



Radio Amateur News & Views

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AMSAT ECHO SATELLITE The March 9th RANV Meeting

Sometime in the next few months, AMSAT is planning to launch a new satellite called Echo. This amazing 9-inch cube will operate with up to 8 watts on 4 bands on both voice and digital modes simultaneously. It is expected that when in proper orbit, it should be accessible with a handheld! Not only is the satellite amazing, but its ride is equally exciting. When the Start Treaty was signed to reduce strategic weapons, a number of Russian Intercontinental Ballistic Missiles were converted into peacetime use. It is one of these dubious vehicles which will loft Echo into orbit. Mike N1JEZ, Vermont AMSAT Coordinator, will be on hand to give us a super multimedia presentation which will shed light on all of the details of AMSAT Echo and its Dnepr launch vehicle.

Activities begin with the pre-meeting food fest at Zach's on Williston Road around 6. The meeting is at 7 PM sharp on Tuesday, March 9th at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Hope to see you there.

ATTENUATOR PROJECT

Next month's meeting on April 13th will feature constructing a active attenuator. The attenuator is made to be paired with the beam we constructed last year. It will knock down signals so that a clear indication can be seen on an S-meter, no matter how strong the original signal. The construction is simple PC

board and box and all materials will be provided for around \$15.

It is necessary to sign up for this project by Tuesday, March 9th, (*next meeting*), as time is needed to order enough materials for everyone. If you have questions, contact Bob at mcamp@gmavt.net.

COMING UP!

The last 5 weeks have been busy times and more are coming!

March 21st is the *Ham Radio Class*. There is still time for some latecomers to jump in and get their ham license in one day. A General upgrade class will run on March 28th

Make sure you leave Tuesday, April 13th clear! That will be our annual Construction Night. Our mission is to build a bunch of active attenuators which will go with the yagis built last year. See details in story on the left.

Our first Fox Hunt of the year will be Friday, April 16th. Paul AA1SU will be the master of ceremonies live from the Fox hole.

That brings us to April 30th and May 1st - the dates of the Spring Hosstraders!



Milton Hamfest 2004



Vertical Vibroplex -
1/2-scale replica by W1KR

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OUR LAST RANV MEETING

by Dave W1DEC, Sec'y

Brian N1BQ called the meeting to order, starting with a call for volunteers to help move tables to/from the Milton High School for the Hamfest.

Mitch W1SJ reported that eight hams attended the HF Operator Training during the Vermont QSO party and achieved QSO rates of 40-80 per hour.

Brian N1BQ reported on excellent cuisine during the *Freeze Your Butt Off* activity on February 7th. Thanks to Bob WE1U for outstanding shrimp and ribs and to Sara W1SLR for the great chili.

Brian gave a brief talk on QRP kits that are available. He demonstrated a 150-watt balun kit and crystal oscillator kit by Elecraft, a QRP-L Pic micro-processor by Micro Chip, and an AZ ScQRPion Paddle Kit.

Bob KB1FRW volunteered to bring food to the March meeting.

David Hale W1KR treated us once again to an absorbing presentation on Miniature/Replica Key Construction. This is another of his avocations, the art of replicating old keys in miniature sizes. In addition to detailing the meticulous process of researching original design and specs for keys, or 'bugs' in ham vernacular, David shared with us the need to build machine tools which enabled him to build necessary parts for construction of various bugs, an art within an art indeed! More than an art, David's machine tooling is an excellent demonstration of determination and resourcefulness and skill.

David summarized the history of telegraph and semi automatic keys commencing in 1840 with Samuel Morse keys and carrying forward including Horace Martin's 1904 vertical movement *Vibroplex*. He designed this famous bug in response to the "glass arm" malady that was so common to telegraph operators of that period. The first design was the *Autoplex* developed in 1901, and the refined and well-known version, the *Vibroplex*, was patented in 1904.

He proceeded to exhibit his half-scale working replica of the *Martin Midget*, a folding telegraph key of which only six originals are known to

exist. He next described and exhibited the *Mellihan Valiant*, developed in September, 1942, which was patented after the War. David has made two of these half-scale replicas, one of which now resides in the collection of internationally known collector Gil Schlehman, who professes to hold the world's largest bug collection.

David's milling tools included a Hollow Mill with three cutters, which alone required in excess of 40 hours of work to manufacture. This is true dedication to the pursuit of perfection. David uses a 10" Atlas Lathe in addition to an extensive collection of files, hacksaws, a drill press or two and a milling machine.

We look forward to seeing David's next project which is the replication of the code key used on the Titanic. Kent, an English manufacturer, sold a large number of knock-offs of this key. However, the real Titanic Key was the 4th Marconi Key, a guillotine key with safety lever. He envisions replicating this key in half scale, but that could change. We look forward to seeing the completed treasure no matter the scale. David's work is truly artful, a joy to behold!

THE PREZ SEZ

by Brian N1BQ, President

I am still reeling from the hamfest. Two words - "Well Done!"

Friday night we had twice the number of people and trucks we needed to move tables to the venue. Everyone pitched and did their share and then some. We were out of there early enough for dinner and shopping.

Saturday, everyone seemed to get set up and get going without a hitch. The forum rooms that I saw had respectable groups in them. Anytime you can get 15-20 people to attend a session on Antenna Modeling at 8:30 you know you are on a roll! My two forums had nice turnouts and I understand the others were also well attended.

Mitch's idea of putting the round cafeteria tables up in the center of the front room was very conducive to eyeball networking - nice work, Mitch! Debbie W1DEB reported she didn't have one complaint about the new \$5 entry fee up from our previous \$3 fee. And it certainly simplified the process of making change. Attendance was up a bit from last year despite the gorgeous weather competing for peoples' attention.

Congratulations to Moe N1ZBH, Jeff KB1IWK, and Bob KB1FRW on the very successful demonstration of IRLP, Echolink and PSK-31. Every time I went by the table it was hopping. I have talked to several people on the repeater the last two days who spoke of learning about the links at the hamfest and exploring the world via Internet already!

Best of all we got the place cleaned up, tables loaded and everyone on the way home by 2:30. Well done, RANV !

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Please send submissions for the newsletter to the editor, W1SJ.

MILTON REVIEW

by Mitch WISJ

The 2004 Northern Vermont Winter Hamfest had it all – good attendance, great forums and demonstrations, great participation and a super flea market. In a world of declining hamfests, our little show is holding its own. Attendance was in the mid-400's - up 3% over last year. Any hamfest growth in a sea of otherwise shrinking hamfests is great! Many expressed that they thought the attendance was way up. What I noticed was that, instead of looking around for 45 minute and zipping off, attendees stayed longer, giving the illusion that many more people were there. Why did they stay? The forums, demonstrations and great vendor turnout probably had a lot to do with it. The lack of noise level from the NWS about perceived winter storms also helped a lot.

As you probably know, we did a lot of soul searching about the future of this show. What came out of the discussion was that we had to have other quality activities to supplement the flea market. I added forums and literally created a flurry of activity so that there would be something for everyone all morning long. Several wanted hands-on activities, so we put the IRLP, Echolink and PSK-31 demonstration station on. All of these were wildly successful. The forums drew 15-55 people each (*the ARRL Forum was standing room only*) and the demonstration had a crowd of 15-20 gathered all day. Evidently, a lot of folks liked these events.

The mainstay of the show, the flea market, was tremendous. How much improved? Last year, we barely filled 55 tables. This year we went over 80 tables. Thanks to Radio Bookstore, Radio Devices, Webster Communications, the return of K2IYJ with his tables of connectors, new vendor Quicksilver Radio Products and many smaller sellers, the flea market was hopping all day. I am at a loss to explain the complete turnaround in the number of vendors but I am certainly happy!

The VE Session was reduced to one sitting at 12 noon and 24 folks lined up to take tests. When the smoke had cleared, there were 9 new hams, 3 complete upgrades and 5 other partial upgrades in the group.

We had to raise the admission to keep up with the big increase we were hit with by the Milton School District. Out front, Debbie reported that there were absolutely no complaints about the \$5 admission. This is quite amazing in light of the fact that there were complaints about the \$3 admission in the past! Maybe it was too low. At \$5, it is still quite a deal, compared with other Conventions and hamfests. Despite the increase in costs, the club did well at the gate.

One downside this year was the total lack of media coverage. Our local daily paper couldn't be bothered with ham radio this time as it was covering a few town meetings in the area. I have a problem with this. Here is a non-trade show, which draws close to 500, including some 200 from out of state, and we are hardly newsworthy? This is not good. I offer a challenge to some of our members who have media skills to turn this around. If the Fair can get pages and pages of coverage, then we should be able to get a paragraph or two. I'd rather not wait for a disaster to get positive coverage for amateur radio.

The most important yardstick of the hamfest is attendee satisfaction. I can't count the number of thank yous I've received in the last few days. It shows that people were truly pleased with the show and I appreciate the feedback, be it good or bad. See you all next year!

REPEATER NEWS

by Mitch WISJ

We have an occasional problem with some noise on the repeater. It is not severe but can be annoying. It is suspected that the hardline connector is acting up again. When the repeater is noisy, please limit your usage.

The quality of activity on the repeater is awful. I am truly ashamed of it and find myself not wanting to demonstrate this aspect of amateur radio. Frequent doubling, timeouts, noisy signals and bad audio are becoming more prevalent. Consistent activity on the repeater is a good thing, but if it is of the level that turns one's stomach, then this isn't good. Others have shared this sentiment. I'll repeat again that a repeater is a device for extending the range of weaker mobile and portable units. If you are not one of these stations then you need to question whether using the repeater for hours at a time, often during busy times, is appropriate. If a group cannot conduct a QSO without frequent doubling and timing out, then all should stop transmitting. It is that simple. It usually means that too much is being said and little thought is being expended.

The quality of signals is often poor. You will be noisy for 3 reasons: your antenna or power is not sufficient, you are in a bad area or there are problems with the repeater. If you cannot maintain a full quieting signal then stop talking and listen. Do not continue to talk with a noisy signal and proceed to give everyone a headache. If someone is noisy into the repeater then tell him or her explicitly. Don't say someone has a good signal when it is not as this is counterproductive. Now, certainly, if you have direct information to exchange, then make the best of the noisy situation. Just don't ragchew in this situation. And if you have an audio or any problem, then take the effort to fix the problem before carrying on QSO's. Take pride in what you put out over the air!

Finally, don't acknowledge a signal unless you clearly copy a callsign or you know who it is. Although malicious activity is rare, it does occur from time to time and an acknowledgment is the last thing you want to do. Also don't acknowledge an Echolink connect message. Nine times out of ten, the connect is unsuccessful and times out. Let the Echolink station actually call on the repeater before going back to the call.

OPERATOR TRAINING AT THE VERMONT QSO PARTY

by Mitch WISJ

The operator training session, held in conjunction with the *Vermont QSO Party*, was a tremendous success. In all, eight operators received 2 hours each of training and practice each during the weekend.

The venue was the *Vermont QSO Party*. This is an interesting event, since there is virtually no one else participating on a serious level. Only certain bands seem to produce any contacts in any serious numbers. Certainly, 10 meters, with the concurrent 10-10 Contest is a favorite. However, 10 meters was very poor this particular weekend and will likely remain that way for several years. Moving down to 15 meters produced great DX runs. But, as soon as the conditions into Europe dried up, so did the contacts. Even though I always hear that I have a tremendous signal in several places across the U.S., I rarely get any runs in the *Vermont QSO Party*. The same situation exists on 40 and 80 meters. I can only assume that folks on these bands are not as interested as DX stations are in contacting a "contest station." Fortunately, this attitude doesn't exist on 20 meters, as it produced many, many contacts.

I set up the station with dual headphones and a dummy logging computer set up for practice. The idea was to first give a very short tutorial on what we were doing. Then I would have the trainee sit in the second chair and practice logging, as I, or the previous operator made contacts and did our own logging. Mistakes on this second computer didn't matter. After 10-15 minutes of hearing what the signals sounded like, I would then move the trainee to the main station.

I started things off at 7 PM on Friday night with a nice run on 20 meters, until it closed after 8:00. On Saturday morning, I started on run-

ning 15 meters into Europe. Larry N1NZZ had the first morning shift at 10:00 and was immediately involved in dealing with a small pileup. Larry has had some previous experience operating HF from his boat and he did quite well picking up callsigns. Unfortunately, Larry is a 2-finger typist and his attempts to peck away at the keyboard while picking through the pileups was tough work.

By noon, the DX run dried up and 15 meters ceased producing, so I moved to 20 meters. Kyle KB1JOO had the noon shift. Kyle is a fairly new Technician with no HF experience and he appeared overwhelmed as stations were coming back to CQ's with marked regularity. When he couldn't understand a callsign, he would look at me and I would always reply, "ask them for their callsign, not me!" Finally, I left the room and Kyle did learn to ask for

"...I jumped back on at 7 PM for another contest called the NA Sprint. Anyone who regularly operates in this event needs serious mental help."

fills as needed. After 20 minutes, he was running stations like a trooper.

Jeff KB1IWK, who came in for the mid-afternoon shift, also had no HF experience. However, he picked up right up where Kyle left off and the 20-meter run continued. I had a cue card set up with the proper CQ and report scripts and would sometimes hide it on Jeff so he would learn the procedure without reading it!

Leo KB1EZE is a veteran of several GOTA operations at Field Day and he needed little direction to keep the pileup going. The rate was slowing somewhat as we were running out of new stations.

After a refreshing break for Chinese dinner with Debbie, I jumped back on at 7 PM for another contest called the *NA Sprint*. Anyone who

regularly operates in this event needs serious mental help. You are not allowed to stay on a frequency for more than a QSO, so you end up jumping all over the place to make contacts. I mostly do it to make contacts for the QSO Party at times when the casual contacts would dry up. It is a lot of work and I often question my sanity. After the Sprint was over, I sat on 80 meters and chased some DX to help fill the log with some multipliers.

Sunday morning, 15 meters was in even better shape. I was on for an hour and ran a big rate. Don N1QKH was first up. He has some HF and Field Day experience but was not prepared for the onslaught. At any time, there were 3-5 DX stations calling simultaneously. I later found out that we were spotted on the DX Cluster several times, thus fueling the inferno. I showed Don how to latch on to one callsign at a time and doggedly pull each out separately. Don struggled with this (*I would too*) and also logging on the computer. He still managed a consistent rate for the two hours.

At noon, I jumped to 20 meters but kept the yagi out towards Europe and the DX run continued. Rob KB1FWU came on board. Rob has been licensed for a few years but has no experience. One listen to the pileup, and he didn't want any, either. Finally, I convinced him to do a little operating. It was a real struggle at first as he was dropped into one of the toughest jobs there are. But, after 30 minutes, he was casually exchanging pleasantries with folks in England and Germany!

At 2:00, Bob KB1FRW was set to operate. He has had a little GOTA experience at Field Day. It was getting towards evening in Europe and the number of stations was thinning out, so we switched to stateside. After some 30 minutes of slow rates,

Operators... continued next page

Operators...

continued from previous page
things picked up and Bob had a good rate going.

The final slot, at 4:00, had Jim KE1AZ in the operator seat. Jim does have an HF station at home and has limited experience. Usually, rates slow up towards the end of the weekend as we run out of people to work. Not this time! Jim completely operated the two hours and made over 70 QSO's an hour.

It is amazing what very new operators can do with a modest station with a little planning and thought. During the training hours, the rates generally ran between 45-75 QSO's an hour, which is not bad for a non-contest. The final tally was 1467 contacts and 129 multipliers, which included 48 states and 55 countries. And this was done without the services of 10 meters with mostly brand new HF operators. Amazing!

At this point, I can only encourage these operators (*and others*) to keep up their practice with other operating activities. I also hope that more effort will be put into organizing and hosting operations during contests and other activities so that practice and training will continue.

FYBO

by Brian N1BQ

The QRP contingent of RANV operated the annual Arizona ScQRPions Winter Field Day contest called FYBO (*Freezin' Your Butt Off*). In this event, the score is multiplied by how low the temperature gets at the operator's position. The team consisted of John VE2EQL, Bob, WE1U, Brian N1BQ, Erich KB1KVV, and Ryan KB1KVVX. We made 26 QSOs with 16 multipliers, operated outdoors and had a low temperature of 17°F for a maximum temperature multiplier.

Anyone not operating FYBO was free to come indoors and warm up by operating the Vermont QSO party. We made about 50 QSOs in 18 states in that event.

NEWS & VIEWS – JOURNAL OF RANV

by Mitch W1SJ

Many don't consider just how important *News & Views* really is. It is the lifeblood of the club. While we have E-mail and reflectors, these are mostly the tools of active members. The newsletter reaches all club members and the whole world, if they choose to read the web site.

Sadly, we need more input from members to make the newsletter a more relevant and valuable communication tool. It has appeared to me that I have been writing more and more of the newsletter. Curious, I went back and checked. In 2003, authors of the articles in *News & Views* were: W1SJ 41, N1BQ 18, AA1SU 10, K2MME 5, KB1FRW 3, W1DEC 3, KC1WH 2, KB1JOO 1 and N1JEZ 1. This doesn't count the news snippets. The reality is that 75% of the newsletter is written by 2 people. That is not healthy.

The common responses given are things like, "I don't have anything to write about", or "I can't write", or something similar to these themes. We are not necessarily looking for technical dissertations. You may know something which the majority of us do not. That would make for a suitable article. Or more commonly, you have done something in amateur radio or have a story to tell which is interesting. The newsletter is the place to share it. If it is true that you cannot write very well (*an ailment which affects many of us*), that is not really an issue. Our staff of experts will make your article shine like it was written by Shakespeare. Well, maybe not that great, but it will put into a form which is readable by all.

A very valuable method of producing articles is a monthly series on a particular topic. Paul AA1SU had a monthly series on Contest events. We have had other series on Gateways and Internet surfing, back before these were household names.

So, search your radio experience for information and stories. The easiest way to submit information is via E-mail. If you have questions, feel free to contact the editor, Mitch W1SJ before writing your piece.

BOY SCOUT CLASS LICENSES SIX

by Brian N1BQ

Growing out of the RANV demonstration at the Boy Scout Jamboree last October at Shelburne Museum, Brian N1BQ and John K1JCM put together a class of four Boy Scouts from Troop 627 and four siblings/parents starting in early December. The class met Thursday nights where time was spent in the classroom and also spent time building NorCal keyer kits and getting on the air. Five class members earned their Technician licenses and one made it to General. Welcome Tim KB1KVV (General), Erich KB1KVV, Ryan KB1KVVX Tom KB1KVVY, Amy KB1KXF and Robert KB1KXE

VIRUSES

Hardly a day goes by that I don't have some virus incident. The latest was scary. Mail from support@arrl.net note read: "Our antivirus software has detected a large amount of viruses outgoing from your email account, you may use our free anti-virus tool to clean up your computer software." There was a "password" enclosed to open up the zipped attachment. The header was suspicious. I was too, and replied back asking for verification. The "real" arrl.net wrote: "Do not open the attachment. It contains a virus. Rest assured that message did not really originate from the ARRL." Well, you have been warned!

When you E-mail me, **do not** send attachments unless you explicitly ask me first. I will otherwise routinely delete them. It is that bad.

Thanks for
helping at
the Hamfest:

AB1BB
K1CRS
K1HD
K1QC
K2MME
KB1EQG
KB1FRW
KB1IWK
KB1JOO
KE1FO
KK1L
KM1Z
N1BQ
N1JEZ
N1PEA
N1QKH
N1ZBH
N1ZRA
W1DEB
W1DEC
W1SJ
W4YFJ
WA1RMS

NEXT MEETING:
“Launch of AMSAT Echo”
Tuesday, March 9th 7 PM
O’Brien Civic Center

RANV

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