



MICH-A-CON

Iron Mountain,
Dickinson County, Mich

October 2015

Meeting Reminder: Second Wednesday of the Month

Which is **October 14 2015** at 07:00 PM at the Dickinson Library, Iron Mountain.

From The President

The screenshot shows the Reverse Beacon Network website interface. At the top, there's a navigation bar with 'welcome', 'main', 'dx spots', 'nodes', 'downloads', and 'about' links. Below that, a search bar is visible with 'SSN:22 SFI:81 A:12 K:2 callsign lookup:'. The main content area displays a table of call signs and their associated frequencies and modes. The table has columns for 'de', 'dx', 'freq', 'cq/dx', 'snr', 'speed', and 'time'. The data rows include call signs like KO7SS, K1TTT, W4KKN, and 9K2HN with various frequencies and modes such as CW and CQ.

de	dx	freq	cq/dx	snr	speed	time
KO7SS	W2IW	7050.0	CW	24	15	0237z 11 Oct
KO7SS	AB3AH/P	3527.8	CW	28	25	0237z 11 Oct
K1TTT	K3QIA	3545.2	CW	34	20	0237z 11 Oct
W4KKN	W6OEZ	7057.0	CW	18	16	0237z 11 Oct
W4KKN	K3QIA	3545.2	CW	43	21	0237z 11 Oct
W4KKN	KC3WX	3540.9	CW	39	27	0237z 11 Oct
9K2HN	EU1WW	3502.8	CW	20	30	0237z 11 Oct

First of all thanks to our climbers, Eric(KG9GH) and Pete (AB9PJ) from the Marinette area. They spent last Saturday on our repeater antenna tower on Pine Mountain and a couple hours here at my QTH doing some coax work on my tower. They do not accept any monetary award for their work. This is a fun project for them. As members of the Marinette/Menominee ARC HAT (Ham Assistance Team), they have completed as many as 50 “projects” in one year. Whether it's a 500 foot tower or a 50 footer, they are glad to help hams in the area. Again, a big thanks to them!

Our repeater antenna will be moved to a different location on the tower this spring. We need to construct some standoffs before Eric and Pete return. More specific information will be given at the next meeting.

Also, at the next meeting on Wednesday at 7:00 pm, we will discuss this year's Veterans Day operation. We will setup on Friday afternoon November 6th and operate on Saturday and Sunday November 7th. More details at the meeting.

Inside this issue:

From The President	1
Secretary Report	2
News....	4
Tower	4
Digital Workshop	5
Learn CW Online	5
Packet Radio Network	6
ARRL Michigan Section News	9
ARRL Dales Tales	12
Propagation Bulletin	15
ARRL DX Report	17
Classified	19
Local Area Hamfest	20
Links and Stuff	21
About Our Club	22
DX Code Conduct	23
Membership List	24
Membership Form	25

I have found a new ham radio site to play with. It's the Reverse Beacon Network at reversebeacon.net.

The Reverse Beacon Network is a revolutionary new idea. Instead of beacons actively transmitting signals, the RBN is a network of stations listening to the bands and reporting what stations they hear, when and how well.

The RBN can be used to test propagation and most importantly YOUR signal to different parts of the world. I used it last week to see the difference between my three 40 meter antennas: a 40 Vee at 60 feet; a Butternut vertical ground mounted with 40 radials; a rotatable shortened dipole at 80 feet.

I transmitted a CW test signal on 7.064, switching between each antenna. I then waited for various receiving beacons to receive my signal and report it on the site. The inverted vee was the better of the three in all locations: south to Brazil and west to California. Unfortunately, the A was 77 that evening and propagation was bad everywhere! The dipole at 80' was the worse of the three. Obviously, there is something wrong with that antenna!

Check out the site and test your antennas!

73, Tom W8JWN

MICH-A-CON AMATEUR RADIO CLUB MINUTES OF SEPTEMBER 9, 2015

President Tom Martin called the meeting to order at 7:00 pm.

Secretary Report

Minutes of the August 12th meeting were read and approved.

Treasurer Report

Balances as of September 6, 2015
Checking -\$3.05
Savings -\$75.44 of which \$1652.43
Trailer Fund - \$1223.35
Repeater Savings - \$284.52
Cash - \$17.00

Repeater Report

Eric KG9GH was up, from, Marinette, over the Labor Day weekend. He will come up with a date when he, and possibly other climbers, can come up and move the new two meter antenna.

A motion (Scott Jarmusch, Terry Moriarity) to pay for fuel and lunch for the Marinette climbers was approved unanimously.



After discussion, a motion (Sam Holmes, Tom Heyboer), that Tom Martin may order 100 feet of RG214 coax and connectors, was approved unanimously.

Old Business

The club antenna trailer still needs painting and an electric winch.

Tom Martin will also order 100 feet of rotor cable (likely used) when he orders materials for the antenna. Gary Schafer will check to see if he might have an eight-pin socket.

The club membership list is now up to date and correct.

Setup for the Veterans Day special event will be on Friday November 6th with operation on Saturday November 7 and Sunday November 8. A list of operators will be finalized at the October meeting.

New Business

Sam Holmes reported that Dave Thomas has three large repeaters, belonging to the club, that he would like to get out of his garage, as they take up a lot of space.

Jim Rye noted that he is stepping down as ARES coordinator for Iron County. Bill Grabowski will be replacing him.

Adjournment

The meeting was adjourned at 7:58 pm.

For the Good of the Order

Attendees reported on their recent activities.

Attendees

Tom Martin, W8JWN
Scott Jarmusch, KA8TFF
Burton Armbrust, Sr., WB8EBS
Joe Ferris, KC9TQR
Gary Schafer, K4FMX
Tim Miller, N8TUM
Sam Holmes, N8ATS
Terry Moriarity, K9TRY
Tom Heyboer, KC8TH
Bill Grabowski, KD8VTT

Joe Kombleicz, KB8ETK
Dana Bey, W8BEY
Skip Caswell, K9EL
LeRoy Anderson, W8WQG
Jim Rye, W8IFI
Lee Franck, N9PHE, Visitor
Joyce Williams, Visitor

News

Tower Work

Guys from Marinette and Menominee climbing our tower Sat , Oct 3rd



Digital Voice Workshop in Traverse City, Michigan **Postponed**

Greetings and my apologies for failing to advise those parties interested in the Digital Workshop originally scheduled for September 26 in Traverse City that it has been postponed. Since I communicated the info about the workshop, it also was my responsibility to also communicate the postponement. I regret any inconvenience that this may have caused.

Larry, WB8R

See below:

Subject: Digital workshop postponed


I notice that the Michigan SET has now be scheduled for the same day we had planned to hold the digital workshop. I know that many of the participants and speakers will be participating in the SET so we had to postpone the workshop until some later date.

I will see what I can do to reschedule the workshop for a later date.

Thanks for your support and I hope we can make this work on a future date.

73,

Ernie, K8RCT



Learn CW online, in your web browser!
**Koch Method Morse Course, Speed Training,
Text to CW conversion, Statistics, Forum**

A new website to learn and practice Morse telegraphy has been launched:
<http://lcwo.net/> - Learn CW Online

There are already hundreds of training programs, MP3/CD courses and practice aids available, but LCWO follows a radically different concept: While sticking to well-proven methods for learning and practice, all you need for using LCWO is a web browser!

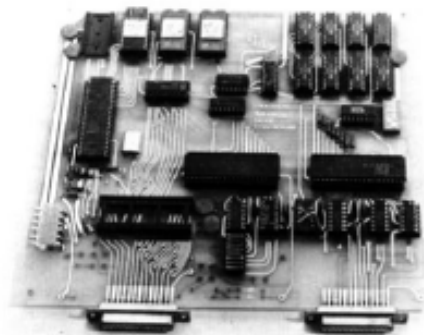
Currently the site, which is available in 30 languages offers a complete Koch method Morse course, code group practice, callsign- and plain text training modes and also allows to convert random text to Morse MP3s.

LCWO.net is a non-commercial project. Creating a free account only takes a few seconds, and you can start practicing CW right away!



Until the early 1980s, amateur digital communication above 50 MHz consisted primarily of RTTY. As this article from October 1981 illustrates, however, something entirely new was on the horizon.

The Making of an Amateur Packet-Radio Network



U.S. and Canadian Radio Amateurs are experimenting with packet radio. Plans are underway for an amateur packet-switched network to be built over the next few years.

By David W. Borden,* K8MMO,
and Paul L. Rinaldo,** W4RI

October 16, 1981, is the date set for the ARRL conference on Amateur Radio Computer Networking at the National Bureau of Standards, Gaithersburg, Maryland.¹ This will be the setting for a get-together by North American radio amateurs who are eager to build a packet-switched network.

Store-and-forward packet-switching techniques date back to a 1964 study by the RAND Corporation. The term "packet" was coined in 1965 by D. W. Davies of the British National Physical Laboratory. In that year, the U.S. Advanced Research Projects Agency (DARPA) started working on time-sharing concepts that would lead to the activation of ARPANET in 1969. Since then, a whole new science of packet communications technology has matured, and numerous government and commercial packet-switched networks have emerged. This history and an excellent treatment of packet technology is covered in a recent book edited by Kuo.²

Amateur Radio packet experimentation got its start in Canada on September 15, 1978, when the Department of Communications (DOC) announced rules for the Amateur Digital Radio Operator's Certificate.³ The DOC also established regulations for packet-radio transmissions and designated certain vhf and uhf subbands for packet emission. This kicked off packet activity in Ottawa, Montreal, Vancouver and elsewhere.

In 1975, the availability of microprocessors and inexpensive micro-computer kits gave personal computing a big send-off. Because ASCII was not at that time permitted in the ham bands, the choices for data communications were to convert to Baudot or to use the telephone lines. Couple this with the fact that many computerists do not have ham licenses, and you can see why telephone data communications became popular. In 1978, the Computerized Bulletin Board System (CBBS) was developed by Christensen and Suess.⁴ There are now around 200 active CBBS systems in the U.S. and Canada. This picture was changed by FCC action, effective March 17, 1980, that legalized ASCII over the U.S. ham bands. This set in motion some experimentation with serial (start-stop) transmission of ASCII; i.e., just hook up the computer to your ham radio equipment through a modem, and let 'er rip! As only a short time passed, it became clear that packet transmission of ASCII offered some advantages. So, a handful of U.S. experimenters set out to catch up with the

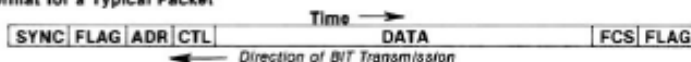
18-month lead enjoyed by their Canadian counterparts.

Pardon Me, But . . .

What is a packet? A packet is a group of ASCII characters (information) surrounded by control signals and error-detection features. The control signals help recognize the presence of a packet and tell any intervening switching equipment where the packet should be sent. The error-detection feature works so well as virtually to guarantee that bad information will not be observed by the destination station. Table 1 illustrates a typical packet.

As may be seen, a packet is similar to a message format. In fact, it's a lot shorter than the average Amateur Radio or MARS message. Besides carrying smaller payload, the header and trailer components are designed to be read by computer, not by human operators. The computer, in this case, can be either a home computer programmed to perform this function or a packet controller — a single-purpose microcomputer board dedicated

Table 1
Format for a Typical Packet



SYNC — First packet in a group of packets contains 16 bits of alternating zeros and ones.

FLAG — 8 bits, always 01111110 (7E hex).

ADR — Address of the sending station, either assigned dynamically by the Station Node at sign-on or hard-coded into the Terminal Interface Program (8 bits).

CTL — 8 bits containing control information for handling the packet.

DATA — From 0 (supervisory packet) to 255 bytes of data in ASCII.

FCS — Frame Check Sequence — 16 bits, computed by the sending station and checked by the receiving station.

FLAG — 8 bits, always 01111110 (7E hex).

*Notes appear on page 30.

*Rte. 2, Box 233B, Sterling, VA 22170

**1524 Springvale Ave., McLean, VA 22101

to this task. There are advantages to the packet-controller board approach, such as (a) taking advantage of packet-controller chips on the market, (b) keeping the hardware costs low by not tying up the personal computer and (c) avoiding the necessity of generating new software for every type of computer as changes are made.

Following this philosophy, a typical vhf Amateur Radio packet station would look like that in Fig. 1. The terminal in this case could be either a cathode-ray tube (CRT) or printer and could operate in either ASCII or Baudot code. The Terminal Node Controller (TNC) of the type designed by Doug Lockhart, VE7APU, can be programmed by means of programmable read-only memories (PROMs) to handle serial or parallel communication with a wide variety of terminals, including computers. The other side of the TNC manages the line — sending and receiving packets in High-Level Data Link Control (HDLC) format.

Example Packet Transmissions

Assume that the source station wishes to send a two-page message to a destination station using packets. The transmission might be broken up into 48 packets, each containing the address of the source and destination, an information (data) field containing a part of the total message and a frame check sequence (FCS) for error detection. The source station would enter his message into a computer terminal attached to a Terminal Node Controller. The TNC would accept the message as input, break it up into packets, send the packets over the transmission medium (radio, in this case) and receive an acknowledgment of correct reception from the destination station for each packet sent. The destination station would also employ a TNC to receive the packets, acknowledge correctly received packets (ASCII ACK) or request retransmission of any bad packets (ASCII NAK or negative acknowledgment). Bad packets are detected using the FCS. An FCS is appended to each packet by the transmitting station. The receiving station computes what the FCS should be and compares that with the FCS supplied with the packet. If the two agree, the chances are very great that the packet is error free. If the two answers disagree, the destination station knows that the packet is bad and requests retransmission of that packet only.

We have yet to observe the benefits of packet radio. First, a channel can be utilized by a number of users through a time-sharing arrangement known as time-division multiplexing. These different conversations can take place on the same channel, apparently at the same time. In fact, each pair of users believes that the channel is theirs exclusively. Unless a station deliberately tells its TNC to monitor

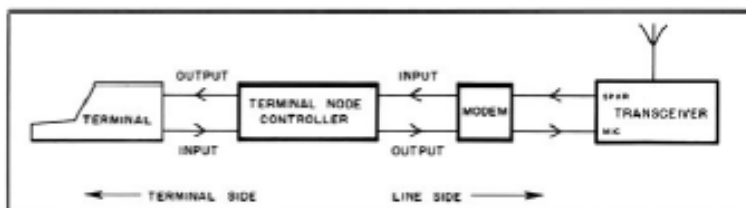


Fig. 1 — Block diagram showing a typical vhf packet-radio station. The arrows indicate the direction of data flow.

everything on the channel, the station will recognize only those transmissions meant for it.

You might ask, "What happens when two users transmit at the same instant?" In ham radio, it's QRM. In packet terminology, it is called a "collision." There are all sorts of so-called contention schemes to avoid collisions, but they happen even in the best packet networks. In this case, the TNC performs a carrier-sense check (to see if anyone is using the channel). Just to reduce the possibility of two TNC boards hearing nothing and bursting packets at exactly the same time, a variable time delay is built in. Because the time delay at each TNC (user) is changing, repeated collisions between the same pair of users should not occur.

Local Repeaters

In packet terminology, Local Area Network (LAN) is used to designate a number of terminals within a small geographical area that are able to talk to one another through a common channel. That may be coaxial cable or radio. It is difficult for some people to feel comfortable with the term "packet repeater," because this type of repeater may be quite different from the usual ham 2-meter fm variety. Because local area network packet repeaters are still highly experimental, those now operating or in the construction stage in the U.S. and Canada represent different approaches. As examples of two implementations of local area networks using the same Vancouver TNC boards and HDLC protocol, let us look briefly at San Francisco and Washington, DC.

The KA6M/R local area network packet repeater was activated on December 10, 1980.¹ It is a single-frequency repeater that accepts packets, performs an error check on them and retransmits them when the packets contain no errors. The repeater itself uses a Z-80 microprocessor driving a custom-built board containing a Western Digital 1933 HDLC chip. Bell 202 1200-baud modems are used both at the repeater and by members of the net. Individual stations are using Vancouver TNC boards.

The WD4IWG/R repeater is a straightforward 2-meter fm voice repeater, which is also used by local AMRAD (Amateur Radio Research and Development Corp.) members for data

communications. So, what comes in is repeated on the output frequency at the same time. This approach has the advantages of (1) using an existing repeater and (2) being able to sense the repeater output for presence of carrier before transmitting, avoiding collisions when the other station cannot be heard directly. Like those local networks in Vancouver, San Francisco and Hamilton, Ontario, the Washington, DC group is using the Vancouver TNC boards.

The local area network packet repeater scene is continuing to evolve with new compromises between doing it "right" and making do with what is available.

The Wider Network

The eventual goal is to tie these and many other local areas together to form a larger packet network. The focus, at the moment, is on interconnecting the various groups in Canada and the U.S. We are using the acronym AMNET to designate this wider network, which may go much beyond North America. Basic approaches, and possibly some tentative standards, for this network are the topic of the October 16 conference in Gaithersburg, Maryland.

There is general agreement that the bulk of the network traffic will be handled by the vhf or uhf packet repeaters deployed across North America. The spread of these repeaters could be as rapid as seen in past years with fm repeaters, but that depends upon enthusiasm and agreement of how to proceed. One view, perhaps the prevailing one, is that the intercity packet repeaters should be separate from the local area network packet repeaters. Also, it seems that the place for them is 220 MHz, and that they should operate at high signaling rates in the range of 1200 to 48,000 bits per second. The idea is to have the speed as high as practical in order to ensure that there is sufficient capacity to handle all intercity traffic. The higher speeds, however, require both wider bandwidths and greater power. So, the trade-offs are being studied. The lower speed (1200) would be necessary if, for some reason, we are unable to obtain an FCC rules change or waiver.

There is also a preference for the use of satellites for the long-haul circuits needed to "leapfrog" the vhf/uhf terrestrial network. Data communications channels are

A Glossary of Packet-Radio Terms

Address — Element(s) of a packet frame that identify the source and/or destination stations by means of an agreed bit pattern.

CCITT — Consultative Committee for International Telegraph and Telephone, a part of the International Telecommunication Union (ITU).

CSMA — Carrier sense multiple access, a contention scheme in which stations listen for the presence of a carrier on the channel before sending a packet.

HDLC — High-Level Data Link Control, a packet transmission protocol developed by the International Standards Organization (ISO). It was derived from IBM's Synchronous Data Link Control (SDLC).

Flow control — The method used to regulate the rate of data exchange between the end users of the packet network in order to prevent system overloading. In general, the input is slowed down or stopped until the network handles the previous input.

Packet — (CCITT definition) A group of binary digits, including data and call control signals, that is switched as a composite whole. The data, call control signals and possibly error-control information are arranged in a specific format.

Packet switching — (CCITT definition) The transmission of data by means of addressed packets, whereby a transmission channel is occupied for the duration of transmission of the packet only. The channel is then available for use by packets being transferred between different data terminal equipment.

Protocol — A format and set of procedures for achieving communications.

Protocol layering — The International Standards Organization (ISO) has divided protocols into seven layers, from the lowest through the highest levels, as follows: Physical, Link, Network, Transport, Session, Presentation and Application. RS-232-C is an example of a Physical level protocol, HDLC a Link level.

Routing — A sequence of passing packets through various store-and-forward packet switches in a network to the desired destination.

Terminal Node — As used by the Vancouver Amateur Digital Communications Group, a user station in the packet network consisting of a Terminal Node Controller board, a data terminal (or computer), a modem and radio equipment.

assigned to AMSAT Phase III and later satellites in the planning stages. Hank Magnuski, KA6M, is the chairman for the AMSAT International Computer Network (AMICON) system architecture design group.

High-frequency (hf) packet circuits will be needed to fill in the gaps while the satellite capability is still not operational. Also, some hf capability should be maintained as a back-up system. An experimental hf packet circuit is being tested between AMRAD (WD4IWG) in Washington and ARRL (W1AW) in Newington to determine both equipment and software requirements for an operational circuit. Hf propagation restricts practical speeds to the general range of 75 to 600 baud, although 300 baud is the top speed presently permitted by FCC rules. The

speeds of 300, 600 and 1200 baud are possible over ionospheric paths within the limitations of multipath distortion. Generally speaking, a radio signal that is operating on the maximum usable frequency (muf) has only one path, thus no multipath. However, lower frequencies (than the muf) can follow several paths within the same ionospheric layer, and suffer multipath distortion at higher speeds. This is a complex effect that varies by path distance and operating frequency, relative to the muf. The worst circuit distances for multipath are the shortest ones, e.g., under 300 miles — that between Newington and Washington. The best path distance is around 1000 to 1600 miles.

Getting Started

First, you need to do some reading. In addition to the references at the end of this article, you will find a number of books and magazine articles in many technical libraries. More to the point, you may wish to join one or all three of the following Amateur Radio groups that regularly publish newsletters with substantial packet information:

- 1) Amateur Radio Research and Development Corp. (AMRAD), monthly *AMRAD Newsletter* (\$12). Gerald Adkins, N4GA, 1206 Livingston St. North, Arlington, VA 22205.
- 2) Vancouver Amateur Digital Communications Group (VADCG), *The Packet* (\$10). Don Oliver, VE7AOG, 818 Rondeau St., Coquitlam, BC V3J 5Z3.
- 3) Hamilton and Area Packet Network (HAPN), *I-Frame de VE3PKT* (\$10). Stu Beal, VE3MWM, 2391 Arnold Cres., Burlington, ON L7P 4J2.

If you decide to start with the Vancouver TNC board, you can order them from VE7AOG. The price is \$30 for a bare board and all documentation. You will need to populate it with integrated circuits, resistors, capacitors and the switches required. You then plug in PROM chips containing the appropriate program and begin communicating. The total cost of the TNC is about \$250 when you add up the costs of the board and parts.

Next, you will need a Bell 202 modem. These may be available as surplus at hamfests, but several manufacturers are now making them at affordable prices. If you contemplate only hf operation, your existing RTTY modem (AFSK keyer/demodulator) may be used at the slower speeds of 75 and 150 baud, possibly with some modification.

Some Cautious Conclusions

Amateur packet radio experimental activity is well under way. Local area networks have been set up in a number of places in Canada and the U.S. Network standards and protocols are beginning to take shape.

You can get involved by starting a local area network with just two (or more) hams within range of each other. One or more of the groups mentioned in this article can help you get started.

Notes

- "Call for Papers on Packet Radio and Computer Networking." *QST*, July 1981, p. 32.
- "Kuo, Protocol & Techniques for Data Communication Networks (Englewood Cliffs, NJ: Prentice-Hall, 1981).
- "R. Hesler, "Canadian Newsfronts: DOC Creates New Amateur License Class." *QST*, Dec. 1978, p. 61.
- "Christensen and Sues, "Hobbyist Computerized Bulletin Board." *Byte*, Nov. 1978, p. 150.
- "H. Magnuski and P. O'Dell, "First Packet Repeater Operational in U.S." *QST*, April 1981, p. 27.

Bibliography of Packet Radio and Amateur Computer Networking

- Abramson. "The ALOHA System." *Computer-Communication Networks*. Englewood Cliffs, NJ: Prentice Hall, Inc., 1973, pp. 501-518.
- Borden. "Protocol." columns. *AMRAD Newsletter*, Feb. and later issues.
- Bruninga. "A Multuser Data Network — Communicating over VHF Radio." *Byte*, Nov. 1978, p. 120.
- Caulkins. "PCNET 1979." *People's Computers*, Sept.-Oct. 1977.
- Derfler. "Dial-up Directory." *73*, issues starting with Jan. 1980.
- Felsenstein. "Community Memory — A 'Soft' Computer System." *Proceedings of the First West Coast Computer Faire*, April 1977.
- Folts and Karp. *Compilation of Data Communications Standards*. New York: McGraw-Hill, 1978.
- Fylstra. "Homebrewery vs. The Software Priesthood." *Byte*, Oct. 1976.
- Halprin. "Hip Packet." *QST*, April 1981, p. 91.
- Henry. "ASCII, Baudot and the Radio Amateur." *QST*, Sept. 1980, p. 11.
- Hewlett-Packard. *Data Communications Testing*. Delcon Div., 690 E. Middlefield Rd., Drawer 7021, Mountain View, CA 94042, 1980, Manual Part No. 5952-4973.
- Hodgson. "An Introduction to Packet Radio." *Ham Radio*, June 1970, p. 64.
- Horton. "Distributed Network." *Byte*, Nov. 1978.
- Isaak. "Standards for the Personal Computing Network." *IEEE Computer*, Oct. 1978, p. 60.
- Kahn, et al. "Advances in Packet Radio Technology." *Proceedings of the IEEE*, Vol. 66, No. 11, Nov. 1978.
- Kasser. "The Sky's the Limit: Ham Radio for Inter-computer Communication." *Byte*, Nov. 1978.
- Kasser. "The Club Computer Network." *Byte*, May 1980.
- Kleinrock and Tobagi. "Packet Switching in Radio Channels: Part I — Carrier Sense Multiple Access Modes and Their Throughput-Delay Characteristics." *IEEE Trans. Commun.*, Vol. COMM-23, Dec. 1975, pp. 1400-1416 (and other papers in the same issue).
- Levin. "Interpersonalized Media: What's News?" *Byte*, June 1980.
- McCarthy. "DIALNET and Home Computers." *Proceedings of the First West Coast Computer Faire*, April 1977.
- Newcomb. "Why not Just Use the Phone?" *Byte*, July 1978.
- Pain. "Washington Mailbox: ASCII." *QST*, June 1980, p. 60.
- Pank. "CB Computer Mail." *Proceedings of the First West Coast Computer Faire*, April 1977.
- Pugh. "MCALL-C: A Communications Protocol for Personal Computer." *Dr. Dobbs' Journal of Computer Calisthenics & Orthodontia*, 1980, No. 46, p. 16.
- Riportella. "Satellite-Linked Computer Network. A Phase-III Hook-up for Your Keyboard." *Ham Radio Horizons*, March 1980, p. 48.
- Rouleau. "The Packet Radio Revolution." *73*, Dec. 1978, p. 192.
- Rouleau and Hodgson. *Packet Radio*. Blue Ridge Summit, PA: Tab Books, 1981.
- Stoner. "Calling All Computers." *Byte*, Dec. 1978, p. 159.
- Teleser. "Computer Networks." *People's Computers*, Sept.-Oct. 1977.
- Wilber. "CIE Net." *Byte*, Feb. through April 1978 issues.
- Williams. "ASCII at Last!" *QST*, Oct. 1978.

ARRL MICHIGAN SECTION NEWS

Greetings to the Hams of Michigan:

It is hard to believe that summer is all but over and the leaves even in the most southern portions of the state are beginning to turn colors. While fall is my favorite time of the year, I have to say that I don't really look forward to the winter season. The good news is that I generally don't have to get out in the white stuff unless I choose to.

Amateur Radio Parity Act of 2015

Attention Club Presidents:

We still need more pressure to be placed on MI Senators Peters and Stabenow to co-sponsor and support Senate Bill S1685. Making a general call for individuals to write letters to their elected representatives, but the real truth of the matter is that the actual percentage of hams that individually take the requested action is pretty small.

You can change that little dose of reality. Do the work for your club members and make it easy for them to take that action. Here is how to do it:

In advance of your next meeting, prepare two letters, one addressed to Senator Stabenow and the other addressed to Senator Peters. You can find the appropriate letters here:

<http://www.arrl.org/amateur-radio-parity-act>.

Remove the sender's name and address prompts from the bottom of each letter. Print or copy the appropriate numbers of letters and take them to your club meeting. Ask that all hams that have not yet sent a letter to their Senators to sign one letter for each Senator and add their printed name and callsign, signature, address, city, state and zip code. Bring a handful of pens so that no one has to stand in line waiting for a pen to use. In 10 minutes you can have 30 or more letters signed for each Senator.

Collect the completed letters, and mail them to ARRL HQ at:

ARRL
225 Main St
Newington, CT 06111

Attn: S1685 Grassroots campaign

Or, if you would like to avoid the postage costs, you can scan the signed letters into PDF format and then email them to:

reginfo@arrl.org.

Please include "S1685 Grassroots Letter" in the subject field of your email.

All letters sent to ARRL HQ (email or snail mail) will be printed and hand delivered to the respective Senator's offices in Washington.

Please send me a note (wb8r@arrl.org) to advise how many letters your club has signed and sent to HQ.

2015 Michigan Simulated Emergency Test

The Michigan Simulated Emergency Test (SET) is scheduled a week earlier this year to avoid the opening of bow season which in the past has asked a significant number of individuals to choose between hunting and participating in the exercise. Hopefully the change will have a positive effect on participation. If you need information, you can locate contact information for your County EC and your District EC here: <http://ares-mi.org/ECcontact.php>. You can contact your Section EC at wb8rcr@arrl.net.

Hospitality Acknowledgements

Sep 14, 2015

Holland ARC

It was a pleasure to attend your club meeting and I thank you for the hospitality you have shown.



Hamfests, Meetings and Section Staff Travel Plans

- Sep 17, 2015 Monroe County Radio Comm. Ass Mtg–WB8R
- Sep 19, 2015 GMARC Fall Trunk Swap
- Sep 20, 2015 Adrian Hamfest, Adrian, MI – WB8R
- Sep 26, 2015 QMN Picnic, Flint MI – WB8R
- Oct 1, 2015 Muskegon ARC, Muskegon, MI – WB8R
- Oct 3, 2015 GRAHamfest, Wyoming, MI – WB8R
- Oct 15, 2015 SMARS Meeting, Battle Creek, MI – WB8R
- Oct 17, 2015 Muskegon Color Tour, Muskegon, MI – WB8R
- Oct 18, 2015 Kalamazoo Hamfest, Kalamazoo, MI – WB8R
- Oct 25, 2015 USECA Hamfest, Madison Heights, MI – WB8R
- Dec 6, 2015 L’Anse Creuse Hamfest, Harrison Twp MI WB8R

Michigan Section Traffic/ARPSC Nets

(All times Local)

- MACS - MI Amateur Communications System 3.952 1000 Daily
- UPN – Upper Peninsula Net 3.921 1700 Daily; Noon Sunday
- MIARPSC – MI Amateur Radio Public Service Corps 3.932 1700 Sunday
- QMN – The Michigan Net 3.563 1830 and 2200 Daily
- MITN – MI Traffic Net 3.952 1900 Daily
- MIDTN – MI Digital Traffic Net 3.583 (Olivia 8/500) in waterfall 2000 Tues, Thurs, Sat
- MIADS – MI ARES D-Star Net Reflector 24A Mon 2000
- D8EN - District 8 Emergency Net 3.909 Wed 2100
- GLETN – Great Lakes Emergency and Traffic Net 3.932 2000 Daily
- MVTN – MI VHF Traffic Net IRA Link System 2100 Mon, Wed, Fri, Sun
- NLEUP - Northern Lower Eastern UP Net 146.64- 18:30 Daily
- SEMTN – SE MI Traffic Net 146.76- 2215 Daily
- TMMTN – Thumb Mid-Michigan Traffic Net 147.30+ 2130 Mon - Sat

More information is available at <http://nts-mi.org/>.
Come join us on our traffic and public service nets.

Amateur Radio Public Service Corps (ARPSC) Activities

SARs for August, 2015: WB9JSR 725, WB8WKQ 200, K8ED 112, K8RDN 107, WB8TQZ 105, N8FVM 98, WD8USA 50, WD8MWD 40, W8MSK 34, KC8BW 20, N8OSL 13, WB8RCR 13, KD8ULU 12, WB8R 9, KD8LSM 2, N8UN 2. Total SAR reported: 1542

BPL for August, 2015: WB9JSR 725.

PSHRs for August, 2015: N8OSL 358, N8FVM 240, WB8RCR 233, WD8MWD 195, WB8R 188, KC8YVF 150, WD8USA 135, WB9JSR 120, WB8WKQ 110, WB8TQZ 110, K8RDN 99, NE8B 95, K8ED 77, KC8BW 54, KD8LSM 30, KC8NFN 28, KD8ULU 17, N8QVQ 2.

Net traffic for August, 2015: The Michigan Net 155, Michigan Traffic Net 127, Michigan Amateur Communications System 114, Upper Peninsula Net 45, Michigan VHF Traffic Net 36, Great Lakes Emergency and Traffic Net 35, Southeastern Michigan Traffic Net 26, Michigan Digital Traffic Net 15, District 3 ARPSC Net 5, Northern Lower Eastern Upper Peninsula Net 5, Saginaw County ARES Net 4, Red Cross Net of Greater Grand Rapids 1, Genesee County ARPSC Traffic and Training Net , District 5 Hospital Net , Oakland County Amateur Radio Society Net , District 8 Emergency Net , Michigan Amateur Radio Public Service Corps , Chelsea ARC Net , Bay Area Regional Traffic System , Branch County Emergency Net .

Total net traffic reported: 568

If you are reporting monthly, you can see your PSHR eligibility status at <http://www.nts-mi.org/>. The full details are at:

<http://www.arrl.org/public-service-honor-roll>. This award recognizes the efforts of hams that are active in public service. Those reporting accumulate points for checking into nets, volunteering, holding Section

appointment(s) and handling message traffic.

EC’s can see their reports of Form FSD-212 here:

http://ares-mi.org/ec_his.php If you send your report to WB8RCR and don't see it noted there, send a note to John to tell him your report has gone missing. EC's: Be sure to share your FSD 212 with your District EC, your ARES/RACES members and with your county's Emergency Manager and others in your jurisdiction who need to know what you and your ARES/RACES group are contributing to your community each month.

If you have difficulty knowing how to report and how to complete the FSD 212 form, assistance is as close as your District EC or your Section EC. If you don't know who these folks are, you can locate them here: <http://ares-mi.org/ECcontact.php>. They stand ready to help you.

Until next time,

73,

Larry, WB8R

Dales Tales

Greetings everyone, welcome to "Dale's Tales" for October 2015.

SPECIAL EVENT: Radio Amateur Satellite Corp. (AMSAT -NA) will hold their 33rd AMSAT Space Symposium and Annual Meeting Friday through Sunday, October 16-18, 2015 in Dayton, Ohio at the Crowne Plaza Hotel, 33 East 5th Street in downtown Dayton. There is free hotel parking to attend the Symposium. Registration includes receiving a copy of the "Proceedings of the 33rd AMSAT Space Symposium". Papers will be presented from 1300-1700 on Friday and 0800-1530 on Saturday (break for lunch). There is a reception Friday evening and the banquet on Saturday starts at 1900. The banquet speaker will be AMSAT VP-Human Space Flight Frank Bauer, KA3DHO, retired NASA Engineer at Goddard Space Flight Center presenting "Making a Difference: AMSAT's Contribution to Navigation and Timing in HEO/GEO Space and Its Profound Impact on Earth and Space Science".

The Symposium is a wonderful opportunity to learn about amateur radio's newest satellites! Get helpful tips and techniques of working the "birds". Hear about the future satellites. Banquet Prizes! Rub shoulders with some of your fellow hams and satellite enthusiasts.

Additional information about Symposium and options to register for the Symposium as well as the banquet can be found online: http://www.amsat.org/?page_id=3667. Check directly with the Crowne Point Plaza Hotel for room availability as the deadline for the AMSAT block of rooms has expired. Call 1-800-689-5586 for hotel reservations.

CLUB PROGRAM OPPORTUNITIES: You would be surprised to discover all the things that your League is involved with these days. Here is an opportunity to learn more about how your being an ARRL member truly helps Amateur Radio. Your locally elected leadership, consisting of your ARRL Director, Vice Director and Section Managers are available to visit radio clubs and talk with you about ARRL and what is happening in your Section or your Division or nationwide. Most of the talks

are prepared in a video presentation format and can include a Q&A session as well. Advance scheduling really helps and gives you an opportunity to publicize the event. See pages 15 & 16 of a recent QST for contact information.

COMMENTS: from our Vice Director, Tom W8WTD

It was another busy month with travel to hamfests. I always enjoy meeting and talking to fellow hams, and finding out what is on your mind.

This may sound like a broken record, but we can't stress enough how important it is to put some pressure on Congress to get our legislation passed. You can check out the ARRL website for all the details on the two bills, one in the Senate, and one in the House. It's hard to overestimate how important these bills may prove to be for the future of ham radio. Each ham should do his or her part.

While we're generating letters at hamfests, it's also important to note where things stand with individual Congressmen. We don't want to appear ignorant of who is supporting us already. While we want to gain more support by way of co-sponsors, it's equally important to thank those who are already on board. So I did a search on the current list of Congressmen, looking for those from the Great Lakes Division who are signed on as co-sponsors.

Here's the list:

Michigan: Rep. Benishek, whose 1st district includes a lot of northern Michigan and all of the U.P. ; Rep. Huizenga, whose 2nd district includes a portion of the western part of the state; and Rep. Bishop, whose 8th district includes a smaller portion of the center of the state.

Kentucky: Rep. Guthrie, whose 2nd district includes a lot of the center of Kentucky, from south of Louisville and Lexington down to Bowling Green.

Ohio: Rep. Wenstrup, whose 2nd district includes much of southern Ohio, from just east of Cincinnati over to

Chillicothe and south to the Ohio River; Rep. Johnson, whose 6th district takes in much of eastern Ohio, running along the Ohio River from Youngstown south and west near to, but not including Portsmouth; and Rep. Joyce, whose 14th district is generally east of Cleveland.

These are people we need to thank! Please send an e-mail, or phone your local office with a message of thanks and encouragement. If you're not sure of just who your representative is, you can find out by checking the listing "Who is my representative in the US House?" under the Amateur Radio Parity Act of 2015 on the ARRL website. If your Congressman is a co-sponsor, please thank him. If not, then ask for his or her support, either by signing a letter at one of the hamfests, or getting details on how you can write a letter from home, also on the ARRL website. Please, do something this week. It only takes a few minutes, and it is so important to you and to all your fellow hams!

Here's another way that a few of you can help. Not everyone will be able to do this. But in conversations at hamfests, I came across a few people who could say, "You know, I went to school with Rep. ____" Or, "I know Rep. ____ from business connections, back when he was doing ____." If you have any connections like that, what would it take for you to call and make an appointment and discuss the issue with your friend?

Personal connections are so important. And while most of us don't have those, all of our representatives went to school somewhere, and have friends in the community. If you have that kind of connection, please make use of it!

Thanks for listening. I hope to see many more of you at hamfests and meetings coming up next month and beyond, and also talking with you on the air.

73, Tom W8WTD

FIELD CARD CHECKERS: Well, the facts are simply this: we need more and we need more to visit our hamfests. The ARRL Programs and Services Committee has established a sub-committee to examine the current Field Checker guidelines, the appointment requirements and many of the details of the program. It has been a while since a thorough review has been conducted of the Field Checker rules so that is happening now.

Your Director has been asked to assist, and I have been actively discussing Field Card Checking with both active Checkers and aspiring ones plus the DX Community in general. Feel free to let me know your thoughts and I will see to it they are considered by the committee.

Today, Card Checkers can be nominated by the following methods: One by each recognized "DX Club", one by the Section Manager in his Section and one by the Division Director in his Division. These requirements impose some serious limits. For example, a Section with 2 DX clubs can have 3 Field Checkers, (possibly 4, if the Director's appointment was made in that geographic area). A change of Section Manager or Director has no bearing on appointing additional Field Checkers. As you can see, geography and population density can affect where the Field Checkers are located and even how far they need to travel. Further, the rules are silent on how to replace non-active Checkers. Suffice it to say, we have a list of things to consider, but hopefully, some improvements can be implemented within the next few months. In the meantime, our Division's diligent Field Card Checkers are taking every opportunity to be at swaps to check our cards. They travel on their dime and truly deserve our sincere thanks for serving the DX Community.

UPDATE for AMATEUR RADIO PARITY ACT:

We now have 100 Co-sponsors for HB1301 in the U.S. House of Representatives. The new ARRL Web Page <http://www.arrl.org/amateur-radio-parity-act> contains the complete text of both the House and Senate bills.

HAMFESTING: Here is the current Great Lakes Division ARRL Sanctioned Hamfest Schedule for the next few weeks. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

Your Division and Section officials want to be at your events and we strive for insuring that the ARRL is properly represented at every ARRL Sanctioned Hamfest. It is always a good idea for your hamfest chair to contact the Section Manager, Vice-Director or Director early in the planning stages to invite them to attend the

activity. This will allow time to prepare for alternate representation in the event of time conflicts.

Oct 3 - ARRL Executive Committee Meeting
Oct 3 - GRAHamfest - Grand Rapids, MI
Oct 3 - Vette City - Bowling Green, KY
Oct 10 - TBARC Swap - Alpena, MI
Oct 17 - Muskegon Color Tour Hamfest - Muskegon, MI
Oct 18 - Conneaut - Conneaut, OH
Oct 18 - Kalamazoo Hamfest, Kalamazoo, MI
Oct 25 - Massillon - Massillon, OH
Oct 25 - USECA - Madison Hgts, MI
Oct 31 - Hazard - Hazard, KY
Nov 7 - Grant County - Georgetown, OH
Dec 5 - Fulton County Winterfest - Delta, OH
Dec 6 - L'Anse Creuse - Harrison Twp., MI

HAMFEST OFFICIALS: When you receive your "Hamfest Package" from ARRL, please open it immediately. Read it over and check out all of the material you received. There is a form included to order additional material if you deem it appropriate.

73, see you on the bands.

Dale Williams WA8EFK
Director
Great Lakes Division

ARRL PROPAGATION BULLETIN

ARLP041 Propagation de K7RA

ZCZC AP41

QST de W1AW

Propagation Forecast Bulletin 41 ARLP041 From Tad Cook, K7RA Seattle, WA October 9, 2015 To all radio amateurs

SB PROP ARL ARLP041

ARLP041 Propagation de K7RA

Sunspot numbers and solar flux softened over the past week, with average daily sunspot numbers declining from 120.9 to just 37, and average daily solar flux down from 122.7 to 93.8. These numbers compare the October 1-7 activity against the previous seven days.

Average planetary A index was way up, from 5.1 to 24.3. The planetary A index reading of 77 on Wednesday was a big factor in the high average. That is a huge number, indicating a strong geomagnetic storm.

Predicted solar flux for the near term is 80 on October 9-10, 85 on October 11, 90 on October 12, 95 on October 13-14, 100 on October 15-16, 130 on October 17-18, 125 on October 19, 120 on October 20-25, 115 on October 26, 110 on October 27 and 100 on October 28-29.

Solar flux is predicted to decline to 85 on November 1-3, then rise to 130 on November 12-14.

Predicted planetary A index is 27 on October 9, 12 on October 10-11, 20 and 15 on October 12-13, 12 on October 14-15, then 10, 12, 8, 10 and 12 on October 16-20, followed by 8 on October 21-27, then 10, 12 and 10 on October 28-30, 12 on October 31 to November 1, then 8, 12 and 15 on November 2-4, then 20, 18 and 12 on November 5-7, and 8 on November 8-11.

A geomagnetic forecast comes to us from Tomas Bayer of the Budkov Geomagnetic Observatory in South Bohemia (Czech Republic):

"Currently, active conditions should continue after the storm yesterday (at the Budkov observatory, the seventh K-index reading on October 8 has reached 6). The first three days of the forecast week (October 10-12), we expect at the Budkov observatory at most unsettled conditions. After day 4 (October 13), geomagnetic conditions should turn to quiet, nevertheless, an isolated active episode is possible. Day 5 (October 14), we expect at most unsettled conditions, the rest of forecast week should be at most quiet with a short active episode."

We also have a weekly geomagnetic forecast from F.K. Janda, OK1HH of the Czech Propagation Interest Group. He expects the geomagnetic field will be active to disturbed October 9-10, quiet to active October 11, quiet to unsettled October 12, quiet to active October 13, quiet to unsettled October 14-15, quiet to active October 16-17, mostly quiet October 18-19, quiet to active October 20, mostly quiet October 21, quiet to unsettled October 22, quiet on October 23-24, quiet to unsettled October 25, quiet on October 26, mostly quiet October 27, quiet to unsettled October 28-29, quiet to active October 30, quiet to unsettled October 31, quiet to active November 1, and active to disturbed on November 2-4.

He expects increased solar wind on October 9-10, 16-17, 19-20 and November 2-4.

John Van Dalen, N7AME of Everett, Washington wrote, "My read of the last week have been disgusting to say the least. The East Coast seems to be enjoying some propagation as does South America and the lower 48. But it appears that Washington State is in a real slump unless I have a radio problems or all three antenna have gone bad."

Yes, the high levels of geomagnetic disturbance this week have had a disruptive effect on HF propagation. John reminds us of a useful tool for propagation work, the online version of VOACAP:

<http://www.voacap.com/prediction.html>

It's easy to use and works great. The predicted mean sunspot number for the month is already entered, so all you

need are the two endpoints of the path you want to look at.

Jon Jones, NOJK in Kansas reports a nice 6 meter opening during all the geomagnetic upset:

"A surprise 6 meter F2 opening occurred the afternoon of October 7 between the Caribbean, Central America and Gulf Coast and Midwest states.

"The solar flux was only 83, but the Boulder K index went to 7 causing a class G3 geomagnetic storm.

"Aurora was spotted in northern W9 and W0 at 1900z.

"Around 1925z FG8OJ was spotted to south Texas along with VP2ETE.

"I was on the radio at 1940z. TI3/W7RI popped up 59++ on 50.110 MHz and in my log at 1941z. Scott, TI3/W7RI worked many stations over the next 25 minutes. Other TI stations active included TI5XP and WA8NJR/TI5. The TI stations worked W8, W9 and W0 along with the Gulf Coast states. This was one hop F2. By 2005z the TI - Midwest opening was over. A brief but intense opening. Stations further south heard the OA4TT/b for another hour or so."

Thanks, Jon!

If you would like to make a comment or have a tip for our readers, email the author at, k7ra@arrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service web page at

<http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/w1aw-bulletins-archive-propagation>. More good information and tutorials on propagation are at <http://k9la.us/>.

My own archives of the NOAA/USAF daily 45 day forecast for solar flux and planetary A index are in downloadable spreadsheet format at <http://bit.ly/1VOqf9B> and <http://bit.ly/1DcpaC5>.

Click on "Download this file" to download the archive, and ignore the security warning about file format. Pop-up blockers may suppress the download.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrl.org/bulletins>.

Sunspot numbers for October 1 through 7 were 73, 58, 47, 18, 15, 24, and 24, with a mean of 37. 10.7 cm flux was 119.7, 107.4, 96.9, 88.3, 82.6, 81.4, and 80.5, with a mean of 93.8. Estimated planetary A indices were 11, 14, 11, 20, 18, 19, and 77, with a mean of 24.3. Estimated mid-latitude A indices were 8, 9, 10, 16, 12, 11, and 44, with a mean of 15.7.

ARRL DX NEWS

ARLD040 DX news

ZCZC AE40

QST de W1AW

DX Bulletin 40 ARLD040

From ARRL Headquarters

Newington CT October 8, 2015

To all radio amateurs

SB DX ARL ARLD040

ARLD040 DX news

This week's bulletin was made possible with information provided by QRZ DX, the OPDX Bulletin, 425 DX News, The Daily DX, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites.

Thanks to all.

ITU HQ, 4UITU. Robert, S53R plans to be QRV as 4U1ITU for a few hours beginning around 1200z on October 13. QSL via operator's instructions.

UGANDA, 5X. Jay, K4ZLE will be QRV as 5X2A from Kampala, Jinja, and Lira from October 10 to 19. Activity will be from 1800 to 2000z and 0300 to 0500z on 40 to 17 meters using CW and possibly RTTY. QSL to home call.

PAKISTAN, AP. Ijaz, AP2IA has been active using RTTY on 15 meters between 1100 and 1430z. QSL direct to home call.

SPAIN, EA. Special event station AO2015STJ celebrates the 500th birthday of the saint Teresa of Avila. Activity is on the HF and VHF bands using CW, SSB and various digital modes. QSL via EA1EG.

REPUBLIC OF KOREA, HL. A large group of operators are QRV as DS0KBS from Shinski Island, IOTA AS-148, until October 11. Activity is on the HF bands. QSL via bureau.

VATICAN, HV. Look for HV0A to be QRV during a DX Summit to the Eternal City in Rome on October 10 begin-

ning around 1400z until 1800z. Activity will be on several HF bands. QSL via IK0FVC.

SVALBARD, JW. Just, LA9DL, Erling, LA6VM and Halvard, LA7XK are QRV as JW9DL, JW6VM and JW7XK, respectively, from Spitsbergen Island, IOTA EU-026, until October 12. Activity is on the HF bands using SSB. This includes being active as JW5X in the Scandinavian Activity SSB Contest. QSL JW5X via LA5X and all others to home calls.

AUSTRIA, OE. Members of the Vienna International Amateur Radio Club are QRV as 4U70VIC until the end of the year to commemorate the United Nation's 70th anniversary. QSL via 4U1VIC.

GREECE, SV. Special event station J42CPMV is QRV until October 18 during the International Disaster Reduction Day. QSL via SV2HXV.

DODECANESE, SV5. Carlo, IK2ECC is QRV as SV5/IK2ECC from Rhodes Island, IOTA EU-001, until October 14. Activity is on the HF bands using CW. QSL to home call.

TUVALU, T2. Atu Maui, T2AM is QRV on some HF bands. QSL via KK7L.

CHAD, TT. Pierre, HB9AMO plans to be QRV as TT8AMO beginning mid-month and lasting until the middle of November. Activity will be on the HF bands using CW with some SSB. QSL direct via MOURX.

BENIN, TY. Nicolas, F8FQX is QRV as TY2SN for the next three years. Activity is on the HF bands using CW and SSB. QSL direct via IZ1BZV.

ASIATIC RUSSIA, UAO. Members of the Novokuznetsk Radio Club are QRV with special call sign RI10NRC during October to celebrate its 10th anniversary. Activity is on the HF bands using all modes. QSL via RV9V.

MARSHALL ISLANDS, V7. A large group of operators will be QRV as V73D from Majuro Atoll, IOTA OC-029, from October 13 to 28.

Activity will be with four stations on 160 to 6 meters using CW, SSB and RTTY. QSL via DL4SVA.

INDONESIA, YB. Special event station YB16IARU will be QRV from Bali, IOTA OC-022, from October 12 to 16 during the context of the 16th IARU Region 3 conference on Bali. Activity will be on the HF bands. QSL via bureau.

ST. HELENA, ZD7. Oliver, W6NV will be QRV as ZD7W from October 15 to November 2. Activity will be on 160 to 10 meters using CW and SSB. QSL via operator's instructions.

OPERATIONS APPROVED FOR DXCC CREDIT. The following operations have been approved for DXCC

Credit: Chesterfield Islands, TX3X, 2015 operation; Albania, ZA1KS, 2015 operation.

THIS WEEKEND ON THE RADIO. The 10-10 International 10-10 Day Sprint, NCCC RTTY Sprint Ladder, NCCC Sprint, Makrothen RTTY Contest, Microwave Fall Sprint, Oceania DX CW Contest, Scandinavian Activity SSB Contest, QRP ARCI Fall CW QSO Party, SKCC Weekend CW Sprintathon, Pennsylvania QSO Party, Arizona QSO Party, FISTS Fall Unlimited CW Sprint, PODXS 070 Club 160-Meter Great Pumpkin PSK31 Sprint and the UBA ON CW Contest will certainly keep contesters busy this weekend.

The RSGB 80-Meter Club CW Sprint, Phone Fray, CWops Mini-CWT CW Test, and NAQCC CW Sprint are scheduled for October 14. Please see October QST, page 89 and the ARRL and WA7BNM contest web sites for details.

CLASSIFIED

K8DDB Items For Sale

Prices as of September 2, 2015

All prices are negotiable, items sold "as is", shipping is not included
(I would prefer to sell the bulky items locally)

Cell phone: (906) 221-1550 or Email: mikebray@chartermi.net

Radio Gear:

* **Elecraft K3 Transceiver** (serial # 5093 purchased 1/11/2011) – 100 watts, w/ATU, general coverage Rx module, filters for - 6 khz, 400 hz, 250 hz -includes manuals,

Heil Proset-K2 boom headset for the K3/K2 (Heil iC element) and book "The Elecraft K3" by Fred Cady.

Asking \$1,500 or reasonable offer

* **Ten- Tec Centurion Model 422 Linear Amp** – Two 3-500Z tubes – 1300 watts SSB, 1000 watts CW, 50% duty cycle. Tubes have very few hours on them as I operate primarily QRP - (includes manual)

Asking \$500 or reasonable offer

* **Viking 6n2 Transmitter** Asking \$19

* **Regulated CB Power Supply** Asking \$5

Test Equipment:

* **RCA Type WO-33A Oscilloscope**

WG-349A Direct/Low Capacitance Probe

Instruction manual Asking \$9

* **B&K Model 162 Transistor/F.E.T. Tester**

With probe and manual

Asking \$29

Miscellaneous:

* **Scanner - Uniden Bearcat BC-210XL** 18 channel scanning radio w/owner's manual and 1996 Radio Shack Police Call Plus Frequency Guide for Michigan and Ohio - Asking \$20

* **CB Radio** - Old 1970s Radio Shack Realistic TRC-55 console CB (23 channel AM) with digital clock (which no longer works) but its set at the perfect time for CB, 10:04 good buddy! Comes with hand mic and nostalgia of "Smokey and the Bandit" days - Asking \$20



UP AREA HAM FEST INFORMATION

**THIS
Space
Reserved
For
You**

LINKS AND STUFF

Under re-construction. Watch for the orange barrels

*Delta County Amateur Radio
Escanaba, MI
www.dcars.org*

*Cooper Country Radio Amateur
Dollar Bay, MI
www.ccras.net*

*Cooper Country Radio Amateur
Dollar Bay, MI
www.ccras.net*

Area Repeaters

Escanaba 147.15+	100.0
	145.13- No PL
Wells 444.30+	No PL
Gladstone	
IRLP 4013 147.55 Smpx	100.0
Champion 146.82-	100.0
Cooks 146.70 -	110.9
GrdMarais 147.195+	No PL
Gwinn 146.64	100.0
Iron Mtn 146.85 -	No PL
Iron River 145.17-	107.2
Ishpeming 146.91-	No PL
IRLP 8993 443.50+	100.0
Manistique 146.79 -	No PL
Marquette 146.97 -	No PL
	147.27+ 100.0
	444.80+
	No PL
Menominee 147.00+	107.2
Newberry 146.61 +	No PL
	147.09+ 114.8
Republic 147.09+	No PL
Trenary 147.03 +	100.0
Wetmore 145.41-	100.0

ARRL Affiliated Club Area Nets

UP Net 3921khz
Daily 5pm EST
Sunday Noon EST

UP CW NET 3590khz
Sunday 7pm EST

160 Net 1895khz
Everynight 0100UTC
Dailey 0600UTC

Midcars 7258khz
Daily 0730am EST
0200pm EST

Outhcars Node 9614
Saturday 0900am EST

UP Echolink Node 9617
Sunday 8pm EST

Delta County ARES
147.150
Sunday 7pm EST

Mich-A-Con Social
146.850
Thursday 0630pm CST
ARES follows

ARRL WEB PAGE: <http://www.arrl.org>

ARRLMICHIGAN: <http://www.arrl-mi.org/>

US REPEATERS: <http://www.usrepeaters.com>

Tropospheric Ducting Forecasts:
<http://www.d/infocentre.com/tropo.html>

MICH-A-CON : <http://www.qsl.net/ka1ddb>

FCC Universal Licensing System: <http://wireless.fcc.gov/uls/>

QTH Com: <http://www.qth.com/>

QRZ <http://www.qrz.com/>

E Ham Net <http://www.eham.net/>

UP Skywarn: <http://kera-mi.net/skywarn/>

ABOUT OUR CLUB....**Club Officers****President:**

Tom Martin, W8JWN
(906) 774-5463
tmartin@chartermi.net

Vice President

Scott Jarmusch, KA8TFF

Secretary:

Joe Ferris, KC9TQR
irferris@borderlandnet.net

Treasurer:

Burt Armbrust, WB8EB
(906) 774-8383
Wb8ebs@yahoo.com

Editor:

Tom Heyboer, KC8TH
(906) 779-0481
Heyboer.tom@gmail.com

Web Editor:

Tom Heyboer, KC8TH
(906) 779-0481
Heyboer.tom@gmail.com

Activities:

Second Wednesday of the month the Mich-A-Con Amateur Radio Club meets in the Dickinson Country Library at 7:00 P.M. Winter or 6:30 PM Summer

Visitors and prospective members are always welcome!

Club Repeater:

The Club maintains two repeaters which are located on Pine Mountain (Elevation 1650 ft) in Iron Mountain with tower and facilities provided by the Wisconsin Electric Power Co.

The range of the 2 meter repeater is about 40 miles. The range of the 440 MHZ repeater is about 25 miles. Both are under normal conditions, depending upon terrain.

The Repeater Specifications:

The 146.85 repeater is a GR Master Pro, 40 watt output. The 440 MHZ repeater is a GE Master Pro, 80 watt output. The repeaters share a Diamond dual band antenna at a tower height of 125 ft.

We're on the Web!

<http://www.qsl.net/ka1ddb/>

Previous editions of the Newsletter can be accessed by a link on the **news** page

From Your Newsletter Editor

Thank you to those contributors and critiques.
Welcome your articles - They make the Newsletter.

For those not getting the Newsletter, it is because I have an incorrect email address. Please give me the correct address.

*Hear on any Events in the UP / Wisconsin Area
Send Info to the Newsletter Editor so the Info can get out*

The following is referenced from <http://www.dx-code.org>

DX Code Of Conduct

I will listen, and listen, and then listen again before calling.

I will only call if I can copy the DX station properly.

I will not trust the DX cluster and will be sure of the DX station's call sign before calling.

I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSX slot.

I will wait for the DX station to end a contact before I call.

I will always send my full call sign.

I will call and then listen for a reasonable interval. I will not call continuously.

I will not transmit when the DX operator calls another call sign, not mine.

I will not transmit when the DX operator queries a call sign not like mine.

I will not transmit when the DX station requests geographic areas other than mine.

When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.

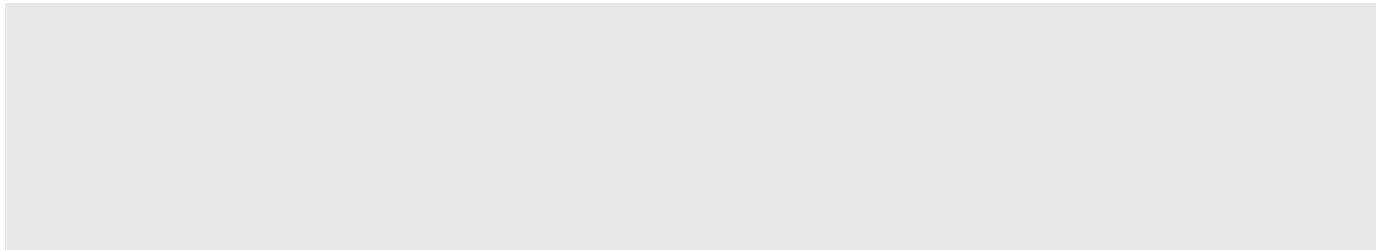
I will be thankful if and when I do make a contact.

I will respect my fellow hams and conduct myself so as to earn their respect.



MEMBERSHIP

Call Sign	Last Name	First Name	City	Phone	Email
WB8EBS	ARMBRUST	BURT	QUINNESEC	906-774-8383	wb8ebs@yahoo.com
W8XBO	ARMBRUST	ED	IRON MOUNTAIN	906-779-5593	w8xbo@sbcglobal.net
KC9KVP	BAKER	BETH	NIAGARA		
KB9AVX	BAKER	SCOTT	NIAGARA	715-251-1944	kb9avx@yahoo.com
KB8SBP	BERTOLDI	BILL	KINGSFORD		
W8BEY	BEY	DANA L.	KINGSFORD	906-774-7937	lst797@charter.net
KE9L	CASWELL	SKIP	IRON MOUNTAIN	906-774-3371	acaswell4238@charter.net
KC8QZG	DAKE	DAVE	NEWBERRY		
KC9ZBC	DOLATOWSKI	SCOTT	GOODMAN	715-633-1006	kc9zbc@live.com
KC9TQR	FERRIS	JOE	FLORENCE	517-589-4386	jrferris@borderlandnet.net
KG8NK	GEMBOLIS	LOUIS	ISHPEMING	906-485-5442	lgembolis@chartermi.net
KD8VTS	GRABOWSKI	DEBRA	CRYSTAL FALLS	906-284-2450	kd8vts@gmail.com
KD8VTT	GRABOWSKI	WILLIAM	CRYSTAL FALLS		
KC8TH	HEYBOER	TOM	IRON MOUNTAIN	906-779-0481	heyboer.tom@gmail.com
N8ATS	HOLMES	SAM	PEMBINE	906-322-8507	chopsam@centrylink.com
KA8TFF	JARMUSCH	SCOTT	IRON MOUNTAIN		
KB9EMU	KNUTSON	WILLIAM	FENCE	715-336-2250	dknutson54@gmail.com
KB8ETK	KOMBLEVICZ	JOSEPH	IRON MOUNTAIN	906-774-4094	kombleviczj@charter.net
W8JWN	MARTIN	THOMAS	IRON MOUNTAIN	906-774-5463	tmartin@chartermi.net
WA8FXQ	MEYERS	BOB	VULCAN	906-396-0119	meyersb@uplogon.com
KC8LRP	MEYERS	MARGE	VULCAN	906-396-8913	mgmeyer@uplogon.com
N8TUM	MILLER	TIMOTHY	FLORENCE	715-696-6517	timmiller.up@gmail.com
K9TRY	MORIARITY	TERRY	NIAGARA	715-251-1670	kb9zer@yahoo.com
ND8M	PAUL	JARED	NORWAY	989-660-9535	jaredpaul@me.com
KD8SZA	PAUL	MICHELLE	NORWAY		
KC9NFT	PERRON	BARRY	FLORENCE	715-696-6175	bperron2@netzero.com
KC8JRI	REED	GORDY	IRON MOUNTAIN	906-779-1254	gordyreed@charter.net
K8ABS	RIVERSIDE	JIM	IRON MOUNTAIN	906-458-0773	jriverside@charter.net
W8IFI	RYE	JIM	CRYSTAL FALLS	906-875-3582	jimrye@up.net
KG9Y	THOMAS	DAVE	NIAGARA	715-251-1393	kg9y@arrl.net





Hewlett-Packard

Please remit dues to:

Burt Armbrust, WB8EBS

693 Cliff St

Quinnesec, Mi. 49876

Name: _____

Call Sign: _____

Address: _____

City, State, Zip: _____, _____, _____

Email Address: _____

Phone: _____

ARRL Member? Yes _____ No _____

Please make check payable to: **Mich-A-Con ARC**

Annual dues for Full Membership -

Single \$20 __ Family \$30 __ Repeater Only \$10 __

If family membership, please list additional:

Names: _____

Call signs: _____

City, State, Zip: _____

Annual dues are Payable January 1st.

Dues for New Members are Pro-rated. Please remit \$1.67 per month for a Single membership or \$.50 per month for a Family membership.