



Nashoba Valley
Amateur Radio Club

SIGNAL



July 1997 Volume 6 Number 7

Club Call N1NC

N1NC

Last Months Meeting

At last months meeting William K1WD presented "Getting Knotted". We all had a good time learning to tie a few new knots. I know William was hoping they would help on Field Day.

This Month's Meeting/Cookout

This month we have a family cook-out/pool party for our meeting. It will take place at the KD1LE/N1PBL QTH. If anyone needs directions please give me a call. The starting time is 6-ish and it goes till whenever the mosquitos chase us out. As usual, it is on the regular meeting night, which will be July 17th. We will make the grill ready as soon as the first person needs it. Paper, plastic ware, soft drinks, and condiments will be provided. Bring your own food to cook and some chairs would be helpful. We have plenty of tables. Don't forget the the bathing suits and towels.

Stan

Field Day

We participated in Field Day again this year from the Groton Middle School grounds. We set up on Saturday morning after eating breakfast at our regular Saturday morning spot.

We put a lot of metal in the air this year. four towers/masts with two tribanders, two 40 meter and two 80 meter dipoles, and a Yagi for 6 meters. That was more than we needed and was so noted.

Our operations were from two screen tents that were under a twenty by forty foot tent. While there was no rain this year, the tent gave welcome additional shade to those not operating and to the screen houses which were cooler.

This year we had quite a few visitors who had seen the articles we had placed in the local papers and the signs that Dave had made.

This years QSO count was only about forty higher than last year, 1657 vs 1612. There was a shift in the distribution of CW/Phone from last year. Last years was approximately 50-50 CW to Phone, while this year was about 70-30 CW to Phone. No particular reason, it just worked out that way.

The brief report is that our total points for Field Day should be up by about 675 or about 11% from last year.

For the negatives, we had a few problems getting started up as usual. On the plus side, some of the things we developed as a result of thinking about the 1996 FD worked out very well for us.

Firsts for this years Field Day:

The rain storm that normally visits Field Days caused us to think about how to protect our equipment better. The roof on a screen tent is considerably smaller than the footprint of the tent. To solve that problem KB1FJ Ben and KD1LE Stan planned to deploy a large tent over the screen houses. After looking into the price of purchasing or even renting large commercial tents and awnings we decided to try to design an inexpensive alternative. The result was the twenty by forty foot tent set up at Field Day. Even though it had only been put up once prior to FD, the large tent went together very quickly. Besides the original purpose of rain shelter it also provided shade for those taking a break from operating. Since the screen tents were put up under it they were also shaded from the sun. Screen tents can get pretty warm when sitting in the direct sun.

Another first was the power distribution system. After the 1996 FD N1ABY Craig and KD1LE Stan decided that there needed to be a better way to provide switching between generators so that maintenance and refueling could be done safely. After looking into some systems that were being used by others we decided on our own design. The goal was to be able to switch the load without shutting down all the stations and computers. Also designed in was the protection that it would not switch to a generator that was not running.

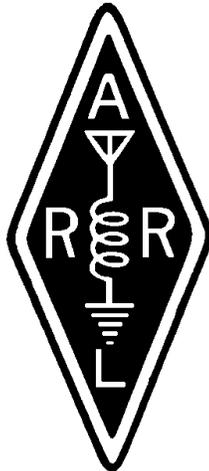
With this system the secondary generator is started and once it is running smoothly a switch is "flipped" to switch the load. Once the load is shifted the "retired" generator can be shut down to cool before be fueled and the oil checked. The switch box and heavy power distribution cables were built by Craig

From The ARRL Newsletter

PHASE 3D LAUNCH
DELAYED TWO
WEEKS

AMSAT Phase 3D officials remain optimistic despite another delay in the launch of the Ariane 502 that is scheduled to carry Phase 3D aloft in mid-September. The European Space Agency, ESA, announced this week that the Ariane 502 launch will be delayed a couple of weeks--until September 30 at the earliest--while the rocket gets another engine. It's the second delay announced this year for the Phase 3D vehicle. In March, the launch date was moved from early July to mid-September. AMSAT-NA President Bill Tynan, W3XO, remains philosophical about the schedule changes. "It's more of the same," he said. "We're trying to use all the time they give us productively."

Orbital Report On-Line said this week that a faulty component was detected in the liquid oxygen turbopump of the Vulcain engine due to fly on Ariane 504. Since the origin of the flaw was identified as a possible production defect and a similar element is known to be in the pump of



the engine already mounted on the Ariane 502 rocket that recently arrived in Kourou, French Guyana, the European Space Agency and the launch consortium (CNES) have decided to remove the engine and replace it with the one originally scheduled for Ariane 503, which features a component from an older production batch.

Any delay increases the overall cost of the project, but Tynan characterized the additional cost factor of the most recent delay as "noise level." He did not have a precise cost estimate. Tynan, who was at the Phase 3D Integration Lab in Orlando, Florida, said everything is going along well in the process. "The RF equipment integrated fine," he noted.

For more information on Phase 3D, including pictures of the assembly and integration process, see <http://www.amsat.org/amsat/sats/phase3d.html>. -Orbital Report On-Line; AMSAT

LEAGUE FILES SPREAD SPECTRUM REPLY COMMENTS

Replying to comments filed in response to the FCC's plans to relax Amateur Radio spread spectrum (SS) rules, the ARRL has suggested that the Commission "arrived at a balanced approach" in its Notice of Proposed Rulemaking (FCC 97-10, released March 3, 1997). The Notice proposed to amend Part 97 rules to facilitate spread spectrum communication by means of additional spreading codes and the incorporation of automatic power-limiting circuitry. The League said the Commission's notice was "carefully crafted to accommodate competing interests," including more flexibility for ham SS operation and avoidance of problems with other users, including narrowband ham operation and unlicensed Part 15 devices. The ARRL had originally petitioned for the SS rules changes.

The comments were split among those who felt the rules changes were too liberal and those who felt they didn't go far enough. Among the recurring themes were issues involving the incompatibility of narrowband modes and SS on the same bands and the requirement for automatic power control (amateur SS operations are currently restricted to a maximum of 100 W output). Under the proposed rule, operation about 1 W would require provisions to reduce power

automatically to the minimum necessary. Some commenters recommended that the FCC also permit in-mode station identification and permit SS emissions on all ham bands above 50 MHz. The League noted that concerns about possible SS interference with weak-signal and satellite work in the same bands were beyond the scope of the proceeding, because the Notice "does not propose to either increase power for SS emissions, nor expand the frequencies on which SS transmissions may be conducted." The ARRL said that because commenters cited no instances of interference, "there is thus no justification for imposition of additional restrictions on SS emissions." The ARRL filing added that informal band planning was the best approach to avoiding interference to narrowband users. The ARRL also deflected opposing comments of Part 15 users by noting that they "generally have no [legal] standing to object to Amateur Service rules changes."

The League urged the FCC to adopt the changes spelled out in its March Notice "without delay." The rules changes "will permit increased experimentation and continued protection against any increase in interference potential," the League's filing stated.

CONTACT FILMING INVOLVED
COORDINATION, COOPERATION

Dave Finley, N1IRZ, of the National Radio Astronomy Observatory in Socorro, New Mexico, is looking forward to seeing the Warner Bros movie, Contact, due to appear in theaters this summer. That's because Finley and many of his NRAO colleagues were heavily involved in helping to bring the film to fruition--including a week of filming at NRAO last fall. "I've never been that big a movie fan," Finley said, "but I was impressed with the actors and the crew."

Finley also was impressed with Contact star Jodie Foster. She plays astronomer Ellie Arroway, who, as a girl, gets her ham ticket along with her father in the late 1960s, then goes on to become a radio astronomer and the first person to decipher a message received on Earth from extraterrestrial intelligent life. Eventually, she's among the team sent into space to explore the message's origin. The story is based on Carl Sagan's 1985 novel of the same name. Finley says Foster had done her homework on radio astronomy. "She's quite sharp," he said. But he

doesn't think the experience was enough to entice Foster to get her ticket in real life.

Realism was a major goal of the filmmakers, Finley said. "They were a very professional group of people." The crew got in touch with NRAO very early on in the project, he said, noting that the first person to call them was none other than Carl Sagan himself. In the movie, the first signal is received at the Very Large Array (VLA) at New Mexico. "They used the actual VLA" in the movie, Finley said.

Finley, who served as the liaison between the film company and the observatory, called the week of filming "an intense experience." The potential of RFI from the crew's wireless mikes and communication gear was a big concern for the sensitive ears of the NRAO. The observatory also was not able to stop work to accommodate the filming, but the Warner Bros crew was able to work around the NRAO to get the shots it needed. "It was a different way of operating for both of us," he said. Despite the movie crew's "overwhelming presence," Finley said the encounter, like the movie's plot, "opened my eyes to a world I'd not seen before." Filming in some locations was simply impractical. In one instance, WB completely and accurately replicated one of the facility's radio telescope control rooms in meticulous detail on another set. "When I walked up to their set, you would really think you were in the control room," Finley said. He hopes the same sense of realism carries over into the ham radio aspects of the movie.

The NRAO, which is run by the US government, gained from the experience too. In exchange for disrupting the observatory's maintenance schedules to get shots of the large arrays being aimed a particular way, Warner Bros reimbursed the government. In addition, WB gave money to the NRAO's educational fund to redo the visitors' center. "All of our visitors will eventually benefit," said Finley.

In addition to Foster, Contact stars James Woods and Matthew McConaughey. Robert Zemeckis directed the film. The ARRL provided the filmmakers with an ARRL map and other League publications of the 1960s, while staff members supplied vintage QSLs and advised Warner Bros on the types of antennas and equipment they'd need to make the movie set realistic.

Contact is due out in mid-July. For more information, see <http://www.contact-themovie.com>.

ITU PROGRESS REPORT

During the week of June 9, ARRL International Vice President Larry Price and Technical Relations Manager Paul Rinaldo were in Geneva representing the IARU and ARRL, respectively, at the meeting of ITU Radiocommunication Study Group 8, which deals with mobile, amateur, radiodetermination and related satellite services.

Rinaldo presented his final progress report as chairman of Task Group 8/2, which has been dealing with wind profiler radars. He reported that the results of the group's work had been accepted by the recently concluded 1997 Conference Preparatory Meeting (CPM-97). Task Group 8/2 produced a new ITU-R report and three new recommendations, which have now been approved. While sharing could not be avoided entirely, it was possible to influence the choice of frequencies to minimize interference to the amateur and amateur-satellite services.

There was consideration of the structure of SG 8. The outcome was that the amateur services will continue to be part of Working Party 8A along with land mobile. WPs 8B (aeronautical/maritime mobile) and 8C (radiodetermination) will be merged as WP 8B.

The new chairman of ITU-R Working Party 8D (mobile-satellite service), Takeshi Mizuike, of the KDD R&D Lab, is familiar with Amateur Radio. He will be dealing with technical studies related to Little and Big LEOs.

IARU raised the question of whether a special Task Group should be established to handle WRC-99 preparatory studies related to Radio Regulations Article S25, which has been assigned to Study Group 8. The question was considered to be premature, as the Chairman of SG 8 wants to wait until immediately after WRC-97 to decide how the Study Group will prepare for WRC-99.

Some European countries at the SG 8 meeting raised objections about ITU recommendations containing numerous national, regional or commercial standards. The subject came to a head over a draft recommendation on digital voice radio dispatch systems for land mobile. The is-

sue demonstrated how industry has gained a stronger voice in ITU affairs in recent years. The debate over which standards will be included is to be passed to the 1997 ITU Radiocommunication Assembly, October 20-24, in Geneva.

RICHARD S. ROBINSON, K1JRW, SK

Well-known VHF DXer Rick Robinson, K1JRW, of Shutesbury, Massachusetts, died June 14. He was 77. An ARRL member, Robinson was one of the first VHFers to earn his DXCC on 6 meters (he held DXCC No 12). "He was a vigilant watcher who was always glad to alert others to band conditions and share news of interest. This upcoming cycle won't be quite the same without Rick," said Ron Klimas, WZ1V. A daughter survives. A service was held June 17.--Ron Klimas WZ1V

IN BRIEF:

* Correction: A report in The ARRL Letter, Vol 16, No 24, on the upcoming STS-94 SAREX flight contained a typographical error. The story should have said: "QSLs go to ARRL EAD, STS-94 QSL, 225 Main St, Newington, CT 06111-1494. Include the following information in your QSL or report: STS-94, date, time in UTC, frequency and mode (FM, voice or packet). You must also include a business-sized SASE."

* Forum set on new licensing system: The FCC has scheduled a public forum to discuss the Wireless Telecommunications Bureau's plans to replace its ten separate licensing-application processing systems with a single, integrated system and database. The new system--the Universal Licensing System or ULS--is projected to be on-line next year. Goals include expanding electronic filing capabilities and speeding licensing. The forum will be July 8, 10 AM, at the Commission Meeting Room (Room 856), 1919 M St NW, Washington, DC.--FCC

What People Have to Say

"The most likely way for the world to be destroyed, most experts agree, is by accident. That's where we come in; we're computer professionals. We cause accidents."

Nathaniel Borenstein

"Ants can carry twenty times their own body weight, which is useful information if you're mov-

ing and you need help getting a potato chip across town."

Ron Darian

Public Service Events

The Club participated in two public service events recently. We supported the Road Race in Pepperell on July 4th with 7 operators. They performed the normal safety and information role we do for races. Participating were; N1VAW Pat, N1VAV Greg, N1MNX Dave, WJ1F Ed, KD1LE Stan, KB1FJ Ben, and WX1J Scott.

We also supported the Pepperell 4th of July Parade on July 5th. Our role being to help in the staging of the parade and in keeping track of the bus that ferries the marchers from the VFW to the start. Those supporting this event were WX1J/Bicycle mobile Scott, NZ1B Ian, KD1LE Stan, N1PBL Lynda.

Thanks to all who helped in these events.
Stan

Upcoming Public Service Events

I have received E-Mail requesting our assistance in the upcoming Harvard Classic Bicycle Race on Sunday July 27th. They are looking for six or seven operators for the period of 11:00 AM. to 6:00 PM. It will be the same course as last year, for those who participated then. Things went smoothly last year, so we hope to work things the same way. Due to the length of the day we may want to schedule three hour shifts to accommodate peoples schedules. The only problem is that some locations are tricky to get to once the roads are closed down. If your interested call Stan KD1LE.

Board Meeting Minutes

There are no board meetings in July and August these also being vacation months for the club and most everyone. Hope to see you at the cookout.



NVARC QSL BUREAU

Bring your cards and a QST label to the meeting or to breakfast and the club will take care of the shipping and bureau fee. We sent out two pounds of cards this month. Stan

\$The Treasurer's Report \$

Income for May was \$15.00 in dues. Expenses were \$22.38 for newsletter postage, QSL Bureau and colored paper for new club brochures. Current balances are:

General fund \$454.38

Education fund \$448.34

And don't forget to renew your arrl memberships, too! If you do it through the club you save a stamp and the club gets part of the money from the League.

73, Ralph KD1SM

CW Practice Nets

the NVARC slow speed net meets Tuesday and Thursday at 7:30 p.m. on 28.123 MHz. Except the third Thursday of the month. That being the club meeting night.

There is now a CW practice session running on the Nashua repeater (147.045) Wednesdays at 8:00 pm. It will be ARRL style and the text will be taken from the Nashua Area Radio Club (NARC) newsletter. You don't need the newsletter to be able to take advantage of the broadcast.

ARRL Cabinet Meeting

Ralph and I attended the ARRL Cabinet Meeting in Worcester on July 13th. This meeting precedes the ARRL Board Meeting by one week and is a source of input for the Division Director Tom Frenaye K1KI,

Following are some of the topics discussed and the comments from those who attended.

There was a lengthy discussion about the Novices License Class and whether it should be continued. This problem is that not many use this as the entry level to Amateur Radio. Since it is not some have suggested eliminating the class. This gets complicated when you start: reassigning band space, change the testing process, and then what happens to all the present Novices. After all the discussions it seemed no one had a

strong reason to proceed and it may just stay the way it is. In a related matter. When the Contest Committee reported they said a replacement for the Novice Roundup had been drafted. The problem was it looked very much like the Novice Roundup. They are starting again to try to create something that will appeal to the Tech Class Licensees.

There was some discussion by the CAC on adding 6M to HF contests. There was no interest in the proposal at this point.

Some movies were listed that had Ham Radio content. There have been some good magazine articles about Ham Radio.

The new computer system at Newington is still coming along. It promises to simplify collecting information and updates. Currently there are separate databases for each of the departments so things like addresses are not shared or updates simultaneously.

Related to the Novice class issue were some proposals to reduce the number of license classes. The elimination of Novice would be one and some other reductions were proposed. This was in the interest of making our structure more like other countries where there are generally fewer classes of licenses. Again it got very complicated once all the issues about spectrum and what happens to all those in the classes that are eliminated. Further, they were trying to make it less complicated to get into Amateur Radio. When it was brought up that if the same material is required but you only have 10 and 20 WPM tests, you have just made it more difficult to get "in" and advance. This also applies to the written tests if they are rolled into fewer tests. Again after all the input the it seemed there was less interest in making any changes at this time.

Tom WA1RHP was presented the New England Division Volunteer of the Year Award. The presentation listed some of his accomplishments and ongoing activities.

WA1IDA reported on Public Service activities. There has been a lot of training this Spring for SKYWARN observers. Over 2000 observers have been trained in the past two years. This training is done by National Weather Service personnel. There have been training sessions in Ma. Ct., and RI. This activity has been coordinated by KD1CY Rob Macedo.

Steve Ford WB8IMY, Managing Editor for QST, made a presentation on what goes on every month to put out the magazine. He also talked about the requirements for article and picture submissions to QST.



**Nashoba Valley
Amateur Radio Club**

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PIO: Earl Russell WR1Y

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 or at Packet address: KD1LE@N1FT.NH