



# Hamgram

*Newsletter of the Winona Amateur Radio Club, Inc.*

*-- When All Else Fails...AMATEUR RADIO --*

*November 2013*

[www.w0ne.org](http://www.w0ne.org)

## NOVEMBER PROGRAM - NOV. 21

WHAT: November Club Program: Review of 2013 Club Activities & Semi-Annual Club Business Meeting

What an active club we have in Winona! Come to the November semi-annual business meeting to review the past year's activities and to voice your ideas for 2014. This meeting also includes election of three executive board members. As you may recall, the club has an executive board of six elected members plus the club station custodian for a total of seven members. This year, there are three openings to be filled in the rotating two-year term board positions.

WHO: All amateur radio operators and other interested persons are encouraged to attend.

DATE: Thursday, November 21, 2013

TIME: 7:00 PM

WHERE: Conference Room B, Winona County Office Building, 202 West 2nd Street, Winona, MN. Doors will be unlocked from 6:45 to 7:15 PM. If you are late, please try the 146.640 repeater to have someone let you in.



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# Message from the Prez

What a wonderful year we have enjoyed. Our club members have been very active indeed. I am going to point out some of the accomplishments that our members have contributed to the club, (with the danger of omitting some accidentally, if so I apologize beforehand). I will refresh your memory in some areas in which the club participates.

**Emergency Preparedness:** Dan Goltz has been our fearless leader and has done an outstanding job, and has received a very significant award from the group of Emergency Management Coordinators. The award of course is well deserved. We thank Dan for his efforts.

**Contesting:** Matt and Lance, and of course many others, have been involved in several contests during the year and have done well. Field day is another important function—it was well planned and executed this year. Don't forget the JOTA this year, which is growing steadily, thanks to the persistent work of Len, Matt, Roger KI0F and John. Fox hunts have been great fun too!

**Maintenance of our Repeaters:** A great deal of effort has gone into maintaining and upgrading our repeaters. Erik has led the charge on this adventure, and has help from many of the members. Syed got a major donation for new coax for the 835 repeater. Thanks to all who aided in these projects.

**Community Service:** We have provided communications for bike events, and other social events. One of the bike events helps us out financially--in fact is a major part of our budget.

**Social Activities:** The picnic and Christmas party by Syed with coaching from Ken--breakfasts, coffees. Whatever I missed, sorry!

Concluding, the more you get into the activities of the club, the more fun you have, so I encourage you to do what you can.

Many thanks to those who have contributed to these successful activities.

73 and see you at the November meeting,  
Paul K0ZYV

# ► *146.835 Repeater Update* ◀

A lot has happened with the club's Bluff Siding repeater in the last year!

Last fall, we received a very generous donation of new Andrew 7/8" hardline from Commscope Corporation. That improved the signal quite a bit.

All was well until December when the repeater faded away off the air. Investigation revealed that some bugs had taken up residence in the power output control board of the Micor transmitter, leaving residue which caused the transmitter to shut down. The repeater was down until about March when we installed a temporary transmitter and amp--the amp loaned to the club by Walt, KE0XI.

Next, we were notified by the site owners that additional equipment was being moved into "our" building (we had been the only major equipment in that building since the FM broadcast transmitter was moved to another building on the site). The other equipment wasn't a problem, except that just before our planned major use of the repeater for the Arcadia Brute Bicycle Race the repeater again suddenly disappeared from the air. It turned out that the connector on the lightning arrestor was damaged and not making contact. So we replaced that.

Considering our options, we decided to purchase a new transmitter and amplifier. We ended up with a Hamtronics Exciter and a TE Systems Amp. This combination would be good for 100 Watts continuous without fans, but our coordination was for only 35W. We applied for and received a change from the Wisconsin Association of Repeaters (WAR) to allow for 65W. Matt, KF0Q, managed to fit in some time along with all the other operating activities he was involved in, and mounted the exciter in a box and cabled it for our system.





The original homebrew power distribution center was not set up for the higher power requirement of the 65W transmitter, so we replaced

that with a Power Pole dist center.

Our coordination requires not only 131.8 tone for receive, but also on the output. So, we temporarily swapped the normal controller for the alternate one originally intended for the 146.64 remote receiver project. I installed the tone encoder and also worked to improve the robustness of the telemetry. Les, K0BAD, used his new (to him) service monitor to adjust the transmitter and receiver frequencies and audio levels.

On Oct 13, a team of Matt and Lance, KB0YJU, installed the new transmitter, upgraded controller, and also swapped out the Micor receiver for a Hamtronics receiver, also originally planned for the remote receiver project. Unfortunately, the receiver did not function well with the higher power, so a week later Lance, Dan, WK0W, and I again visited the site to investigate and ended up swapping the Micor back in. All seems to be functioning well now. We have taken care to cover all ventilation slots with window screen to avoid further bug

intrusions.



As I was working on it, I was reflecting on the changes since we originally put the repeater on the air in 1997 or so. We are still using the original antenna, a Hustler G-7, which was originally used on 146.64. The feedline has been replaced. The duplexer is the one we purchased new for 146.835. Still the same equipment rack and control receiver. We are currently using the original Micor receiver, but the controller, transmitter, power supply, batteries, and power dist center have all been changed. We have also added the APRS telemetry.

The tone output of the system is set up to only be present when a receive signal is present. This will facilitate crossband repeating. If you have a dual-band radio that supports crossband repeating, I encourage you to experiment with it. Set the VHF side to transmit on

146.235 with a 131.8 Hz tone. Set it to receive on 146.835, and require a 131.8 Hz tone to activate it. The UHF side does not need tones. This arrangement will repeat the VHF repeater's output to UHF only while a receive signal is present. You will not hear the courtesy tone or ID., but the big advantage is that you will be able to break in to a conversation without the 146.835 transmitter having to go down.

It's also interesting to watch the telemetry on APRS. Use your radio, or your favorite APRS website, such as aprs.fi. W0NE-8 is the 146.835 repeater, and W0NE-6 is the 146.64 site. The first telemetry channel is the battery voltage in tenths of volts. The second is the local temperature (inside the Byonics TT4). The 5<sup>th</sup> channel is AC power. That's an analog channel, but the signal is actually digital. A value around 250 means power is on. A value near 0 means AC is off.

## **Continuing Work**

Les is going to evaluate the Hamtronics receiver.

We are in the process of rebuilding the Micor transmitter. When it comes out of the shop it will be 65W and will also be in a sealed box. We have been using a common connector system so that we can swap receivers, transmitters, and controllers as needed. This will give us a complete backup system that can be swapped in as needed. The first use will probably be on 146.64 next summer when we do maintenance on that system.

Enjoy!

Erik WB0NIU



# JOTA 2013

The weather wasn't very fair, but the Boy Scouts and Cub Scout who stopped by the JOTA station on Saturday, October 19, go a good introduction to amateur radio.



Set up went smoothly, with Jim N0WE helping Matt, Roger KI0F, Len and John K2OPT set up the 20 meter delta loop

antenna and the club's vertical Hustler antenna. The weather was warm with a breeze from the southeast, and some nice QSOs were made with JOTA stations before the scouts came around.

Then the cold front came through and brought westerly wind and rain with it. Luckily, the picnic table shelter at the site served the group well.

Two Boy Scouts, one Cub Scout and fathers came by in the early afternoon. All had an opportunity to get on the air and make contacts with scouts at other JOTA stations in the US and Canada. Essentially all the contacts were on 20 meters using the delta loop—30 contacts with other scouts in 13 US states and one Canadian province.

Some educational materials relating to the Radio merit badge had been prepared for the scouts, but due to the weather and level of activity after the scouts arrived, the materials were never presented. Room for improvement in the future! One Boy Scout did express strong interest in going ahead with his work on the Radio merit badge.



The club bought 2013 JOTA patches for each of the scouts, and they arrived this week. Appropriate troop/pack leaders are being asked to present the patches to the boys.

Minutes of the November 4 WARC Board meeting were not available at the time the Hamgram was published.

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## Radio Items Available:

Received from Charlie Matzke in Lewiston some time ago....

“I have some equipment for Ham Radios. I just talked to Gene Mrozek from Whitewater Wireless and said some of the things I have would work for you guys. Power supply and other gadgets I'm not sure I have. I have other things but they are wide band and not legal anymore....”

Here are some pictures sent by Charlie:

If you are interested, please give Charlie an email at [cjmatzke@gmail.com](mailto:cjmatzke@gmail.com) and he would be glad to discuss what he has with you or arrange for you to see it.



### Item for Sale:

- 2 meter glass mount antenna
- Similar to MFJ #1738
- New in package
- \$30.00
- Contact Ken, N0JP

**The Winona Amateur Radio Club, Inc.**  
**P.O. Box 1264, Winona, MN 55987-7264**

**Executive Board**

President: Paul Schumacher, KØZYV  
[pschumacher@winona.edu](mailto:pschumacher@winona.edu)

Vice President: Lance Tagliapietra, KBØYJU  
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Custodian: Erik Brom, WBØNIU  
[ewbrom@hbcicom](mailto:ewbrom@hbcicom)

Members: Harro Hohenner KG6RLM  
Bob Seaquist KC9IWE

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Dues: \$25.00 per calendar year per license holder.  
\$30.00 per calendar year for all licensed members of the same family within the same household.

Dues should be sent to: Matt Burt, Treasurer, P.O. Box 1264, Winona, MN 55987

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Board meetings are announced in advance (WEPNet).

Monthly club programs are held on the third Thursday. The submission deadline for the ***Hamgram*** is Wednesday of the week *prior* to that of the club programs.

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