

Mich-A-Con RF

Iron Mountain, Michigan

May 31, 2012

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Visit the ARRL's Web Site at <http://www.arrl.org>

FCC Expands Part 95 Med Radio Rules to Allow Devices in 2360-2400 MHz Band

from:

ARRL Letter for May 31, 2012

05/29/2012

In a *First Report and Order* and a *Further Notice of Proposed Rulemaking* ([ET 08-59](#)) released on May 24, the FCC decided to expand the Part 95 Personal Radio Service rules to allow medical devices to operate on a secondary basis in the 2360-2400 MHz band. These devices -- called Medical Body Area Networks (MBAN) -- provide a way for health care facilities to monitor their patients via wireless networks. Because use of these frequencies will be on a secondary basis, MBAN stations will not be allowed to cause interference to -- and must accept interference from -- primary services, including radio amateurs who operate on a primary basis in the 2390-2395 MHz and 2395-2400 MHz bands.

In July 2006, the FCC released a Notice of Proposed Rulemaking and Notice of Inquiry and Order ([NOI](#)), regarding the use of the radio spectrum for advanced medical technologies. In December 2007, GE Healthcare filed ex parte comments in response, proposing that the band 2360-2400 MHz be allocated on a secondary basis for "Body Sensor Networks" (BSNs). In April 2008, the FCC put the proposal on Public Notice; the ARRL submitted comments, pointing out the potential incompatibility with amateur operations.

Nevertheless, in June 2009, the FCC released a Notice of Proposed Rulemaking that also requested comments on possible alternatives, including 2300-2305 MHz. The ARRL followed up in October 2009

with additional comments.

“Even though the Amateur Radio Service retains its primary status at 2390-2400 MHz, it remains to be seen how the addition of a new secondary service in the band will work out in practice,” noted ARRL Chief Executive Officer David Sumner, K1ZZ. **“In the past, the FCC has declined the ARRL’s request to raise the status of the Amateur Service at 2300-2305 MHz to primary, even though there is no other service to which this segment of the band is allocated. This is now the only portion of the 2300-2450 MHz band -- which at one time was available in its entirety to amateurs -- that is not encumbered by other spectrum occupants. We hope that in the future, the FCC will be receptive to making the Amateur Service primary in this narrow segment, in recognition of the reduced utility of the remainder of the band.”**

In making the decision to allow these devices in the 2360-2400 MHz band, the FCC noted that the costs of permitting MBAN operation “are limited to the risk of increased interference, which we minimize by adopting rules to protect other licensed operations in these bands. We find that the risk of increased interference is minimal and is greatly outweighed by the benefits of the MBAN rules we adopt today.”

Sumner observed that with this decision, “the Commission has effectively taken 2360-2400 MHz off the table for consideration for commercial wireless broadband.”

How Does this Affect Amateur Radio?

MBAN operators in the 2390-2400 MHz band will have to account for radio amateurs, who are authorized on a primary basis in this spectrum. “Both Philips and GE Health Care assert that interference from MBAN devices to Amateur Radio is unlikely, citing factors such as the low transmission power and low duty cycle proposed for MBAN devices, as well as geographic separation and the frequency agility of MBAN devices,” the FCC pointed out in its comments. **“The ARRL does not anticipate that an MBAN would cause ‘a significant amount of harmful interference’ to amateur users, but it cautions that some amateur operations -- such as weak signal communications that occur on a ‘completely unpredictable basis’ -- could receive interference.”**

The FCC said it believed that MBAN devices can “successfully share the band with the Amateur Service. These frequencies are part of the larger ‘13 cm band’ in which Amateur Radio operators already share the adjacent 2400-2450 MHz portion of the band with low-powered equipment authorized under Part 15 of our rules. We expect that the Amateur Service will likewise be able to share the 2390-2400 MHz portion of the band with MBAN devices because the power limits for MBAN operations will be even lower than that allowed for the unlicensed equipment that operates in the 2400-2450 MHz range. We further believe that MBAN and amateur operations are highly unlikely to occur in close proximity to each other. An MBAN, which will use very low transmitted power levels compared to the Amateur Service, is not intended for mass market types of deployment, and instead will be used only under the direction of health care professionals.”

According to the FCC, the majority of MBAN operations in the 2390-2400 MHz band will be located indoors: “We envision that the most likely outdoor use will

occur in ambulances or while patients are otherwise in transit, thus we do not believe that prolonged outdoor use in a single location is likely. In such a situation, any interference that might occur would likely be transitory in nature and would not seriously degrade, obstruct or repeatedly interrupt amateur operations and thus would not be considered harmful under our definition of harmful interference.”

The FCC also addressed the potential for interference from radio amateurs to the MBAN devices. The ARRL, in its October 2009 comments, stated that “amateur operation in the band is unpredictable” and that the “substantial power levels and exceptionally high antenna gain figures used by radio amateurs in the 2390-2400 MHz band will provide no reliability of MBANs in this segment whatsoever,” calling the results of such interference “potentially disastrous.” The FCC pointed out that MBAN proponents assert that “MBAN devices will have built-in capabilities, such as spectrum sensing techniques to detect in-band amateur signals and frequency agility capability to move MBAN transmissions to other available channels.”

As to the ARRL’s concerns about MBAN’s reliability and the risk presented by interference caused by amateur operation, GE Health Care acknowledged that “medical device manufacturers seeking to develop equipment consistent with the MBAN rules would need to build robust products in order to satisfy FDA requirements and to ensure customer acceptance,” but the FCC did not view that as a barrier to its efforts to develop and deploy MBAN devices.

“We find that factors such as the incorporation of established techniques to avoid interference into MBAN devices, the use of low duty cycles and the separation distances between MBAN devices and amateur operations that are likely to occur in real-world situations will minimize any potential for interference to MBAN devices from amateur users,” it explained. “In the unlikely event that an atypical scenario occurs where amateur operators do receive harmful interference from MBAN operations, we note that amateur operators would be entitled to protection from MBAN interference. MBAN operations will occur on a secondary basis and MBAN operators will thus be required to accept any interference they receive from primary amateur licensees operating in accordance with the rules.”



Club Patches are available from:

Burt Armbrust WB8EBS

693 Cliff St

Quinnesec, Mi 49876

The patches are 3 inches in diameter and sell for \$3 each.

If ordering by mail please include a SASE along with your payment.

**Mich-A-Con Amateur Radio Club
Minutes of the May 8th, 2012 Meeting**

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

Secretary Report

Wasn't read in the interest of time and is available online and in the newsletter.

Treasurer Report

Membership Dues Received: \$30.00

Balances as of April 30th, 2012:

Checking - \$10.97

Regular Savings - \$2,962.39 of which \$1,809.64 is in the Trailer Fund.

Repeater Savings - \$ 1,079.84

Petty Cash - \$24.00

Radio Fund \$88.00

Repeater Report

Bob Meyers reported that our 2 meter repeater is not functioning very well right now because it has 1,000 microvolts sensitivity but it should be ¼ of a microvolt. Dave Thomas & Terry Moriarity have a Motorola 2000 repeater from Florence Co. for donation to the club. It has 100 watts of continuous output. Cost new was about \$7,500.00. The repeater should not be off the air during the conversion because we have a backup repeater that's still there on the rack w/ 15 watts output. Terry's friend has the parts required but he's out of town now. Nate Mieras has a 24 volt power supply which Bob will install. Cost of a new ICom repeater is about \$2,000 budget estimate.

ARES

Dennis Beurjey discussed the new Wisconsin concealed weapons law. Wisconsin ARES prohibits concealed carry during ARES activities. The net has been meeting regularly.

Old Business

Scott Jarmusch recommended that the club purchase a 40 meter Cushcraft add on kit quad loop antenna from a kit that this would be a good investment for the club to make. This would give a total of 40-6 meters. Motion by Scott to purchase one for \$200.00, seconded by Terry. All Eyes, No no's. President Tom will search for the best deal and make the purchase.

Terry Moriarity has the contract from the town of Florence, WI for the lease for Field Day. Terry will attend the town's meeting tomorrow night. Telephone Poles: Terry and Dave will do some more measuring. 2 telephone poles in the back corners and the bucket truck out front will allow for as many wires as we need but attaching the beam to the fiberglass bucket will be difficult if not impossible to do. President Tom will check with Loflom lumber to request a donation of their bucket lift. Paul Schultz will bring a BBQ grille.

President Tom recommended that we not use the call sign KC8VC again because it will come up as MI and since we'll be in WI we should use a 9 call sign. Terry recommends staying with KC8VC to keep using the club's call sign even if we have to call portable 9 but Tom said this would be confusing. Tom said it's da da and not da da da. A decision will be made in the future.

Should we operate 2A or 3A? Tom will have two radios, Terry will also have two radios and Scott will bring his radio. The club has a computer. A decision will be made in the future.

New Business

President Tom will do a demonstration on M3FJP logging program at the next meeting. This is the program we use for Field and Veterans Day.

Per President Tom the Model A Ford Club of America will have a convention in Ishpeming June 18th - 22nd and are requesting volunteers to help with communications to monitor 2 meters from 6am central to the early afternoon. The cars will be touring from Ishpeming to the Cornish pump in Iron Mountain in groups of about 20 Model A cars. Volunteers will report as the groups pass checkpoints. One checkpoint will be in Sagola and another one at the Cornish Pump. Randy Zandt and Burt Armbrust and Tom Martin and Joe Ferris may be interested.

The club had four members attend the storm spotter training this week.

Storm spotting locations have not been updated in years. Burt is assigned at Wells Fargo with a view to the west, east and south. Dennis is assigned to the Iron Mountain Ice Arena. Paul is assigned to the north side school parking lot with a panoramic view to the north. Tom is assigned to County N. Joe is assigned to his home in Florence which has a good view. 141 & 8 to the South of Niagara is a good place needing a volunteer. Dennis will email an updated location list to Pete Schlitt.

Dennis reported than felons cannot participate in any ARES activities. Tom asked how they would know. Felons are prohibited from obtaining a ham radio license. RACES does background checks.

Adjournment

The meeting was adjourned at 7:50 p.m.

For the Good of the Order

Attendees reported on their recent activities.

Submitted by Paul Schultz

Attendees

**Tom Martin, W8JWN - President
Burton Armbrust Sr., WB8EBS - Treasurer
Scott Jarmusch, KA8TFF - Vice President
Paul Schultz, KD8KUF - Secretary
Dana Bey, KD8POR
Joe Ferris, KC9TQR
Art Costa, KD8GLO
Joe Ferris, KC9TQR
Joe Komblevicz, KB8ETK
Terry Moriarity, K9TRY
Bob Meyers, WA8FXQ
Nate Mieras, KD8GLP
Dennis Beurjey, K8SWX
Scott Baker, KB9AVX**

Mich-A-Con ARC Activities for June 2012

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thur</i>	<i>Fri</i>	<i>Sat</i>
					1	2
3	4	5	6	7 <i>ARES</i>	8	9
10	11	12 <i>Meeting</i>	13	14 <i>ARES</i>	15	16 <i>BREAKFAST</i>
17	18	19	20	21 <i>ARES</i>	22	23 <i>FIELD DAY!</i>
24 <i>FIELD DAY!</i>	25	26	27	28 <i>ARES</i>	29	30

Club Activities:

ARES Nets are conducted at 6:30 PM Central Time every Thursday on our 2-meter repeater (146.850 MHz.)

Meeting: The Mich-A-Con Club meets the second Tuesday of the month at the Dickinson County Library at 7:00 PM. Visitors and Prospective Members are always welcome.

Our Saturday Morning Breakfast is held on the 3rd Saturday of every month at 9:00 AM at the Holiday Kitchen Restaurant on Stephenson Ave (US-2) in Iron Mountain.

Club Repeaters:

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 under normal conditions, depending upon terrain. The 440 MHz repeater has a range of about 25 miles.

OUTPUT	OFFSET	PLTONE	CALLSIGN
146.850	MINUS	-	WA8FXQ
444.850	PLUS	100 Hz	WA8FXQ

Repeater Specifications:

The 146.85 repeater is a Melco Hi Pro (built from a kit in the 1970s) with 25 watts output. The repeaters share a Diamond dual band antenna at a tower height of 125 ft.

V.E. TESTING:

8/14 Iron Mountain: 9:30am central time, Dickinson County Library(conference room), contact Mark J. Lewis N8UKD, Fairmount St. Kingsford, Mi 49802. Examinees must be pre-registered. (906-776-1553).

12/11 Marquette: 8:30am eastern time, (arrive by 8:00am) Marquette County Health Dept. Bldg,U.S. 41 just east of the Michigan State Police Post. You must pre-register by Tuesday preceding the test date. Contact Rich Schwenke, N8GBA at 906 249-3837 e-mail: n8gba@chartermi.net or Greg KI8AF 906 225-1594 ki8af@arrl.net.

10/13 Hancock: 8:30am eastern time, The Zion Lutheran Church, 400 Ingot St Hancock, Mi. Go north on hwy 41 (Quincy Hill) near the lookout. Turn left on Ingot up about one block. The church is on the left hand side of the street. This is a barrier free entrance for the handicapped Contact Glenn Ekdahl, WA8QNF at (906) 482-7743 or email: wa8qnf@arrl.net if you have questions. You can now take a Hamexam "Anytime". Contact Glenn, WA8QNF at (906)482-7743 for details.

7/14 Gladstone: Sponsor: Delta County Amateur Radio Society Time:10:00 AM (Walk-ins welcome) Contact: Dave Palmgren N8DP, (906) 428-2271, n8dp@dcars.org Vec: ARRL/VECLocation: Gladstone City Hall Main Meeting Room 1100 Delta Ave Gladstone, Mi. 49837.

Please arrive one-half hour early for test sessions to give time to process applications. Testing applicants should bring the following items with them: Two pieces of I.D. one being a photo I.D., Original license and one clear copy of their license if applicable, Completed form 605 (one will be provided if you don't have one), pencils, calculator and the test fee of \$15.00. Please have the correct fee as examiners do not carry change. Please contact the individual(s) listed to confirm date(s), location(s), etc. Note: If you have been assigned a FRN from the FCC you must use it on all forms rather than your SSN

Please remit dues to :
Burt Armbrust WB8EBS
693

Name: _____
Address: _____
City, State, Zip _____

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 and call signs: _____
City, State, Zip _____
Call Sign: _____
Email Address: _____
Phone: _____
ARRL Member? Yes ___ No ___

Words from the President

Tom, W8JWN

Field Day 2004 is history, but the memories will linger for a long time. How could I ever forget the smell of plastic melting in the surge protectors, the cold, crisp breeze at 3 A.M. that drove Mike and I to our vehicles to get warm, the frustration of calling KP4 "umpteenth" times with no contact being made, and the glow of dawn as the sun came up directly in front of my operating position. It was a great experience! I didn't realize until late Sunday, after a very long nap, that I missed being a part of these events. My last FD was back in the late 70's. I would hope that many of the readers of this newsletter get to savor the FD experience in the future. Don't wait as long as I did.

The above was from the July 2004 newsletter. After a 35-year absence from participating in Field day, I came back with a vengeance! I applied my contest background to the FD operation: aggressive calling, "never leave the chair" staying power, etc. I was in "whole hog".

The last few years, I have lost a bit of that "staying power"! I get tired earlier and the chair gets harder and harder, as the time goes by. My joints get stiff and I need a couple Aleve capsules to continue through the night. I don't think that I've seen a sunrise at my operating position in three years!

This year's Field Day, June 23-24, might be a little different, though. We will be at a new site at the Florence Fairgrounds; therefore, a new view to the east. I just might be operating as the sun rises on Sunday morning.

We will need operators for two stations and the GOTA station. Club members that haven't operated the GOTA station in the past and haven't been on HF can operate this year. Don't be afraid! You will have someone there to guide you.

Family members can operate as well. No license is needed. Last year, my 6-year old grandson, made a contact.

Field Day plans will be finalized at the June 12th meeting. Be there!



Field Day 2010



Sun Rise, Field Day 2011 (Photo by Tom, W8JWN)

Club Meetings:

The Mich-A-Con Amateur Radio Club meets on the second Tuesday of the month in the Dickinson County Library at 7:00 PM. 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:
Scott Jarmusch KA8TFF
s_jarmusch@yahoo.com

Secretary:
Paul Schultz KD8KUF
(906) 774-8900
pauls@schultzequipment.com

Treasurer:
Burt Armbrust WB8EBS
(906) 774-8383 retary:
[Paul Schultz KD8_wb8ebs@yahoo.com](mailto:Paul_Schultz_KD8_wb8ebs@yahoo.com)

Reminders:

Club dues for the year 2012 were payable on January 1st. Please use the Membership Application

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Renewal form when paying your dues. Checks should be made payable to : Mich-A-Con Arc and sent to our Treasurer, Burt Armbrust WB8EBS at the address listed on the form. Thank-you for supporting your club!

The Next Mich-A-Con Meeting will be held on Tue June 12th, 2012. It will be held in the Dickinson County Library at 7 PM

MICH-A-CON RF

Mich-A-Con ARC
c/o Stephen Skauge
213 South Angeline
Ishpeming, Mi 49849

