

Hamgram

Newsletter of the Winona Amateur Radio Club, Inc. Aug 2006
www.w0ne.org

Meeting Announcement

The September meeting of the Winona Amateur Radio Club will be held on Thursday, September 21, 2006, at 7:00 p.m. in the conference room on the lower level of the Winona County Annex Building. All radio club members and enthusiasts are welcome.

Minutes of the August 2006 meeting of the WARC

These minutes were constructed from notes taken by Jake (KC9CRM).

The August meeting of the Winona Amateur Radio Club was held on Thursday, August 17 in the lower conference room of the Winona Courthouse Annex. The meeting was called to order by President Darlene Tagliapietra (KCØCTH).

The meeting began with a brief presentation and discussion of a free APRS software package by Clare Jarvis (KØNY) and Erik Brom (WBØNIU). The software package, called Xastir, was developed for Linux (available at www.xastir.org) and is also available to run on Windows (download from: www.cygwin.com).

The minutes of the June/July meetings were approved as published in the August issue of *Hamgram*. The Treasurer report indicated a total of \$ 1,839.40 in the club treasury.

Old Business

There was no outstanding old business.

New Business

Erik Brom (WBØNIU) gave a report of the situations with the voice repeater systems. A failure occurred on 835 which led to a number of questions for which the committee is seeking input from other club members.

1. How much reliability and redundancy do we want in our repeaters? For instance, new vs. used batteries? High quality battery conditioning devices or cheaper "battery chargers"?
2. Based on the following facts, in what directions should the committee move?
 - o The 64 machine is 20 years old.
 - o The UHF machine is now 10 years old.
 - o The 835 machine is roughly 7 years old
 - o The 64 machine had new batteries of 200-300 amp hour capacity.

Moved by Jim (KBØTHN) and **seconded** by Jerry (WAØX):

Allocate \$600 to be used to purchase new batteries and commercial quality dual-purpose chargers/power supplies for the 64, 835 repeater sites and also the packet site. The motion **passed**.

President Darlene acknowledged several club members:

- Thanks to all who participated in the Fremont Country Store and GRSF special event operations.
- Thanks to those who participated in the Field Day operation from Clare and Sherri's (KØNY/WA9IGK) home.
- Congratulations to Jake (KC9CRM) upon his election as Member-At-Large on the Executive Committee and for being on TV.

Ken (NØJP) updated members on the Fremont operation.

Additional people are needed to fill out the treats schedule.

The meeting was adjourned at 8:50 p.m.

Respectfully Submitted with the help of Jake, KC9CRM,

Leslie D. Hittner

Leslie Hittner, Secretary

Treats Schedule:

September: * October: * November: **KØBAD**
 December: **KC9ERJ/KC9CRM** (* = OPEN)

Attendance (08/17/2006)

KCØCTH, Darlene	KØNY, Clare
NØJP, Ken	WØEUU, Terry
WBØNIU, Erik	NØTNC
KBØTHN, Jim	WAØX, Jerry
KC9ERJ, Pete	KC9CRM, Jake
KBØYJU, Lance	Leo and Jennifer
NØVV, Dick	KCØMBT, Richard
Barb	
WKØW, Dan	NØWTH, Bob

Repeater Update**Lots of activity in the last month!**

By: Erik Brom, WB0NIU
 Chairman, Voice Repeater Committee

Last month, I asked for input from the club. At the meeting, \$600 was approved to improve our power supplies.

To that end, we have done (or are about to do) the following:

1. All three sites will have IOTA chargers. These are new commercial grade float chargers that will be very good for the batteries.
2. We obtained some premium quality (sealed AGM type), although apparently used, 200 AH batteries. One set is now at the 64 site.
3. The 835 site still has the same set of batteries, also premium quality but used, that we put there about a month ago.
4. The APRS site is going to get the flooded cell batteries the club purchased in June, and which were at the 64 site. We made this swap because we were concerned about an acid spill and/or fumes at the 64 site. There is no concern with that in the pole building where the APRS node lives.

Although still a ways away, we want to improve the telemetry at all the sites so we have a better idea of what's happening, and hopefully be able to detect a failing battery. We will also be visiting the sites more often than we have in the past.

After a huge amount of discussion in which we all learned a lot, we have decided that the used batteries that we can obtain free, or nearly free, are the most effective for us. With proper care they should last a long time in our service. The new IOTA chargers will take good care of them. This gives us more capacity, at a drastically lower price, but we will need to change them more often.

We have spent a little over \$300 so far.

Right now there are at least two additional sets of similar batteries in town, and there will be two more sets soon. In fact, there are some more available for \$20 per set. Let me know if you are interested. As I mentioned above, these are premium quality AGM completely sealed batteries. They are "used", but it appears they are really fairly new. If you want to learn more about batteries, visit this website:

http://www.windsun.com/Batteries/Battery_FAQ.htm#Starting,%20Marine,%20and%20Deep-Cycle%20Batteries

We made some good progress on the 64 remote link: Under Len's direction, we installed the link antennas and feedlines at both sites. The rest of the equipment is progressing well, and we should be installing more soon.

We had some additional trouble at the 835 site: it appears that the site has taken a lot of lightning, as we found that the lightning arrestor was creating high SWR and losing power. We were fortunate to be able to hook up with the broadcast site engineer, Steve Schuh, who provided us with some valuable measurements with his sophisticated test equipment. That helped us track down the lightning arrestor, which we will be replacing soon. 835 is running up-to-par as I write this.

Walt and Les took the initiative to do brush trimming around both repeater sites, which Steve S. was very appreciative of.

We are still having some challenges with the Hamtronics receiver we purchased for the remote receiver. It is synthesized, so we have been running it as the 835 (146.235) receiver. It seems to be bothered by interference, though. We recently got a new crystal, and turned the Micor into a two channel receiver – it can be used on 146.235 or 146.040 at the flip of a switch. Both receivers have identical connectors, so we can move them back and forth at will.

Thanks to everyone who has helped out: Les, KØBAD, Lance, KBØYJU, Walt, KEØXI, Jim, KBØTHN, Ken, NØJP, Len, KCØRSX, Clare, KØNY, Tom, WØMK, Russ, NØQK, and Matt, KFØQ. I hope I didn't miss anyone.

Thanks.

Test Your Amateur Radio Knowledge

By Len Litvan KCØRSX

The following are from the FCC exam pool—Technician, General and Amateur Extra.

#1 - What does an inductor do?

- A. It stores energy electrostatically and opposes a change in voltage
- B. It stores energy electrochemically and opposes a change in current
- C. It stores energy electromagnetically and opposes a change in current
- D. It stores energy electromechanically and opposes a change in voltage

#2 – What protection from harmful interference caused by primary service users do amateur radio stations have while operating in the 60-meter band?

- A. None
- B. Stations in the mobile and fixed service must not interfere with amateur stations
- C. Stations in the mobile and fixed service must not interfere if an amateur station is already on the frequency
- D. Stations in the mobile and fixed service must not interfere with amateur stations if they are located in ITU Region 2

#3 - In polar coordinates, what is the impedance of a series circuit consisting of a resistance of 4 ohms, an inductive reactance of 4 ohms, and a capacitive reactance of 1 ohm?

- A. 6.4 ohms, / 53 degrees
- B. 5 ohms, / 37 degrees
- C. 5 ohms, / 45 degrees
- D. 10 ohms, / -51 degrees

Answers to Exam Pool Questions:

#1 - (C); #2 - (A) [97.303s]; #3 - (B)

Summer Picnic 2006



Go

charcoal, go!



The heart of the 835

The Winona Amateur Radio Club, Inc.

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

Dues should be sent to: Richard Kolter, Treasurer

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Board meetings are announced in advance (WEPNet)

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

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