NVARC
Nashoba Valley
Amateur Radio Club

SIGNAL

SPECIAL SERVICE CLUB
ARRL

September 1999 Volume 8 Number 9

This Months Meeting

The plan for the meeting this month is to host one of the local Boy Scout troops. The idea is to do some short presentations of the show-and-tell kind on various aspects of ham radio. We also intend to go over JOTA and give them and opportunity to talk on the radio. When the JOTA weekend comes around in the Fall they are often mike shy or haven't given any thought to what they might say. So we can change that. If you have a show-and-tell type of thing or a story you can share bring them along.

Last Month's Meeting

Thursday evening August 19th was the NVARC cookout at the KD1LE/N1PBL residence. The weather was great though cool for August. But that didn't keep people out of the pool or prevent super powered squirt gun fights. Besides the food and recreational activities the evening included a tour of the NVARC FoxFinder™ kitting and distribution facility. A good time was all.

Future Meetings

The December meeting will be Homebrew Nite. If you are planning on bringing something that takes 27 coats of hand-rubbed lacquer or a circuit with 500 components you'd better get going.

NVARC FoxFinder

Representing months of hard work contributed by the dedicated engineering, test, manufacturing, and marketing team we are finally ready to make the FoxFinder™ available to the general fox hunting pubic. The original concept was just to 'kit' an existing design to make building it easier for the typical hunter. We built and tested several different circuits that had been published and evaluated the equipment in the field. Some of the existing designs performed poorly in terms of sensitivity and some failed based on ease of use in the field tests. One of the designs would not have been practical because of the cost of the components used. At first we considered 'fixing' one of the existing designs but after some study we decided it would be better to start from scratch. At this point we developed a list of requirements such as sensitivity, ease of use, user interface, and cost based on our field trials. In the design phase we acquired parts and designed sections of the circuit sometimes trying several options. This resulted in two alpha units which underwent much field testing; not that we needed an excuse to hunt. In fact both alpha units are still being used for hunting. The first model was built on a breadboard and the second used a prototype PC board with improved circuit designs. This development process resulted in a 'final' design that met all the initial requirements. Assembly instructions, troubleshooting procedures, and a theory of operation were written. We then had printed circuits boards commercially produced and kitted two beta units which we sold with a 'we'll make them work' guarantee. By this time the instructions were pretty solid but a few changes and additions based on user feedback from the beta units were made. A few more circuit board changes to improve the circuit layout and we are up to the current design. At this time we have a limited number of units ready to ship to interested hunters.

The unit is contained in a two and one-half by four and one-half by one inch box that will fit in a shirt pocket. It has only a power switch and a range switch for controls to make it easy to use. There are connectors for headphones and RF input from an antenna. The typical use is with a three or four element two meter Yagi. It has an LED to indicate that power is on. The signal strength indicator is

an audio tone that varies with signal strength. This is monitored using headphones plugged into the headphone jack. From use testing we found that making adjustments and watching a meter or other indicator did not work well while you are navigating through the woods typical of where the fox boxes get placed. The unit runs approximately fifty hours on a nine-volt battery. The kit contains all of the parts; silk screened circuit board, wire, detailed instructions with layout pictures, annotated diagrams, and drilling and cutting templates to assemble the unit (battery not included). The cost of the kit is $59.95 plus $5.00 shipping and handling. The kit can be ordered by sending your order to NVARC, P.O. Box 900, Pepperell, MA., 01463. Allow 4 to 6 weeks for delivery.

Understanding Cable Television

There are ways to keep your cable costs down such as when you call to add services. Instead of saying just "Add HBO" question pricing, it may be that a package of channels is a better deal. Ask questions like, "Can I pick up the box at your office and install it myself?" If requesting a technician to come to your house be prepared with a suitable time that you or someone over 18 can be present (consider time as normal business hours) but question alternatives. Try to start with a pleasant voice, and attitude, sometimes it is hard when things aren't going right, but, "You can catch more flies with sweet honey than with vinegar." Also it's much easier to understand a softer voice, than one that's yelling. The customer service representatives get immense pleasure solving your problems.

For specific items the cable company would typically charge their cost to the subscriber to keep the generic cost low to the majority. Like extremely long cable runs on long driveways, this cost calculation is done after subtracting the distance that all subscribers get free. Consider some of these costs as user fees, like bringing out and connecting a cable box, connecting your VCR, replacing the cable the dog chews, or the remote lost by the kids. Should everyone have to pay? Also don't let government officials pass a law regarding cable without you understanding its ramification's to you and your cable bill. Here is a list of some of the cable companies costs: employees wages and benefits, Telephone system, and office equipment, service trucks, tools, training, Insurance, taxes, franchise fees, electricity, pole rental, cost to build a huge distribution system, most channels charge fees, billing costs, and these aren't even all of them.

In order for a cable company to construct a cable system in your community, they must seek a franchise license, which is granted by an issuing authority. Generally in our towns this is the Selectman's office. They must meet requirements of the community, state, and federal governments. The community requirements are negotiable.

The cable company likes to give back to the community but they "can not give away the cow, cause then there is no more milk". And as in any other business someone pays the bill. The franchise negotiations must be done with cost to the subscriber in mind.

The cable system is a "CLOSED" R.F. (Radio frequency) system. It uses a broad spectrum of frequencies referred to as "BROADBAND". These frequencies are also used by Police, Fire, Amateur radio, C.B. and Aircraft. This is the reason the system must be closed, to prevent interference. It is important that the cable system be kept as tightly closed as possible to prevent interference from getting in (ingress) or out (egress). The F.C.C. (Federal Communications Commission) which oversees all communications has strict guidelines especially regarding the egress commonly referred to as "Leakage." One of the main concerns is cumulative leakage in the Aircraft frequency area, which if sufficient may cause navigational problems, although it would have to be at very high levels to cause any real problem. The Cable Operator by law has to, on a quarterly basis, measure leakage and repair any leaks. If it can not repair the problem in a relatively short amount of time they must shut the section or the entire system down. Ingress only causes problems with quality of picture or other cable services. Cable modems (computer/internet service) can be hindered by ingress.

Most often if there is leakage, there is ingress so, it is in the best interest of the cable company to expedite the repair. This would include shutting off a subscribers home that may have a bad cable or other part, due to failure, or customer-added equipment defects, so it is best to contact the cable company before you install any equipment.

The present system is a "Tree and Branch "coaxial system. Because of it's length, and breaks to insert amplifiers and other distribution equipment, it is more prone towards leakage. Typically caused by temperature changes, which cause expansion

and contraction. On the return cable path, which such things as cable modems depend, noise funnels back through the system to the headend and causes problems "hearing" the device in the system.

The new system design, one that most cable companies are using, is HFC (**H**ybrid **F**iber **C**oax.) There are many advantages to HFC systems:

Fiber portion uses a beam of light, which if leakage occurs is not an interference problem (i.e. egress is not a problem to other services.)

Fiber has low loss, which helps picture Quality.

Fiber beams travel much longer distances before needing a "BOOST." The coaxial distances after a fiber node are shortened thus the return noise level is much lower which helps video or cable modems.

For the cable operator, fiber saves equipment costs, saves electricity costs, and maintenance costs. For the subscriber this means fewer and shorter outages, and less increases in their cable bill. This also means a larger bandwidth (more channels or services). From the Cable Headend (Antenna/processing office) fiber may go many miles then convert through a node to coaxial system to continue to the home. It is mainly the high cost of nodes that prevents the fiber from going directly to the house.

Cable companies are required by the FCC to do proof of performance tests to assure quality of service. These are public record and if a quality issue arises a customer has a course to follow. First, contacting the cable company you must specify that this is a complaint of quality of service. Request resolution and notification allowing them a reasonable time to fix the problem. Document time, date, and person(s) you spoke with. If no satisfaction is derived then the second step would be contact the issuing authority (Selectman's office.) They may refer your complaint to the Cable Advisory Committee who would then investigate your problem. If these results are not satisfactory you may contact the state, then the FCC.

For further information you can contact your local cable company, local Cable Advisory Board or the Massachusetts Cable Commission, here are some web sites that may help:

[http://www.chartercom.com/index.html for Charter Communications, the cable company]

[http://www.fcc.gov/csb/ for the FCC]

[http://www.catv.org/modem/ for cable modems]

Thank you and I hope this helps you understand a little about cable.

David K. Peabody N1MNX
Pepperell Cable Advisory Committee

Search and Rescue

The weekend of September 10-12 Ralph KD1SM and Stan KD1LE participated in the Berkshire Mountain Search and Rescue Conference. Their interest in this was sparked by the presentation given at a club meeting this Spring by Ranger Curt Rudge of MA Forests and Parks on Search and Rescue. This conference is organized by the Berkshire Mountain Search and Rescue Team (BMSART.) and occurs every two years. The conference was held this year in Hancock Massachusetts at the Jiminy Peak Ski Resort. There were approximately 300 participants from Massachusetts, New Hampshire, Maine, Vermont, Connecticut, Rhode Island, New York, Pennsylvania, Tennessee, New Jersey, Virginia. Canada and Ireland were also represented. Some came as individuals, but many were whole Search and Rescue (SAR) teams. Several of the Teams were dog handlers and there were about 25 search dogs present. There were also Rangers from the Massachusetts DEM and Maine Forestry. The Massachusetts State Police brought one of their new helicopters, the mobile command post, a horse team, and two Small Unit Support Vehicles (SUSVE). These are Bearcats which are enclosed ATV's.

The mobile command post was used for a mock search exercise on the first day of the conference. Four persons were 'lost' on the ski slopes and had to be found and transported to the base lodge.

The program had three tracks with sessions covered a wide range of topics. These topics included search techniques, map and compass work in a classroom, orienteering on a course over the mountain, wilderness medicine, clothing, mountain weather, managing searches, interviewing, high angle recovery, low angle recovery, urban rescue, non-freezing injuries, equipment and equipment readiness.

Public Service List (PSLIST)

Listing public events at which Amateur Radio communications is providing a public service and for which additional volunteers from the Amateur Community are needed and welcome. Please contact the person listed to identify how you may serve and what equipment you may need to bring.
Sep 17-to Oct 3 Springfld MA Big E Traffic Booth Tammy KB1CYN 860-953-4915 or Anne K1STM annejon1@juno.com

Sep 18 Marblehed MA Cycle 4 Life Keith N1HLK 781-631-2877 n1hlk@nsradio.org

Oct 1-3 NH NH Boy Scout Jamboree David KE1IW 603-543-9590 David.Haseman@Dartmouth.EDU

Oct 3 S.Portlnd ME ADA Walktoberfest SMTC Gym Bryce K1GAX 207-799-1116 k1gax@juno.com

Oct 3 Falmouth ME Maine Marathon Bryce K1GAX 207-799-1116 k1gax@juno.com

Oct 9 Hartford CT Greater Hartford Marathon Knut N1QKP 860-741-7248 KnutFinn@aol.com

Oct 9-11 Pepperell MA Pepperell Soccer Tournament Ian NZ1B 978-448-5681 inorrish@usa.net

Oct 17 Hopkinton MA Jimmy Fund Marathon Walk Bob WA1IDA 508-650-9440 wa1ida@arrl.net

Oct 23-24 Boston Head of the Charles Regatta Jeff N1FWV 800-564-1234x370 N1FWV@amsat.org

This list is published periodically as demand warrants by Stan KD1LE and Ralph KD1SM. Our usual distribution is via packet to NEBBS, via Internet mail to the arrl-nediv-list and ema-arrl distribution lists, and on the World Wide Web (see URL below). If other mailing list owners wish us to distribute via their lists we will be happy to oblige. Permission is herewith granted to republish this list in its entirety provided credit is given to the authors and the URL below is included. Send comments, corrections, and updates to:(via packet) KD1SM@K1UGM.#EMA.MA.USA, (via Internet) KD1SM@ARRL.NET.
We make an attempt to confirm entries with the coordinator unless the information is from another published source. We very much appreciate the assistance we have been receiving from our 'scouts'; everyone is welcome to send us postings. World Wide Web users: the most recent copy of this list is maintained at http://purl.org/hamradio/publicservice/nediv. AR

You Can't Sell Your Services as a Ham

You can't get paid for your services using Amateur Radio but that doesn't mean there are no benefits. Well, there is always the benefit of knowing you provided a valuable service at the time. But even later, in the long term, there are benefits. For starters there are the six ball caps I have from working the last six years at the Pepperell Fall Classic Soccer Tournament. I only put in two days for each one of those. They will keep the sun out of my eyes for a few years. Then there are the Tee shirts, twenty-two Tee shirts from all kinds of events. There are seven from the Groton Road Race, five from the Pepperell Fourth of July Fun Run, three from the Parker Classic on Devens, two from the Rotary Cross Country Meet, two from the Longsjo Bike Race where I spent two days this year, one from the Chase Corporate Challenge in Boston, one from the North Middlesex High School May Madness Race, one from WGBH for a day the hams manned the pledge phones. So that keeps me in Tee shirts. Then there are the two jackets. The Boston Marathon jackets. They are harder to come by. It's been a fourteen hour day each for those. I spent it with a medical team on or near the finish line each time. And it's all been fun, doing what I want to do, providing the radio equipment cables and antenna systems to suit the various situations, performing net control station duties, writing procedures to help people operate properly in a controlled net, or just being one of those people. I've also learned a lot about providing communications in a variety of circumstances. The experience has produced a number of other benefits. There's a list of "Things You Should Always Have Ready" in which I documented equipment that should be packed and ready for emergencies or situations of duration's of twenty-four hours and seventy-two hours. The twenty-four hour version is the pack that I use for the all day events and things like Search and Rescue. There's the compact emergency two meter antenna and fourteen foot mast that lives in a bag in the trunk of my car. The twenty-four foot version that's in a bag in the garage both for immediate emergency use. There are the self indicating speakers, that show you which radio was 'talking' while you were on another one as net control (my request and a Bob W1XP design). There's the 'battery backed up battery system' to support ex-

tended use of a mobile radio as a crossband repeater. And the list goes on. For every problem there is solution, so the more problems you involve yourself in the more possible solutions you have to apply to the next situation. So who says you can't benefit from providing services as a ham?

Stan

NVARC Public Service

July was a busy month for public service activities for NVARC. We coordinated communications for three local events and members helped by supporting several others.

The month started off with Fourth of July activities and we provided the communications for the Pepperell Fun Run on July 2nd and the Pepperell Fourth of July Parade on July 3rd. The Fun Run was supported by Dave N1MNX, Pat N1VAW, Stan KD1LE, Den KD2S, Herm KE1EC, Lynda N1PBL, Scott N1OMM, and Scott W1XJ. The parade, for which we provide staging support, was supported by Ralph KD1SM, Den KD2S bicycle mobile, and Stan KD1LE.

The same weekend some members supported the Longsjo Classic bike race. The race has a different location and format each of the four days it runs. Ralph KD1SM, Stan KD1LE and others from MARA supported the Sunday and Monday programs. Sunday was a road course in Princeton and Westminster on an eleven mile loop with each of the races ending by climbing to the top of Mt. Wachusett. Monday's circuit was an eight-tenths of a mile loop run in downtown Fitchburg.

July 18th we completed our monthly road cleanup. Thanks to the following members for their help: Scott W1XJ, Den KD2S, Ben KB1FJ, Ralph KD1SM, Joseph N1QDZ, Herm KE1EC, and Stan KD1LE.

On July 25th we provided communications for the Harvard Classic Road Race (bicycle) in Harvard, Ma. There were nine races (classes) starting at three different times. We got to show off a little here because with severe weather coming we were monitoring the SKYWARN nets. First we gave them advanced notice of the incoming weather and NWS warnings. There was obvious thunder and lightning approaching. Then we had some rain reports from the perimeter of the course and from towns to the north and west. Finally we got a report of hail from Ralph KD1SM at the King of the Mountain location. Within thirty seconds of the report, which the announcer had repeated to the crowd, we got hail at the start/finish line. That caused early termination of the ongoing heats via radio to the pace car. After a short break the weather cleared and the final heats were lined up. The race official gave each group its starting instructions which included watching for a last lap signal from the hams on the course should the weather again turn bad. You will notice some strange callsigns in the list of people who participated in the event. Several people from outside of our area noticed the event on the Public Service List (PSList) which we maintain and decided to help out. Thanks to the following: John N1SBS (and friend), Ken K1JKR, Ralph KD1SM, Ben KB1FJ, Keith KF4QXO, James KE1LQ, Pat N1VAW, Greg N1VAV, Dan N1LLG, Herm KE1EC (Who got to ride in the pace car), Den KD2S, Bill NZ1D, and Stan KD1LE (coordinator).

On August 29th we completed our 'last of the summer' road cleanups. Yes, sad to say, summer is over for most of us and the kids are heading back to school. We still have a few more cleanups this year the last one being in November. This month's participants were Craig N1ABY, Jim AA1PO, Ralph KD1SM, Pat N1VAW, Bob W1XP, Stan KD1LE, Don N1HVA, Russ W1XP, and Herm KE1EC.

On September 18th we have been asked to support the Rotary Cross Country Jamboree on Devens. See Ralph KD1SM if you can help out.

Our only other scheduled event left for the year is the soccer tournament in October. Ian NZ1B is organizing the personnel for this so if you can help out give him a call. While this is not our biggest event in terms of numbers of hams it is in duration. Providing communications from the fields for three full days takes six or seven people and if its in half day shifts that is 36-42 people shifts.

NVARC FoxBox

The NVARC FoxBox will be out constantly for the Summer/Fall. We have been putting it out on Thursday or Friday and usually pick it up just to change batteries Tuesday or Wednesday. Generally only the possible towns are given as a hint. Some weekends we have set up for those who are more inclined to a walking hunt. On these occasions we will announce the town or even the par-

ticular piece of property where it is located. There are many nice woodlands for walking in our area. So why not take a handheld and give it a try? On these occasions we keep moving the fox and just make a quick battery change sometime during the week. Recently it has been hidden at several sites in Lunenburg. The following adventurers have found it during July and August. From MARA there was W1HFN Barry, N1MGO Gordon, WN1E Charlie. From NVARC there was KD1LE Stan, W1XP Bob, KA1JVU Karen, KA1JVU Wolf, KD1SM Ralph. From the MMRA there was WA1NLR Bill, N1NOM Eddie, N1ZCB Paul, N1VJE Shelley, N1QPR Bill. Many of the hunters have found the fox several times during this period.

The DTMF is functional so when you think you are close enough to want more frequent transmissions you transmit an asterisk immediately at the end of a fox transmission. You have to be quick since it only listens for 5 seconds at the end of each transmission (after the carrier drops). If you activate the quick cycle the fox will then transmit the next ten transmission at one half the pause time. If it was on a five minute interval it will change to a two minute and thirty second intervals Happy Hunting.

Corrections and Stuff

In last month's newsletter I failed to give Earl credit for the article he wrote on directional couplers. Thanks Earl. To help me out when you write something please 'sign' at the end as you would like it to appear in the newsletter.

As it works out one or two articles that add up to four pages is about the right size for each newsletter. So if you have something you would like to write about I want to encourage that. I would be happy to work with anyone wanting help to write one. Stan

From the ARRL Newsletter

ULS SLOWLY SMOOTHING OUT AMATEUR SERVICE WRINKLES

Good news! The FCC has processed a backlog of several hundred applications--some dating back to early August—

Volunteer Examiner Coordinators able to file with the new Universal Licensing System. More good news: It appears that the various ULS Public Access Transaction files--commonly called ZIP or update files--now are available. Web call sign servers use the ZIP files to post current Amateur Radio licensee data on their sites.

Many hams are relishing their new call signs or upgraded privileges granted since the processing logjam brought about by the ULS implementation in mid-August was cleared. Adam Kittle, KD5IBG, of Converse, Texas, had to wait three weeks from exam session to the day his new call sign was granted on August 27. Many more new call signs were granted last weekend and this week as the FCC caught up with the remaining backlog. Floyd Brown of Norcross, Georgia, snagged his snazzy KG4EME call sign on September 1. Once the ULS is running smoothly, the FCC hopes to process applications nearly as soon as they are received, cutting the typical wait to just a few days.

No vanity call signs have been issued since August 4, and there is still no word from the FCC as to when vanity call sign processing will resume. The ULS accepts vanity applications, however.

Although it's not nearly as convenient to use as the typical Web call sign server, applicants can obtain their new call signs or upgrades from the ULS, http://www.fcc.gov/wtb/uls, by clicking on "License Search" and inputting their name--as it appeared on their application--or call sign. To confirm license class and reveal additional data, users must click on the pull-down menu labeled "License Options" on the bottom of the screen, click on "Amateur Administration" and click "Go."

Amateurs may have to wait a bit longer before doing a Web call sign lookup on one of the Web call sign servers such as UALR, QRZ.com, WM7D.net, or the FCC Transaction Search on ARRLWeb. The FCC first attempted to post a full update ZIP file last week, but the file was corrupt. Another attempt Wednesday to post a complete update appears to have been successful, however. The FCC has issued a revised file specifica-

tion for the ZIP files, however, so call sign servers may have to modify the program routines they use to grab the data each day from the FCC's server.

The ULS Task Force says it's tackling issues like these that are being brought to its attention. "We are good at taking criticism and at making improvements," a spokesperson said. The Task Force said ULS Public Access Transaction files will be created each day.

The FCC now has requested that applicants needing to obtain an Assigned Taxpayer Identification Number or having other "administrative" questions about the ULS contact the FCC Call Center, toll-free, at 888-CALL FCC (225-5322) and press menu item 2 (those calling from outside the US should dial +1-202-418-0190). Club station trustees must continue to file on Form 610B, and hams who are trustees for more than one club station need to obtain a separate ATIN for each club.

Users with technical questions dealing with the mechanics of ULS registration or access, or having browser problems, should continue to contact ULS Tech Support at 202-414-1250; ulscomm@fcc.gov.

The FCC says the ULS dial-up access has been upgraded to support 56k modems. In the wake of comments and criticisms about the difficulty of having to configure a dial-up connection with a particular browser to file an application, the ULS Task Force says it's planning to convert to electronic filing via the Internet "sometime after the first of the year."

MICHIGAN HAM MAY BE HEADED FOR HEARING IN EXAM CASE

The FCC has notified Andrew Penn, N8JVA, of Linden, Michigan, that it intends to designate his Amateur Radio station license for a revocation hearing before an administrative law judge. The FCC also intends to suspend Penn's Extra class operator license for the remainder of the license term, which ends February 22, 2004. The action August 18 by the FCC's Compliance and Information Bureau stems from a case it inherited from the days when it shared enforcement duties with the Wireless Telecommunications Bureau.

Penn was a Volunteer Examiner for an examination session June 3, 1997, in Oak Park, Michigan, after which, the FCC alleges, the names of four applicants who did not sit for exams were added to the list of successful applicants. Last December 14 the FCC downgraded two amateur licensees and pulled the Tech Plus ticket of Steven A. Penn, formerly KC8HUM, of Southfield. Andrew Penn is Steven Penn's father. The FCC says the name of an unidentified fourth ham was added to the list after the test session but the application never was submitted to the FCC.

The Commission says its evidence shows that the names of four applicants "were added and signatures forged, sometime after the tests were administered, by one of the four examiners." The FCC says the other three examiners knew nothing of the scheme and brought the situation to the attention of the ARRL-VEC and the FCC.

Andrew Penn had 20 days to indicate whether he intended to appear and present evidence at the proceeding. But the FCC also gave him the option of avoiding the hearing and terminating the investigation by submitting his Amateur Radio license for cancellation.

HAMS ACTIVE AS CALIFORNIA WILDFIRES BLAZE

Hams are helping to provide much-needed communication as hundreds of fires raged in 16 Northern California counties. Sacramento Valley SEC Jerry Boyd, K6BZ, reports that amateurs are assisting the California Division of Forestry/Fire Protection with a variety of communication in the affected counties. Chief fire officers are being “shadowed” by hams to insure they have communications capabilities. Fire emergency command and control centers are using amateurs, as are evacuation centers in several jurisdictions. As of earlier this week, Boyd said major activity was concentrated on two fires—the High Fire north of Shasta Lake and the Mammoth Fire west of Shasta Lake. More than 2200 state, local, and federal firefighters were deployed. In addition to assisting CDF, hams also are assisting the US Forest Service, since some of the fires are in National Forest territory.

Northern California experienced a series of wildland fires in early July, and residents there had hoped that would be it for the season. “Unfortunately, that was not to be the case,” Boyd said. In late August, a series of thunderstorms passed through Northern California from just north of Sacramento to the Oregon border. The thunderstorms produced lots of “dry lightning” with numerous ground strikes and no rain to stop the fires the

lightning started. Southern California and other western states have experienced similar problems.—thanks to Jerry Boyd, K6BZ

P3D back in the nest: Phase 3D Integration Lab manager Lou McFadin, W5DID, reports that the P3D satellite has safely returned home to Florida following vibration testing in Maryland. "The bird has returned to the nest," said McFadin, adding, "as the normal Florida thunderstorms began to build up in the far distance, Phase 3D was unloaded from the rental truck." McFadin said the assembled team worked quickly and efficiently and unloaded the satellite in record time. AMSAT-NA President Keith Baker, KB1SF, passed along his thanks to everyone at the Lab for a job well—and safely—done.—AMSAT News Service

W4RA to receive Calcutta Key: IARU President Larry Price, W4RA, will receive the Calcutta Key from the RSGB during the IARU Region 1 Conference that gets under way September 19 in Lillehammer, Norway. The Calcutta Key is awarded by the RSGB for "outstanding service in fostering International Friendship within Amateur Radio." Price says RSGB General Manager Peter Kirby, G0TWW, notified him of the award in late July. The RSGB Council voted to award Price the Calcutta Key at its July 24 meeting. "Naturally I am quite thrilled at this recognition," said Price, who called the RSGB "one of the leading societies amongst the world community." Price is a past president of the ARRL.

$The September Treasurer's Report $

Please see the Treasurers Report and fiscal year summary at the end of the newsletter.

Operating Events

Sept 18-20
ARRL 10 GHz
Air Force Anniversary QSO Parth
Scandinavian Activity Contest CW
Tennessee QSO Party
Washington State Salmon Run

Sept 25-26
Scandinavian Activity Contest SSB
CQ/RJ WW RTTY Contest
UHF/VHF Fall Sprints

Flea Markets

September
18 Genesis ARS, Marshfield MA
18 RIFMRS Forestdale RI
18 Bagley ARC Lincoln ME
19 Candlewood ARA, Newtown CT
19 MIT
25,26 Lancaster NH
26 FARA Framingham MA
October
8,9 HossTraders Rochester NH
10 Nutmeg Hamfest Conn State Convention
17 MIT
23 NE Antique RC Nashua NH
November
6 IRS Manchester NH
20 WARA Newton MA

NVARC
Nashoba Valley
Amateur Radio Club
PO Box # 900
Pepperell Mass 01463-0900

Pres.: Erik Piip KA1RV
V Pres.: Den Connors KD2S
Secretary: Ian Norrish NZ1B
Treasurer: Ralph Swick KD1SM
Editor: Stan Pozerski KD1LE
PIO: Jon Kinney N1JGA
Board Members
Wolfgang Seidlich KA1VOU 1997
Earl Russell 1998
Bob Reif 1999
Meetings are held on the 3rd Thursday of the month - 7:30 p.m. - Pepperell Community Ctr.
Talk-in 146.490 simplex
442.90 + 100Hz Repeater
This newsletter is published monthly. Submissions, corrections and inquiries should be directed to the newsletter editor. Articles and graphics in most IBM-PC formats are OK. You can leave items on PEPMBX, at Packet address: KD1LE@N1FT.NH or

pozerski@net1plus.com
Copyright 1999 NVARC

For the month of August we had expenses of $26.40 for newsletter postage (2 months). No dues income was received but we did collect 3 cents during the road cleanup thanks to Pat N1VAW who has sharp eyes!. The FoxFinder project generated $81.35 net income. The Community Fund had no activity this month.

Current balances are:

General Fund $696.55
Community Fund $1434.43

Here is the belated annual report for the general operating fund for the 1998 Fiscal Year and, for comparison, the previous year's report. You will note that we continue to run a slight deficit. However, expenses exceeded income last year by only the amount of one family membership, so we are closing the gap. Or, viewed another way, if ten more Club members had remembered to renew their ARRL membership through the Club we would have broken even. We are fortunate in that the newsletter copying continues to be donated most issues; this would be our second largest expense after the liability insurance. Fortunately too, the insurance premium has also remained stable for several years. Keep your fingers crossed that it will stay this way for a while.

	4/1/98 - 3/31/99	4/1/97-3/31/98
Income		
Dues	495.00 (2)	520.00 (1)
ARRL memberships	6.00	21.00
Bank interest	12.27	7.78
Donation	0.50	10.00
Total Income	513.77	558.78
Expenses		
Insurance	255.00	255.00
Newsletter printing	19.20	39.60
Newsletter postage	157.00	217.60
Banking		
PO Box	16.00	12.00
QSL Bureau	38.95	6.00
Field Day	37.29	53.83
Miscellaneous	9.44	31.38
Community		32.85
Total Expenses	532.88	648.26
Net Income	-19.11	-89.48

Notes: (1) Four members paid through FY99
(2) One member paid through FY01

73, -Ralph KD1SM