



# The Monitor



December 2003



## Presidents Message

Just a quick note to those that are planning on attending the meeting on Saturday. The location has been changed to EBAs in Hanover. Time and date are still the same. This is due to the fact that last month the restaurant in WRJ was closed.

Verne N5IEP

## Upcoming Events

**TSRC Meeting** Dec 13, 2003, 9:00am  
EBAs, Hanover, NH

**TSRC Meeting** Jan. 10, 2004, 9:00am  
EBAs, Hanover, NH

## The Prouty

Just thought that all of you would like to know how successful it was for the Norris Cotton Cancer Center:

\$265,000+ raised, and some still coming in. 970 participants  
160 10k walkers  
140 5k walkers  
100 mile 247 cyclists  
50 mile 218 cyclists  
25 mile 165 cyclists

Their goal was \$250,000 and last year they raised \$183,000

I hope to see all of you next year! Next year's is Saturday, July 10, 2004. So please keep this date free!

The repeater is already working better with a new antenna and 100 hz PL tone. More antenna and repeater modifications are planned. The 220 link is up. And we have much improved our packet set up and coverage. We did a good job providing communications, and next year, with your help, should do even better!

Thanks again to all and 73

Rex G. Carr, M.D. – AA1KL rexcarr@sover.net

## 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.

## ARRL VHF SWEEPSTAKES-2004

It's time to start thinking about the 2004 VHF Sweeps January 24-26, 2004!! Last January, the TSRC team had a great time, scoring over thirty one thousand points, almost double our score of 18,358 in 2002.

The action takes place at our home in Strafford, VT where we operate out of my garage workshop, with heat and lights, and up to five operating positions. Typically, we operate on 6M, 2M, 222 Mhz and 70 Cm. Last January we also operated on 902 Mhz for the fifth band.

We use a mix of existing antennas, the club tower/trailer, some loaned antennas and lots of hardline! Setup usually starts on Friday afternoon and continues till start time at 2PM on Saturday. The station setup from last January is shown here:

6 Meters-

Rig- FT920;  
Amp- ACOM 1000- 1KW;  
Antenna- 5 el yagi

2 Meters-

Rig- TS711A;  
Amp- TE Systems- 300 Wts;  
Antenna- 11 el yagi

222 Mhz-

Rig- FT736R;  
Amp- RF Concepts- 130 Wts;  
Antenna- 6 el yagi

432 Mhz-

Rig- TR851;  
Amp- Homebrew amp- 500 Wts;  
Antenna- 19 el yagi

903 Mhz-

Rig- HR2510;  
Transverter- 8 Wts out;  
Antenna- 11 el loop yagi

This gives you an idea of the equipment that has been used as well as the power levels. We don't know at this time if Mike N1JEZ will be joining us with his impressive 6M setup and the 500 watt amp for 70Cm is not available this time. The mix of equipment will be dependent on who joins us and what they have available. Last year, we had about a dozen club members and friends who joined us.

We do computer logging with the 6M, 2M and 70 Cm stations networked. Since 222 and any other station don't typically have a large number of contacts, we add those logs in by hand after the contest.

Food and lodging- This is the middle of the winter, so these are important issues! We have lodging for several visitors at the lower

house on our property. It is heated by wood with full kitchen, bath and sleeping facilities. We only ask that you bring your own sleeping bag or sheets and pillows. We supply a complete turkey dinner, with all the fixings, for the Saturday night meal. Usually Dave KA1UAG provides a pot of his "award-winning" chili and Joe KB1FDA usually has a culinary delight for us! We ask anyone coming to bring their own breakfast fixings. We also provide coffee during the contest.

This is a great event for anyone who would like to try contesting. It is not intense and there is more "conversation content" to many contacts, so you have a chance to work a contest and get used to the technique as well as learning the computer logging process. This all helps in preparing for June- FD2004!

The TSRC team has been improving and moving up in scoring constantly for the past few years and we would like invite you to join us in January for a weekend of operating fun!

73, Bill WB1BRE

## **FNpack and FNpsk the SET and the HF net**

Yesterday we had a successful training session for FNpack and FNpsk. FNpsk allowed Ken and I to send traffic with minimal power. Which means it may work well with inefficient portable antennas! We also tested the Moose Mountain Ka-node and digipeater, with mixed results. We will continue to test, train, and revise. Thanks to those who did participate!

Last night's HF net was moved to the K1JY repeater system, when HF communications failed (including 5 Mhz!). Thank you to Charlie, N1AOK for helping and participating.

The EC's used packet to communicate with the SEC to see what the net was going to do. One of the items reviewed on the net was the future importance of Packet and perhaps other digital modes for statewide communication. The most likely alternative will be PSK. Ken (AC1H) has developed an addition to FNpack to allow PSK63, for faster rates and error correction.

Next Saturday, 11/22/03 at 0930L will be another FNpack/FNpsk training session. There will also be one on 11/29/03 at 0930L. I encourage all of you that can do packet or psk to participate. Those of you that don't, please contact those of us who do to see about arranging to be at someone's station during the test to increase your familiarity with these programs and modes.

Please practice, practice, and practice more packet and PSK. One or both of these modes will likely be the main method of passing non-tactical messages within New Hampshire! I will be happy to come to a person's home to help get them going. Packet is one of those things that is learned best with help and trial by fire, HI HI.

I am working on revising the SGARES Comm. Plan to more closely reflect the new State Plan.

We had a great meeting with the VTARES leadership! I was able to meet with and have been communicating with VTRACES, also. We met Steve Hogan of the NWS/Skywarn for VT. He indicated that he would be more than happy to schedule a skywarn training session. It would last on the order of 1.5 to 2 hours....longer if we let him, HI HI.

One last item, Mill, K1IB has found a program that will allow mapping of the membership's locations. This could prove quite useful. I know that you are all busy, but if all of you could please send me your station location by Lat. and Long. We will see about putting together a map.

2004 is going to be an important year for emergency communications! The new small pox vaccine is supposed to be ready by then and I was just told that they are beginning to ramp up the system of The Draft, into the military.

Please take some time to prepare with us and for your family.

TNX and 73 to all.

Rex G. Carr, M.D. – AA1KL

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## **PSK31 and Friends**

It's hard to tell ahead of time what new things will eventually be successful. Some new car models make it and some don't. Some TV shows are cancelled within a few weeks while others become big hits. As digital modes go, PSK31 is an Oscar winner. Everyone I know of that has tried PSK31 really enjoys it.

As popular as PSK31 is though, it is not perfect so some variations have been introduced in the years since PSK31 was originally created. One version is called PSK63. PSK63 is similar in many respects to PSK31 but it (PSK63) is twice as fast -- about 60 wpm vs 30 wpm for PSK31. Since many hams don't type faster than 30 wpm PSK31 is fast enough to keep up with live messages being typed on a keyboard. But PSK31 seems to be slow when sending previously prepared messages such as descriptions of station equipment, etc. When sending prepared messages the faster speed of PSK63 is a big advantage. So even though PSK63 takes more bandwidth, it is gaining support in the amateur community and most PSK31 programs now include the PSK63 flavor as well.

Recently Rex Carr, AA1KL, and I ran some tests of PSK31 and PSK63 as candidate modes for passing ARES traffic. We know that stations have worked around the world with just a few watts of PSK31, but if a few errors occur in a normal QSO it is of little consequence. On the other hand, the goal for ARES messages is to have essentially error-free transmission. Our question is can PSK31 and PSK63 deliver error-free transmission ?

Our first round of testing tends to confirm one fact predicted by theory: With all other things being equal, PSK63, with its higher speed and wider bandwidth, takes twice the transmitter power of PSK31. The lowest possible power setting on my FT-847 gives an output of 3

watts. At that power level PSK63 made occasional errors but would be adequate for normal ham use. To get essentially error-free transmission, the goal when sending ARES traffic, power needed to be increased to the 10-20 watt range. These very preliminary tests suggest that PSK63 can give high quality performance in regional ARES nets when using a modest amount of power. We will need more tests, and tests at greater distances, to tell what power levels are needed to get high performance at a statewide level.

A big advantage of PSK and other digital modes, including packet, is that checksums can be used to find errors and to request re-transmissions of defective messages. So although we strive for error-free transmission, a rare error is permitted because it can be found by the checksum and then eliminated by re-transmitting the message. The game is to get nearly error free transmission the first time so that very few re-transmissions are needed. Hmmm, I wonder what the error rates are in voice and cw messages which don't have protections such as checksums.

## **NEW GENERAL CLASS QUESTION POOL RELEASED**

The Question Pool Committee (QPC) of the National Conference of Volunteer Examiner Coordinators has released a revised and expanded Amateur Radio General class (Element 3) question pool into the public domain. The new question pool becomes effective July 1, 2004, and must be used to generate all General written examinations administered on or after that date.

"The pool has been expanded to 432 questions," said ARRL VEC Manager Bart Jahnke, W9JJ, a member of the Question Pool Committee, who notes that all subelements grew slightly. "The largest increase in questions this time around was in our Operating Procedures and Amateur Radio Practices subelements," he said. The General class question pool does not contain any diagrams or symbols.

The new Element 3 question pool is available on the ARRL Amateur Exam Question Pools Web page <<http://www.arrl.org/arrlvec/pools.html>> in Adobe PDF and ASCII text format. It includes all questions and answers relating to Element 3.

The Question Pool Committee now is turning its attention to developing an outline for an updated Amateur Extra class (Element 4) question pool, which will be revised over the next 24 months, Jahnke said. It will go into effect July 1, 2006. The deadline to submit input to the Amateur Extra question pool syllabus is May 1, 2004.

In addition to Jahnke, members of the Question Pool Committee are Chairman Scotty Neustadter, W4WW, Fred Maia, W5YI, and John Johnston, W3BE. Commenters may address specific Element 3 questions as well as inputs to the Element 3 syllabus and question pool to the Question Pool Committee via e-mail <[qpc@arrl.org](mailto:qpc@arrl.org)>.

## **LoTW CONTINUES TO GROW**

The ARRL's Logbook of the World secure contact-verification database continues to grow. So far, reports ARRL Membership Services Manager Wayne Mills, N7NG, nearly 5000 users have uploaded logs containing some 25.4 million Amateur Radio contacts. This has resulted in more than 1 million QSL records.

"The key is participation, and it doesn't cost a thing to get the software and upload logs," Mills pointed out. "We're encouraging all hams to participate in Logbook, whether the ham is a casual operator, contester, ragchewer or DXer." To further expand the database and generate more confirmed contacts for all LoTW users, Mills is calling on everyone to sign aboard and submit as many logs as possible.

Once LoTW programming is complete, users will be able to redeem credits for ARRL awards without having to go through the expense and trouble of obtaining hard-copy QSL cards. Mills emphasizes that LoTW is not meant to replace paper QSL cards but supplements traditional QSLing.

Signing up as a new LoTW user is simple. Visit the Logbook of The World Web site <<http://www.arrl.org/lotw>> and read the "Getting Started" document, Mills said. He advises new users to print it out to have the instructions handy.

The "Getting Started" page offers step-by-step instructions for getting a secure digital certificate from ARRL and preparing and uploading logs. Mills noted that most new user problems result from failing to specifically follow the instructions outlined on the "Getting Started" page.

Amateur Radio software developers are starting to include direct support for Logbook of The World in their programs. Most logging software allow users to export a log in ADIF format, which LoTW will accept. A few programs incorporate the ARRL's TQSL file-generation and digital certificate code, which simplifies the process of digitally signing logs and exporting them in a separate e-mail.

For more information, visit the Logbook of The World Web site <<http://www.arrl.org/lotw>>.

## **W4B to commemorate Wright Brothers' flight centenary**

The North Carolina Special Events Group is operating special event station W4B December 12-17 (UTC) to commemorate the 100th anniversary of the Wright Brothers first flight at Kitty Hawk, North Carolina. One station will be on 14.260 MHz continuously as propagation permits, while a second station will alternate between SSB and CW. For more information, visit the NCSEG Web site <<http://www.ncseg.org>> or contact Robert Hamrick, WA4RH <[wa4rh@ncseg.org](mailto:wa4rh@ncseg.org)>. The North Carolina Special Events group is a nonprofit organization that promotes historical and other events via Amateur Radio to increase public awareness of ham radio. Orville Wright was at the controls for the first successful flight December 17, 1903. The 120-foot flight lasted just 12 seconds.

*Happy Holidays!!!*

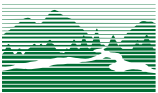
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Part 97 <http://www.arrl.org/field/regulations/news/part97/>

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



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