



The Monitor



November 2003



Upcoming Events

TSRC Meeting Nov. 8, 2003, 9:00am
Regency Inn, WRJ, VT

TSRC Meeting Dec 13, 2003, 9:00am
Regency Inn, WRJ, VT

YLNET - W1AW

This information was gathered for the Vermont YL net, after the question was asked -- "What is W1AW?"

To folks who collect QSL cards, W1AW is a treasure reminding them that they have made a contact with the radio station at ARRL Headquarters.

ARRL was co-founded by Hiram Percy Maxim and Clarence Tuska in 1914. The name came from the idea of relaying radio messages as a common bond between amateurs, hence the name American Relay Radio League. The first radio station at headquarters, then in Hartford, was W1MK. When Mr. Maxim died, it was decided to dedicate the station as a permanent memorial to him, so they applied to the FCC and received W1AW, which was Hiram Percy Maxim's personal call.

The seven acre site in Newington, Connecticut was purchased in the summer of 1937, and the building erected. The March 1938 QST announced: "When completed, the station will have four completely separate transmitters, with full amateur power capability for each amateur band, and provision for radiotelephone and radiotelegraph work included in each. It will be a station of which any member may well be proud."

The station was on the air the first time, on July 9, 1938, and formally dedicated on September 2, 1938, which would have been Mr. Maxim's 69th birthday.

Since then, the new ARRL Headquarters Building was erected on the site in the 1960's; W1AW building was remodeled and expanded; equipment and antennas have been improved, but the W1AW services were always there: CW, SSB, and RTTY bulletins, code practice transmissions; when needed, emergency and health and welfare traffic; and many more than to list here. And of course the Visitor Operating Studios. On weekdays from 10AM to 12 PM, and 1 PM to 3:45 PM, just show your license to Joe Carcia, NJ1Q, the station manager, and have fun.

There are three Visitor Operating Studios. In each studio there are three HF operating positions, consisting of donated equipment from Icom, Kenwood, Ten Tec, and Yaesu. A personal comment, since the radios are the top of the line, it makes operating at W1AW a dream experience.

The current antenna farm consists of four towers. Three of them are 65 feet tall, the Rohn 65 is at 125 feet. All totaled, there are 31 antennas proportioned among them.

W1AW is by far the largest of the two radio stations at ARRL Headquarters in Newington, Connecticut. The other, W11NE, is located in the ARRL Headquarters Building and may be used by HQ staff, and is used at the individual benches in the ARRL Lab.

When you make a trip to that area, do stop; go on a tour of the building, and don't miss the opportunity to operate at one of the W1AW stations. You will long remember the thrill of being on the busy end of a pile-up of other hams from all over the world.

Dot KA1LDS

Sources: The Radio Amateurs Handbook, ninth edition, 1932
From Spark to Space first edition 1989
<http://www.arrl.org/news/features/2001/07/30/1/>
<http://www.arrl.org/news/features/2001/08/07/1/>
Joe Carcia NJ1Q nj1q@arrl.org

TSRC WORKING CREW INSTALLS NEW REPEATER ANTENNAS

Early Sunday morning - Nov 2- several TSRC members converged on the Moose Mtn tower site to replace repeater antennas. Dave WA1ZCN and Rex AA1KL were the "climbers" and headed for the top of the 300 ft tower. The goal was to replace the 440 and 2M antennas used for the repeaters. The 2M antenna had serious problems with noise and performance and the 440 antenna was not working well. The new 2M antenna is a commercial grade, four bay collinear recently purchased for this job. A temporary 440 antenna was also installed and we will be putting a commercial grade unit up in the spring.

After preparations were completed Dave and Rex headed up the tower about 10 AM for what would be about a 5 hour perch inside the tower structure at the antenna location near the top of the tower. They removed the old antennas and we carefully lowered the 2M unit to the ground using lines and pulleys. The old 440 antenna was in bad shape and we tested the force of gravity to get it to earth. The Moose Mtn site is interesting in that it is an "antenna graveyard"! You find the remnants of old antennas both inside the compound and out in the woods- some dropped deliberately after failure and others that just broke off in the severe weather!

Dave inadvertently performed the classic physics experiment involving the acceleration of a body, in this case a wrench, from the 300 ft level. The wrench dug a 2" hole in the ground- fortunately all of the ground crew were under cover at the time.

Both antennas were installed and operating by about 2:30 and subsequent signal reports on the 2M side indicates a significant improvement in signal level. We will get an indication of how it performs in wind on the first windy day.

Dave WA1ZCN, our repeater manager reported "Since the 440 and 222 antennas, and the new sidearms are all still on backorder, we have the 2m antenna temporarily on the old sidearm. Come spring (and warm, dry weather) we'll drop the entire antenna and sidearm, attach the other antennas, install the new sidearms and haul the whole mess up the tower. Right now we have the 440 antenna on a spare UHF Stationmaster that we put up in place of the old control receiver antenna, and the 222 link is operating on a homebrew coaxial dipole.

If you notice any areas where coverage has improved or deteriorated over what it was in the "good old days" before the Stationmaster started to deteriorate, please let me know. So far, it seems to be working extremely well. One of the first checkins was a low power station from Essex Junction, VT who said he hadn't been able to even hear us recently. He was getting us full quieting and we were hearing him at about 80-90% quieting."

More testing will be needed to get a good picture of how the 2M and 440 repeaters are working now. It would be a big help if you could provide any "before and after" S-meter readings for a fixed site on either frequency.

Thanks to our ground crew on the site- W1KRT, WB2QLL, N1YMQ, and N1HAC and special thanks again to WA1ZCN and AA1KL who came off the tower exhausted, cold and hungry after almost 5 hours in low earth orbit!

73, Bill WB1BRE

TSRC SUPPORTS CROPWALK IN POST MILLS, VT

As in past years, our club was asked to help with safety and communications support for the annual CropWalk on October 12, sponsored by the United Church of Christ in Post Mills. This is a fund raiser for an agency that helps feed the hungry of the world.

The walk is about seven miles around Lake Fairlee and provides a pleasant setting for both walkers and helpers. There are two checkpoints, one at the North end of Lake Fairlee and one at Five Corners at the SE corner of the lake. Walkers get water and apples at each checkpoint and a chance to take a break.

The TSRC team included Dot KA1LDS (NCS at the church), Dave WA1ZCN (rover) Verne N5IEP (first checkpoint), Charlie N1AOK (second checkpoint) and Bill WB1BRE (rover). In addition

to our team, a nurse was trailing the walkers with a scanner tuned to our frequency and the walk coordinator, Doug Miller, listened on an H/T loaned by ZCN as he walked the route. Doug has been coordinating the walk for several years and we have developed a good working relationship with him.

In a recent note, Doug said „Your group is so much fun to work with, and I can't even begin to tell you how much you help put my mind at ease regarding safety. I still worry, but without you folks, I don't think I could allow the walkers to even begin such a venture around the lake. Please pass my thanks along to all of your group, especially those who participated. I always look forward to seeing you. Your service is a true blessing to not only our group, but to all you serve. I will let you know the results of our fund drive, though it will probably be a few weeks before all the accounting is done. Bless you all.....Doug Miller%

This was another uneventful walk from our viewpoint, the kind we really like! Several people did get transported back to the church and one walker needed a bandaid for a foot blister. All who finished the walk were in good spirits and found cider, cookies, sandwiches and other goodies at the church for refreshments.

This was a short but good public service event and training session and allows the club to make Amateur Radio visible to a segment of the public.

Bill WB1BRE

SGARES get together and the SET

There will NOT be an SGARES get together this month! Ken, AC1H and I are giving a lecture to the VTARES leadership in Randolph. Please forward any suggestions/feedback about the recent SET to me. They may be comments for local components or state components.

It is clear that packet is going to be used at the state level more and more. The sunspots are more active, and HF will be less efficient and reliable. It is also clear that as a group, we need more operators that have training! It is great that VTARES is active along with VTRACES and Sullivan county NHARES! This means that in a large emergency, the members in Grafton County will be more important.

I thank those who did check in for the SET. AC1H KA1LDS KB1AYT KE1LF N1AOK N1HAC N1KDV N1YMQ N5EI N5IEP WB1BRE. Ken, Dave, Dot, Bill, Kim, and Charlie worked especially hard. Ed tried to get into the UHF net for us. They managed nets, used packet, passed traffic, managed multiple radios, tried new ideas. Verne really wanted to help more, but I and Shelley had a cold and I warned him off from coming to help at the "EOC"!

It was a most notable SET...VTARES participated with the Red Cross. We passed traffic from the Concord ARC to Burlington ARC, via the Rutland Chapter office. Two large linked NH repeater systems were linked for a statewide UHF net.

I am going to work on having more drills, esp. with packet and FNpack. We as a group need the practice. We need more participation than the "frequent few". Please try to be more involved. There is a great momentum, there is a great need, this is the way for us to contribute to what is going on in the world. I know that all of you are juggling many things, as I am. Spend some time with FNpack and packet. Read about the ARRL format for messages. Listen to nets. Listen to the HF net on the 15th of each month. Take the ARRL course. I will try and involve you all as you make yourselves available. Remember, 2004 has always been the year that the nationwide small pox vaccination has been planned, unless there was an outbreak. Let us not get lax. We are still in a battle that may affect us all to different degrees.

TNX and 73,

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You Know You're a Ham if :

- You buy electrical black tape in ten packs.
- You've stripped wire with your teeth.
- You tell your son, "One day, all this will be yours," and he doesn't respond.
- You'd rather help a buddy put up a new tower than mow the lawn.
- You've grabbed the wrong end of a soldering iron. - You start giving out RST reports when you're on the telephone.
- The propagation forecast means far more to you than the weather forecast.
- The microphone at a town meeting won't work and you rush up to the front to fix it.
- When your XYL notices a new rig in the shack, you say "why, that's been there for years."
- Your watch is set to UTC.
- When you pray, it starts off something like "CQ CQ CQ GOD DE <your callsign>."
- You've ever had to patch your roof after an antenna project.
- Ham radio magazines comprise more than 50% of your bathroom library.
- You've ever sent your XYL on an errand just so you could watch her on the APRS tracker.
- You and the XYL took a Caribbean cruise so you could visit the ship's radio room.
- You've ever tapped out "hi" in Morse on your car horn to another ham.
- You've ever had an antenna fall down, but had it back up before the storm ended.
- Your teenager refuses to ride in your car because it looks like a porcupine.
- You know your home's latitude and longitude better than your Social Security number.
- You go into the local Radio Shack store and the clerk asks you where something is.

A Sub-audible tone encoder for PL on a repeater

Some time ago, TSRC club members voted to have the repeater committee install a PL capability on the 145.33 repeater. This requires that any radio accessing the repeater must have capability of generating a continuous sub-audible tone to open the receiver.

Most newer radios have this function built in and a little bit of front panel button pushing puts you on the repeater. Older rigs probably don't have this built in. Most of us, myself included, have a mix of newer and older 2M equipment.

There are a couple of ways to incorporate PL in older rigs- you can buy a miniature, ready made tone encoder with miniature DIP switches to set the PL tone manually. This solution costs about \$30 and soldering of three wires. You do have to locate a place in your rig to place the encoder board, but most older rigs have enough empty spaces to make this easy.

Another way to cheap PL is to gather the parts and build your own tone encoder. Dave AL7DJ has designed and built two versions of an inexpensive and simple encoder that is very easy to build and install. We have many of the parts available in the Parts Inventory and at most, you may need to purchase a specific chip or two and the DIP switch assy. Most of these parts are anywhere from \$1 to \$5. To make it even simpler, for those who want to try their hand at building, Dave and I are willing to provide hands-on help in putting the kit together and installing in a rig.

I have several 2M and 222 rigs that don't have PL and I have installed the \$30 solution in two of the 2M rigs. I also have an old Clegg 28 and plan to build the simple tone encoder to install in that rig.

Dave has provided the schematic and parts list for one of the two PL tone encoders that he designed and built. We will include the schematic and parts list for the second version next month.

If you are interested in putting a tone encoder in a rig or need help in putting one together, contact me or Dave and have some fun building and installing your own kit!!

73, Bill WB1BRE

Editor's Note: I have put the schematic and parts list online as a PDF file at <http://www.w1fn.org/pl1.pdf> – The schematic didn't reproduce well at the size necessary for the newsletter.

Disclaimer

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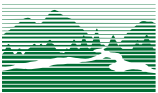
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Part 97 <http://www.arrl.org/field/regulations/news/part97/>

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



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