

The KEY

The Newsletter of the Contoocook Valley Radio Club

Volume 11, Number 3

June, 1999

Programs

June 8 Annual CVRC Field Day Primer. Marc, N1QGM, will present the league video Field Day Fever, A light-hearted look at this popular ARRL-sponsored activity. Produced by H. Paul Clampit, K5TCK. Al Shuman, N1FIK, will also be stopping by to introduce Mike Graham, K7CTW, our new ARRL NH section manager.

July 13 Don't miss the annual CVRC potluck dinner cruise! The M.V. Mt. Sunapee II will embark from Sunapee Harbor at 7:00 pm sharp (Please arrive by 6:45). The cost is \$15 per person which will be collected prior to departure. A cash bar will be available, bring your own food. Family members and friends are invited as this is a great way to have them get to know the club. We will be passing a sign-up sheet around during the June meeting. If you will not be able to make the meeting, please call Dave, N1KTP, at 456-3787 (We need to provide a head count to the captain a week before the cruise). If you have any questions, please feel free to call Dave or talk to any club officer at the June meeting.

CVRC meetings are held on the second Tuesday of the month at the Hopkinton Town Library in Contoocook, NH. Members and nonmembers alike are welcomed. Talk-in is on the K1BKE 146.895-600 kHz (100 Hz PL) repeater.

The KEY is published every other month at the beginning of the even numbered months. The deadline for articles and submissions is the fourth Tuesday (coinciding with the usual business meeting schedule) of the preceding month.

Another NH QSO Party Win for the CVRC!

For the fourth year in a row, the CVRC has taken first place (large club category) in the NH QSO Party. A total score of 190,574 points gave us an easy win with almost twice as many points as the second place club. Thank you to those who operated the K1BKE call during the contest; AF1T, K1PDY, N1FOJ, N1GJF, N1IIC, N1JHJ, N1KPZ, N1SKZ, N1VRT, W1GTA, WA1UKV, and WA1VKO. The K1BKE score alone was not enough, however (It would have earned fourth place). AF1T, K1JY, N1FOJ, N1GJF, N1IIC, N1JHJ, N1SKZ, WA1UKU, and WA1VKO each donated their personal scores, totaling 170,648 points, to secure the CVRC win. For complete information on this year's qso party visit the NHARA website at <http://www.nhara.nhradio.org>.

License Class VE Session

Lindsay Collins, K1JY

An open VE Session was held on May 20 following the CVRC license classes schedule. 15 candidates took 32 elements. There were 7 new licensees including several YLs, 4 upgrades, 2 with CSCE credits for elements passes, and only 2 candidates failed any credits (one of which was a 20 wpm code test). N1JI felt this was the best session he had ever administered. Club member Joe, N1ZIH, is a new Advanced. License class teachers headed by W1GTA, N1QGM, and AF1T are to be congratulated! Thanks, guys.

From the President's Desk

Marc Fraser, N1QGM

It's really gratifying to be able to see our Club at work in the Community! Such is the case with the recently completed license classes at WEVO. If you haven't seen the Club's website yet, or don't have access to it, there were fifteen people who came to take the test, ably conducted by Dexter, KY1M, and all but two went away with some measure of success! The four participants of the class who stuck it out the whole time were present, and all of them ended up being fully licensed. We have two new Novices, one Tech and one Tech Plus. Add to that the upgrades and CSCEs that were issued and I can truly say it's the best test session I've ever been associated with.


My heartfelt thanks go out to all who participated in this tremendous success. I hope I remember all the names. First, to the four new licensees, Tracy, David, Fred and Claire. Your hard work and dedication to the classes really paid off! Congratulations! Next, the VE Team, Dexter (KY1M/VEC), Ed (W1TTU), Lindsay (K1JY), Jock (N1JI) and Dan (N1OAJ). Fifteen sets of tests to correct

and the team handled it all with great patience and professionalism.

To the other attendees of the testing session (you know who you are) I say "Congratulations!" and continue the great work at upgrading. Finally, the session teachers, Dale (AF1T), who took on three sessions, Jason (N1IIC), Ken, (K1MID) and especially Larry (W1GTA). Larry taught all the CW sessions and all or part of three theory classes. His thoroughness and patience with the class really shows his enjoyment of CW operating and teaching that enjoyment during the half-hour sessions. The result of this is that three of the four "core" class members were able to pass Element 1A, the 5WPM code test. The depth of knowledge shown by all who presented a section in the "Now You're Talking!" text is a credit to our Club's enthusiasm for Amateur Radio and a willingness to bring new Hams into the community. I also tip my hat to Larry for allowing us the use of the WEVO studios in Concord. It's a great place to hold the class sessions and I hope we can continue this tradition for a long time to come. Once more, thanks to all who took part over the past twelve weeks. Your hard work has paid off once more with four new New Hampshire hams! Look for another session starting in the late summer and sign up to be a part of this success story! — 73, Marc



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Merrimack County ARES Corner Tom, N1SKZ, Emergency Coordinator

**Net: 20:00 Local Time, Mondays
Frequency: 146.895 - (CVRC Repeater)
Alternate: 147.570 Simplex**

**E-mail: N1SKZ@ARRL.NET
Phone: 464-4095 (evenings)**

Ever since I stepped up to the plate to become the EC for the Merrimack County area, I have asked about the possibility of holding emergency drills. Drills are a great idea as they show us where our weaknesses are while building ARES into a more cohesive team. I have been somewhat hesitant to initiate such events for two reasons:

1. Drills tend to be somewhat boring unless other groups/agencies are involved.
2. What if we held a drill and nobody showed up?

It would be very difficult for most of us, including myself, to develop a training scenario involving an air disaster, major fire, or Y2K failure and make it believable. In real life, involvement in such disasters would come from police, fire, EMS and relief agencies. How many of us would know what their needs would be? Would they have needs? In short, we need help from outside agencies to educate us on what services we may be able to provide. This summer we may have the opportunity to work with agencies that will be holding

such drills. Through our involvement with the Red Cross, we may be asked to assist with the following events:

- * A large-scale fire training exercise that will be held at Bear Brook State Park.
- * A simulated major disaster.
- * A Y2K exercise.

While our involvement in the above events is only being considered at this time, I feel it is very significant that we are being considered! Over the next several weeks, ARES leadership will be attending meetings with the host agencies to determine what level of involvement we can support. I will keep you all informed on the status of these events.

If you feel that Ham radio is still relevant to serving our community, then you may be wondering what you can do to be prepared should we be asked to partake in these events. Here are some ideas:

- * Check your mobile and portable equipment to ensure it is capable of long term communications.
- * Volunteer to help support club sponsored public service events. Bike races, walk-a-thons and parades are the best training activities we can take part in.
- * Check into the weekly net on the .895 machine.

As you see, we may very well have some training to help us hone our skills. If we are invited to participate, let's be ready.

On a different front (no pun intended) here is some interesting weather myth v. fact information it came across:

Myth: "Heat lightning occurs after very hot summer days and poses no threat:

Fact: What is referred to as "heat lightning" is actually lightning from a thunderstorm too far away for thunder to be heard. However, the storm may be moving in your direction!

Myth: If it is not raining, then there is no danger from lightning.

Fact: Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.

The above information was found in the joint NOAA, FEMA, ARC publication Thunderstorms and Lightning...the underrated killers!

Have a great and safe summer. — 73, Tom

K1BKE Repeater History

Lindsay Collins, K1JY

This article is just one example of the many great features you can find on the CVRC website at <http://www.qsl.net/k1bke> — Ed.

From the time the CVRC was reorganized in 1987, the members knew that a club repeater was on the top of the list of club projects. A loosely formed committee headed by Ken Dermon, K1BGI-SK, and Lindsay Collins, K1JY (then WB1DNJ), spearheaded the project with assistance from Warren Styles, W1LO (then WA1RLO). The first repeater consisted entirely of donated equipment, a GE Prog-line receiver, a VHF Engineering transmitter, Microcontrol Associates controller and duplexors purchased from the 146.850 repeater by K1MID and donated to the project, a power supply home built by K1BGI. The repeater was initially located for test purposes at Ken's QTH in Henniker. With a stiff tail wind, it could be worked from Bradford and Concord.

In the midst of a snowstorm in the winter of 1987, the repeater was transported by snowcat to its current home on the summit of Pat's Peak courtesy of the Patenaud family. The equipment cabinet rode in the back of the cat accompanied by K1JY; the hardware and balance of the crew rode in the cab. The equipment was the first to be installed in a new communications building at the summit. The antenna was mounted at the 20 foot level on the tower. The original frequency as suggested by the NESMC coordinator was 146.775, -600 khz.

The original repeater required nearly constant attention. The GE receiver was deaf; the antenna was a dummy load; the transmitter qualified for multi-multi status (transmitting on multi-frequencies and multi-bands at the same time); and the frequency was a mess with significant overlap with a co-channel repeater in Southern Maine. In mid 1988, the frequency was

changed to the current 146.895 -600 khz with the antenna mounted on the north side of the tower to create a null towards co-channel K1MWS in Walpole, Ma. By mid 1989, the receiver had been replaced with a Spectrum Communications SCR1000, the transmitter replaced by a Melco EV1/PAV1 exciter/amplifier running 35 watts, the antenna by an Austin Ruggedized-DFQer with 3 db gain, and the transmission line by 1/2 inch foam line. To this date, the hardware remains substantially the same. The controller has been upgraded to a S-Com 6K with autopatch and scheduling capabilities, the 32 inch deep, 7 foot tall equipment rack has been replaced with a much smaller Motorola repeater cabinet (as demand for floor space in our host building increased), the power supply replaced with an Astron RS-35, and a battery charger and deep discharge battery added for emergency power back-up. The '895 repeater still serves as a gathering place for Contoocook Valley Radio Club members, and is home to the weekly Merrimack County ARES net.

As original trustee of the club call, K1BKE, Ken, K1BGI, was also the repeater trustee. In early 1990, Ken expressed the desire to pass on the responsibility of trustee. The club selected Jack, W1JS (then WA1ALM) as the new trustee, and the first club callsign license issued in care of Jack was on May 8, 1990.

A brief flirtation by the CVRC with a 440 repeater in 1990 lasted but a short time. Coordination was received for 442.250 and a repeater with hardware courtesy of W1LO was on the air briefly from various locations including that of WA1UKV (then KA1AUA) on Diamond hill in Hopkinton. The project died from a lack of commitment and financial support from the CVRC membership in general. However, those interested in the project went on to establish several other UHF repeaters in the area including the K1JY linked system on Craney, Kearsarge and Oak, and the W1LO system including repeaters on Mt. Uncanoonuc in Goffstown and in southern Maine.

Navajo Code Talkers

This information is from an article found on the Naval Historical Center's website at www.history.navy.mil/faqs/faq61-1.htm. Please visit the site for more information, including an in-depth description of the code-talkers' dictionary.

Guadalcanal, Tarawa, Peleliu, Iwo Jima: the Navajo code talkers took part in every assault the U.S. Marines conducted in the Pacific from 1942 to 1945. They served in all six Marine divisions, Marine Raider battalions and Marine parachute units, transmitting messages by telephone and radio in their native language -- a code that the Japanese never broke.

The idea to use Navajo for secure communications came from Philip Johnston, the son of a missionary to the Navajos and one of the few non-Navajos who spoke their language fluently. Johnston, reared on the Navajo reservation, was a World War I veteran who knew of the military's search for a code that would withstand all attempts to decipher it. He also knew that Native American languages--notably Choctaw--had been used in World War I to encode messages.

Johnston believed Navajo answered the military requirement for an undecipherable code because Navajo is an unwritten language of extreme complexity. Its syntax and tonal qualities, not to mention dialects, make it unintelligible to anyone without extensive exposure and training. It has no alphabet or symbols, and is spoken only on the Navajo lands of the American Southwest. One estimate indicates that less than 30 non-Navajos, none of them Japanese, could understand the language at the outbreak of World War II.

Early in 1942, Johnston met with Major General Clayton B. Vogel, the commanding general of Amphibious Corps, Pacific Fleet, and his staff to convince them of the Navajo language's value as code. Johnston staged tests under simulated combat conditions, demonstrating that Navajos could encode, transmit, and decode a three-line English message in 20 seconds. Machines of the time required 30 minutes to perform the same job. Convinced, Vogel recommended to the Commandant of the Marine Corps that the Marines recruit

200 Navajos.

In May 1942, the first 29 Navajo recruits attended boot camp. Then, at Camp Pendleton, Oceanside, California, this first group created the Navajo code. They developed a dictionary and numerous words for military terms. The dictionary and all code words had to be memorized during training. Once a Navajo code talker completed his training, he was sent to a Marine unit deployed in the Pacific theater. The code talkers' primary job was to talk, transmitting information on tactics and troop movements, orders and other vital battlefield communications over telephones and radios. They also acted as messengers, and performed general Marine duties.

Praise for their skill, speed and accuracy accrued throughout the war. At Iwo Jima, Major Howard Connor, 5th Marine Division signal officer, declared, "Were it not for the Navajos, the Marines would never have taken Iwo Jima." Connor had six Navajo code talkers working around the clock during the first two days of the battle. Those six sent and received over 800 messages, all without error.

The Japanese, who were skilled code breakers, remained baffled by the Navajo language. The Japanese chief of intelligence, Lieutenant General Seizo Arisue, said that while they were able to decipher the codes used by the U.S. Army and Army Air Corps, they never cracked the code used by the Marines. The Navajo code talkers even stymied a Navajo soldier taken prisoner at Bataan. (About 20 Navajos served in the U.S. Army in the Philippines.) The Navajo soldier, forced to listen to the jumbled words of talker transmissions, said to a code talker after the war, "I never figured out what you guys who got me into all that trouble were saying."

In 1942, there were about 50,000 Navajo tribe members. As of 1945, about 540 Navajos served as Marines. From 375 to 420 of those trained as code talkers; the rest served in other capacities.

Navajo remained potentially valuable as code even after the war. For that reason, the code talkers, whose skill and courage saved both American lives and military engagements, only recently earned recognition from the Government and the public.