

# The LANDLINE

The Newsletter of the  
COPPER COUNTRY RADIO AMATEUR ASSOCIATION, INC.  
P.O. BOX 217 DOLLAR BAY, MICHIGAN 49922-0217  
Visit us on the World Wide Web: [www.ccraa.net](http://www.ccraa.net)

## **Health and Welfare:**

Individuals wishing to contact Lee can at the following:

Lee J. Royce, KC8DYG  
c/o University of Michigan Hospital  
1500 E. Medical Center Dr.  
Floor 7B  
Room 425, Bed 1  
Ann Arbor, MI 48109  
Tel. (734) 936-7425 (Main line)  
Tel. (734) 615-0467 (Nurse's Station)  
73, George, W8FWG

## **FRIDAY NIGHT BULLETINS RESUME:**

As of Friday, September 1, Geo., W8FWG has announced that the following:

1. Keweenaw County ARES Net at 9:00 pm on the "315" repeater (PL100 required)
2. Followed immediately by the SKYWARN net, where your input is asked for.
3. An all new (abbreviated) BULLETIN TRANSMISSION.

Our thanks to Mark, KC8YDU for his generous contribution of equipment making this possible. Also thanks to Gary, K8YSZ and Howard, KD8ABP for their assistance on the installation on Monday, August 28, 2006 ,Geo., W8FWG

## **APRS & DIGI'S**

APRS is a system developed by Bob Bruninga, WB4APR, which uses [amateur radio](#) to transmit position reports, weather reports, and messages between users.

APRS™ is a multifaceted system for use with packet radio by Hams, it allows the monitoring of real time geographical information such as the position of vehicles, the status of weather, radio direction finding and much much more. It involves mapping, GPS tracking, packet radio, etc. It is a VERY interesting facet of packet radio and has much to offer most everyone including non-hams that just want to watch over the internet.

**UBIQUITOUS OPERATIONS:** Consistent with providing information on all resources within range, APRS must also work across all boundaries and in all areas of the continent for all travelers. For this reason, **144.39 MHz** is dedicated to APRS throughout North America. Other continents have similar single frequencies such as 144.80 in Europe and 145.175 In Australia. <http://eng.usna.navy.mil/~bruninga/aprs.html>  
Howard(KD8ABP)

Thanks to the technical expertise and generosity in providing equipment and time, Bill

Becks of Porterfield, WI arrived in the Copper Country on Sunday, Sept.. 3, 2006 to help install two new APRS digipeaters. (APRS is "Automatic Position Reporting System") The first one went in at the Herman site (site of the 67 voice repeater), with equipment provided by Bill, WA8WG and antenna system provided by George, W8FWG. The second, later that day, went in at Osceola (Calumet) with equipment of W8FWG and antenna system provided by the Copper Country Radio Amateur Association, Inc. (CCRAA.) Both have emergency power capabilities, and operate on the Nationwide frequency of 144.390 MHz. These digipeaters will help with weather reporting in the future, and to allow mobile stations traveling through Upper Michigan to access other stations via these digipeaters.

Source: Geo., W8FWG

### **MY FIRST SATELLITE!**

No...I didn't transmit to it...but it came up on my UI-VIEW32 map on Tuesday night about 11 PM EST. It was AO51 Sat/Pacsat traveling at 1149.6 mph, and it was right over Mass City! (Ontonagon Co.) Course of 346 degrees, and it was digi'ed through W7HDO at "yydigi"...out in Washington State! How about that. That is the highest speed, that I have seen on a vehicle to date! It was gone (of course) about 15 minutes later...Had I had the transmit freq. in my rig, I could have worked it! Bummer!

(signed) "Space Commander" Thurner! Har!

Geo., W8FWG

### **Mobile APRS**

My vehicle is now operating with a ICOM V-8 HT using a TinyTrak3+ TNC and GPS receiver mounted on the dash, also a 5/8 mag mount antenna. The system is set To pulse a burst of packet information into available Node and Digipeaters located In our area and then is updated into a web server showing up on the UI-View32 program. Howard(KD8ABP) For information can be found at the following web site;

[www.byonics.com/tinytrak](http://www.byonics.com/tinytrak)

<http://www.deluoelectronics.com/customer/home.php>

### **FOR SALE:**

ADI 2M model AT-200 handheld (minus antenna) w/charger, manual and original carton.

Call John Maninen at (906) 483-3699

or E-Mail: [jrman@charter.net](mailto:jrman@charter.net)

### **VACUUM TUBES.NET**

Welcome to the Vacuum Tubes division of Radio Electric Supply, home of the largest supply of electron vacuum tubes in the world. We also stock ceramic tubes as well. Many other suppliers say they are the biggest... but we are the real deal.

**We maintain a working inventory of over 5,000 different radio tubes, amplifier tubes, and vacuum tubes in stock at all times.**

<http://vacuumtubes.net/> Howard(KD8ABP)

### **Looking For Equipment & Etc;**

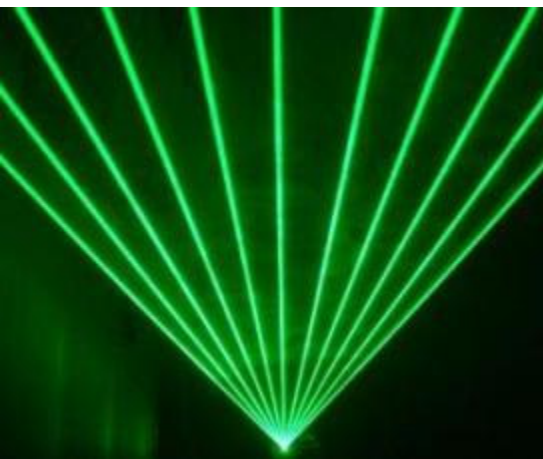
6JS6C Tubes

Looking for a pair of 6JS6C tubes if anyone has a pair floating around.  
Need them for a Yaesu FT101B.

Frederick Andrew Lesnick, VE3FAL  
2060 Hwy 61, Thunder Bay, Ontario P7J 1B9 Canada

### **CubeSat 2 Launch Set for September 20, 2006**

Despite the 26 July setback which saw the loss of 14 CubeSats  
When their launched failed, the Amateur CubeSat program is  
Continuing. News reports that another launch of four CubeSats  
Known to be carrying Amateur Radio payloads is scheduled for  
20 September 2006. These mini-satellites will be orbited using a  
Russian-built booster launching from the Baikonur Cosmodrome  
In Kazakhstan. AMSAT, ARNewsline  
Howard(KD8ABP)



### **LASERS SPEAK TO SUBS**

Communicating with subs underwater is beyond tough. Sound moves through seawater in very strange ways, with water temperature, salinity, and density speeding up and slowing things down -- garbling conversations in the process. Electromagnetic transmissions (like radio) are no better -- the sea has some funky electrical conductivity. During the Cold War, sub authority [Joe Buff](#) notes, the Navy managed to get super-simple, one-way messages to its subs, with a pair of giant (28-mile!) extremely low frequency [transmitters](#), based in the Midwest. But those transmitters were shut down, a few years back.

The Navy's new idea is to get specially tuned lasers to handle the job, instead. The service has handed out a [pair](#) of small business innovation research [contracts](#) to Bothell, WA's [Aculight Corporation](#) and Bedford, MA-based [Q-Peak](#) to build blue-green, quick-burst lasers for transmitting messages across the deep. Aculight, for example, wants to use a combination of semiconductor and fiber lasers to produce a low power beam (around 10 watts) at about 532nm spectrum range. The idea is to get pulses as quick as half a nanosecond, repeating as much as 10 million times per second.

Blue-green lasers have been discussed for a while as potential sub-talkers, with good reason. Seawater has a lot of organic junk floating around inside, which makes it "turbid" -- "nearly opaque to light over much of any distance," Buff explains.

*Blue-green light's frequency is best at penetrating through this turbidity, given the mix of sizes in microns of the particles and other stuff that prevents seawater from being transparent. (Of course, some areas such as the Bahamas are famous for the clarity of their water, but this is very much the exception, not the rule, globally speaking.) This same turbidity is essential to giving submarines their invisibility while submerged, so it's a double edged sword.*

[September 19, 2006 12:28 PM](#) | [Comms](#), [Lasers and Ray Guns](#), [Ships and Subs](#)  
Howard(KD8ABP)

### **WEATHER ON YOUR DESKTOP**

If you have a computer, you can download this program, insert your city or zip code, and get the current weather conditions in your area, including radar satellite imagery. Just go to: [www.weatherstudio.com](http://www.weatherstudio.com) It's a free download! (Submitted by Geo., W8FWG)

### **Great Lakes and Seaway Shipping;**

You can sign-up and receive updated information on ships and  
Other information on the below web address;  
<http://www.boatnerd.com/> Howard(KD8ABP)

### **PROGRAM FOR OCTOBER:**

A talk on PSK31 by George, W8FWG. This new method of communication promises to be something big for the future of ham radio.  
73, Geo., W8FWG

### **V.E. TEST SESSION CHANGES:**

The following (tentative) changes go into effect in 2007 for the CCRAA/HARC Testing Team in Houghton County. We're planning on giving exams only twice annually.....The second Saturday of April and September, is the new schedule. We also will accommodate schools or other organizations that need to give a test after their class on ham radio ends. Those sessions will be by appointment only, but will be open to everyone. In the rare case where we get an individual application we will also accommodate them if they pre-register. We will be retaining all of our present examiners. Thanks to all, who have helped over the years.  
Geo., W8FWG

### **V.E. EXAMS:**

The last V.E. Test Session of 2006 in Houghton County will be October 14 (second Saturday of October) Location: Wadsworth Residence Hall on the campus of Michigan Technological University in Houghton. Room: G04W (basement of "Wads" directly opposite the Campus Radio station, WMTU.) Time: 9:00 am Eastern. All applicants should arrive NLT 8:30am in order to fill out the necessary paperwork. Applicants should bring: 2 soft-lead pencils (HB), two pens (blue or black ink only), a picture proof of ID, or two other proofs, if no picture is available, a calculator and the registration fee of \$14. If paying by check, it should be made out to: "ARRL/VEC." Next year we will be conducting only two exams per year, the second Saturday of April and September.  
Questions?: Call George Thurner, W8FWG at (906) 337-2542 or E-Mail to: [w8fwg@arrl.net](mailto:w8fwg@arrl.net)

### **U.P. HAM EXAM SCHEDULE FOR 2006**

The 2006 schedule is posted on the CCRAA's Web page at: [www.ccraa.net](http://www.ccraa.net)  
Please note that some times are Central Time. Also note that PRE-REGISTRATION "IS" required for the Iron Range Club.

### **EXAM QUESTION POOLS UPDATE:**

The Technician Class exam pool changes on July 1, 2006 and one other change is that there will be no circuit drawings in the new Tech. pool. The General changes on July 1, 2007, and the Extra on July 1, 2008. Some of these changes may be amended as the Morse code issue is still

up in the air, and not decided upon as yet, by the FCC.

### **PRACTICE EXAM SITE:**

Taking a "ham" test soon? No matter which one you are taking this is a good one, It even will allow you to "peek" at the right answers! But, try doing the exam as you would at a test session and see how you do. The 35 or 50 question answer sheet is right there too, and you insert your answers. Remember, this is only a practice run....it doesn't count...but it will allow you to see how you are coming along with your studies. Find it at: <http://www.w8mhb.com/exam/> Try it! You'll like it! [Thanks to the "Courage Center" [Handi-Hams] for alerting us to this site. Submitted by Geo., W8FWG)

## **ISS (International Space Station) Amateur Radio Frequencies;**

### **Mode V/V Crew Contact (Region 1): Operational**

Uplink: 145.2000 MHz FM

Downlink 145.8000 MHz FM

### **Mode V/V Crew Contact (Regions 2 & 3): Operational**

Uplink: 144.4900 MHz FM

Downlink 145.8000 MHz FM

### **Mode U/V (B) FM Voice Repeater (Worldwide): Non-Operational**

Uplink: 437.8000 MHz FM

Downlink 145.8000 MHz FM

### **Mode V Imaging: Operational**

Downlink 144.4900 MHz SSTV

### **Mode V/V Packet (Worldwide): Operational**

Uplink: 145.9900 MHz AFSK 1200 BPS

Downlink 145.8000 MHz AFSK 1200 BPS

## **Communicating with the ISS**

To work ISS from your home, you should have at least the following Amateur Radio equipment. A 2-meter radio with an output rating of 5 watts or more. While it's possible to operate with an omni-directional antenna and even a whip, a small beam antenna similar to the Arrow antenna works much better and will increase your chances of success. If you plan to operate in packet mode a standard 1200 baud AX.25 TNC should be used and connected to a computer running APRS or other packet communications software.

## **For more information about the International Space Station...**

- [ARISS North America](#)

- [ARISS Europe](#)
- [ARISS Japan](#)
- [AMSAT web site – WWW.amsat.org/amsat-news/tools/predict/](http://WWW.amsat.org/amsat-news/tools/predict/)
- Howard(KD8ABP)

## **Resources for Radio, Radar, RF, Microwave, & Wireless Engineering**

Check out [www.rfcafe.com](http://www.rfcafe.com). It's a great site. Gary(K8YSZ)

## **NASA Takes on Google Earth**

Check out the following web site;

<http://worldwind.arc.nasa.gov> Howard(KD8ABP)

## **+ GOOGLE EARTH APPLICATIONS**

Some hams are doing very interesting things with Google Earth, including linking it to APRS, overlaying weather imagery, RF coverage, etc. See <http://www.tech-software.net/globalearth.htm>

During Katrina, I was asked to relay an early 9-11 call from a trapped New Orleans resident. He was more resourceful than most, and realizing that street addresses were useless to helicopters, he had used a portable GPS receiver to determine his lat/long. He included that in his distress call.

After passing that message, I switched on Google Earth, and began using it to correlate street addresses to lat/long for other rescue requests. In one case, I was also able to offer "landmark" directions to a non-local responder using the Google Earth "3-D buildings" feature.

What other uses can we come up for this novel software that are EMCOMM related? -- Les Rayburn, N1LF, Helena, Alabama; National Communications System-NCS047; Navy MARS NNN0HSI; ARES-SHARES-Skywarn; ARRL EmComm Level 3 Certified; Official Emergency Station

## **ASSISTIVE TECHNOLOGY:**

(This is an edited story from the Courage Center)

Today's meeting was about assistive technology. Courage Center, our parent organization, realizes the need for staff to have understanding and expertise in the assistive technology that will help people with disabilities and sensory impairments to reach their goals.

Of course all of us who work in the handiham program know about the assistive technology that applies directly to amateur radio. There are the things like the LDG talking wattmeter, the puff and sip keyer, transceivers with voice modules, and that sort of thing. After all, many of our members are blind and need those things to properly operate their stations. But it is a big, wide world out there, and people need lots of other

technology to accomplish a galaxy of other tasks at work, school, and home.

There are devices to generate speech, switches in so many different varieties I could never describe them all here, special mounting arms and devices to put equipment within reach, adaptive computer hardware and software, mobility devices to help people get around, and on and on and on -- the list is simply endless! With so many different types of assistive and adaptive technology to organize and learn about, you can be sure that we will never be bored. Every meeting I go to about assistive technology ends up being a real learning experience. That, my friends, is worth a lot in the ham radio business, because we are really all about technology and communication in the first place. Often times, at our radio camp sessions, the volunteers or campers will come up with elegant assistive technology solutions to various problems. What ham radio is really good at is getting technical-type people together to solve problems. That is why we have real potential to be a driving force in assistive technology!

Patrick Tice, WA0TDA [patt@courage.org](mailto:patt@courage.org) [wa0tda@arrl.net](mailto:wa0tda@arrl.net) Handiham Manager

### **Keep that address current!**

In recent actions against two licensed amateurs, the FCC's Riley Hollingsworth cited §97.23 of the Commission's Amateur Radio Service rules that requires each license grant to show the licensee's correct name and mailing address. The rule provides that "revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct mailing address."

The two operators had their licenses suspended for failing to update their information on the FCC database, something that is really easy to do. Ordinarily, the FCC will not be trying to contact you, but these two operators obviously did something to call attention to themselves. When the FCC tried to contact them by mail to address these issues and the letters were returned, the suspension action resulted. Since people move around all the time, it is likely that changing your address with the FCC is something that you will do at one time or another.

One more thing to watch out for is license expiration. When you first get your license, the ten year term seems like it will go on forever and ever. In ten years, you will have done many things in amateur radio, including making new friends, collecting QSL cards, participating in contests, helping during public service emergencies, and perhaps even building some of your own equipment. But one thing you will *not* have done is renewing your license! That makes it easy to forget about renewal. A reminder email from a ham radio organization like ARRL can be helpful here, but you are responsible for taking action to renew your amateur radio license. Operating with an expired license is, of course, not allowed.

(Source: Patrick Tice, WA0TDA at the "Courage Center" Golden Valley, MN)



## **Quarter Century Wireless Association;**

I am sending this message the amateur radio clubs in our area.

One of our club members, Dave Arnold, W8DXX is trying to determine the interest in forming a chapter of the Quarter Century Wireless Association in the Northeast Wisconsin- Southern Upper Peninsula area. Currently the closest chapters are headquartered in St. Ignace, Michigan and Watertown and Kenosha, Wisconsin. The M&M Amateur Radio Club is supporting Dave's efforts.

The Quarter Century Wireless Association is open to all amateurs who were first licensed at least 25 years ago. I'm sure many of your members qualify, and some are probably already members.

Please pass this information on to your club membership. If you have anyone who would be interested in joining an area chapter, please have them contact Dave Arnold, W8DXX at 1801 32nd Avenue, Menominee, MI 49858, or by email at [DJARNOLD63@AOL.com](mailto:DJARNOLD63@AOL.com) .

Thanks and 73,  
Jim Callow K8IR  
President, M&M ARC Marinette, WI-Menominee, MI  
Member QCWA

## **70 CM REPEATER ON MT. BROCKWAY:**

As of 15 July 2006, the Brockway Mountain 444.150 repeater (+, PL 107.2) is on the air. Local control operators (George-(W8FWG) and Howard-(KD8ABP) monitor and have access to control codes for the system.  
Michael(K9SJ)

## **UPDATE ON THE CCRAA's REPEATERS:**

Our Engineer, (Chuck, WB8FCY) has reinstalled the 100 watt PA (power amplifier), for the Hancock site, and it is now back in service. We are experiencing some local QRM on it, and we've yet not pinpointed the source. It could be skip coming in from another "88" repeater, another "splinter" frequency, or interference from a paging system. Chuck is continuing his search on ferreting out the trouble. The station's ID level (volume) has been brought down, to a more comfortable level, and filter chokes were added to all leads going into the repeater. A BPF (Bandpass Filter) has been added, and the fittings throughout are now of the "N" variety, making for a better impedance match all around..

At the Herman site, (still to come)...are the addition of additional filters, a telephone line to that site, and autopatch capabilities. Baraga Tel. has given us a very good rate on the telephone line, and the club has agreed to putting in the phone line. Once the phone line is installed, connections will be made to the controller in that repeater, and control will then be changed from an RF path to a telephone line type. (We hope to accomplish this before the snow flies!) The repeater at Herman is identical to the installation at Hancock, (Hamtronix repeater), and the added Cresend amplifier is putting out its rated power.

On an experimental basis we have added two APRS digipeaters, one at Herman and one



at Osceola. The equipment for these installations was donated by Bill, WA8WG and George, W8FWG, at no cost to the CCRAA. If they continue to work, they will be left in place, if they prove not to be valuable, they will be taken out.

Future: There is a possibility that a third "digi" for APRS use (on 144.39 MHz) could be added at Keweenaw. Some equipment is available and we will update progress on that site, as time goes on. Submitted by: George, W8FWG

### **315 Repeater/Calumet Air Base, Mt. Horace Greeley: Quick Work by KCRA members and Anderson's Comm's.**

During the last week of August 2006, members of the KCRA Arrived for Repeater/cabinet maintenance and a brief Inspection of the antenna/mast mount to discover a bent mast pipe, bottom clamp missing, top clamp damaged. Quick service from Fred Anderson and his crew plus help from key KCRA members Saved the antenna before anymore damage occurred. A new heavy wall mast pipe and three new heavy clamps were installed. The 315 Repeater was put back on the air late Thursday afternoon with A measured 28 watts forward and zero reflected... Howard(KD8ABP)

20-21 October, 2006 [Lake Superior PRO Rally, Houghton, 906/296-9686 or www.lsprorally.com](#)

The Lake Superior Pro Rally begins on October 20 and continues on Oct. 21. The first day covers the south end of the U.P. (Baraga county)...and the second day covers the north end (Keweenaw County).  
(Thanks to Ronald, KB8XI, for this information)

### **ARES ID:**

This may significantly impact Amateur Radio operators in the future. ARES membership will not allow you access to a Red Cross shelter unless you have a background check. In Orlando, Orange County, Florida, the ARES/RACES group is sponsored by the county and background checks were done through the sheriff's department. Upon completion the members were issued county ID cards. The city and county EOCs and communication centers would not permit anyone inside the centers that did not have the county ID card. With the additional emphasis on security, this is going to be a bigger problem in the future. Homeland Security is pushing for a single national ID for government first responders. -- Jerry Reimer, KK5CA, South Texas SEC

### **K.C.R.A. MEETING ANNOUNCEMENT:**

Our sister club, the Keweenaw County Repeater Association, Inc. will hold its meeting on **Wednesday, October 11, 2006** at the Keweenaw Pines Apartments, in the Community Room, the Annex to Building "C." Keweenaw Pines Apts. Are located just one-half mile north of the Cliff Drive Road near Mohawk. Time: 7:00pm EST. Visit our Web Page at [www.kcra-mi.net](http://www.kcra-mi.net) All persons interested in "ham" radio are invited to attend. Door prize to be raffled!!!!!!!!!! If you need further information before the meeting date, please call George Thurner, W8FWG (Sec.-Treas.) at (906) 337-2542.

COPPER COUNTRY RADIO AMATEUR ASSOCIATION  
MONTHLY MEETING MINUTES  
SEPTEMBER 5, 2006

- I. Meeting called to order at 7:00 PM by president Glenn-WA8QNF.
- II. Members present:

WA8QNF-Glenn	W9VLM-Paul
N8ZBJ-Andy	KCONPE-Ben
KB9RQZ-Mark	KC9CFR-James
KD8CTL-Gavrielah	W8FWG-George
KB8FCX-Rich	Associate-Virginia
K8YSZ-Gary	WQ8G-Don
Associate-Dianne	WB8CBA-Ed
N8DU-Dave	KI8GM-Carl
KC8FLK-Paul	
- III. Minutes from August 1 meeting approved.
- IV. Treasurer-Balance \$2514.
- V. Reports-UP Directory-George-All sold out.  
Property-George-New 40' antenna, (144.39) to be installed.  
Porta-potty needs to be checked on.  
Clubhouse is ok. Gas tank is full.  
VE-George October 14, 2006 at Wadsworth Hall.
- VI. Next meeting at Dollar Bay firehall. October 3, 2006, 7:00PM.
- VII. November meeting will be November 14, due to elections.
- VII. Pro Rally, October 21-22. Volunteers are needed.
- VIII. Meeting adjourned at 7:15 PM.

Respectfully submitted  
Andy Kangas (N8ZBJ)  
Secretary

**Next meeting Tuesday October 3, 2006 – Dollar Bay Fire Hall, 7:00pm**

The "LANDLINE" is published monthly by the **Copper Country Radio Amateur Association, Inc.** Contributions for use in the LANDLINE, relating to the amateur radio service and to the CCRAA are welcomed at any time. Please submit your contributions directly to the editor, and they should be received by the 25th of the month before the meeting. Material received later may or may not make it into that issue. The LANDLINE Editor is Howard F. Klann, KD8ABP. If you have a question or a comment I can be reached at: (906) 337-2168 or E-mail to: msgklann@pasty.net. Club Members

receive E-Mail copies sent by Howard, KD8ABP. Complimentary copies to other radio clubs and the E-mail copies are handled by George, W8FWG. Please refer any delivery problems to the Editor (Howard, KD8ABP) at (906) 337-2168/ Fax (906) 337-0599. To find out more about the CCRAA Inc. or the Amateur Radio Service, please contact one of the officers listed below or write to the **CCRAA, POB 217, Dollar, Bay, MI 49922-0217** or visit us on the web: **www.ccraa.net** **Ask for our new FREE booklet for new prospects to ham radio, for your friends who may be interested in ham radio. It's available in Adobe E-Mail format or via USPS.**

**PRESIDENT**

Glenn P. Ekdahl  
WA8QNF  
(906)482-7743  
wa8qnf@arrl.net

**VICE PRESIDENT**

Paul A. Kemppainen  
KC8FLK  
(906)482-4150  
pak77@lighthouse.net

**SECRETARY**

Andrew C. Kangas  
N8ZBJ  
(906) 483-3820  
andykangas@cs.com

**TREASURER**

Paul M Christensen  
W9VLM  
(906) 487-5271  
pungvait@hotmail.com

---

**CCRAA, INC.**

**POB 217**

**DOLLAR BAY MI 49922-0217**