

The Rochester VHF Group

The VHF



Journal

Volume 66, Issue 1

September 2013

The next regular meeting of the Rochester VHF Group will be Friday, September 13th, 2013 at 7:30 PM at **Spencerport Wesleyan Church**

2653 Nichols St., Spencerport
Map and directions on last page

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Topic: 300-3800 MHz SDR

RVHFG's Beacons

Band	MHz
6m	50.078
2m	144.298
1.25m	222.050
70cm	432.300
23cm	1296.257

The Chairman Speaks! Bob Nezelek W2CNS

Groupers: Groupers! It is my honor to be elected to be your new Chairman of the Rochester VHF Group (RVHFG). The Board of Directors (BOD) has been working hard to make this year a memorable one with good speakers every month.

This year the group has an additional responsibility as the RVHFG will be hosting in the fall of 2014 the Microwave Update Conference (MUD) in Rochester. Last spring WB2BYP appointed Frank Pollino, K2OS and Dave Hallidy, K2DH as Co-Chairman's for the conference. FYI, twenty years ago they did the same job! Also we, the whole group, will be assisting them as Frank and Dave will need a lot of help ensuring a successful conference. Also, this conference is international. When you are working our fellow friends up in VE land let them know about the conference.

...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... This fall several of us will be traveling in October to the 2013 MUD conference in Moorehead, Kentucky. Let us know if you plan to attend.

Our speaker, W2XH, for the September meeting will be presenting some very new technology in Software Defined Radios (SDR). Additional information is included in the Journal.

I have an assignment for you, the membership: What do you want the group to be presenting in technical topics? Remember, this is our group and your inputs are very important. I know that there are a lot of hot topics out there as well as good presenters. Be prepared to have at least one topic for the meeting.

This summer there has been some openings on the Magic Band (6Meters) as well as some tropo.

What have you worked? The Beacons are up and running and we have a 6M skimmer.

Have any of you been working on a new project? Tell us about it at the meeting.

That's about it...I look forward to seeing all of you at the meeting and get on the air.

Secretary Report

Tom Jennings, KV2X

Rochester VHF Group Meeting Minutes for May 2013

The meeting was called to order at 1941 by W2BYP. John welcomed everybody and summarized the agenda for the meeting. Next WB2BYP asked if there was a motion to accept the minutes from the last meeting as printed in the Journal. WB2GFZ made the motion to accept and K2DB seconded. WB2BYP asked if there was a motion to accept the Treasurer's Report from the last meeting as printed in the Journal. K2OS made the motion to accept and AB2YI seconded.

Attending:

KV2X, WB2GFZ, K2STF, K2GAB, K2TER, WB2BYP, W2CNS, K2OS, AB2YI, K2DB, K2MTH

Old Business:

MUD- The planners of the 2014 MUD are planning on attending the 2013 MUD being held mid October at Moorehead State University. K2OS said they are still in the early stages of planning.

New business:

The 6m skimmer is running but not on line.

Ham-O-Ramma: (Rochester Hamfest) RVHFG plans to be present and will set up a table adjacent to the RDXA. This year the hamfest will be entirely outdoors.

Elections:

Prior to the elections, WB2BYP explained that there will be an opening in the Even Year Director position and a new director will be appointed by the BOD as per the club's constitution.

The following were elected:

Bob Nezelek, W2CNS, as Chairman,
Tom Jennings, KV2X, as Vice Chairman
Freddie Sulyma, WB2GFZ, as Secretary/Treasurer.
Bill Rogers Elected to Odd Year Director.

After the elections K2DB made a motion to adjourn the meeting and K2STF seconded the motion.

Program:

W2CNS showed his 423 cavity amp project.

K2STF showed his Raspberry computer.

WB2BYP and K2DB showed the 6m skimmer, operated it, explained its operation, and answered questions.

VHF Group Treasurer's Report

CHECKING ACCOUNT

Previous Balance (as of 5/10/2013):	\$2038.09
Income:	\$20.00
Expenses:	\$0.00
Current Balance	\$2058.09

Respectfully submitted,

Tom Jennings, KV2X, Treasurer

The Vice Chairman's Report

By Tom Jennings KV2x

Welcome all to the start of the 2013-14 season for the Rochester VHF Group. As RVHFG Vice Chairman I am looking forward to an exciting year. Among other things, my job involves putting together the presenters and meeting subjects, so I am hoping to facilitate some interesting topics that are both generally interest to the VHF-UHF enthusiast in all of us, as well as appeal the technical itch in all of our brains. To this end, I am officially welcoming one and all of you to please come forward and give me your ideas. Send me email at kv2x@arrl.net . Some upcoming programs: in November we will have our meeting at the new AWA Museum; December will be the annual Tune-up Clinic; January we will have a contest warm up and hopefully if the moon cooperates we will have a EME demo. If you don't already know about it, the Rochester VHF Group has a Monday Evening Net on 144.260 USB at 2100 local time. Feel free to check in.

Tom kv2x

Status of the RVHFG/RDXA 6M Skimmer Project

By John Stevens WB2BYP

The 6M Skimmer has been an interesting tool to use over the summer E-Skip season. A lot of activity is picked up and forwarded to the Reverse Beacon Net in real time. In case you missed it, here is a link to the RBN specific to W2UTH:

<http://www.reversebeacon.net/dxsd1/dxsd1.php?f=0&c=W2UTH&t=de>

The Skimmer does a nice job of quickly identifying any activity in the CW segment. That will change seasonally, and bears watching as we get into the latter part of the year. If you have been watching it, you will notice that activity has apparently fallen off, as propagation has shifted. There was a time over the summer when the band was open reliably into the deep south every morning, and there were occasional times when Europe was in. I was watching it one late evening, and it spotted PV8ADI calling CQ. I quickly fired up and aimed south, and worked him (FJ92 Brazil). The time between him calling CQ and the post on the RBS was maybe 10 seconds, and did not involve anyone else "posting" the activity to a DX Cluster.

One of the things we have learned running it over these past few months, is that it is far more effective and reliable identifying CW CQ and QSO activity than identifying beacons on the band. This is apparently due to inconsistencies in the way in which beacons identify, and or the purity of signals. The Skimmer will not for example decode the W2UTH Beacon down at the AWA, due to the level of back-wave on the signal. Normally this is not as problem for the beacon in use, and signal levels at distance may not hear the -60 dB down key-up radiation, but close in with a big signal into

the Skimmer, the decoder has no way of distinguishing the on/off signal information. This is an area we might be able to improve our beacon in the future. We also see that there are a number of less-stable signals in use in beacon service, especially when the band is wide open and a large sample is propagating into our receiver. The decoder seems to have trouble with chirp on the demodulated signal. Also, not all beacons in the world seem to identify with "de XXXXX/B" in the stream, so when our Skimmer is set to forward all signals received, it sometimes mis-decodes and forwards a bogus call-sign to the network. There is a way to build a comprehensive filter for it to screen out errant calls, though this means maintaining a text file at the computer with all known local and DX beacon station call-signs. For the moment the Skimmer has been enormously reliable set to only recognize the "de XXXXX" of a legitimate CQ pattern. We have the luxury of remote access, so fine-tuning can be done. Clearly the real benefit to the Skimmer will be not only detecting activity, but the potential for activity due to "un-discovered" band openings.

Physically the hardware is still set up in Macedon on a 3 element Yagi pointed southwest. In September we plan to relocate to Webster at the QTH of W2FU and put it in service on the Omni Loop. I should have some more info on the install plan at the RVHFG Meeting.

John, wb2byp

June VHF Contest Reports

W2CCC June VJF Contest 2013 (Chris, K2CS op)

I've always had a place in my heart for VHF contesting. I was blessed to get into the hobby during the big "Tech Plus" push of years past. The RVHFG (along with the RDXA) provided me a place to operate alongside many "storied" operators and multis. I've been part of the N2WK efforts, roved with W2HPF, WA2MOP and my wife, N2TWI. Over the last 4 years, I've revived my love of VHF thanks to K2QO/r.

W2CCC is located in FN23 and for those familiar with the grid, our Watertown stronghold is no more. In the "old days", FN23 was about as easy as FN13, WA2AEY was always on, good station and Kevin was a great operator. My understanding is the demise of the station was perpetuated by an ice storm the Adirondacks experienced years ago. I purchased 10 acres of land and an 1846 farmhouse that had been abandoned for 30 years. The building needed a lot of work so no time for any radio for almost a year. Great "take off" at 1400 ft. Eventually, I tossed a 6m dipole thru the trees and worked VP2JM. This was the start of W2CCC as it is today. Currently, the station has 2, 6, 222 and 432 with a collection of radios and equipment that I've owned (and roved with) or has been donated or "reconditioned". 100w on those bands, I run 3 elements on 6m, an old "twist" on 2m (only the horizontal elements), a 222 beam and long boom 432 (from K8GP, thanks to N2OPW and a Dayton "scouting" expedition). The most recent additions have been the 432 rig from W2BSN (from W2DYY, thanks Russ) and a 432 preamp found and tested by WB2BYP. As you can see, many members have helped to get this station where it is today (as can be expected with this organization).

I had hoped June 2013 would be like June of the year prior where late on Sunday, we had a huge opening to Europe. Well, as happens all too often, that wasn't going to be the case. Starting the contest, I had a few skeds, successfully



completed those and set about looking for K2QO/r. We've found that we can work each other nomatter where those guys go. Mark has picked out some "classic" spots to operate from thru the years. K2LIM is always a "no brainer" so I found them and worked thru several bands. W2SZ is on the same parallel. Several "local" folks were on so worked to the West for a bit. Next, found K8GP (in FM19?) so 2m was working OK. K1TEO is another strong and consistent operator. One of the most frustrating things I encounter is no one aims toward FN23. I guess years of in-activity (and activity overall) has taken its toll. I will say, it's gotten better of late after a few successful band runs with stations who have no idea who I am. The rest of the afternoon and evening, it's "ground plane" with nothing special. K2QO/r pulls in for a bit of rest late Saturday which



is always enjoyable. Nice to hear the "road stories", what they are hearing, what I am hearing... Obviously, an few 807's are consumed. This year (as in past Junes) Paul, WA2TAU rides along in the K2Q/r.

I often comment that W2CCC has a 6m opening every single day, and it does. Sunday morning provides that as the EL grids are coming in here and there. Several "pings" are heard to the West but nothing in the log.

As usual, the activity tapers Sunday afternoon and honestly, if not for rovers there wouldn't be much reason to stick it out. A pleasant surprise just before I pack up to go home is KB2M in FM29 (on 2m) giving me my 14th grid on 2m. All told about the same score as I'm use to in September – 6201, 88 QSOs, 53 grids. I'm very pleased with my 222 score (using a converted

HTX-100 from an old NJ2L article) – 11 grids and 432 (using the W2DYY rig), 10 grids. 6m was a bust considering, 16 grids but typical without an opening (and with 3 elements). All told fun none the less.

Looking forward to September in a few weeks, look for me in FN23 or send along an note for a sked, glad to put you n the log.

Chris K2CS (W2CCC – FN23)

K2LIM June Contest Effort

PRE-CONTEST

The work for June 2013 started right after the June 2012 contest, with Ken KA2LIM and Al W9KXI traveling north to pick up The Beast, a 60-foot telescoping tower for 432. They mounted the 4x25 long-yagi array to it, and the bottom of that array is now at about 65 feet above ground. This new system later proved itself by working 443 miles on ground wave from WNY to Indiana in this contest. The former tower is being used for other 432 antennas--the LVA (Large Vertical Array, a stack of multiple short-boom yagis) and a stack of two 15-el yagis.

In August, Ken got another tower trailer put together and installed a homebrew 11/11 stack for 2m which would later work great in launching signals over the hills during the January VHF Contest. In September he did a rebuild of the 6m 7/7 stack, installing new matching sections and new elements while going back to the former element spacing. In October Ken and Ron WZ1V began evaluating new logging software as well as a new stand-alone chat program for communication between operating positions. Also in October, Ken went to the PackRat/NEWS conference. He saw the presentation

by K8GP which included information about the 6m LVA systems that are used there. He also talked with VHF Super station owner Marshall K5QE about the same topic. When Ken got home, work began right away on a 6m LVA design to be employed at K2LIM.

By November the 6m LVA was complete, and we now have 3/3/3/3 elements able to rotate in all directions on a separate tower, an antenna system with substantial gain into an impressive azimuth beam width of 55 degrees between 3 dB points. Unfortunately, November 2012 also brought the discovery of antenna damage from Super Storm Sandy. The first clue was a Sumac tree across the access road to the contest site. Ken and Al found damaged towers, masts, and antennas blown out of alignment (see photos on our website). Oddly, the two 432 towers were unaffected and they are the tallest ones we have. December brought an FM tower raising party. The top antenna, a homebrew quagi for 446.0 FM simplex, is now at 27 feet above ground.

In the weeks before the contest, the 2-stack horizontally polarized omni on 2m was upgraded to a 4-stack. The difference was more than anyone could have imagined. Al W9KXI tested them out the weekend before the contest and was raving about them. He worked 441 miles into EN70 with 5x6 signals on both ends, and predicted that this would be our workhorse antenna on 2m for the contest. We were now in a good position for some amazing results on 2m and eagerly awaiting contest weekend.

CONTEST

Many of us arrived at the contest site in the 11:00 AM hour in order to get some training on the new logging software and chat program. Both were working nicely. The new logging software can handle 6-digit grids which helps in aiming the narrow-beam width antennas, and it processes information faster in a networked environment. The new chat program is also quicker and easier to use than the old one. It helps in passing stations to other bands more efficiently, and that's good for everyone involved.

After saying hello, returning borrowed equipment, setting up sleeping quarters for the night, and moving food and drink into the Hornby Room, the operators at K2LIM entered the Grid square Limo and filled the seats at each operating position. Operators throughout the weekend were Ken KA2LIM, Al W9KXI, Rob KB2YCC, Walt N2IK, Dave N2LID, Larry WA3CSP, Alex N3NP, and your author, Lu N2SLN. Gregg NX2W was not able to join us this time, but provided contacts from home. Tom KV2X was in rover mode for this event and would end up putting in a fine performance.

Starting on all bands through 3.4 GHz, the contacts came in steadily Saturday. Despite Saturday being 28 days after the big 6m opening in the spring 6m Sprint, there were no big openings to be had this day, so the "28-day rotation of the sun trick" didn't work. Nevertheless, we did manage a few single-hop contacts in the second hour, with the farthest one being Texas station WB5TUF in EL29 (1367 miles). Later in the afternoon, team KC2SFU/R stopped by to check out the Limo on their first rover trip. Later that evening when 11 PM hit, we figured the excitement would drop down. But all of a sudden there was KF7NP in Arizona on 6m--the only double-hop contact of the entire contest. Lu looked up at the antenna switches and noticed that the contact was made on the 4/4 stack pointed NE--the contact was made off the back of the antenna! Late-night sporadic-E seems to be a recurring theme in 2013: The peak nighttime hour of 6m sporadic-E reported in the January VHF contest was 0300-0400 UTC, exactly what we had in June. The excitement died back down in the 12 AM hour. We had just decided to call it quits for the day and were all reaching for the power switches, when K1WHS jumped in there and called us. We worked them on all 4 bands, which fired up another burst of activity. Then the lights dimmed and we heard a groaning noise. Murphy has struck. The power supply on the 432 station malfunctioned and took out the IF radio and transverter with it. Our 432 station is down. We borrowed equipment from the microwave station to get a secondary 432 station on the air, but now the microwave gear would have to sit idle for all of Sunday. The backup 432 station would not have the performance of the main station, but it was better than nothing (and we did

pick up a new grid in the final 3 hours of the contest with it). Better for this catastrophe to happen late at night than in the heat of battle, I suppose. Our best DX on 222 and 432 appears to be the 443-mile contacts with Indiana station K9MRI EN70.

Sunday brought slightly more 6m single-hop than the day before, but still no strong openings. We worked a few stations in the EM field mid-day, mostly gulf-coast grids. While at the 2m station Sunday afternoon, Lu brought up the software's grid map and noticed that we still hadn't worked FN24 on 2m, a rare grid but very much within our station's capability. So the lone quagi at 31 feet was assigned that task. Entering FN24 into WinGrid to get the beam heading, Lu turned the 15-el homebrew quagi, threw the antenna switch, and called CQ. He was immediately answered by K2LDT/R who was in FN24 and a new grid was colored in on the map just like that. Without having a spare antenna handy for specific jobs, we may have missed that one. A while later, Alex arrived for some operating, and brought a sample of his latest of many inventions: A very clean, robust drive-on mount for rovers and portable operations. This was a great design incorporating weight saving techniques, plus it had smooth welds, beautiful anodized tubing at the base, and an innovative engineering technique to prevent mast slippage without the use of a keyway.

The final 20 minutes brought some unexpected excitement. Ken worked a 508-mile contact on the new 2m 4-stack omnis to northwest Indiana, grid EN61, on a flat band. This antenna turned out to be the main hardware highlight of this contest as Al predicted, and what great timing given the lackluster conditions on 6m. More than one operator at K2LIM reported a pileup on 2m ground wave as a result of this amazing antenna, and breaking 300 QSOs on 2m for the first time ever is just more proof of the 2m station's incredible capability, not to mention beating 6m in number of QSOs in a June contest. I'm almost afraid to think what this antenna could do in September if we get tropo in any direction.

A special thanks to the rovers, who provided us with an astonishing 171 QSOs not counting Saturday's microwave contacts. That's a staggering 21 percent of our QSOs that would be missing without the rovers. This is an all-time high number of rover contacts for K2LIM. There was a particularly high number of Canadian rovers in our log in this contest--11 to be exact. VA3ELE/R provided us with a 301-mile 2m contact into EN95, our only contact with that grid, and one that brings back memories for Ken and Rob who activated that grid one decade earlier. KV2X/R reports working K2LIM on all bands from all grids--a clean sweep! There were a lot of sore ears after straining to work stations under the toughest June band conditions in years, possibly ever. Al reports more CW contacts than ever and several contacts on 432 that just wouldn't have happened without CW. But because of dedicated operators and the intriguing contacts we make in every one of these VHF contests, we do not need to rely on points for our happiness. Plenty of fun is available at K2LIM without a 6m band opening, and we are looking forward to having lots more fun in the July CQ Worldwide VHF Contest

Lu, N2SLN

KV2X/R June VHF Contest Effort

For the June VHF Contest my rover plan was to start the contest in FN23 just north of Little Falls, then to FN22 Mutton Hill. Sunday was the usual FN12/FN02/FN03 and finish up at Woodcliff in FN13. I want to thank K2TER for letting me borrow his FT736 for 2m, 1.25m, and 70cm along with his Log Periodic for 2 to 70cm and a 6m Moxon. My IC706 was used for 6m. I mounted the antennas on a 20ft telescoping mast supported by a home made tripod. Below are pictures from FN12 and FN23 along with the station.



I had a problem with the Moxon at the FN23 site. All of a sudden the SWR went to infinity...something opened up. Coax checked out ok so that meant the little black box on the Moxon had an open. I decided not to fix it and continued with the contest. At Mutton Hill it worked but at FN12 it didn't. I decided to open the box and found a wire popped off the SO239 connector. Lucky I had a solder gun, wire, and 120VAC Generator! Problem fixed. Next time I go out roving, the antennas and tripod will be mounted in the bed of the truck! I met up with Mark, K2QO, Paul, W2TAU, Dave AB2YI, and Ev, W2EV for dinner at the Railroad Station Restaurant in Leroy. Here is my summary:

Band	QSOs	Grids
50	70	19
144	62	20
222	26	16
432	35	16

K2LIM was work on all bands from all 5 grids.

Tom kv2x

2013 September ARRL VHF: September 14-16!

For amateurs in the US and Canada (and their possessions) to work as many amateur stations in as many different 2 degrees x 1 degree Maidenhead grid squares as possible using authorized frequencies above 50 MHz. Stations outside the US & Canada (and their possessions) may only work stations in the US (and its possessions) and Canada. Begins 1800 UTC Saturday and runs through 0259 UTC Monday or local time the contest begins 2 PM Saturday and ends 11 PM Sunday. All authorized frequencies above 50 MHz (6 Meters).

Can't do weak signal? Try the Single Operator, 3-Band which is restricted to 50, 144 and 432 MHz. Power limits are 100 W PEP on 50 and 144 MHz, 50 W PEP on 432 MHz. Single Operator, FM Only which means all QSOs must be made using FM.

Or you can try .Single Operator Portable: You are limited to 10 W PEP output or less using a portable power source to power portable equipment and use portable antennas. Single Operator Portable stations must operate from a location other than a permanent station location and may not change locations during the contest period outside of the original 500-meter diameter permitted circle.

W2EV says: "I will be "Activating on the 8's" with regard to FM simplex; and hope you will join me. It can be a LOT of fun.

6 meters: 52.525 (Vertical), 50.3 (Horizontal)

2 meters: 146.55 (Vertical)

222 MHz: 223.5 (Vertical)

440 MHz: 446.0 (Vertical)

When the clock says "8", activate! 8:00 PM Saturday, 8:00 AM Sunday, 8:00 PM Sunday. Stay on as long as you want, of course. It's ok to just "get on and give away points" to others ... but it is more fun to log and submit to the ARRL."

The **K2LIM** Contest station will be on the air also and all bands 50 MHz thru 3 gigs! Would be great fun to run the bands with them and they are eager to make FM contacts.

Look for rovers and try running the bands with them! Don't forget to ask when and where their next grid stop is going to be!

See www.arrl.org/september-vhf for full contest details.

Good luck to all and **HAVE FUN!**

Tom KV2X

2013 New York QSO Party

CQ NYQP!

Mark your calendars!! **October 19th** is the day for the New York QSO Party (NYQP). It is open to the HF bands AND, VHF, 6M, 2M, and UP. Phone / CW / RTTY / Digital. That leaves it wide open for all RVHFG members to participate and have fun. The rules were specifically written to get everyone involved. Let's all show some club spirit. Let's send, and receive some VHF signals during this event. You can find the rules at: <http://nyqp.org/wordpress/2013-new-york-qso-party-rules/>

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"THRILL BEFORE THE CHILL"**

Fall Tailgate Flea Market

**A Benefit
to Support**



**Shriners Hospitals
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Sponsored by Rochester Amateur Radio Association

Event is scheduled to Run 8:00 am to Noon

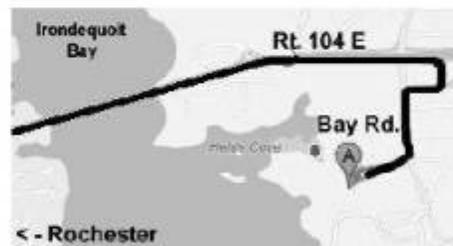
Dealer Setup at 7:00 am

Donation \$5.00 per person

Tailgating Spots free

Concessions at reasonable prices beginning at 8:00am

Proceeds from this event will go to Benefit Shriner's Hospitals for Children



Damascus Shriner Center

979 BAY ROAD - WEBSTER, NY

1/3 of mile South off Rt. 104E

Just 15 minutes East of Rochester

SAVE THE DATE: SEPTEMBER 14TH, 2013

Flyer Designed & Donated by ShadoGunz

Classified Listings

The J-Pole Adapter is Here.

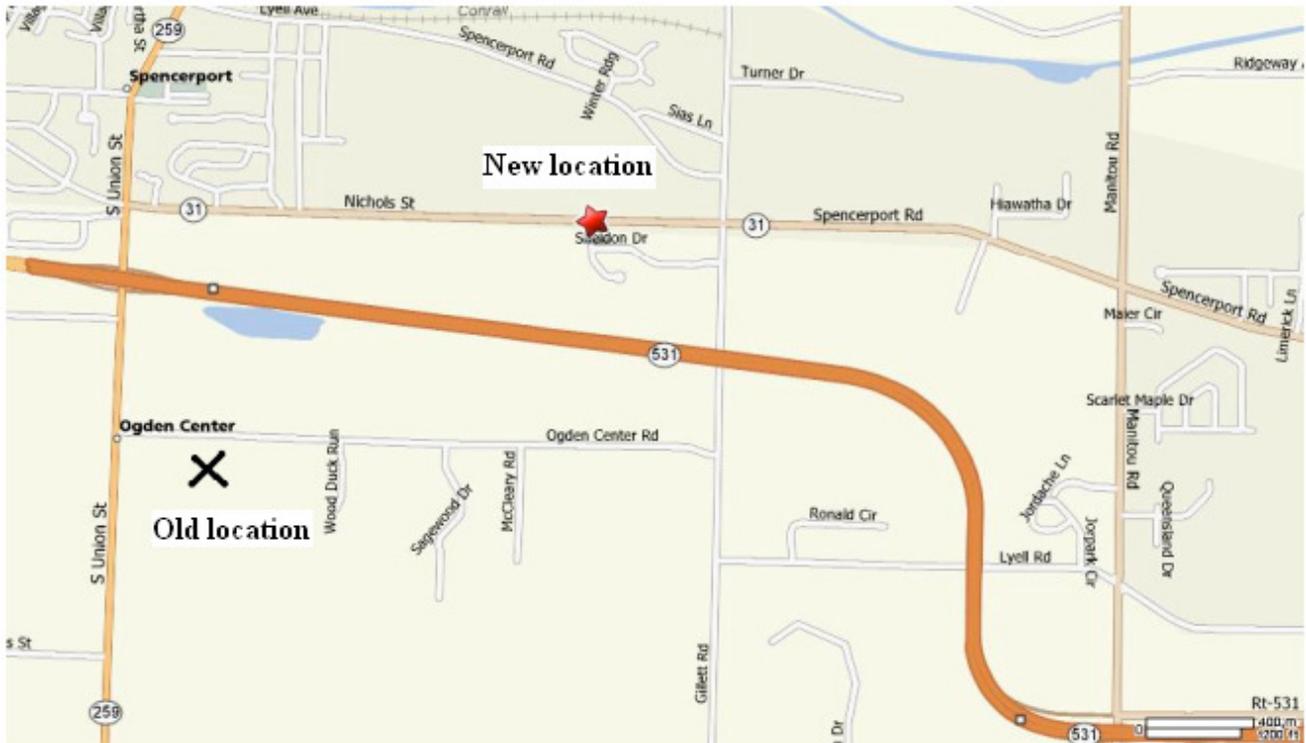
This product comes as a complete kit, providing a very secure place to attach your SO-239 adapter. Viewed in the picture on the right, this brass fitting allows you to have a good solid connection for your coax. The next time you build a copper j-pole, do it right - with the J-Pole Adapter. See our web site below for more details. Email for quantity orders.



<http://www.jpoleadapter.webs.com>

This card came in the mail.

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.

