

# Mich-A-Con RF

Iron Mountain, Michigan

November 2004

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Visit the ARRL's web site at:

<http://www.arrl.org>

## ARRL PARTICIPATING IN IEEE, INDUSTRY EFFORTS TO SET BPL STANDARDS

Working with industry through the IEEE Broadband over Power Line (BPL) Study Group <http://grouper.ieee.org/groups/bpl/> and in other venues, the ARRL is taking part in efforts aimed at defining and establishing key BPL technical standards. Among other issues, these standards will address the avoidance of interference from BPL to licensed radio services. The study group has held three meetings this year, and the next session is set for January 14 in San Diego. The study group met most recently in Piscataway, New Jersey, on October 13, the day before the FCC adopted new Part 15 rules to govern BPL deployment. ARRL Lab Manager Ed Hare, W1RFI, told those attending that gathering that any BPL standards must address issues of electromagnetic compatibility (EMC).

"The consensus of the committee is still that dealing with emissions and EMC is very high on the importance list," Hare said later. In terms of EMC, he said, the components of any IEEE BPL standard should "include the needs of the BPL industry to have a workable environment in

which to manufacture and market BPL technology while addressing the need for licensed radio services to operate in an environment that does not result in harmful interference."

Hare's presentation focused on explaining why the BPL industry's measurements using spectrum analyzers and test probes differ from the impact BPL emissions have on communications receivers attached to typical amateur antenna systems.

"I also continued to extend our offer to work cooperatively with industry representatives," Hare said. The ARRL and the FCC's Enforcement Bureau have a long history of cooperating in resolving Part 15 interference complaints resulting from power line noise.

Hare and ARRL Chief Technology Officer Paul Rinaldo, W4RI--who attended a July study group meeting in Piscataway--have been charged with drafting the part of the IEEE study group's

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## Mich-A-Con ARC November 9th Meeting

The meeting was called to order by President Tom Martin, W8JWN, at 6:30 PM

### Secretary Report:

The minutes of the October 12<sup>th</sup> meeting were read by Mike, K8DDB, and accepted.

### Treasurer Report:

The Treasurer's Report was presented by Steve, KC8RYY. As of this meeting we have \$311.91 in checking, \$2,082.46 in the savings account, \$1511.80 in the repeater account and \$26.00 petty cash. Steve resigned as Treasurer, effective immediately, due to workload at his job.

### Repeater Report:

A check for \$163.99 was given to Bob, WA8FXQ, for the new repeater antenna and supplies. This amount will be transferred from the repeater account to replenish the checking account.

### Old Business:

Mike, K8DDB, sent a copy of our newsletter to George Croy, W9MDP, of NEWDXA along with information about the software used to produce the newsletter. George expressed appreciation for the information and thanked him for his help.

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## Words from the President

As I write these “Words” for this month’s newsletter in my deer blind, I am reminded of last year’s hunt when I spent the “waiting game” studying for the Extra. Deer blinds, located in a low deer activity area, can be productive in many other ways, not just for harvesting deer!

First, I would like to thank the club members who decided that they wanted to have more “words” from W8JWN by electing me for another term as your president. It was a close race but the best “ham” won. ( Check the minutes for the election results.)

Next, I would like to thank various members who have worked to better the club. Dennis, KD8AIT, for taking Net Control on Tuesdays, Bob, WA8FXQ, for assisting hams in need, Mike, K8DDB, for editing a fantastic newsletter and keeping the minutes, Lee, N8LT, for his technical expertise and his Workbench articles, Mike, K9NBN, for being ready to step in for me, and Steve, KC8RY Y, for serving as treasurer even though he was swamped at work. Thanks a ton, guys!

Again, to all members, please support your club by attending meetings, checking in on the Tuesday evening net, and participating in as many club activities as you can.

## Pete Trembl, K8PT, to Present January Program

On Tuesday, January 11, Pete Trembl, K8PT, will be presenting a Power Point program on his annual DX-pedition to Jersey, in the Channel Islands.

Pete, a community banker from Marquette, has been traveling to Jersey every March with his friend K3PLV, since 2000. Pete has also operated from HB, DL, F, G, KH6, and VE.

Since Pete is coming from Marquette, your attendance would be appreciated. His photos and commentary can be appreciated by non-hams as well.



### Contests

Top Band Sprint  
0000-0600 Dec 2

ARRL 160 Meter Contest (CW)  
2200 Dec 3-1600 Dec 5

Holiday Spirits Homebrew Sprint  
2000-2400 Dec 5

Great Colorado Snowshoe Run  
0200-0359 Dec 11

ARRL 10 Meter Contest  
0000 Dec 11-2400 Dec 12

RAC Winter Contest  
0000-2359 Dec 18

PSK31 Death Match  
0000 Dec 18-2400 Dec 19

Lighthouse Christmas Lights  
QSO Party  
0000 Dec 18-2400 Jan 2

ARRL Straight Key Night  
0000-2400 Jan 1

Contest dates are UTC  
see the ARRL web site  
Dec Contests or December QST  
for more information and for a  
complete listing of contests:  
<http://www.arrl.org/contests/>

### December Club Activities

Tnn (Tuesday night net) on the 7th, 21st and 28th at 6:30 PM on the 2-meter repeater. Dennis, KD8AIT, has been doing the honors of Net Control since September 28th. Please join us on 146.85 at the appointed time.

Club meeting on Tuesday the 14th at 6:30 PM in the Grace United Methodist Church, 721 Norway Street, Norway Michigan. The meeting room is upstairs next to the Sanctuary.

Saturday Morning Breakfast, 9:00 AM on the 18th at the Holiday Kitchen in Iron Mountain. Breakfast's have been changed to the 3rd Saturday of the month to avoid holiday weekends, etc. Come alone, or bring your significant other and enjoy the food and friendly conversation.

## Mich-A-Con ARC Activities for December 2004

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7 Tnn	8	9	10	11
12	13	14 Meeting	15	16	17	18 Breakfast
19	20	21 Tnn	22	23	24	25
26	27	28 Tnn	29	30	31	

**License Study Materials**  
Available from the ARRL:

**Technician Class:**

*Now You're Talking* - 5th edition - Order No. 8810  
\$19.95

*ARRL's Tech Q&A* - 3rd edition - Order No. 8829  
\$12.95

*ARRL Technician Class Video Course* - 4th ed.  
DVD Course No. 9116  
VHS Course No. 8837  
\$149 each + \$12 s&h

**General Class:**

*ARRL General Class License Manual* - 5th ed.  
Valid beginning July 1, 2004 - Order No. 9205  
\$16.95

*ARRL's General Q&A*  
Valid beginning July 1, 2004 - Order No. 9213  
\$12.95

*ARRL General Class Video Course*  
Order No. 8349  
\$149 + \$12 s&h

*Your Introduction to Morse Code* - Pass 5 wpm test  
Cassettes No. 8322  
Audio CD No. 8314  
\$14.95 each

*Ham University - Complete Edition* - Learn Morse code with this easy to use software. Includes a written exam quiz generator with all three question pools. CD-ROM for Win95-XP  
Order No. 8735  
\$39.95

Phone: 1-888-277-5289

or

<http://www.arrl.org/catalog/lm/>

<http://www.arrl.org/catalog/8330/>

<http://hamuniversity.com>

# Charging Nickel-based Batteries

by Isidor Buchmann

The reliability and longevity of a battery hinges, to a large extent, on the quality of the charger. Battery chargers are often given low priority, especially for consumer products. In this paper we address the charger as the quintessential provider and guardian of the battery. We look at various charge methods that will increase the performance of nickel-based batteries. Charging lithium and lead-based batteries is described in separate papers.

A battery should always remain cool during charging because high temperatures shorten battery life. Some temperature rise with nickel-based batteries cannot be avoided. The time during which the battery temperature remains elevated should be as short as possible. The temperature rise occurs in the second half of the charge cycle. The battery should cool to room temperature when on trickle charge. If the temperature remains above room temperature after a few hours in ready mode, the charger is performing incorrectly. In such a case, remove the battery when ready. The caution applies especially to nickel-metal-hydride because this chemistry cannot absorb overcharge well.

Nickel-based chargers are grouped into three categories:

- **Slow Charger** - Also known as 'overnight charger', the slow charger applies a fixed charge of about 0.1C\* (one-tenth of the rated capacity) for as long as the battery is connected. Charge time is 14-16 hours. Slow chargers are found in cord-less phones, portable CD players and other consumer goods.
- **Quick Charger** - Also known as rapid charger, this charger serves the middle range, both in terms of charging time and price. Charging time is 3-6 hours. The charger switches the battery to trickle charge when ready. Quick-chargers are used for cell phones, laptops and camcorders.
- **Fast Charger** - Designed for nickel-based battery, the fast charger fills a pack in about one hour. Fast charging is preferred because of reduced crystalline formation (memory). Accurate full-charge detection is important. When full, the charger switches to topping and then trickle charge. Fast chargers are used for industrial devices such as two-way radios, medical devices and power tools.

New nickel-based batteries should be trickle-charged for 24 hours prior to use. Trickle charge brings all cells to equal charge level because each cell self-discharges at a different rate. Trickle charge also redistributes the electrolyte to remedy dry spots on the separator brought on by gravitation of the electrolyte during long storage.

\* The C-rate is a unit by which charge and discharge currents are scaled. A charge current of 1000mAh, or 1C, will charge a 1000mAh battery in slightly more than one hour. A 1C discharge lasts one hour.

Some battery manufacturers do not fully form the cells before shipment. Full performance is reached after the battery has been primed through several charge/discharge cycles, either with a battery analyzer or through normal use. In some cases, 50-100 discharge/charge cycles are needed to obtain full performance. Properly formed cells perform to specification after 5-7 cycles.

Most rechargeable cells are equipped with a safety vent to release excess pressure if overcharged. The safety vent on a nickel-based cell opens between 10-13 Bar (150-200 psi). (The pressure of a car tire is about 2.3 Bar or 35 psi.) With a resealable vent, no damage occurs after venting. Some electrolyte is lost and the seal may leak afterwards. A white powder accumulating at the vent opening indicates venting activities.

## Charging nickel-cadmium

The overall charge efficiency of nickel-cadmium is about 90% if fast charged at 1C. On a 0.1C overnight charge, the efficiency drops to 70% and the charge time is 14 hours or longer.

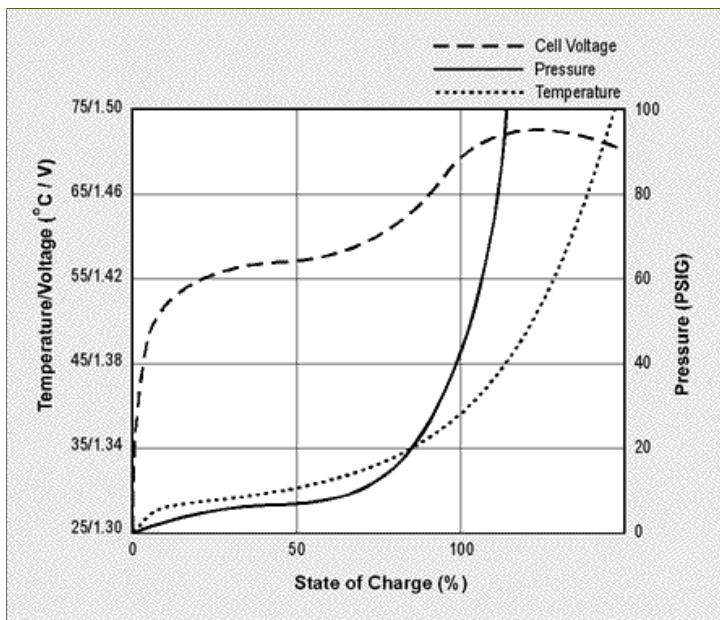
In the initial 70% of charge, the charge acceptance of a healthy nickel-cadmium battery is close to 100%. The battery remains cool because all energy is absorbed. Currents of several times the C-rating can be applied without heat buildup. Ultra-fast chargers use this phenomenon to charge a battery to the 70% level within minutes. Past 70%, the battery gradually loses the ability to accept charge. The pressure and temperature increase. Figure 1 illustrates

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## Charging Nickel-based Batteries

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the relationship of cell voltage, pressure and temperature while nickel-cadmium is being charged.



**Figure 1: Charge characteristics of a nickel-cadmium cell.**  
The cell voltage, pressure and temperature characteristics are similar to nickel-metal-hydride.

Ultra-high capacity nickel-cadmium batteries tend to heat up more than the standard version on fast-charge. This is partly due to increased internal cell resistance. To moderate the temperature buildup and achieve short charge times, advanced chargers apply a high current at the beginning and then lower the amount to harmonize with the charge acceptance.

Interspersing discharge pulses between charge pulses improves the charge acceptance of nickel-based batteries. Commonly referred to as burp or reverse load charging, this method promotes high surface area on the electrodes to improve the recombination of gases generated during charge. The results are better performance, reduced memory and longer service life.

Full-charge detection is based on a combination of voltage drop at full charge (negative delta V), rate-of-temperature-increase (dT/dt), absolute temperature and timeout timers. The charger utilizes whatever comes first to terminate the fast-charge.

After the initial fast charge, some fast-chargers apply a timed topping charge. In an attempt to gain a few extra capacity points, some chargers apply a measured amount of overcharge. The capacity gain is about 6%. The negative is shorter cycle life. The recommended trickle charge for nickel-cadmium is between 0.05C and 0.1C. Because of memory concerns and compatibility with nickel-metal-hydride, the trickle charge is set as low as possible.

## Charging nickel-metal-hydride

Nickel-metal-hydride chargers require more complex electronics than nickel-cadmium systems. To begin with, nickel-metal-hydride produces a very small voltage drop at full charge and the NDV is almost non-existent at charge rates below 0.5C and elevated temperatures. Aging and degenerating cell match diminish the already minute voltage delta further. This makes full charge detection difficult.

A nickel-metal-hydride charger must respond to a voltage drop of 8-16mV per cell. Making the charger too sensitive may terminate the fast charge halfway through the charge due to voltage fluctuations and electrical noise. Most of today's nickel-metal-hydride chargers use a combination of NDV, rate-of-temperature-increase (dT/dt), temperature sensing and timeout timers. The charger utilizes whatever comes first to terminate the fast-charge.

Nickel-metal-hydride should be rapid charged rather than slow charged. Because of poor overcharge absorption, the trickle charge must be lower than that of nickel-cadmium and is usually around 0.05C. This explains why the original nickel-cadmium charger cannot be used on nickel-metal-hydride.

It is difficult, if not impossible, to slow-charge a nickel-metal-hydride. At a C-rate of 0.1-0.3C, the voltage and temperature profiles fail to exhibit defined characteristics to measure the full charge state accurately and the charger must rely on a timer. Harmful overcharge can occur if a partially or fully charged battery is charged with a fixed timer. The same occurs if the battery has aged and can only hold 50 instead of 100% charge. Overcharge could occur even though the battery feels cool to the touch.

Lower-priced chargers may not apply a fully saturated charge. Some will indicate full-charge immediately after a voltage or temperature peak is reached. These chargers are commonly sold on the merit of short charge time and moderate price.

### Simple Guidelines:

- Avoid high temperature during charging. Discontinue the use of chargers that cook batteries.
- A charger for nickel-metal-hydride can also accommodate nickel-cadmium, but not the other way around. A charger designed for nickel-cadmium would overcharge the nickel-metal-hydride battery.
- nickel-based batteries prefer fast-charge. Lingering slow charges cause crystalline formation (memory).
- nickel- and lithium-based batteries require different charge algorithms. The two chemistries can normally not be interchanged in the same charger.

If not used immediately, remove the battery from the charger and apply a topping-charge before use. Do not leave

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## FCC BPL REPORT AND ORDER STRESSES INTERFERENCE AVOIDANCE, RESOLUTION

### Club Membership Drive

Of the twenty-eight members that paid dues in 2003, twenty-three have renewed their membership. May 11th was the deadline for the payment of dues. Those that didn't pay were dropped from the active membership list and will no longer receive correspondence via regular mail. Former members with an up to date email address will, however, continue to receive email as there is no cost to the club to do so.

We were able to attract fourteen new members to the club this year and we are seeking more. A single issue of this newsletter is being sent to a new local Ham every month in an effort to increase club membership. Please pay us a visit at one of our monthly meetings or just complete the application/renewal form on page 9 to become a member.

### N8LT's Workbench

This series, written by our resident expert on the technical side of things, focuses on technical topics that you, the reader, want him to write about. Lee wants your input. This is your chance to get those gnawing questions answered so that you can become more self-reliant when repairs are needed to your electronic gear.

What subjects would you like to see covered?

Please send your input to me and I will collate the responses and give them to Lee.

Send your input to:  
mikebray@chartermi.net  
(906) 563-7020

Mike Bray, K8DDB  
W3821 Waucedah Road  
Vulcan, MI 49892-8483

The FCC this week released the full BPL Report and Order (R&O) in ET Docket 04-37 that it adopted just two weeks ago. While extolling the purported benefits of broadband over power line technology, the 81-page document also declares the FCC's intention to protect licensed services from harmful interference.

"We recognize that some radio operations in the bands being used for Access BPL, such as those of Amateur Radio licensees, may occur at distances sufficiently close to power lines as to make harmful interference a possibility," the FCC conceded in its R&O. "We believe that those situations can be addressed through interference avoidance techniques by the Access BPL provider such as frequency band selection, notching, or judicious device placement."

Notches would have to be at least 20 dB below applicable Part 15 limits on HF, 10 dB below on VHF. The FCC called the ability to alter a system's operation to notch out transmissions on specific frequencies where interference is occurring "a necessary feature for resolving interference without disrupting service to BPL subscribers."

In line with remarks made at the October 14 open meeting where the FCC adopted the R&O--then still in draft form--the FCC declined to reduce the Part 15 radiated emission limit for BPL systems. It maintained that emissions from BPL systems are very localized and at low enough levels to generally preclude harmful interference.

The FCC said it had no evidence before it that BPL operation would significantly contribute to generally raising background noise levels. At the same time, it seemed to put some of the onus on Amateur Radio licensees to take steps to avoid power-line interference--and, by inference, BPL interference--in advance.

"In addition, because power lines inherently can radiate significant noise emissions as noted by NTIA and ARRL, good engineering practice is to locate sensitive receiver antennas as far as practicable from power lines," the FCC said.

In a footnote, the FCC took pains to advise ARRL that in cases where its members experi-

ence RF noise, "such noise can often be avoided by carefully locating their antennas; in many instances an antenna relocation of only a relatively short distance can resolve noise interference."

BPL operators would be required to avoid certain bands, such as those used for life and safety communications by aeronautical mobile or US Coast Guard stations. The FCC R&O makes clear, however, that similar rules will not apply to the Amateur Service.

"We similarly do not find that Amateur Radio frequencies warrant the special protection afforded frequencies reserved for international aeronautical and maritime safety operations," the Commission said. "While we recognize that amateurs may on occasion assist in providing emergency communications," the FCC added. It described typical amateur operations as "routine communications and hobby activities."

Although some cases of harmful interference may be possible from BPL emissions at levels up to Part 15 limits, the FCC said, "we agree with NTIA [National Telecommunications and Information Administration] that the benefits of Access BPL service warrant acceptance of a small and manageable degree of interference risk." The Commission reiterated in the R&O its belief that BPL's public benefits "are sufficiently important and significant so as to outweigh the limited potential for increased harmful interference that may arise."

Among other specific provisions, the FCC's new rules mandate certification of BPL equipment instead of the less-stringent verification, a public BPL database--something the BPL industry did not want--and mechanisms to deal swiftly with interference complaints. BPL systems will have to incorporate the ability to modify operation and performance "to mitigate or avoid potential harmful interference" and to deactivate problematic units, the R&O says.

Further, the new rules spell out the locations of "small geographic exclusion zones" as well as excluded bands or frequencies--concessions made primarily at the insistence of the NTIA, which administers radio spectrum for federal

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## FCC BPL Report and Order

(Continued from page 5)

government users--and "coordination areas" where BPL operators must "pre-coordinate" spectrum use. The rules also detail techniques to measure BPL emissions from system equipment and power lines.

The FCC said it expects "good faith" on both sides in the event of interference complaints. While the Commission said it expects BPL operators to take every interference complaint seriously and to diagnose the possible cause of interference quickly, it also suggested that complainants have responsibilities.

"At the same time, we expect the complainant to have first taken reasonable steps to confirm that interference, rather than a receiver system malfunction, is occurring and, to the extent practicable, to determine that the interference source is located outside the complainant's premises," the Commission said.

Shutting down a BPL system in response to a valid interference complaint "would be a last resort when all other efforts to satisfactorily reduce interference have failed," the FCC said.

League officials are studying the R&O and considering possible responses. The ARRL Executive Committee (EC) already has authorized filing a Petition for Reconsideration. The EC also authorized ARRL General Counsel Chris Imlay, W3KD, to "prepare to pursue other available remedies as to procedural and substantive defects" in the BPL proceeding.

For more information on BPL, visit the "Broadband Over Power Line (BPL) and Amateur Radio" page <http://www.arrl.org> on the ARRL Web site.

## Charging Nickel Batteries

(Continued from page 4)

a nickel-based battery in the charger for more than a few days, even if on trickle charge. A well-designed charger is a reasonably complex device. Taking short cuts will cost the user in the long run. Choosing a well-engineered charger will return the investment in longer lasting and better performing batteries.

Taken from the Battery University Web Site:  
<http://www.batteryuniversity.com/index.htm>

## Most Wanted DX Worked by Tom, W8JWN



Upon my arrival in the DPR Korea in December 1998, I did not realize that I would be activating the most sought after DXCC country one day.

It has been a long march to make my life-time dream come true and to make the DPR Korea a part of this great world DX community of ours. I am grateful to the dedicated supporters of KK5DO, OH2BH, W3UR and W5IZ for assisting me at various times in my adventure.

It was their support and knowledge that guided me so that the accredited P5/4L4FN cards would make their way to you today. But most of all, I would like to present my greatest gratitude to my wife Marine and my daughter Ann who have lived through Dad's "strange hobby" back home in Georgia, as well to all my friends in DPR Korea who have made our desires possible. With this wonderful experience, I am now extending my stay here until June 2003, securing that P5 will be logged for all those who Deserve.

I would like to thank the following for their kind help: EA7JX, K5GNA, K5OE, PA8AA, WZ8P, Personal Database Applications, Inc., Benchet, Inc., NCDXF, INDEXA and all hams worldwide.

Date	UTC	Band	Mode	RST
9 May 02	23:00	15M	SSB	59
VOID	VOID	VOID	VOID	VOID
VOID	VOID	VOID	VOID	VOID
VOID	VOID	VOID	VOID	VOID
QSO Verified by KK5DO				73...Ed

BENCHER, INC.      Northern California DX Club      International DX Association

10-X# 72722  
Grid PM38

Ed, P5/4L4FN, North Korea. Worked by Tom, W8JWN, on 15 meters SSB May 9, 2002. W8JWN: Yaesu FT1000MP and Dentron MLA-2500 amp at 500 watts output to a 40 meter 2 element beam at 80 feet. A Dentron MT-3000A antenna tuner was used to match the rig on 15 meters. It was a split frequency operation. He was listening up 5-10.

## Members Invited To Help Club, KC8VC, Attain WAS and DXCC Awards

All club members are invited to use the club callsign to help the club attain WAS and DXCC. As club callsign trustee, I have been keeping a computer log of all KC8VC QSOs, so if you use the club call please notify me as soon as possible so I can enter it into the log. Please give information required for the log such as: station worked, date and time (UTC), frequency, RST sent and received, mode and power. Also give me a description of the equipment you were using.

Club QSL cards are available from me. Send me an email or give me a call and I will get them to you.

KC8VC WAS and DXCC Status can be accessed from a link on the Membership page of the club web site: <http://www.qsl.net/ka1ddb/>

K8DDB

# ARRL Michigan Section News

## Tnn

Tuesday Night Net Report,  
Dennis, KD8AIT, Net Control:

October 26th: Two members  
and one visitor checked in. AI,  
NG0C, is a silent key.

November 2nd: Three mem-  
bers and one visitor checked  
in. Paul's, WB8SZI, antenna  
has come down and help will  
be needed to make repairs.

November 16th: No Net due to  
PTA conferences.

November 23rd: Two members  
checked in.

## ELMERS

Many hams fondly remember  
the "Old Timer" that gave them  
the help they needed to get  
started in the hobby or learn  
some new facet of it. But, it's  
not just the old timer that can  
provide help, it is the ham that  
enjoys a particular facet of the  
hobby that knows it best. It  
doesn't matter if that person is  
an old timer or just recently  
licensed.

Elmers are listed below along  
with their areas of interest.  
Give them a call if you need  
help.

**Mike Bray, K8DDB**  
**(906)563-7020:** HF/CW, QRP,  
Portable Operation, Kit Build-  
ing, DXing, Contesting, Com-  
puter Logging, Paper Chasing,  
QSLing

**Tom Martin, W8JWN**  
**(906)774-5463:** Contest opera-  
tion, digital modes and associ-  
ated software and linear ampli-  
fier refurbishing

Please consider being listed as  
an Elmer, send an e-mail to:  
mikebray@chartermi.net

A reminder to those having an interest in Public Service: The Michigan State ARPSC Net meets every Sunday at 5:00PM. The Net frequency is 3932 kHz. This is the weekly meeting place for Michigan hams with an interest in Public Service. Designed primarily for ECs, DECs, ORSs and NMs, other Section staff members participate as well. Very frequently the latest news hits here first, and it is the opportunity to communicate directly with Section officials. Discussions include various current topics and information relating to the NTS, ARES and RACES programs.

Attention ECs: How well prepared is your organization to handle formal radiogram traffic? Can everyone do it? Does your local ARES/RACES Net have a regular liaison to an NTS traffic net? Do you include message handling in your training program? Our served agencies' expectations are for everyone to be able to originate, receive and deliver formal radiogram traffic -- and that is our basic commitment.

Be certain to check ACC Dan KB6NU's MI Section Club News for the full details on the Michigan club newsletter award winners. The winning entry will participate in the Great Lakes Division Newsletter Contest. Those awards will be presented at the GLD Convention in Toledo, OH on March 19 and 20.

We are always pleased to report club officers when their new terms are announced. Sometimes a thankless job, but definitely a vital one as the team of officers truly leads a club, making it grow and prosper. Congratulations to the new officers of these Radio Clubs: Hiawatha ARC: Pres WD8OKJ, VP KC8ULE, Treas KG8YT, Secty AB8RE, Trustee WB8NJP.

SARs For October: WB8RCR 206, K8KV 150, K8AE 146, WD8USA 90, K8LJG 83, WB8TKL 55, WR8F 51, AA8SN 44, KK5KZ 35, K8UPE 32, WA8EFK 31, K8KHZ 30, WB8YPG 30, K8AMR 26, WI8K 26, N8UN 22, K8ZJU 17, KA8NCR 8, KC8RTW 5, KC8CKM 3.

SARs are the combination of originations, receipts, and delivery of radiograms handled by your station during the month. Please forward them to me for inclusion in the news column. The deadline is the 8th of each month.  
73, Dale WA8EFK

MI Section Club News, November 2004

LCARA Captures Newsletter Contest  
It was a very close contest, but in the end the Lapeer County Amateur Radio Association Waveguide has won the 2004 Club Newsletter Contest. The top three finishers included:

1. Lapeer County Amateur Radio Association Waveguide
2. Branch County Amateur Radio Club Branch Signals
3. Muskegon Area Amateur Radio Council Flashovers

The entrants were rated on four different criteria: layout and composition, grammar and style, content of interest to radio amateurs, and local content. The awards were presented at the Michigan Section Convention in Holland on Friday, November 6.

Need More Members?

To increase their membership, the Top Of Michigan Amateur Radio Club is now offering incentives to members who sign up new members. For each new member they get to join, the member gets a \$5 discount on their membership. If they sign up four or more, they get a free year's membership.

Get Members Involved

As a way to get more members involved in club activities, the Branch County Amateur Radio Association holds an annual QSL card design contest. The winning card is the official QSL card of the club for a year and bears the winner's callsign, crediting him or her as the creator of the design.

Website Tip

Looking for a way to make your website more interesting? Consider posting pictures of members' shacks. I picked up this idea after surfing the Garden City Amateur Radio Club website at <http://www.gcarc.net/>. Having such a page will allow some of your members to show off and others to learn from them.

That's all for this month. If you have a tip for increasing club membership, improving a club's website, or getting members involved, e-mail me at kb6nu@w8pgw.org..... 73, Dan KB6NU

*(Note: Edited to fit available space)*

## November 9th Meeting

*(Continued from page 1)*

Tom, W8JWN, asked if everyone was aware of the club's Skywarn Net Procedure and Net Control Operator Script which contains a map of the area and predefined vantage points. Mike, K8DDB, stated that the information was available on the Skywarn page of our web site. He will distribute the information via email.

Discussion of a club banner was tabled until we get closer to next Field Day.

### New Business:

A thank you card from Ann Pacheco, wife of Al, NG0C, was read to the attendees. The club had sent her a sympathy card and a gift of ten dollars upon learning of Al's passing. The money will be contributed to the Alaska State Trooper's Fund for the scholarship of fallen state trooper's children, in which Al was very active.

Mike, K8DDB, informed the attendees of a letter from Robin Turner of the Marquette office of the NWS in which he asked for volunteers to man the NWS amateur radio station during the upcoming Skywarn Recognition Day Special Event, from 7:00 p.m. on Friday December 3 through 7:00 p.m. Saturday December 4.

Mike, K8DDB, stated that the ARRL web site has posted the results of Field Day 2004. Our club placed 13<sup>th</sup> out of 23 Michigan entries and 224<sup>th</sup> out of 448 total entries for the Class 2A, less than 150 watt category.

Mike, K8DDB, was asked to contact Melissa, KB8ETN, about the club's 40 foot tower.

Tom, W8JWN, announced that Pete Trembl, K8PT, will present a program on his DXpedition to Jersey Island following the January meeting. He said the presentation is very well done and encouraged club members to attend.

Tom, W8JWN, noted that today's Daily News stated that the county will expend \$101,000 for 800 MHz radios as part of a 2004 Homeland Security Grant.

Bill Lukes, WB9SYG, said he is selling much of his Amateur Radio equipment. Details will be posted on the Buy-Sell-Trade page of the club's web site.

### Election of Club Officers:

There were no nominees for club office. The

current officers volunteered for another term. Until a replacement for the office of Treasurer is found, Mike, K8DDB, and Tom, W8JWN, will share duties as Treasurer. Tom will handle the books and Mike will collect the 2005 dues. This was approved by those in attendance.

### Adjournment:

The meeting was adjourned at 7:18 PM

Submitted by: Mike Bray

### Attendees:

Mike Bray, K8DDB (Secretary)  
 Mike Boileau, N9NBN (Vice President)  
 Tom Martin, W8JWN (President)  
 Paul Hintz, WB8SZI and Carol (guest)  
 Bill Lukes, WB9SYG  
 John Hurschik, KB8DSC (guest)  
 Randy Zandt, KB9ZES (guest)  
 Lee Michaud, N8LT  
 Steve Johnson, KC8RYR (Treasurer)  
 Bob Meyers, WA8FXQ

## IEEE BPL Standards

*(Continued from page 1)*

"white paper" dealing with affected radio services, including Amateur Radio. Other aspects of the document will include safety; compatibility between access BPL and in-home BPL; compatibility with utility distribution systems, and security, privacy and authentication issues.

Following the July study group meeting, Rinaldo said the consensus of participants was that the core issue confronting the BPL industry was dealing successfully with the issue of interference from and to BPL. "BPL won't survive unless that fundamental problem is solved soon," Rinaldo asserted.

Rinaldo also took part in a Power Line Communications Association (PLCA) Strategic Summit and Business Briefing in late October in the DC area. His presentation concluded, among other things, that best practice for the BPL industry would be to avoid Amateur Radio spectrum at the equipment design level.

A few days earlier, Rinaldo had represented the League at a meeting of the National Association of Regulatory Utilities Commissioners (NARUC) Broadband over Power Lines Task Force.

*Taken from The ARRL Letter November 19, 2004*

### **Club Apparel:**

Our club apparel is supplied by:

Shirt Tails  
 408 S Stephenson Ave.  
 Iron Mountain, MI 49801

Phone: (906)774-3370  
 or  
 finleyd@up.net

### Prices:

Jacket with liner \$45  
 (Tall add \$5, 2X or 3X add \$5,  
 to add your name or call sign  
 on the front is \$5)

T-Shirt - \$10  
 (2X or 3X add \$1)  
 Sweatshirt - \$16  
 (2X or 3X add \$2)

If you wish to have the club logo printed on an item of clothing that you have purchased elsewhere, there is charge of \$6.

Club patches are available from:

Tom Martin, W8JWN  
 812 West B Street  
 Iron Mountain, MI 49801

They are 3 inches in diameter and sell for \$3.00 each. If ordering by mail, please include a SASE along with your payment.





Mich-A-Con Amateur Radio Club  
Membership Application/Renewal Form

Please remit dues to club Treasurer (Pro Tem):  
Mike Bray, K8DDB  
W3821 Waucedah Road  
Vulcan, MI 49892-8483

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Call Sign: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Phone: \_\_\_\_\_

ARRL Member? Yes \_\_\_\_\_ No \_\_\_\_\_

Single \$20 \_\_\_\_\_ \*      Family \$30 \_\_\_\_\_ \*

If family membership, please list additional names and call signs:

\_\_\_\_\_  
\_\_\_\_\_

\* The dues for NEW members are prorated - you only pay for the remainder of the year! Please remit \$1.67 per month for a Single membership or \$2.50 per month for a Family membership.

## Exam Schedule

City: Iron Mountain  
Location: Dickinson County Library  
Room: Conference Room  
Time: 9:30 AM Central Time  
Contact: Mark Lewis, N8UKD  
Telephone: (906) 774-6598

Exam Date: Feb 5, 2005  
Exam Date: May 7, 2005  
Exam Date: Aug 6, 2005  
Exam Date: Nov 5, 2005

Examinees should bring 2 pencils, a pen for the official paperwork, the originals AND copies of any previous credit that you have earned (Certificates of Successful Completion or current license), 1 photo id (usually a driver's license) and 1 other id. (usually a birth certificate or SS card), a calculator if needed (make sure your memories are cleaned out), and the test fee (2004 fee is \$12).

Mich-A-Con RF is published by the Mich-A-Con Amateur Radio Club of Iron Mountain.

Items for Mich-A-Con RF should be in the editor's hands by the first week of the month to be included in the next edition.

Our newsletter needs contributions from the membership to help keep the information presented each month new, interesting and fun to read. Please consider writing an article related to Amateur Radio to share with your fellow members. Send the article in plain text and attach any photos, etc., don't worry about format, that's the editor's job.

Send to:  
mikebray@chartermi.net  
(906) 563-7020

## Repeaters

The club maintains two repeaters, which are located on Pine Mountain in Iron Mountain, with tower and facilities provided by the Wisconsin Electric Power Co.

Identifier: WA8FXQ/R IMT

Output	Offset	PL Tone
146.850 MHz	minus	—
444.850 MHz	plus	100

Both repeaters have an auto patch with a toll restriction. The auto patch on the 2-meter repeater can be used with permission. The 440 auto patch is for club use only.

A club net is held on the 2-meter repeater every Tuesday at 6:30 PM except the 2nd Tuesday of the month, which is club meeting night.

# Mich-A-Con RF

Mich-A-Con ARC  
c/o Michael F. Bray  
W3821 Waucedah Road  
Vulcan, MI 49892-8483

## Mich-A-Con RF

### Club Meetings

The Mich-A-Con Amateur Radio Club meets on the second Tuesday of the month at 6:30 PM in the Grace United Methodist Church (upstairs in the room next to the sanctuary), 721 Norway Street in Norway, Michigan. Visitors and prospective members are always welcome!

The URL for the Mich-A-Con ARC web site is:

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

Previous editions of Mich-A-Con RF can be accessed by a link on the news page.

The ARRL DX Bulletin on the Upcoming Activities page is updated each Thursday and the contests section is updated on a monthly basis.

### CLUB OFFICERS

**President:**

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

**Vice President:**

Mike Boileau, N9NBN  
(715) 251-3137  
n9nbn@netnet.net

**Secretary:**

Mike Bray, K8DDB  
(906) 563-7020  
mikebray@chartermi.net

**Treasurer (Pro Tem):**

Tom Martin, W8JWN  
Mike Bray, K8DDB  
(Shared responsibility)

### Reminders

The monthly meeting for December is on TUESDAY the 14th at 6:30 PM in the Grace United Methodist Church, 721 Norway Street, Norway, Michigan. (upstairs in the room next to the sanctuary.)

Saturday Morning Breakfasts have been changed to the THIRD Saturday of the month at the Holiday Kitchen in Iron Mountain (on Stephenson Avenue across from Econo Foods) – Dec 18th at 9:00 AM

Don't forget to provide input on the articles you would like to see in Lee's column, N8LT's Workbench.

Please let Mike, K8DDB, know what club equipment you have in your custody so he can update the Club Equipment List.