

# Mich-A-Con RF

Iron Mountain, Michigan

September 2004

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Visit the ARRL's web  
site at:  
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## N8LT's Workbench

HEY, DUMMY...

Load, that is. Everyone knows that a dummy load is a phantom antenna that's designed to convert RF from a transmitter into heat without radiating any of the RF. (Why would anyone want to do that!?)

### COMMON USES

Perhaps one of the most common uses of the dummy load is to tune up a transmitter or power amplifier off-air (the kinds that need tuning; common on HF) so the tuning process doesn't cause interference to others. Another common use is to terminate a transmitter during test, repair, or trouble shooting. But, did you know it's also a very useful test instrument?

### AS A TEST INSTRUMENT

For example, you don't seem to be getting out very well. Could it be the antenna? The feed line? Your (horrors) transmitter? You can check the transmitter by connecting it to a dummy load and measuring the power output. As a matter of fact,

the only way you can accurately measure the power output using the common in-line, or thru-line, wattmeter is with a dummy load or a truly flat, i.e., 1:1 Standing Wave Ratio (SWR), antenna. That's because they only read correctly when terminated in a true 50 ohm purely resistive load; which is not likely to be any of your antennas. (When an SWR is present you can get a useful approximation of transmitter power output by subtracting the Reflected Power reading from the Forward Power reading.)

Get a complaint about the sound of your radio? Connect it to a dummy load, tune in your signal on another radio, and listen to yourself. The "monitor" radio could be any suitable receiver such as another rig, handheld, or even a scanner. Using headphones on the monitor radio will eliminate audio feedback and allow you to hear better. Care should be exercised in using this simple test. If your signal does sound like it has a problem make sure it's not due to the monitor receiver being overloaded. It's best to disconnect the antenna on the monitor radio to avoid overloading the receiver and possibility creating dis-

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## Mich-A-Con ARC September 14th Meeting

The meeting was called to order by President Tom Martin, W8JWN, at 6:35 PM

### Secretary Report:

The minutes of the July 13<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 \$194.82 in checking, \$2,329.42 in the savings account, \$1,510.49 in the repeater account and \$26.00 in petty cash.

### Repeater Report:

There was no repeater report as Lee, N8LT, was absent.

### Old Business:

Tom, W8JWN, encouraged club members to list themselves as an "Elmer" on the club's web page. You don't have to have an engineering degree, just be willing to share your expertise with your fellow hams. See Mike, K8DDB, for details.

Eight people attended the club picnic in August.

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## Words from the President

I am sure that most of us have followed the news coverage of the hurricanes that have run rampant throughout Florida, Alabama, and the Caribbean these past few weeks. We also have witnessed the third anniversary of the terrorist attack on the WTC towers. At the last meeting, we watched and listened to an A/V presentation produced by the BBC as amateurs in NYC responded to the call for emergency communications. Shortly before Mike Bray's presentation, Pete Schlitt (KC8JRH), Director of Emergency Services for Dickinson County, spoke to us about the Homeland Security grant for next year and the possibility of our club receiving money for emergency service use.

It is hard to believe that the Dickinson County area would ever suffer a terrorist attack but we could have a more devastating tornado than the one in 2002. It is also possible that one of the dams on the Menominee River could be damaged, or break (remember the Twin Falls collapse in the 1970's) and flood the downstream areas. These are very real possibilities. Are we prepared today to provide emergency communications?

About seven years ago, we had an ARES/RACES organizational meeting to train and prepare for such emergencies. Nothing, except for some SKYWARN sessions, has really been done

since to provide for such services if needed. How many have been on 2 meters lately during a tornado warning? How many of us have NOAA receiving capabilities? How many of us have alternate power sources? How many of us have a HF rig capable of operating off a battery. Finally, how many of us, other than the year 2000 "worry warts", have a portable generator?

I think that it is time for our club to address these questions and to prepare for the worst.

## October Club Activities

Club Net on Tuesday the 5th, 19th and 26th at 6:30 PM on the 2-meter repeater. We now have a Net Control (KD8AIT), so try to be on 146.850 at the appointed time.

Club meeting on Tuesday the 12th 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 16th at the Holiday Kitchen in Iron Mountain. Breakfast's have been changed to the 3rd Saturday of the month to avoid holiday weekends, etc.

## Mich-A-Con ARC Activities - Oct 2004

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

### Contests

Oceania DX Contest (Phone)  
0800 Oct 2-0800 Oct 3

EU Autumn Sprint (SSB)  
1500-1859 Oct 2

California QSO Party  
1600 Oct 2-2200 Oct 3

Oceania DX Contest (CW)  
0800 Oct 9-0800 Oct 10

EU Autumn Sprint (CW)  
1500-1859 Oct 9

Pennsylvania QSO Party  
1600 Oct 9-0500 Oct 10  
and 1300-200 Oct 10

FISTS Fall Sprint  
1700-2100 Oct 9

North American RTTY Sprint  
0000-0400 Oct 10

10-10 Day Sprint  
0001-2400 Oct 10

Illinois QSO Party  
1800 Oct 17-0200 Oct 18

QRP ARCI Fall QSO Party  
1200 Oct 23-2400 Oct 24

USI W/VE Islands QSO Party  
1600 Oct 23-2359 Oct 24

CQ WW DX Contest (SSB)  
0000 Oct 30-2400 Oct 31

10-10 International CW-Digital Contest  
0001 Oct 30-2400 Oct 31

Contest dates are UTC see the ARRL web site Oct Contests or October QST for more information and for a complete listing of contests:

<http://www.arrl.org/contests/>

**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  
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*ARRL Technician Class Video Course* - 4th ed.  
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*ARRL General Class License Manual* - 5th ed.  
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*ARRL General Class Video Course*  
Order No. 8349  
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or

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

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<http://hamuniversity.com>

## N8LT's Workbench

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tortion. Radios, coax, and even most dummy loads radiate enough leakage for the signal to be heard a significant distance away. If the monitor radio has a signal strength indicator which is reading less than full scale you should be ok. If no signal strength indicator, the received signal should be weak enough to be accompanied by a slight amount of background noise. Overload should not be a problem with FM radios but can be extremely important with amplitude modulated modes such as AM, SSB, and CW. Alternatively, you can have someone else talk into the microphone (no license required on a dummy load) while you listen from a short distance away.

You just put up a new antenna and don't like the SWR reading. Or, "I wonder why the SWR reading is so high today, it usually reads lower?" Hmm..., could be an antenna problem, feed line problem, wrong antenna, antenna not connected, connector problem (I hope you're not one of those people who doesn't solder the shield when installing PL-259 connectors), transmitter problem, or... maybe it's the SWR meter! Remember that thunderstorm that caught you by surprise the other day? You know, the one that caught you with your antenna connected? Could it have damaged your meter? How the heck can you check your SWR Bridge? Aha! connect it to your dummy load. If it doesn't read 1:1 on "Reflected" it needs work. Even if it is off somewhat; if your antenna reads much worse than the dummy load, at least you will know that you have an antenna problem...too. (Note the terms SWR Bridge and SWR Meter are used interchangeably here, as in real life.)

You just came home from the Hamfest with a great deal on a roll of coax; but is it any good? You can check it out with a dummy load, SWR Bridge, and a transmitter. Transmitters don't like high SWR so do a preliminary test with an Ohmmeter. Check for continuity of the center conductor and shield, then check for leakage or shorts between the center conductor and shield. If it has connectors installed this will check the connectors also. (If the cable has PL-259s unscrew the connector shell and check the soldering job on the shield. If there is any doubt about the soundness of the connection, cut off the connectors and re install them. Better yet, just redo them.) If it passes these tests try checking the SWR of the line with it terminated to a

dummy load. Initially, use a low power setting on the transmitter. Transmitters are much more tolerant of SWR at low power levels (and less likely to be damaged by high SWR). The SWR should be 1:1 or very close to it. If the SWR is low try higher transmitter power, SWR bridges are more accurate at higher power levels, especially when the SWR is low. If the SWR is not low, the cable may be defective, a connector may be bad, or it may have a different characteristic impedance than the dummy load and SWR bridge (Gee, I just assumed it was 50 ohm cable; but then, it was awfully cheap!)

You have a roll of coax you'd like to use on an antenna (maybe the Hamfest cable?) but what kind of loss does it have on VHF? Or even UHF? Or, "My antenna feed line has been up for a few years now, I wonder if its loss is increasing?" Checking feed line loss is easy; if you have a dummy load. Connect one end of the feed line to the dummy load and the other to a transmitter. Insert a wattmeter at the transmitter end, key the transmitter, and measure the power going into the line. Next move the wattmeter to the dummy load end of the line and read the power reaching the dummy load. The rest is arithmetic. Divide the power reading at the dummy load by the power reading at the transmitter and multiply by 100 to get the percentage of power lost in the feed line. To check that against the cable specifications you will need to calculate the loss in dB per 100 feet since cable attenuation specifications are always given in dB per hundred feet of line. Divide the power reading at the transmitter by the power reading at the dummy load (note that this is the opposite, or inverse, of the calculation used in the above percentage loss calculation) then take the logarithm of the result and multiply by 10 and you have the cable's attenuation in dB. You can find logarithms (Log) on any "scientific" calculator, the calculator in "Windows", a slide rule (if your old enough), or in tables in many math books, radio handbooks, data books, and reference books. If your line isn't exactly 100 feet long you can easily compensate by adjusting your attenuation number since the attenuation of a cable in dB varies proportionately with its length (the percentage loss does not). Simply multiply your measured attenuation by 100 and divide by the length of your cable in feet. For example, you have 75 feet of cable with 4.5 dB of measured attenuation; the attenuation per 100 feet would be:  $4.5 \text{ dB} \times 100 / 75 \text{ ft} = 6 \text{ dB per hundred feet}$ . Suppose you have 150 feet of the same cable with a

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## N8LT's Workbench

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measured 9.0 dB of attenuation; the attenuation per hundred feet would be:  $9.0 \text{ dB} \times 100 / 50 \text{ ft} = 6 \text{ dB}$ . (Boy, what a coincidence!) Remember, attenuation depends upon frequency. To find the attenuation on another band you must use the attenuation measured on that band and the cable's "attenuation-per-hundred-feet" rating for that band.

A similar calculation can be used to determine the attenuation for any length of new cable too. Simply multiply the cable's rated attenuation in dB per 100 feet by the desired cable length and divide by 100 to get the attenuation in dB for the desired length cable. For example: You wish to use a cable with a rated attenuation of 2.3 dB per hundred feet on two meters and wish to know what the attenuation will be for 85 feet of the cable. Solution:  $2.3 \text{ dB per } 100 \text{ feet} \times 85 \text{ ft} / 100 = 1.96 \text{ dB}$ . For 125 feet of the same cable it would be:  $2.3 \text{ dB per } 100 \text{ feet} \times 125 \text{ ft} / 100 = 2.88 \text{ dB}$  (that's about 48 %). Again, remember that attenuation depends upon frequency. To find the attenuation on another band you must use the appropriate "attenuation-per-hundred-feet" cable rating published for that frequency.

### USEFUL HINTS

Power meters are most accurate for readings near full scale and can be quite inaccurate at readings near the low end of the scale. When reading reflected power, accuracy can sometimes be improved by reading the reflected power on a lower range than the forward power. If using this technique, be sure to test the wattmeter on a dummy load to be certain that under such conditions the reflected power reading is zero on the range you desire to use in your test at the power level to be used. This technique can only be carried so far before inaccuracies creep in. When there is measurable reflected power, the actual power is equal to the forward power reading minus the reflected power reading.

SWR bridges give more accurate readings at higher power levels than lower power levels. Perhaps you have noticed that SWR readings taken at power levels near the minimum required to calibrate the SWR meter tend to be more optimistic than those taken at higher power levels on the same antenna. SWR bridges are also much more accurate for determining SWR at low levels of SWR than power meters; making them a

much better choice for antenna tuning as well. If your power meter is a combination Power/SWR meter, use the SWR facility rather than Forward and Reflected power readings where SWR determination is necessary.

### A CAUTIONARY NOTE

To be useful, measurements must be made within the ratings of the test equipment used. SWR bridges and power meters have specified power limits, frequency range, and line impedance.

To check a meters suitability at a given frequency and power level check it with a good dummy load. For instance, I have a small SWR bridge rated to 60 MHz. On a good dummy load it reads 1.05:1 on 2 meters. I have no hesitation using it on 2 meters even though it's not rated for that band. This test doesn't guarantee accurate SWR readings except at 1:1 but that's really the only reading that needs to be accurate for most work.

Dummy loads have ratings too. The most important dummy load ratings are its power rating (often given for both continuous and intermittent use), impedance (they're not all 50 ohms you know), and frequency range (beyond its specified frequency range it may not be 50 ohms). Lacking specifications, you can check a dummy load's suitability at a given frequency by checking its SWR with a suitable SWR meter.

### CHECKING YOUR SWR BRIDGE

There are a couple of simple checks you can make on your SWR bridge to verify proper operation. First connect it to a good dummy load and check the SWR. If it doesn't read an SWR of 1:1, or close to it, it's out of calibration. Be sure you're well within the upper frequency limit specified for your dummy load and SWR bridge. A small SWR reading is acceptable, especially if the test is run at substantial power. Check the bridge on something less than perfect like an antenna too.

Here's another check: Connect the bridge backwards, that is, connect the Transmitter connector to the dummy load and the Antenna connector to the transmitter. Calibrate the bridge in the usual manner except select the Reflected position first and set the Sensitivity control to produce a full scale reading, then switch to Forward. The meter should read 1:1, or, if not, it should at least read near 1:1 and give the same SWR reading as when

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### 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

## Unsung Heroes

On September 4, 2004, BBC Radio 4 aired a documentary on Amateur Radio's involvement in providing communications after the September 11, 2001 terrorist attack on the World Trade Center. The half-hour program, "Unsung Heroes," is available through a link on our club's "9-11-2001, Lest We Forget" web page:

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

Because the file is 26 MB in size, a high-speed internet connection is recommended. The BBC did a great job on this documentary and it is well worth the wait for the file to download to your computer!

"Through moving interviews, sensitive use of ham radio transmissions and some harrowing accounts, 'Unsung Heroes' reveals the little-known story of the 9/11 ham radio operators who provided vital communication networks for the rescue agencies," the BBC program listing says. "Hams, often mocked for their obsessive hobby, believe that September 11th became Amateur Radio's finest hour. Stephen Evans, the BBC's North American Business Correspondent, witnessed the attacks that day and meets with ham operators who witnessed the terrorist attacks or lost friends and relatives on September 11th and still helped to support the search-and-rescue operation."

Mark Phillips, KC2ENI/G7LTT, says the program, produced by Kate Bissell, features N2NOV, KF2EO, KE2UN, AB2IZ, "and a whole host of others," including himself. It was recorded during the last week of June.

The program is also available in MP3 format on Phillips' Web site:

<http://www.g7litt.com/>

On Phillip's page, click on: World Trade Center 9/11

## Ready, Study, Know

With the one-two punch of Hurricanes Charley and Frances leaving Florida a soggy mess in many locations, thousands of hams are performing vital public service across the state. More are needed as the initial volunteers finish their "tours of duty" and return to their homes.

As the winter approaches, there will surely be opportunities to support your local public safety, Red Cross, weather watchers, and other emergency and disaster relief agencies. The time to consider your station's readiness is now, not when the first storm warnings are making the nightly news.

Sometimes neglected in favor of equipment is the operator. Are you personally prepared to provide useful service in time of need? I'm not talking about your station or your "go kit" but your emergency communications training. Even the best-equipped amateur can be more of a hindrance than a help if untrained.

There is an understandable tendency for many of us to think, "Well, I've been a ham for years and I've checked into lots of nets, so I know what I'm doing. I'll just pick it up on the fly." NOT!

Although it's not difficult to learn, emergency communications has a definite rhythm, jargon, and structure that you need to know to be effective. Just like contesting, you wouldn't expect to place in the Top Ten without having some experience and tutoring.

For example, the Incident Command System is now the norm for how emergency and disaster response are managed. Are you familiar with ICS? If you haven't been trained on it in the past couple of years, the chances are you don't know about it. Do you know the message format for your local and regional agencies? It's probably not the ARRL Radiogram form, although that is the standard for the National Traffic System. The last thing an emergency worker needs to hear from you is, "Huh?" so it's a good idea to learn these things in advance.

Luckily, there is a great opportunity to learn the basics from the comfort of the chair in which your bottom resides right now. The ARRL's EC-001 course opens for registration on the first Monday of each month. (Registration is open through Sep 13 at <http://www.arrl.org/cce/courses.html#ec001> It's an excellent introduc-

tion or refresher into "emcomm", including how the ICS works. The course is FREE if you complete it - you get reimbursed for the \$45 registration fee via your credit card.

Right behind EC-001 is the course for net control training, EC-002, which is also FREE after completion. (Your editor is about to finish that course.) Acting as a net control is an excellent way for contesters to put our pileup management skills and operating stamina to work. If you acquire a taste for emcomm, EC-003 will prepare you with leadership skills, as well.

Of course, "book learning" is no substitute for the on-the-air practice. Your county or section probably has some kind of active emergency group. These may be folks you've never met, but are working hard and have good skills to share with you. How do you contact them? The most direct way is to contact your ARRL Section Manager and ask about volunteering. Another good way is to check into a local emergency net. Go to the ARRL's on-line Net Directory at <http://www.arrl.org/FandES/field/nets/client/index.html> and check "Local Nets", select your state, and click "Search for Nets". You'll see the nets you're looking for in the list provided. An excellent opportunity to get some practice is coming up in the October Simulated Emergency Test <http://www.arrl.org/FandES/field/setguide.html> on 2-3 Oct.

Now's the time. Prepare your station, have your emergency supplies ready, and be sure to prepare yourself, too.

Ready? Study. Know!

73, Ward N0AX

*Taken with permission from the September 8, 2004 issue of the ARRL Contest Rate Sheet.*

Note:

Registration for the emergency communication course is available on a regular basis. See: <http://www.arrl.org/cce/> For more information, contact Emergency Communications Course Manager Dan Miller, K3UFG, (860)594-0340; [cce@arrl.org](mailto:cce@arrl.org).

## N8LT's Workbench

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connected in the normal manner. If not, the bridge is out of calibration. Ideally, the Sensitivity control setting for full scale calibration with the bridge reverse-connected should be exactly the same (or very nearly so) as the setting for full scale calibration when the bridge is connected in the normal manner.

### CHECKING YOUR DUMMY LOAD

Fortunately dummy loads are easy to check because they are simply resistors. You can test a dummy load with an Ohmmeter. A 50 ohm dummy load should read between 45 and 55 ohms. (The DC (ohmmeter) resistance may be somewhat different than the RF resistance due to "skin effect" and other factors.)

Another way to check a dummy load is with a good SWR bridge. Remember that dummy loads have an upper frequency limit above which their impedance begins to significantly depart from their rated value. When making such a test stay well away from that upper frequency limit of the dummy load and the SWR bridge. Use one of the HF bands if possible, especially if the frequency rating of the dummy load is unknown. Make sure your SWR bridge is rated for use at the test frequency. If the dummy load is bad, it will be bad at all frequencies.

To test the suitability of a dummy load at any given frequency simply check it's SWR at that frequency. Again, make sure your within the frequency range specified for the SWR bridge. If the SWR reading is within the acceptable range specified for the transmitter you wish to use it on, it may safely be used.

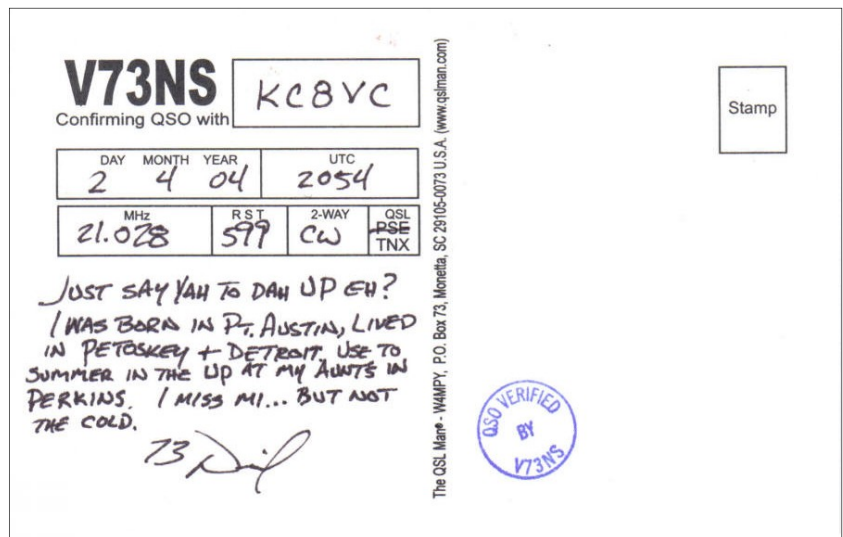
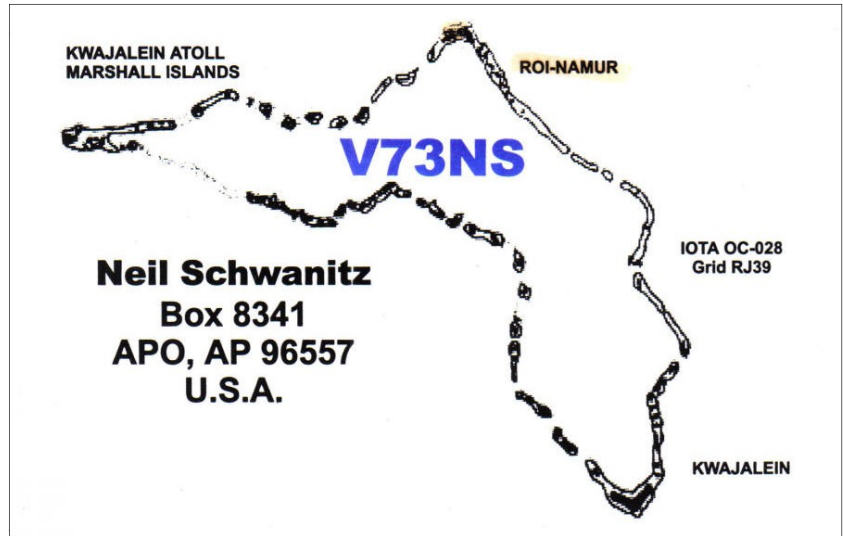
### FINALLY

Everyone with a transmitter should at least have an SWR bridge (not to mention a dummy load!). Anyone with a "no-tune" transmitter or amplifier should consider it a must. Without one, you are blindly transmitting into the unknown. They are not only indispensable for checking antennas but you literally cannot build or adjust one without it.

As you can see, wattmeters are also very useful.

N8LT

## DX Worked With The KC8VC Club Callsign



Neil, V73NS, Roi-Namur, Kwajalein Atoll, Marshall Islands. Worked by Mike, K8DDB, on 15 meters CW in April of 2004.

KC8VC—Ten Tec Argonaut V at 5 watts to a wire vee beam antenna. (Worked off of the back of the vee beam—6,500 miles.)

Just goes to show you how small the world of Amateur Radio is. Neil, as a kid, spent his summers with his Aunt in Perkins Michigan only 40 miles from here!

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.

K8DDB

**Club Equipment List**

Please take the time to look through your "stuff" and see if you have anything belonging to the club.

Here's what we have so far:

Tom, W8JWN, has custody of :

- Gin Pole for Rohn tower sections with 100 feet of rope.
- Small TV type rotor and control.
- Dipole antennas for 80, 40, 20, 15 and 10 meters with 50 feet of RG58 coax.
- Various lengths of string for antennas (not very heavy)
- RG8X with double shield (100 feet)
- 3/16 inch single braid Dacron rope (200 feet)
- 20 meter open stub (nulls 40 and 15 meters)
- 40 meter shorted stub (nulls 20 and 10 meters)
- 40 meter shorted stub (nulls 15 meters)
- 6 PL259 silver connectors
- 4 T-adapters for stubs
- 4 UG-176 silver sleeves
- 3 right-angle connectors

Bob, WA8FXQ, has custody of a light 40 foot tower (condition is not known.)

The list can be accessed by a link on the Membership page of our web site:

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

If you have custody of any club equipment, please notify Mike, K8DDB, of what you have. Also, notify Mike when you give custody of the equipment to another member.

Email: [mikebray@chartermi.net](mailto:mikebray@chartermi.net)  
or  
Phone (906) 563-7020

# ARRL Michigan Section News for July

Packet radio has been the topic of serious discussion for several months, particularly in light of the interest in the deployment of Winlink 2000 as an email-like user interface. Testing of Winlink 2000 in Michigan has had positive results, and demonstrations of the system to various officials at both local and state levels has resulted in favorable commentary.

Michigan has explored and operated several packet networks and has pioneered in specific areas of packet radio. With the likelihood of Winlink 2000 becoming an integral part of emergency communications and a national standard, it is in our interest to seriously examine the status of our various networks and associated stations and develop reasonable plans and guidelines to aid in both the near-term and long range development of an effective and reliable packet radio system in Michigan. Winlink has in fact been successfully implemented and is operational in several regions of Michigan as of this time.

I am therefore establishing the Michigan Sectional Digital Radio Group to spearhead this effort. The key objectives shall include, but not necessarily be limited to the following tasks: examine existing system and networks, determine which are most appropriate to serve the needs of Michigan in terms of reliability, ease of use, redundancy, throughput, ease of implementation, potential for growth, likelihood of obsolescence, availability of equipment and software, interface to existing systems and networks and other requirements to be determined by the group. Recommend, and where appropriate, develop and/or integrate new systems and networks to serve those determined needs and national standards.

It must be noted that many pressures and the need for the group to complete their objectives will be high, requiring cooperation from a wide range of nets, clubs, local and state government organizations and ARES/RACES groups. In some way, most amateur radio organizations in the state will be affected by the actions of this new team, requiring a resolute effort in cooperation and teamwork. Nearly everyone will in some way be a stakeholder in insuring the success of this program.

It shall draw its membership from three primary areas: The ARES/RACES program, the NTS

Staff, and the amateur radio technical community. Each sector shall be appropriately represented within the following guidelines. The SEC shall chair the body, and permanent seats will be assigned to the STM, the QMN, the ASM for ARPSC and a representative from the ARRL Great Lakes Division. The SM shall serve as an advisor without vote. Each DEC shall select a representative from his District to serve as a member. Members shall serve a two year renewable term, and in the case of the permanent members, concurrent with their other offices. A secretary shall be chosen to record the proceedings and they shall be published and made available to all interested parties. Meetings shall be held as the group determines, but always with formal advanced notice posted on the ARRL Michigan Section web page. The committee shall develop the remaining by-laws.

An important requirement is for this newly created team to operate in an open environment where it can freely receive input and suggestions from the entire Michigan Amateur community. Likewise, the group is charged with reporting its plans and activities to us all on a regular basis. I will make the resources of the Section Staff available for distributing those reports, minutes and commentaries. Of course there are high expectations for this team, and many of us will clearly focus on monitoring its efforts. I am confident that the support of the Michigan amateurs will be behind this effort and we will see near-term very positive results.

73....Dale Williams, WA8EFK  
(Section Manager)

Abbreviations:

- ARES—Amateur Radio Emergency Service
- ARPSC—Amateur Radio Public Service Coordinator
- ARRL—American Radio Relay League
- ASM—Assistant Section Manager
- DEC—District Emergency Coordinator
- NTS—National Traffic System
- QMN—Michigan Net
- RACES—Radio Amateur Civil Emergency Service
- SEC—Section Emergency Coordinator
- SM—Section Manager
- STM—Section Traffic Manager

## September 14th Meeting

*(continued from page 1)*

The weather was miserable.

Tom attended the NEWDXA last Saturday and said the club banner they have is too heavy. We should look for a lightweight banner for our club. Steve, KC8RYY, will check with CJ Graphics to see if they can supply one.

### New Business:

Steve, KC8RYY, requested that information regarding satellite operation be posted on our website. He will supply the URLs for Mike, K8DDB, to post on the website.

Mike, K8DDB, submitted a request for reimbursement in the amount of \$25.43 for printing and mailing newsletters for the last six months and for postage for other club correspondence. The request was approved by those in attendance.

NEWDXA is looking for ideas for their club newsletter. Tom will put them in touch with our newsletter editor.

Steve, KC8RYY, requested that we transfer \$200 from our savings account to checking. The request was approved by those in attendance.

Pete Schlitt stated that funds from a Homeland Security grant may be available in the near future. He wants the club to evaluate our needs and get back to him within 3 months with a prioritized list. Bob, KC8TWG, suggested that we could use a 4 to 5 kw generator. Mike, N8NBN, suggested that we may want to modernize our repeater.

### For The Good Of The Order:

New member, Dennis Beurjey, introduced himself to the group. Dennis is from Kingsford and will be taking his amateur radio license exam this month in Iron River. He has recently purchased a 2-meter rig and has been listening to the local traffic.

Pete Schlitt, KC8JRH, introduced himself to the group. Pete is the Director of Emergency Services for Dickinson County. He will be retiring at the end of this year and will be returning as Deputy Director of Emergency Services on a consulting basis.

### Adjournment:

The meeting was adjourned at 7: 22 PM

The meeting was followed by "Unsung Heroes", an audio presentation provided by Mike, K8DDB. This program was aired on September 4, 2004, by BBC Radio 4 and chronicles Amateur Radio's involvement in providing communications after the September 11, 2001 terrorist attacks.

"Through moving interviews, sensitive use of ham radio transmissions and some harrowing accounts, the half-hour program 'Unsung Heroes' reveals the little-known story of the 9/11 ham radio operators who provided vital communication networks for the rescue agencies," the BBC program listing says.

Submitted by: Mike Bray

### Attendees:

Mike Bray, K8DDB (Secretary)  
Mike Boileau, N9NBN (Vice President)  
Bob Uren, KC8TWG  
Steve Johnson, KC8RYY (Treasurer)  
Dennis Beurjey (new member)  
Tom Martin, W8JWN (President)  
Paul Hintz, WB8SZI and Carol  
Pete Schlitt, KC8JRH (guest)  
Randy Zandt, KB9ZES (guest)

## Jamboree On The Air

When Scouts want to meet young people from another country, they usually think of attending a World Jamboree. But few people realize that each year more than 400,000 Scouts and Guides "get together" over the airwaves for the annual Jamboree-on-the-Air (JOTA). Modern technology offers Scouts the exciting opportunity to make friends in other countries without leaving home.

JOTA is an annual event in which Boy and Girl Scouts and Guides from all over the world speak to each other by means of Amateur Radio. Scouting experiences are exchanged and ideas are shared via radio waves. Since 1958 when the first Jamboree-on-the-Air was held, millions of Scouts have met each other through this event. Many contacts made during JOTA have resulted in pen pals and links between Scout troops that have lasted many years.

JOTA 2004 will be held on the weekend of October 16-17. Local scout leaders have not yet contacted the club to request our participation, but we usually set up our equipment on Saturday morning and operate for a few hours. Please notify Tom, W8JWN, if you are interested in supporting this event.

### **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:

Steve Johnson, KC8RYY  
917 Coolidge Ave  
Kingsford, MI 49802

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:  
Steve Johnson, KC8RYY  
917 Coolidge Ave  
Kingsford, MI 49802

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: Nov 6, 2004  
Exam Date: Feb 5, 2005  
Exam Date: May 7, 2005  
Exam Date: Aug 6, 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:**

Steve Johnson, KC8RYY  
(906) 776-1597  
sjohnson4@chartermi.net

### Reminders

The monthly meeting for October is on TUESDAY the 12th at 6:30 PM in the Grace United Methodist Church, 721 Norway Street, Norway, Michigan. (upstairs in the room next to the sanctuary.)

We have a Net Control for the Tuesday Net, so try to be around the frequency at 6:30 PM.

Saturday Morning Breakfasts have been changed to the THIRD Saturday of the month at the Holiday Kitchen – Oct 16th @9:00 AM

Don't forget to provide input on the articles you would like to see in Lee's new 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.