



# The Monitor

January 2002



## Presidents' Message

Another year is upon us, and instead of looking back on what we accomplished last year, we should take a moment to look ahead to what we choose to tackle. Not to make any resolutions mind you, but to look at what we have around us and what needs to be done. We should not only do this as a club but as individuals with our own agenda, no matter how large or small it might be.

Generally I can only speak for myself, but by now I can imagine you are already sick of hearing my end of the story. Sure I have my own agenda, but I don't really want to bore you with all those gory details, you could pick up on what I am up to at just about any given moment by listening to the KA1UAG repeater system. Usually I am listening there, for many reasons other than you might think...

But on the other hand, as a club there are only a couple things I would really like to achieve this year as I attempt to lead this group as President. We are already pretty active in the Public Service arena, so there is not a lot we can expand on there. We do an excellent job helping others, and the only improvement I could foresee is greater club participation in these events.

We have a very well-respected repeater system installed, and at this point there are a few upgrades and links planned, but by and large only maintenance will be required for the immediate future. We have become the dominant club in this area, and one of the main reasons for that status is our repeater system. Combined with the KA1UAG system, and it will be extremely hard to beat or to outdo what we have accomplished.

But I seem to be rambling on and on about our accomplishments, not about what we need to do in 2002... so here goes - The top thing I feel we can accomplish this year is better organization. Whether it is a more streamlined or organized Field Day or a more efficient call-up list, I feel we can be better prepared for anything with a little more organization. I know this is a bit hypocritical, especially coming from me. Personally I have become a slave to routines, which makes me very predictable. But one thing that breeds predictability is organization. You couldn't tell I was organized if you looked at my shack, but then again I promised not to talk about me...

On the subject of Field Day, it is time to start planning again for the 2002 event. We will need to collectively choose someone to lead us and oversee the planning, and I can only hope we have another fun-filled event without any casualties. The results for last year's event were great, but it does leave room for improvement although I can't see how we could have a better time. I know almost everyone looks forward to the event, I expect this year's event will again be bigger and better than last year.

Another area I feel we can improve is that of membership. I plan on sending more applications out again this year, a mass mailing is not necessarily a bad thing, just two new members should pay for the effort. Seems like a good idea to me... but then again it seemed a pretty good idea a few years ago when I did it. Increased membership means increased revenues, and that means more projects and stuff for us to play with.

On the subject of revenues, we hope to have a tentative budget prepared for the January meeting, so that the membership can vote whether to accept it or not. Not a lot of change is planned other than allotting a bit more for Field Day and the summer picnic. The status quo here as far as money matters is concerned is a conservative path to follow and has proven its worth in the past, I see no need to stray from that path.

An upcoming event worthy of mentioning is the January VHF QSO Party, to be held again at the QTH of Bill WB1BRE. It would be a good idea for those planning on participating to get any and all equipment ready for this event, as it is only a couple weeks away and there is a lot to do in a short amount of time. Traditionally this is one of the coldest weekends in the year, so please dress warm and don't forget your gloves. We should be able to show off a few new pieces of equipment, but without decent antennas and a lot of participation, it will just be another cold weekend in January. As usual I look forward to the food and camaraderie rather than the score when it is all over.

Maybe sometime this year we could generate a club effort for an HF contest, I am certain there are a couple that would fit comfortably within our style and range of operation. There are certainly those who could lead such an effort within our ranks, and I am absolutely certain that events such as the New England QSO Party can become annual events easily, with the amount of membership and equipment we have available. Larger multi-multi events can not only give us a little fun but hone our skills as operators and give us some computer logging experience as well.

The last area I feel we can improve a bit is that of member participation. We need to make sure that new participants to our events are encouraged, and that we make every effort to accommodate everyone's wishes. When people volunteer, they are giving of themselves with no expectation of anything in return except the pride and satisfaction of knowing they helped someone else. Please do all you can to promote this idea and it will be returned to you tenfold.

Micky K1XH

## Disclaimer

Opinions expressed in The Monitor are those of the individual authors and do not reflect the opinions or policies of The Twin State Radio Club, Inc.

## Upcoming Events

Hartford Tower Hearing Jan.8, 2002, 6:30 pm  
Bugbee Senior Center, WRJ, VT  
TSRC Meeting Jan. 12, 2002, 9:00am  
Gillam's Restaurant, WRJ, VT  
TSRC Meeting Feb. 9, 2002, 9:00am  
Gillam's Restaurant, WRJ, VT

## 2002 ARRL JANUARY VHF SWEEPSTAKES

From Jan 19 at 1900 UTC to Jan 21 at 0400 UTC

This winter operating event is coming up fast and the Burdens would again like to offer our location in Stafford for TSRC to again enter the VHF Sweepstakes. This would be the fourth year of operating and in 2001, TSRC was "top dawg" in Vermont!

We will have the same operating setup, using my shop in the garage with room for 5 operating positions and plenty of heat and lights. One addition this year is a Rohn tower, which I have installed on the rear of the garage. The antennas on the tower will be at about 40 ft and will include 2M, 222 MHz, 440 MHz and anything above that which I can get on before the cold weather sets in. The 2M and 440 antennas will be horizontally polarized for SSB and the 222 antenna will be a vertical.

Last year we were limited in operations to the east by the peak of the hill on our property. By erecting this tower, I have placed the antennas close to the altitude of the peak of the hill and we should have much improved performance to the east and can expect good performance in all directions! If we use the small club tower trailer, which I can move into position before the contest, we can install a 6 M beam and any antennas for other bands. There will be a rotor on my tower and, of course, one on the tower trailer. One small problem we have noted with having several band antennas on the same tower is that when looking for contacts it would be better to have separate rotatable antennas for each band. If we need to, we could add a third, temporary tower to the setup and have three rotatable antenna suites. These are issues we can work out in the next month.

Rig and amplifier availability is another consideration. Rex is bringing an FT©100D, which will get us on 6M. We have 2M and 70 Cm SSB rigs and amplifiers for both bands. Also, I have the club 222 rig for FM on that band. It would be a big step up to get something on above 70 Cm and Dave KA1UAG has equipment for 5760 MHz and 10 GHz. I have a 1269 MHz transverter with 10 w out, but that's setup for satellite and the terrestrial stuff is on 1296. Maybe I can convert it and get an antenna up in time...?! We will also need mast-mounted preamps for the VHF/UHF bands to maximize performance.

Based on last year's plan, we should start setup on Friday, January 18 concentrating on the antennas and some station setup. We can complete the station and antenna installation and checkout on Saturday prior to the contest start at 1900 UTC (2PM local). Operating Sunday afternoon is based more on considerations of tear down in daylight than on band conditions. Last year, we had pretty well worked the bands out by mid-afternoon, so we were able to tear down and get everyone home at a reasonable hour.

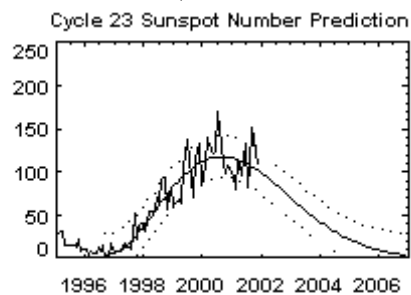
If you are interested in participating in the January VHF Sweeps at our location, just let me know on the repeater, via Email, etc. Those who have participated in past years can attest to it being a great time with good food and real sleeping accommodations at our lower cottage. If you have not tried a contest before, this is a good one to start on, as it doesn't have the huge pileups associated with HF contests. Also, if you have equipment that you would like to bring to the event let me know what you have and we will work out the details.

For those who have not been to our place, we are off the beaten track at about 2000 ft and our driveway is 0.4 miles long, all uphill! If you don't have a 4WD vehicle, let me know in advance and we can make arrangements to park you at a temporary parking area at the foot of our driveway and get you up to the site.

73, Bill WB1BRE  
wb1bre@arrl.net  
802 333 4623

## Propagation in 2002

The new year is off to a great start. Six meter operators have enjoyed regular worldwide openings for several weeks—a situation typical of solar cycle peaks—and the other high bands have been in great shape too. The latest data from NASA on the progress of Solar Cycle 23 shows we are experiencing a double-peak in the cycle. The year 2002 looks like it will be another good one, before the inevitable down trend settles in as the cycle progresses toward its inevitable bottom sometime in 2006 or 2007.



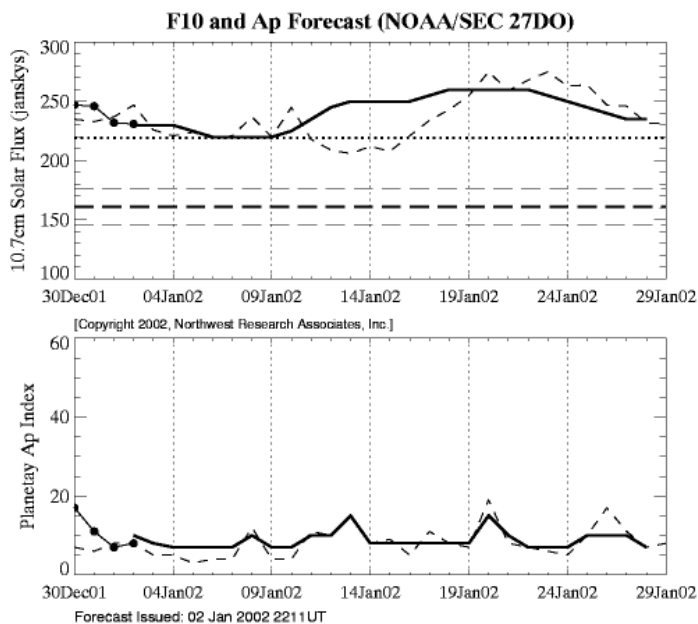
## January Propagation Outlook

by AD5Q, edited by K1IB

January brings us the lowest MUFs of the year. Low bands are having a great season, but signals on 80 are still much weaker than they will be at the bottom of the sunspot cycle. This is something to look forward to, but for now, let's enjoy 10 and 15 meters.

Ten meters is loaded with DX activity from Europe in the morning. Openings to the rest of the world will occur at their regular times. For difficult to reach corners of the world such as southern Asia, things will be easier on 15 or 20. Conditions on 15 will be very good. Twenty meters is in great shape in the southern hemisphere. In the late afternoon and evening look for activity from Africa and the Antarctic. Tune carefully for exotic long path stuff from the far east around sunset.

Midwinter is the best time of year for low band work. Europeans are very workable after dark on 80, but MUFs are too high for any heavy DX excitement on 160. Forty meters will be the best band for serious worldwide nighttime DXing for the next month or so.



### Solar Activity & Geomagnetic Forecast

*These plots show forecasts for the 10.7cm solar radio flux (F10) and the planetary geomagnetic activity index (Ap) for the next 27 days (heavy solid lines). The light solid lines and filled circles at the start of each plot are the observed F10 and Ap for the past few days, and the light dashed lines show the observed F10 and Ap from the previous solar rotation. The three horizontal long-dash lines on the F10 plot indicate the mean (heavy line) and expected range (light lines below and above the heavy line) of F10 from the NOAA SEC long-range prediction for Solar Cycle 23. The single horizontal dotted line is the 90-day mean F10 flux for the preceding 90-day period*

## DXBVT DX Cluster

As the Vermont amateur radio community has been a source of great support for me over the past few years, and I being in the holiday spirit, I would like to offer in return a holiday gift.

It's been several years since there has been a DX cluster in Vermont. For the past couple of months, I've been working on a project to bring one back. I've gained a lot of knowledge of Linux, AX.25, and networking in the process!

The DXBVT DX Cluster is now available for use. You can connect to it either through the Internet, via telnet at telnet://n1zuk.dyndns.org:8000 , or via radio on 145.030 MHz and connecting to either DXBVT or N1ZUK-2. I have a link to the K1TTT DX cluster in MA, which has many New England amateurs connected, sometimes in the neighborhood of 200 hams. There's also feeds from around the world, so you can get a feel for what conditions are like globally. The cluster includes a lot of 'bells and whistles', like QRZ look-ups via the Internet, distance/heading information, messaging, and more.

I added the 145.03 MHz access, as I know there are a number of folks using dial up modems, that can't stay connected for long periods of time (or RF knocks them offline).

I'm pretty centrally located, and on an open, elevated area, so if you point towards Ames/Camp Johnson, you should be able to reach me if you're in the greater Burlington area (and not in a hole yourself).

The cluster is still a 'work in progress', so there may be times in the next few weeks when it's unavailable. The goal is to have it open 24/7/365. Come try it out. If you have any problems or questions, you can email me at n1zuk@adelphia.net . In the next month or so, I'll be putting up a web site with support information, manuals, help files, programs, etc.

73, and happy holidays —  
Fred N1ZUK

## THE ARRL FIELD ORGANIZATION

Have you ever wondered how you can get more involved with Ham Radio in your area? Want to try something new, fun, and different, all while making new friends? This month, we are starting a new series of articles about the ARRL Field Organization. The League is volunteer based, and the Field Organization serves as its backbone. The Section Manager (SM), elected every two years, is responsible for managing the Field Organization programs in Vermont. Our SM, Bob DeVarney WE1U, recruits League volunteers to staff eight crucial program areas: emergency communications, message traffic, volunteer monitoring, RFI problem solving, support of affiliated clubs, government liaison, encouragement of technical activities, and dissemination of on the air bulletins.

Here's where you come in. You can sign up for an ARRL appointment, no matter what your skill level, or license. There is a place for everybody, and we will be giving a brief description of two of the 18 available appointments, for the next nine newsletter issues. For more detailed information, please visit the ARRL Field Organization on the League's web site, and click on the office that you might be interested in. You must be a Full Member of the ARRL to be considered for an office. This month we will start with Local Government Liaison and Public Information Officer.

Want to know more about your local government? How about getting more involved helping hams with zoning issues? The Local Government Liaison (LGL) serves as a primary contact for amateurs encountering problems dealing with local government agencies. The LGL monitors local dockets, proposals, and actions of town councils and any other legislative agencies whose actions can directly or indirectly affect Amateur Radio. In addition to attending meetings, getting familiar with local policies, assisting local amateurs, and reporting to the State Government Liaison (SGL), the LGL educates elected and appointed officials, formally and informally, about the value of Amateur Radio to their community. Currently the LGL position in all areas of Vermont is vacant.

Interested in a future with public relations? How about working with the local TV station? The Public Information Officer (PIO) establishes a list of media contacts in the local area and maintains personal contacts with appropriate representatives of those media, such as editors, news directors, science reporters, etc. The PIO then becomes the main contact that the local media looks to when information about ham radio activities is needed. Working with the LGL, he/she establishes and maintains personal contacts with local government officials and explains to them in brief, non-technical terms about Amateur Radio and how it can help their communities. Some other duties include promoting local hams, minimizing any negative media publicity, generating advance publicity of Ham activities, such as Field Day, and helping individual hams and radio clubs to develop and promote good ideas for community projects to display our hobby in a positive light. The PIO reports to the Public Information Coordinator (PIC). Currently there are two PIOs in Vermont, but there is plenty of room for expansion in your town. They are Bob K1HKI in Brookfield, and Jim N2EA in Essex Junction.

Sounds like a lot of dry stuff, right? Well it's not, for the right person. You don't even need to have previous experience in one of these areas. There is a handbook that the League provides that would fill in the blanks when needed. More than one person is needed for each position, as these are local duties, and they are not terribly time consuming. So why not consider a more active role in your local ham radio community? It can be a fun and educating experience for both you and the people that you work with and help. The web site to start with is [www.arrl.org/FandES/field/org/](http://www.arrl.org/FandES/field/org/). Here you will find a link that will give a more detailed job description and another link to an application for the position, if it is something that you are interested in. Next month, we will cover two more positions in the ARRL Field Organization.

## **AO-40 "OFFICIALLY IN THE 'DEAD ZONE'"**

AO-40 satellite ground controllers have begun adjusting the spacecraft's attitude as it enters a period of unfavorable sun angles. AO-40 command station team member Stacey Mills, W4SM, says that AO-40's operating schedule has been modified slightly to reflect the decreasing attitude longitude (ALON).

"As expected, the satellite has lost sun sensor lock, so we are now officially in the 'dead zone'," Mills reported. The satellite is currently in a long period during which Earth eclipses the sun near perigee—its point closest to Earth. These periods will continue well into next June.

The satellite relies on solar panels for its power. In late November, Mills said that necessary adjustments to AO-40's attitude to compensate for unfavorable sun angles over the next several months would lead to some down time for the spacecraft's transponders. The attitude shifting necessary to

compensate for the unfavorable sun angle will leave AO-40's antennas pointing away from Earth for several weeks.

To save power, the transponder passbands were being turned off at various times, and the RUDAK digital transponder was scheduled to be off for up to five days.

Mills has said there will be periods of no transponder activity and a much longer period of limited—but progressively increasing—transponder activity. "AO-40 command stations will make every effort to activate AO-40's transponders, even if for only a short time each orbit, when conditions are appropriate," he said. Mills said he anticipated being able to keep the transponders active through the eclipse period for an hour or so right after perigee.

Yoshi Takeyasu, JA6XKQ, of the JAMSAT SCOPE team, recently announced the release of several new photos taken by the SCOPE cameras aboard AO-40. The photos are available on the JAMSAT Web site <<http://www.jamsat.or.jp/scope/011215/>>.

For more information on AO-40, visit the AMSAT-NA Web site <<http://www.amsat.org/>>.

## **Amateur Radio Emergency Communications Course January registration:**

Registration for the Level I Amateur Radio Emergency Communications Course (EC-001) will open Monday, January 7, 2002, at 4 PM Eastern Time. Registration for Level II (EC-002) will open on Monday, January 14; registration for Level III (EC-003) will open January 21. Courses must be completed in order, starting with Level I. To learn more, visit the ARRL Certification and Continuing Education Web page <<http://www.arrl.org/cce>> and the C-CE Links found there. For more information, contact Certification and Continuing Education Coordinator Dan Miller, K3UFG, [cce@arrl.org](mailto:cce@arrl.org).

## **Question pools to remain valid for four years:**

The Question Pool Committee of the National Conference of Volunteer Examiner Coordinators has announced that starting with the new Amateur Extra (Element 4) question pool released November 30 and going into effect this July 1, all question pools will be valid for four years. QPC Chairman Scotty Neustadter, W4WW, says the shift from a three to a four-year schedule will enable the QPC to do a better job in developing syllabi and pools for the various examination elements and allow more opportunities for public input.

## **Almost—but not quite— 2 million cards in 2001:**

ARRL QSL Service Manager Martin Cook, N1FOC, reports that the final shipment of 138,925 QSL cards on December 31, 2001, brought the total for the year to 1,932,315 cards. "This is 63,420 more than last year," Cook said. The upswing in the number of QSL cards handled via the outgoing QSL service over the past couple of years has roughly corresponded with the current solar cycle peak.

## **Standardized list applies only to ARRL Club Competition participants:**

ARRL Contest Branch Manager Dan Henderson, N1ND, notes that the recently announced list of club abbreviations that appears on the ARRL Web site <<http://www.arrl.org/contests/club-list.html>> is only for the convenience of operators whose clubs typically participate in the ARRL November Sweepstakes, the ARRL International DX Contest, the ARRL 160-Meter Contest, the ARRL 10-Meter Contest and the ARRL-sponsored VHF events in January and September. Points for these contests count toward the club competition totals. Field Day participation, while appreciated, does not count toward the ARRL Affiliated Club Competition program. It is not necessary for clubs that only participate in Field Day to be shown on the club list. The standardized list of club designators enables the ARRL contest robot to properly count electronically submitted contest scores toward a club's ARRL Affiliated Club Competition point total.

## **Vermont Ham Activities**

Happy Holidays and all the best for the New Year!

A number of activities are coming up which might be of interest to amateur operators in Vermont.

### **1. WEEKEND CW CLASS**

This is the first class of this type in Vermont in a long time. The goal is to pass the 5 word per minute cw exam, leading to the General and Extra Class licenses. The course is in two parts: 1. Directed at-home study and 2. Two day training session held in Essex Junction on January 26-27. As this is the first time this class is being held, there is no charge. Students must pre-enroll and commit to the course (i.e. do your Homework!) Students should enroll by December 31 or earlier. There is a enrollment cutoff. Future classes are planned. For details, go to: <http://www.ranv.org/cwclass.html>

### **2. MILTON HAMFEST**

Milton, aka Vermont State Convention, will be held February 23rd. Be there! Forums on Towers, Contesting, Antennas, Logging, QRP, Satellites and Microwave are being dis-

cussed. If you have any suggestions, please speak up. Milton Web site: <http://www.ranv.org/milton.html>

### **3. VERMONT AMATEUR RADIO DIRECTORY**

The Vermont Amateur Radio Directory 2002 will debut at Milton. They will continue to sell for \$5. If you have any corrections for individual or club listings in the Directory, please let me know: [w1sj@arrl.net](mailto:w1sj@arrl.net).

### **3. WEEKEND HAM RADIO CLASSES**

Weekend classes are scheduled for March 16-17 in Essex Junction, VT and April 6-7 in Manchester, NH. The Technician class is Saturday only, the General is Saturday and Sunday and the Upgrade class is Sunday only. Details at: <http://www.ranv.org/weekend.html> or call me at 879-6589.

### **4. VERMONT QSO PARTY**

Vermont's contest takes place on the weekend of February 1-3, 2002. Get on and make some contacts and put Vermont on the map. Contest rules are at: <http://www.ranv.org/vtqso.html>

All the best for a safe and happy 2002!  
73, Mitch W1SJ



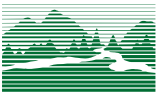
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## ELECTRONIC ADDRESSES

\*ARRL Website <http://www.arrl.org/>  
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\*NH Amateur Radio Home Page: <http://www.nhradio.org/>  
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\*Bob DeVarney WE1U-VT SM we1u@arrl.org  
Part 97 <http://www.arrl.org/field/regulations/news/part97/>

Don't forget to check the TSRC Home Page!  
Make it your default start page!  
<http://www.w1fn.org>



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