VILAS COUNTY AMATEUR RADIO CLUB

VCARC / Radio Club Newsletter #9

March 2016

VCARC / Radio Club Newsletter

VCARC contacts:

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The VCARC Repeater KD9DXK/R Update

by Paul N7EKY and Fred KD9CCE

Tim (KC9FNX) climbed the Ministry tower on Saturday, February 20, to investigate what connector is in place between the hard line and the PD-220 antenna. He also wanted to see how the current antenna is attached to the tower mast. The hard line connector was removed so that a perfect match between the new antenna and the hard line can be constructed. Tim was assisted by Dave (KC9ZJO) and Fred (KD9CCE).

Work continued during February and March to replace the club repeater antenna on the Ministry Eagle River Memorial Hospital tower. Three tower climbs were completed to evaluate and replace the antenna. Tim (KC9FNX) made the initial climb to review the cabling and connectors and determine how the antenna was attached to the tower.

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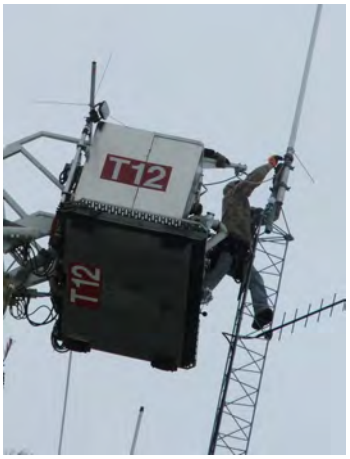
The Eagle River Fire Department volunteered to assist with the first climb.



The Eagle River Fire Department ladder truck with Chief Jim Bonson aboard. Tim KC9FNX is between the bucket and the antenna.

Inside this issue:

Tech Talk

by Paul N7EKY

Members Dave (KD9DQX), Rick (KD9FIM), Dave (KC9ZJO), Lorin (KD9CXC), Bill (KG9RH), Ken (W9KJB), Bob (N9HSQ), Fred (KD9CCE) and Paul (N7EKY) were present on February 20 when Roger (KD9EPX) presented "Building for the Ham Shack." He went into a fair amount of detail about what components to purchase, precautions to adhere to when building projects and the proper planning of projects.

Roger highlighted his emergency power system which included control of power from the grid, solar, and generator. The custom circuitry he designed and built allows him to know exactly what is happening at any given time. Although Roger refers to this system as a prototype, to many in attendance it appeared a mature power control system. Roger stressed that he favors the non-computerized displays and controls since they are less susceptible to EMP.

Roger offered to send the PowerPoint presentation document to anyone who wants it, which includes the photos. Contact Roger via voice only landline 715-477-0231 or email at rog15mn@yahoo.com. He said that he can also help with optical, free space laser systems, and sensor systems for security and environmental uses. He said that he has designed backup power systems including wind, solar, steam and water powered units.

Immediately after Roger's presentation, Paul (N7EKY) presented the Raspberry Pi and Ham radio. Paul showed the group a Raspberry Pi B which comes with 4 USB ports, an HDMI port, audio, power, network and a slot for a MicroSD card. The unit booted up and everything was going well until the operating system image containing the application "TwoToneDetect" did not respond as it should have to a page recorded on an iPhone. Some basics of the Raspberry Pi were covered and some projects available for the unit were discussed.

On Wednesday, March 9, Kyle (KD9AYN) presented his project "Building a Keyer for Radios without VOX." Kyle went into detail about how his project works to allow for a non-VOX equipped radio work with modes like MMSSTV and Fldigi and covered how the project was put together and where he sourced the parts. Then Chris (KE8CCX) showed his 3D printer project which works with his Raspberry Pi which runs a flavor of Linux. Chris is still waiting for some parts for his project to be completed but he explained how the printer can be used to manufacture items.

Do you have a favorite project, radio, or piece of equipment that you think the club will appreciate, contact Paul (N7EKY) @ pclay@nnex.net.

Slow Scan Television (SSTV)

by Paul N7EKY

On February 27, after the APRS SIG, Tom (KC9UDA) demonstrated some of the ins and outs of the Slow Scan application, MMSSTV, which is in common use by many hams in the Northwoods. He demonstrated how to modify the templates which are in common use by all who operate with this application. There are several club members currently using SSTV on HF and many join the Iron Range Amateur Radio Club Monday night Slow Scan net. This is just a bunch of hams having fun with SSTV but provides good training for those who may be called on to operate this mode during emergencies.

VCARC Repeater KD9DXK/R Monday Night Net

by Ray (KB9CBL)

Another successful Simplex Net was held on Monday, 22 February on 145.150MHz with check-ins from KB9CBL, N9NBC, KC9UDA, KC9FNX, KC9ZJO, KC9EPX, KC9DDC, KC9ZJF, W9BHL, KA9SRO, KD9CCE, N9HSQ, N7EKY, KC9KAK, KC9VEQ, and KC9PAS.

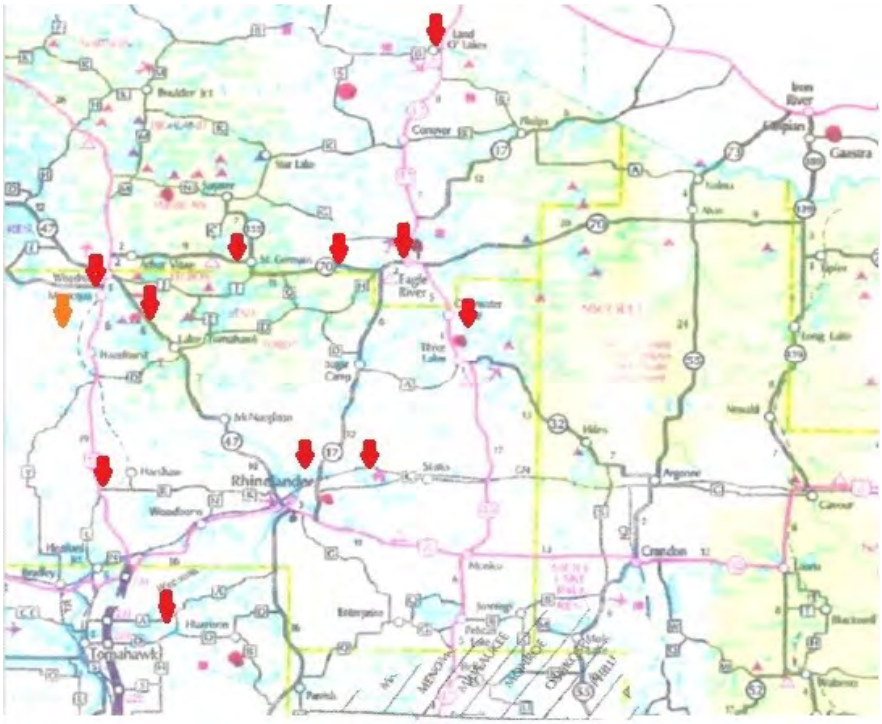
The area map has a mileage scale and red arrows displaying the approximate locations of check-ins. The orange arrow southwest of Minocqua is my home for reference. I wasn't there during the Net but was setup in Eagle River using the Northwoods ARES portable tower and antenna.

One benefit of having the Simplex Net is a better understanding of how your station works. By setting up the proper frequency we can find out what to reasonably expect for receive and transmit signals. We don't all have 100-foot towers with maximum transmit power that can hear a pin drop two counties away, and that's okay. Knowing what we have and maybe tweaking it for improvement when possible is a good goal, as is working together to relay information if needed to get the message out.

Do you have battery or generator backup? If severe lightning is overhead, are you grounded sufficiently? Do you have a backup antenna for a second operating point in a safe location and have you tried it out? Nets are good opportunities to try things out ***before*** you drop off the grid and make sure you are prepared in the event of a real emergency situation to protect yourself and your family.

If you have a question or concern, ask a fellow ham for advice. There's no need to reinvent the wheel when a host of experience is around us.

Ray Mark, KB9CBL
Northwoods ARES/RACES EC
Oneida and Vilas counties



Technician Ham Class News

by Paul N7EKY

The next Technician class is set for April 9-10 in the Vilas County Economic Development Manufacturing Incubator classroom. The class will run from 8 am to 4 pm Saturday and 8 am to about 2 pm Sunday. The examination for The Technician Class amateur radio license will be offered immediately after the class.

The class is designed to provide the information for anyone to successfully pass their Technician examination. Topics include Rules and Regulations, Basic Electricity and Ohms Law, Radio Propagation, Antenna Theory and Safety.

Any members who may know of someone interested in getting their FCC license should have them contact Paul at 715-891-0157 or pclay@nnex.net for information and registration in the class.

Automatic Packet Reporting System Special Interest Group

by Paul N7EKY

.The most recent APRS SIG was held on the February 27. Paul (N7EKY) set up an ICOM IC-7000, Tigertronics SignaLink USB and laptop computer to demonstrate the ability to use a non-APRS -ready radio for APRS using free application software.

Paul went through the download, installation and configuration of the UZ7HO Soundmodem, which is a software only based Terminal Node Controller (TNC). With the configuration presented with a small antenna located inside the building, there was minimal APRS traffic (the building has metal siding). It did demonstrate how the UZ7HO program worked. Next, the APRS-IS program, APRSISCE/32 was demonstrated. APRSISCE/32 "talks" to the TNC and displays the result in real time. It can use information derived from the Internet as well as from FM or SSB radios on VHF or HF. It was agreed that the lack of a decent antenna detracted from the presentation. Paul promised to look into the possibility of installing an antenna at the location which could be used during group or class meetings.

Fred (KD9CCE) showed his TinyTrak APRS setup but, without a decent antenna, the results were not what were desired. The club does own a Butternut 2M antenna, which would look very good on the side of the building. Only time will tell.

Paul passed around his Easy Digi custom cable by KF5INZ. This cable is offered preconfigured for almost any device. Paul's cable was made to interface between a Baofeng HT and an iPhone. The iPhone would run one of the available TNC/APRS applications that could communicate either through the Internet, to an external radio, or both. The iPhone has a built-in positioning system.

The next APRS SIG is scheduled for March 26 at the classroom. Hopefully the antenna situation will have improved so that some of the demonstrations may be repeated. In addition, there is work be conducted on a Raspberry Pi to run Dire Wolf, an APRS TNC application which may be ready to present by the next meeting.

February Ham Breakfast

by Paul N7EKY

Several members and one non-member joined at the Friendship House on Saturday morning, February 27. This was our largest showing ever forcing us to "grab" two extra tables. Everyone said that they had a good time and one ham stated that he wanted to join the club.

Our Supporters for 2016

by Paul N7EKY

These fine businesses have decided to support the Vilas County Amateur Radio Club, Inc. for 2016:

Eagle River Tire
126 E Division Street
Eagle River, WI 54521
715-479-8820
http://www.ertire.com/

Stateline Accounting & Tax Service LLC
4366 County Road B
Land O Lakes, WI 54540
715-547-6212

VCARC to Assist Salvation Army and National Guard Training

by Paul N7EKY

Terri Leece, the Wisconsin and Michigan UP Disaster Services Director sent registration information and Salvation Army application forms to the members of the Vilas County Amateur Radio Club, Inc. who attended her classes on January 23. She said that her goal was to have members ready to attend the major training events scheduled for the summer with the National Guard and Air Force National Guard.

Two events are scheduled this summer down state. The first, Miles Paratus, will take place June 5-9 and the other, Patriot, is scheduled for July 18-21. Ms. Leece said that more information would be forthcoming.

Phelps Twin Tri – Triathlon Set for August 27

by Paul N7EKY

Tony (KC9SZW) requested permission for the club to utilize the Phelps communications tower and commercial frequency repeater. Tony did this to insure that the club will have adequate communications during the Phelps Triathlon in August. Since our repeater was off the air and no other Wisconsin Repeater adequately covers all of Phelps.

The Phelps town repeater is on a frequency of 154.965 MHz and a receive frequency of 158.850 MHz and using a PL of 127.3. Obviously this is outside of our 2-meter band and some amateur VHF equipment will not be able to transmit in this area but others will. Those who specified an interest in this event will have time to work this out, or even determine if the commercial repeater will be needed, depending on the status of our repeater.

Brat Sales this summer in Eagle River

by Paul N7EKY

Bob (N9HSQ) has teamed up with Andy (N9NBC) to manage the club's brat sales events, which will take place this summer at Trig's in Eagle River. This is a tremendous opportunity to earn needed funds for the Vilas County Amateur Radio Club, Inc. Bob was able to reserve the following dates:

Thursday, June 9
Friday, July 15
Friday, August 12

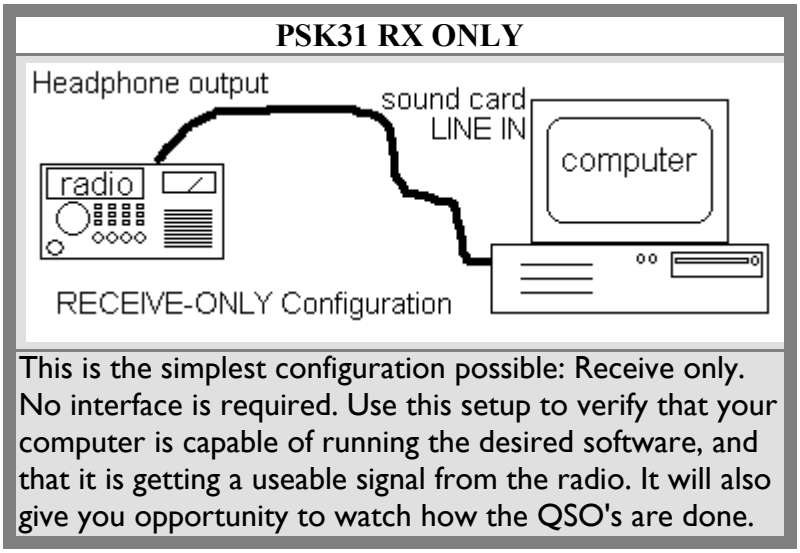
Trig's essentially sells us the product at cost and provides everything we will need to conduct the sale. What we need to do is staff the hut, cook the brats, and sell as many as we can. If you are willing to spend a few hours helping with this then please contact Andy (N9NBC).

PSK31 Corner

by Bob KC9RF

Editor's Note: Reprinted from February due to missing material.

After my presentation in October some of you have been trying out PSK31. During 2016 I will be writing a few articles about this mode of operation. During the winter I spend most of my time in Texas and operate my Yaesu FT-857D, tablet computer and Little Tarheel II screwdriver antenna from a Travel Trailer. See my QRZ page. It's amazing what 25 watts can accomplish. For example, in November, I had 71 contacts which includes European Russia, Ukraine, Austria, South Shetland Islands and six more. Stateside I logged 23 states. Contacts were made on 10, 15, 20 and 40 meters. The most common upper side band frequencies used are 14.070, 21.070 and 7.070 MHz. Receiving PSK31 is very straight forward as shown in the figure below (figure courtesy of N1NKM).



This is the simplest configuration possible: Receive only. No interface is required. Use this setup to verify that your computer is capable of running the desired software, and that it is getting a useable signal from the radio. It will also give you opportunity to watch how the QSO's are done.

Once your hardware is connected, there are many software programs available. I have used the three programs listed below. I like Fldigi the best as you can watch 10 conversations simultaneously. By clicking on the call sign in the receive window, the call sign is automatically put in the log display.

PSK31 free software download links:

Fldigi – info page	http://www.w1hkj.com/
Fldigi program	http://sourceforge.net/projects/fldigi/files/fldigi/
DIGIPAN	http://www.digipan.net/
Ham radio deluxe	http://www.iw5edi.com/software/ham-radio-deluxe-5-download-links

I hope to see you on the air as I will be operating from Port Isabel, Texas from Feb 21to March 21, then operating from the Corpus Christi area in April. Have fun — I hope to see you on the air. If you have questions my email is sail_ski@yahoo.com

Short Takes

Club Membership

The Vilas County Amateur Radio Club, Inc. now can count 78 members!

— VCARC to Install Donated Antenna at Manufacturing Incubator Building—

Vilas County Economic Development have graciously allowed us to install an antenna on the side of their building close to the classroom window. This will better allow us to conduct demonstrations and events in the classroom that require good VHF communications. Ray (KB9CBL) has donated a new, high quality, slim-jim antenna to the club for this purpose. Perhaps we will be able to test this new antenna during one of our weekly simplex nets. Thanks Ray!

— Club Business Cards —

Don (KD9EPY) has been working on VCARC membership cards and will partner with Dr. Weeks (WW9J), who will print club membership cards. Don said that he can offer club business cards for those who are interested. Not a bad idea if you are retired and need a business card. Dr. Weeks is also looking into clothing with the club logo and other items he believes will benefit the club. Don had a poster made as a donation to the club that the can be used during brat sales and other fund-raising events. Thanks Don!

— VCARC Newsletter Articles Needed —

Members are encouraged to submit articles and photos involving club members or Amateur Radio in general. Read any good articles or posts. Want to submit a review of a piece of equipment you have or recently acquired? Your submissions are welcome! Please send them to pclay@nnex.net.

— Charter Membership Certificates —

Members are reminded that for those who joined the Vilas County Amateur Radio Club, Inc. anytime in 2015, they will receive a Charter Member Award Certificate. These are available from Paul (N7EKY) at any monthly meeting.

— For Sale by Members —

This is a new section in our newsletter to list equipment members wish to sell or swap. Submit listings for your personally owned amateur radio equipment to pclay@nnex.net. This is not intended for someone who makes it a business to buy and sell equipment.

For Sale: Yaesu FT-101-E with CW filter & Cooling Fan, very clean radio. Original owner, it's my Eagle River rig. Asking $350 or best offer. Call 1-847-274-8433. Bill W9ZCL

For Sale: K3 100 watt transceiver with LP Pan and accessories. Serial #4831. 1.8 and 250 Hz filters, IF board, LP Pan Adapter, USB sound card with cabling. USB radio serial cable. Available May, call Bob KC9RF 608-481-0297 or email sail_ski@yahoo.com $2,175.00 firm.

The VCARC Repeater KD9DXK/R Update — continued

The second climb was accomplished with the assistance of the Eagle River Fire Department. Snow and ground conditions prevented the ladder truck from approaching close enough to the tower to allow the antenna to be lifted upward out of its brackets.

A third climb was conducted by Mike (KB9RBL) of PTT Communications of Medford supported by Tim (KC9FNX) and other club members. This climb resulted in the successful removal of the existing antenna and installation of the new club antenna.

Mike KB9RBL installs the antenna.

Mike KB9RBL of PTT Communications, Tim KC9FNX and Dave KC9ZJO prepping the antenna for the climb.