



SIGNAL



de N1NC

December 2001 Volume 10 Number 12

This Month's Meeting

The December meeting Program is Homebrew. There is still time to finish up those projects, but who ever said that they needed to be finished? Bring them anyway. If your project is too large to bring then pictures will do just fine. No project is too big or too small and Homebrew night is as good as we make it.

We gather at Tiny's for breakfast Saturday mornings at 8:00 AM. We sit in the back dining area.

Bring your short Shows-and-Tell to the meetings. They are always welcome. Its always interesting to see the variety of things people are working on.

Last Month's Meeting

Last months meeting program was on the subject of RACES/ARES/MEMA by Terry Stader KA8SCP who is the MEMA Radio Officer for Area 1.

Terry described the staffing and equipment at the command site for Area 1 that is located on the Tewksbury Hospital grounds. He covered the differences between ARES and RACES and who governed the operation of each.

In addition he discussed SKYWARN and its functions in support of the National Weather Service (NWS).

He also mentioned how support for all these organizations is returned by their support of our access to frequency spectrum.

There was some discussion about training and how a group can gain acceptance from local authorities like police and emergency management.

Den KD2S has been arranging for the purchase of a club patch. At the meeting the purchase of the patches was approved. Each member will receive a

patch and additional patches may be purchased from the person designated to hold the surplus.

Next Months Meeting

Next months program will be by Norm Jones. His presentation will be on the miniature engines that he machines and builds.

Field Day Results

Wolf KA1VOU, our Field Day organizer, announced at the last meeting that NVARC finished sixth overall in the 1A Battery class for Field Day 2001 and we did it while having a good time. Everyone had plenty of operating time during the event. In fact we only operated about 19 hours, shutting down for the early morning hours on Sunday and completely shutting down a few hours early at the end when it was obvious there was no one we could hear that we hadn't worked.

We did learn a few things along the way. If you want to run low power with simple equipment you are going to be running CW. Batteries are heavy so minimizing the number you need is a good thing. The radio uses less power than the small high intensity type light we used to illuminate the operating area at night. The laptop logging computer used even more. So a way to provide more battery power with less batteries would be a good objective if we ran in this mode again.

A good time was had by all the participants. Our Field Day team consisted of Wolf KA1VOU Field Day Coordinator, Dave N1MNX provider of tents and other items, Bob W1XP and Stan KD1LE grounds crew, Ben KB1FJ, Bruce K1BG.

Some bits of information.

6th of 60 in the 1A Battery class with 3990 points.

Just 200 points out of 5th.

900 points ahead of the guys on the hill (NEQRP)
So we did very well with low power and few wire antennas.

Even though we just received the results of this years Field Day it's not too early to start at least thinking about what we might want to do for next year. Field Day is only about seven months away.

Adopt-A-Highway

On November 18th we performed our last road cleanup for 2001. This was the fifth year of our participation in this public service activity. The next cleanup will be in April 2002. Thanks to the following for their help Earl WR1Y, Ralph KD1SM, Pat N1VAW, Linda N1UPR, Stan KD1LE, Dave N1MNX, Dan N1LLG.

BayState Marathon

Due to unforeseen technical difficulties (I couldn't find the diskette) I could not include the one picture we had from the Marathon that took place October 21st. So here it is.



Erik KA1RV providing communications support to the marshals at the Tyngsborough bridge across the Merrimac river. During the heaviest runner traffic and for wheelchair runners the bridge was closed to automobile traffic so the marshals needed to know in advance when they were coming

We also received a letter from the Greater Lowell Road Runners thanking us for providing communications for the BayState Marathon.

Board of Directors Meeting

The December Board of Directors meeting was held at the KA1RV QTH (Erik's) on December 13th. The Treasurer reported the monthly NVARC financial status and that report is appears later in the newsletter.

Den KD2S delivered the club patches. It was decided that the Treasurer will control the inventory of patches. Each member will receive one patch free so you should see Ralph at a meeting to pick up your patch. Additional patches can be purchased for \$2.00 each.

Tower Construction Everywhere

First Ralph had to take down the antennas and old tower.



Tower projects abound. At Dave's N1MNX tower relocation and improvements took place last month.

Ralph KD1SM, Wolf KA1VOU, Stan KD1LE, Bob W1XP and Dave N1MNX worked on the project.



At Stan's KD1LE a 35 foot mast that held up the center of a wire dipole for 160 meters was replaced by a 65 foot tower to get the dipole higher and add the capacity to hang other antennas on it. Several cross arms and side arms with pulleys and halyards were added to make raising and lowering antennas easy.



Above a hole with rebar ready to become a 4X4 block of concrete.



This is a serious form in the making. Made of only the finest red oak plywood. This is going in the hole below that will support an



I-beam for a raised guy point.



October Meeting Pics

It seemed like a never ending supply but we actually finished in about an hour and a half. Then we all sat down for Pizza and soft drinks provided by the Club.



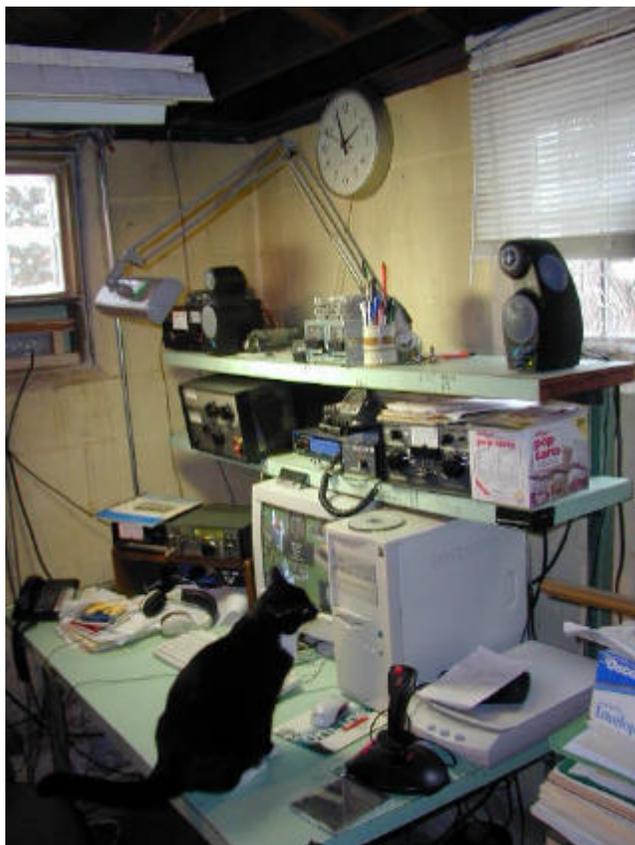
There's always one in every crowd.



Seems like miles and miles of cards.

Other Recent Activity

After doing some quick repairs on KB1FJ's tower our photographer (Ralph KD1SM) took some pictures of Ben's shack. Here is Ben's assistant when he runs in multi-op mode.



And here's Ben posing for the camera pretending to operate.

From The ARRL Letter

TAKE A NUMBER: FRN NOW MANDATORY

Anyone filing an Amateur Radio application now will be asked to supply a 10-digit FCC Registration Number (FRN) issued by the FCC's new Commission Registration System, or CORES. The requirement applies to FCC applications filed on-line or on paper. The FCC also has supplanted Universal Licensing System (ULS) registration with "CORES/Call Sign" registration, so applicants no longer need to register separately in both systems.

Most, if not all, hams who registered previously with the ULS already have an FRN, although they may not know it yet. The FCC just completed another cross-registration to include those already on the ULS books within the CORES "entity registration" database, and another is scheduled. Amateurs can learn their FRNs by doing a license search on the FCC's Universal Licensing System page <<http://wireless.fcc.gov/uls/>>. FRNs also are displayed via the ARRL call sign server on ARRLWeb <<http://www.arrl.org>>.

The FCC has updated its ULS page <<http://wireless.fcc.gov/uls/>> to reflect the new reality and to make the page a bit less confusing. Amateurs not yet registered in CORES who click "CORES/Call Sign" registration will be redirected to the CORES site to complete that process. Amateurs who click "Online Filing" are advised to proceed to CORES to register if they do not already have an FRN, then return to ULS for filing.

Those filing on-line applications now are asked to supply either an FRN or a Taxpayer Identification Number (TIN--a Social Security Number for an individual) plus a password, typically the same for both CORES and ULS.

The process is a bit more daunting for new club station applicants, who now will be asked to register in CORES as business entities. Such applicants also may file with a Club Station Call Sign Administrator using Form NCVEC 605 and simply leave the FRN field blank. ARRL VEC Manager Bart Jahnke, W9JJ, says that in those cases, the Club Station Call Sign Administrator (CSCSA), such as ARRL, will register the club station entity in CORES on the applicant's behalf.

The FCC also now only accept FCC Form 159 (Remittance Advice) dated February 2000 or later, which requires providing an FRN. A copy of the acceptable version is available on the FCC Web site

<<http://www.fcc.gov/fees>>. At the left side of the page, click on "Form 159".

For more information about the Commission Registration System or on obtaining an FRN, contact the CORES Help Desk, 877-480-3201, cores@fcc.gov.

HAM RADIO CONNECTS SOUTH CAROLINA, GEORGIA YOUNGSTERS WITH SPACE STATION

Youngsters visiting the South Carolina State Museum in Columbia and attending the Atlanta New Century School in Georgia recently spoke via ham radio with the International Space Station. The contacts were the latest in a string of successful radio conversations between school-age youngsters and Expedition 3 Crew Commander Frank Culbertson, KD5OPQ. They were arranged as part of the Amateur Radio on the International Space Station (ARISS) program.

On Friday, November 30, 13 youngsters in grades 4 through 11 visiting the South Carolina State Museum quizzed Culbertson, who operated as NA1SS from aboard the ISS. Culbertson generated some news during the contact when he revealed that NASA had scheduled a space walk by two of the crew members to clear up a Progress rocket docking problem. The faulty docking had been holding up the launch of the Expedition 4 crew on the space shuttle.

Some 100 youngsters were on hand at "Earth Station South Carolina" for the occasion. One fifth grader wanted to know whether Culbertson had ever seen life in space. "Just the guys I live with up here," Culbertson quipped. "I haven't seen any other kind of life outside the space station." His remark drew laughter from the earthbound audience. "Who knows whether there is or not," he continued in a more serious vein. "If there is, it's a pretty big deal and would be very important. If there's not, then it makes our place in the universe even more important and gives us more responsibility to take care of what we have."

Culbertson told the youngsters that he was floating "halfway between the ceiling and the floor" as he was talking to them. "Zero G is fun," he said, referring to the weightless environment, "however, there are hazards." Although there's no artificial gravity aboard the space station, Culbertson said he sometimes he wished there were.

Culbertson spoke Wednesday, December 5, with youngsters at the Atlanta New Century School. First up was a first grader who wanted to know how "the fire makes the ship fly." Culbertson explained that the "fire" was really a mixture of exhaust gases forcefully exiting the rocket "really, really fast" and that the reaction to that force made the rocket move in the oppo-

site direction. He told the next questioner that liquid hydrogen and liquid oxygen were the primary shuttle fuels--a half million gallons in all.

Another student prompted guffaws from his classmates when he asked how much Culbertson earned. The pay scale for his job as an astronaut is the same as for an average aerospace engineer, Culbertson told the youngster--from about \$50,000 to more than \$90,000 a year.

About a dozen questions were asked and answered during contact with Atlanta New Century School. Culbertson's sister, Amy, was among those in the audience at Atlanta. "Tell my sister Amy hello for me," Culbertson said, but the two did not converse.

Nancy Richeleau, WH6PN, and Dick Flagg, AH6NM, operating from The Sacred Hearts Academy club station in Honolulu, served as the control operators for the South Carolina contact. Tony Hutchison, VK5ZAI, in South Australia handled Earth station duties for the Atlanta contact. Two-way audio was handled by WorldCom teleconferencing facilities.

Culbertson, who's logged nearly two dozen ARISS school contacts during his ISS stay, is looking forward to returning to Earth in time to join his family for the holidays. The current crew has been aboard the ISS since August. The shuttle Endeavour carrying the Expedition 4 crew of Commander Yuri Onufrienko and Flight Engineers Dan Bursch, KD5PNU, and Carl Walz, KC5TIE, blasted into space December 5. The shuttle also is carrying some new ham radio antennas for the ISS.

ARRL ISSUES QRP DXCC PROGRAM RULES

The ARRL has issued rules <<http://www.arrl.org/awards/dxcc/qrp/qrp-dxcc-rules.html>> for its new QRP DXCC Award. Applications will be accepted starting January 2, 2002.

The ARRL Board of Directors approved the new QRP DXCC Award at its July 2001 meeting. The QRP DXCC Award is given for working 100 different "entities" (formerly "countries") on The DXCC List while operating with an output power of 5 W or less. Standard DXCC rules <<http://www.arrl.org/awards/dxcc/>> also apply to this new award. Contacts made since November 15, 1945, are acceptable.

The award is available to Amateur Radio operators worldwide. Applicants must submit an alphanumeric list of 100 contacts--sorted by call sign prefixes. Application forms and additional information are available on the ARRL Web site <<http://www.arrl.org/awards/dxcc/qrp/index.html>>, via

e-mail to dxcc@arrl.org, fax 860-594-0259, or mail to ARRL DXCC, 225 Main St, Newington, CT 06111.

ANTHRAX SCARE IMPACTING OUTGOING DX QSL VOLUME:

With one month to go in 2001, ARRL Outgoing QSL Service Manager Martin Cook, N1FOC, reports that his bureau has handled 1,716,940 cards from January 1 through November 30 of this year. That's 54,960 cards ahead of the same date last year. "However, the volume of cards coming in for processing has slowed drastically since the recent anthrax scare," Cook said. "I was hoping to make the 2 million mark this year, but it's not looking good. We will be lucky to beat last year's total." The more than 1.7 million figure so far in 2001 includes cards going to US incoming QSL bureaus and cards sorted and mailed by contractor. The Outgoing QSL Service handled 1,868,895 cards during 2000.

DUCIE IS NEWEST DXCC ENTITY! DXPEDITION OPERATION IMMINENT

You might never have heard of it before, but Ducie Island in the South Pacific is the latest DXCC entity--the 335th, according to ARRL Membership Services Manager Wayne Mills, N7NG. A DXpedition was en route. Starting at 0000 UTC on November 16, 2001, Ducie Island became eligible for DXCC credit as a result of a favorable vote to accept the Pitcairn Island Amateur Radio Association (PIARA) as an International Amateur Radio Union member-society <<http://www.iaru.org/rel011116.html>>.

PIARA filed its application for IARU membership last March, and the matter went to a world-wide vote of IARU member-societies in June. Votes were counted this week, and PIARA's application was approved. Under DXCC rules, an entity that hosts an IARU society is considered a "political entity."

Mills emphasized that only contacts dated November 16, 2001, and later will count for DXCC. For the moment, that point is a bit academic, however, since the DXpedition team has been delayed in reaching Ducie. The island has been activated previously for the Islands On The Air program (it's IOTA OC-182), but Mills says those earlier contacts will not count for DXCC.

The group will use a VP6 call sign--to be announced. Some operation is planned on all bands, 160 through 6 meters (there will be a 6 meter beacon on 50.110 MHz) on CW, SSB and RTTY. Log checks will be available on the DX Cluster from Japan Web site, <<http://www.big.or.jp/~ham/dx.html>>.

Pilot station Bill "Dr Bill" Avery, K6GNX, said the team was expected to arrive on Ducie early on November 17. The DXpedition operation should last about five days. Ducie is located east of Pitcairn Island, perhaps best known among hams as the home of Tom Christian, VP6TC, who's PIARA president and head of the Ducie DXpedition team.

Other DXpedition members are Kan Mizoguchi, JA1BK; Dave Brown, VP6DB; Mike McGirr, K9AJ; and Vince Thompson, K5VT, plus JA1SLS/VP6BB, JF11ST, and FO3HO.

The QSL manager is Garth Hamilton, VE3HO, PO Box 1156, Fonthill, ON L0S 1E0, Canada. All 50-MHz QSL requests go to JA1BK.

Ducie Island, about 2.5 square miles, is surrounded by water 3000 meters (9800+ feet) deep and visited only rarely. Due to ecological concerns, only one group may be on the island at a given time. The CQ zone for Ducie is 32; the ITU zone is 63. More information is available on the JA1BK Web site <<http://www.ijjnet.or.jp/JA1BK/>>.

AMATEURS ACTIVATE FOLLOWING NEW YORK AIR CRASH

The Amateur Radio Emergency Service promptly activated in the wake of this week's disastrous plane crash in New York City. Hams responded to support Salvation Army and American Red Cross relief operations after an American Airlines flight went down November 12 in a residential area of the Borough of Queens, near JFK International Airport.

Officials say 265 people died in the air disaster, which came two months and one day after the World Trade Center terrorist attacks in New York City. Investigators say the crash appears to have been related to mechanical failure.

Queens District Emergency Coordinator Mark Phillips, KC2ENI, said that ARES had been planning on up to three days of Amateur Radio support at the request of the Salvation Army Team Emergency Response Network--SATERN. Conventional communication systems returned to service the evening of the crash, however, and ham radio support operations were able to stand down.

The American Red Cross Emergency Communications Service in Queens also activated immediately after the crash. ARC ECS President George Sau, WB2ZTH, reports that members were dispatched with Red Cross disaster action teams to the crash site.

SATERN Amateur Radio Liaison Officer Jeff Schneller, N2HPO, said telephone cables had been destroyed by the crash, cell phone communication "was spotty at best, the Nextels were not working most of the time, and power was cut off to the entire area." SATERN supplied several radio operators plus a net control station. The Rockaway Emergency Coastal Weather Alert also supported the activation.

Schneller contacted the ARES DEC and SATERN members and notified the Electchester VHF and Broadcast Employees Amateur Radio Society of the intended operation. Both groups volunteered had their repeaters during the World Trade Center disaster and did so again November 12. SATERN responders were able to put their "field packs"--used recently for the World Trade Center disaster--into use for the plane crash support operation.

Sau said his ARC Emergency Communications Service was able to immediately provide emergency communication via a UHF repeater as well as on simplex. As a result Red Cross support personnel at the crash site, the temporary disaster Family Information Center at the JFK Ramada Inn, the established Red Cross shelter at Public School 114 in the Rockaways, and the Queens Red Cross chapter operations base were able to remain in contact.

Most of the victims on the plane were bound for the Dominican Republic. Sau said some group members were able to use their fluency in Spanish to support the disaster action team translators at the Family Information Center. Sau said the ARC ECS stood down at around 8 PM.

As he did following SATERN's World Trade Center activation, Schneller advised all amateurs to get involved in ARES or SATERN and to take the emergency communications courses offered by the ARRL <<http://www.arrl.org/cce>>.

AMATEUR RADIO RESPONDS TO MICHELLE'S FURY

Amateur Radio had an extensive emergency communication role during Hurricane Michelle. The late-season storm, boasting winds of up to 135 MPH, swept across Cuba and the Bahamas November 3-5. The Hurricane Watch Net <<http://www.hwn.org>> and W4EHW at the National Hurricane Center <<http://www.nhc.noaa.gov/>> in Miami teamed up to provide forecasters with real-time surface reports. At one point, ham radio was a primary means of communication between Cuba and the outside world. Amateur Radio also was used for the first time to

communicate directly with a hurricane hunter aircraft as it was in the eye of a hurricane over land.

The storm had lingered as a tropical depression for almost a week, drenching Nicaragua and Honduras before drifting into the Caribbean and regaining strength as a powerful Category 4 hurricane dubbed Michelle. It then tracked northward toward Cuba and intensified. The Hurricane Watch Net and W4EHW activated Saturday, November 3, to collect and relay essential weather data via ham radio. The HWN operates on 14.325 MHz whenever a hurricane is within 300 miles of projected landfall in the Atlantic, Caribbean or Gulf of Mexico.

Anticipating a communication disruption, Hurricane Center Director Max Mayfield requested that W4EHW establish a backup ham radio link with Havana. In addition, permission was secured from the FCC for W4EHW to operate SSB on the Cuban Emergency Net frequency, which is in the US 40-meter CW sub-band. W4EHW Assistant Amateur Radio Coordinator Julio Ripoll, WD4JR, said a primary W4EHW operation remained on 20 meters, and additional operators were added to each shift.

As Michelle moved over the mainland of central Cuba, "Ham radio was the only form of communication left operating to and from Cuba and within the center part of island nation," Ripoll said. W4EHW on 40 meters then became the only source of current hurricane advisories, and the information was relayed by Cuban amateurs on HF and VHF.

Ripoll says that during Michelle, W4EHW conducted some pre-planned on-the-air testing with the Hurricane Hunter Airplane NOAA-42, piloted by Captain Dave Tennesen NL7MT. The aircraft made several eye penetrations and perimeter passes as the hurricane was over Cuba. Ripoll said W4EHW could barely hear the Hurricane Hunter until both stations moved to 40 meters. Ripoll said the on-the-air tests also checked out a new HF antenna on the aircraft.

As Michelle moved into the Bahamas, hams and boaters there sent reports throughout the day on Monday, November 5. Ripoll said that one of the most important communication from the Bahamas came from Wayne Wilkinson, KC4CYK/C6A, on his 42 foot sailboat docked at Highbourn Cay. By then, Ripoll said, hurricane forecasters were considering lowering the warnings, but after Wilkinson called in with winds gusting to 115 MPH, the warnings remained up a while longer.

The Hurricane Watch Net and W4EHW secured operation later on November 5. Ripoll and Assistant HWN Manager Mike Pilgrim, K5MP expressed their

appreciation for the dozens of volunteers who participated as well as for the clear frequency. The Northern Florida Emergency Net also activated during Hurricane Michelle.

November Treasurer Report\$

Income for November was \$50 from membership renewals, \$0.11 donated by Pat Rice (in October) from road cleanup findings and \$20 from club patch purchases.

Expenses were \$20.40 for newsletter postage, \$35.50 net for FoxFinder parts reimbursement and \$255 for club patches, leaving a net expense of \$240.79.

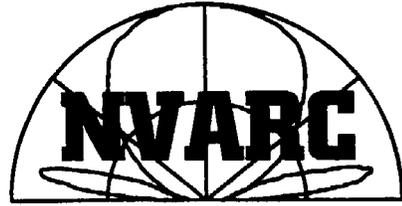
The Greater Lowell Road Runners sent a contribution of \$200 in thanks for our volunteer support of the BayState Marathon in October. This has been added to the Community Fund.

Fund balances as of November 8 are:

General Fund:	\$5074.41
Community Fund:	\$1717.55

If you are thinking of joining the ARRL, or we can convince you to join the ARRL, the Club receives a commission for sending in your application.

73, -Ralph KD1SM



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Photographer Ralph Swick KD1SM
PIO: open

Board Members

Bob Reif 1999-2002
Den Connors 2000-2003
Craig Kalley 2001-2004

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
53.890 - 100Hz Repeater

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