





de N1NC

June 2007 Volume 16 Number 6

This Month's Meeting

This months meeting presentation will be by Jim W1TRC on using the LTSPICE modeling program to analyze circuits.

At last months Board meeting a Field Day budget was approved. Due to the expense of Field Day the budget was brought to the regular meeting for approval. The following budget was approved by the membership.

\$20 coffee & donuts \$250 food \$50 fuel \$120 Field Day pins \$140 porta-john

\$580 total

Road Cleanup Sunday June 17th.

From the President

Since this is the last regular meeting of the spring meeting schedule I want to wish everyone a safe and fun filled summer.

I hope to see many of you at Field Day and details on the summer cookout will be sent out via the newsletter and email when plans are set.

On the subject of meeting programs I have had some communication with our QSL Bureau contact. We do our regular card sort in October which takes care of about one month of incoming QSL cards. The Bureau gets five or six boxes of QSL cards a month. Only three other clubs do an annual sort and they are all in the fall or winter months. This leaves the spring and summer when the folks who run the Bureau have to pick up the slack. One thought is for us to do a spring sort either as a regular meeting or

as a special activity. But I want to be sure we that we don't turn what is one of our most popular meeting programs into a chore. Another option is for us to interest another local club to have a spring card sort. We could help them get going and provide some training and the use of the sorting boxes. In that way we could help the Bureau and if some people were interested in doing a sort in the spring they could attend a different clubs meeting. I would be interested in the member's thoughts on the subject.

In the ARRL Letter section the 300th contact of Amateur Radio on the International Space Station (ARISS) was noted. Our contact for the Hawthorne Brook Middle School in Townsend was almost two years ago. Of the 300 contacts only 153 are from the US which puts us in a select group.

Stan KD1LE

Last Month's Meeting

Last month's presentation was about Field Day. Stan did a presentation on NVARC Field Days Past. Larry and Dale polled the club on what members wanted to do and solicited volunteers to provide specific equipment and to fulfill specific Field Day bonus point tasks.

Attendees at the May meeting: Dale AB1GA, Leo K1LK, Skip K1NKR, Tom K1NNJ, Gary K1YTS, Larry KB1ESR, Nancy KB1KEF, Stan KD1LE, Ralph KD1SM, John KK1X, Les N1SV, Peter N1ZRG, Rod WA1TAC, and Earl WR1Y.

Field Day

Field Day is approaching. Dale and Larry have been working to put the pieces in place for us. Contact them if you want to volunteer to organize some part of the event. www.cep/wyerizon.net



Longsjo Volunteers Needed

Volunteers Needed - Longsjo Classic 30 June & 1 July

de Ralph KD1SM

I have received the official request for Amateur Radio support for the 2007 Longsjo Classic Race. The event is four days; June 28 to July 1 but we only try to assemble a crew for the Wachusett Mountain Road Race on Saturday and the Downtown Criterium on Sunday.

This is a professional-level bicycle race; some participants are competing to be on Olympic cycling teams. We are positioned around the courses at strategic intersections to help with traffic control and pass any emergency communications.

Your reward for a day of service is watching some great racing, the satisfaction of helping the community by using your licensed skills, lunch, and a collectible Longsjo T-shirt.

The Saturday crew size is ideally 14 or 15 radio operators. For Sunday, 6 operators can cover the course.

The weekend after Field Day you'll have caught up on your sleep and be looking for more operating opportunities. Please consider becoming a part of the Longsjo radio communications crew. I'm available to answer any questions about this event.

More information about the race itself is available at http://www.longsjo.com/

How to Find That Info

I regularly hear some one say "what is 'Jacks' email address or phone number"? All of that data and more are available in the Club Yearbook. We updated the Yearbook the beginning of the year with current member's information, new pages in the club activities section, and the newsletter article indexes. This includes almost 40 replacement and additional pages. There are still some copies of the update available for those who need them. To keep your copy of the Yearbook useful, keep it current with the update. See Stan for the update.

Board Meeting

This month's board meeting discussion topics.

We have updated the Club Brochure and we have a supply on hand. If you know of a location that would be suitable to leave a few see Stan or Ralph. Some ideas are local businesses that have public bulletin boards, restaurants, electronics stores.

Meeting presentations and future meeting presentations for the fall. Some short presentations to add to otherwise short meetings. We are looking for member input to find suitable speakers or subjects.

For our support of the QSL Bureau NVARC will get free incoming Bureau service for the club callsign.

Discussion about helping another area club do a card sort for the W1 QSL Bureau.

Treasurer's report.

Field Day planning.

Cookout planning and budget of \$30.

In attendance Ralph KD1SM, Bob W1XP, John KK1X, Larry KB1ESR, Joel W1JMM, Stan KD1LE, Les N1SV, and Peter N1ZRG.

Adopt A Highway

June is a busy month with Field Day the 23-24th and the Longsjo Bike Race the next weekend so road cleanup will be Sunday June 17th.

The May road clean up took place May 27th. Thanks to the following members for supporting the last road cleanup; John KK1X, Bob AB1CV, Calie K1ZAK, Stan KD1LE, Ralph KD1SM.

Parker Road Race

We supported the Parker races in Devens on the 20th of May. The weather wasn't the best with rain during the 5 mile race. We helped by making sure the course was set up prior to each race, the mile mark clocks got set at each start, and tracked the lead and last runners/walkers so announcements could be made during the races and we knew everyone was clear of the courses.



Tom K1JHC saved the two mile race by putting the runners back on the course after an officer turned the runners prematurely at the wrong intersection.

Everyone got a tee shirt and lunch to wrap up the event.

Thanks to everyone who helped out Nancy KB1KEF, Gary K1YTS, Stan KD1LE, Larry KB1ESR, John KK1X, Tom K1JHC, Ralph KD1SM and Joel W1JMM.

Groton Memorial Day Parade

May 28th Stan KD1LE, Larry KB1ESR and Ralph KD1SM supported the Groton Memorial Day Parade Stan set up a mobile PA system that covered ceremonies at the Fireman's Memorial and Sawyer Common. Ralph provided a mobile PA system to be used staging the parade and for ceremonies at the Old Burying Ground. Larry set up a fixed public address system so that the large audience at the Groton Cemetery could hear the dedications. The Parade Adjutant was Bob AB1CV.

Treasurers Report

Income for May was \$230 from member dues (one member expects the Club to still be in existence through 2017), \$1 found by the road cleanup volunteers, \$38 from the April meeting book raffle, \$2 from ARRL renewals, and \$1.05 from bank interest. Expenses were \$16.40 for newsletter postage and \$1.12 for other postage leaving a net income of \$256.77 for the month.

Current balances:

General fund \$4,716.48 Community fund \$2,136.83

As of 14 June we have 58 members who are current with their dues and 6 renewals outstanding. 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.

If you have not been receiving the monthly notices when the Signal is posted in the Web then we do not have your current email address. These notices are usually sent the weekend after the Board meeting.

Don't forget that the Club receives a portion of your ARRL dues if you renew your ARRL membership through me.

Ralph KD1SM

PSLIST

Jul

7 Mt Washngtn NH Newton's Revenge cycle race Cliff N1RCQ n1rcq@amsat.org or Dave KA1VJU ka1vju@cnharc.org

Auc

18 Mt Washngtn NH Mt. Wash. Bicycle Hill Climb Cliff N1RCQ n1rcq@amsat.org or Dave KA1VJU ka1vju@cnharc.org

19 Mt WashngtnNH Mt. Washington Century Ride Cliff N1RCQ n1rcq@amsat.org or Dave KA1VJU ka1vju@cnharc.org

Sec

29 Bristol NH NH Marathon Cliff N1RCQ n1rcq@amsat.org or Dave KA1VJU ka1vju@cnharc.org

NVARC Club Net

The club net meets on the 442.900 repeater. Subjects discussed recently; upcoming events Groton Road Race wrap up, upcoming Parker Road Race, road cleanup.

Recent participants include Dave N1MNX, Bob W1XP, Bob AB1CV, Joel W1JMM, Larry KB1ESR, Skip K1NKR, Gary K1YTS, Ralph KD1SM, Stan KD1LE, Les N1SV, Richard KB1MBR, Ken K1JKR, Den KD2S and Peter KB1LZH.

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

June

16 Southern Berkshire ARC, Goshen CT

17 MIT

July

15 MIT

August

19 MIT

September

16 Western CT Hamfest Newtown CT

16 MIT

Advertisements



603-465-2422 800-323-5876

FAX 603-465-3320

P.O. BOX 330 19 PROCTOR HILL RD. HOLLIS, NH 03049

W1ZC

WW1Z

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

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 2007

June 9-11 ARRL June VHF QSO Party 23-24 ARRL Field Day

July CQWW VHF 3rd full weekend September

CQWW RTTY DX 4th full weekend

DXpeditions

Call	Location	Until
J20SA V73NS OX3PG 9V1CW	Greenland Ivory Coast Sudan Djibouti Kwajalein Greenland Singapore Maldives	June 07 31 August 07 April 2007 From 1 April From 1 May Jun 2007 2008 Nov 2007

See www.425dxn.org for more listings

TV Trivia

Do you know what the longest running TV shows were? The topic came up in some discussion so I did a little research. Here are the top ten.

Show	Episodes	Years
Gunsmoke	633	1955-1975
Lassie	588	1954-1973
Death Valley Days	452	1952-1972
Ozzie and Harriet	435	1952-1966
Bonanza	430	1959-1972
The Simpsons	387	1989-pres
Law and Order	381	1990-pres
My Three Sons	369	1960-1972
Alfred Hitchcock	361	1955-1965
Dallas	357	1978-1991

ARRL Letter

ARRL, DoD, FCC TRY TO COME TO TERMS WITH PAVE PAWS

The ARRL has sent out more than 100 letters to repeater owners/trustees who have repeaters affected by the "Pave Paws" radars (PPR). Citing an increasing number of interference complaints, the US Air Force has asked the FCC to order dozens of repeater systems to either mitigate interference to the Pave Paws radars or shut down. The ARRL is working with the US Department of Defense (DoD) to develop a plan to mitigate alleged interference from 70 cm ham radio repeaters to this military radar system on both coasts.

The situation affects 15 repeaters within less than 100 miles of Otis Air Force Base on Cape Cod, Massachusetts, and more than 100 repeaters within some 140 miles of Beale Air Force Base near Sacramento, California.

ARRL Regulatory Information Specialist Dan Henderson, N1ND, stresses that the Defense Department acknowledges Amateur Radio's value in disasters and emergencies and is being extremely cooperative -- and a wholesale shutdown of US 70 cm Amateur Radio activity is not on the table.

The Amateur Radio Service is a secondary user in the 420-450 MHz band, both by the Table of Frequency Allocations and the FCC Part 97 regulations. As such, Amateur Radio licensees, jointly and individually, bear the responsibility of mitigating or eliminating any harmful interference to the primary user, which in this case is the Government Radiolocation Service that includes the DoD Pave Paws systems.

The letters sent to affected repeater owners/trustees give them an up-to-date briefing on the ongoing negotiations with the US Air Force, as well as outlines the DoD's plan. The DoD has indicated a willingness to try a mitigation proposal, but they have also indicated their need is for these issues to be resolved sooner rather than later. With that expediency in mind, the proposed mitigation strategy is as follows:

* All repeaters on the DoD list in the affected areas will immediately reduce power to 5 W transmitter power output (TPO). Each repeater licensee/trustee should contact Henderson to confirm this once this has been done for their system. Confirmation of this being done is needed from each repeater owner by Friday, June 15, 2007.

- * The ARRL will provide the Longley-Rice calculations for each repeater to the DoD by June 15, 2007. The DoD will provide engineering data to the ARRL and FCC by June 15, 2007. These studies will be reviewed by the DoD, the ARRL Lab and the FCC to determine the amount of mitigation necessary for each repeater. Based on this review by the DoD, additional mitigation proposals for individual repeaters (including further power reductions, lowering of antenna heights, use of more directive antennas and other possible mitigation techniques) will be provided by the ARRL as needed to individual repeater owners. If there is a disagreement on the conclusions, a conference call will be held to resolve any outstanding issues.
- * All interference must be resolved no later than August 1, 2007.
- * Beginning in August 2007 (and continuing on a periodic basis), the DoD will have a follow-up engineers study at each PPR site to ensure corrective actions have been taken and the interference and to ensure that successful mitigation continues.

According to the DoD, the in-band interference from Amateur Radio fixed FM voice repeaters has increased to an unacceptable level. Pave Paws radars are used for national security functions, including early detection of water-launched missiles. They are critical to our national defense and are in use 24 hours per day, seven days per week.

The goal of the ARRL has been to develop and implement a plan that would mitigate the interference, and at the same time to permit the repeaters to continue operation and to operate on as liberal a basis as possible. To do so, the League has offered to work closely with the two involved repeater coordinating groups, as well as the individual repeater owners, sharing information and dealing with this issue on a coordinated basis with all stakeholders.

The League has also been in contact with representatives of the FCC. They have the ultimate responsibility for enforcing any mitigation plan, up to and including ordering specific repeaters to shut down operations. The FCC is aware of the complex nature of this problem and the mitigation strategy being proposed by the DoD.

Since Amateur Radio operators are secondary users on the band, the ARRL has few options, and all options involve cooperation with the DoD. It is hoped the Longley-Rice calculations from the ARRL and the DoD's engineering studies will provide enough data to allow as many of the repeaters in the affected ar-

eas as possible to remain on the air at reasonable power levels.

It is entirely probable that even with extreme mitigation techniques, some repeaters in close proximity to the PPR sites may have to be shut down permanently. If that happens, official notice would come from the FCC. It is also possible that some repeaters might be required to operate permanently at a lower power level in the areas near these Air Force bases. In those cases, the League will be in contact with the individual repeater owners with that information and the FCC will be notified.

Henderson requests that all repeater owners/trustees affected by this issue immediately implement the 5 W TPO for your repeater/s; please contact his office by June 15 indicating if you have implemented the power reduction. This will allow the ARRL to have voluntary compliance on hand that can be used to show the cooperation of the amateur community.

Henderson stresses that it is to each repeater's long-term advantage to implement the power reduction as soon as possible. The DoD indicated they will be collecting engineering data during June. This presents the opportunity to assess a repeater's actual impact at the lower power level and a more honest determination of its continued potential for harmful interference to the PPR sites. If any repeaters are running at higher power levels, then the determinations can only be based on assumptions rather than on actual data.

LEAGUE STAFFERS CRISSCROSS THE COUNTRY PROMOTING AMATEUR RADIO

ARRL Membership Manager Katie Breen, W1KRB, was in Rochester, New York for the Atlantic Division Convention and Rochester Hamfest May 31-June 3. ARRL President Joel Harrison, W5ZN: Atlantic Division Director Bill Edgar, N3LLR, and Vice Director Tom Abernethy, W3TOM, were there as well. Katie reports that both attendance and spirits were high at the event, especially on Saturday morning with long lines and standing-room-only for the VE test sessions. More than 100 test elements were given with over 70 passes. Many excited new hams came to share their good news at the ARRL Booth and have their pictures taken with President Harrison. Katie gave a forum on Saturday afternoon that included a tour of HQ, highlighting the Special Event blogs and videos on youtube.com.

ARRL Regulatory Information Specialist Dan Henderson, N1ND, attended the Georgia State Convention in conjunction with the Atlanta Hamfest on June

2. Dan spoke about the changing face of Amateur Radio since the 2006-2007 rules changes.

ARRL Chief Development Officer Mary Hobart, K1MMH. attended the Northwestern Division Convention led by Division Director Jim Fenstermaker, K9JF, and Vice Director Bill Sawders, K7ZN. The event, held in Seaside, Oregon last weekend, attracted about 2500 people from Oregon. Washington, Montana, Alaska, Idaho and California. The special event stations, W1AW/7 was operational for the duration of the convention, which also offered flea market opportunities and key ham radio vendors. More than 300 people attended the Saturday night banquet where Steve Johnson, N7VIC, received a scholarship. The ARRL table saw brisk business as publications and Field Day T-shirts and other paraphernalia flew off the table.

ARISS MILESTONE: 300TH CONTACT

On Thursday, May 31, Amateur Radio on the International Space Station (ARISS) made its 300th contact since its inception back in December 2000. This milestone QSO was to the NASA Teacher Conference in Houston, Texas. The first contact was on December 21, 2000 to Burbank School in Burbank, Illinois.

The United States leads in the number of ARISS contacts with 153. Japan is next with 25; Australia has 18, Canada has 16, Belgium has 10, the United Kingdom and Germany have 8 and France has 7 contacts. A total of 28 countries have made contact with the ISS through ARISS.

For schools interested in setting up an ARISS contact, first check with your local school! See if the school's Amateur Radio school station is sufficiently equipped to enable a successful contact (i.e., general technical level, transceiver + power, steerable antenna, tracking programs and such). Please take into account the expected level of deployment of the Amateur Radio equipment operated onboard ISS. Next, carefully fill out the application form (this can be found http://www.rac.ca/ariss/arissapp.htm. Please make sure to include the school's educational proposal. The educational proposal should include answers to these questions: How will you: a) integrate this activity into the school curriculum and b) involve as many grade levels as you can, participating through essay contests, poster drawing, letter writing and so on? How will you get as much media coverage as possible? For US schools, e-mail your completed application to ariss@arrl.org.

For more information on the ARISS program, please see http://www.rac.ca/ariss/faqariss.htm.

RILEY REITERATES RECOMMENDATION TO "LIGHTEN UP" ON HAM BANDS

FCC Special Counsel in the Spectrum Enforcement Division Riley Hollingsworth's main message at the Dayton Hamvention® http://www.hamvention.org 2007 FCC Forum may not have been a new one. But it's certainly one he believes bears repeating -- at least until it starts cutting through the QRM and QRN that pervade more communication channels than our Amateur Radio bands.

"Well, you could have gone to the flea market, but you came to church instead," Hollingsworth quipped to his Dayton forum audience. "I've got you now."

Hollingsworth repeated what for many Riley Watchers has become a familiar refrain: That the Amateur Radio community needs to "lighten up" on the air. Acknowledging that he was repeating himself, Hollingsworth urged his audience to take his message more to heart. "All of you can learn from each other," he said, "and you need to work together more and show a little more respect for your diverse interests and for the Amateur Service as a whole. It isn't about you. It isn't about enforcement. It's about Amateur Radio."

As radio amateurs take to the airwaves, he continued, they need to decide what's most important -- the best interests of ham radio or their ego, pride or perceived "rights."

"I realize I may be preaching to the choir here, but on the air you need to be more cooperative and less argumentative -- and I need you to take this message with you when you go home," he continued.

As a "homework assignment," Hollingsworth encouraged his listeners to read the "It Seems to Us . . . " editorial, "Most Effective Use" http://www.arrl.org/news/features/2007/05/01/1/, by ARRL Chief Executive Officer David Sumner, K1ZZ, in May 2007 QST. In his commentary, Sumner stressed that interference occurring as a side effect of legitimate Amateur Radio activities in crowded bands "is simply a fact of life" and that it's "unfair to your fellow amateurs to assume that every instance of interference you may encounter is a hostile act."

Hollingsworth offered good news and bad news. "The good news: Nothing is wrong with Amateur Radio," he allowed. "It is a good service that is showing its value to the public on a daily basis."

The bad news, he asserted, making a comparison to "road rage," is "that there is an element of Amateur Radio that too often reflects present society generally."

Hollingsworth urged all radio amateurs to cooperate more and depend less on the FCC to solve their operating issues.

"We live in a rude, discourteous, profane, hotheaded society that loves its rights, prefers not to hear about its responsibilities, and that spills over into the ham bands," he said.

Hollingsworth's bottom line: Be flexible in your frequency selection and make regular use of the "big knob" on the front of your transceiver to shift to any of the "thousands of frequencies and hundreds usable at any given time of day or year" as necessary to avoid problems. "The world is ugly enough -- don't add to it," Hollingsworth advised.

"We can enforce our rules, but we can't enforce kindness and courtesy or common sense," Hollingsworth concluded. "And a very wise person, who happens to be standing to my left [FCC Wireless Telecommunications Bureau staffer Bill Cross, W3TN -- Ed] once told me: 'You can't regulate stupid.' If we could, we'd be working for the United Nations instead of the FCC."

In his comments, Cross singled out the controversy that erupted recently over fears that automatically controlled digital stations would overwhelm the amateur bands, eclipsing most other modes. Cross cited §97.7 of the rules, which requires each amateur station to have a control operator and, in essence, to employ a "listen-before-transmit" protocol."

When a station is under automatic control, regardless of the transmission mode, Cross explained, the control operator need not be at the control point, but must employ station control devices and procedures while transmitting that ensure compliance with the FCC rules and does not cause harmful interference to ongoing communications of other stations.

The operational rule, Cross said, is: "Your call sign, your responsibility."

ARRAY OF NEW GEAR DEBUTS AT DAYTON 2007

It's always a treat to get your first look at a new HF transceiver at Dayton. This year, there were no fewer than six to drool over. Here, in alphabetical order, is a rundown:

Elecraft http://www.elecraft.com/ announced its new K3 HF and 6 meter transceiver. It includes many upgrade options, so many, in fact, that you can configure anything from a kit-built 10 W portable QRP radio to a full-featured, contest-ready 100 W rig with *two* high-performance receivers. It is scheduled to ship starting in July.

FlexRadio Systems http://www.flex-radio.com/, a pioneer in high-performance software defined radios (SDRs), introduced its Flex-5000 HF plus 6-meter transceiver series that promises higher performance and more features than its earlier model. Included are the Flex-5000C, a fully integrated system in a single box, and the Flex-5000D, which includes a second receiver.

Hilberling, the first Amateur Radio transceiver maker from across the Atlantic for some years, announced its PT-8000 transceiver. It's offered as a full-featured HF and VHF transceiver available in 10, 100 or 600 W versions. The North America distributor is Array Solutions http://www.arraysolutions.com/>.

ICOM http://www.icomamerica.com/ unveiled its IC-7700 HF + 6 meter transceiver. It appears to be a single-receiver version of its top-tier IC-7800, sharing the 200 W transmitter, high performance receiver and 7-inch display of its sibling. Contesters are the market target, but the IC-7700 may be of interest to anyone who covets the features of the IC-7800 but doesn't need two receivers or the higher price tag.

Ten-Tec has its new Omni-VII HF + 6 meter transceiver on display. The unit's "distributed roofing filter architecture" promises ham-band-only receive performance with a general coverage receiver. Stay tuned for the "Product Review" in July QST.

Finally, Yaesu http://www.yaesu.com/ showed its new FT-450 HF + 6 meter offering. The FT-450 bears some similarities to the Yaesu FT-2000, but with fewer features and a correspondingly lower price.

What else?

Array Solutions is distributing the SPE Expert 1K-FA solid-state linear amplifier. It is a compact light weight (44 pounds) fully automated, full break-in capable amplifier that puts out 1000 W PEP on 160 through 10 meters (700 W PEP on 6 meters). It has an internal 120 or 240 V ac power supply and antenna tuner.

Dishtronix http://www.dishtronix.com/ showed off its 100% duty cycle, 1500 W output (on all modes)

solid-state linear. This is a "serious" amplifier at 65 pounds with the choice of a separate 120 pound linear power supply or a 54 pound switcher.

Tokyo Hy-Power http://www.thp.co.jp/ enjoyed a great debut at Dayton this year, showing three HF amplifiers newly introduced to the US market. On display were the HL-1.2KFX 750 W output, HL-1.5KFX 1 kW output and HL-2.5KFX legal limit amplifiers as well as the HL-500V 2 meter linear. All are solid state. THP also offers a new legal-limit automatic antenna tuner.

Kenwood http://www.kenwood.com/> announced a new V/UHF mobile transceiver, the TM-71A. Of particular note is free software that allows downloading repeater data from ARRL's Travel Plus http://www.arrl.org/catalog/?item=9930 directly into radio memories. It also can function as a crossband repeater.

Yaesu introduced a new V/UHF transceiver especially for hams on the go! The FTM-10 is designed to mount on the handlebars of your bike or motorcycle so that you don't even need a mic! Just talk into the front panel, and you're on the air!

Radio accessories are always popular at Dayton and MFJ can always be counted on to have new products. Topping the list this year is the MFJ-998 1500 W Intellituner. This legal-limit auto tuner is designed to handle loads from 12 to 1600 ohms from 160 to 10 meters and includes two outputs and sophisticated memory, protection and control features.

West Mountain Radio http://www.westmountainradio.com/, the RigBlaster and RigRunner folk, have branched out into the audio side of your radios. They introduced a DSP-equipped speaker designed for the HF operator who would like more signal and less noise.

Palstar http://www.palstar.com/> has a new AT1KP tuner that covers 160 through 6 meters. By switching in the 160 meter inductance only when needed, the AT1KP reduces the minimum capacitance of the tuner so it can cover 6 meters.

The Swiss Antenna Matching System from Heinz-Bolli is a legal-limit remote-controlled tuner designed for outdoor mounting. It can be manually tuned by remote control or auto tuning can be used to select the best tuner configuration or adjust the parameters. Array Solutions is the North American distributor. -- Joel Hallas, W1ZR

It's not too early to start working up those holiday gift lists.



Nashoba Valley Amateur Radio Club

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http://www.n1nc.org/

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Secretary: John Griswold KK1X
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Board Members:
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Joel Magid W1JMM 2006-2009
Bob Reif: W1XP 2007-2010

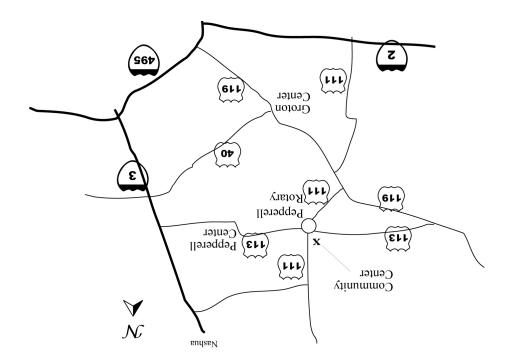
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Meetings are held on the 3rd Thursday of the month 7:30 p.m. - Pepperell Community Ctr.

Talk-in 146.490 simplex 442.900 + 100Hz Repeater 147.345 + 100 Hz Repeater 53.890 – 100Hz Repeater

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