

Hamgram

Newsletter of the Winona Amateur Radio Club, Inc. Oct 2004

<http://www.winonaarc.org>

Meeting Notice

The October meeting of the Winona Amateur Radio Club will be held Thursday, October 21 at 1900 in the County Courthouse Annex Building conference room. The Repeater Committee will present a 45-60 minute program to discuss their plans for the 835 and 64 repeater sites. The program will be followed by a social hour. There will be no business meeting.

MINUTES WARC MEETING, September 16, 2004

Meeting called to order at 7 p.m. by Club President Tom, KAØMLO at the Courthouse Annex Meeting Room. Ken, NØJP, provided us a VHS tape to watch from the ARRL, "When Disaster Strikes." The first two chapters on the tape were viewed at the meeting.

RACES - Radio Amateur Civil Emergency Services

ARES - Amateur Radio Emergency Services

Both the above organizations are resources for amateurs during crisis situations. RACES has some federal government backing. ARES is organized through the ARRL. Affiliation with these two groups might put the volunteer under the insurance umbrella if any accident, injury or liability occurred.

ARES allows for a mobile locator at any moment. Walt, KEØXI, commented that communications are critical during an emergency and that an organized unit or team is needed.

After the tape, President Tom, KAØMLO, opened the business meeting.

Lance, KBØYJU, made a motion to approve the August Minutes as written in the September *Hamgram*. 2nd by Walt, KEØXI. Carried.

The Treasurer, Dick, NØVV, was not present at the first part of the meeting for the treasurer's report but at the end of the meeting he provided the secretary the account balance for inclusion in the minutes.

OLD BUSINESS

Lance, KBØYJU, presented a report on what ARRL affiliation "buys" our club.

1. ARRL Report
2. insurance
3. referrals
4. club stationary
5. \$ for new members
6. mailing lists and labels once a year
7. literature
8. library sets of ARRL publications
9. 50% Discount on club ads in publications
10. gavel competitions

Types of ARRL Clubs:

1. Local Clubs
2. Regional or National Clubs
3. Youth, School or Elderly (Disabled)
4. Clubs in Clubs

For ARRL Affiliation:

1. 51% ARRL Members
2. 51% Licensed Amateurs

Club Bylaws must not be in conflict with ARRL Rules.

Ken, NØJP, pointed out that our lapse in ARRL affiliation was by oversight.

The next item of Old Business was amateur radio license classes in our community. Walt, KEØXI, pointed out that the Winona Amateur Radio Club is the umbrella-sponsor for training sessions in the community providing:

1. Teaching
2. Exams

Should we have an organized group of those interested in training? Walt, KEØXI, made a motion that our club in its organizational structure provide for licensing classes and for volunteer examiners for licensure. 2nd by Les, KØBAD

A lengthy discussion ensued.

Les, KØBAD: This activity could be included in committee's reports.

Walt, KEØXI: When trying to organize this sort of activity within the club, it is tough to get people to show up.

Jerry, WAØX: This type of activity should be discussed at the Executive Committee Meeting.

Les, KØBAD: People are busy. Our Club Meeting should be activity focused instead of meeting focused.

Walt, KEØXI: Fountain City Days is an example of a great event that was carried out by individuals rather than club organized.

Tom, KAØMLO: We could have a group in the club that would help others strengthen the level of their licensure through a structured event.

Lance, KBØYJU: Like small study groups.

Tom, KAØMLO: All of us are busy; we need a beginning.

Walt, KEØXI: I agree with the activity oriented things; maybe we could use email to organize spur of the moment gatherings.

Les, KØBAD: Executive Committee, Licensing Committee, Volunteer Examiner Committee, Repeater Committee, and Packet Committee could each meet at a time when that committee's respective members could gather.

Lance, KBØYJU: We need changes to our bylaws to provide for such committee-oriented activities; our long regular club business meetings are burning us out.

Dick, NØVV Regular monthly club meetings were a good place to talk with old friends.

Walt, KEØXI: The Club Board meetings should be for the Back Room Stuff; the regular monthly club meeting should be for fun stuff like training and introduction to new modes and new gear.

Les, KØBAD: Let's get rid of the business meeting portion of our regular monthly meeting.

Tom, KAØMLO: Skip Green has offered to give us a tour of his amateur radio station.

Tom, KAØMLO: I will appoint Walt, KEØXI, to chair the study group.

Walt, KEØXI: Anyone here volunteer to teach an advanced licensing group? Lance, KBØYJU, and Jerry, WAØX, volunteered.

Walt, KEØXI: Present Volunteer Examiners in the club include Dick, NØVV; Les, KØBAD; Dan, WKØW; and Erik, WBØNIU. The question was called and the original motion by Walt, KEØXI, carried.

President Tom, KAØMLO, asked our treasurer, Dick, NØVV, how many dues paying members we have. The reply was 55 to 60. Tom requested Dick to give a current list of members to Lance, KBØYJU, so that Lance could put together an accurate list of club ARRL members.

Eric, WBØNIU, reporting for the repeater committee, stated that the 835 repeater had been down for several days.

Club Committee Chairs were listed for the group:

ATV - Russ, NØQK Packet - Clare, KØNY
WEPNET - Lance, KBØYJU Finance Committee - Dick, NØVV
Study Club - Tom, KAØMLO VE - Walt, KEØXI

It was suggested that classes and contact phone numbers for classes could be placed in an advertisement in the local paper.

Steve, N9MFH, volunteered to assemble a club membership book.

Swap Meet:

Jerry, WAØX, paid a voluntary \$5.00 on his sales.

Walt, KEØXI, pointed out that our current dues include a fixed portion that goes to support the local repeaters.

President Tom, KAØMLO, stated that he had reserved the Eagles Club for the 2005 Swap Meet.

Jerry, WAØX, presented his feelings on the SWAP meet. He felt the SWAP meet was not well attended. Only 10-12 club members and 14 (out of town) persons attended.

Gary, NØOWS, was instrumental in organizing the original Swap Fest but Jerry wonders if it is worthwhile to continue it.

Jerry suggested: (1) a different weekend maybe at a time the schools are not in session and at a time when there is no model airplane competition, (2) a firm commitment on the part of members to ensure support for it,

Jerry also wondered if most trades are not made on the Internet these days through EBAY.

Bob, NØPDD, got a lot of publicity out for the Swap Fest. Tom, KØMLO, indicated he was willing to do it again. Les, KØBAD, wondered if we should have some expectation of volume. Walt, KEØXI, said we can't count on the club to keep the Swap Meet going. Ken, NØJP, said he was the only member of our club that had the conflict with the model airplane meet.

President Tom, KAØMLO, appointed Ken, NØJP, and Delores, NØNUO, as organizers for the Club Holiday Party.

Tom, KAØMLO, thanked Jake, KC9CRM, for his individual effort to show off the capabilities of ham radio at the Fountain City Farm Fest.

Motion by Erik, WBØNIU, to adjourn the meeting. 2nd by Les, KØBAD. Carried. Meeting adjourned at 8:37 p.m.

Present at the Meeting:

Name	Call	ARRL	Name	Call	ARRL
Tom	WØMK	Yes	Tom	KAØMLO	Yes
Ken	NØJP	Yes	Steve	N9MFH	No
Delores	NØNUO	Yes	Pete	KC9ERJ	No
Jake	KC9CRM	Yes	Jerry	WAØX	Yes
Bob	NØPDD	Yes	Joe	KCØMBL	No
Walt	KEØXI	No	Les	KØBAD	Yes
Lance	KBØYJU	Yes	Erik	WBØNIU	Yes
Dick	NØVV	Yes			

Treats schedule 2004:

January: Holiday Party-no treats

July: Picnic-no treats

February: Clare, KØNY & Shari, WA9IGK

August: Joe, KCØMBL

March: Tom, KAØMLO

September: Erik, WBØNIU

April: Delores, NØNUO

October: Tom, WØMK

May: Bob, NØPDD

November: Les, KØBAD

June: Dick, NØVV

December: Lance, KBØYJU

Respectfully submitted, Tom Wilmot, WØMK, Secretary

Editorial: Why Join the ARRL?

We have had several discussions as of late about ARRL membership and whether the club has enough ARRL members to again become an ARRL Affiliated Club. Some have said the ARRL "doesn't care" about the member count and that we should simply send them a set of numbers that "works." If that's the case, the ARRL should remove those "requirements." If people at the League gave that kind of answer to a question about affiliated clubs, they are being irresponsible. The requirements do exist.

I think the questions we should be asking are: "Why have we had such a struggle to reach that 51% limit?", "Why do we have a significant number of Amateur Radio Operators in the Winona area who are **not** members of the ARRL?", and "What can we do to encourage their membership in that national organization?" The following article illustrates just one reason why it is important to be a member of and support the American Radio Relay League.

-Leslie Hittner, KØBAD

"MORE THAN JUST BPL!" LEAGUE KICKS OFF 2005 SPECTRUM DEFENSE CAMPAIGN

From The ARRL Letter - Vol. 23, No. 37 - September 17, 2004

The ARRL this week kicked off its 2005 Spectrum Defense Fund campaign with the slogan "more than just BPL!" ARRL President Jim Haynie, W5JBP, says that while interference from BPL--broadband over power line--technology is the most prominent and immediate threat to amateur spectrum, generous donations from ARRL members and supporters make it possible for the League to face it and other spectrum challenges. Haynie says that not all of ARRL's advocacy efforts necessarily involve taking defensive measures, such as with BPL, but all of them are essential.

"Forty meters, Little LEOs some years back, the work that the League's Technical Relations Office in Washington does--all this makes the spectrum available to us," Haynie said. "And without spectrum, the license that we have in our pocket or hanging up on the wall is pretty much useless."

Haynie says that, as he sees it, the League's job is to look out for the best interests of Amateur Radio and make sure that we have spectrum to operate on. "And that's a big job, it's a huge job that we've undertaken. It becomes very important because spectrum is so precious."

It's also a job whose cost and complexity have risen considerably in the past decade, as new technology-driven demand for spectrum has put increasing pressure on Amateur Radio frequencies. World Radiocommunication Conferences, at which ARRL and International Amateur Radio Union personnel represent Amateur Radio's interests, now occur every two or three years instead of once a decade. As ARRL CEO David Sumner pointed out in a fundraising letter <https://www.arrl.org/forms/fdefense/> to League members, in such an environment, the League no longer can cover the cost of its operations and advocacy efforts with dues revenue and the sale of publications and QST advertising.

"The whole philosophy of spectrum management is being rethought, with the objective of easing access for new products for consumers and industry," Sumner wrote. "But as the rules for their introduction and use are developed, we in the Amateur Radio Service need an advocate to ensure that our interests are safeguarded. With your help, the ARRL will continue to be that advocate, for ourselves and for future generations of radio amateurs."

In 1985, the League spent perhaps \$200,000 on advocacy and spectrum defense. The League's Washington office at the time consisted of one staff member. As 2005 looms, it's a much different picture.

"Today we spend close to \$900,000, and I know it's something that hams can't see, touch or feel, but it's just as important as those things that they can--like QST and the Handbook," Haynie said, "because we would not have all those things if it were not for the fact that we have a place to operate."

The 2005 Spectrum Defense Fund depends on membership support and is essential to the League's continued success. Radio amateurs may contribute online via the ARRL's secure donor Web site <<https://www.arrl.org/forms/fdefense/fdefense.html>>. Those contributing at or above the \$50 level may request a gift as a token of the League's appreciation.

For more information about the 2005 Spectrum Defense Fund or to discuss other ways you can support the ARRL's continuing work on behalf of Amateur Radio, contact ARRL Chief Development Officer Mary Hobart, K1MMH. <k1mmh@arrl.org>; 860-594-0397.

Report of the IEEE Discussion on BPL in Rochester

October 11, 2004

By Matt, KF0Q¹

Winona area amateurs KØNY, KBØYJU, KCØRK, NØJP and I attended the Broadband over Power Lines (BPL) interactive discussion sponsored by the Southern Minnesota Section IEEE held at the Mayo Medical Sciences Building (Mann Hall) Rochester, MN Monday, October 11. The guest speaker was Gary Evans of HBC. The program discussion was also co-facilitated by a representative from Rochester Public Utilities (RPU). What is BPL? According to the information from the RPU webpage "broadband over power lines, is an exciting new technology that allows data signals to be transmitted over existing electrical power lines. The data signals are injected onto the electric utility power grid and can be received through any electric outlet within the city." The power lines used are the medium voltage (14KV) distribution feeders that stretch out both overhead and underground throughout a municipality. The network is completed by installing a BPL modem on the outside and inside the home.

Why do we as amateurs care about BPL? In my opinion the BPL technology is operating as an FCC part 15 device. Part 15 essentially states that this equipment must not provide harmful interference to any licensed radio service, and further may accept interference from a licensed

service.ⁱ The long and short of it is that much of the spectrum we are licensed to operate in lays the 2-80 MHz spectrum where many BPL systems are designed to operate as a part 15 device. As many of you know BPL or Broadband Power Line technology has the potential to create interference to many of our amateur bands. This interference broadband in nature could appear beyond 80 MHz where many of our VHF bands are.ⁱⁱ Many of us consider this to be a threat to our ability to operate on these bands. You don't have to look very hard to find information on BPL these days - See any ARRL webpage lately and it is the subject is on top.

As many of us locally know Hiawatha Broadband started providing internet services to customers in the Winona area in 1997. High speed cable internet was added in 1999 and telephone service in 2000. The market has obviously grown and HBC is looking at ways of providing high speed internet access without having to spend a large investment constructing the backbone which is expensive and can cause disruptions to other existing utilities. This fact has caused HBC to look for a partner to explore BPL viability for internet services and telephone. Rochester, MN seemed to be a possible fit for HBC as the city has its own utility for electrical power Rochester Public Utilities RPU.

A test area in the city of Rochester was agreed upon and BPL equipment provided by Main.net is installed and operating. Testing of this 12 block test area located to the south of HyVee (South) in Rochester began late in the week of July 12, 2004. This test area has approximately 10 customers. The BPL technology used is called Gen I (Generation I) and has a potential for speeds of 250 - 1.2 MEG. Even though internet connection speed, data rates and telephone via VOip are acceptable Gen I does not appear to be viable. Initial testing to date shows that the system does work, but there seems to be some issues that make Gen I not the best choice. Mr. Evans said that testing is on-going and that based on the initial results several decisions have been made with regard to BPL. For any system to be acceptable a short payback for 3 years is required. The BPL system in test does require a great deal of hardware and would not make much sense in a lower populated area due to the expense. Modems are also quite expensive (\$300-\$400) which makes this system even less attractive. There also appears to be problems with interference to and from the amateur service with the BPL test site.

Specific details of interference problems were not discussed however; the representative from RPU claimed that the Main.net equipment only uses the 2-20MHz spectrum. The Main.net product was supposed to notch out the 14 MHz portion of the spectrum to reduce potential interference

¹ Notes for this report also provided by Lance, KBØYJU

on the 20 meter band however the rep from RPU stated that the notching features of the BPL equipment were not in place when shipped. There seems to be a level of frustration with the customer service of Main.net which is a company located in Israel. Even though RPU claims to be aware of the potential for interference they have not done much in terms of testing specifically for interference. Data rates can be disrupted with interference. RPU has noticed that the 14KV feeders located underground seem much better than the overhead feeders, due to the use of shielded HV cable being used underground which reduces the potential for radiated interference substantially.

Mr. Evans stated that the Main.net GEN I equipment is not adequate, and the experience has not been encouraging. HBC and RPU are still looking for new vendors. A visit by RPU to another undisclosed vendor last week shows promising. GEN II technology BPL with speeds of 3 to 4 MEG will be available November 2004. This speed is capable of supporting video, but is still slower than other technologies such as VDSL. It was not clear to me if the HBC RPU alliance was going to pursue GEN II or wait until the spring of 2005 for GEN III. There was little discussion about the speed and capability of GEN III equipment. One thing that was mentioned however was the use of WiFi for distribution. Mr. Evans stated that an order for a WiFi distribution system had been placed, and that testing will begin soon. Ultimately a decision on one of these technologies will be made by 12/31/05.

Conclusions:

1. The BPL trial in Rochester is quite small
2. Interference to and from the Amateur Radio Service is apparent, and the RPU group seems willing to work with the local Rochester Amateur Radio group to resolve issues.
3. Underground MV (14KV) shielded conductors used for BPL have substantially less issue with interference.
4. HBC is not happy with Main.net and will not pursue GEN I BPL. They are looking at other vendors and technology.
5. Regardless of the technology a pay back of 3 years is required for a viable distribution system.
6. Active notching technology required to reduce interference to licensed radio services was not mentioned. In my opinion this feature should be mandated for any BPL system to be approved by the FCC.

More BPL Links:

ARRL BPL information: <http://www.arrl.org/tis/info/HTML/plc/>

Main.net home page: <http://www.mainnet-plc.com/>

Broadband over Power Lines (BPL) and Amateur Radio:

<http://www.rarchams.org/bpl.htm>

Rochester Public Utilities:

http://www.rpu.org/about/news/news_releases/bpl_faq/

ⁱ FCC Part 15 information: <http://www.arrl.org/tis/info/part15.html>

ⁱⁱ Broadband Over Power Line (BPL) Interference: Fact or Fiction?; Barry Malowanchuk, VE4MA 38th Conference of the Central States VHF Society Proceedings, Toronto, ON July 24, 2004

Test Your Amateur Radio Knowledge

by Len Litvan KCØRSX

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

#1 - What are the station identification requirements for an amateur transmitter used for telecommand (control) of model craft?

- A. Once every ten minutes
- B. Once every ten minutes, and at the beginning and end of each transmission
- C. At the beginning and end of each transmission
- D. Station identification is not required if the transmitter is labeled with the station licensee's name, address and call sign

#2 - How should the microphone gain control be adjusted on a single-sideband phone transmitter?

- A. For full deflection of the ALC meter on modulation peaks
- B. For slight movement of the ALC meter on modulation peaks
- C. For 100% frequency deviation on modulation peaks
- D. For a dip in plate current

#3 - How are junction diodes rated?

- A. Maximum forward current and capacitance
- B. Maximum reverse current and PIV
- C. Maximum reverse current and capacitance
- D. Maximum forward current and PIV

Answers to Exam Pool Questions:

#1--(D); #2—(B); #3 - (D)

FOR SALE

From estate of NØVGT: approx 40 ft tower, rotator, VHF yagi, cables etc.
ICOM communications receivers.
Contact Ken, NØJP for details.
Some freebee items will be at the October meeting.

The Winona Amateur Radio Club, Inc.

President:	Thomas E. Mauszycki tmauszycki@charter.net
Vice President:	Paul Schumacher pschumacher@winona.edu
Secretary:	Thomas M. Wilmot tmwilmot@msn.com
Treasurer:	Richard Kolter kolter@luminet.net 1128 West Mark Street Winona, Minnesota 55987
Member At Large: 01/01/04 to 06/30/04	Scott K. Hayes skhayes@savacaf.com

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

***Hamgram* is published monthly by
The Winona Amateur Radio Club, Inc.**

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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.

If I can make room, “New Digital Modes” will continue next month.

Hamgram

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