

The Rochester VHF Group

The VHF



Journal

Volume 64, Issue 6

February 2012

The next regular meeting of the Rochester VHF Group will be Friday, February 10th 2012 at 7:30 PM

**Spencerport Wesleyan Church
2653 Nichols St., Spencerport**

Map and directions in back

In this issue:

The Chairman Speaks!
Secretary Report
Treasurer's Report
VHF Sweepstakes Reports
Faster FFT
Classified

Topic: 1296 MHz Moon bounce

The Chairman Speaks! John Stevens WB2BYP

Groupers: The next Rochester VHF Group meeting will be held on 10 February 2012 at our usual location, the Spencerport Wesleyan Church. Thanks to Bill Rogers for the presentation last month which included a tour of the legendary K2TER Rover. I am anxious to hear how the team did for the January VHF contest.

Our next program will be on the topic of 1296 MHz Moon bounce. I've been asked by the RDXA to give a talk at their Tuesday 21 February 2012 meeting, and have enlisted the support of two other subject matter experts, Dave K2DH and Bob W2CNS to help out. Dave as most everyone knows has been playing on that band for many years with several different set-ups, and has a lot of contacts and contests in his resume. Bob has become an expert in the area of utilizing WSJT and incorporating it into his 432 EME efforts. The topic of digital EME is hot these days, as more and more activity is showing up in that mode. So I thought we would present a beta version of the RDXA presentation to the assembled RVHFG folks in our February meeting.

. . . Continued....

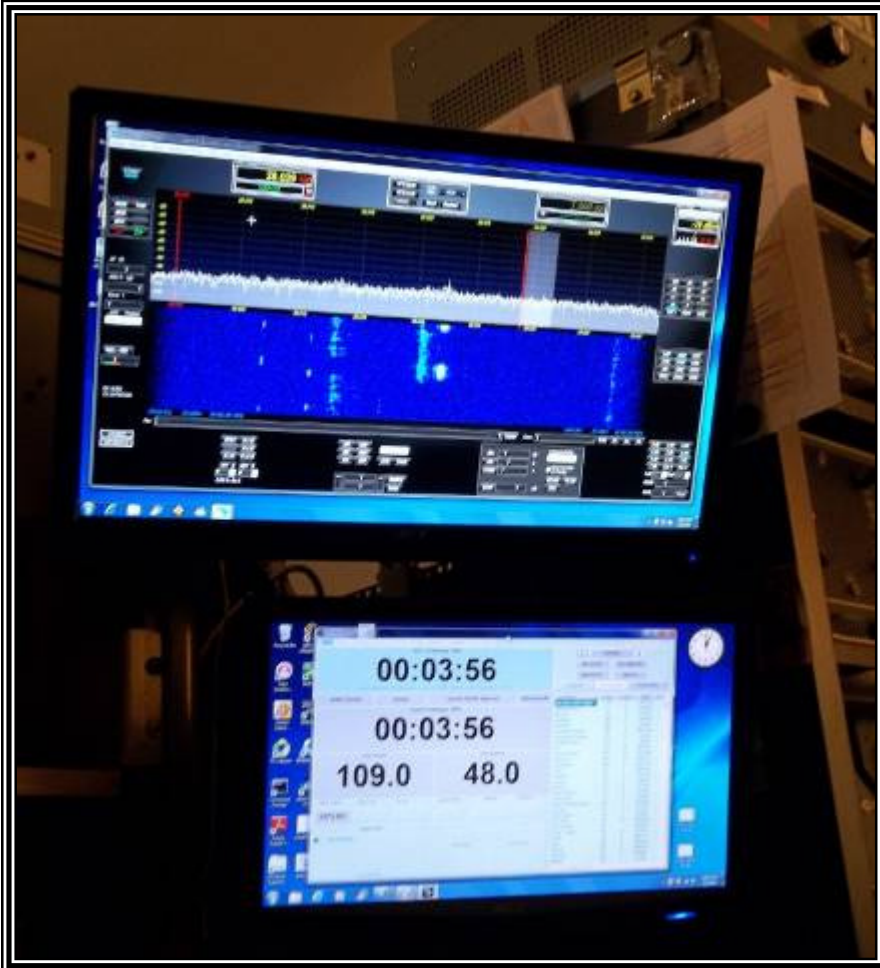
Published by
Rochester VHF Group
PO BOX 92122
Rochester, NY 14692
Editor: Tom Jennings, KV2X

The VHF Journal is published by the Rochester VHF Group monthly except June-August. The subscription price is included in the membership dues. If you elect to receive the PDF version by downloading it from our website, dues are US\$10 per year. In this case, you will be notified by email the day it is available for download. If you choose to receive the hardcopy Journal by Postal delivery, the dues are US\$15.00 per year. Articles and comments should be submitted to journal@rvhfg.com

The Chairman Speaks! continued...

...We will have hardware to look over as well as a power point presentation, geared not so much to the nitty-gritty of link budgets and noise figures, but to show on a broad brush what it takes to work DX on the band. It should be fun.

Speaking of DX, the following snapshot of the home station pan adaptor screen shows the level of activity that appeared on the band about 4 minutes after the clock struck 00:00Z last weekend, when the 1296 SSB EME Contest kicked off.



This is an event that happens once a year, when the mostly large stations worldwide get on the air for a 24 hour period and work each other for a mostly "for fun" event. It is scored, and an award is given out during the International EME Conference to the highest scoring station. For me, I just enjoyed working a couple of the bigger stations and made a great spectrum recording of the activity for hopeful playback at the presentation.

Those big fat traces were on the order of 20 dB out of the noise, representing the signals from PI9CAM, HB9BBD, K5GW, F2TU and K2UYH. It is quite a thrill to hear and work SSB off the moon, and represents one of the bigger challenges in the not-as-easy-as-it-seems world of 1296 EME.

I have more news on the Annual Banquet, which will again this year be a joint effort with our RDXA brethren. We are reserved for Saturday 21 April 2012, 1800 local for the bar to open

and 1900 local for the dinner at Lillian's Restaurant and Party House, 2200 Penfield Road in the PennFair Plaza. Mark your calendars; it should be a fun evening for both RDXA and RVHFG.

Please keep the cards and letters coming...or at least the emails with your constructive suggestions as to how we can make the club bigger and better in 2012!

73,
John WB2BYP

Secretary Report

Tom Jennings, KV2X

Rochester VHF Group Meeting Minutes for January 2012

The meeting was called to order by John Stevens, WB2BYP, at 1945 hours. We went around the room introducing ourselves and discussing our vhf ham activities in the last month.

There was a discussion about using 60 meters as NVIS liaison frequency during the contest between rovers and fixed stations. Since 60 m is a channelized band to make sure our radios are tuned correctly to 5346.5 MHz. WB2GFZ made a motion to accept minutes as printed in the Journal and AB2YI seconded the motion. W2CNS made a motion to accept treasure's report as printed in the Journal. WB2QCJ seconded the motion.

Attending: K2TER, AB2YI, WB2BYP, WB2GFZ, W2CNS, WB2QCJ, KV2X, and W3OAB.

Old business: Beacons were discussed. WB2BYP has a message out to Duncan at AWA to plan beacon location at the AWA site.

WB2BYP said that MUD is being discussed and some very preliminary ground work for planning has been done.

KV2X brought up that the Barns and Noble store in Pittsford has a community room which could be a possible meeting location. KV2X will follow up on details.

New business: Joint banquet with RDXA will take place at Lillian's located in Penfield at Rte 250 and 441 Saturday 21 April at 6 pm. RXDA likes that date. An announcement will be posted on reflector and website.

K2TER made a motion to close the meeting. W2CNS seconded the motion. Meeting adjourned at 2025 hours.

Program K2TER Rover talk by Bill Rogers, K2TER, and Tom Jennings, KV2X. Plus a quick tour of the rover.

Rochester VHF Group Treasurer's Report

CHECKING ACCOUNT

Previous Balance (as of 01/09/2011):

\$1,996.09

Income:

\$10.00

Current Balance

\$2006.09

Respectfully submitted,

Tom Jennings, KV2X, Treasurer

January 2012 VHF Sweepstakes Reports

K2QO

January 2012 VHF Sweepstakes results for K2QO		
Band	Qs	Q pts
50	127	127
144	62	62
222	15	15
420	12	12
Total	216	216
Total Score 20,412 pts., SOLP		

DAMNED FOOTBALL!!!!!! Activity during the games was lousy. Anyway, did OK here in the flats in the Town of Newstead. Au on 6 and 2 was fun. Lots of eSkip was fun. Chasing K2TER/R and VE3OIL/R was fun. Big lesson - CHECK THE FEEDPOINT CONNECTOR ON THE LONG HB QUAGI BEFORE INSTALLATION. Lost a pile of QSOs. Small lesson - Use a real VHF logger. N1MM is not up to the challenge unless my setup skills are NG. Which number in which box is the beam heading? ARGHH! Now to figure out where the second tower will be installed.

73,
Mark K2QO

K2DH

January 2012 VHF Sweepstakes results for K2DH				
Band	QSOs	Value	QSO Pts	Mults
50	44	1	44	15
144	24	1	24	7
432	8	2	16	2
Totals	76		84	24
Claimed Score: (84 X 24) = 2,016				

This was done with low DIPOLES on all three bands, low power, and limited time (8 hours total operating time through the weekend). Thanks to all who heard/worked me- I had a blast, and look for a MUCH bigger signal from Irondequoit next time!

73
Dave K2DH

KA2ENE

January 2012 VHF Sweepstakes results for KA2ENE.				
Band	QSOs	Value	QSOPts	Mults
50	91	1	91	28
144	53	1	53	12
432	26	2	52	4
Totals	170		196	44
Claimed Score: (196 x 44) 8624				

Note: Last year's score was only 2484. The band openings on 6 meters this year made all the difference.

73 KA2ENE

N2BEG

January 2012 VHF Sweepstakes results for N2BEG			
<i>Band</i>	<i>QSO's</i>	<i>QSO Pts</i>	<i>Mults</i>
50	22	22	13
144	2	2	1
Totals	24	24	14
Claimed Score: 24 x 14 = 308			

Nice 6m opening to FI on Sunday afternoon, not many on though... maybe something to do with football??

de N2BEG

AF2K

January 2012 VHF Sweepstakes results for AF2K			
<i>Band</i>	<i>QSO's</i>	<i>QSO Pts</i>	<i>Mults</i>
50	185	185	45
144	34	34	5
446	3	6	1
Totals	222	225	51
Claimed Score: 225 X 51 = 11,475			

Irv ~ AF2K

N2SLN/R

January 2012 VHF Sweepstakes results for N2SLN			
<i>Band</i>	<i>QSOs</i>	<i>QSO pts.</i>	<i>Mults.</i>
50	6	6	5
144	22	22	12
432	10	20	5
Grids activated			3
Totals	38	48	25
Claimed Score: 48 X 25 = 1200			

OPERATORS

N2SLN -- most planning and operating, all driving and paper logging, under the call sign N2SLN/R

KC2SFU -- some planning and conquering of adversity, some operating, major equipment contributor for FN23 activation

ANTENNA SYSTEM

6 meter KU4AB loop (the most aerodynamic 6m loop available)

2 meter 4-el end-mount yagi

222 Directive Systems rover special yagi (not hooked to anything, just there to provide equal wind resistance on opposite side of mast)

432 Directive Systems rover special yagi

RADIO EQUIPMENT

6m/2m/432:

Icom IC-7000

Mirage B5016G 160 watt amplifier for 2m

DESCRIPTION

I decided that this would not be a serious effort. I was going to use the contest to try the new antenna configuration. A last-minute change in plans had me canceling the FN21 activation due to an "80 percent chance of moderate accumulation" in that area and others along the way, as well as mixed precipitation. So I drove to eastern FN12 and operated in the snow plow turn around area just beneath the summit that I normally use (which is inaccessible in winter). I enjoyed a first: not getting out of the vehicle to set up any equipment! For 11 years I've been roving as a "stop-n-shoot" rover, meaning lots of time spent setting up and tearing down support structures/antennas/feed lines at each site. The cold January contest was a perfect choice of a contest to try the first deployment as a "run-n-gun" rover who gets to stay inside and enjoy the warmth. Six meters was open to 5-land but I was not able to get anyone's attention whether I was calling CQ or answering CQs. On the other hand, it was



fun to suddenly hear a group of hams on 2m SSB from northern NY with good signals. I was able to jump in and work one of them: K2DLW on 6m/2m in eastern FN13, an area that over the years has been elusive despite the higher population density of the greater Syracuse, NY area. I operated for 2 1/2 hours at this site.

After a zero degree night at home, I went out Sunday morning to start the rover vehicle and the "check engine" light came on and the engine was running rough. I didn't want to risk a dead rover vehicle on some roadside far from home, so I just assumed that this was going to be the end of the contest for me. I turned the rover antennas toward KC2SFU and told him why I was going to have to cancel our FN23 plans. In true ham spirit, he welcomed the adver-

sity as a challenge and suggested we take my new commuter vehicle instead (no ham gear installed yet), and he would supply batteries, portable transceivers, and antennas if I could bring the antenna support structure with attached rotor. Next thing you know we are making the trek northward to just outside the Adirondacks, and while setting up, we were treated to quite a sight: A bald eagle was flying very slowly nearby, just 5 feet above the treetops across the road. We were limited to 2m/432 only at this location, but I was thankful to be on the air at all. We had only 3 elements available on each band, but were still able to work 224 miles on 432 (using only 20 watts). On 2m we were happy to be

able to work N3RG on CW who was 276 miles away in FM29. We were also delighted to find a surprisingly high number of FM simplex contacts on both bands despite the horizontal polarization of our dual band antenna. It was great to hear the call sign N2PA back in the mix again after a few years of absence. He said he was operating from a different location (his home station), waiting to see how many other operators showed up. Another contact of note: We provided KA1ZE/3 FN01 with his 59th grid on 2m.

After I got home and had dinner, I went out to the rover vehicle to see if it was going to run rough again, but it was running fine this time. So I got on the air and then noticed that the rotor was no longer working. Luckily, the antennas were stuck south which is probably the best direction from the home QTH. So I spent the last few hours of the contest operating from the driveway, giving out FN22 to whoever I could work on 6m/2m/432. It's just as well, since there was freezing rain predicted for that time period.

The good news is that the fix for the rotor was simply disassembling the connector on the control cable and re-assembling it. The rotor turned beautifully after that. The rover vehicle has been running fine since then, too. I'm going to fill the fuel tank and then dump in some injector cleaner just for good measure. I may go roving in June to make up for the bad luck.

73

N2SLN

K2LIM

January 2012 VHF Sweepstakes results for K2LIM			
Band	Qs	Q Pts	Mults
50	314	314	68
144	218	218	43
222	68	136	30
432	71	142	27
Totals 671	810	168	
Claimed Score: 810 X 168 = 136,080			

We had everything ready to go a few days before contest start so all we had to do was arrive, turn things on and operate. Well we arrived on site on Saturday with the last operator arriving about 50 minutes before start time. But, 'ole Murphy is always lurking around and he did his thing right away before the start of the contest. All the equipment was on just waiting to go and suddenly there was sparks and smoke coming from under the bench by the 2M position. Upon investigation, we found that the transformer for the 2M amplifier had shorted and burned out. Holy Schamolie! So a quick trip home to get a back-up amp and we were ready to go before contest start.

Just before the contest started, the "server" computer had a Hard Drive failure.

I pulled the Ethernet cable and we tried to get a second computer to work as the "server", that didn't work and we were under pressure and didn't have time to work through it. I had installed a back-up plan after the September crash so with a few clicks, each positions computer was setup as "stand alone" so we could log independently. I then had to make the trip home to get the 2M back-up amplifier. While I was gone, Al worked on the server computer. He decided, with nothing to lose, to try to "kick start" the dead computer by dropping the computer on the desk. 1st time didn't work but the 2nd time it did work. I arrived back on site, installed the 2M amplifier and then after a few minutes of investigating, I discovered that the cable for the server had been plugged into the wrong port. I changed the plug, reconnected the server laptop to the network, rebooted the program and the network was back up and running. So rather than chance any more boo-boo's, I manually entered the data from each stand-alone log into the network log, which took about 45 minutes and the rest is history.

The next thing that "ole Murphy touched was the 4 position antenna switch at the 432 position. It was an older Alpha-Delta switch and the internal non-metal components appear to be Teflon-like and can't take the heat that is generated at 432 MHz's, so they melted. We changed the switch out to a newer Alpha-Delta switch and no more problems; it stayed cool for the rest of the contest,

Operators on hand on Saturday were Ken-KA2LIM, Al-W9KXI, Gregg-NX2W, Dave-N2LID and Walt-N2IK. The contest started out and activity seemed to be slow and down and as we later found out, it was due to the weather. South and east of us there was bad conditions with snow and ice. We dodged the bullet here, with about 3 inches of snow max. It got cold but that was all. Had a decent ES opening on 6M late Saturday afternoon which helped bring the score up a bit but it was on track with September so it was looking like another low score contest coming.

Conditions were really weird on 432 with most signals right at the noise level coming up and back down below the noise floor, like a wave. As a result, 222 produced more Q's and Grids. Sunday started out quiet and slow, the first contact came around 0630 local time and did not pick up until after 0800.

We were at 4 operators on Sunday so each position was filled. Walt had to leave just after 1pm local time and as he was getting out of the 6M seat, Alex-N3NP walked in and took over on the 6M position. Then 6M popped open into the south and Alex got his baptism by fire on 6. He did a good job handling the pile-up and added about 15 new grids to the count. What a nice "late Christmas present" and for the contest. Alex stayed until 5:45 when he had to leave to pick up his wife and kids so we were now down to 3 operators. I took over on 6M and continued adding Q's until about 7:40 pm when the ES finally dropped out with Al and Gregg holding down the other 3 positions.

Gregg had to leave just before 7 PM so that left Al and I to hold down the fort until contest end. We kept plugging away adding to the score right up to the very last minute of the contest. I was able to work many on 432 with CW which helped bring up the Q count on that band. Look at the score and breakdown by band at the beginning of this report.

I must tell about the food as it is always good every contest. There were subs for lunch before the contest start. Zucchini/corn beef bake, Chili with corn bread on the side, two kinds of stew, wieners in barbecue sauce, some great Irish sharp cheese, crackers, banana's, grapes and tangerines for the other meals and I know I forgot something. For breakfast there were breakfast sandwiches and sausage sandwiches. There was hot coffee, tea and hot coco. And of course water, soda, gator-aid and of course BEER that included a keg of Irish Red Ale (home brewed of course) some bottled stout and a growler of ale from a local micro-brewery.

This crew always seems to eat very well.

All in all this turned out to be a pretty decent contest, and we didn't have to drive through 2 feet of snow, like last year, to get to the site. And we wound up with a higher score than in September. A big "thank you" to all who got on to work us in spite of the bad weather that some of you had that hindered your operation.

Look to work you in the June Contest.

Ken
KA2LIM

K2TER/R

January 2012 VHF Sweepstakes results for K2TER/R			
Band Mode	QSOs	Pts	Mults
50	131	131	21
144	80	80	13
222	13	26	6
420	37	74	6
Grids activated			4
Totals	261	311	50
Claimed Score: 311 X 50 = 15,550			

The new K2TER/R finally got to do a real Rove this year! We decided this should be a “shake down” rover we planned to activate 4 local grids. We had 50 thru 1296 MHz but as the results shows the upper 2 bands were not activated. We only had a chance to try 903 once and that did not work out due to a suspect cavity connection.

This year we had the antennas and rigs installed a more than a week before the contest so we could give a presentation and tour at the RVHFG meeting before the contest. Later we made a special coax harness and got all the rigs, amps, power meters, and cavity filters connected up and ran through brief power on tests. Saturday morning of the contest there were a bunch of loose ends to tie up and the major one was the antenna height indicator. This was solved by a visit to Wal-Mart. A clip on goose neck from a reading lamp mated to a makeup mirror using duct tape made an adequate position feedback system – next time we’ll improve this to use the precision pots in the rotor system. This also allowed us to keep an eye on the antenna height and let us know when we need to add some more compressed air. Our first planned location in FN13 was to be Mendon Ponds Park but after driving around we could not find a satisfactory place to stop so we



ended up in Brighton at Buckland Park which was a nice out of the way place to park but in right smack in the middle of all kinds of high power AM, FM, and TV broadcast towers. Needless to say it was noisy. We made about 37 Qs in about 2 hours. We then moved on to FN03 and by the time we arrived it was dark. Lucky the rover's service lights help light up the antennas so the antenna indicator still worked! We made around 60 Qs.

While in FN13 and FN03 whenever the 6 meter station would transmit, the other station which was on 2 and up would go completely deaf! We attributed the problem to desensing since the antennas are so close to each other. But Sunday



while on the way to FN12 site we decided it must be something else causing the problem possibly with the switching box. So after a few minutes of switching cables around we managed to get things so that the 2 meter station doesn't know that the 6 meter station is transmitting and vice versa. Great! Problem solved. When getting ready to leave the mast did not start to lower as soon at the button was pressed but took a couple nervous minutes. May be we were not quite level.

After a short lunch at a café (converted gas station) at Suicide Corners we went to Werner Rd. What a surprise as the road was clear enough to drive up with no problems! Best location with about 130 Qs! The wind kept moving the antenna height indicator!

This turned out to be a great shake down rove as everything performed well enough. For June our goal is to have 6m to 10g with no lossy coax harness!



Bill, K2TER and Tom KV2X

Faster FFT!

At the Symposium on Discrete Algorithms (SODA) a few weeks ago, a group of MIT researchers presented a new algorithm that improves on the fast Fourier transform. Under some circumstances, the improvement can be dramatic — a tenfold increase in speed. The new algorithm could be particularly useful in extending SDR bandwidth. Who knows there may be a practical VHF/UHF SDR available sooner than we think! For further details see <http://web.mit.edu/newsoffice/2012/faster-fourier-transforms-0118.html>.

Tom kv2x

Classified Listings

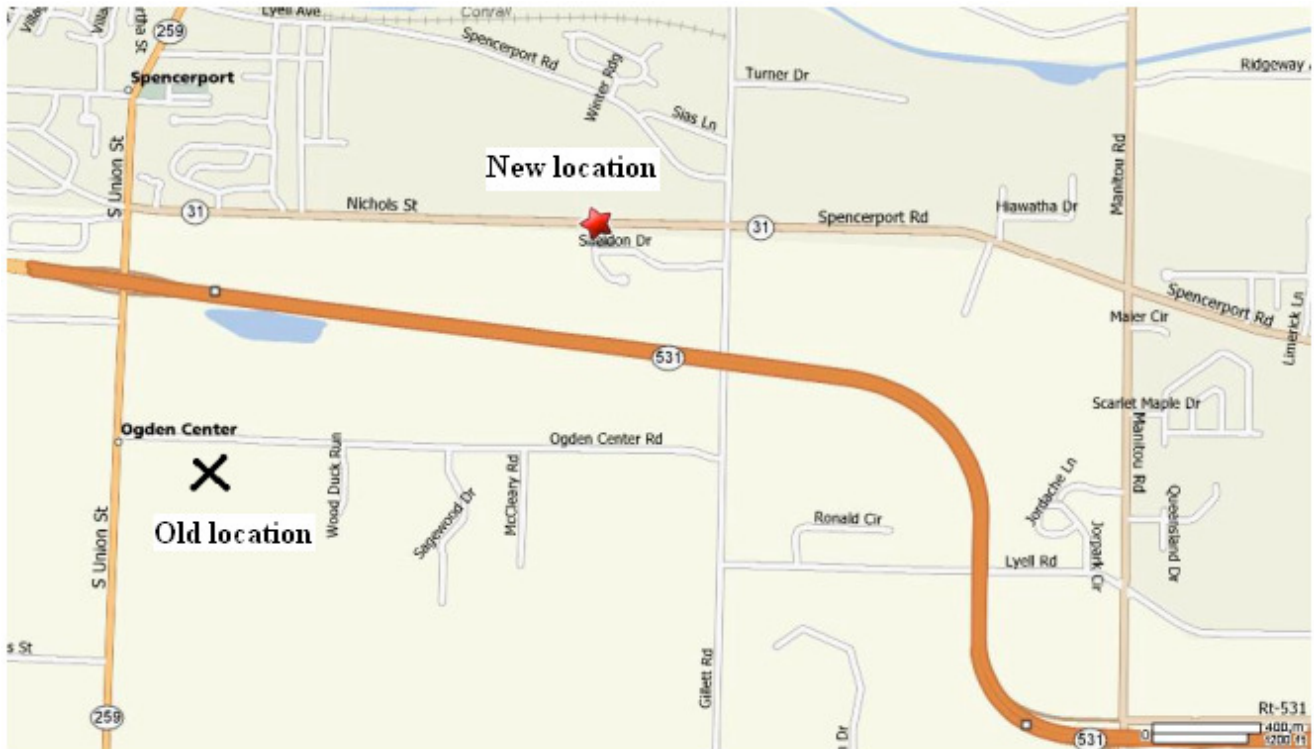
Wanted: 222 Equipment. I am trying to help a family member (extra) jump into the world of 222m Transverters. I suggested Down East Microwave - but they have a 12 to 18 week wait Does anybody have suggestions? Know of good used equipment for 222?

Thanks,

Bob

ac2hj@arrl.net

Meeting Location and Directions



Spencerport Wesleyan Church on 2653 Nichols St. (actually Hwy. 31).

Directions from Rochester:

531W exit RT. to 259N

259N turn Rt. on 31E (first Rt. at traffic light)

Look for Spencerport Schools Bus Garage on left

Take first Rt. on Sheldon at A-framed church, park in rear lot.

Enter gray metal door under fire escape.