

September 2006



Central Michigan Amateur Radio Club

# The Scope



Lansing Civil Defense Repeater Association

[www.qsl.net/cmarc](http://www.qsl.net/cmarc) 84 Years of Service to Our Community!



## **Table of Contents**

- Page 3:** Upcoming Events  
August Key of Month
- Page 4:** For Sale – Frequency Counter  
Breakfast Groups  
Regular Announcements
- Page 5:** Nets  
September Birthdays  
September Anniversaries  
CMARC Club Officers
- Page 6:** August CMARC Treasurer’s Report  
Upcoming Hamfests
- Page 7:** August CMARC Board Minutes
- Page 8:** August CMARC Club Minutes
- Page 9:** Event Announcements  
BPL Article
- Page 10:** Editor’s Notes
- Page 11:** September Key of Month
- Page 12:** Club Registration Forms

## Upcoming Events

**9/9** Club Picnic @ Burchfield Park in Holt. 12:00 - ? (Address is 881 Grovenburg Road Holt, MI 48842 for anyone wanting to make a map.) Any Questions? Call DeAnna @ 980-4798.

Details for the picnic - Bring the whole family and a dish to pass. Beer and Wine is allowed in park but please designate a driver first. We are trying to get a foxhunt going and hoping to have a GOTA Station available. There is a playground and restroom nearby with sidewalks. I hope to see you all there to enjoy in the fun. Ladies, please bring a white elephant with you.

**9/10** Run/Walk with the MSU women's basketball team @ Hawk Island. Anyone wishing to help operate contact Don Tillitson.

**9/17** Hospice Hike @ Hawk Island, If anyone would like to help with operations on this please contact Clint Hannahs.



### August Key Of The Month

The August selection for "Key of the Month" is another offering from Menomonee, Mich. This Key on Board "KOB" was made by Signal Electric Company. This one features a shorting bar, and a hole through the base to provide for a screw mount so the key could be secured to the operating desk. This may not seem so important to a civilian, but very necessary if the "operating desk" is a ship or plane or even a tank. This one dates to the 1940's. This was found right here in Lansing at the Antique Radio show. They were made by the thousands so there are still plenty of them out there in use. They have a good feel, are easily adjustable, and inexpensive, making them a good choice for the new ham. There were several variations made as next month we will look at one with a buzzer added.

73, WB8LZG Gregg

**For Sale:** Heath kit model 2410 frequency counter, measures to 250 Mcs. Great shape and works well. This unit was LCC surplus from the lab. **\$ 25**  
 Call Gregg Mulder @ 517- 646-6257 after 5 please.

**Breakfast groups**

1. Rod's Breakfast Bunch Each Friday - Starts about 8:00 - 8:30 AM - location: Bob Evans Restaurant - DeWitt - north of I-69 at 13101 S. US 27 145.390 Talk in.
2. QCWA – Last Saturday of every month – at 8:00 AM - Location: Korner Kitchen @ Mt. Hope and Pennsylvania St.
3. 539er's – Every Saturday – 8:00 AM – New Location: Penn Ave Diner on Pennsylvania Rd near Miller.

**Regular Announcements**

Lansing VE testing is held the 2nd Saturday of the odd months at the Red Cross building. Registration begins at 9:30 am and testing starts at 10:00 am. The address is 1800 E. Grand River Lansing. The next date is?

March 11 <sup>th</sup>	May 20 <sup>th</sup>	July 8 <sup>th</sup>
<b>September 9<sup>th</sup></b>	November 11 <sup>th</sup>	January 13 <sup>th</sup>

Charlotte has their VE testing on the 2nd Saturday of even months at the Eaton County Sheriff's Department, Charlotte MI at 12:00 noon. The next Registration date is?

February 11 <sup>th</sup>	April 8 <sup>th</sup>	June 10 <sup>th</sup>
August 12 <sup>th</sup>	<b>October 14<sup>th</sup></b>	December 9 <sup>th</sup>

The Delta Township Auxiliary Communications Service meetings are held on the 1st Monday of each month at Fire Station Number One on Saginaw and Canal Rd. at 7:00 pm. The Next meeting is?

March 6 <sup>th</sup>	April 3 <sup>rd</sup>	May 1 <sup>st</sup>
June 5 <sup>th</sup>	July 10 <sup>th</sup>	August 7 <sup>th</sup>
<b>September 11<sup>th</sup></b>	October 2 <sup>nd</sup>	November 6 <sup>th</sup>
December 4 <sup>th</sup>	January 8 <sup>th</sup> , 2007	February 5 <sup>th</sup> , 2007

The Lansing Civil Defense Repeater Association, LCDRA, meeting is held quarterly on the Third Thursday at Fire Station Number 8 on Marshall and Saginaw St in Lansing at 7:00 pm. The next meeting will be?

April 20 <sup>th</sup>	July 20 <sup>th</sup>	<b>October 19<sup>th</sup></b>	January 18, '07	April 18, '07
------------------------	-----------------------	--------------------------------	-----------------	---------------

ARPSC meets the 3rd Monday of every month @ 7:00 pm. Odd months they meet @ Fire Station 8 on Marshall and Grand River Even months they meet @ Ingham County Sheriff's Department 630 N. Cedar St Mason MI  
 Next dates:

Odd-  
 March 20<sup>th</sup>    May 15<sup>th</sup>    July 17<sup>th</sup>    **September 18<sup>th</sup>**    November 20<sup>th</sup>    January 15<sup>th</sup>, 2007

Even-  
 April 17<sup>th</sup>    June 19<sup>th</sup>    Aug. 21<sup>st</sup>    October 16<sup>th</sup>    December 18<sup>th</sup>    February 19<sup>th</sup>, 2007

## **NETS:**

Sunday- 147.080 @ 8:00 pm. No pl tone. Eaton County Amateur Radio net.  
Monday- 443.625 @ 9:00 pm. PI tone 100. Traders net.  
Tuesday- 443.625 @ 9:00 pm. PI tone 100. Michigan IRLP net.  
Wednesday- 443.625 @ 9:00 pm. PI tone 100. Canadian IRLP net.  
Friday- 443.625 @ 9:00 pm. PI tone 100. International IRLP net. (New net)

Sunday evening @ 8:00 pm the Eaton County - ECARC net is held on the 147.080 repeater.  
Sunday evening @ 8:30 pm the CMARC information and fun net is held on the 145.390 repeater 100Hz. PL.

Sunday evening @ 9:00 pm the Central Michigan Six-meter fun net is held on 52.525 MHz.  
Tuesday evening @ 8 pm the QCWA- Quarter Century Wireless Association holds it's net on the 146.700 repeater, 100Hz. PL You do not need to be a member. All check-ins are welcomed.

Thursday evening @ 7:00 pm the CCARA – Clinton County Amateur Radio Association holds their net on the N8ZMT repeater 145.13 (94.8 PL) and 444.850 (141.3 PL) and 146.86 (107.2 PL). You can also use 147.48 simplex.

**Please support these area nets, their survival depends on you!!!**

### **Birthdays**

9/14 Kay Clark KD8BDJ  
9/18 Larry Nordeen N8VEN  
9/20 Jereme Warner KC8TIP  
9/25 John Kreer WA8ZTQ  
9/30 John Hosford KC8QZB - R.E. Lindberg WA8ZWR

### **Anniversaries**

9/07 David Toth, KC8ZGZ & Wife  
9/20 George Newton, KC8DVV & Wife

<b>2006 Elected Officers</b>		
<b>President</b>	<b>John Hosford</b>	<a href="#"><u>KC8QZB</u></a>
<b>Vice President</b>	<b>Roger Barnhill</b>	<a href="#"><u>AB8RX</u></a>
<b>Secretary</b>	<b>Richard H. McGuire</b>	<a href="#"><u>KI8C</u></a>
<b>Treasurer</b>	<b>Don Devendorf</b>	<b>W8EGI</b>
<b>Director</b>	<b>Jane Law</b>	<a href="#"><u>KC8FSK</u></a>
<b>Director</b>	<b>Ron Harger</b>	<a href="#"><u>WD8BCS</u></a>
<b>Membership Chairman</b>	<b>John A. Ingraham</b>	<a href="#"><u>NG8L</u></a>
<b>Under 22 Director</b>	<b>Jordan Mulder</b>	<b>KC8QYU</b>
<b>Scope Editor</b>	<b>DeAnna Barnhill</b>	<a href="#"><u>KD8BDI</u></a>
<b>Web Chairman</b>	<b>John A. Ingraham</b>	<a href="#"><u>NG8L</u></a>
<b>Sky Warn Chairman</b>	<b>Jim Hannahs</b>	<b>KC8QWH</b>
<b>Awards Manager</b>	<b>Donald L. De Feyter</b>	<a href="#"><u>KC8CY</u></a>
<b>Ziegenbein Nominations</b>	<b>Pamela J. Denomme</b>	<a href="#"><u>KB8PSF</u></a>
<b>VE Team Liaison</b>	<b>Laurence J. Nordeen</b>	<a href="#"><u>N8VEN</u></a>
<b>VE Team Contact</b>	<b>Joseph H. Denomme</b>	<a href="#"><u>N8VYS</u></a>

## Central Michigan Amateur Radio Club August 1, 2006 Treasurer's Report

### Assets:

NuUnion Credit Union	
Primary Share Account (Humphries Fund)	\$ 352.38
Business Checking Account	998.59
NuUnion Certificate of Deposit 4.15% (2-13-07)	1,617.60
Net Worth August 1, 2006	<u>\$2,968.57</u>

Respectfully Submitted,  
Don Devendorf, W8EGI Treasurer

Upcoming Hamfests			
Dates	Type	Event and Contact	Location
9 Sep 2006	+	Greater Louisville Hamfest Greater Louisville Hamfest Association <a href="http://critterbob.com/qlha">http://critterbob.com/qlha</a> <b>Talk-In:</b> 146.700 (PL 79.7) <b>Contact:</b> Joe Pollock, K4ULW 10012 Old Third Street Road Louisville, KY 40272 Phone: 502-935-7197 Email: <a href="mailto:k4ulw@bellsouth.net">k4ulw@bellsouth.net</a>	Shepardsville, KY Paroquet Springs Conference Center <a href="#">395 Paroquet Springs Drive</a> <b>Div:</b> Great Lakes <b>Sect:</b> Kentucky
9 Sep 2006	+	GRAHamfest 2006 Grand Rapids Amateur Radio Association <a href="http://www.w8dc.org/swap.htm">http://www.w8dc.org/swap.htm</a> <b>Talk-In:</b> 147.26+ (PL 94.8); 146.52 <b>Contact:</b> Jack Amelar, NY8D Grand Rapids ARA PO Box 3282 Grand Rapids, MI 49501-3282 Phone: 616-897-6885 Fax: 616-493-8708 (Attn: Amelar) Email: <a href="mailto:grahamfest06@w8dc.org">grahamfest06@w8dc.org</a>	Grand Rapids (Lowell), MI Kent County Fairgrounds 225 South Hudson <b>Div:</b> Great Lakes <b>Sect:</b> Michigan
10 Sep 2006	+	Findlay Radio Club <a href="http://www.findlayradioclub.org">http://www.findlayradioclub.org</a> <b>Talk-In:</b> 147.15/.75 <b>Contact:</b> Dean Calvin, N8RMF 141 Olive Street Findlay, OH 45840 Phone: 419-423-3402 Email: <a href="mailto:n8rmf@arrl.net">n8rmf@arrl.net</a>	Findlay, OH Hancock County Fairgrounds <a href="#">1017 East Sandusky Street</a> <b>Div:</b> Great Lakes <b>Sect:</b> Ohio
17 Sep 2006	+	Adrian ARC <a href="http://www.w8tqe.com/">http://www.w8tqe.com/</a> <b>Talk-In:</b> 145.370 (PL 85.4) <b>Contact:</b> Margie Willey, KB8TMM 307 Pentecost Highway Onsted, MI 49265 Phone: 517-467-6303 Email: <a href="mailto:maggie214@frontiernet.net">maggie214@frontiernet.net</a>	Adrian, MI Lenawee County Fairgrounds <a href="#">602 Dean Street</a> <b>Div:</b> Great Lakes <b>Sect:</b> Michigan
17 Sep 2006	+	Trunk Sale - Hamfest Shiawassee ARA (SARA) <b>Talk-In:</b> 147.02 MHz Input + 600 kHz (100 Hz) <b>Contact:</b> Don Warner, WB8GUS 10008 Lehring Road Byron, MI 48418 Phone: 810-266-4897 Email: <a href="mailto:wb8gus@arrl.net">wb8gus@arrl.net</a>	Owosso, MI Bennington Township Hall <a href="#">5849 South M-52</a> <b>Div:</b> Great Lakes <b>Sect:</b> Michigan

Upcoming Hamfests			
17 Sep 2006	+	GCARA HAMFEST 2006 Greater Cincinnati ARA <a href="http://gcara.org">http://gcara.org</a> <b>Talk-In:</b> 145.37 (-600), 146.88 (-600) <b>Contact:</b> Stan Cohen, W8QDQ 2301 Royal Oak Court Cincinnati, OH 45237-2939 Phone: 513-531-1011 or 513-531-3834 Fax: 513-531-3834 Email: <a href="mailto:stanco49@aol.com">stanco49@aol.com</a>	Cincinnati, OH Diamond Oaks Career Development Center <a href="#">6375 Harrison Avenue</a> <b>Div:</b> Great Lakes <b>Sect:</b> Ohio
23 Sep 2006	+	Hazard Swapfest Kentucky Mountains ARC <a href="http://home.alltel.net/jfarler/hf.html">http://home.alltel.net/jfarler/hf.html</a> <b>Talk-In:</b> 146.07/.67 MHz (PL 103.5) <b>Contact:</b> John Farler, K4AVX 109 Hall Street Hazard, KY 41701 Phone: 606-436-5354 Email: <a href="mailto:k4avx@alltel.net">k4avx@alltel.net</a>	Hazard, KY Civil Air Patrol Building Wendell Ford Airport KY Hwy 15 <b>Div:</b> Great Lakes <b>Sect:</b> Kentucky
24 Sep 2006	+	Cleveland Hamfest and Computer Show Hamfest Association of Cleveland <a href="http://www.hac.org">http://www.hac.org</a> <b>Talk-In:</b> 146.73 (PL 110.9) <b>Contact:</b> Hamfest Association of Cleveland, Inc. PO Box 81252 Cleveland, OH 44181-0252 Phone: 800-CLE-FEST Email: <a href="mailto:info@hac.org">info@hac.org</a>	Berea, OH Cuyahoga County Fairgrounds <a href="#">164 Eastland Road</a> <b>Div:</b> Great Lakes <b>Sect:</b> Ohio

## Central Michigan Amateur Radio Club Minutes of the Board Meeting August 4, 2006

The meeting was brought to order by club president John Hosford (KC8QZB) at 7:20 p.m.

The following board members were present for the meeting:

John Hosford (KC8QZB) - President  
 Roger Barnhill (AB8RX) - Vice President  
 Dick McGuire (K18C) - Secretary  
 Ron Harger (WD8BCS) - Director

The following items were discussed at the board meeting:

- Membership Chairman John Ingraham (NG8L) had sent President John Hosford a lifetime membership card for Don Rickerd (W8BQD). The lifetime membership was subject to board approval, and the board approved. John will mail the card to Don.
- Roger Barnhill (AB8RX) wanted approval for the wording of a Lifetime Achievement Award. The wording will read, "CMARC presents this Lifetime Achievement Award in honor of your dedication to Amateur Radio and contribution." The award will have individual plaques attached and will hang in either the meeting room or the radio room. The board approved Roger's "intellectual property."

Meeting was adjourned at 7:23.

## **Central Michigan Amateur Radio Club Minutes of the Meeting (August 4, 2006)**

The business meeting was brought to order by club president John Hosford (KC8QZB) at 7:30 p.m.

### **Members**

17 members were present at the meeting.

### **Visitors**

Mary Lou Tillitson  
Barbara Hosford

### **New Members**

Bob Berger (K8RDN)

### **Cards and Flowers**

Dick McGuire (K18C) sent condolence cards to the families of David Gardner (N8SHR) and Ed Fitzgerald (N8FPR).

### **Sick or in Hospital**

Don Tillitson (WB8NUS) reported that Don Rickerd (W8BOD), who now lives in California, is now on proper medication and doing fine. Persons desiring to talk to Don Rickerd may call his Lansing number, which will connect to Don in California.

### **Upgrades and New Licenses**

None

### **Old Business**

John Hosford announced to the general membership that Don Rickard has just been approved for lifetime membership.

Don Tillitson was sent a card of appreciation for services by the amateur radio operators during the Angel House Run/Walk on June 6.

Minutes of the July meeting had been distributed in The Scope. The secretary's report was accepted as submitted. Moved by Rocky Beckner (K8DRB) and seconded by Jim Harvey (KA8DDQ).

Treasurer Don Devendorf (W8EGI) was on vacation, so John read the report as published in The Scope. The report was accepted as printed if the account number is removed. Moved by Rocky Beckner (subject to annual audit) and seconded by Bernie Gaffney (N8PVZ).

### **New Business**

Roger Barnhill (AB8RX) announced Member of the Month awards for June and July. The June recipient was Ron Harger (WD8BCS) for organizing Field Day, and the July recipient was John Hosford (KC8QZB) for keeping meetings focused.



Ron Harger announced that the final Field Day score submitted was for 1912 points, for category 2A.

Gregg Mulder (WB8LZG) announced that quantities of parts in the back of the room were free for the taking.

DeAnna Barnhill (KD8BDI) is trying to organize a picnic for September 9th. DeAnna will get back to us on details.

Pictures of Field Day were on display and available for anybody interested.

John Hosford was displaying a Vibroplex bug from his father.

Gregg Mulder is asking for operators for the November cw Sweepstakes. Rumor has it that John will have gotten used to his bug by then.

Don Tillitson reported on the 5-county drill, which was interesting as a drill should be. Rock Beckner (K8DRB) spoke in favor of writing down messages. Hams are not only considered desirable, but necessary for federal funding, per Rocky. Rocky also described the Hurricane Katrina situation.

Don Tillitson announced that Beverly Stoner (K8ZJU) is recovering from a fall and broken hip. Recuperation is expected to take five or six weeks. Dick will send a card from CMARC.

#### **EVENT ANNOUNCEMENTS**

- Jackson Hamfest will be August 12th
- CMARC picnic will be September 9th.
- Run with the MSU Basketball Girls will be September 10th
- Hospice Hike will be September 17th

Meeting was adjourned. Moved Rocky Beckner (K8DRB) and seconded by Bernie Gaffney (N9PVZ).

John Hosford won \$4.00 in the 50/50 drawing.

Jim Harvey (KA8DDQ) spoke on MARS.

#### **"BPL IS A PANDORA'S BOX OF UNPRECEDENTED PROPORTIONS," ARRL TELLS FCC** **BY RICK LINDQUIST, N1RL SENIOR NEWS EDITOR JULY 8, 2003**

NEWINGTON, CT, Jul 8, 2003--Citing the potential for interference to and from Amateur Radio, the ARRL has called on the FCC to "take no steps" to permit Broadband over Power Line (BPL)--a form of power line carrier (PLC) technology. The League has filed a 120-page response--including studies--in response to the FCC's BPL *Notice of Inquiry (NOI)* in ET Docket 03-104, published May 23. The *NOI* asking how the FCC should regulate the delivery of broadband services to homes and businesses using electrical wiring to conduct high-speed digital signals attracted some 1900 comments--many from the amateur community--by the July 7 comment deadline.

"ARRL is unwilling to have the Amateur Service gored with the double-edged sword of an incompatible service that will at once (1) cause widespread interference, and (2) preclude any future changes in the amateur HF allocations," the ARRL said. The League said that based on "diligent and exhaustive research," it's concluded that BPL must avoid any and all amateur MF, HF and VHF allocations without exception. "This interference potential, as a matter of both law and fact, disqualifies access BPL as a potential future competitive broadband delivery system." So-called "access BPL" would use existing

overhead medium-voltage power lines to distribute Internet and broadband services to homes and businesses. Another form of BPL, "in-house BPL," uses electrical wiring inside a building to distribute digital signals. The League said that while it's aware that current Part 15 rules permit BPL, its interference potential remains untested and unrealized, since no access BPL systems are in operation. BPL proponents would prefer that the FCC authorize even higher power levels for such systems, however. "BPL is a Pandora's Box of unprecedented proportions," the ARRL declared. It asked the FCC to modify its Part 15 rules to prevent interference to users of the HF and low-VHF spectrum from the start and "to prevent consumers' reliance on BPL as an interference-free broadband delivery system."

In announcing its BPL initiative earlier this year, members of the FCC could barely contain their enthusiasm for the technology. The League's comments point out, however, that the FCC had acceded to the utility industry by citing potential interference to and from unlicensed power company PLC power-grid control systems in turning down ARRL's petition for a 136 kHz allocation. ARRL had asked that hams be permitted to transmit on 136 kHz at less than 2 W effective isotropic radiated power (EIRP); the FCC had proposed 1 W EIRP. "Yet, the same industry, together with BPL manufacturers, is apparently contending now that at HF and VHF, where the power lines are better antennas than they are at LF, that BPL can co-exist with amateur stations using more than 10,000 watts EIRP," the League said. "Both arguments cannot be valid."

Studies appended to the League's comments suggest received signal levels of BPL broadband noise at typical amateur stations would be anywhere from 33.7 dB to 65.4 dB higher than typical ambient noise levels in the worst-case situations. "BPL cannot be deployed using amateur allocations in the MF, HF and VHF bands without severely high interference potential," the ARRL reiterated. Electric utility companies would operate many, if not most, BPL systems. ARRL pointed out that some power companies have demonstrated a less-than-stellar record of cooperation in resolving complaints of power line noise to hams. "It is fair to say that power line interference to Amateur Radio has been a substantial regulatory burden to the Commission," the ARRL said. "It is a very substantial problem now for the Amateur Service, without the addition of BPL to the mix."

The ARRL concluded by urging the FCC to ensure that BPL "is not permitted to operate in or near any Amateur Radio allocations" and that any future changes in ham allocations would "trigger retroactive modifications to BPL facilities" to avoid amateur frequencies. In addition, the ARRL said, spurious emissions from BPL facilities must be substantially attenuated below current Part 15 requirements. ARRL's complete [filing in response](#) to the FCC's *NOI* is available on the ARRL Web site. The complete *NOI* is available on the FCC Web site. Reply comments in this proceeding are due on or before August 6, 2003. Interested parties may submit electronically filed comments via the FCC's Electronic Comment Filing System ([ECFS](#)). Under ECFS Main Links, click on "Submit a Filing." In the "Proceeding" field, enter "03-104" and complete the required field. Comments may be typed into a form or you may attach a file containing your comments. Comments also may be submitted via e-mail, per instructions on the ECFS page. The ARRL has initiated an important Spectrum Defense Fund campaign to support activities to educate government officials on the potential threat that BPL poses to Amateur Radio. To find out more, or to support ARRL's efforts in this area, visit the ARRL's secure [BPL Web site](#).

**Editor's notes: My cell phone number, 505-1983 is now back in service should you need to contact me.**

**Looking for: A microwave oven, call DeAnna at 505-1983**

**Propagation note: Solar cycle 24 is beginning!! 2 sunspots have been spotted that are magnetically reversed. That is, their magnetic poles are reversed compared to the sunspots of cycle 23. :)) (From Spaceweather.com)**

## September Key of the Month



September's offering for "Key of the Month" is a kit key. This key was proto-typed by K8FF and then in 1998 the Nor-Cal QRP club decided to make a mass production run of a kit for the paddle. For \$25, you got a plain steel base, all the brass pieces, and all the brass hardware in raw form. It was up to the purchaser to decide how much fine sanding to do to get it to look beautiful. They made 1000 kits and sold out within a few months. The kit was received very well by the QRP community. Sometime in 2000, the patent rights were sold to Vibroplex, and they mass produced it under the name "CODE WARRIOR JR". The paddle base measures only 2.5' x 2.5' so it was an instant hit with the portable crowd. I was fortunate to have a friend in the automotive paint biz, and he painted the base for mine with several coats of high gloss black. I then fine sanded all the brass with 200, 400, then 600 grit emery cloth to a mirror shine, and topped it all off with a set of custom Brazilian Kings wood finger pieces. It really looks good. I'm proud to "show it off". The Vibroplex version costs over \$100, so those lucky enough to get a kit, got a real savings by making the kit. The mechanics were not spring tension, but instead used a small magnet to provide the return. In operation the key handles very smooth, although some "heavy fisted" ops complain of the lack of base weight. I find it pleasant to use and goes along good with some of my other homebrew gear. If you happen to see one at a swap, better grab it, as they are becoming a real collector's item. I saw an unbuilt kit at Dayton this year. The owner wanted a small fortune for it. I was tempted but couldn't afford the 2nd mortgage on my house! Hi Hi



Central Michigan Amateur Radio Club

Please print and complete the form below. Make check or money order payable to CMARC. Mail completed membership form and the membership fee to:

John Ingraham / NG8L, Membership Chairman  
2807 Greenbriar Avenue  
Lansing, MI 48912

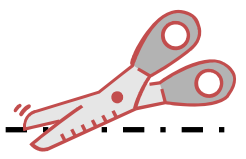
NAME: \_\_\_\_\_ Call: \_\_\_\_\_  
 City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: ( ) \_\_\_\_\_ Lic. Class: \_\_\_\_\_

ARRL Member?	Yes	No	(Circle Answers)
Email Scope?	Yes	No	

Email Address: \_\_\_\_\_  
 Birthday Month: \_\_\_\_\_ Day: \_\_\_\_\_  
 Wedding Anniversary: \_\_\_\_\_

Full Membership: \$10.00 / year  
Associate Member: 5.00 / year  
Membership dues are from January to December.

As a licensed Amateur, you can sign up today as a Full member of CMARC. This grants you voting rights and an annual subscription to SCOPE, the club newsletter. An Associate member does not have voting rights but does receive an annual subscription to the SCOPE.



Lansing Civil Defense Repeater Association



**Lansing Civil Defense Repeater Association**

Please print and complete the form below. Make check or money order payable to L.C.D.R.A.. Mail completed membership form and the membership fee to:

L.C.D.R.A.  
PO Box 26281  
Lansing, MI 48909-6281

NAME: \_\_\_\_\_ Call: \_\_\_\_\_  
 City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: ( ) \_\_\_\_\_ Lic. Class: \_\_\_\_\_

Birthday Month: \_\_\_\_\_ Day: \_\_\_\_\_

Full Membership: \$15.00 / year  
2nd Membership of same family: \$ 7.50 / year  
Membership dues are from January to December.

Use of the repeaters does not REQUIRE membership, but your support is GREATLY appreciated.