing with a new digital mode, or just curious, give WSPR a try. Till next time, 73 Bob W1XP

Board Meeting

Plans to accommodate meeting speaker.

Support for MARA card sort.

Discussed Field Planning. Still no Field Day Chairman. SSB and CW station Captains set. Site permissions needed. Some other basic facilities need to be arranged. We need to have operator support for the event.

Received letter from Groton American Legion requesting PA support for the Memorial Day Parade.

Present at the meeting KD1LE, KD1LE, KK1X, N1ZRG, W1XP.

Adopt A Highway

The first 2008 road cleanup was Sunday April 20th. We had eight members participate and picked up 22 bags of trash along our 2 miles of Route 119.



The first cleanup is always the worst but we still managed to finish in about one hour. It's not a lot of work and you get to chat with another member as you stroll a half mile section of the roadway. The cleanups are always the Sunday after the club meeting so put it on your calendar. If everyone helped out once or twice a year we would be all set.

Thanks to the following who helped out.

Nancy KB1KEF, Bob AB1CV, Ralph KD1SM, John KK1X, Callie K1ZAK, Gary K1YTS, Stan KD1LE, Larry KB1ESR.

Next road cleanup is Saturday, May17 after breakfast due to the Parker Race on Sunday.

Treasurers Report

Income for April was \$80 in membership dues, \$45.06 in bank interest, \$2 from ARRL renewals, \$1.10 from road cleanup findings, and \$26 from the book raffle. Expenses were \$16.40 for newsletter postage and \$63.80 for 2 more years of Web site hosting leaving a net income of \$73.96 for the month.

Current balances:

General fund	\$4,438.04
Community fund	\$2,386.83

As of 4 May we have 55 members who are current with their dues and 13 renewals outstanding. Many of the first Club members renew in April; please

check the member roster that is circulated at the monthly meeting if you do not remember your renewal date. Your membership date also appears on your newsletter mailing label. You can always ask Ralph if you are in doubt.

If you are not yet an ARRL member please consider joining and showing your support for the programs developed by our national organization. If you let me send in your membership then the Club pays for the stamp and receives a portion of your ARRL dues. Bring your check to a Club meeting or to Saturday breakfast payable to NVARC in the amount of your ARRL renewal and Ralph will do the rest.

Ralph KD1SM

ARRL Letter

TEN NEW SATELLITES IN ORBIT

Ten satellites reached orbit April 28 aboard an Indian PSLV-C9 rocket launched from the Satish Dhawan Space Center. The primary payloads were India's CARTOSAT-2A and IMS-1 satellites. In addition to the NLS-5 and RUBIN-8 satellites, the rocket carried six CubeSat <http://www.cubesat.org/> research satellites, all of which communicate using Amateur Radio frequencies. All spacecraft deployed normally and appear to be functional at this time.

The SEEDS satellite was designed and built by students at Japan's Nihon University. When fully operational, SEEDS will download telemetry in Morse code and 1200-baud FM AFSK packet radio at 437.485 MHz. The satellite also has Slow-Scan TV (SSTV) capability. Several stations have reported receiving SEEDS CW telemetry and the team would appreciate receiving more reports from amateurs at their ground station Web page http://sat.aero.cst.nihon-u.ac.jp/gs/english/cardform_e.html.

AAUSAT-II <http://aausatii.space.aau.dk/eng/> is the creation of a student team at Aalborg University in Denmark. It will downlink scientific telemetry at 437.425 MHz using 1200 or 9600-baud packet.

Can-X2 <http://www.utias-sfl.net/nanosatellites/CanX2/> is a product of students at the University of Toronto Institute for Aerospace Studies, Space Flight Laboratory (UTIAS/SFL). Can-X2 will downlink telemetry at 437.478 MHz using 4 kbps GFSK, but the downlink will be active only when the satellite is within range of the Toronto ground station.

Compass-One <<http://www.cubesat.de/>> was designed and built by students at Aachen University of Applied Sciences in Germany. The satellite features a Morse code telemetry beacon at 437.275 MHz. Compass-1 will also provide a packet radio data downlink, which will include image data, at 437.405 MHz.

Cute 1.7 + APDII
http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html is a satellite created by students at the Tokyo Institute of Technology. This satellite will not only provide telemetry, it will also offer a 9600-baud packet store-and-forward message relay with an uplink at 1267.6 MHz and a downlink at 437.475 MHz.

Delfi-C3 <<http://www.delfic3.nl/>> was designed and built by students at Delft University of Technology in the Netherlands. It includes an SSB/CW linear transponder. The satellite will be in telemetry-only mode for the first three months of the mission, after which it will be switched to transponder mode. Delfi-C3 downlinks 1200-baud packet telemetry at 145.870 MHz. The linear transponder, when activated, will have an uplink passband from 435.530 to 435.570 MHz and a corresponding downlink bpassband from 145.880 to 145.920 MHz.

ANTENNA EXPERT L. B. CEBIK, W4RNL (SK)

L. B. Cebik, W4RNL, ARRL Technical Advisor and antenna authority, passed away last week of natural causes. He was 68. An ARRL Life Member, Cebik was known to many hams for the numerous articles he wrote on antennas and antenna modeling. He had articles published in most of the US ham journals, including QST, QEX, NCJ, CQ, Communications Quarterly, Ham Radio, 73, QRP Quarterly, Radio-Electronics and QRPp. Larry Wolfgang, WR1B, QEX Editor, called Cebik "probably the most widely published and often read author of Amateur Radio antenna articles ever to write on the subject."

Cebik lived in Knoxville, Tennessee and wrote more than a dozen books on antennas for both the beginner and the advanced student. Among his books are a basic tutorial in the use of NEC antenna modeling software and compilations of his many shorter pieces. A teacher for more than 30 years, Cebik was retired, but served as Professor Emeritus of philosophy at the University of Tennessee, Knoxville. Cebik served his country in the US Air Force from 1957-1961, specializing in air traffic control.

One of Cebik's last articles for QST, "A New Spin on the Big Wheel," appeared in the March 2008 issue. The article, co-written with Bob Cerreto, WA1FXT, looked at a three dipole array for 2 meters. This was

a follow-up to their article in the January/February issue of QEX that featured omnidirectional horizontally polarized antennas. Cebik authored the "Antenna Options" column for QEX.

Former ARRL Senior Assistant Technical Editor Dean Straw, N6BV, and editor of "The ARRL Antenna Book," said: "LB will be greatly missed by the thousands of hams he's helped through his incredibly prolific – and invariably proficient -- writing about antennas. LB helped me personally in numerous ways while I worked on antenna matters at the League, always communicating with a gentle, scholarly attitude and a real eye for detail. I'm in shock at the news of LB's passing. May his soul rest in peace."

Licensed since 1954, Cebik served as Technical Editor for "antenneX Magazine" <<http://www.antennex.com>>. According to Jack L. Stone, publisher of antenneX, he had not heard from Cebik for a few days and became worried: "I called the Sheriff in Knoxville to go check on him since I hadn't heard from him in over 5 days, either e-mail or phone, which is highly unusual. The Sheriff [went to Cebik's house to check on him and] called back to tell me the sad, devastating news. As his publisher of books, monthly columns, feature articles and software/models for more than 10 years, we communicated almost daily during that span of time. Not hearing from him for that long was unusual, causing my concern. He was like family to me and was loved and respected by so many."

Cebik maintained a Web site <<http://www.cebik.com>>, a virtual treasure trove to anyone interested in antennas. Besides a few notes on the history of radio work and other bits that Cebik called "semi-technical oddities," the collection contains information of interest to radio amateurs and professionals interested in antennas, antenna modeling and related subjects, such as antenna tuners and impedance matching. Cebik said that his notes were "geared to helping other radio amateurs and antenna enthusiasts discover what I have managed to uncover over the years -- and then to go well beyond."

His Web site also contains information on antenna modeling. His book, "Basic Antenna Modeling: A Hands-On Tutorial" for Nittany-Scientific's NEC-Win Plus NEC-2 antenna modeling software, contains models in .NEC format for over 150 exercises. "Since the principles in the book apply to any modeling software," Cebik said, "I have also created the same exercise models in the EZNEC format. For more advanced modelers using either NEC-2 or NEC-4, I have prepared an additional volume, "In-

intermediate Antenna Modeling: A Hands-On Tutorial," based on Nittany-Scientific's NEC-Win Pro and GNEC. The volume includes hundreds of antenna models used in the text to demonstrate virtually the complete command set (along with similarities and differences) used by both cores."

ARRL Contributing Editor H. Ward Silver, N0AX, said, "LB typified generosity. He was always developing material that was published widely. Furthermore, the quality of the articles and concepts was always high, but the writing was such that an audience with a wide range of technical backgrounds could understand it. His Web site is a Solomon's Treasure of solid antenna information -- available to all."

Wolfgang remembered Cebik, saying, "L. B. was an ARRL Technical Advisor, with expertise in antenna modeling and design. I learned that I could count on L. B. to offer clear, concise comments on any submitted article dealing with antennas. He was always a friendly voice on the other end of my phone line when I needed to talk to an expert, and I came to expect a quick e-mailed response to any antenna questions that I sent him. L. B. was so much more than an antenna author, though. He was one of the first ARRL Educational Advisors I ever had the pleasure of working with when I became editor of the ARRL study materials. He played a key role in helping develop the concept of online courses when ARRL began to study the idea of the Continuing Education program <<http://www.arrl.org/cce/courses.html>>; his Antenna Modeling course has been one of the most popular offerings in the program. L. B. leaves a legacy of friendly advice and Amateur Radio wisdom. I will miss him as a friend and as an advisor."

Cebik's niece, Gina Robeson, also of Knoxville, told the ARRL that her uncle "was amazing to me in a different way than hams viewed him. But he was a legend to me and to the thousands of amateurs whose lives he touched with his work. To me he was my uncle, teacher, friend and confidant. He was a wonderful man, but his family did not really know about the ham side of him."

Robeson said her family spent each Christmas with Cebik and his wife Jean; Jean passed away in 2002 from cancer. "It was always the greatest fun with all the food and family getting together. It did not matter if we were getting together as a group or if it was just me and Uncle Roy, he always had the time to listen and offer advice. He will be sorely missed."

A memorial service for Cebik will be held Sunday, April 27 at 1 PM at Mynatt Funeral Home, 2829 Renoc Road in Knoxville. Cebik will be cremated and

his ashes scattered in his garden, the same place his wife's ashes were scattered. "They will once more be together," Robeson said.

NVARC Club Net

Topics discussed on the Club net recently; emergency communications preparedness, NMAEPC radio programming, programming member's mobile radios with common frequencies, Upcoming meeting, need for volunteers for Parker Road Race, Winlink setup.

Recent participants include Leo K1LK, Bob W1XP, Larry KB1ESR, Skip K1NKR, Stan KD1LE, Les N1SV, Richard W1LTN, Den KD2S.

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.

Flea Markets

2008

June
7 Southern Berkshire ARC Goshen CT

July
12 Pen-Bay ARC Union Me

August
9 Rason Hamfest Ledyard CT
22-24 NE Division Convention Boxboro

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

N1MNX Repeater Support

The N1MNX repeaters cover the area of our club members and are supported by user donations. Donations for support of the repeaters should go Dave N1MNX.

Contest, DXpeditions and Special Events

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.

Contests 2008

June

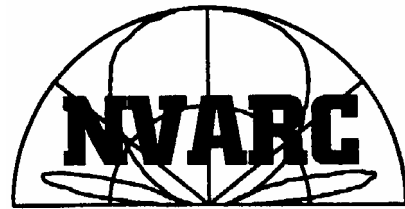
14-16 ARRL June VHF QSO Party
28-29 ARRL Field Day

July

12-13 IARU HF World Championships

August

2-3 ARRL UHF Contest
16-17 ARRL 10 GHz and Up Contest



Nashoba Valley Amateur Radio Club

PO Box # 900
Pepperell Mass 01463-0900

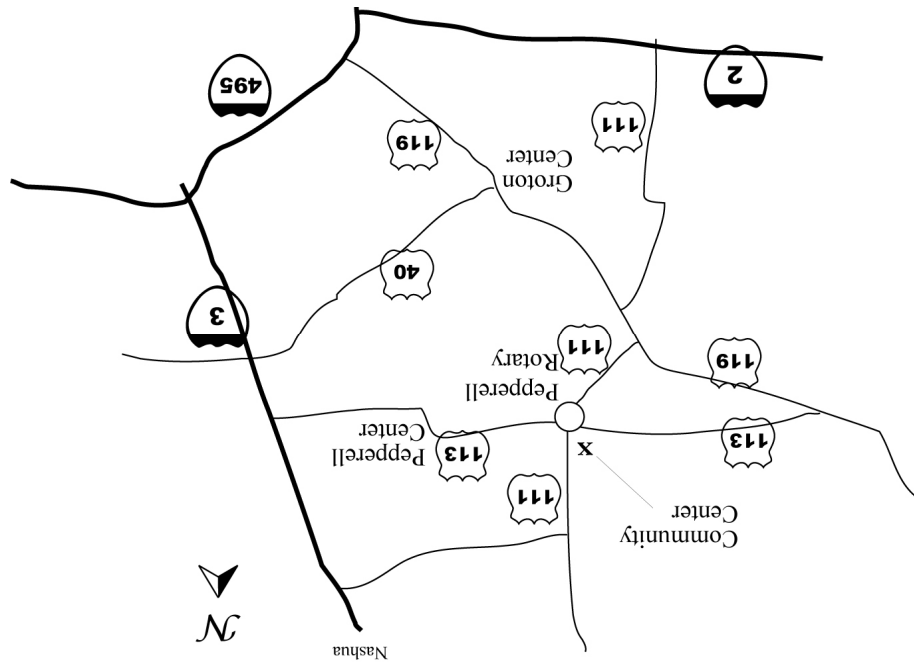
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N1NC Trustee: Bruce Blain K1BG
Meetings are held on the 3rd Thursday of the month
7:30 p.m. - Pepperell Community Ctr.
Talk-in 146.490 simplex
442.900 + 100Hz Repeater
147.345 + 100 Hz Repeater
53.890 - 100Hz Repeater

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.

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